COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC TARIFF FILING OF BIG RIVERS		
ELECTRIC CORPORATION AND KENERGY	**)**	**2023-00312**
CORP. TO REVISE THE LARGE INDUSTRIAL	**)**	
CUSTOMER STANDBY SERVICE TARIFF	**)**	

JOINT RESPONSE OF BIG RIVERS ELECTRIC CORPORATION AND KENERGY CORP. TO KIMBERLY-CLARK CORPORATION'S FIRST REQUEST FOR INFORMATION
Part 2 of 2

Big Rivers Electric Corporation ("Big Rivers") and Kenergy Corp. ("Kenergy"),by counsel, file their joint responses to Domtar Paper Company, LLC's First Request for Information, issued in the above-captioned case on October 13, 2023.

FILED: October 27, 2023

IN THE MATTER OF:
ELECTRONIC TARIFF FILING OF BIG RIVERS ELECTRIC CORPORATION
AND KENERGY CORP. TO REVISE THE
LARGE INDUSTRIAL CUSTOMER STANDBY SERVICE TARIFF
CASE NO. 2023-00312

JOINT RESPONSE OF BIG RIVERS ELECTRIC CORPORATION AND KENERGY CORP.
TO KIMBERLY-CLARK CORPORATION'S FIRST REQUEST FOR ICNFORMATION

REQUEST NO. 1-5: ***Please provide all BREC annual financial statements and financial reports issued on or after January 1, 2020.***

RESPONSE: Please see attachments for annual financial statements and financial reports issued on or after January 1, 2020.

Witness: Nathanial A. Berry (Big Rivers)

KPMG

BIG RIVERS ELECTRIC CORPORATION

Financial Statements

December 31, 2019 and 2018

(With Independent Auditors' Report Thereon)

KPMG LLP
Suite 2600
400 West Market Street
Louisville, KY 40202

Independent Auditors' Report

The Board of Directors and Members
Big Rivers Electric Corporation:

Report on the Financial Statements

We have audited the accompanying financial statements of Big Rivers Electric Corporation, which comprise the balance sheets as of December 31, 2019 and 2018, and the related statements of operations, comprehensive income, equities, and cash flows for each of the years in the three-year period ended December 31, 2019, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Big Rivers Electric Corporation as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2019 in accordance with U.S. generally accepted accounting principles.

KPMG

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated April 15, 2020, on our consideration of Big Rivers Electric Corporation's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of Big Rivers Electric Corporation's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering Big Rivers Electric Corporation's internal control over financial reporting and compliance.

KPMG LLP

Louisville, Kentucky
April 15, 2020

BIG RIVERS ELECTRIC CORPORATION

Balance Sheets

December 31, 2019 and 2018

(Dollars in thousands)

Assets		2019	2018
Utility plant – net	$	905,086	1,012,709
Restricted investments – Member rate mitigation		1,391	691
Restricted investments – NRUCFC Capital Term Certificates		31,609	33,416
Other deposits and investments – at cost		21,474	20,604
Current assets:			
Cash and cash equivalents		30,733	38,466
Restricted cash-construction funds trustee		353	—
Short-term investments		9,437	9,607
Accounts receivable		37,266	33,390
Fuel inventory		26,965	25,028
Nonfuel inventory		24,216	24,864
Prepaid expenses and other assets		4,298	6,961
Total current assets		133,268	138,316
Deferred charges and other assets:			
Regulatory assets		250,562	153,982
Federal tax receivable		54	200
Other		5,769	2,968
Total deferred charges and other assets		256,385	157,150
Total	$	1,349,213	1,362,886
Equities and Liabilities			
Capitalization:			
Equities	$	523,164	505,816
Long-term debt		706,269	734,969
Total capitalization		1,229,433	1,240,785
Current liabilities:			
Current maturities of long-term obligations		27,673	26,495
Purchased power payable		2,702	5,334
Accounts payable		22,328	22,748
Accrued expenses		9,054	11,915
Accrued interest		3,279	3,533
Total current liabilities		65,036	70,025
Deferred credits and other:			
Regulatory liabilities – member rate mitigation		2,111	2,031
Asset retirement obligations		34,557	29,746
Deferred credits and other		18,076	20,299
Total deferred credits and other		54,744	52,076
Commitments and contingencies (note 13)			
Total	$	1,349,213	1,362,886

See accompanying notes to financial statements.

BIG RIVERS ELECTRIC CORPORATION

Statements of Operations

Years ended December 31, 2019, 2018, and 2017

(Dollars in thousands)

		2019	2018	2017
Operating revenue	$	378,727	380,205	407,229
Total operating revenue		378,727	380,205	407,229
Operating expenses:				
Operations:				
Fuel for electric generation		119,831	128,555	126,644
Power purchased and interchanged		37,893	51,910	100,045
Production, excluding fuel		45,918	47,897	42,790
Transmission and other		38,078	34,359	30,763
Maintenance		39,066	47,897	37,053
Depreciation and amortization		21,613	20,709	20,301
Regulatory debit - TIER credit		27,743	—	—
Total operating expenses		330,142	331,327	357,596
Electric operating margin		48,585	48,878	49,633
Interest expense and other:				
Interest		36,937	38,568	40,654
Income tax expense/(benefit)		(28)	(12)	7
Other – net		696	717	744
Total interest expense and other		37,605	39,273	41,405
Operating margin		10,980	9,605	8,228
Nonoperating margin:				
Interest income and other		5,735	5,625	4,770
Total nonoperating margin		5,735	5,625	4,770
Net margin	$	16,715	15,230	12,998

See accompanying notes to financial statements.

BIG RIVERS ELECTRIC CORPORATION

Statements of Comprehensive Income

Years ended December 31, 2019, 2018, and 2017

(Dollars in thousands)

		2019	2018	2017
Net margin	$	16,715	15,230	12,998
Other comprehensive income (loss):				
Defined-benefit plans:				
Prior service cost (benefit)		—	—	(1,077)
Actuarial gain (loss)		1,506	(1,350)	1,938
Amortization of loss		559	804	376
Defined-benefit plans		2,065	(546)	1,237
Postretirement benefits other than pensions:				
Prior service cost		(414)	(138)	(138)
Actuarial gain (loss)		(820)	413	(1,192)
Amortization of (gain)		(198)	(30)	(170)
Postretirement benefits other than pensions		(1,432)	245	(1,500)
Other comprehensive income (loss)		633	(301)	(263)
Comprehensive income	$	17,348	14,929	12,735

See accompanying notes to financial statements.

BIG RIVERS ELECTRIC CORPORATION

Statements of Equities

Years ended December 31, 2019, 2018, and 2017

(Dollars in thousands)

				Other equities		
		Total equities	Retained margin	Donated capital and memberships	Consumers' contributions to debt service	Accumulated other comprehensive income/(loss)
Balance – December 31, 2016	$	478,152	473,802	764	3,681	(95)
Net margin		12,998	12,998	—	—	—
Pension and postretirement benefit plans		(263)	—	—	—	(263)
Balance – December 31, 2017		490,887	486,800	764	3,681	(358)
Net margin		15,230	15,230	—	—	—
Pension and postretirement benefit plans		(301)	—	—	—	(301)
Balance – December 31, 2018		505,816	502,030	764	3,681	(659)
Net margin		16,715	16,715	—	—	—
Pension and postretirement benefit plans		633	—	—	—	633
Balance – December 31, 2019	$	523,164	518,745	764	3,681	(26)

See accompanying notes to financial statements.

BIG RIVERS ELECTRIC CORPORATION

Statements of Cash Flows

Years ended December 31, 2019, 2018, and 2017

(Dollars in thousands)

		2019	2018	2017
Cash flows from operating activities:				
Net margin	$	16,715	15,230	12,998
Adjustments to reconcile net margin to net cash provided by operating activities:				
Depreciation and amortization		21,664	24,365	24,394
Interest compounded – RUS Series A Note		—	26	56
Interest compounded – RUS Series B Note		10,911	10,300	9,724
Interest income compounded – RUS Cushion of Credit (advance payments unapplied)		(169)	(120)	—
Noncash member rate mitigation revenue		(15,578)	(5,525)	(4,292)
Noncash regulatory debit – TIER credit		27,743	—	—
Changes in certain assets and liabilities:				
Accounts receivable		(3,876)	13,007	(8,120)
Inventories		(1,289)	14,186	17,036
Prepaid expenses and other		2,663	(1,621)	1,616
Deferred charges		(13,162)	(3,239)	1,006
Purchased power payable		(2,632)	2,802	1,665
Accounts payable		46	1,726	3,389
Accrued expenses		(3,115)	2,634	(930)
Federal tax receivable		—	—	(1,847)
Other – net		15,113	2,494	10,842
Net cash provided by operating activities		55,034	76,265	67,537
Cash flows from investing activities:				
Capital expenditures		(23,281)	(24,480)	(23,361)
Proceeds from restricted investments and deposits		21,655	1,097	—
Purchases of restricted investments and other deposits and investments		(22,462)	—	(5,017)
Proceeds of short-term investments		11,334	627	2,252
Purchases of short-term investments		(11,165)	(1,011)	(5,562)
Net cash used in investing activities		(23,919)	(23,767)	(31,688)
Cash flows from financing activities:				
Principal payments on long-term obligations		(38,495)	(93,488)	(37,572)
Proceeds from long-term obligations		—	43,595	15,000
Payments on line of credit		—	(20,000)	(26,000)
Borrowing on line of credit		—	—	20,000
Net cash used in financing activities		(38,495)	(69,893)	(28,572)
Net increase/(decrease) in cash and cash equivalents		(7,380)	(17,395)	7,277
Cash and cash equivalents – beginning of year		38,466	55,861	48,584
Cash and cash equivalents – end of year	$	31,086	38,466	55,861
Supplemental cash flow information:				
Cash paid for interest	$	26,487	28,957	31,380
Cash paid for income taxes		2	1	1
Supplemental schedule of non-cash financing and investing activities:				
Change in regulatory assets associated with asset retirement obligations	$	2,897	5,294	23,408
Change in regulatory assets associated with utility plant		83,616	26,417	26,336
Purchases of utility plant in accounts payable		582	(1,236)	425

See accompanying notes to financial statements.

(1) Organization and Summary of Significant Accounting Policies

(a) General Information

Big Rivers Electric Corporation ("Big Rivers" or the "Company"), an electric generation and transmission cooperative, supplies wholesale power to its three member distribution cooperatives (Jackson Purchase Energy Corporation, Kenergy Corp. ("Kenergy"), and Meade County Rural Electric Cooperative Corporation) under all requirements contracts. Big Rivers also markets power to nonmember utilities, power marketers, and the Midcontinent Independent System Operator ("MISO"). The members provide electric power and energy to industrial, residential, and commercial customers located in portions of 22 western Kentucky counties. The wholesale power contracts with the members remain in effect until December 31, 2043. Rates to Big Rivers' members are established by the Kentucky Public Service Commission ("KPSC") and are subject to approval by the Rural Utilities Service ("RUS"). The financial statements of Big Rivers include the provisions of the Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") 980, Regulated Operations, and give recognition to the ratemaking and accounting practices of the KPSC and RUS.

(b) Estimates

The preparation of the financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses, and disclosure of contingent assets and liabilities. The estimates and assumptions used in the accompanying financial statements are based upon management's evaluation of the relevant facts and circumstances as of the date of the financial statements. Actual results may differ from those estimates.

(c) System of Accounts

Big Rivers maintains its accounting records in accordance with the Uniform System of Accounts as prescribed by the RUS Bulletin 1767B-1, as adopted by the KPSC. These regulatory agencies retain authority and periodically issue orders on various accounting and ratemaking matters. Adjustments to RUS accounting have been made to make the financial statements consistent with generally accepted accounting principles in the United States of America.

(d) Revenue Recognition

Revenues generated from the Company's wholesale power sales are based on month-end meter readings and are recognized as earned when electricity is delivered. Capacity revenues are recognized in the period in which the Company provides capacity to a counterparty.

In May 2014, the FASB issued Accounting Standards Update (ASU) 2014-09, *Revenue from Contracts with Customers (Topic 606)* (ASU 2014-09). The main principle of the guidance is that an entity should recognize revenue to depict the transfer of promised goods or services to its customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. ASU 2014-09 became effective for the Company for its annual reporting period beginning on January 1, 2019. The Company assessed the impact of adopting the guidance and determined there was no material effect.

(Dollars in thousands)

(e) *Utility Plant and Depreciation*

Utility plant is recorded at original cost, which includes the cost of contracted services, materials, labor, and overhead. In accordance with FASB ASC 835-20, *Interest – Capitalization of Interest,* the Company also includes capitalized interest on projects with an estimated total cost of $250 or more before consideration of such cost. The interest capitalized is determined by applying the effective rate of Big Rivers' weighted average debt to the accumulated expenditures for qualifying projects included in construction in progress. Replacements of depreciable property units, except minor replacements, are charged to utility plant.

Depreciation of utility plant in service is recorded using the straight-line method over the estimated remaining service lives, as approved by the RUS and KPSC. During 2012, a depreciation study was completed to evaluate the remaining economic lives of the Company's assets and establish new depreciation rates. The study was approved by the RUS in 2012 and by the KPSC in 2014, with the rates becoming effective February 1, 2014. The annual composite depreciation rates used to compute depreciation expense were as follows:

Electric plant	0.35%–25.38%
Transmission plant	1.36%–2.29%
General plant	3.76%–9.88%

For 2019, 2018, and 2017, the average composite depreciation rates were 2.41%, 2.52%, and 2.45%, respectively. At the time plant is disposed of, the original cost plus cost of removal less salvage value of such plant is charged to accumulated depreciation, as required by the RUS.

(f) *Impairment Review of Long-Lived Assets*

Long-lived assets are reviewed as facts and circumstances indicate that the carrying amount may be impaired. FASB ASC 360, *Property, Plant, and Equipment*, requires the evaluation of impairment by comparing an asset's carrying value to the estimated future cash flows the asset is expected to generate over its remaining life. If this evaluation were to conclude that the future cash flows were not sufficient to recover the carrying value of the asset, an impairment charge would be recorded based on the difference between the asset's carrying amount and its fair value (less costs to sell for assets to be disposed of by sale) as a charge to net margin.

(g) *Asset Retirement Obligations*

FASB ASC 410-20, *Asset Retirement and Environmental Obligations – Asset Retirement Obligations*, requires legal obligations associated with the retirement of long-lived assets to be recognized at fair value when incurred and capitalized as part of the related long-lived asset. The liability is accreted each period based on the credit-adjusted risk-free rate of return that existed when the liability, or portion thereof, was initially measured. The period accretion is recognized as an increase in the carrying amount of the liability, and the capitalized cost is depreciated over the useful life of the related asset. When the asset is retired, the entity settles the obligation for its recorded amount or incurs a gain or loss.

Big Rivers has recorded liabilities in its financial statements for asset retirement obligations ("AROs") related to the requirements of the U.S. Environmental Protection Agency's ("EPA") Disposal of Coal Combustion Residuals from Electric Utilities Rule ("CCR Final Rule") and Effluent Limitations Guidelines Rule ("ELG Final Rule") for the coal ash ponds located at its Green Station and the City of Henderson's Station Two ("Station Two") generating units. The CCR Final Rule was published in the Federal Register on April 17, 2015 and provides a comprehensive set of requirements for the safe disposal of CCRs, commonly known as coal ash, from coal-fired power plants. The ELG Final Rule was published in the Federal Register on November 3, 2015, and sets limits on the levels of toxic metals in wastewater that can be discharged from power plants. See Note 3 for further discussion of the Company's AROs.

(h) Inventory

Inventories are carried at average cost and include coal, petroleum coke, lime, limestone, oil and gas used for electric generation, and materials and supplies used for utility operations. Purchased emission allowances are recorded in inventory at actual cost by each vintage year. Allowances issued by the EPA are recorded at zero cost by each vintage year. Total purchased and EPA issued allowances are carried in inventory at a weighted average cost by each vintage year. Issuances of allowances are accounted for on a vintage basis using a monthly weighted average cost.

(i) Restricted Investments

Certain investments are restricted under KPSC order to establish certain reserve funds for Member rate mitigation. The loan agreement with National Rural Utilities Cooperative Finance Corporation ("CFC") requires as a condition of the extension of credit, that an equity ownership position be established by all borrowers. Big River's equity ownership in this organization is less than one percent.

These equity investments do not have readily determinable fair values and are accounted for at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar investment of the same issuer. No impairment or observable price changes were recorded during 2019.

(j) Cash and Cash Equivalents

Big Rivers considers all short-term, highly liquid investments with original maturities of three months or less to be cash equivalents.

(k) Restricted Cash

Big Rivers has restricted cash related to proceeds from the sale of property as required by the RUS loan contract.

(l) Short-Term Investments

Short-term investments include certificates of deposits (CDs) held for investment and investments in debt securities with original maturities greater than three months and less than one year.

(m) Regulatory Assets and Liabilities

FASB ASC 980-10 applies to regulated entities for which rates are designed to recover the costs of providing service. In accordance with this topic, certain items that would normally be reflected in the statement of operations are deferred on the balance sheet. Regulatory assets represent probable future revenues associated with certain incurred costs, which will be recovered from customers through the rate-making process. Regulatory assets are reduced during the period(s) in which the related costs are recovered through rates or when future recovery is no longer probable. Conversely, regulatory liabilities represent future reductions in revenues associated with amounts that are to be credited, or refunded, to members through the regulated rate-making process. Regulatory liabilities are reduced during the period(s) in which the related amounts are refunded to members through rates or when future refunding of the amounts is no longer probable.

(n) Other Deposits and Investments

Other deposits and investments consist primarily of patronage capital, cash collateral/margin call deposits, investments in associated organizations, and deferred compensation.

(o) Income Taxes

Big Rivers was formed as a tax-exempt cooperative organization as described in Internal Revenue Code Section 501(c)(12). To retain tax-exempt status under this section, at least 85% of Big Rivers' annual income must be generated from transactions with the Company's members. In 1983, sales to nonmembers resulted in Big Rivers failing to meet the 85% requirement. Until Big Rivers can meet the 85% member income requirement, the Company will not be eligible for tax-exempt status and will be treated as a taxable cooperative.

As a taxable cooperative, Big Rivers is entitled to exclude the amount of patronage allocations to members from taxable income. Income and expenses related to nonpatronage-sourced operations are taxable to Big Rivers. Big Rivers files a federal income tax return and certain state income tax returns.

Under the provisions of FASB ASC 740, *Income Taxes*, Big Rivers is required to record deferred tax assets and liabilities for temporary differences between amounts reported for financial reporting purposes and amounts reported for income tax purposes. Deferred tax assets and liabilities are determined based upon these temporary differences using enacted tax rates for the year in which these differences are expected to reverse. Deferred income tax expense or benefit is based on the change in assets and liabilities from period to period, subject to an ongoing assessment of realization. Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return are recorded only when the more-likely-than-not recognition threshold is satisfied and measured at the largest amount of benefit that is greater than 50% likely of being realized upon settlement.

(p) Patronage Capital

As provided in the Company's bylaws, Big Rivers accounts for each year's patronage-sourced income, both operating and nonoperating, on a patronage basis. Notwithstanding any other provision of the bylaws, the amount to be allocated as patronage capital for a given year shall not be less than the greater of regular taxable patronage-sourced income or alternative minimum taxable patronage-sourced income.

(q) Derivatives

Management has reviewed the requirements of FASB ASC 815, *Derivatives and Hedging*, and has determined that certain contracts the Company is party to may meet the definition of a derivative under FASB ASC 815. The Company has elected the Normal Purchase and Normal Sale exception for these contracts, and therefore, the contracts are not required to be recognized at fair value in the financial statements.

(r) Fair Value Measurements

FASB ASC 820, *Fair Value Measurement*, defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal, or most advantageous, market for the asset or liability in an orderly transaction between market participants at the measurement date. ASC 820 establishes a three-level fair value hierarchy that prioritizes the inputs used to measure fair value. This hierarchy requires entities to maximize the use of observable inputs when possible. The three levels of inputs used to measure fair value are as follows:

- Level 1 – quoted prices in active markets for identical assets or liabilities;
- Level 2 – observable inputs other than quoted prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar assets and liabilities in markets that are not active; or other inputs that are observable or can be corroborated by observable market data; and
- Level 3 – unobservable inputs that are supported by little or no market activity and that are significant to the fair values of the assets or liabilities, including certain pricing models, discounted cash flow methodologies, and similar techniques that use significant unobservable inputs.

(s) Deferred Loan Costs

The Company capitalizes costs incurred in connection with long-term debt. These costs are amortized on various bases over the term of the respective debt financing agreements.

In accordance with Accounting Standards Update ("ASU") 2015-03, deferred loan costs related to a recognized debt liability are presented on the balance sheet as a direct deduction from the carrying amount of the related debt liability instead of being presented as an asset.

(t) Deferred Credits and Other

Deferred credits and other includes employee related benefits and capacity revenue sales billed but not yet earned. Employee related benefits include, but are not limited to, pension and post-retirement benefit costs and amounted to $16,403 and $17,013 at December 31, 2019 and 2018, respectively. Deferred capacity revenue, which will be recognized within the next year, amounted to $1,673 and $2,878 at December 31, 2019 and 2018, respectively.

(u) New Accounting Guidance

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)* (ASU 2016-02). The main principle of this revised accounting guidance requires that lessees recognize all leases (other than leases with a term of twelve months or less) on the balance sheet as lease liabilities, based upon the present value of the lease payments, with corresponding right of use assets. ASU 2016-02 also makes targeted changes to other aspects of the current guidance, including the lease classification criteria and the lessor accounting model. The amendments in ASU 2016-02 will be effective for the Company for annual reporting periods beginning after December 15, 2020. The Company is currently assessing the impact of adopting the guidance but does not believe it will have a material effect.

(Dollars in thousands)

(2) Utility Plant

At December 31, 2019 and 2018, utility plant is summarized as follows:

		2019	2018
Classified plant in service:			
Production plant	$	1,713,576	1,822,536
Transmission plant		294,407	290,335
General plant		54,416	53,302
Other		67	292
		2,062,466	2,166,465
Less accumulated depreciation		1,193,043	1,187,688
		869,423	978,777
Construction in progress		35,663	33,932
Utility plant – net	$	905,086	1,012,709

Big Rivers' secured long-term debt obligations and 2015 Syndicated Senior Secured Credit Agreement, as amended September 19, 2017, are secured under Big Rivers' Indenture dated as of July 1, 2009, as supplemented and amended (the "Indenture"), between Big Rivers and U.S. Bank National Association, as trustee (the "Indenture Trustee"). Obligations are secured under the Indenture by a mortgage lien on substantially all of Big Rivers' owned tangible, and certain intangible, properties including Big Rivers' production, transmission, general, and other Utility Plant. See Note 4 for further discussion of Big Rivers' Debt and Other Long-Term Obligations secured under its Indenture.

Interest capitalized for the years ended December 31, 2019 and 2018, was $207 and $56, respectively.

The Company has identified certain legal obligations, as defined in FASB ASC 410, *Asset Retirement and Environmental Obligations*, associated with the retirement of long-lived assets that require the recognition of a liability. See Note 3 for further discussion of the Company's asset retirement obligations.

As of December 31, 2019 and 2018, the Company had recorded an estimated $60,723 and $59,996, respectively, related to nonlegal removal costs included in accumulated depreciation as required by the RUS.

(Dollars in thousands)

(3) Asset Retirement Obligations

The Company has AROs arising from legal obligations associated with the retirements of certain long-lived assets. The liabilities were initially measured at fair value and subsequently adjusted for accretion expense and changes in estimated future cash flows. The corresponding asset retirement costs are capitalized as part of the carrying amount of the related long-lived assets and depreciated over their remaining useful lives. The following table presents the activity for the ARO liabilities for the years ended December 31, 2019 and 2018:

		2019		2018	
ARO balance at beginning of year	$	29,746		28,347	
Changes in estimated timing or cost		3,418	(a)	0	
Accretion expense		1,528	(b)	1,399	(b)
Actual costs incurred		(135)		0	
ARO balance at end of year	$	34,557		29,746	

(a) During 2019, a study was completed by an independent engineering firm which provided updated settlement dates and cost estimates for the eventual closures of the ash ponds located at Big Rivers' Green Station and Station Two, for compliance with federal regulations, including the EPA's CCR Final Rule and ELG Final Rule, for which Big Rivers initially recognized ARO liabilities in 2015. The change in estimated settlement dates, as well as the updated present value of cost estimates, to close the Green Station and the Station Two ash ponds, per the 2019 studies, was higher than prior estimates completed by independent engineering firms during 2017. Accordingly, in 2019, Big Rivers recorded adjustments to its ARO liabilities to reflect the change in estimates.

(b) The 2019 and 2018 annual ARO accretion expense of $1,528 and $1,399, respectively, was deferred and included in the Regulatory Assets amount reported on the Company's balance sheet as of December 31, 2019 and 2018. These amounts will be amortized and recognized as expense during the period(s) in which they are recovered through rates.

In 2020, Big Rivers anticipates that the EPA will pass legislation that may require Big Rivers to record a $48,500 ARO liability for Coleman Station's ash ponds.

(Dollars in thousands)

(4) Debt and Other Long-Term Obligations

A detail of long-term debt at December 31, 2019 and 2018 is as follows:

		2019	2018
CFC Refinance Promissory Note, Series 2012B, serial note pricing, 4.30% effective interest rate, final maturity date of May 2032	$	214,712	227,578
RUS 2009 Series B Promissory Note, stated amount of $245,530, no stated interest rate, 5.80% imputed interest rate, maturing December 2023		195,027	184,117
CoBank Promissory Note, Series 2012A, 4.30% fixed interest rate, final maturity date of June 2032		171,442	181,271
County of Ohio, Kentucky, promissory note, 6.0% fixed interest rate, maturing in July 2031		83,300	83,300
CFC Equity Note, Series 2012B, 5.35% fixed interest rate, final maturity date of May 2032		32,229	33,998
2018 RUS Guaranteed FFB Loan, W8, 2.828% fixed interest rate, final maturity date of January 2033		25,228	25,630
2018 RUS Guaranteed FFB Loan, X8, 2.935% fixed interest rate, final maturity date of December 2043		17,836	17,965
CFC Refinance Promissory Note, Series 2017B, 3.69% fixed interest rate, final maturity date of October 2020		—	13,500
Total long-term debt		739,774	767,359
Less current maturities		27,673	26,495
Less unamortized deferred debt issuance costs		2,343	2,575
Less advance payments unapplied – RUS cushion of credit		3,489	3,320
Total long-term debt – net of current maturities, deferred debt issuance costs, and advance payments	$	706,269	734,969

(Dollars in thousands)

The following are scheduled maturities of long-term debt at December 31:

		Amount
Year:		
2020	$	27,673
2021		28,281
2022		30,073
2023		226,414
2024		33,393
Thereafter		393,940
Total	$	739,774

(a) *National Rural Utilities Cooperative Finance Corporation (CFC) Refinance and Equity Promissory Notes, 2012B*

In July 2012, Big Rivers issued new debt with CFC in the form of a secured term loan in the amount of $302,000 (the "Refinance Note") and a CFC Equity Note in the amount of $43,156. The Refinance Note is secured under Big Rivers' Indenture, dated July 1, 2009 between the Company and U.S. Bank National Association, and consists of twenty individual notes with different fixed interest rates ranging from 3.05% to 5.35%. The Refinance Note has an effective interest rate of 4.30% and a final maturity date of May 2032.

The Equity Note has a fixed interest rate of 5.35% and a final maturity date of May 2032. The proceeds of the CFC Equity Note were used to purchase interest-bearing Capital Term Certificates (CTCs), as required in connection with the Refinance Note (Note 8).

(b) *RUS Notes*

On July 15, 2009, Big Rivers' previous RUS debt was replaced with the RUS 2009 Promissory Note Series A (the "RUS Series A Note") and the RUS 2009 Promissory Note Series B (the "RUS Series B Note").

In April 2018, Big Rivers prepaid the RUS Series A Note in full, using available general funds, when the total outstanding principal balance was $65,300. The RUS Series A Note had a stated interest rate of 5.75%, was recorded at an imputed interest rate of 5.84%, and was secured under Big Rivers' Indenture. The original maturity date of the RUS Series A Note was July 2021.

The RUS Series B Note has no stated interest rate, is recorded at an imputed interest rate of 5.80%, and is secured under Big Rivers' Indenture. The $245,530 stated amount of the RUS Series B Note is due December 2023.

(c) CoBank, ACB (CoBank) Promissory Note, Series 2012A

In July 2012, Big Rivers issued new debt with CoBank in the form of a secured term loan in the amount of $235,000, which is secured under Big Rivers' Indenture. The loan has a fixed interest rate of 4.30% and a final maturity date of June 2032.

(d) Pollution Control Bonds

In June 2010, the County of Ohio, Kentucky, issued $83,300 of Pollution Control Refunding Revenue Bonds, Series 2010A ("Series 2010A Bonds"), the proceeds of which are supported by a promissory note from Big Rivers, which bears the same interest rate as the bonds and is secured under Big Rivers' Indenture. These bonds bear interest at a fixed rate of 6.00% and mature in July 2031. These bonds are subject to an optional redemption on or after July 15, 2020. Big Rivers plans to redeem and reissue these bonds in 2020.

(e) 2018 RUS Guaranteed FFB Loan, W8

In April 2018, Big Rivers received a $25,630 loan from the Federal Financing Bank (FFB) (the "W8 Loan") which is guaranteed by the RUS and secured under Big Rivers' Indenture. The W8 Loan is for long-term financing of capital projects included in Big Rivers' 2012 Environmental Compliance Plan (ECP) to comply with the EPA's Mercury and Air Toxics Standards (MATS) rule. These capital projects were completed in 2016 and were originally funded with Big Rivers' general funds. Accordingly, the proceeds of the W8 Loan were used to replenish Big Rivers' general funds. The W8 Loan has a fixed interest rate of 2.828%, which includes a 0.125% RUS administration fee, and has a final maturity date of January 2033.

(f) 2018 RUS Guaranteed FFB Loan, X8

In April 2018, Big Rivers received a $17,965 loan from the FFB, (the "X8 Loan") which is guaranteed by the RUS and secured under Big Rivers' Indenture. The X8 Loan is for long-term financing of capital projects included in Big Rivers' 2013-2015 Transmission Construction Work Plan, which were completed in 2017 and were originally funded with Big Rivers' general funds. Accordingly, the proceeds of the X8 Loan were used to replenish Big Rivers' general funds. The X8 Loan has a fixed interest rate of 2.935%, which includes a 0.125% RUS administration fee, and has a final maturity date of December 2043.

(g) CFC Refinance Promissory Note, Series 2017B

In October 2017, Big Rivers borrowed $15,000 from CFC at a fixed interest rate of 3.69%, the proceeds of which were used to prepay a portion of the RUS Series A Note. The CFC note was secured under Big Rivers' Indenture and had a final maturity date of October 2020. Big Rivers prepaid the outstanding balance and associated interest and fees for the CFC note on December 20, 2019.

(h) Line of Credit

On March 5, 2015, Big Rivers entered into a $130,000 Syndicated Senior Secured Credit Agreement (the "2015 Agreement") with CFC, CoBank, Fifth Third Bank, KeyBank National Association, and Regions Bank. In conjunction with the 2015 Agreement, Big Rivers issued secured promissory notes (the "Series 2015A Notes"), equal to each lender's commitment, which are secured under Big Rivers' Indenture.

On September 19, 2017, the 2015 Agreement was amended to, among other things, reduce the total facility amount from $130,000 to $100,000, and extend the maturity date from March 5, 2018 to September 18, 2020.

Big Rivers is in the process of amending and extending the 2015 Agreement during 2020. The line of credit is expected to increase and a provision will be added for two, one-year, extensions. The closing for the line of credit is expected to occur in the second quarter of 2020, pending regulatory approval.

As of December 31, 2019, Big Rivers had no outstanding borrowings under the 2015 Agreement and $7,579 in issued letters of credit outstanding, which reduced its available borrowing capacity under the 2015 Agreement from $100,000 to $92,421.

As of December 31, 2018, Big Rivers had no outstanding borrowings under the 2015 Agreement and $7,729 in issued letters of credit outstanding, which reduced its available borrowing capacity under the 2015 Agreement from $100,000 to $92,271.

(i) RUS Cushion of Credit

In 2018, Big Rivers began participating in the cushion of credit program administered by the RUS in conjunction with the execution of the 2018 W8 and X8 RUS Guaranteed FFB Loans. Under the cushion of credit program, RUS borrowers may make voluntary irrevocable deposits into the cushion of credit account which, during 2019, accrued interest at an annual rate of 5.0%. Per the terms of the RUS' commitment to guarantee Big Rivers' W8 and X8 Loans, Big Rivers agreed to make an initial deposit of $3,200 to the cushion of credit account upon receipt of the loan funds and to make additional deposits, as needed, so that the balance at the beginning of each year going forward is equal to or greater than the annual payments due on the W8 and X8 Loans during the year.

Big Rivers' amounts in the cushion of credit account (deposits and accrued interest) may only be used to make scheduled principal and interest payments on the W8 and X8 Loans. As of December 31, 2019 and 2018, Big Rivers' balance in the RUS cushion of credit account was $3,489 and $3,320, respectively, which is included on the Company's balance sheet as a reduction to long-term debt.

(j) Covenants

Big Rivers is in compliance with all debt covenants associated with both its long-term and short-term debt obligations. The Company's Indenture and other debt agreements require that a Margins for Interest Ratio (MFIR) of at least 1.10 be maintained for each fiscal year. The 2015 Agreement requires that Big Rivers, throughout the duration of the agreement, maintain a minimum Members' Equities balance at each fiscal quarter-end and year-end of $375,000 plus 50% of the Company's cumulative positive net margins for each of the preceding fiscal years, beginning with the fiscal year ended December 31, 2015. Big Rivers' MFIR for the fiscal year ended December 31, 2019 was 1.45, and its Members' Equities balance was $523,164.

An MFIR of less than 1.10, per the Indenture and other debt agreements, may result in the following actions, restrictions, or consequences: Big Rivers may not secure additional debt under the Indenture; the Company must seek rates that are reasonably expected to yield a 1.10 MFIR; the Company must provide a written plan satisfactory to the RUS setting forth actions to be taken to achieve the specified MFIR on a timely basis; an event of default may occur; interest rates may increase; and its line of credit may be terminated with an acceleration of any outstanding amounts becoming due immediately.

In accordance with the Amended and Consolidated Loan Contract between Big Rivers and the United States of America (acting by and through the RUS Administrator), Big Rivers provided notification to the RUS Administrator, via letter dated February 7, 2013, of a failure to maintain two Credit Ratings of Investment Grade. In order to remain compliant under the Amended and Consolidated Loan Contract, in March 2013, the Company, prepared and presented to the RUS, its Corrective Action Plan setting forth the actions to be taken by management, that are reasonably expected to achieve two Credit Ratings of Investment Grade. The Company regularly updates the RUS on actions taken to date related to its Corrective Action Plan.

(5) Rate Matters

The rates charged to Big Rivers' members consist of a demand charge per kilowatt (kW) and an energy charge per kilowatt-hour (kWh) consumed as approved by the KPSC. The rates include specific demand and energy charges for its members' two classes of customers, the large industrial customers and the rural customers, under its jurisdiction. For the large industrial customers, the demand charge is generally based on each customer's maximum demand during the current month. For the rural customers, the demand charge is based on Maximum Adjusted Net Local Load (as defined in Big Rivers' tariff).

The Company has certain KPSC approved tariff riders; including a fuel adjustment clause and an environmental surcharge. The net effect of these tariffs is recognized as revenue on a monthly basis with an offset to the regulatory liability – member rate mitigation described below.

The net impact of the tariff riders to members' rates is currently mitigated by a Member Rate Stability Mechanism (MRSM) that is held by Big Rivers as restricted investments. An offsetting regulatory liability – member rate mitigation reflects the obligation associated with the funding of these reserve accounts. As described below, Big Rivers has proposed certain changes to its MRSM.

The KPSC entered an order on October 29, 2013, granting Big Rivers an annual revenue increase of $54,227, effective August 20, 2013 (Case No. 2012-00535). In its order, the KPSC excluded the Coleman plant depreciation from rate recovery. The KPSC directed the Company to defer this depreciation expense and record the deferred amounts in a regulatory asset account. The KPSC's order indicated this action was being taken due to the planned temporary idling of Coleman, the length of time the plant will be idled, and the impact of the rate increase on customers. As of December 31, 2019, cumulative depreciation expense of $37,245 was deferred for the Coleman plant, which management believes is probable of recovery in future rates.

The KPSC entered an order on April 25, 2014, granting Big Rivers an annual revenue increase of $36,160, effective February 1, 2014 (Case No. 2013-00199). In its order, the KPSC approved Big Rivers' 2012 Depreciation Study, but excluded Wilson plant depreciation from rate recovery. The KPSC directed the

Company to defer the Wilson depreciation expense and record in a regulatory asset account, similar to the Coleman depreciation expense deferral per the KPSC's order in Case No. 2012-00535. As of December 31, 2019, cumulative depreciation expense of $120,544 was deferred for the Wilson plant, which management believes is probable of recovery in future rates. The KPSC also approved Big Rivers' proposal to temporarily offset the rate increase by utilization of the MRSM. The KPSC further granted Big Rivers' proposed accounting treatment for transmission revenues related to the Hawesville smelter but included the test year transmission revenues related to the Sebree smelter in the determination of Big Rivers' revenue requirement. The net effect of this accounting treatment was the recognition of revenue on a monthly basis with an offset to the applicable regulatory liability accounts as the reserve funds were used to offset the impact of the base rate increase on the members' monthly bills. Effective July 17, 2009, the KPSC approved the implementation of the Non-Fuel Adjustment Clause-Purchased Power Adjustment (Non-FAC PPA) which is a rate mechanism allowing Big Rivers to recover certain costs of purchased power that are not recoverable through its Fuel Adjustment Clause (FAC). An accrual is recorded monthly to a regulatory asset or liability account based on the difference between the actual purchased power costs recoverable through the Non-FAC PPA and the purchased power base cost included in base rates. The balance in the regulatory asset or liability account as of June 30 each year is billed or refunded to members during the following twelve-month period beginning September 1 through August 31 of the following year.

The CCR Final Rule requires Big Rivers to address the eventual permanent closures of its coal ash ponds. Big Rivers believes it will face significant liabilities with respect to the treatment of the ash ponds at its Green Station and Station Two generating stations upon closure of the ash ponds. In accordance with FASB ASC 410-20, *Asset Retirement and Environmental Obligations – Asset Retirement Obligations* and under the RUS Uniform System of Accounts, Big Rivers initially recognized its coal ash pond AROs at fair value and subsequently adjusted for accretion expense and changes in estimated costs as of December 31, 2019 (Note 3).

On January 5, 2016, the KPSC issued an order in Case No. 2015-00333 approving Big Rivers' request to establish regulatory assets for the deferral of certain expenses it would incur for compliance with the CCR Final Rule, including accretion and depreciation expense related to the AROs and other incremental expenses. As of December 31, 2019, the total amount of CCR-related expenses and costs for asset retirement obligations deferred and included in Regulatory Assets on the Company's balance sheet was $21,103.

On July 21, 2015, the KPSC issued an order in Case No. 2014-00134 approving the Nebraska Consortium contracts and the Stipulation and Recommendation (the "Stipulation") between Big Rivers, the Office of the Attorney General, and the Kentucky Industrial Utility Customers (KIUC). The Stipulation stated that Nebraska margins would flow back to Big Rivers' members through the MRSM tariff if, for the previous year, certain financial metrics were achieved. For the year ended December 31, 2019, Big Rivers did not meet these requirements.

On August 29, 2018, the KPSC entered an order (Case No. 2018-00146) (i) finding that the Station Two units were no longer capable of the normal, continuous, reliable operation for the economically competitive production of electricity; (ii) finding that the Station Two contracts, except for the Joint Facilities Agreement, have therefore terminiated pursuant to their own terms; (iii) granting Big Rivers' request for authority to continue to operate Station Two under terms of the Station Two contracts for a period up to May 31, 2019;

and (iv) reserving a ruling on Big Rivers' request for authority to establish a Station Two regulatory asset. The remaining issues in this case were resolved with a Settlement Agreement between the Office of the Attorney General, the KIUC, and Big Rivers. The Settlement Agreement provided that the KPSC would approve the Station Two regulatory asset, that Big Rivers would establish a Station Two Depreciation Credit, starting in the month that Station Two is retired, to reduce customer bills based on the revenues Big Rivers would receive associated with depreciation expense on Station Two, that Big Rivers would establish a TIER Credit to reduce existing regulatory assets in the event Big Rivers achieves a TIER in excess of 1.45 in 2019 or 2020, and that in Big Rivers' next general rate case, the intervenors would support Big Rivers' recovery of the Station Two, Wilson plant, and, conditionally, the Coleman plant regulatory assets. On October 23, 2018, the KPSC issued a final order approving the Settlement Agreement in full. RUS approved the Settlement Agreement on February 22, 2019. Big Rivers retired Station Two on January 31, 2019. On February 26, 2019, Big Rivers filed revised tariff sheets with the KPSC to incorporate the Station Two Depreciation Credit. For the year ended December 31, 2019, the amount of Station Two assets transferred from utility plant to the Station Two regulatory asset was $84,936; the Station Two Depreciation Credit was $5,490; and Big Rivers' TIER Credit was $27,743.

On December 12, 2018, the KPSC approved Big Rivers' request to phase out its existing Demand Side Management (DSM) programs, to establish a new Low-Income Weatherization Program, and to establish a regulatory liability for the savings associated with the phase out of the existing DSM programs.

(Dollars in thousands)

In connection with the rate matters discussed above, the following tables provide a summary of Regulatory Assets and Liabilities reflected in the Balance Sheet as of December 31, 2019 and 2018:

		Regulatory assets	
		2019	**2018**
Coleman plant deferred depreciation	$	37,245	31,418
Wilson plant deferred depreciation		120,544	99,949
Rate case expense and other		676	676
Non-FAC PPA		8,313	8,293
Asset retirement obligations		13,169	10,272
Environmental costs (CCR)		7,934	1,068
Station Two contract termination		90,424	2,306
Subtotal regulatory assets	$	278,305	153,982
TIER Credit		(27,743)	—
Total regulatory assets	$	250,562	153,982

		Regulatory liabilities	
		2019	**2018**
Economic reserve-member rate mitigation	$	1,406	2,031
Demand side management		705	—
Total regulatory liabilities	$	2,111	2,031

On February 7, 2020, Big Rivers filed an application with the KPSC for approval of Big Rivers' 2020 Environmental Compliance Plan ("2020 ECP"), which includes requests for authority to close the Green Station and Station Two ash ponds, to move the Coleman Station flue gas desulfurization system (FGD) to Wilson Station to replace Wilson's FGD, and to complete several CCR-related projects. Big Rivers also requested authority to close the Coleman Station ash ponds should Big Rivers be required to do so in compliance with certain environmental regulations. The total capital cost of the projects included in the 2020 ECP (including the Coleman ash ponds) is projected to be $232,340. In the 2020 ECP proceeding, Big Rivers is also requesting the authority to recover through its existing environmental surcharge tariff rider the costs of the 2020 ECP, including the costs of the new projects in the plan as well as the costs of Big Rivers' existing CCR-related regulatory assets. The 2020 ECP case is pending.

On February 28, 2020, Big Rivers filed an application with the KPSC seeking approval to cease the deferral of the Coleman and Wilson Station depreciation expense; to retire the Coleman Station and Reid Station Unit 1 subject to receiving the KPSC's and RUS' approval to establish regulatory assets for the remaining net book value of both stations and for other costs related to their retirement, including the cost to decommission the units; to cease deferring DSM-related savings through the DSM regulatory liability; to recover through existing rates the Coleman and Wilson depreciation-related regulatory assets, the Station

Two contract termination-related regulatory asset, and the Coleman and Reid Unit 1 retirement-related regulatory assets (collectively, the "Smelter Loss Mitigation Regulatory Assets") by amortizing the balance of those assets (less the current balance of the DSM regulatory liability and 80% of the headroom Big Rivers has in equity over the minimum equity levels required by its loan covenants) over the remaining life of all-requirements contracts with its Members (i.e., through December 31, 2043). In addition, Big Rivers proposes a new TIER credit, and the modification of its MRSM tariff, under which one-half of the margins Big Rivers earns over the margins that would produce a 1.30 TIER is credited to Members and the other half is used to further reduce the balances of the Smelter Loss Mitigation Regulatory Assets. This case is pending.

(6) Income Taxes

At December 31, 2019, Big Rivers had a Non-Patron Net Operating Loss (NOL) Carryforward of approximately $30,467 expiring at various times between 2029 and 2039 which was entirely offset by a full valuation allowance.

At December 31, 2019, the Company also had an Alternative Minimum Tax (AMT) Credit Carryforward of $107. The Company expects to claim a refund of AMT credit carryforwards of $54 on its 2019 federal tax return.

On December 22, 2017, the U.S. government enacted comprehensive Federal tax legislation commonly referred to as the Tax Cuts and Jobs Act of 2017 (the "Tax Act"). The Tax Act significantly modified the U.S. corporate income tax system by, among other things, reducing the corporate income tax rate from 35% to 21% for tax years beginning after December 31, 2017. The income tax effects of changes in tax laws are recognized in the period when enacted. In addition to the reduction to the corporate tax rate, the Tax Act also repealed AMT as well as IRC Section 168(k)(4). For tax years beginning in 2018, 2019, and 2020, to the extent that AMT credit carryovers exceed regular tax liability (as reduced by certain other credits), 50% of the excess AMT credit carryovers are refundable. Any remaining AMT credits will be fully refundable in 2021. The Tax Act also requires deferred AMT refunds previously reported on the balance sheet in Other Deferred Charges to be reported as a long-term receivable. At December 31, 2019 and 2018, Big Rivers reported $54 and $200, respectively, as Federal Tax Receivable.

(Dollars in thousands)

The components of the net deferred tax assets as of December 31, 2019 and 2018 were as follows:

		2019	2018
Deferred tax assets:			
Net operating loss carryforward	$	7,602	4,223
Fixed asset basis difference		1,730	707
Total deferred tax assets		9,332	4,930
Deferred tax liabilities:			
RUS Series B Note		(3,343)	(3,343)
Bond refunding costs		(62)	(67)
Total deferred tax liabilities		(3,405)	(3,410)
Net deferred tax asset (prevaluation allowance)		5,927	1,520
Valuation allowance		(5,927)	(1,520)
Net deferred tax asset	$	—	—

A reconciliation of the Company's effective tax rate for 2019, 2018, and 2017 is as follows:

	2019	2018	2017
Federal rate	21.0%	21.0%	35.0%
State rate – net of federal benefit	4.0	4.0	4.7
Permanent differences	0.5	0.3	0.4
Patronage allocation to members	(25.4)	(25.3)	(40.2)
Alternative minimum tax credit recovery	(0.3)	(0.3)	—
Effective tax rate	(0.2)%	(0.3)%	(0.1)%

The Company files a federal income tax return, as well as certain state income tax returns. The years currently open for federal income tax examination are 2016 through 2018. The major state tax jurisdiction currently open for income tax examination is Kentucky for years 2015 through 2018. The Company has not recorded any unrecognized tax benefits or liabilities related to federal or state income taxes.

The Company classifies tax-related interest and penalties as an operating expense on the statement of operations and accrued expenses on the balance sheet. No material tax-related interest or penalties have been recorded during 2019, 2018, or 2017.

(7) Pension Plans

(a) Defined-Benefit Plans

Big Rivers has a noncontributory defined-benefit pension plan covering substantially all employees who meet minimum age and service requirements and who were employed by the Company prior to the plan closure dates cited below. The plan provides benefits based on the participants' years of service and the five highest consecutive years' compensation during the last ten years of employment. Big Rivers' policy is to fund such plan in accordance with the requirements of the Employee Retirement Income Security Act of 1974.

Prior to January 1, 2014, Big Rivers had two separate defined-benefit pension plans. The salaried employees' defined-benefit plan was closed to new entrants effective January 1, 2008, and the bargaining employees' defined-benefit plan was closed to new hires effective November 1, 2008. The Company simultaneously established base contribution accounts in the defined-contribution thrift and 401(k) savings plans, which were renamed as the retirement savings plans. The base contribution account for an eligible employee, which is one who meets the minimum age and service requirements, but for whom membership in the defined-benefit plan is closed, is funded by employer contributions based on graduated percentages of the employee's pay, depending on his or her age.

In order to meet minimum participation requirements, Big Rivers' salaried employees defined benefit plan was merged into the bargaining employees defined benefit plan. The merger was effective January 1, 2014 for purposes of Internal Revenue Code and effective December 31, 2014 for all other purposes. Effective January 1, 2017, participation was frozen in the merged plan for highly compensated employees in order to comply with IRS code section 401(a)(26).

The Company has adopted FASB ASC 715, *Compensation – Retirement Benefits*, including the requirement to recognize the funded status of its pension plan and other postretirement plans (Note 11 – Postretirement Benefits Other than Pensions). ASC 715 defines the funded status of a defined-benefit pension plan as the fair value of its assets less its projected benefit obligation, which includes projected salary increases and defines the funded status of any other postretirement plan as the fair value of its assets less its accumulated postretirement benefit obligation.

ASC 715 also requires an employer to measure the funded status of a plan as of the date of its year-end balance sheet and requires disclosure in the notes to the financial statements of certain additional information related to net periodic benefit costs for the next fiscal year. The Company's pension and other postretirement benefit plans are measured as of December 31, 2019 and 2018.

(Dollars in thousands)

The following provides an overview of the Company's noncontributory defined-benefit pension plan.

A reconciliation of the Company's benefit obligations of its noncontributory defined-benefit pension plan at December 31, 2019 and 2018 is as follows:

		2019	2018
Benefit obligation – beginning of period	$	20,962	22,176
Service cost – benefits earned during the period		599	766
Interest cost on projected benefit obligation		834	762
Benefits paid		(2,233)	(2,304)
Actuarial loss (gain)		1,458	(438)
Benefit obligation – end of period	$	21,620	20,962

Big Rivers' defined-benefit pension plan provides retirees and terminated employees with a lump-sum payment option. Benefits paid in 2019 include lump-sum payments totaling $2,193 – the result of five retirees or terminated employees electing the lump-sum payment option. Benefits paid in 2018 include lump-sum payments totaling $2,264 – the result of four retirees or terminated employees electing the lump-sum payment option.

The accumulated benefit obligation for the defined-benefit pension plan was $17,545 and $16,934 at December 31, 2019 and 2018, respectively.

A reconciliation of the Company's pension plan assets at December 31, 2019 and 2018 is as follows:

		2019	2018
Fair value of plan assets – beginning of period	$	18,973	19,851
Employer contributions		—	1,971
Actual return on plan assets		4,158	(545)
Benefits paid		(2,233)	(2,304)
Fair value of plan assets – end of period	$	20,898	18,973

The funded status of the Company's pension plan at December 31, 2019 and 2018 is as follows:

		2019	2018
Benefit obligation – end of period	$	(21,620)	(20,962)
Fair value of plan assets – end of period		20,898	18,973
Funded status	$	(722)	(1,989)

(Dollars in thousands)

Components of net periodic pension costs for the years ended December 31, 2019, 2018, and 2017 were as follows:

		2019	2018	2017
Service cost	$	599	766	798
Interest cost		834	762	801
Expected return on plan assets		(1,194)	(1,243)	(1,262)
Amortization of prior service cost		(33)	(33)	(33)
Amortization of actuarial loss		325	304	409
Settlement loss		268	533	—
Net periodic benefit cost	$	799	1,089	713

A reconciliation of the pension plan amounts in accumulated other comprehensive income at December 31, 2019 and 2018 is as follows:

		2019	2018
Prior service cost	$	22	55
Unamortized actuarial loss		(2,617)	(4,716)
Accumulated other comprehensive income	$	(2,595)	(4,661)

In 2020, $33 of prior service credit and $47 of actuarial loss is expected to be amortized to periodic pension benefit cost.

The recognized adjustments to other comprehensive income at December 31, 2019 and 2018 are as follows:

		2019	2018
Prior service cost	$	—	—
Unamortized actuarial gain/(loss)		(2,065)	546
Other comprehensive (income)/loss	$	(2,065)	546

At December 31, 2019 and 2018, amounts recognized in the balance sheets were as follows:

		2019	2018
Deferred credits and other	$	(722)	(1,989)

(Dollars in thousands)

Assumptions used to develop the projected benefit obligation and determine the net periodic benefit cost were as follows:

	2019	2018	2017
Discount rate – projected benefit obligation	2.99%	4.12%	3.44%
Discount rate – net periodic benefit cost	4.12	3.44	3.80
Rates of increase in compensation levels	4.00	4.00	4.00
Expected long-term rate of return on assets	6.50	6.50	7.00

The expected long-term rate of return on plan assets for determining net periodic pension cost for each fiscal year is chosen by the Company from a best estimate range determined by applying anticipated long-term returns and long-term volatility for various asset categories to the target asset allocation of the plan. The expected long-term rate of return on assets is based on the median expected rate of return for a passively-managed portfolio plus the incremental return from active management.

Big Rivers utilizes a third-party investment manager for the plan assets, and has communicated thereto the Company's Retirement Plan Investment Policy, including a target asset allocation mix of 50% U.S. equities (an acceptable range of 45%–55%), 15% international equities (an acceptable range of 10%–20%), and 35% fixed income (an acceptable range of 30%–40%). As of December 31, 2019 and 2018, the investment allocation was 55% and 54%, respectively, in U.S. equities, 12% and 11%, respectively, in international equities, and 33% and 35%, respectively, in fixed income. The objective of the investment program seeks to (a) maximize return on investment, (b) minimize volatility, (c) minimize Company contributions, and (d) provide the employee benefit in accordance with the plan. The portfolio is well diversified and of high quality. The average quality of the fixed income investments must be "A" or better. The equity portfolio must also be of investment grade quality. The performance of the investment manager is reviewed semiannually.

(Dollars in thousands)

At December 31, 2019 and 2018, the fair value of Big Rivers' defined-benefit pension plan assets by asset category are as follows:

	Level 1	Level 2	December 31, 2019
Cash and money market	$ 607	—	607
Equity securities:			
Common stock	8,792	—	8,792
Preferred stock	538	—	538
Mutual funds	5,183	—	5,183
Fixed:			
Tax exempt bonds and notes	—	2,250	2,250
Corporate bonds and notes	—	3,528	3,528
	$ 15,120	5,778	20,898

	Level 1	Level 2	December 31, 2018
Cash and money market	$ 932	—	932
Equity securities:			
Common stock	6,939	—	6,939
Preferred stock	425	—	425
Mutual funds	5,478	—	5,478
Fixed:			
Tax exempt bonds and notes	—	2,426	2,426
Corporate bonds and notes	—	2,773	2,773
	$ 13,774	5,199	18,973

(Dollars in thousands)

Expected retiree pension benefit payments projected to be required during the years following 2019 are as follows:

		Amount
Year ending December 31:		
2020	$	1,099
2021		1,785
2022		1,584
2023		1,729
2024		2,412
Thereafter		9,089
Total	$	17,698

(b) *Defined-Contribution Plans*

Big Rivers has two defined-contribution retirement plans covering substantially all employees who meet minimum age and service requirements. Each plan has a thrift and 401(k) savings section allowing employees to contribute up to 75% of pay on a pretax and/or after-tax basis, with employer matching contributions equal to 60% of the first 6% contributed by the employee on a pretax basis.

A base contribution retirement section was added and the plan name changed from Thrift and 401(k) Savings to Retirement Savings, effective January 1, 2008, for the salaried plan and November 1, 2008, for the bargaining plan. The base contribution account is funded by employer contributions based on graduated percentages of pay, depending on the employee's age.

The Company's expense under these plans was $4,749, $5,124, and $5,087 for the years ended December 31, 2019, 2018 and 2017, respectively.

(c) *Deferred Compensation Plan*

Big Rivers sponsors a nonqualified deferred compensation plan for its eligible employees who are members of a select group of management or highly compensated employees. The purpose of the plan is to allow participants to receive contributions or make deferrals that they could not receive or make under the salaried employees qualified defined-contribution retirement savings plan (formerly, the thrift and 401(k) savings plan) as a result of nondiscrimination rules and other limitations applicable to the qualified plan under the Internal Revenue Code. The nonqualified plan also allows a participant to defer a percentage of his or her pay on a pretax basis.

The nonqualified deferred compensation plan is unfunded, but the Company has chosen to finance its obligations under the plan, including any employee deferrals, through a rabbi trust. The trust assets remain a part of the Company's general assets, subject to the claims of its creditors. The employer contribution for December 31, 2019 and 2018 was $156 and $136, respectively, and the deferred compensation expense for December 31, 2019, 2018, and 2017 was $248, $136, and $103, respectively. As of December 31, 2019, the trust asset was $895 and the deferred liability was $895.

(Dollars in thousands)

(8) Restricted Investments

The amortized costs and fair values (Level 1 measurement) of Big Rivers' restricted investments held for Member rate mitigation at December 31, 2019 and 2018 were as follows:

	2019 Amortized costs	2019 Fair values	2018 Amortized costs	2018 Fair values
Debt securities:				
U.S. Treasury – Money Market	$ 1,391	1,391	691	691
Total	$ 1,391	1,391	691	691

There were no gross unrealized gains or losses on restricted investments at December 31, 2019 and 2018.

	2019 Gains	2019 Losses	2018 Gains	2018 Losses
Debt securities:				
U.S. Treasury – Money Market	$ —	—	—	—
Total	$ —	—	—	—

Debt securities at December 31, 2019 and 2018 mature, according to their contractual terms, as follows (actual maturities may differ due to call or prepayment rights):

	2019 Amortized costs	2019 Fair values	2018 Amortized costs	2018 Fair values
In one year or less	$ 1,391	1,391	691	691
Total	$ 1,391	1,391	691	691

(Dollars in thousands)

Gross unrealized losses on investments and the fair values of the related securities, aggregated by investment category and length of time that individual securities have been in a continuous unrealized loss position at December 31, 2019 and 2018 were as follows:

	2019		2018	
	Less than 12 months		Less than 12 months	
	Losses	Fair values	Losses	Fair values
Debt securities:				
U.S. Treasury – Money Market	$ —	1,391	—	691
Total	$ —	1,391	—	691

None of the Company's restricted investments held for Member rate mitigation were in an unrealized loss position as of December 31, 2019 or 2018.

In conjunction with the CFC $302,000 secured term loan (Note 4), Big Rivers was required to invest in CFC CTCs equal to 14.29% of the Refinance Note. Proceeds of the Equity Note were used to purchase the investments in CTCs as required under the loan agreement. The interest rate on the CTCs is fixed at 4.28% and is equal to 80% of the Equity Note rate of 5.35%. The CTCs cannot be traded in the market, and therefore, they do not have readily determinable fair values and are accounted for at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar investment of the same issuer.. The Company's investment in these CTCs at December 31, 2019 and 2018 was $31,609 and $33,416, respectively.

(9) Short-Term Investments

At December 31, 2019, the Company's short-term investments included $5,022 of investments in debt securities and $4,415 of investments in certificates of deposits (CDs), which are both included in the Company's balance sheet at amortized cost. At December 31, 2018, the Company's short-term investments included $4,987 of investments in debt securities and $4,620 of investments in CDs, which are both included in the Company's balance sheet at amortized cost. The investments in debt securities are classified as held-to-maturity, based on management's intent and ability to hold them to maturity. Both CDs and investments in debt securities are included in "Cash and Cash Equivalents" (if the orginal maturity date is less than or equal to three months) or "Short-term-Iinvestments" (if the original maturity date is greater than three months but less than one year).

(Dollars in thousands)

The amortized costs and fair values (Level 1 measurement) of Big Rivers' short-term investments at December 31, 2019 and 2018, were as follows:

		2019		2018	
		Amortized costs	Fair values	Amortized costs	Fair values
Debt securities:					
Corporate notes	$	1,223	1,226	1,215	1,219
U.S. Treasuries		3,799	3,812	3,390	3,408
U.S. Government agency		—	—	382	384
Total debt securities		5,022	5,038	4,987	5,011
Other:					
Certificates of deposit		4,415	4,423	4,620	4,615
Total short-term investments	$	9,437	9,461	9,607	9,626

Gross unrealized gains and losses on short-term investments at December 31, 2019 and 2018, were as follows:

		2019		2018	
		Gains	Losses	Gains	Losses
Debt securities:					
Corporate notes	$	3	—	4	—
U.S. Treasuries		13	—	18	—
U.S. government agency		—	—	2	—
Total debt securities		16	—	24	—
Other:					
Certificates of deposit		8	—	—	(5)
Total short-term investments	$	24	—	24	(5)

(10) Fair Value of Other Financial Instruments

FASB ASC 820 defines fair value, establishes a framework for measuring fair value and expands disclosures about fair value measures. It applies under other accounting standards that require or permit fair value measurements and does not require any new fair value measurements.

The carrying value of accounts receivable and accounts payable approximate fair value due to their short maturity. At December 31, 2019 and 2018, the Company's cash and cash equivalents included short-term investments in an institutional U.S. government money market portfolio account classified as trading securities under ASC 320, *Investments – Debt and Equity Securities*, that were recorded at fair value which was determined using quoted market prices for identical assets without regard to valuation adjustment or block discount (a Level 1 measure), as follows:

(Dollars in thousands)

		2019	2018
Institutional U.S. government money market portfolio	$	28,744	35,606

It was not practical to estimate the fair value of patronage capital included within other deposits and investments due to these being untraded companies.

Big Rivers' long-term debt at December 31, 2019, consisted of CFC notes totaling $246,941, a CoBank note in the amount of $171,442, an RUS note totaling $195,027, RUS guaranteed FFB loans totaling $43,064, and fixed-rate pollution control bonds in the amount of $83,300 (Note 4). The CFC, CoBank, RUS and FFB debt cannot be traded in the market, and therefore, a value other than their outstanding principal amounts cannot be determined. At December 31, 2019, the fair value of Big Rivers' fixed-rate Series 2010A Bonds, was determined based on quoted prices available for the most recent trades of those bonds occurring in the dealer market on or near the balance sheet date (Level 1 measure) and totaled $84,341.

(11) Postretirement Benefits Other than Pensions

Big Rivers provides certain postretirement medical benefits for retired employees and their spouses. Generally, except for generation bargaining retirees, Big Rivers pays 85% of the premium cost for all retirees age 62 to 65. The Company pays 25% of the premium cost for spouses age 55 to 61. Beginning at age 65, the Company pays 25% of the premium cost if the retiree is enrolled in Medicare Part B. For each generation bargaining retiree, Big Rivers establishes a retiree medical account at retirement equal to $1.25 per year of service up to 30 years. The account balance is credited with interest based on the 10-year treasury rate subject to a minimum of 4% and a maximum of 7%. The account is to be used for the sole purpose of paying the premium cost for the retiree and spouse.

The discount rates used in computing the postretirement benefit obligation and net periodic benefit cost were as follows:

	2019	2018	2017
Discount rate – projected benefit obligation	3.34%	4.34%	3.66%
Discount rate – net periodic benefit cost	4.34	3.66	4.21

(Dollars in thousands)

The healthcare cost trend rate assumptions as of December 31, 2019 and 2018 were as follows:

	2019	2018
Initial trend rate	5.98%	6.24%
Ultimate trend rate	4.50	4.50
Year ultimate trend is reached	2038	2038

A one-percentage-point change in assumed healthcare cost trend rates would have the following effects:

		2019	2018
One-percentage-point decrease:			
Effect on total service and interest cost components	$	(113)	(136)
Effect on year-end benefit obligation		(1,321)	(1,265)
One-percentage-point increase:			
Effect on total service and interest cost components	$	143	175
Effect on year-end benefit obligation		1,654	1,553

A reconciliation of the Company's benefit obligations of its postretirement plan at December 31, 2019 and 2018 is as follows:

		2019	2018
Benefit obligation – beginning of period	$	13,892	14,348
Service cost – benefits earned during the period		447	551
Interest cost on projected benefit obligation		544	530
Participant contributions		369	288
Plan amendments		227	—
Plan curtailments		98	—
Special termination benefits		204	—
Benefits paid		(1,829)	(1,412)
Actuarial loss (gain)		722	(413)
Benefit obligation – end of period	$	14,674	13,892

(Dollars in thousands)

Big Rivers revised the eligibility requirements for postretirement medical with regard to age and service. Beginning January 1, 2013, eligibility for retirement is age 62 with 10 years of service. The service requirement is waived for active employees on December 31, 2012 who will not have 10 years of service at age 62. A reconciliation of the Company's postretirement plan assets at December 31, 2019 and 2018 is as follows:

		2019	2018
Fair value of plan assets – beginning of period	$	—	—
Employer contributions		1,460	1,124
Participant contributions		369	288
Benefits paid		(1,829)	(1,412)
Fair value of plan assets – end of period	$	—	—

The funded status of the Company's postretirement plan at December 31, 2019 and 2018 is as follows:

		2019	2018
Benefit obligation – end of period	$	(14,674)	(13,892)
Fair value of plan assets – end of period		—	—
Funded status	$	(14,674)	(13,892)

The components of net periodic postretirement benefit costs for the years ended December 31, 2019, 2018, and 2017 were as follows:

		2019	2018	2017
Service cost	$	447	551	475
Interest cost		544	530	551
Amortization of prior service cost		(138)	(138)	(138)
Amortization of gain		(198)	(30)	(170)
Curtailment recognized		(49)	—	—
Special termination benefits		204	—	—
Net periodic benefit cost	$	810	913	718

(Dollars in thousands)

A reconciliation of the postretirement plan amounts in accumulated other comprehensive income at December 31, 2019 and 2018 is as follows:

		2019	2018
Prior service credit	$	605	1,018
Unamortized actuarial gain		1,963	2,981
Accumulated other comprehensive income	$	2,568	3,999

In 2020, $112 of prior service cost and $37 of actuarial gain is expected to be amortized to periodic benefit cost.

The recognized adjustments to other comprehensive income (loss) at December 31, 2019 and 2018 are as follows:

		2019	2018
Prior service cost	$	(414)	(138)
Unamortized actuarial gain (loss)		(820)	413
Amortization of net gain		(198)	(30)
Other comprehensive income/(loss)	$	(1,432)	245

At December 31, 2019 and 2018, amounts recognized in the balance sheets were as follows:

		2019	2018
Accounts payable	$	(1,445)	(1,151)
Deferred credits and other		(13,229)	(12,741)
Net amount recognized	$	(14,674)	(13,892)

(Dollars in thousands)

Expected retiree benefit payments projected to be required during the years following 2019 are as follows:

		Amount
Year:		
2020	$	1,445
2021		1,281
2022		1,169
2023		1,042
2024		944
Thereafter		4,292
Total	$	10,173

In addition to the postretirement plan discussed above, Big Rivers has another postretirement benefit plan, which vests a portion of accrued sick leave benefits to salaried employees upon retirement or death. To the extent an employee's sick leave hour balance exceeds 480 hours, such excess hours are paid at 20% of the employee's base hourly rate at the time of retirement or death. The accumulated obligation recorded for the postretirement sick leave benefit is $676 and $682 at December 31, 2019 and 2018, respectively. The postretirement expense recorded was $61, $72, and $83, for 2019, 2018, and 2017, respectively, and the benefits paid were $67, $21, and $5 for 2019, 2018, and 2017, respectively.

(12) Related Parties

For the years ended December 31, 2019, 2018, and 2017, Big Rivers had tariff sales to its members of $256,280, $263,792, and $248,389, respectively. In addition, for the years ended December 31, 2019, 2018, and 2017, Big Rivers had certain sales to Kenergy for the Domtar Paper Co. load of $4,182, $3,833, and $2,336, respectively.

At December 31, 2019 and 2018, Big Rivers had accounts receivable from its members of $20,903 and $21,826, respectively.

(13) Commitments and Contingencies

Big Rivers is involved in ongoing litigation with the City of Henderson and the City of Henderson Utility Commission doing business as Henderson Municipal Power and Light (collectively, "HMP&L") in which Big Rivers is seeking damages from HMP&L relating to HMP&L's refusal to pay the costs associated with Excess Henderson Energy produced at Station Two. In December 2017, Big Rivers and HMP&L entered into an agreement to settle all claims relating to Excess Henderson Energy. Under the settlement agreement, HMP&L agreed to be responsible for all costs related to Excess Henderson Energy generated after the effective date of the settlement agreement. Big Rivers has filed a claim against HMP&L for those costs, and HMP&L has filed a counterclaim alleging that if HMP&L is required to pay the costs of the Excess Henderson Energy, it is entitled to an offset for the revenues related to that energy. Big Rivers does not dispute that HMP&L is entitled to the Excess Henderson Energy-related revenues if it pays the costs of that energy.

On May 1, 2018, the contracts under which Big Rivers was operating Station Two terminated as a result of the Station Two units no longer being capable of the economically competitive production of electricity (Note 5). To allow HMP&L time to make alternate arrangements for its power supply, Big Rivers continued to operate the units under the terms of the Station Two contracts until the units were retired on January 31, 2019. The termination of the Station Two contracts has given rise to disputes between the parties, including a declaratory judgment action HMP&L has filed relating to the interpretation of the deed to the real estate on which the Station Two units were constructed, a claim HMP&L has filed seeking amounts HMP&L claims it is owed as a result of the annual budget settlement process that occurred during the term of the Station Two contracts, and a proceeding Big Rivers filed with the KPSC to resolve all outstanding disputes between it and HMP&L. The Company believes there will be no material adverse effect to its financial statements when the litigation and disputes with HMP&L are resolved.

Big Rivers is involved in other litigation arising in the normal course of business. While the results of such litigation cannot be predicted with certainty, management, based upon advice of counsel, believes that the final outcome will not have a material adverse effect on the financial statements.

(14) Subsequent Events

See Note 4(d) relating to the pollution control bonds.

See Note 4(h) relating to the amendment and extension of the line of credit.

See Note 5 relating to Case No. 2020-00064, *Application of Big Rivers Electric Corporation for Approval to Modify its MRSM Tariff, Cease Deferring Depreciation Expenses, Establish Regulatory Assets, Amortize Regulatory Assets, and Other Appropriate Relief*, which Big Rivers anticipates will begin in part in December 2020 and in full beginning January 2021, filed with the KPSC on February 28, 2020.

In March 2020, the World Health Organization declared the novel strain of the coronavirus (COVID-19) a global pandemic and recommended containment and mitigation measures worldwide. As of the date of this filing, the Company does not expect the COVID-19 disruption to materially impact its 2020 results of operations or financial position. However, the Company cannot reasonably estimate the overall length or severity of this pandemic, or the extent to which a prolonged disruption may impact the Company's financial position or results of operations beyond 2020.

Management evaluated subsequent events up to and including April 15, 2020, the date the financial statements were available to be issued.

KPMG LLP
Suite 2600
400 West Market Street
Louisville, KY 40202

Independent Auditors' Report on Internal Control over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance With *Government Auditing Standards*

The Board of Directors
Big Rivers Electric Corporation

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, the financial statements of Big Rivers Electric Corporation (Big Rivers), which comprise the balance sheet as of December 31, 2019, and the related statements of operations, comprehensive income, equities, and cash flows for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated April 15, 2020.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered Big Rivers' internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of Big Rivers' internal control. Accordingly, we do not express an opinion on the effectiveness of Big Rivers' internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis. A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether Big Rivers' financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Big Rivers' internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Big Rivers' internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

KPMG LLP

Louisville, Kentucky
April 15, 2020

KPMG LLP
Suite 2600
400 West Market Street
Louisville, KY 40202

Independent Auditors' Report on Compliance with Aspects of Contractual Agreements and Regulatory Requirements for Electric Borrowers

The Board of Directors
Big Rivers Electric Corporation
Henderson, Kentucky:

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of Big Rivers Electric Corporation (Big Rivers), which comprise the balance sheet of Big Rivers as of December 31, 2019, and the related statements of operations, comprehensive income, equities, and cash flows for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated April 15, 2020. In accordance with *Government Auditing Standards*, we have also issued our report dated April 15, 2020, on our consideration of Big Rivers' internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, grant agreements and other matters. No reports other than the reports referred to above related to our audit have been furnished to management.

In connection with our audit, nothing came to our attention that caused us to believe that Big Rivers failed to comply with the terms, covenants, provisions, or conditions of their loan, grant, and security instruments as set forth in 7 CFR Part 1773, *Policy on Audits of Rural Utilities Service Borrowers,* §1773.33, insofar as they relate to accounting matters as enumerated below.

- Accounting procedures;
- Accumulating and recording labor, material, and overhead costs, and the distribution of these costs to construction, retirement, and maintenance or other expense accounts;
- Reconciling property records to the general ledger;
- Clearing construction accounts and accruing depreciation on completed construction;
- Recording the retirement of property;
- Seeking approval of the sale, lease or transfer of capital assets and disposition of proceeds for the sale or lease of plant, material, or scrap;
- Maintaining control over materials and supplies;
- Preparing Financial and Operating Reports;
- Obtaining written RUS approval to enter into any contract for the management, operation, or maintenance of the borrower's system if the contract covers all or substantially all of the electric system;
- Disclosing material related party transactions in the financial statements in accordance with accounting principles generally accepted in the United States of America;
- Recording depreciation in accordance with accounting principles generally accepted in the United States of America;
- Complying with the requirements for the detailed schedule of deferred debits and deferred credits; and

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- Complying with the requirements for the detailed schedule of investments.

Our audit was not directed primarily toward obtaining knowledge of noncompliance. Accordingly, had we performed additional procedures, other matters may have come to our attention regarding Big Rivers' noncompliance with the above-referenced terms, covenants, provisions, or conditions of the contractual agreements and regulatory requirements, insofar as they relate to accounting matters as enumerated above.

The purpose of this report on compliance with aspects of contractual agreements and regulatory requirements for electric borrowers is solely to describe the scope of our testing of compliance and the results of that testing, and not to provide an opinion on compliance based on the requirements of 7 CFR Part 1773, *Policy on Audits of Rural Utilities Service Borrowers and Grantees*. Accordingly, this report is not suitable for any other purpose.

KPMG LLP

Louisville, Kentucky
April 15, 2020

BIG RIVERS ELECTRIC CORPORATION

DETAILED SCHEDULE OF DEFERRED DEBITS AND CREDITS AS OF DECEMBER 31, 2019

DEFERRED DEBITS:

Other Deferred Debits	$	5,427,154
RUS Part A, Section B, Line 30		5,427,154
Regulatory Assets		250,562,563
Financing Fees		2,685,007
Deferred Income Taxes		53,612
DEFERRED CHARGES AND OTHER	**$**	**258,728,336**

DEFERRED CREDITS:

Regulatory liabilities – Member Rate Mitigation	$	1,406,058
Regulatory liabilities – Demand Side Management		704,839
Other Deferred Credits		1,673,371
RUS Part A, Section B, Line 59		3,784,268
Provision for pension and postretirement benefits		16,402,916
Provision for Asset Retirement Obligations		34,556,653
RUS Part A, Section B, Line 48		50,959,569
TOTAL DEFERRED CREDITS AND OTHER	**$**	**54,743,837**

BIG RIVERS ELECTRIC CORPORATION

DETAILED SCHEDULE OF INVESTMENTS AS OF DECEMBER 31, 2019

Investments in associated organizations	$	43,297,251
Investments in economic development projects		10,000
RUS Part A, Section B, Lines 7-11	**$**	**43,307,251**

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BIG RIVERS ELECTRIC CORPORATION

Financial Statements

December 31, 2020 and 2019

(With Independent Auditors' Report Thereon)

KPMG

KPMG LLP
Suite 2600
400 West Market Street
Louisville, KY 40202

Independent Auditors' Report

The Board of Directors and Members
Big Rivers Electric Corporation:

Report on the Financial Statements

We have audited the accompanying financial statements of Big Rivers Electric Corporation, which comprise the balance sheets as of December 31, 2020 and 2019, and the related statements of operations, comprehensive income, equities, and cash flows for each of the years in the three-year period ended December 31, 2020, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Big Rivers Electric Corporation as of December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2020 in accordance with U.S. generally accepted accounting principles.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated March 24, 2021, on our consideration of Big Rivers Electric Corporation's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of Big Rivers Electric Corporation's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering Big Rivers Electric Corporation's internal control over financial reporting and compliance.

KPMG LLP

Louisville, Kentucky
March 24, 2021

BIG RIVERS ELECTRIC CORPORATION

Balance Sheets

December 31, 2020 and 2019

(Dollars in thousands)

Assets		**2020**	**2019**
Utility plant – net	$	786,622	905,086
Restricted investments – Member rate mitigation		666	1,391
Restricted investments – NRUCFC Capital Term Certificates		—	31,609
Other deposits and investments		22,377	21,474
Current assets:			
Cash and cash equivalents		20,400	30,733
Restricted cash – construction funds trustee		353	353
Short-term investments		6,603	9,437
Accounts receivable		40,736	37,266
Fuel inventory		20,391	26,965
Nonfuel inventory		17,457	24,216
Prepaid expenses and other assets		5,129	4,298
Total current assets		111,069	133,268
Deferred charges and other assets:			
Regulatory assets		435,252	250,562
Federal tax receivable		—	54
Other		2,249	5,769
Total deferred charges and other assets		437,501	256,385
Total	$	1,358,235	1,349,213
Equities and Liabilities			
Capitalization:			
Equities	$	531,539	523,164
Long-term debt		663,780	706,269
Total capitalization		1,195,319	1,229,433
Current liabilities:			
Current maturities of long-term obligations		32,962	27,673
Purchased power payable		3,713	2,702
Accounts payable		23,535	22,328
Accrued expenses		9,345	9,054
Accrued interest		903	3,279
Regulatory liabilities – member rate mitigation		12,223	—
Total current liabilities		82,681	65,036
Deferred credits and other:			
Regulatory liabilities – member rate mitigation		1,111	2,111
Regulatory liabilities – TIER credit		20,000	—
Asset retirement obligations		40,410	34,557
Deferred credits and other		18,714	18,076
Total deferred credits and other		80,235	54,744
Commitments and contingencies (note 13)			
Total	$	1,358,235	1,349,213

See accompanying notes to financial statements.

BIG RIVERS ELECTRIC CORPORATION

Statements of Operations

Years ended December 31, 2020, 2019, and 2018

(Dollars in thousands)

		2020	2019	2018
Operating revenue	$	328,708	378,727	380,205
Total operating revenue		328,708	378,727	380,205
Operating expenses:				
Operations:				
Fuel for electric generation		83,939	119,831	128,555
Power purchased and interchanged		35,756	37,893	51,910
Production, excluding fuel		40,616	45,918	47,897
Transmission and other		37,042	38,078	34,359
Maintenance		36,947	39,066	47,897
Depreciation and amortization		54,630	49,356	20,709
Total operating expenses		288,930	330,142	331,327
Electric operating margin		39,778	48,585	48,878
Interest expense and other:				
Interest		33,393	36,937	38,568
Income tax benefit		(448)	(28)	(12)
Other – net		830	696	717
Total interest expense and other		33,775	37,605	39,273
Operating margin		6,003	10,980	9,605
Nonoperating margin:				
Interest income and other		4,192	5,735	5,625
Total nonoperating margin		4,192	5,735	5,625
Net margin	$	10,195	16,715	15,230

See accompanying notes to financial statements.

BIG RIVERS ELECTRIC CORPORATION

Statements of Comprehensive Income

Years ended December 31, 2020, 2019, and 2018

(Dollars in thousands)

	2020	2019	2018
Net margin	$ 10,195	16,715	15,230
Other comprehensive income (loss):			
Defined-benefit plans:			
Actuarial gain (loss)	(779)	1,506	(1,350)
Amortization of loss	296	559	804
Defined-benefit plans	(483)	2,065	(546)
Postretirement benefits other than pensions:			
Prior service cost	(112)	(414)	(138)
Actuarial gain (loss)	(1,205)	(820)	413
Amortization of gain	(20)	(198)	(30)
Postretirement benefits other than pensions	(1,337)	(1,432)	245
Other comprehensive income (loss)	(1,820)	633	(301)
Comprehensive income	$ 8,375	17,348	14,929

See accompanying notes to financial statements.

BIG RIVERS ELECTRIC CORPORATION

Statements of Equities

Years ended December 31, 2020, 2019, and 2018

(Dollars in thousands)

			Other equities			
		Retained margin	Donated capital and memberships	Consumers' contributions to debt service	Accumulated other comprehensive income/(loss)	Total equities
Balance – December 31, 2017	$	486,800	764	3,681	(358)	490,887
Net margin		15,230	—	—	—	15,230
Pension and postretirement benefit plans		—	—	—	(301)	(301)
Balance – December 31, 2018		502,030	764	3,681	(659)	505,816
Net margin		16,715	—	—	—	16,715
Pension and postretirement benefit plans		—	—	—	633	633
Balance – December 31, 2019		518,745	764	3,681	(26)	523,164
Net margin		10,195	—	—	—	10,195
Pension and postretirement benefit plans		—	—	—	(1,820)	(1,820)
Balance – December 31, 2020	$	528,940	764	3,681	(1,846)	531,539

See accompanying notes to financial statements.

BIG RIVERS ELECTRIC CORPORATION

Statements of Cash Flows

Years ended December 31, 2020, 2019, and 2018

(Dollars in thousands)

		2020	2019	2018
Cash flows from operating activities:				
Net margin	$	10,195	16,715	15,230
Adjustments to reconcile net margin to net cash provided by operating activities:				
Depreciation and amortization		55,329	49,407	24,365
Interest compounded – RUS Series A Note		—	—	26
Interest compounded – RUS Series B Note		11,557	10,911	10,300
Interest income compounded – RUS Cushion of Credit (advance payments unapplied)		(169)	(169)	(120)
Noncash member rate mitigation revenue		(9,532)	(15,578)	(5,525)
Changes in certain assets and liabilities:				
Accounts receivable		(3,470)	(3,876)	13,007
Fuel and nonfuel inventory		13,333	(1,289)	14,186
Prepaid expenses and other		(831)	2,663	(1,621)
Deferred charges		(12,042)	(13,162)	(3,239)
Purchased power payable		1,011	(2,632)	2,802
Accounts payable		(3,706)	46	1,726
Accrued expenses		(2,085)	(3,115)	2,634
Other – net		6,619	15,113	2,494
Net cash provided by operating activities		66,209	55,034	76,265
Cash flows from investing activities:				
Capital expenditures		(61,154)	(23,281)	(24,480)
Proceeds from restricted investments and deposits		43,902	21,655	1,097
Purchases of restricted investments and other deposits and investments		(12,854)	(22,462)	—
Proceeds of short-term investments		11,074	11,334	627
Purchases of short-term investments		(8,239)	(11,165)	(1,011)
Net cash used in investing activities		(27,271)	(23,919)	(23,767)
Cash flows from financing activities:				
Principal payments on long-term obligations		(141,337)	(38,495)	(93,488)
Proceeds from long-term obligations		93,241	—	43,595
Proceeds from line of credit		83,300	—	—
Payments on line of credit		(83,300)	—	(20,000)
Payments on debt issuance costs		(1,175)	—	—
Net cash used in financing activities		(49,271)	(38,495)	(69,893)
Net decrease in cash and cash equivalents		(10,333)	(7,380)	(17,395)
Cash and cash equivalents – beginning of year		31,086	38,466	55,861
Cash and cash equivalents – end of year	$	20,753	31,086	38,466
Supplemental cash flow information:				
Cash paid for interest	$	24,801	26,487	28,957
Cash paid for income taxes		—	2	1
Supplemental schedule of non-cash financing and investing activities:				
Change in regulatory assets associated with asset retirement obligations	$	13,476	2,897	5,294
Change in regulatory assets associated with utility plant		156,122	83,616	26,417
Purchases of utility plant in accounts payable		4,694	582	(1,236)

See accompanying notes to financial statements.

(1) Organization and Summary of Significant Accounting Policies

(a) General Information

Big Rivers Electric Corporation ("Big Rivers" or the "Company"), an electric generation and transmission cooperative, supplies wholesale power to its three member distribution cooperatives (Jackson Purchase Energy Corporation, Kenergy Corp. ("Kenergy"), and Meade County Rural Electric Cooperative Corporation) under all requirements contracts. Big Rivers also markets power to nonmember utilities, power marketers, and the Midcontinent Independent System Operator ("MISO"). The members provide electric power and energy to industrial, residential, and commercial customers located in portions of 22 western Kentucky counties. The wholesale power contracts with the members remain in effect until December 31, 2043. Rates to Big Rivers' members are established by the Kentucky Public Service Commission ("KPSC") and are subject to approval by the Rural Utilities Service ("RUS"). The financial statements of Big Rivers include the provisions of the Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") 980, *Regulated Operations*, and give recognition to the ratemaking and accounting practices of the KPSC and RUS.

(b) Estimates

The preparation of the financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses, and disclosure of contingent assets and liabilities. The estimates and assumptions used in the accompanying financial statements are based upon management's evaluation of the relevant facts and circumstances as of the date of the financial statements. Actual results may differ from those estimates.

(c) System of Accounts

Big Rivers maintains its accounting records in accordance with the Uniform System of Accounts as prescribed by RUS Bulletin 1767B-1, as adopted by the KPSC. These regulatory agencies retain authority and periodically issue orders on various accounting and ratemaking matters. Adjustments to RUS accounting have been made to make the financial statements consistent with generally accepted accounting principles in the United States of America.

(d) Revenue Recognition

Revenues generated from the Company's wholesale power sales are based on month-end meter readings and are recognized as earned when electricity is delivered. Capacity revenues are recognized in the period in which the Company provides capacity to a counterparty.

In May 2014, the FASB issued Accounting Standards Update ("ASU") 2014-09, *Revenue from Contracts with Customers (Topic 606)*. The main principle of the ASU is that an entity should recognize revenue to depict the transfer of promised goods or services to its customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. ASU 2014-09 became effective for the Company for its annual reporting period beginning on January 1, 2019.

(Dollars in thousands)

(e) Utility Plant and Depreciation

Utility plant is recorded at original cost, which includes the cost of contracted services, materials, labor, and overhead. In accordance with FASB ASC 835-20, *Interest – Capitalization of Interest,* the Company also includes capitalized interest on projects with an estimated total cost of $250 or more before consideration of capitalized interest. The interest capitalized is determined by applying the effective rate of Big Rivers' weighted average debt to the accumulated expenditures for qualifying projects included in construction in progress. Replacements of depreciable property units, except minor replacements, are charged to utility plant.

Depreciation of utility plant in service is recorded using the straight-line method over the estimated remaining service lives, as approved by the RUS and KPSC. During 2012, a depreciation study was completed to evaluate the remaining economic lives of the Company's assets and establish new depreciation rates. The study was approved by the RUS in 2012 and by the KPSC in 2014, with the rates becoming effective February 1, 2014. The annual composite depreciation rates used to compute depreciation expense are as follows:

Electric plant	**0.35%–25.38%**
Transmission plant	**1.36%–2.29%**
General plant	**3.76%–9.88%**

For 2020, 2019, and 2018, the average composite depreciation rates were 3.19%, 2.41%, and 2.52%, respectively. At the time utility plant is disposed of, the original cost plus cost of removal less salvage value of such utility plant is charged to accumulated depreciation, as required by the RUS. For 2020 and 2019, Big Rivers TIER credit was charged to depreciation and amortization as discussed in Note 5. There was no TIER credit in 2018.

(f) Impairment Review of Long-Lived Assets

Long-lived assets are reviewed as facts and circumstances indicate that the carrying amount may be impaired. FASB ASC 360, *Property, Plant, and Equipment*, requires the evaluation of impairment by comparing an asset's carrying value to the estimated future cash flows the asset is expected to generate over its remaining useful life. If this evaluation were to conclude that the future cash flows were not sufficient to recover the carrying value of the asset, an impairment charge would be recorded based on the difference between the asset's carrying amount and its fair value (less costs to sell for assets to be disposed of by sale) as a charge to net margin.

(g) Asset Retirement Obligations

FASB ASC 410-20, *Asset Retirement and Environmental Obligations – Asset Retirement Obligations*, requires legal obligations associated with the retirement of long-lived assets to be recognized at fair value when incurred and capitalized as part of the related long-lived asset. The liability is accreted each period based on the credit-adjusted risk-free rate of return that existed when the liability, or portion thereof, was initially measured. The period accretion is recognized as an increase in the carrying amount of the liability, and the capitalized cost is depreciated over the useful life of the related asset.

When the asset is retired, the entity settles the obligation for its recorded amount or incurs a gain or loss.

Big Rivers has recorded liabilities in its financial statements for asset retirement obligations ("AROs") related to the requirements of the U.S. Environmental Protection Agency's ("EPA") Disposal of Coal Combustion Residuals from Electric Utilities Rule ("CCR Final Rule") and Effluent Limitations Guidelines Rule ("ELG Final Rule") for the coal ash ponds located at its Green Station and the City of Henderson's Station Two ("Station Two") generating units.

The CCR Final Rule was published in the Federal Register on April 17, 2015 and provides a comprehensive set of requirements for the safe disposal of CCRs, commonly known as coal ash, from coal-fired power plants. The EPA subsequently published an update to the CCR Final Rule, effective on September 28, 2020, allowing facilities to submit a demonstration for an extension to the deadline for unlined CCR surface impoundments to stop receiving waste. The Company submitted the demonstration in November 2020 requesting approval to operate its Green Station ash pond until June 2022, with closure commencing at that time. The ELG Final Rule was published in the Federal Register on November 3, 2015, and sets limits on the levels of toxic metals in wastewater that can be discharged from power plants. See Note 3 for further discussion of the Company's AROs.

(h) Inventory

Inventories are carried at average cost and include coal, lime, limestone, oil and gas used for electric generation, and materials and supplies used for utility operations. Purchased emission allowances are recorded in inventory at actual cost by each vintage year. Allowances issued by the EPA are recorded at zero cost by each vintage year. Total purchased and EPA issued allowances are carried in inventory at a weighted average cost by each vintage year. Issuances of allowances are accounted for on a vintage basis using a monthly weighted average cost.

(i) Restricted Investments

Certain investments are restricted under KPSC order to establish reserve funds for Member rate mitigation. The 2012 loan agreement with the National Rural Utilities Cooperative Finance Corporation ("CFC") required as a condition of the extension of credit, that an equity ownership position be established by all borrowers. During 2020, the CFC agreed to Big Rivers utilizing the equity ownership position to pay off the 2012B CFC Equity Note.

The equity investments did not have readily determinable fair values and were accounted for at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar investment. No impairment or observable price changes were recorded during 2020, 2019, or 2018.

(j) Cash and Cash Equivalents

Big Rivers considers all short-term, highly liquid investments with original maturities of three months or less to be cash equivalents.

(k) Restricted Cash

Big Rivers has restricted cash related to proceeds from the sale of utility plant as required by the RUS loan contract.

(l) Short-Term Investments

Short-term investments include certificates of deposits ("CDs") held for investment and investments in debt securities. Both of the aforementioned short-term investments have original maturities greater than three months and less than one year.

(m) Regulatory Assets and Liabilities

FASB ASC 980 applies to regulated entities for which rates are designed to recover the costs of providing service. In accordance with this FASB topic, certain items that would normally be reflected in the statement of operations are deferred on the balance sheet. Regulatory assets represent probable future revenues associated with certain incurred costs, which will be recovered from members through the regulated rate-making process. Regulatory assets are reduced during the period(s) in which the related costs are recovered through rates or when future recovery is no longer probable. Conversely, regulatory liabilities represent future reductions in revenues associated with amounts that are to be credited, or refunded, to members through the regulated rate-making process. Regulatory liabilities are reduced during the period(s) in which the related amounts are refunded to members through rates or when future refunding of the amounts is no longer probable.

(n) Other Deposits and Investments

Other deposits and investments consist primarily of patronage capital, cash collateral/margin call deposits, investments in associated organizations, and investments held in trust for a deferred compensation plan. Investments held in trust consist primarily of equities and money market accounts and are carried at fair value. Remaining deposits are recorded at their original cost as their cost approximates fair value due to the nature of the deposit.

(o) Income Taxes

Big Rivers was formed as a tax-exempt cooperative organization as described in Internal Revenue Code Section 501(c)(12). To retain tax-exempt status under this section, at least 85% of Big Rivers' annual income must be generated from transactions with the Company's members. In 1983, sales to nonmembers resulted in Big Rivers failing to meet the 85% requirement. Until Big Rivers can meet the 85% member income requirement, the Company will not be eligible for tax-exempt status and will be treated as a taxable cooperative.

As a taxable cooperative, Big Rivers is entitled to exclude the amount of patronage allocations to members from taxable income. Income and expenses related to nonpatronage-sourced operations are taxable to Big Rivers. Big Rivers files a federal income tax return and certain state income tax returns.

Under the provisions of FASB ASC 740, *Income Taxes*, Big Rivers is required to record deferred tax assets and liabilities for temporary differences between amounts reported for financial reporting purposes and amounts reported for income tax purposes on the tax return. Deferred tax assets and liabilities are determined based upon these temporary differences using enacted tax rates for the year in which these differences are expected to reverse. Deferred income tax expense or benefit is based on the change in assets and liabilities from period to period, subject to an ongoing assessment of realization. Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return are recorded only when the more-likely-than-not recognition threshold is satisfied and measured at the largest amount of benefit that is greater than 50% likely of being realized upon settlement.

(p) Patronage Capital

As provided in the Company's bylaws, Big Rivers accounts for each year's patronage-sourced income, both operating and nonoperating, on a patronage basis. Notwithstanding any other provision of the bylaws, the amount to be allocated as patronage capital for a given year shall not be less than the greater of regular taxable patronage-sourced income or alternative minimum taxable patronage-sourced income.

(q) Derivatives

Management has reviewed the requirements of FASB ASC 815, *Derivatives and Hedging*, and has determined that certain contracts to which the Company is a party to meet the definition of a derivative under FASB ASC 815. The Company has elected the Normal Purchase and Normal Sale exception for these contracts, and therefore, the contracts are not required to be recognized at fair value in the financial statements.

(r) Fair Value Measurements

FASB ASC 820, *Fair Value Measurement*, defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal, or most advantageous, market for the asset or liability in an orderly transaction between market participants at the measurement date. ASC 820 establishes a three-level fair value hierarchy that prioritizes the inputs used to measure fair value. This hierarchy requires entities to maximize the use of observable inputs when possible. The three levels of inputs used to measure fair value are as follows:

- Level 1 – quoted prices in active markets for identical assets or liabilities;
- Level 2 – observable inputs other than quoted prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar assets and liabilities in markets that are not active; or other inputs that are observable or can be corroborated by observable market data; and
- Level 3 – unobservable inputs that are supported by little or no market activity and that are significant to the fair values of the assets or liabilities, including certain pricing models, discounted cash flow methodologies, and similar techniques that use significant unobservable inputs.

(s) Deferred Loan Costs

The Company capitalizes costs incurred in connection with long-term debt. These costs are amortized using the effective interest methodover the term of the respective debt financing agreements.

In accordance with ASU 2015-03, *Interest-Imputation of Interest (Subtopic 835-30)*, deferred loan costs related to a recognized debt liability are presented on the balance sheet as a direct deduction from the carrying amount of the related debt liability instead of being presented as an asset.

(t) Deferred Credits and Other

Deferred credits and other includes employee-related benefits and capacity revenue sales billed but not yet earned. Employee related benefits include, but are not limited to, pension and post-retirement benefit costs and amounted to $18,474 and $16,403 at December 31, 2020 and 2019, respectively. Deferred capacity revenue, which will be recognized within the next year, amounted to $240 and $1,673 at December 31, 2020 and 2019, respectively.

(u) New Accounting Guidance

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)* (ASU 2016-02). The main principle of this ASU requires that lessees recognize all leases (other than leases with a term of twelve months or less) on the balance sheet as lease liabilities, based upon the present value of the lease payments, with corresponding right of use assets. ASU 2016-02 also makes targeted changes to other aspects of the current guidance, including the lease classification criteria and the lessor accounting model. In May 2020, the FASB delayed the required implementation date of ASU 2016-02 for private entities by one year. The amendments in ASU 2016-02 will be effective for the Company for annual reporting periods beginning after December 15, 2021. The Company is currently assessing the impact of adopting the guidance but does not believe it will have a material effect.

(v) Reclassification

Certain items in 2019 have been reclassified on the financial statements for comparative purposes to conform with presentation in the current year financial statements. Specifically, the regulatory debit-TIER credit is reflected in depreciation and amortization on the Statements of Operations and the Statements of Cash Flows in the current year and was presented separately in the 2019 financial statements. The amount of the TIER credit is $33,334 and $27,743 in 2020 and 2019, respectively. The reclassification has no impact on net margins.

(w) Risks and Uncertainties

The outbreak of the COVID-19 pandemic has resulted in governments and customers enacting emergency measures to combat the spread of the virus. These measures have included the implementation of travel bans, self-imposed quarantine periods, social distancing, additional safety protocols, and temporary customer facility shutdowns. The KPSC ordered utilities to continue serving customers who do not pay, and subsequently issued an order requiring utilities to offer payment plans to customers with past due account balances. The Company met its financial targets in 2020 and did not experience any material adverse impacts. It is not currently possible to estimate the length, severity, or financial impact of these developments in the future. Any prolonged restrictive measures put in place in order to contain the outbreak of the virus could adversely affect the Company's financial results.

(Continued)

(Dollars in thousands)

(2) Utility Plant

The Company retired Coleman Station and Reid Station Unit 1 on September 30, 2020. The utility plant associated with Coleman Station and Reid Station Unit 1 in the amount of $124,210 and $6,731, respectively, were retired and recorded in a regulatory asset. See Note 5 for further discussion of the Company's regulatory asset balances related to the Coleman Station and Reid Station Unit 1 retirement costs. At December 31, 2020 and 2019, utility plant is summarized as follows:

		2020	2019
Classified plant in service:			
Production plant	$	1,460,252	1,713,576
Transmission plant		326,898	294,407
General plant		56,845	54,416
Other		67	67
		1,844,062	2,062,466
Less accumulated depreciation		1,102,333	1,193,043
		741,729	869,423
Construction in progress		44,893	35,663
Utility plant – net	$	786,622	905,086

Big Rivers' secured long-term debt obligations and 2020 Amended and Restated Syndicated Senior Secured Credit Agreement, dated June 11, 2020, are secured under Big Rivers' Indenture dated as of July 1, 2009, as supplemented and amended (the "Indenture"), between Big Rivers and U.S. Bank National Association, as trustee (the "Indenture Trustee"). Obligations are secured under the Indenture by a mortgage lien on substantially all of Big Rivers' owned tangible, and certain intangible, properties including Big Rivers' production, transmission, general, and other Utility Plant. See Note 4 for further discussion of Big Rivers' Debt and Other Long-Term Obligations secured under its Indenture.

Depreciation expense on utility plant for the years ended December 31, 2020, 2019 and 2018, was $21,119, $20,748 and $20,709, respectively.

Interest capitalized for the years ended December 31, 2020 and 2019, was $587 and $207, respectively.

The Company has identified certain legal obligations, as defined in FASB ASC 410, *Asset Retirement and Environmental Obligations*, associated with the retirement of long-lived assets that require the recognition of a liability. See Note 3 for further discussion of the Company's asset retirement obligations.

As of December 31, 2020 and 2019, the Company had recorded an estimated $48,683 and $60,723, respectively, related to nonlegal removal costs included in accumulated depreciation as required by the RUS.

(Dollars in thousands)

(3) Asset Retirement Obligations

The Company has AROs arising from legal obligations associated with the retirements of certain long-lived assets. The liabilities were initially measured at fair value and subsequently adjusted for accretion expense and changes in estimated future cash flows. The corresponding asset retirement costs are capitalized as part of the carrying amount of the related long-lived assets and depreciated over their remaining useful lives. The following table presents the activity for the ARO liabilities for the years ended December 31, 2020 and 2019:

		2020		2019	
ARO balance at beginning of year	$	34,557		29,746	
Changes in estimated timing or cost		4,421	(a)	3,418	(b)
Accretion expense		1,732	(c)	1,528	(c)
Actual costs incurred		(300)		(135)	
ARO balance at end of year	$	40,410		34,557	

(a) During 2020, the EPA issued an update to the CCR Final Rule which shortened the deadline to close the ash pond at Green Station. In order to comply with federal regulations, the settlement date for closure of this ash pond was reduced by approximately three years. Accordingly, in 2020, Big Rivers recorded an adjustment to the Green Station ARO liability to reflect the change in the federal regulations. The revised regulations did not impact the ARO liability recorded for the ash pond located at the retired Station Two facility.

(b) During 2019, a study was completed by an independent engineering firm which provided updated settlement dates and cost estimates for the eventual closures of the ash ponds located at Big Rivers' Green Station and Station Two, for compliance with federal regulations, including the EPA's CCR Final Rule and ELG Final Rule, for which Big Rivers initially recognized ARO liabilities in 2015. The change in estimated settlement dates, as well as the updated present value of cost estimates, to close the Green Station and the Station Two ash ponds, per the 2019 studies, was higher than prior estimates completed by independent engineering firms during 2017. Accordingly, in 2019, Big Rivers recorded adjustments to its ARO liabilities to reflect the change in estimates and estimated settlement date.

(c) The 2020 and 2019 annual ARO accretion expense of $1,732 and $1,528, respectively, was deferred and included in the Regulatory Assets amount reported on the Company's balance sheet as of December 31, 2020 and 2019. The KPSC final order in Case No. 2019-00435, the Environmental Compliance Plan, approved the recovery of the capital costs for ash pond closure through the environmental surcharge mechanism ("ESM") based on non-levelized amortization of the actual ash pond closure spending-to-date, allocable over a rolling 10-year period. This method ensures that cost recovery from Members through the ESM is based on actual project spending while also allowing Big Rivers to match its amortization expense with ESM revenue.

(Dollars in thousands)

(4) Debt and Other Long-Term Obligations

A detail of long-term debt at December 31, 2020 and 2019 is as follows:

		2020	2019
CFC Refinance Promissory Note, Series 2012B, serial note pricing, 4.30% effective interest rate, final maturity date of May 2032	$	201,380	214,712
RUS 2009 Series B Promissory Note, stated amount of $245,530, no stated interest rate, 5.80% imputed interest rate, maturing December 2023		206,585	195,027
CoBank Promissory Note, Series 2012A, 4.30% fixed interest rate, final maturity date of June 2032		161,137	171,442
County of Ohio, Kentucky, promissory note, 6.00% fixed interest rate, maturing in July 2031		—	83,300
CFC Equity Note, Series 2012B, 5.35% fixed interest rate, final maturity date of May 2032		—	32,229
2018 RUS Guaranteed FFB Loan, W8, 2.83% fixed interest rate, final maturity date of January 2033		23,585	25,228
2018 RUS Guaranteed FFB Loan, X8, 2.94% fixed interest rate, final maturity date of December 2043		17,308	17,836
Old National Bank, Paycheck Protection Program Loan, 1.00% fixed interest rate, maturing in 18 months if determined ineligible (see Note 4(i))		9,941	—
CFC Promissory Note, Series 2020B, 2.49% fixed interest rate, final maturity date of February 2031		83,300	—
Total long-term debt		703,236	739,774
Less current maturities		32,962	27,673
Less unamortized deferred debt issuance costs		2,836	2,343
Less advance payments unapplied – RUS cushion of credit		3,658	3,489
Total long-term debt – net of current maturities, deferred debt issuance costs, and advance payments	$	663,780	706,269

(Dollars in thousands)

The following are scheduled maturities of long-term debt at December 31, 2020:

		Amount
Year:		
2021	**$**	**32,962**
2022		**31,293**
2023		**235,783**
2024		**31,086**
2025		**31,825**
Thereafter		**340,287**
Total	**$**	**703,236**

(a) National Rural Utilities Cooperative Finance Corporation (CFC) Refinance and Equity Promissory Notes, 2012B

In July 2012, Big Rivers issued new debt with CFC in the form of a secured term loan in the amount of $302,000 (the "Refinance Note") and a CFC Equity Note in the amount of $43,156. The Refinance Note is secured under Big Rivers' Indenture, dated July 1, 2009 between the Company and U.S. Bank National Association, and consists of twenty individual notes with different fixed interest rates ranging from 3.05% to 5.35%. The Refinance Note has an effective interest rate of 4.30% and a final maturity date of May 2032.

The Equity Note was prepaid during 2020 utilizing proceeds received from the sale of Capital Term Certificates previously held with the CFC.

(b) RUS Notes

On July 15, 2009, Big Rivers' previous RUS debt was replaced with the RUS 2009 Promissory Note Series A (the "RUS Series A Note") and the RUS 2009 Promissory Note Series B (the "RUS Series B Note").

The RUS Series B Note has no stated interest rate, is recorded at an imputed interest rate of 5.80%, and is secured under Big Rivers' Indenture. The $245,530 stated amount of the RUS Series B Note is due December 2023.

(c) CoBank, ACB (CoBank) Promissory Note, Series 2012A

In July 2012, Big Rivers issued new debt with CoBank in the form of a secured term loan in the amount of $235,000, which is secured under Big Rivers' Indenture. The loan has a fixed interest rate of 4.30% and a final maturity date of June 2032.

(d) Pollution Control Bonds

In June 2010, the County of Ohio, Kentucky, issued $83,300 of Pollution Control Refunding Revenue Bonds, Series 2010A ("Series 2010A Bonds"), the proceeds of which were supported by a promissory note from Big Rivers, bearing the same interest rate as the bonds and secured under Big Rivers' Indenture. These bonds bear interest at a fixed rate of 6.00% and mature in July 2031. These bonds were subject to an optional redemption on or after July 15, 2020, which Big Rivers exercised on July 15, 2020, utilizing proceeds from a CFC loan to pay off the bonds. See Note 4(h) for additional information regarding the 2020 CFC loan used to redeem the Series 2010A Bonds.

(e) 2018 RUS Guaranteed FFB Loan, W8

In April 2018, Big Rivers received a $25,630 loan from the Federal Financing Bank ("FFB") (the "W8 Loan") which is guaranteed by the RUS and secured under Big Rivers' Indenture. The W8 Loan is for long-term financing of capital projects included in Big Rivers' 2012 Environmental Compliance Plan ("ECP") to comply with the EPA's Mercury and Air Toxics Standards ("MATS") rule. These capital projects were completed in 2016 and were originally funded with Big Rivers' general funds. Accordingly, the proceeds of the W8 Loan were used to replenish Big Rivers' general funds. The W8 Loan has a fixed interest rate of 2.828%, which includes a 0.125% RUS administration fee, and has a final maturity date of January 2033.

(f) 2018 RUS Guaranteed FFB Loan, X8

In April 2018, Big Rivers received a $17,965 loan from the FFB, (the "X8 Loan") which is guaranteed by the RUS and secured under Big Rivers' Indenture. The X8 Loan is for long-term financing of capital projects included in Big Rivers' 2013-2015 Transmission Construction Work Plan, which were completed in 2017 and were originally funded with Big Rivers' general funds. Accordingly, the proceeds of the X8 Loan were used to replenish Big Rivers' general funds. The X8 Loan has a fixed interest rate of 2.935%, which includes a 0.125% RUS administration fee, and has a final maturity date of December 2043.

(g) Line of Credit (CFC Syndicated Line, Series 2020A)

On March 5, 2015, Big Rivers entered into a $130,000 Syndicated Senior Secured Credit Agreement (the "2015 Agreement") with CFC, CoBank, Fifth Third Bank, KeyBank National Association, and Regions Bank. In conjunction with the 2015 Agreement, Big Rivers issued secured promissory notes (the "Series 2015A Notes"), equal to each lender's commitment, which are secured under Big Rivers' Indenture.

On September 19, 2017, the 2015 Agreement was amended to, among other things, reduce the total facility amount from $130,000 to $100,000, and extend the maturity date from March 5, 2018 to September 18, 2020.

On July 11, 2020, the existing 2015 Agreement, that was previously amended and restated in 2017, was replaced with a $150,000 Syndicated Secured Credit Agreement (the "2020 Agreement") with CFC, CoBank, Fifth Third Bank, KeyBank National Association, Regions Bank, and Bank of America. In conjunction with the 2020 Agreement, Big Rivers issued secured promissory notes (the "Series 2020A Notes"), equal to each lender's commitment, which are secured under Big Rivers' Indenture.

As of December 31, 2020, Big Rivers had no outstanding borrowings under the 2020 Agreement and $4,729 in issued letters of credit outstanding, which reduced its available borrowing capacity under the 2020 Agreement from $150,000 to $145,271.

As of December 31, 2019, Big Rivers had no outstanding borrowings under the 2015 Agreement and $7,579 in issued letters of credit outstanding, which reduced its available borrowing capacity under the 2015 Agreement from $100,000 to $92,421.

(h) CFC Promissory Note, 2020B

On December 23, 2020, Big Rivers issued new debt with CFC in the form of a secured balloon note in the amount of $83,300 for the purpose of early redemption of the Series 2010A Bonds. This note is secured under Big Rivers' Indenture, with a fixed interest rate of 2.49% and a final maturity date of February 2031.

(i) Old National Bank, Paycheck Protection Program ("PPP") Note

In response to the COVID-19 pandemic, the federal government passed and signed the Coronavirus Aid, Relief, and Economic Security Act ("CARES Act) into law on March 27, 2020. This act allowed qualified businesses to borrow money through the Paycheck Protection Program administered by the Small Business Administration ("SBA) to cover payroll and other related expenses. On April 7, 2020, Big Rivers applied for PPP funds in the amount of $9,941. The unsecured loan was approved and funds were received on April 21, 2020. On August 18, 2020, Big Rivers submitted an application requesting forgiveness of the $9,941 loan. Terms of the loan are a fixed interest rate of 1.00% and monthly principal and interest payments of $559 over an 18-month period originally set to commence in November 2020. Principal and interest payments have been suspended by the lender until Big Rivers receives a decision from the SBA on the forgiveness application. No repayments were made on the loan in 2020.

(j) RUS Cushion of Credit

In 2018, Big Rivers began participating in the cushion of credit program administered by the RUS in conjunction with the execution of the 2018 W8 and X8 RUS Guaranteed FFB Loans. Under the cushion of credit program, RUS borrowers may make voluntary irrevocable deposits into the cushion of credit account which, during 2020, accrued interest at an annual rate of 4.75%. Per the terms of the RUS' commitment to guarantee Big Rivers' W8 and X8 Loans, Big Rivers agreed to make an initial deposit of $3,200 to the cushion of credit account upon receipt of the loan funds and to make additional deposits, as needed, so that the balance at the beginning of each year going forward is equal to or greater than the annual payments due on the W8 and X8 Loans during the year. The interest rate dropped from 5% to 4% on October 1, 2020 and will become a variable rate on October 1, 2021.

Big Rivers' amounts in the cushion of credit account (deposits and accrued interest) may only be used to make scheduled principal and interest payments on the W8 and X8 Loans. As of December 31, 2020 and 2019, Big Rivers' balance in the RUS cushion of credit account was $3,658 and $3,489, respectively, which is included on the Company's balance sheet as a reduction to long-term debt.

(k) Covenants

Big Rivers is in compliance with all debt covenants associated with both its long-term and short-term debt obligations. The Company's Indenture and other debt agreements require that a Margins for Interest Ratio ("MFIR") of at least 1.10 be maintained for each fiscal year. The 2020 Agreement requires that Big Rivers, throughout the duration of the agreement, maintain a minimum Members' Equities' Balance at the end of each fiscal quarter-end and as of the last day of each fiscal year in an amount at least equal to $417,000 plus 50% of the cumulative positive net margin for the period from December 31, 2019 to the end of the Borrower's most recently ended fiscal year. Big Rivers' MFIR for the fiscal year ended December 31, 2020 was 1.30, and its Equities balance was $531,539.

An MFIR of less than 1.10, per the Indenture and other debt agreements, may result in the following actions, restrictions, or consequences: Big Rivers may not secure additional debt under the Indenture; the Company must seek rates that are reasonably expected to yield a 1.10 MFIR; the Company must provide a written plan satisfactory to the RUS setting forth actions to be taken to achieve the specified MFIR on a timely basis; an event of default may occur; interest rates may increase; and its line of credit may be terminated with an acceleration of any outstanding amounts becoming due immediately.

In accordance with the amended and consolidated loan contract between Big Rivers and the United States of America (acting by and through the RUS Administrator), Big Rivers provided notification to the RUS Administrator, via letter dated February 7, 2013, of a failure to maintain two Credit Ratings of Investment Grade. In order to remain compliant under the amended and consolidated loan contract, in March 2013, the Company, prepared and presented to the RUS, its Corrective Action Plan setting forth the actions to be taken by management, that are reasonably expected to achieve two Credit Ratings of Investment Grade. The Company regularly updates the RUS on actions taken to date related to its Corrective Action Plan. On December 2, 2020, Big Rivers received its second Investment Grade Credit Rating. With that, Big Rivers has fulfilled the Corrective Plan and will no longer be required to update the plan.

(5) Rate Matters

The rates charged to Big Rivers' members consist of a demand charge per kilowatt ("kW") and an energy charge per kilowatt-hour ("kWh") consumed as approved by the KPSC. The rates include specific demand and energy charges for its members' two classes of customers, the large industrial customers and the rural customers, under its jurisdiction. For the large industrial customers, the demand charge is generally based on each customer's maximum demand during the current month. For the rural customers, the demand charge is based on Maximum Adjusted Net Local Load (as defined in Big Rivers' tariff).

The Company has certain KPSC approved tariff riders; including a fuel adjustment clause and an environmental surcharge. The net effect of these tariffs is recognized as revenue on a monthly basis with an offset to the Regulatory Liability – Member Rate Mitigation described below.

The net impact of the tariff riders to members' rates is currently mitigated by a Member Rate Stability Mechanism ("MRSM") that is held by Big Rivers as restricted investments. An offsetting regulatory liability – member rate mitigation reflects the obligation associated with the funding of these reserve accounts. As described below, on June 25, 2020, the KPSC approved several changes to the MRSM beginning in January 2021.

The KPSC entered an order on October 29, 2013, granting Big Rivers an annual revenue increase of $54,227, effective August 20, 2013 (Case No. 2012-00535). In its order, the KPSC excluded the Coleman plant depreciation from rate recovery. The KPSC directed the Company to defer this depreciation expense and record the deferred amounts in a regulatory asset account. The KPSC's order indicated this action was being taken due to the planned temporary idling of Coleman, the length of time the plant would be idled, and the impact of the rate increase on customers. As of December 31, 2020, cumulative depreciation expense of $13,870 was deferred for the Coleman plant, which includes the TIER credit reduction from 2019, as discussed below. Management believes the remaining balance is probable of recovery in future rates. The Coleman plant was retired September 30, 2020, as described below for Case No. 2020-00064.

The KPSC entered an order on April 25, 2014, granting Big Rivers an annual revenue increase of $36,160, effective February 1, 2014 (Case No. 2013-00199). In its order, the KPSC approved Big Rivers' 2012 Depreciation Study, but excluded Wilson plant depreciation from rate recovery. The KPSC directed the Company to defer the Wilson depreciation expense and record in a regulatory asset account, similar to the Coleman depreciation expense deferral per the KPSC's order in Case No. 2012-00535. As of December 31, 2020, cumulative depreciation expense of $141,353 was deferred for the Wilson plant, which is recoverable in future rates. The KPSC also approved Big Rivers' proposal to temporarily offset the rate increase by utilization of the MRSM. The KPSC further granted Big Rivers' proposed accounting treatment for transmission revenues related to the Hawesville smelter and authorized Big Rivers to pass the transmission revenues to its members through the MRSM. The net effect of this accounting treatment was the recognition of revenue on a monthly basis with an offset to the applicable regulatory liability accounts as the reserve funds were used to offset the impact of the base rate increase on the members' monthly bills.

Effective July 17, 2009, the KPSC approved the implementation of the Non-Fuel Adjustment Clause-Purchased Power Adjustment ("Non-FAC PPA") which is a rate mechanism allowing Big Rivers to recover certain costs of purchased power that are not recoverable through its Fuel Adjustment Clause ("FAC"). An accrual is recorded monthly to a regulatory asset or liability account based on the difference between the actual purchased power costs recoverable through the Non-FAC PPA and the purchased power base cost included in base rates. The balance in the regulatory asset or liability account as of June 30 each year is billed or refunded to members during the following twelve-month period beginning September 1 through August 31 of the following year.

The CCR Final Rule requires Big Rivers to address the eventual permanent closures of its Green Station coal ash pond and the coal ash pond at the City of Henderson, Kentucky's Station Two. Big Rivers recorded asset retirement obligations for its ash ponds at its Green Station and Station Two generating stations. See Note 3 for further discussion of the Company's asset retirement obligations. In accordance with FASB ASC 410-20, *Asset Retirement and Environmental Obligations – Asset Retirement Obligations* and under the RUS Uniform System of Accounts, Big Rivers initially recognized its coal ash pond AROs at fair value and subsequently adjusted for accretion expense and changes in estimated timing of pond closures and changes in estimated costs as of December 31, 2020 (Note 3).

On January 5, 2016, the KPSC issued an order in Case No. 2015-00333 approving Big Rivers' request to establish regulatory assets for the deferral of certain expenses it would incur for compliance with the CCR Final Rule, including accretion and depreciation expense related to the Green Station and Station Two ash ponds AROs and other incremental expenses.

On August 6, 2020, the KPSC approved Big Rivers' 2020 Environmental Compliance Plan ("2020 ECP"), (1) granting Big Rivers the authority to close the Green Station and Station Two ash ponds; (2) granting Big Rivers the authority to move the Coleman Station flue gas desulfurization system ("FGD") to Wilson Station to replace Wilson's FGD; (3) conditionally granting Big Rivers' request to establish regulatory assets for the accretion and depreciation expense related to the Coleman Station legacy ash ponds, should the CCR Final Rule be extended to apply to such legacy ash ponds; (4) conditionally granting Big Rivers the authority to close the Coleman Station ash ponds, should the CCR Final Rule be extended to apply to such legacy ash ponds; (5) authorizing Big Rivers to amortize the Green Station and Station Two ash pond AROs through its environmental surcharge; (6) conditionally authorizing Big Rivers to amortize the costs incurred to close the Coleman Station ash pond through its environmental surcharge should the CCR Final Rule be extended to apply to the Coleman Station ash ponds; (7) authorizing Big Rivers to amortize the regulatory asset for CCR-related expenses through its environmental surcharge; and (8) authorizing Big Rivers to establish a regulatory asset for the costs of preparing and prosecuting the 2020 ECP case, the recovery of which regulatory asset will be taken up in a subsequent proceeding.

As of December 31, 2020, the total amount of CCR-related expenses and costs for asset retirement obligations deferred and included in Regulatory Assets on the Company's balance sheet was $42,228, and the costs of preparing and prosecuting the ECP case that have been deferred and included in Regulatory Assets on the Company's balance sheet was $289.

On August 29, 2018, the KPSC entered an order (Case No. 2018-00146) (i) finding that the Station Two units were no longer capable of the normal, continuous, reliable operation for the economically competitive production of electricity; (ii) finding that the Station Two contracts, except for the Joint Facilities Agreement, have therefore terminated pursuant to their own terms; (iii) granting Big Rivers' request for authority to continue to operate Station Two under terms of the Station Two contracts for a period up to May 31, 2019; and (iv) reserving a ruling on Big Rivers' request for authority to establish a Station Two regulatory asset. The remaining issues in this case were resolved with a Settlement Agreement between the Office of the Attorney General, the Kentucky Industrial Utility Customers ("KIUC"), and Big Rivers. The Settlement Agreement provided that the KPSC would approve the Station Two regulatory asset, that Big Rivers would establish a Station Two Depreciation Credit, starting in the month that Station Two is retired, to reduce customer bills based on the revenues Big Rivers would receive associated with depreciation expense on Station Two, that Big Rivers would establish a TIER Credit to reduce existing regulatory assets in the event Big Rivers achieves a TIER in excess of 1.45 in 2019 or 2020, and that in Big Rivers' next general rate case, the intervenors would support Big Rivers' recovery of the Station Two, Wilson plant, and, conditionally, the Coleman plant regulatory assets. On October 23, 2018, the KPSC issued a final order approving the Settlement Agreement in full. RUS approved the Settlement Agreement on February 22, 2019. Big Rivers retired Station Two on January 31, 2019. On February 26, 2019, Big Rivers filed revised tariff sheets with the KPSC to incorporate the Station Two Depreciation Credit. As of December 31, 2020, the total amount of the Station Two contract termination included in the Regulatory Assets on the Company's balance sheet was $92,102. This includes Station Two assets transferred from utility plant to

Regulatory Assets, Station Two Depreciation Credit and the Company's portion of decommissioning costs incurred to date.

On December 12, 2018, the KPSC approved Big Rivers' request to phase out its existing Demand Side Management ("DSM") programs, to establish a new Low-Income Weatherization Program, and to establish a regulatory liability for the savings associated with the phase out of the existing DSM programs. As of December 31, 2020, the DSM savings were no longer recorded in a Regulatory Liability based on the ruling received in Case No. 2020-00064, as discussed below.

On June 25, 2020, the KPSC entered an order in Case No. 2020-00064 approving a Settlement Agreement, as modified by the Commission, between Big Rivers, KIUC and the Attorney General, which approved Big Rivers' requests to: (1) establish regulatory assets for the remaining net book value of Coleman Station and Reid Station Unit 1 at retirement, and for the costs to decommission those units; (2) cease charging DSM savings to a regulatory liability; (3) utilize the existing DSM regulatory liability in 2020 and 80% of equity headroom in 2021 to reduce certain regulatory assets (the Wilson and Coleman depreciation regulatory assets; the Coleman, Reid 1, and Station Two retirement and decommissioning regulatory assets; and a regulatory asset through which the costs related to a focused management audit were deferred); and (4) recover the amounts deferred in those regulatory assets through amortization. The KPSC also approved replacing the TIER Credit mechanism in Big Rivers' MRSM tariff with a new TIER Credit mechanism. Under the new TIER Credit, in years in which Big Rivers earns in excess of a 1.30 TIER, 40% of the excess margins will be returned to Big Rivers' members over the following year through a monthly bill credit. The remaining 60% of the excess margins will be deferred in regulatory liability accounts, with a minimum required balance of $9,000, to be utilized in a year in which Big Rivers does not achieve a 1.30 TIER or to further decrease the balance of the regulatory assets with KPSC approval. The first $700 of the bill credit each year will be allocated to Rural customers, and any bill credit over $700 will be allocated between the Rural and Large Industrial customers based on revenues.

Big Rivers' new TIER Credit was $33,334 for 2020, with 40%, or $13,334 to be returned to members over a twelve-month period beginning February 2021. This amount is recorded as a regulatory liability at December 31, 2020 presented between current and long-term maturities based on the timing of future bill credits expected to be provided to the members. The remaining 60%, or $20,000, was also deferred in regulatory liability accounts with $11,000 expected to offset the regulatory assets, as described above, and is pending KPSC approval. The remaining regulatory liability of $9,000 will remain as a minimum required balance as described above. The new TIER Credit was recorded as depreciation and amortization expense on the statement of operations.

(Dollars in thousands)

In connection with the rate matters discussed above, the following tables provide a summary of Regulatory Assets and Liabilities reflected in the Balance Sheet as of December 31, 2020 and 2019:

		Regulatory assets	
		2020	2019
Coleman plant deferred depreciation	$	13,870	37,245
Wilson plant deferred depreciation		141,353	120,544
Rate case expense and other		—	676
Non-FAC PPA		7,772	8,313
Asset retirement obligations		26,645	13,169
Environmental costs (CCR)		15,583	7,934
Station Two contract termination		92,102	90,424
Coleman plant retire/decommission		129,869	—
Reid 1 plant retire/decommission		7,769	—
ECP case expense		289	—
Subtotal regulatory assets		435,252	278,305
TIER Credit		—	(27,743)
Total regulatory assets	$	435,252	250,562

		Regulatory liabilities	
		2020	2019
Economic reserve-member rate mitigation	$	13,334	1,406
Demand side management		—	705
TIER Credit		20,000	—
Total regulatory liabilities	$	33,334	2,111

On February 26, 2021, Big Rivers filed an application with the KPSC, Case No. 2021-00061, for review of its MRSM charge for calendar year 2020. In its application, Big Rivers proposed to use the regulatory liability amount in excess of the minimum required balance of $9,000, or $11,000, that was established in Case No. 2020-00064, discussed above, to further reduce the SLM Regulatory Assets in 2021. This case is pending.

On March 1, 2021, Big Rivers filed an application with the KPSC, Case No. 2021-00079, seeking approval for a certificate of public convenience and necessity ("CPCN") to convert Big Rivers' two existing coal-fired generating units at its Green Station to run on natural gas, an Order authorizing that the gas conversion assets be depreciated over a seven-year period, and the establishment of a regulatory asset to defer recognition of the costs that Big Rivers expects to incur as a result of the retirement of certain Green Station assets that will no longer be utilized after the conversion. This case is pending.

(6) Income Taxes

At December 31, 2020, Big Rivers had a Non-Patron Net Operating Loss (NOL) Carryforward of approximately $40,933 expiring at various times between 2029 and 2037 which was entirely offset by a full valuation allowance.

On December 22, 2017, the U.S. government enacted comprehensive Federal tax legislation commonly referred to as the Tax Cuts and Jobs Act of 2017 (the "Tax Act"). The Tax Act significantly modified the U.S. corporate income tax system by, among other things, reducing the corporate income tax rate from 35% to 21% for tax years beginning after December 31, 2017. The income tax effects of changes in tax laws are recognized in the period when enacted. In addition to the reduction to the corporate tax rate, the Tax Act also repealed the Alternative Minimum Tax ("AMT") as well as Internal Revenue Code ("IRC") Section 168(k)(4). For tax years beginning in 2018, 2019, and 2020, to the extent that AMT credit carryovers exceed regular tax liability (as reduced by certain other credits), 50% of the excess AMT credit carryovers are refundable. Any remaining AMT credits will be fully refundable in 2021. The Tax Act also requires deferred AMT refunds previously reported on the balance sheet in Other Deferred Charges to be reported as a long-term receivable. At December 31, 2020 and 2019, Big Rivers reported $0 and $54, respectively, as Federal Tax Receivable.

On January 16, 2020, the Internal Revenue Service issued News Release IR 2020-12 announcing that it would refund all amounts sequestered from refundable AMT credits under IRC Section 168(k)(4) since 2013. The Company received a refund of $449 and recorded a benefit to federal income tax expense during 2020.

On March 27, 2020, H.R. 748, the CARES Act was signed into legislation which includes tax provisions relevant to businesses. The CARES Act provides that any unused AMT credits can be claimed fully in tax years beginning in 2018 and 2019. The Company claimed a refund of the remaining AMT credit carryforward of $107 on its 2019 federal tax return and received the refund during fiscal 2020.

(Dollars in thousands)

The components of the net deferred tax assets as of December 31, 2020 and 2019 were as follows:

		2020	2019
Deferred tax assets:			
Net operating loss carryforward	$	10,213	7,602
Fixed asset basis difference		5,906	1,730
Total deferred tax assets		16,119	9,332
Deferred tax liabilities:			
RUS Series B Note		(3,343)	(3,343)
Bond refunding costs		(56)	(62)
Total deferred tax liabilities		(3,399)	(3,405)
Net deferred tax asset (pre-valuation allowance)		12,720	5,927
Valuation allowance		(12,720)	(5,927)
Net deferred tax asset	$	—	—

A reconciliation of the Company's effective tax rate for 2020, 2019, and 2018 is as follows:

	2020	2019	2018
Federal rate	21.0 %	21.0 %	21.0 %
State rate – net of federal benefit	4.0	4.0	4.0
Permanent differences	0.2	0.5	0.3
Patronage allocation to members	(25.2)	(25.4)	(25.3)
Alternative minimum tax credit recovery	(4.6)	(0.3)	(0.3)
Effective tax rate	(4.6)%	(0.2)%	(0.3)%

The Company files a federal income tax return, as well as certain state income tax returns. The years currently open for federal income tax examination are 2017 through 2019. The major state tax jurisdiction currently open for income tax examination is Kentucky for years 2016 through 2019. The Company has not recorded any unrecognized tax benefits or liabilities related to federal or state income taxes.

The Company classifies tax-related interest and penalties as an operating expense on the statement of operations and accrued expenses on the balance sheet. No material tax-related interest or penalties have been recorded during 2020, 2019, or 2018.

(7) Pension Plans

(a) Defined-Benefit Plans

Big Rivers has a noncontributory defined-benefit pension plan covering substantially all employees who meet minimum age and service requirements and who were employed by the Company prior to the plan closure dates cited below. The plan provides benefits based on the participants' years of service and the five highest consecutive years' compensation during the last ten years of employment. Big Rivers' policy is to fund such plan in accordance with the requirements of the Employee Retirement Income Security Act of 1974.

Prior to January 1, 2014, Big Rivers had two separate defined-benefit pension plans. The salaried employees' defined-benefit plan was closed to new entrants effective January 1, 2008, and the bargaining employees' defined-benefit plan was closed to new hires effective November 1, 2008. The Company simultaneously established base contribution accounts in the defined-contribution thrift and 401(k) savings plans, which were renamed as the retirement savings plans. The base contribution account for an eligible employee, which is one who meets the minimum age and service requirements, but for whom membership in the defined-benefit plan is closed, is funded by employer contributions based on graduated percentages of the employee's pay, depending on his or her age.

In order to meet minimum participation requirements, Big Rivers' salaried employees defined benefit plan was merged into the bargaining employees defined benefit plan. The merger was effective January 1, 2014 for purposes of Internal Revenue Code and effective December 31, 2014 for all other purposes. Effective January 1, 2017, participation was frozen in the merged plan for highly compensated employees in order to comply with IRS code section 401(a)(26).

The Company has adopted FASB ASC 715, *Compensation – Retirement Benefits*, including the requirement to recognize the funded status of its pension plan and other postretirement plans (Note 11 – Postretirement Benefits Other than Pensions). ASC 715 defines the funded status of a defined-benefit pension plan as the fair value of its assets less its projected benefit obligation, which includes projected salary increases and defines the funded status of any other postretirement plan as the fair value of its assets less its accumulated postretirement benefit obligation.

ASC 715 also requires an employer to measure the funded status of a plan as of the date of its year-end balance sheet and requires disclosure in the notes to the financial statements of certain additional information related to net periodic benefit costs for the next fiscal year. The Company's pension and other postretirement benefit plans are measured as of December 31, 2020 and 2019.

The following provides an overview of the Company's noncontributory defined-benefit pension plan.

(Dollars in thousands)

A reconciliation of the Company's benefit obligations of its noncontributory defined-benefit pension plan at December 31, 2020 and 2019 is as follows:

		2020	2019
Benefit obligation – beginning of period	$	21,620	20,962
Service cost – benefits earned during the period		597	599
Interest cost on projected benefit obligation		625	834
Benefits paid		(2,194)	(2,233)
Actuarial loss (gain)		2,791	1,458
Benefit obligation – end of period	$	23,439	21,620

Big Rivers' defined-benefit pension plan provides retirees and terminated employees with a lump-sum payment option. Benefits paid in 2020 include lump-sum payments totaling $2,154 – the result of three former employees electing the lump-sum payment option. Benefits paid in 2019 include lump-sum payments totaling $2,193 – the result of five retirees or terminated employees electing the lump-sum payment option.

The accumulated benefit obligation for the defined-benefit pension plan was $18,998 and $17,545 at December 31, 2020 and 2019, respectively.

A reconciliation of the Company's pension plan assets at December 31, 2020 and 2019 is as follows:

		2020	2019
Fair value of plan assets – beginning of period	$	20,898	18,973
Employer contributions		222	—
Actual return on plan assets		3,329	4,158
Benefits paid		(2,194)	(2,233)
Fair value of plan assets – end of period	$	22,255	20,898

The funded status of the Company's pension plan at December 31, 2020 and 2019 is as follows:

		2020	2019
Benefit obligation – end of period	$	(23,439)	(21,620)
Fair value of plan assets – end of period		22,255	20,898
Funded status	$	(1,184)	(722)

(Dollars in thousands)

Components of net periodic pension costs for the years ended December 31, 2020, 2019, and 2018 were as follows:

		2020	2019	2018
Service cost	$	597	599	766
Interest cost		625	834	762
Expected return on plan assets		(1,318)	(1,194)	(1,243)
Amortization of prior service cost		(33)	(33)	(33)
Amortization of actuarial loss		41	325	304
Settlement loss		289	268	533
Net periodic benefit cost	$	201	799	1,089

A reconciliation of the pension plan amounts in accumulated other comprehensive income at December 31, 2020 and 2019 is as follows:

		2020	2019
Prior service cost	$	(11)	22
Unamortized actuarial loss		(3,068)	(2,617)
Accumulated other comprehensive income	$	(3,079)	(2,595)

In 2021, $33 of prior service credit and $85 of actuarial loss is expected to be amortized to periodic pension benefit cost.

The recognized adjustments to other comprehensive income at December 31, 2020 and 2019 are as follows:

		2020	2019
Prior service cost	$	—	—
Unamortized actuarial gain/(loss)		483	(2,065)
Other comprehensive (income)/loss	$	483	(2,065)

At December 31, 2020 and 2019, amounts recognized in the balance sheets were as follows:

		2020	2019
Deferred credits and other	$	(1,184)	(722)

(Dollars in thousands)

Assumptions used to develop the projected benefit obligation and determine the net periodic benefit cost were as follows:

	2020	2019	2018
Discount rate – projected benefit obligation	2.05 %	2.99 %	4.12 %
Discount rate – net periodic benefit cost	2.99	4.12	3.44
Rates of increase in compensation levels	4.00	4.00	4.00
Expected long-term rate of return on assets	6.50	6.50	6.50

The expected long-term rate of return on plan assets for determining net periodic pension cost for each fiscal year is chosen by the Company from a best estimate range determined by applying anticipated long-term returns and long-term volatility for various asset categories to the target asset allocation of the plan. The expected long-term rate of return on assets is based on the median expected rate of return for a passively-managed portfolio plus the incremental return from active management.

Big Rivers utilizes a third-party investment manager for the plan assets, and has communicated thereto the Company's Retirement Plan Investment Policy, including a target asset allocation mix of 50% U.S. equities (an acceptable range of 45%–55%), 15% international equities (an acceptable range of 10%–20%), and 35% fixed income (an acceptable range of 30%–40%). As of December 31, 2020 and 2019, the investment allocation was 57% and 55%, respectively, in U.S. equities, 13% and 12%, respectively, in international equities, and 30% and 33%, respectively, in fixed income. The objective of the investment program seeks to (a) maximize return on investment, (b) minimize volatility, (c) minimize Company contributions, and (d) provide the employee benefit in accordance with the plan. The portfolio is well diversified and of high quality. The average quality of the fixed income investments must be "A" or better. The equity portfolio must also be of investment grade quality. The performance of the investment manager is reviewed semiannually.

(Dollars in thousands)

At December 31, 2020 and 2019, the fair value of Big Rivers' defined-benefit pension plan assets by asset category are as follows:

	Level 1	Level 2	December 31, 2020
Cash and money market	$ 1,006	—	1,006
Equity securities:			
Common stock	9,494	—	9,494
Preferred stock	290	—	290
Mutual funds	6,025	—	6,025
Fixed:			
Tax exempt bonds and notes	—	54	54
Corporate bonds and notes	—	5,386	5,386
	$ 16,815	5,440	22,255

	Level 1	Level 2	December 31, 2019
Cash and money market	$ 607	—	607
Equity securities:			
Common stock	8,792	—	8,792
Preferred stock	538	—	538
Mutual funds	5,183	—	5,183
Fixed:			
Tax exempt bonds and notes	—	2,250	2,250
Corporate bonds and notes	—	3,528	3,528
	$ 15,120	5,778	20,898

(Dollars in thousands)

Expected retiree pension benefit payments projected to be required during the years following 2020 are as follows:

		Amount
Year ending December 31:		
2021	$	1,866
2022		1,405
2023		1,479
2024		2,372
2025		1,648
Thereafter		10,093
Total	$	18,863

(b) Defined-Contribution Plans

Big Rivers has two defined-contribution retirement plans covering substantially all employees who meet minimum age and service requirements. Each plan has a thrift and 401(k) savings section allowing employees to contribute up to 75% of pay on a pretax and/or after-tax basis, with employer matching contributions equal to 60% of the first 6% contributed by the employee on a pretax basis.

A base contribution retirement section was added and the plan name changed from Thrift and 401(k) Savings to Retirement Savings, effective January 1, 2008, for the salaried plan and November 1, 2008, for the bargaining plan. The base contribution account is funded by employer contributions based on graduated percentages of pay, depending on the employee's age.

The Company's expense under these plans was $4,518, $4,749, and $5,124 for the years ended December 31, 2020, 2019 and 2018, respectively, recorded as operating expenses on the statement of operations.

(c) Deferred Compensation Plan

Big Rivers sponsors a nonqualified deferred compensation plan for its eligible employees who are members of a select group of management or highly compensated employees. The purpose of the plan is to allow participants to receive contributions or make deferrals that they could not receive or make under the salaried employees qualified defined-contribution retirement savings plan (formerly, the thrift and 401(k) savings plan) as a result of nondiscrimination rules and other limitations applicable to the qualified plan under the Internal Revenue Code. The nonqualified plan also allows a participant to defer a percentage of his or her pay on a pretax basis.

The nonqualified deferred compensation plan is unfunded, but the Company has chosen to finance its obligations under the plan, including any employee deferrals, through a rabbi trust. The trust assets remain a part of the Company's general assets, subject to the claims of its creditors. The employer contribution for December 31, 2020 and 2019 was $214 and $156, respectively, and the deferred compensation expense for December 31, 2020, 2019, and 2018 was $388, $248, and $136, respectively. As of December 31, 2020 and 2019, the trust assets were $1,333 and $895, and the deferred liability was $1,333 and $895, respectively.

(Dollars in thousands)

(8) Restricted Investments

The amortized costs and fair values (Level 1 measurement) of Big Rivers' restricted investments held for Member rate mitigation at December 31, 2020 and 2019 were as follows:

	2020		2019	
	Amortized costs	Fair values	Amortized costs	Fair values
Debt securities:				
U.S. Treasury – Money Market	$ 666	666	1,391	1,391
Total	$ 666	666	1,391	1,391

There were no gross unrealized gains or losses on restricted investments at December 31, 2020 and 2019.

	2020		2019	
	Gains	Losses	Gains	Losses
Debt securities:				
U.S. Treasury – Money Market	$ —	—	—	—
Total	$ —	—	—	—

Debt securities at December 31, 2020 and 2019 mature, according to their contractual terms, as follows (actual maturities may differ due to call or prepayment rights):

	2020		2019	
	Amortized costs	Fair values	Amortized costs	Fair values
In one year or less	$ 666	666	1,391	1,391
Total	$ 666	666	1,391	1,391

(Dollars in thousands)

Gross unrealized losses on investments and the fair values of the related securities, aggregated by investment category and length of time that individual securities have been in a continuous unrealized loss position at December 31, 2020 and 2019 were as follows:

		2020		2019	
		Less than 12 months		Less than 12 months	
		Losses	Fair values	Losses	Fair values
Debt securities:					
U.S. Treasury – Money Market	$	—	666	—	1,391
Total	$	—	666	—	1,391

None of the Company's restricted investments held for Member rate mitigation were in an unrealized loss position as of December 31, 2020 or 2019.

In conjunction with the CFC $302,000 secured term loan (Note 4), Big Rivers was required to invest in CFC capital term certificates ("CTCs") equal to 14.29% of the Refinance Note. Proceeds of the Equity Note were used to purchase the investments in CTCs as required under the loan agreement. The interest rate on the CTCs was fixed at 4.28% and was equal to 80% of the Equity Note rate of 5.35%. The CTCs cannot be traded in the market, and therefore, they do not have readily determinable fair values and were accounted for at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar investment of the same issuer. During 2020, the Company sold the investments and used the proceeds to pay off the CFC Equity Note (see Note 4 (a)). The Company's investment in these CTCs at December 31, 2020 and 2019 was $0 and $31,609, respectively.

(9) Short-Term Investments

At December 31, 2020, the Company's short-term investments included $5,103 of investments in debt securities and $1,500 of investments in CDs, which are both included in the Company's balance sheet at amortized cost. At December 31, 2019, the Company's short-term investments included $5,022 of investments in debt securities and $4,415 of investments in CDs, which are both included in the Company's balance sheet at amortized cost. The investments in debt securities are classified as held-to-maturity, based on management's intent and ability to hold them to maturity. Both CDs and investments in debt securities are included in "Cash and Cash Equivalents" (if the original maturity date is less than or equal to three months) or "Short-term-investments" (if the original maturity date is greater than three months but less than one year).

(Dollars in thousands)

The amortized costs and fair values (Level 1 measurement) of Big Rivers' short-term investments at December 31, 2020 and 2019, were as follows:

		2020		2019	
		Amortized costs	Fair values	Amortized costs	Fair values
Debt securities:					
Corporate notes	$	1,201	1,196	1,223	1,226
U.S. Treasuries		3,902	3,894	3,799	3,812
Total debt securities		5,103	5,090	5,022	5,038
Other:					
Certificates of deposit		1,500	1,502	4,415	4,423
Total short-term investments	$	6,603	6,592	9,437	9,461

Gross unrealized gains and losses on short-term investments at December 31, 2020 and 2019, were as follows:

		2020		2019	
		Gains	Losses	Gains	Losses
Debt securities:					
Corporate notes	$	—	(5)	3	—
U.S. Treasuries		—	(8)	13	—
Total debt securities		—	(13)	16	—
Other:					
Certificates of deposit		2	—	8	—
Total short-term investments	$	2	(13)	24	—

(10) Fair Value of Other Financial Instruments

FASB ASC 820 defines fair value, establishes a framework for measuring fair value and expands disclosures about fair value measures. It applies under other accounting standards that require or permit fair value measurements and does not require any new fair value measurements.

The carrying value of accounts receivable and accounts payable approximate fair value due to their short maturity. At December 31, 2020 and 2019, the Company's cash and cash equivalents included short-term investments in an institutional U.S. government money market portfolio account classified as trading securities under ASC 320, *Investments – Debt and Equity Securities*, that were recorded at fair value which was determined using quoted market prices for identical assets without regard to valuation adjustment or block discount (a Level 1 measure), as follows:

(Dollars in thousands)

		2020	2019
Institutional U.S. government money market portfolio	**$**	**11,000**	**28,744**

It was not practical to estimate the fair value of patronage capital included within other deposits and investments due to these being untraded companies.

Big Rivers' long-term debt at December 31, 2020, consisted of CFC notes totaling $284,680, a CoBank note in the amount of $161,137, an RUS note totaling $206,585, RUS guaranteed FFB loans totaling $40,893, and Old National Bank Paycheck Protection Plan note in the amount of $9,941 (Note 4). The CFC, CoBank, RUS, FFB, and Old National Bank debt is carried at amortized cost which approximates fair value.

(11) Postretirement Benefits Other than Pensions

Big Rivers provides certain postretirement medical benefits for retired employees and their spouses. Generally, except for generation bargaining retirees, Big Rivers pays 85% of the premium cost for all retirees age 62 to 65. The Company pays 25% of the premium cost for spouses age 55 to 61. Beginning at age 65, the Company pays 25% of the premium cost if the retiree is enrolled in Medicare Part B. For each generation bargaining retiree, Big Rivers establishes a retiree medical account at retirement equal to $1.40 per year of service up to 30 years. The account balance is credited with interest based on the 10-year treasury rate subject to a minimum of 2% and a maximum of 4%. The account is to be used for the sole purpose of paying the premium cost for the retiree and spouse.

The discount rates used in computing the postretirement benefit obligation and net periodic benefit cost were as follows:

	2020	2019	2018
Discount rate – projected benefit obligation	**2.44%**	**3.34%**	**4.34%**
Discount rate – net periodic benefit cost	**3.34**	**4.34**	**3.66**

The healthcare cost trend rate assumptions as of December 31, 2020 and 2019 were as follows:

	2020	2019
Initial trend rate	5.73 %	5.98 %
Ultimate trend rate	4.50	4.50
Year ultimate trend is reached	2038	2038

(Dollars in thousands)

A one-percentage-point change in assumed healthcare cost trend rates would have the following effects:

		2020	2019
One-percentage-point decrease:			
Effect on total service and interest cost components	$	(110)	(113)
Effect on year-end benefit obligation		(1,529)	(1,321)
One-percentage-point increase:			
Effect on total service and interest cost components	$	142	143
Effect on year-end benefit obligation		1,927	1,654

A reconciliation of the Company's benefit obligations of its postretirement plan at December 31, 2020 and 2019 is as follows:

		2020	2019
Benefit obligation – beginning of period	$	14,674	13,892
Service cost – benefits earned during the period		490	447
Interest cost on projected benefit obligation		472	544
Participant contributions		340	369
Plan amendments		—	227
Plan curtailments		—	98
Special termination benefits		—	204
Benefits paid		(1,373)	(1,829)
Actuarial loss (gain)		1,205	722
Benefit obligation – end of period	$	15,808	14,674

Big Rivers revised the eligibility requirements for postretirement medical with regard to age and service. Beginning January 1, 2013, eligibility for retirement is age 62 with 10 years of service. The service requirement is waived for active employees on December 31, 2012 who will not have 10 years of service at age 62. A reconciliation of the Company's postretirement plan assets at December 31, 2020 and 2019 is as follows:

		2020	2019
Fair value of plan assets – beginning of period	$	—	—
Employer contributions		1,033	1,460
Participant contributions		340	369
Benefits paid		(1,373)	(1,829)
Fair value of plan assets – end of period	$	—	—

(Dollars in thousands)

The funded status of the Company's postretirement plan at December 31, 2020 and 2019 is as follows:

		2020	2019
Benefit obligation – end of period	$	(15,808)	(14,674)
Fair value of plan assets – end of period		—	—
Funded status	$	(15,808)	(14,674)

The components of net periodic postretirement benefit costs for the years ended December 31, 2020, 2019, and 2018 were as follows:

		2020	2019	2018
Service cost	$	490	447	551
Interest cost		472	544	530
Amortization of prior service cost		(112)	(138)	(138)
Amortization of gain		(20)	(198)	(30)
Curtailment recognized		—	(49)	—
Special termination benefits		—	204	—
Net periodic benefit cost	$	830	810	913

A reconciliation of the postretirement plan amounts in accumulated other comprehensive income at December 31, 2020 and 2019 is as follows:

		2020	2019
Prior service credit	$	493	605
Unamortized actuarial gain		737	1,963
Accumulated other comprehensive income	$	1,230	2,568

In 2021, $112 of prior service cost and $0 of actuarial gain is expected to be amortized to periodic benefit cost.

(Dollars in thousands)

The recognized adjustments to other comprehensive income (loss) at December 31, 2020 and 2019 are as follows:

		2020	2019
Prior service cost	$	(112)	(414)
Unamortized actuarial gain/(loss)		(1,205)	(820)
Amortization of net gain		(20)	(198)
Other comprehensive income/(loss)	$	(1,337)	(1,432)

At December 31, 2020 and 2019, amounts recognized in the balance sheets were as follows:

		2020	2019
Accounts payable	$	(1,424)	(1,445)
Deferred credits and other		(14,384)	(13,229)
Net amount recognized	$	(15,808)	(14,674)

Expected retiree benefit payments projected to be required during the years following 2020 are as follows:

		Amount
Year:		
2021	$	1,424
2022		1,233
2023		1,079
2024		950
2025		978
Thereafter		4,420
Total	$	10,084

In addition to the postretirement plan discussed above, Big Rivers has another postretirement benefit plan, which vests a portion of accrued sick leave benefits to salaried employees upon retirement or death. To the extent an employee's sick leave hour balance exceeds 480 hours, such excess hours are paid at 20% of the employee's base hourly rate at the time of retirement or death. The accumulated obligation recorded for the postretirement sick leave benefit is $766 and $676 at December 31, 2020 and 2019, respectively. The postretirement expense recorded was $96, $61, and $72, for 2020, 2019, and 2018, respectively, and the benefits paid were $7, $67, and $21 for 2020, 2019, and 2018, respectively.

(12) Related Parties

For the years ended December 31, 2020, 2019, and 2018, Big Rivers had tariff sales to its members of $226,152, $256,280, and $263,792, respectively. In addition, for the years ended December 31, 2020, 2019, and 2018, Big Rivers had certain sales to Kenergy for the Domtar Paper Co. load of $3,013, $4,182, and $3,833, respectively.

At December 31, 2020 and 2019, Big Rivers had accounts receivable from its members of $20,926 and $20,903, respectively.

(13) Commitments and Contingencies

Big Rivers is involved in ongoing litigation with the City of Henderson and the City of Henderson Utility Commission doing business as Henderson Municipal Power and Light (collectively, "HMP&L") in which Big Rivers is seeking damages from HMP&L relating to HMP&L's refusal to pay the costs associated with Excess Henderson Energy produced at Station Two. HMP&L has filed a counterclaim alleging that if HMP&L is required to pay the costs of the Excess Henderson Energy, it is entitled to an offset for the revenues related to that energy. In December 2017, Big Rivers and HMP&L entered into an agreement to settle all claims relating to Excess Henderson Energy. Under the settlement agreement, HMP&L agreed to be responsible for all costs related to Excess Henderson Energy generated after the effective date of the settlement agreement. Big Rivers does not dispute that HMP&L is entitled to the Excess Henderson Energy-related revenues after the payment date in the settlement agreement if it pays the costs of that energy.

On May 1, 2018, the contracts under which Big Rivers was operating Station Two terminated as a result of the Station Two units no longer being capable of the economically competitive production of electricity (Note 5). To allow HMP&L time to make alternate arrangements for its power supply, Big Rivers continued to operate the units under the terms of the Station Two contracts until the units were retired on January 31, 2019. The termination of the Station Two contracts has given rise to disputes between the parties, including (i) a declaratory judgment action HMP&L has filed relating to the interpretation of the deed to the real estate on which the Station Two units were constructed; (ii) a claim HMP&L has filed seeking amounts HMP&L claims it is owed as a result of the annual budget settlement process that occurred during the term of the Station Two contracts; (iii) a claim HMP&L filed seeking a declaratory judgment on the percentage owed by each party for the decommissioning and post-closure compliance costs for the Station Two Ash Pond; (iv) a separate action HMP&L filed seeking a declaratory order that the December 2017 settlement agreement only applies to some of the Excess Henderson Energy; and (v) a proceeding Big Rivers filed with the KPSC to resolve all outstanding disputes between it and HMP&L. The Company believes there will be no material adverse effect to its financial statements when the litigation and disputes with HMP&L are resolved.

Big Rivers is involved in other litigation arising in the normal course of business. While the results of such litigation cannot be predicted with certainty, management, based upon advice of counsel, believes that the final outcome will not have a material adverse effect on the financial statements.

(14) Subsequent Events

See Note 5 relating to Case No. 2021-00061, Application of Big Rivers Electric Corporation for Review of its MRSM Credit for Calendar Year 2020, filed with the KPSC on February 26, 2021.

See Note 5 relating to Case No. 2021-00079, Application of Big Rivers Electric Corporation for a Certificate of Public Convenience and Necessity Authorizing the Conversion of the Green Station Units to Natural Gas-Fired Units and an Order Approving the Establishment of a Regulatory Asset, filed with the KPSC on March 1, 2021.

Management evaluated subsequent events up to and including March 24, 2021, the date the financial statements were available to be issued.

KPMG LLP
Suite 2600
400 West Market Street
Louisville, KY 40202

Independent Auditors' Report on Internal Control over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance With *Government Auditing Standards*

The Board of Directors
Big Rivers Electric Corporation:

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, the financial statements of Big Rivers Electric Corporation (Big Rivers), which comprise the balance sheet as of December 31, 2020, and the related statements of operations, comprehensive income, equities, and cash flows for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated March 24, 2021.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered Big Rivers' internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of Big Rivers' internal control. Accordingly, we do not express an opinion on the effectiveness of Big Rivers' internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis. A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether Big Rivers' financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Big Rivers' internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Big Rivers' internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

KPMG LLP

Louisville, Kentucky
March 24, 2021

KPMG LLP
Suite 2600
400 West Market Street
Louisville, KY 40202

Independent Auditors' Report on Compliance with Aspects of Contractual Agreements and Regulatory Requirements for Electric Borrowers

The Board of Directors
Big Rivers Electric Corporation
Henderson, Kentucky:

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of Big Rivers Electric Corporation (Big Rivers), which comprise the balance sheet of Big Rivers as of December 31, 20, 2020 and the related statements of operations, comprehensive income, equities, and cash flows for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated March 24, 2021. In accordance with *Government Auditing Standards*, we have also issued our report dated March 24, 2021, on our consideration of Big Rivers' internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, grant agreements and other matters. No reports other than the reports referred to above related to our audit have been furnished to management.

In connection with our audit, nothing came to our attention that caused us to believe that Big Rivers failed to comply with the terms, covenants, provisions, or conditions of their loan, grant, and security instruments as set forth in 7 CFR Part 1773, *Policy on Audits of Rural Utilities Service Borrowers,* §1773.33, insofar as they relate to accounting matters as enumerated below.

- Accounting procedures;
- Accumulating and recording labor, material, and overhead costs, and the distribution of these costs to construction, retirement, and maintenance or other expense accounts;
- Reconciling property records to the general ledger;
- Clearing construction accounts and accruing depreciation on completed construction;
- Recording the retirement of property;
- Seeking approval of the sale, lease or transfer of capital assets and disposition of proceeds for the sale or lease of plant, material, or scrap;
- Maintaining control over materials and supplies;
- Preparing Financial and Operating Reports;
- Obtaining written RUS approval to enter into any contract for the management, operation, or maintenance of the borrower's system if the contract covers all or substantially all of the electric system;
- Disclosing material related party transactions in the financial statements in accordance with accounting principles generally accepted in the United States of America;
- Recording depreciation in accordance with accounting principles generally accepted in the United States of America;
- Complying with the requirements for the detailed schedule of deferred debits and deferred credits; and
- Complying with the requirements for the detailed schedule of investments.

Our audit was not directed primarily toward obtaining knowledge of noncompliance. Accordingly, had we performed additional procedures, other matters may have come to our attention regarding Big Rivers' noncompliance with the above-referenced terms, covenants, provisions, or conditions of the contractual agreements and regulatory requirements, insofar as they relate to accounting matters as enumerated above.

The purpose of this report on compliance with aspects of contractual agreements and regulatory requirements for electric borrowers is solely to describe the scope of our testing of compliance and the results of that testing, and not to provide an opinion on compliance based on the requirements of 7 CFR Part 1773, *Policy on Audits of Rural Utilities Service Borrowers and Grantees*. Accordingly, this report is not suitable for any other purpose.

KPMG LLP

Louisville, Kentucky
March 24, 2021

BIG RIVERS ELECTRIC CORPORATION

DETAILED SCHEDULE OF DEFERRED DEBITS AND CREDITS AS OF DECEMBER 31, 2020

DEFERRED DEBITS:		
Other Deferred Debits	$	1,800,152
RUS Part A, Section B, Line 30		1,800,152
Regulatory Assets		435,251,556
Financing Fees		3,285,220
Deferred Income Taxes		0
DEFERRED CHARGES AND OTHER	**$**	**440,336,928**
DEFERRED CREDITS:		
Regulatory liabilities – Member Rate Mitigation	$	13,333,514
Regulatory liabilities – TIER Credit		20,000,272
Other Deferred Credits		240,000
RUS Part A, Section B, Line 59		33,573,786
Provision for pension and postretirement benefits		18,474,347
Provision for Asset Retirement Obligations		40,410,545
RUS Part A, Section B, Line 48		58,884,892
TOTAL DEFERRED CREDITS AND OTHER	**$**	**92,458,678**

BIG RIVERS ELECTRIC CORPORATION

DETAILED SCHEDULE OF INVESTMENTS AS OF DECEMBER 31, 2020

Investments in associated organizations	$	12,723,874
Investments in economic development projects		10,000
RUS Part A, Section B, Lines 7-11	**$**	**12,733,874**

KPMG

BIG RIVERS ELECTRIC CORPORATION

Financial Statements

December 31, 2021 and 2020

(With Independent Auditors' Report Thereon)

KPMG LLP
Suite 2400
400 West Market Street
Louisville, KY 40202

Independent Auditors' Report

The Board of Directors and Members
Big Rivers Electric Corporation:

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of Big Rivers Electric Corporation, which comprise the balance sheets as of December 31, 2021 and 2020, and the related statements of operations, comprehensive income (loss), equities, and cash flows for each of the years in the three-year period ended December 31, 2021, and the related notes to the financial statements.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the financial position of Big Rivers Electric Corporation, as of December 31, 2021 and 2020, and the results of operations, and cash flows thereof for each of the years in the three-year period ended December 31, 2021 in accordance with U.S. generally accepted accounting principles.

Basis for Opinion

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of Big Rivers Electric Corporation, and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with U.S. generally accepted accounting principles, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about Big Rivers Electric Corporation's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditors' Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS and Government Auditing Standards will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS and Government Auditing Standards, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of Big Rivers Electric Corporation's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about Big Rivers Electric Corporation's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control related matters that we identified during the audit.

Other Reporting Required by *Government Auditing Standards*

In accordance with Government Auditing Standards, we have also issued our report dated March 31, 2022 on our consideration of Big Rivers Electric Corporation's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, and contracts, and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of Big Rivers Electric Corporation's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards in considering Big Rivers Electric Corporation's internal control over financial reporting and compliance.

KPMG LLP

Louisville, Kentucky
March 31, 2022

BIG RIVERS ELECTRIC CORPORATION

Balance Sheets

December 31, 2021 and 2020

(Dollars in thousands)

Assets		**2021**	**2020**
Utility plant – net	$	892,988	771,622
Intangible plant		15,000	15,000
Restricted investments – Member rate mitigation		—	666
Other deposits and investments – at cost		16,643	22,377
Current assets:			
Cash and cash equivalents		29,913	20,400
Restricted cash – construction funds trustee		—	353
Short-term investments		352	6,603
Accounts receivable		47,920	40,736
Fuel inventory		17,198	20,391
Nonfuel inventory		18,329	17,457
Prepaid expenses and other assets		5,250	5,129
Total current assets		118,962	111,069
Deferred charges and other assets:			
Regulatory assets		361,521	435,252
Long-term accounts receivable		8,293	—
Deferred charges and other		11,618	2,249
Total deferred charges and other assets		381,432	437,501
Total	$	1,425,025	1,358,235
Equities and Liabilities			
Capitalization:			
Equities	$	460,226	531,539
Long-term debt		669,295	663,780
Total capitalization		1,129,521	1,195,319
Current liabilities:			
Current maturities of long-term obligations		27,999	32,962
Line of credit		60,000	—
Purchased power payable		5,087	3,713
Accounts payable		42,698	23,535
Accrued expenses		18,567	9,345
Accrued interest		1,135	903
Regulatory liabilities – member rate mitigation		16,332	12,223
Total current liabilities		171,818	82,681
Deferred credits and other:			
Regulatory liabilities – member rate mitigation		1,485	1,111
Regulatory liabilities – TIER credit		35,726	20,000
Asset retirement obligations		72,760	40,410
Deferred credits and other		13,715	18,714
Total deferred credits and other		123,686	80,235
Commitments and contingencies (note 13)			
Total	$	1,425,025	1,358,235

See accompanying notes to financial statements.

BIG RIVERS ELECTRIC CORPORATION

Statements of Operations

Years ended December 31, 2021, 2020, and 2019

(Dollars in thousands)

		2021	2020	2019
Operating revenue	$	393,144	328,708	378,727
Total operating revenue		393,144	328,708	378,727
Operating expenses:				
Operations:				
Fuel for electric generation		130,019	83,939	119,831
Power purchased and interchanged		37,436	35,756	37,893
Production, excluding fuel		46,945	40,616	45,918
Transmission and other		34,735	37,042	38,078
Maintenance		32,082	36,947	39,066
Depreciation and amortization		172,136	54,630	49,356
Total operating expenses		453,353	288,930	330,142
Electric operating margin (loss)		(60,209)	39,778	48,585
Interest expense and other:				
Interest		28,575	33,393	36,937
Income tax benefit		—	(448)	(28)
Other – net		684	830	696
Total interest expense and other		29,259	33,775	37,605
Operating margin (loss)		(89,468)	6,003	10,980
Nonoperating margin:				
Interest income and other		14,072	4,192	5,735
Total nonoperating margin		14,072	4,192	5,735
Net margin (loss)	$	(75,396)	10,195	16,715

See accompanying notes to financial statements.

BIG RIVERS ELECTRIC CORPORATION

Statements of Comprehensive Income (Loss)

Years ended December 31, 2021, 2020, and 2019

(Dollars in thousands)

		2021	2020	2019
Net margin (loss)	$	(75,396)	10,195	16,715
Other comprehensive income (loss):				
Defined-benefit plans:				
Actuarial gain (loss)		3,066	(779)	1,506
Amortization of (gain) loss		(1,289)	296	559
Defined-benefit plans		1,777	(483)	2,065
Postretirement benefits other than pensions:				
Prior service cost		(112)	(112)	(414)
Actuarial gain (loss)		2,418	(1,205)	(820)
Amortization of gain		—	(20)	(198)
Postretirement benefits other than pensions		2,306	(1,337)	(1,432)
Other comprehensive income (loss)		4,083	(1,820)	633
Comprehensive income (loss)	$	(71,313)	8,375	17,348

See accompanying notes to financial statements.

BIG RIVERS ELECTRIC CORPORATION

Statements of Equities

Years ended December 31, 2021, 2020, and 2019

(Dollars in thousands)

		Other equities			
	Retained margin	Donated capital and memberships	Consumers' contributions to debt service	Accumulated other comprehensive income/(loss)	Total equities
Balance – December 31, 2017	$ 486,800	764	3,681	(358)	490,887
Net margin	15,230	—	—	—	15,230
Pension and postretirement benefit plans	—	—	—	(301)	(301)
Balance – December 31, 2018	502,030	764	3,681	(659)	505,816
Net margin	16,715	—	—	—	16,715
Pension and postretirement benefit plans	—	—	—	633	633
Balance – December 31, 2019	518,745	764	3,681	(26)	523,164
Net margin	10,195	—	—	—	10,195
Pension and postretirement benefit plans	—	—	—	(1,820)	(1,820)
Balance – December 31, 2020	528,940	764	3,681	(1,846)	531,539
Net margin (loss)	(75,396)	—	—	—	(75,396)
Pension and postretirement benefit plans	—	—	—	4,083	4,083
Balance – December 31, 2021	$ 453,544	764	3,681	2,237	460,226

See accompanying notes to financial statements.

BIG RIVERS ELECTRIC CORPORATION

Statements of Cash Flows

Years ended December 31, 2021, 2020, and 2019

(Dollars in thousands)

		2021	2020	2019
Cash flows from operating activities:				
Net margin (loss)	$	(75,396)	10,195	16,715
Adjustments to reconcile net margin (loss) to net cash provided by operating activities:				
Depreciation and amortization		172,641	55,329	49,407
Interest compounded – RUS Series B Note		12,242	11,557	10,911
Interest income compounded – RUS Cushion of Credit (advance payments unapplied)		(111)	(169)	(169)
Forgiveness from long-term obligations		(9,941)	—	—
Noncash member rate mitigation revenue		—	(9,532)	(15,578)
Changes in certain assets and liabilities:				
Accounts receivable		(15,477)	(3,470)	(3,876)
Fuel and nonfuel inventory		2,321	13,333	(1,289)
Prepaid expenses and other		(121)	(831)	2,663
Deferred charges		(4,650)	(12,042)	(13,162)
Purchased power payable		1,374	1,011	(2,632)
Accounts payable		7,620	(3,706)	46
Accrued expenses		9,454	(2,085)	(3,115)
Other – net		(11,518)	6,619	15,113
Net cash provided by operating activities		88,438	66,209	55,034
Cash flows from investing activities:				
Capital expenditures		(149,396)	(61,154)	(23,281)
Proceeds from restricted investments and deposits		8,322	43,902	21,655
Purchases of restricted investments and other deposits and investments		(2,320)	(12,854)	(22,462)
Proceeds of short-term investments		6,994	11,074	11,334
Purchases of short-term investments		(744)	(8,239)	(11,165)
Net cash used in investing activities		(137,144)	(27,271)	(23,919)
Cash flows from financing activities:				
Principal payments on long-term obligations		(26,314)	(141,337)	(38,495)
Proceeds from long-term obligations		24,542	93,241	—
Proceeds from line of credit		75,000	83,300	—
Payments on line of credit		(15,000)	(83,300)	—
Payments on debt issuance costs		(362)	(1,175)	—
Net cash provided by (used in) financing activities		57,866	(49,271)	(38,495)
Net increase (decrease) in cash and cash equivalents		9,160	(10,333)	(7,380)
Cash and cash equivalents – beginning of year		20,753	31,086	38,466
Cash and cash equivalents – end of year	$	29,913	20,753	31,086
Supplemental cash flow information:				
Cash paid for interest	$	19,358	24,801	26,487
Cash paid for income taxes		1	—	2
Supplemental schedule of non-cash financing and investing activities:				
Change in regulatory assets associated with asset retirement obligations	$	22,319	13,476	2,897
Change in regulatory assets associated with utility plant		(99,315)	156,122	83,616
Change in deferred charges associated with asset retirement obligations		3,378	—	—
Purchases of utility plant in accounts payable		8,675	4,694	582

See accompanying notes to financial statements.

(1) Organization and Summary of Significant Accounting Policies

(a) General Information

Big Rivers Electric Corporation ("Big Rivers" or the "Company"), an electric generation and transmission cooperative, supplies wholesale power to its three member distribution cooperatives (Jackson Purchase Energy Corporation, Kenergy Corp. ("Kenergy"), and Meade County Rural Electric Cooperative Corporation ("Meade County RECC")) under all requirements contracts. Big Rivers also markets power to nonmember utilities, power marketers, and the Midcontinent Independent System Operator ("MISO"). The members provide electric power and energy to industrial, residential, and commercial customers located in portions of 22 western Kentucky counties. The wholesale power contracts with the members remain in effect until December 31, 2043. Rates to Big Rivers' members are established by the Kentucky Public Service Commission ("KPSC") and are subject to approval by the Rural Utilities Service ("RUS"). The financial statements of Big Rivers include the provisions of the Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") 980, *Regulated Operations*, and give recognition to the ratemaking and accounting practices of the KPSC and RUS.

(b) Estimates

The preparation of the financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses, and disclosure of contingent assets and liabilities. The estimates and assumptions used in the accompanying financial statements are based upon management's evaluation of the relevant facts and circumstances as of the date of the financial statements. Significant items subject to such estimates and assumptions include intangible asset recoverability, asset retirement obligations, pension and postretirement obligations, and other contingencies. Actual results may differ from those estimates.

(c) System of Accounts

Big Rivers maintains its accounting records in accordance with the Uniform System of Accounts as prescribed by RUS Bulletin 1767B-1, as adopted by the KPSC. These regulatory agencies retain authority and periodically issue orders on various accounting and ratemaking matters. Adjustments to RUS accounting have been made to make the financial statements consistent with generally accepted accounting principles in the United States of America.

(d) Revenue Recognition

Revenues generated from the Company's wholesale power sales are based on month-end meter readings and are recognized as earned when electricity is delivered. Capacity revenues are recognized in the period in which the Company provides capacity to a counterparty.

(Dollars in thousands)

In May 2014, the FASB issued Accounting Standards Update ("ASU") 2014-09, *Revenue from Contracts with Customers (Topic 606)*. The main principle of the ASU is that an entity should recognize revenue to depict the transfer of promised goods or services to its customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. ASU 2014-09 became effective for the Company for its annual reporting period beginning on January 1, 2019.

(e) Utility Plant and Depreciation

Utility plant is recorded at original cost, which includes the cost of contracted services, materials, labor, and overhead. In accordance with FASB ASC 835-20, *Interest – Capitalization of Interest*, the Company also includes capitalized interest on projects with an estimated total cost of $250 or more before consideration of capitalized interest. The interest capitalized is determined by applying the effective rate of Big Rivers' weighted average debt to the accumulated expenditures for qualifying projects included in construction in progress. Replacements of depreciable property units, except minor replacements, are charged to utility plant.

Depreciation of utility plant in service is recorded using the straight-line method over the estimated remaining service lives, as approved by the RUS and KPSC. During 2012, a depreciation study was completed to evaluate the remaining economic lives of the Company's assets and establish new depreciation rates. The study was approved by the RUS in 2012 and by the KPSC in 2014, with the rates becoming effective February 1, 2014. The annual composite depreciation rates used to compute depreciation expense are as follows:

Electric plant	**0.35%–25.38%**
Transmission plant	**1.36%–2.29%**
General plant	**3.76%–9.88%**

For 2021, 2020, and 2019, the average composite depreciation rates were 3.09%, 3.19%, and 2.41%, respectively. At the time utility plant is disposed of, the original cost plus cost of removal less salvage value of such utility plant is charged to accumulated depreciation, as required by the RUS. For 2021, 2020 and 2019, Big Rivers TIER credit was charged to depreciation and amortization as discussed in Note 5.

(f) Intangible Plant

Intangible plant was recorded as a result of the resolution from a certified dispute amongst Big Rivers, Meade County RECC, and Louisville Gas and Electric in KPSC Case No. 2019-00370. The amount was paid during 2020 and the certified territorial rights do not expire. Intangible plant is subject to impairment testing and if impaired, the carrying value is accordingly reduced. Intangible plant has an indefinite life and is not subject to amortization. There was no impairment recorded in 2021 or 2020.

(g) *Impairment Review of Long-Lived Assets*

Long-lived assets are reviewed as facts and circumstances indicate that the carrying amount may be impaired. FASB ASC 360, *Property, Plant, and Equipment*, requires the evaluation of impairment by comparing an asset's carrying value to the estimated future cash flows the asset is expected to generate over its remaining useful life. If this evaluation were to conclude that the future cash flows were not sufficient to recover the carrying value of the asset, an impairment charge would be recorded based on the difference between the asset's carrying amount and its fair value (less costs to sell for assets to be disposed of by sale) as a charge to net margin.

(h) *Asset Retirement Obligations*

FASB ASC 410-20, *Asset Retirement and Environmental Obligations* – *Asset Retirement Obligations*, requires legal obligations associated with the retirement of long-lived assets to be recognized at fair value when incurred and capitalized as part of the related long-lived asset. The liability is accreted each period based on the credit-adjusted risk-free rate of return that existed when the liability, or portion thereof, was initially measured. The period accretion is recognized as an increase in the carrying amount of the liability, and the capitalized cost is depreciated over the useful life of the related asset. When the asset is retired, the entity settles the obligation for its recorded amount or incurs a gain or loss.

Big Rivers has recorded liabilities in its financial statements for asset retirement obligations ("AROs") related to the requirements of the U.S. Environmental Protection Agency's ("EPA") Disposal of Coal Combustion Residuals from Electric Utilities Rule ("CCR Final Rule") and Effluent Limitations Guidelines Rule ("ELG Final Rule") for the coal ash ponds located at its Green Station and the City of Henderson's Station Two ("Station Two") generating units. In 2021, Big Rivers also recorded AROs for the closure of the landfill located at its Sebree Station and closure of Phase Two of the landfill located at its Wilson Station. The Wilson Station landfill is divided into three sections. The Company has begun closure activities for the Phase One section, which will be complete in 2022. The CCR Final Rule and the ELG Final Rule do not apply to the Phase One section, and it is not recorded as part of the ARO. By-product produced as a result of current operations is being deposited into the Phase Two section. Phase Three of the landfill is not expected to be utilized given the remaining useful life of the Wilson Station facility.

The CCR Final Rule was published in the Federal Register on April 17, 2015 and provides a comprehensive set of requirements for the safe disposal of CCRs, commonly known as coal ash, from coal-fired power plants. The EPA subsequently published an update to the CCR Final Rule, effective on September 28, 2020, allowing facilities to submit a demonstration for an extension to the deadline for unlined CCR surface impoundments to stop receiving waste. The Company submitted the demonstration in November 2020 requesting approval to operate its Green Station ash pond until June 2022, with closure commencing at that time. The ELG Final Rule was published in the Federal Register on November 3, 2015 and sets limits on the levels of toxic metals in wastewater that can be discharged from power plants. See Note 3 for further discussion of the Company's AROs.

(i) Inventory

Inventories are carried at average cost and include coal, lime, limestone, oil and gas used for electric generation, and materials and supplies used for utility operations. Purchased emission allowances are recorded in inventory at actual cost by each vintage year. Allowances issued by the EPA are recorded at zero cost by each vintage year. Total purchased and EPA issued allowances are carried in inventory at a weighted average cost by each vintage year. Issuances of allowances are accounted for on a vintage basis using a monthly weighted average cost.

(j) Restricted Investments

In 2020, the KPSC issued an order that eliminated the restricted investments that had been reserved for Member rate mitigation and required distribution of the remaining reserve funds to Members in 2021.

The 2012 loan agreement with the National Rural Utilities Cooperative Finance Corporation ("CFC") required as a condition of the extension of credit, that an equity ownership position be established by all borrowers. During 2020, the CFC agreed to Big Rivers utilizing the equity ownership position to pay off the 2012B CFC Equity Note. The equity investments did not have readily determinable fair values and were accounted for at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar investment. No impairment or observable price changes were recorded during 2021, 2020, or 2019.

(k) Cash and Cash Equivalents

Big Rivers considers all short-term, highly liquid investments with original maturities of three months or less to be cash equivalents.

(l) Restricted Cash

Big Rivers had restricted cash related to proceeds from the sale of utility plant as required by the RUS loan contract for the year ended December 31, 2020, and no restricted cash for year-ending 2021. The restricted cash was used to pay RUS principal in 2021 on the 2018 RUS Guaranteed FFB W8 and X8 loans.

(m) Short-Term Investments

Short-term investments include investments in debt securities. The aforementioned short-term investments have original maturities greater than three months and less than one year.

(n) Regulatory Assets and Liabilities

FASB ASC 980 applies to regulated entities for which rates are designed to recover the costs of providing service. In accordance with this FASB topic, certain items that would normally be reflected in the statement of operations are deferred on the balance sheet. Regulatory assets represent probable future revenues associated with certain incurred costs, which will be recovered from members through the regulated rate-making process. Regulatory assets are reduced during the period(s) in which the related costs are recovered through rates or when future recovery is no longer probable. Conversely, regulatory liabilities represent future reductions in revenues associated with amounts that are to be credited, or refunded, to members through the regulated rate-making process. Regulatory liabilities are reduced during the period(s) in which the related amounts are refunded to members through rates or when future refunding of the amounts is no longer probable.

(o) Long-Term Accounts Receivable

During 2021, the Company amended a market-based rate partial and full requirements contract with an existing non-member customer. The amendment included deferral of charges incurred by the customer during 2021. As of December 31, 2021, the total due from the customer was $9,958, with $8,293 recorded as long-term accounts receivable and $1,665 recorded in accounts receivable. The customer began making monthly installment payments during 2021 and will continue these payments through May 2027. An allowance for doubtful accounts is recorded if it is determined it is probable that the Company will not collect all principal and interest contractually due. There is no allowance recorded at December 31, 2021.

(p) Other Deposits and Investments

Other deposits and investments consist primarily of patronage capital, cash collateral/margin call deposits, investments in associated organizations, and investments held in trust for a deferred compensation plan. Investments held in trust consist primarily of equities and money market accounts and are carried at fair value. Remaining deposits are recorded at their original cost as their cost approximates fair value due to the nature of the deposit.

(q) Income Taxes

Big Rivers was formed as a tax-exempt cooperative organization as described in Internal Revenue Code Section 501(c)(12). To retain tax-exempt status under this section, at least 85% of Big Rivers' annual income must be generated from transactions with the Company's members. In 1983, sales to nonmembers resulted in Big Rivers failing to meet the 85% requirement. Until Big Rivers can meet the 85% member income requirement, the Company will not be eligible for tax-exempt status and will be treated as a taxable cooperative.

As a taxable cooperative, Big Rivers is entitled to exclude the amount of patronage allocations to members from taxable income. Income and expenses related to nonpatronage-sourced operations are taxable to Big Rivers. Big Rivers files a federal income tax return and certain state income tax returns.

Under the provisions of FASB ASC 740, *Income Taxes*, Big Rivers is required to record deferred tax assets and liabilities for temporary differences between amounts reported for financial reporting purposes and amounts reported for income tax purposes on the tax return. Deferred tax assets and liabilities are determined based upon these temporary differences using enacted tax rates for the year in which these differences are expected to reverse. Deferred income tax expense or benefit is based on the change in assets and liabilities from period to period, subject to an ongoing assessment of realization. Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return are recorded only when the more-likely-than-not recognition threshold is satisfied and measured at the largest amount of benefit that is greater than 50% likely of being realized upon settlement.

(r) Patronage Capital

As provided in the Company's bylaws, Big Rivers accounts for each year's patronage-sourced income, both operating and non-operating, on a patronage basis. Notwithstanding any other provision of the bylaws, the amount to be allocated as patronage capital for a given year shall not be less than the greater of regular taxable patronage-sourced income or alternative minimum taxable patronage-sourced income.

(s) Derivatives

Management has reviewed the requirements of FASB ASC 815, *Derivatives and Hedging*, and has determined that certain contracts to which the Company is a party to meet the definition of a derivative under FASB ASC 815. The Company has elected the Normal Purchase and Normal Sale exception for these contracts, and therefore, the contracts are not required to be recognized at fair value in the financial statements.

(t) Fair Value Measurements

FASB ASC 820, *Fair Value Measurement*, defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal, or most advantageous, market for the asset or liability in an orderly transaction between market participants at the measurement date. ASC 820 establishes a three-level fair value hierarchy that prioritizes the inputs used to measure fair value. This hierarchy requires entities to maximize the use of observable inputs when possible. The three levels of inputs used to measure fair value are as follows:

- Level 1 **–** quoted prices in active markets for identical assets or liabilities;
- Level 2 **–** observable inputs other than quoted prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar assets and liabilities in markets that are not active; or other inputs that are observable or can be corroborated by observable market data; and
- Level 3 **–** unobservable inputs that are supported by little or no market activity and that are significant to the fair values of the assets or liabilities, including certain pricing models, discounted cash flow methodologies, and similar techniques that use significant unobservable inputs.

(u) Deferred Loan Costs

The Company capitalizes costs incurred in connection with long-term debt. These costs are amortized using the effective interest method over the term of the respective debt financing agreements.

In accordance with ASU 2015-03, *Interest-Imputation of Interest (Subtopic 835-30)*, deferred loan costs related to a recognized debt liability are presented on the balance sheet as a direct deduction from the carrying amount of the related debt liability instead of being presented as an asset.

(v) Deferred Credits and Other

Deferred credits and other includes employee-related benefits and capacity revenue sales billed but not yet earned. Employee related benefits include, but are not limited to, pension and post-retirement benefit costs and amounted to $13,465 and $18,474 at December 31, 2021 and 2020, respectively. Deferred capacity revenue, which will be recognized within the next year, amounted to $250 and $240 at December 31, 2021 and 2020, respectively.

(w) New Accounting Guidance

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)* (ASU 2016-02). The main principle of this ASU requires that lessees recognize all leases (other than leases with a term of twelve months or less) on the balance sheet as lease liabilities, based upon the present value of the lease payments, with corresponding right of use assets. ASU 2016-02 also makes targeted changes to other aspects of the current guidance, including the lease classification criteria and the lessor accounting model. In May 2020, the FASB delayed the required implementation date of ASU 2016-02 for private entities by one year. The amendments in ASU 2016-02 will be effective for the Company for annual reporting periods beginning after December 15, 2021. The Company is currently assessing the impact of adopting the guidance but does not believe it will have a material effect.

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*, which allows a company to irrevocably elect the fair value option on certain financial instruments. Subsequently, the FASB issued ASU 2019-04, *Codification Improvements to Topic 326, Financial Instruments – Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825, Financial Instruments* and ASU 2019-05, *Financial Instruments – Credit Losses (Topic 326): Targeted Transition Relief* in May 2019; ASU 2019-11, *Codification Improvements to Topic 326, Financial Instruments – Credit Losses* in November 2019; and ASU 2020-03, *Codification Improvements to Financial Instruments*, in March 2020. The effective date of the guidance for the Company will be for annual reporting periods beginning after December 15, 2022. The Company is currently assessing the impact of adopting the guidance but does not believe this guidance will have a material effect.

(x) Reclassification

Certain items in 2020 have been reclassified on the financial statements for comparative purposes to conform with presentation in the current year financial statements. Specifically, the intangible plant is presented separately on the Balance Sheet in the current year and was included in Utility plant, net in the 2020 financial statements. The amount of the intangible plant is $15,000 in both 2021 and 2020. The reclassification has no impact on net margins.

(y) Risks and Uncertainties

The outbreak of the COVID-19 pandemic has resulted in governments and customers enacting emergency measures to combat the spread of the virus. These measures have included the implementation of travel bans, self-imposed quarantine periods, social distancing, additional safety protocols, and temporary customer facility shutdowns. There is unprecedented uncertainty surrounding the duration of the pandemic, its potential economic ramifications, and any government actions to mitigate them. The Company met its financial targets in 2020 and 2021, and did not experience any material adverse impacts. Continued restrictive measures put in place in order to mitigate the virus could adversely affect the Company's financial results. Additionally, the recent events in the Ukraine have had a negative impact on commodity prices. It is not currently possible to estimate the length, severity, or financial impact of these developments in the future.

(Dollars in thousands)

(2) Utility Plant

The Company retired Coleman Station and Reid Station Unit 1 on September 30, 2020. The utility plant, net, associated with Coleman Station and Reid Station Unit 1 in the amount of $124,210 and $6,731, respectively, were retired and recorded as a regulatory asset. See Note 5 for further discussion of the Company's regulatory asset balances related to the Coleman Station and Reid Station Unit 1 retirement costs. At December 31, 2021 and 2020, utility plant is summarized as follows:

	2021	2020
Classified plant in service:		
Production plant	$ 1,484,121	1,460,252
Transmission plant	324,393	311,898
General plant	61,130	56,845
Other	67	67
	1,869,711	1,829,062
Less accumulated depreciation	1,151,975	1,102,333
	717,736	726,729
Construction in progress	175,252	44,893
Utility plant – net	$ 892,988	771,622

Big Rivers' secured long-term debt obligations and 2020 Amended and Restated Syndicated Senior Secured Credit Agreement, dated June 11, 2020, are secured under Big Rivers' Indenture dated as of July 1, 2009, as supplemented and amended (the "Indenture"), between Big Rivers and U.S. Bank National Association, as trustee (the "Indenture Trustee"). Obligations are secured under the Indenture by a mortgage lien on substantially all of Big Rivers' owned tangible, and certain intangible, properties including Big Rivers' production, transmission, general, and other Utility Plant. See Note 4 for further discussion of Big Rivers' Debt and Other Long-Term Obligations secured under its Indenture.

Depreciation expense on utility plant for the years ended December 31, 2021, 2020 and 2019, was $41,187, $21,119 and $20,748, respectively. The increase in depreciation expense on utility plant, net, in 2021 is related to the discontinuation of the deferral of depreciation expense on the Wilson plant as of January 1, 2021. See Note 5 for discussion of Wilson plant depreciation.

Interest capitalized for the years ended December 31, 2021 and 2020, was $3,246 and $587, respectively.

(Dollars in thousands)

The Company has identified certain legal obligations, as defined in FASB ASC 410, *Asset Retirement and Environmental Obligations*, associated with the retirement of long-lived assets that require the recognition of a liability. See Note 3 for further discussion of the Company's asset retirement obligations.

As of December 31, 2021 and 2020, the Company had recorded an estimated $50,862 and $48,683, respectively, related to nonlegal removal costs included in accumulated depreciation as required by the RUS.

(3) Asset Retirement Obligations

The Company has AROs arising from legal obligations associated with the retirements of certain long-lived assets. The liabilities were initially measured at fair value and subsequently adjusted for accretion expense and changes in estimated future cash flows. The corresponding asset retirement costs are capitalized as part of the carrying amount of the related long-lived assets and depreciated over their remaining useful lives. The following table presents the activity for the ARO liabilities for the years ended December 31, 2021 and 2020:

		2021		2020	
ARO balance at beginning of year	$	40,410		34,557	
Additional obligations incurred		22,442	(a)	—	
Changes in estimated timing or cost		143	(b)	4,421	(c)
Accretion expense		10,020	(d)	1,732	(d)
Actual costs incurred		(255)		(300)	
ARO balance at end of year	$	72,760		40,410	

(a) An ARO liability was recorded in 2021 for closure costs associated with the Sebree Station landfill and Phase Two of the Wilson Station Landfill.

(b) During 2021, a favorable ruling was received in the final order of Case No. 2019-00269, which states the City of Henderson is liable for its share of closing the Station Two ash pond. As a result of this ruling, Big Rivers recorded an adjustment to the Station Two ash pond ARO liability to reflect both a change in cost estimate and extension of the final closure date. See Note 5 for further discussion of litigation with the City of Henderson.

(c) During 2020, the EPA issued an update to the CCR Final Rule which shortened the deadline to close the ash pond at Green Station. In order to comply with federal regulations, the settlement date for closure of this ash pond was reduced by approximately three years. Accordingly, in 2020, Big Rivers recorded an adjustment to the Green Station ARO liability to reflect the change in the federal regulations. The revised regulations did not impact the ARO liability recorded for the ash pond located at the retired Station Two facility.

(d) The 2021 and 2020 annual ARO accretion expense of $7,935 and $1,732, respectively, was deferred and included in the Regulatory Assets amount reported on the Company's balance sheet as of December 31, 2021 and 2020. The remaining 2021 ARO accretion expense of $2,085 was deferred and included in the Deferred Charges amount reported on the Company's balance sheet as of December 31, 2021. The KPSC final order in Case No. 2019-00435, the Environmental Compliance Plan, approved the recovery of the capital costs for ash pond closure through the environmental surcharge mechanism ("ESM") based on non-levelized amortization of the actual ash pond closure spending-to-date, allocable over a rolling 10-year period. This method ensures that cost recovery from Members through the ESM is based on actual project spending while also allowing Big Rivers to match its amortization expense with ESM revenue.

(Dollars in thousands)

(4) Debt and Other Long-Term Obligations

A detail of long-term debt at December 31, 2021 and 2020 is as follows:

	2021	2020
CFC Refinance Promissory Note, Series 2012B, serial note pricing, 4.30% effective interest rate, final maturity date of May 2032	$ 187,540	201,380
RUS 2009 Series B Promissory Note, stated amount of $245,530, no stated interest rate, 5.80% imputed interest rate, maturing December 2023	218,827	206,585
CoBank Promissory Note, Series 2012A, 4.30% fixed interest rate, final maturity date of June 2032	150,333	161,137
2018 RUS Guaranteed FFB Loan, W8, 2.83% fixed interest rate, final maturity date of January 2033	22,322	23,585
2018 RUS Guaranteed FFB Loan, X8, 2.94% fixed interest rate, final maturity date of December 2043	16,900	17,308
2021 RUS Guaranteed FFB Loan, Y8A, 1.94% fixed interest rate, final maturity date of December 2043	24,542	—
CFC Promissory Note, Series 2020B, 2.49% fixed interest rate, final maturity date of February 2031	83,300	83,300
Old National Bank, Paycheck Protection Program Loan, 1.00% fixed interest rate, maturing in 18 months if determined ineligible (see Note 4(j))	—	9,941
Total long-term debt	703,764	703,236
Less current maturities	27,999	32,962
Less unamortized deferred debt issuance costs	2,701	2,836
Less advance payments unapplied – RUS cushion of credit	3,769	3,658
Total long-term debt – net of current maturities, deferred debt issuance costs, and advance payments	$ 669,295	663,780

(Dollars in thousands)

The following are scheduled maturities of long-term debt at December 31, 2021:

		Amount
Year:		
2022	$	27,999
2023		248,026
2024		32,356
2025		32,861
2026		34,291
Thereafter		328,231
Total	$	703,764

(a) National Rural Utilities Cooperative Finance Corporation (CFC) Refinance and Equity Promissory Notes, 2012B

In July 2012, Big Rivers issued new debt with CFC in the form of a secured term loan in the amount of $302,000 (the "Refinance Note") and a CFC Equity Note in the amount of $43,156. The Refinance Note is secured under Big Rivers' Indenture, dated July 1, 2009 between the Company and U.S. Bank National Association, and consists of twenty individual notes with different fixed interest rates ranging from 3.05% to 5.35%. The Refinance Note has an effective interest rate of 4.30% and a final maturity date of May 2032.

The Equity Note was prepaid during 2020 utilizing proceeds received from the sale of Capital Term Certificates previously held with the CFC.

(b) RUS Notes

On July 15, 2009, Big Rivers' previous RUS debt was replaced with the RUS 2009 Promissory Note Series A (the "RUS Series A Note") and the RUS 2009 Promissory Note Series B (the "RUS Series B Note"). The RUS Series A Note was repaid in full in 2018.

The RUS Series B Note has no stated interest rate, is recorded at an imputed interest rate of 5.80%, and is secured under Big Rivers' Indenture. The $245,530 stated amount of the RUS Series B Note is due December 2023.

(c) CoBank, ACB (CoBank) Promissory Note, Series 2012A

In July 2012, Big Rivers issued new debt with CoBank in the form of a secured term loan in the amount of $235,000, which is secured under Big Rivers' Indenture. The loan has a fixed interest rate of 4.30% and a final maturity date of June 2032.

(d) Pollution Control Bonds

In June 2010, the County of Ohio, Kentucky, issued $83,300 of Pollution Control Refunding Revenue Bonds, Series 2010A ("Series 2010A Bonds"), the proceeds of which were supported by a promissory note from Big Rivers, bearing the same interest rate as the bonds and secured under Big Rivers' Indenture. These bonds had a fixed interest rate of 6.00% and maturity date of July 2031. These bonds were subject to an optional redemption on or after July 15, 2020, which Big Rivers exercised on July 15, 2020, utilizing proceeds from a CFC loan to pay off the bonds. See Note 4(i) for additional information regarding the 2020 CFC loan used to redeem the Series 2010A Bonds.

(e) 2018 RUS Guaranteed FFB Loan, W8

In April 2018, Big Rivers received a $25,630 loan from the Federal Financing Bank ("FFB") (the "W8 Loan") which is guaranteed by the RUS and secured under Big Rivers' Indenture. The W8 Loan is for long-term financing of capital projects included in Big Rivers' 2012 Environmental Compliance Plan ("ECP") to comply with the EPA's Mercury and Air Toxics Standards ("MATS") rule. These capital projects were completed in 2016 and were originally funded with Big Rivers' general funds. Accordingly, the proceeds of the W8 Loan were used to replenish Big Rivers' general funds. The W8 Loan has a fixed interest rate of 2.828%, which includes a 0.125% RUS administration fee, and has a final maturity date of January 2033.

(f) 2018 RUS Guaranteed FFB Loan, X8

In April 2018, Big Rivers received a $17,965 loan from the FFB, (the "X8 Loan") which is guaranteed by the RUS and secured under Big Rivers' Indenture. The X8 Loan is for long-term financing of capital projects included in Big Rivers' 2013-2015 Transmission Construction Work Plan, which were completed in 2017 and were originally funded with Big Rivers' general funds. Accordingly, the proceeds of the X8 Loan were used to replenish Big Rivers' general funds. The X8 Loan has a fixed interest rate of 2.935%, which includes a 0.125% RUS administration fee, and has a final maturity date of December 2043.

(g) 2021 RUS Guaranteed FFB Loan, Y8 A

In November 2021, Big Rivers received a $24,542 loan from the FFB, (the "Y8 A Loan") which is guaranteed by the RUS and secured under Big Rivers' Indenture. The Y8 A Loan is for long-term financing of capital projects included in Big Rivers' 2016-2019 Transmission Construction Work Plan, which were completed in 2020 and were originally funded with Big Rivers' general funds. Accordingly, the proceeds of the Y8 A Loan were used to replenish Big Rivers' general funds. The Y8 A Loan has a fixed interest rate of 1.936%, which includes a 0.125% RUS administration fee, and has a final maturity date of December 2043.

(h) Line of Credit (CFC Syndicated Line, Series 2020A)

On March 5, 2015, Big Rivers entered into a $130,000 Syndicated Senior Secured Credit Agreement (the "2015 Agreement") with CFC, CoBank, Fifth Third Bank, KeyBank National Association, and Regions Bank. In conjunction with the 2015 Agreement, Big Rivers issued secured promissory notes (the "Series 2015A Notes"), equal to each lender's commitment, which are secured under Big Rivers' Indenture.

On September 19, 2017, the 2015 Agreement was amended to, among other things, reduce the total facility amount from $130,000 to $100,000, and extend the maturity date from March 5, 2018 to September 18, 2020.

On July 11, 2020, the existing 2015 Agreement, that was previously amended and restated in 2017, was replaced with a $150,000 Syndicated Secured Credit Agreement (the "2020 Agreement") with CFC, CoBank, Fifth Third Bank, KeyBank National Association, Regions Bank, and Bank of America. In conjunction with the 2020 Agreement, Big Rivers issued secured promissory notes (the "Series 2020A Notes"), equal to each lender's commitment, which are secured under Big Rivers' Indenture.

As of December 31, 2021, Big Rivers had outstanding borrowings of $60,000 under the 2020 Agreement and $37,190 in issued letters of credit outstanding, which reduced its available borrowing capacity under the 2020 Agreement from $150,000 to $52,810.

As of December 31, 2020, Big Rivers had no outstanding borrowings under the 2020 Agreement and $4,729 in issued letters of credit outstanding, which reduced its available borrowing capacity under the 2020 Agreement from $150,000 to $145,271.

(i) CFC Promissory Note, 2020B

On December 23, 2020, Big Rivers issued new debt with CFC in the form of a secured balloon note in the amount of $83,300 for the purpose of early redemption of the Series 2010A Bonds. This note is secured under Big Rivers' Indenture, with a fixed interest rate of 2.49% and a final maturity date of February 2031.

(j) Old National Bank, Paycheck Protection Program ("PPP") Note

In response to the COVID-19 pandemic, the federal government passed and signed the Coronavirus Aid, Relief, and Economic Security Act ("CARES Act) into law on March 27, 2020. This act allowed qualified businesses to borrow money through the Paycheck Protection Program administered by the Small Business Administration ("SBA) to cover payroll and other related expenses. On April 7, 2020, Big Rivers applied for PPP funds in the amount of $9,941. The unsecured loan was approved, and funds were received on April 21, 2020. On August 18, 2020, Big Rivers submitted an application requesting forgiveness of the $9,941 loan. Big Rivers received notice on August 17, 2021, that the PPP loan principal and accrued interest was forgiven in full and is recorded in the Interest income and other line on the statement of operations.

(k) RUS Cushion of Credit

In 2018, Big Rivers began participating in the cushion of credit program administered by the RUS in conjunction with the execution of the 2018 W8 and X8 RUS Guaranteed FFB Loans. Under the cushion of credit program, RUS borrowers may make voluntary irrevocable deposits into the cushion of credit account. Per the terms of the RUS' commitment to guarantee Big Rivers' W8 and X8 Loans, Big Rivers agreed to make an initial deposit of $3,200 to the cushion of credit account upon receipt of the loan funds and to make additional deposits, as needed, so that the balance at the beginning of each year going forward is equal to or greater than the annual payments due on the W8 and X8 Loans during the year. The interest rate dropped from 5% to 4% on October 1, 2020 and became a variable rate, which is equal to the one-year Treasury rate as of October 1 of each year. The rate in effect as of December 31, 2021 is 0.09%. During 2021, the cushion of credit account accrued interest at an annual rate of 2.99%.

Big Rivers' amounts in the cushion of credit account (deposits and accrued interest) may only be used to make scheduled principal and interest payments on the W8 and X8 Loans. As of December 31, 2021 and 2020, Big Rivers' balance in the RUS cushion of credit account was $3,769 and $3,658, respectively, which is included on the Company's balance sheet as a reduction to long-term debt.

(l) Covenants

Big Rivers is in compliance with all debt covenants associated with both its long-term and short-term debt obligations. The Company's Indenture and other debt agreements require that a Margins for Interest Ratio ("MFIR") of at least 1.10 be maintained for each fiscal year. The 2020 Agreement requires that Big Rivers, throughout the duration of the agreement, maintain a minimum Members' Equities' Balance at the end of each fiscal quarter-end and as of the last day of each fiscal year in an amount at least equal to $417,000 plus 50% of the cumulative positive net margin for the period from December 31, 2019 to the end of the Borrower's most recently ended fiscal year. Big Rivers' MFIR for the fiscal year ended December 31, 2021 was 1.30, and its Equities balance was $480,226.

An MFIR of less than 1.10, per the Indenture and other debt agreements, may result in the following actions, restrictions, or consequences: Big Rivers may not secure additional debt under the Indenture; the Company must seek rates that are reasonably expected to yield a 1.10 MFIR; the Company must provide a written plan satisfactory to the RUS setting forth actions to be taken to achieve the specified MFIR on a timely basis; an event of default may occur; interest rates may increase; and its line of credit may be terminated with an acceleration of any outstanding amounts becoming due immediately.

(Dollars in thousands)

(5) Rate Matters

In connection with the rate matters discussed below, the following tables provide a summary of Regulatory Assets and Liabilities reflected in the Balance Sheet as of December 31, 2021 and 2020:

		Regulatory assets	
		2021	2020
Coleman plant deferred depreciation	$	13,870	13,870
Wilson plant deferred depreciation		32,364	141,353
Non-FAC PPA		12,863	7,772
Asset retirement obligations		31,899	26,645
Environmental costs (CCR)		13,814	15,583
ECP case expense		233	289
Station Two contract termination		92,957	92,102
Coleman plant retire/decommission		132,615	129,869
Reid 1 plant retire/decommission		9,342	7,769
Green plant gas conversion		21,564	—
Total regulatory assets	$	361,521	435,252

		Regulatory liabilities	
		2021	2020
Economic reserve-member rate mitigation	$	17,817	13,334
TIER Credit		35,726	20,000
Total regulatory liabilities	$	53,543	33,334

The rates charged to Big Rivers' members consist of a demand charge per kilowatt ("kW") and an energy charge per kilowatt-hour ("kWh") consumed as approved by the KPSC. The rates include specific demand and energy charges for its two classes of customers, the large industrial customers and the rural customers, under its jurisdiction. For the large industrial customers, the demand charge is generally based on each customer's maximum demand during the current month. For the rural customers, the demand charge is based on Maximum Adjusted Net Local Load (as defined in Big Rivers' tariff).

The Company has certain KPSC approved tariff riders; including a fuel adjustment clause and an environmental surcharge. The net effect of these tariffs is recognized as revenue on a monthly basis with an offset to the Regulatory Liability – Member Rate Mitigation described below.

Coleman plant depreciation and Wilson plant depreciation:

The net impact of the tariff riders to members' rates is currently mitigated by a Member Rate Stability Mechanism ("MRSM"). An offsetting regulatory liability – member rate mitigation reflects the obligation associated with the funding of these reserve accounts. As described below, on June 25, 2020, the KPSC approved several changes to the MRSM beginning in January 2021.

The KPSC entered an order on October 29, 2013, granting Big Rivers an annual revenue increase of $54,227, effective August 20, 2013 (Case No. 2012-00535). In its order, the KPSC excluded the Coleman plant depreciation from rate recovery. The KPSC directed the Company to defer this depreciation expense and record the deferred amounts in a regulatory asset account. The KPSC's order indicated this action was being taken due to the planned temporary idling of Coleman, the length of time the plant would be idled, and the impact of the rate increase on customers. As of December 31, 2021, cumulative depreciation expense of $13,870 was deferred for the Coleman plant, which includes the TIER credit reduction from 2019, as discussed below. Management believes the remaining balance is probable of recovery in future rates. The Coleman plant was retired September 30, 2020, as described below for Case No. 2020-00064.

The KPSC entered an order on April 25, 2014, granting Big Rivers an annual revenue increase of $36,160, effective February 1, 2014 (Case No. 2013-00199). In its order, the KPSC approved Big Rivers' 2012 Depreciation Study, but excluded Wilson plant depreciation from rate recovery. The KPSC directed the Company to defer the Wilson depreciation expense and record in a regulatory asset account, similar to the Coleman depreciation expense deferral per the KPSC's order in Case No. 2012-00535. As of December 31, 2021, cumulative depreciation expense of $32,364 was deferred for the Wilson plant, which is recoverable in future rates. The KPSC also approved Big Rivers' proposal to temporarily offset the rate increase by utilization of the MRSM. The KPSC further granted Big Rivers' proposed accounting treatment for transmission revenues related to the Hawesville smelter and authorized Big Rivers to pass the transmission revenues to its members through the MRSM. The net effect of this accounting treatment was the recognition of revenue on a monthly basis with an offset to the applicable regulatory liability accounts as the reserve funds were used to offset the impact of the base rate increase on the members' monthly bills.

Non-FAC PPA:

Effective July 17, 2009, the KPSC approved the implementation of the Non-Fuel Adjustment Clause-Purchased Power Adjustment ("Non-FAC PPA") which is a rate mechanism allowing Big Rivers to recover certain costs of purchased power that are not recoverable through its Fuel Adjustment Clause ("FAC"). An accrual is recorded monthly to a regulatory asset or liability account based on the difference between the actual purchased power costs recoverable through the Non-FAC PPA and the purchased power base cost included in base rates. The balance in the regulatory asset or liability account as of June 30 each year is billed or refunded to members during the following twelve-month period beginning September 1 through August 31 of the following year.

Asset Retirement Obligations:

The CCR Final Rule requires Big Rivers to address the eventual permanent closures of its Green Station coal ash pond and the coal ash pond at the City of Henderson, Kentucky's Station Two, as well as its landfills at Sebree Station and Wilson Station. Big Rivers recorded asset retirement obligations for its ash ponds at its Green Station and Station Two generating stations and for its landfills at Sebree Station and Wilson Station. See Note 3 for further discussion of the Company's asset retirement obligations. In accordance with FASB ASC 410-20, *Asset Retirement and Environmental Obligations – Asset Retirement Obligations* and under the RUS Uniform System of Accounts, Big Rivers initially recognized its coal ash pond AROs at fair value and subsequently adjusted for accretion expense and changes in estimated timing of pond closures and changes in estimated costs as of December 31, 2021 (Note 3).

On January 5, 2016, the KPSC issued an order in Case No. 2015-00333 approving Big Rivers' request to establish regulatory assets for the deferral of certain expenses it would incur for compliance with the CCR Final Rule, including accretion and depreciation expense related to the Green Station and Station Two ash ponds AROs and other incremental expenses. On June 11, 2021, the KPSC issued an order in Case No. 2021-00079 approving Big Rivers' request to establish a regulatory asset for the deferral of certain expenses related to the Green Station. The new ARO for the Sebree Station landfill is recorded in this regulatory asset. The new ARO for the Wilson Station landfill is deferred pending an application requesting a regulatory asset.

Environmental Costs (CCR) and ECP Case Expense:

On August 6, 2020, the KPSC approved Big Rivers' 2020 Environmental Compliance Plan ("2020 ECP"), (1) granting Big Rivers the authority to close the Green Station and Station Two ash ponds; (2) granting Big Rivers the authority to move the Coleman Station flue gas desulfurization system ("FGD") to Wilson Station to replace Wilson's FGD; (3) conditionally granting Big Rivers' request to establish regulatory assets for the accretion and depreciation expense related to the Coleman Station legacy ash ponds, should the CCR Final Rule be extended to apply to such legacy ash ponds; (4) conditionally granting Big Rivers the authority to close the Coleman Station ash ponds, should the CCR Final Rule be extended to apply to such legacy ash ponds; (5) authorizing Big Rivers to amortize the Green Station and Station Two ash pond AROs through its environmental surcharge; (6) conditionally authorizing Big Rivers to amortize the costs incurred to close the Coleman Station ash pond through its environmental surcharge should the CCR Final Rule be extended to apply to the Coleman Station ash ponds; (7) authorizing Big Rivers to amortize the regulatory asset for CCR-related expenses through its environmental surcharge; and (8) authorizing Big Rivers to establish a regulatory asset for the costs of preparing and prosecuting the 2020 ECP case, the recovery of which regulatory asset was approved in Case No. 2021-00061.

As of December 31, 2021, the total amount of CCR-related expenses and costs for asset retirement obligations deferred and included in Regulatory Assets on the Company's balance sheet was $31,889, and the costs of preparing and prosecuting the ECP case that have been deferred and included in Regulatory Assets on the Company's balance sheet was $233.

Station Two Contract Termination:

On August 29, 2018, the KPSC entered an order (Case No. 2018-00146) (i) finding that the Station Two units were no longer capable of the normal, continuous, reliable operation for the economically competitive production of electricity; (ii) finding that the Station Two contracts, except for the Joint Facilities Agreement, have therefore terminated pursuant to their own terms; (iii) granting Big Rivers' request for authority to continue to operate Station Two under terms of the Station Two contracts for a period up to May 31, 2019; and (iv) reserving a ruling on Big Rivers' request for authority to establish a Station Two regulatory asset. The remaining issues in this case were resolved with a Settlement Agreement between the Office of the Attorney General, the Kentucky Industrial Utility Customers ("KIUC"), and Big Rivers. The Settlement Agreement provided that the KPSC would approve the Station Two regulatory asset, that Big Rivers would establish a Station Two Depreciation Credit, starting in the month that Station Two is retired, to reduce customer bills based on the revenues Big Rivers would receive associated with depreciation expense on Station Two, that Big Rivers would establish a TIER Credit to reduce existing regulatory assets in the event Big Rivers achieves a TIER in excess of 1.45 in 2020 or 2021, and that in Big Rivers' next general rate case, the intervenors would support Big Rivers' recovery of the Station Two, Wilson plant, and, conditionally, the Coleman plant regulatory assets. On October 23, 2018, the KPSC issued a final order approving the Settlement Agreement in full. RUS approved the Settlement Agreement on February 22, 2019. Big Rivers retired Station Two on January 31, 2019. On February 26, 2019, Big Rivers filed revised tariff sheets with the KPSC to incorporate the Station Two Depreciation Credit. As of December 31, 2021, the total amount of the Station Two contract termination included in the Regulatory Assets on the Company's balance sheet was $92,957. This includes Station Two assets transferred from utility plant to Regulatory Assets, Station Two Depreciation Credit and the Company's portion of decommissioning costs incurred to date.

On December 12, 2018, the KPSC approved Big Rivers' request to phase out its existing Demand Side Management ("DSM") programs, to establish a new Low-Income Weatherization Program, and to establish a regulatory liability for the savings associated with the phase out of the existing DSM programs. As of December 31, 2021, the DSM savings were no longer recorded in a Regulatory Liability based on the ruling received in Case No. 2020-00064, as discussed below.

Coleman Plant and Reid 1 Plant Retire/Decommission:

On June 25, 2020, the KPSC entered an order in Case No. 2020-00064 approving a Settlement Agreement, as modified by the Commission, between Big Rivers, KIUC and the Attorney General, which approved Big Rivers' requests to: (1) establish regulatory assets for the remaining net book value of Coleman Station and Reid Station Unit 1 at retirement, and for the costs to decommission those units; (2) cease charging DSM savings to a regulatory liability; (3) utilize the existing DSM regulatory liability in 2020 and 80% of equity headroom in 2021 to reduce certain regulatory assets (the Wilson and Coleman depreciation regulatory assets; the Coleman, Reid 1, and Station Two retirement and decommissioning regulatory assets; and a regulatory asset through which the costs related to a focused management audit were deferred); and (4) recover the amounts deferred in those regulatory assets through amortization. The KPSC also approved replacing the TIER Credit mechanism in Big Rivers' MRSM tariff with a new TIER Credit mechanism. Under the new TIER Credit, in years in which Big Rivers earns in excess of a 1.30 TIER, 40% of the excess margins will be returned to Big Rivers' members over the following year through a monthly bill credit. The remaining 60% of the excess margins will be deferred in regulatory liability accounts, with a minimum required balance of $9,000, to be utilized in a year in which Big Rivers does not achieve a 1.30 TIER or to further decrease the balance of the regulatory assets with KPSC approval. The first $700 of the bill credit each year will be allocated to Rural customers, and any bill credit over $700 will be allocated between the Rural and Large Industrial customers based on revenues.

On March 8, 2022, Big Rivers filed a motion for clarification of the KPSC's Order entered on June 25, 2020, in Case No. 2020-00064. Specifically, Big Rivers asked the KPSC to clarify that the utilization of equity headroom to reduce the Smelter Load Mitigation (SLM) regulatory assets is not recoverable from its members. The KPSC issued an order on March 15, 2022, clarifying the June 25, 2020 Order, by stating that Big Rivers' member equity headroom in 2021 to record a one-time amortization of the SLM regulatory assets is not recoverable from Big Rivers' members in current or future rates. Big Rivers recorded $84,945 for utilization of its equity headroom as a charge to amortization expense in 2021. During 2021 and 2020, the Company reduced the SLM regulatory asset balances by recording amortization of $108,989 against Wilson Plant deferred depreciation and $705 against focused management audit, respectively. The amortization recorded was ordered in Case No. 2020-00064 and includes the equity headroom adjustment, annual TIER credit allocation, monthly amortization and phase out of the DSM programs.

Green Plant Gas Conversion:

On June 11, 2021, the KPSC granted Big Rivers a certificate of public convenience and necessity ("CPCN") to convert Big Rivers' two existing coal-fired generating units at its Green Station to run on natural gas, authorized the gas conversion assets to be depreciated over a seven-year period, and granting Big Rivers the authority to establish a regulatory asset to defer recognition of the costs that Big Rivers expects to incur as a result of the retirement of certain Green Station assets that will no longer be utilized after the conversion. As of December 31, 2021, the total amount of this regulatory asset incurred to date was $21,564.

Regulatory Liabilities:

In years in which Big Rivers earns in excess of a 1.30 TIER, excluding the utilization of equity headroom, 40% of the excess margins will be returned to Big Rivers' members over the following year through a monthly bill credit. The remaining 60% of the excess margins will be deferred in regulatory liability Big Rivers' new TIER Credit was $44,543 for 2021, with 40%, or $17,817 to be returned to members over a twelve-month period beginning February 2022. This amount is recorded as a regulatory liability at December 31, 2021 presented between current and long-term maturities based on the timing of future bill credits expected to be provided to the members. The remaining 60%, or $26,726, was also deferred in regulatory liability accounts and is expected to offset the regulatory assets, as described above, pending KPSC approval. The regulatory liability of $9,000 remaining from 2021 will continue to remain as a minimum required balance as described above. The new TIER Credit was recorded as depreciation and amortization expense on the statement of operations.

On February 28, 2022, Big Rivers filed an application with the KPSC, Case No. 2022-00028, for review of its MRSM charge for calendar year 2021. In its application, Big Rivers proposed to use the regulatory liability amount in excess of the minimum required balance of $9,000, or $26,726 that was established in Case No. 2020-00064, discussed above, to further reduce the SLM Regulatory Assets in 2022. This case is pending.

(6) Income Taxes

At December 31, 2021, Big Rivers had a Non-Patron Net Operating Loss ("NOL") Carryforward of approximately $35,280 expiring at various times between 2029 and 2037 which was entirely offset by a full valuation allowance.

On January 16, 2020, the Internal Revenue Service issued News Release IR 2020-12 announcing that it would refund all amounts sequestered from refundable AMT credits under IRC Section 168(k)(4) since 2013. The Company received a refund of $449 and recorded a benefit to federal income tax expense during 2020.

On March 27, 2020, H.R. 748, the CARES Act was signed into legislation which includes tax provisions relevant to businesses. The CARES Act provides that any unused Alternative Minimum Tax ("AMT") credits can be claimed fully in tax years beginning in 2018 and 2019. The Company claimed a refund of the remaining AMT credit carryforward of $107 on its 2019 federal tax return and received the refund during fiscal 2020.

(Dollars in thousands)

The components of the net deferred tax assets as of December 31, 2021 and 2020 were as follows:

		2021	2020
Deferred tax assets:			
Net operating loss carryforward	$	8,802	10,213
Fixed asset basis difference		6,901	5,906
Total deferred tax assets		15,703	16,119
Deferred tax liabilities:			
RUS Series B Note		(3,343)	(3,343)
Bond refunding costs		(51)	(56)
Total deferred tax liabilities		(3,394)	(3,399)
Net deferred tax asset (pre-valuation allowance)		12,309	12,720
Valuation allowance		(12,309)	(12,720)
Net deferred tax asset	$	—	—

A reconciliation of the Company's effective tax rate for 2021, 2020, and 2019 is as follows:

	2021	2020	2019
Federal rate	21.0 %	21.0 %	21.0 %
State rate – net of federal benefit	4.0	4.0	4.0
Permanent differences	—	0.2	0.5
Patronage allocation to members	(25.0)	(25.2)	(25.4)
Alternative minimum tax credit recovery	—	(4.6)	(0.3)
Effective tax rate	— %	(4.6)%	(0.2)%

The Company files a federal income tax return, as well as certain state income tax returns. The years currently open for federal income tax examination are 2018 through 2020. The major state tax jurisdiction currently open for income tax examination is Kentucky for years 2017 through 2020. The Company has not recorded any unrecognized tax benefits or liabilities related to federal or state income taxes.

The Company classifies tax-related interest and penalties as an operating expense on the statement of operations and accrued expenses on the balance sheet. No material tax-related interest or penalties have been recorded during 2021, 2020, or 2019.

(7) Pension Plans

(a) Defined-Benefit Plans

Big Rivers has a noncontributory defined-benefit pension plan covering substantially all employees who meet minimum age and service requirements and who were employed by the Company prior to the plan closure dates cited below. The plan provides benefits based on the participants' years of service and the five highest consecutive years' compensation during the last ten years of employment. Big Rivers' policy is to fund such plan in accordance with the requirements of the Employee Retirement Income Security Act of 1974.

Prior to January 1, 2014, Big Rivers had two separate defined-benefit pension plans. The salaried employees' defined-benefit plan was closed to new entrants effective January 1, 2008, and the bargaining employees' defined-benefit plan was closed to new hires effective November 1, 2008. The Company simultaneously established base contribution accounts in the defined-contribution thrift and 401(k) savings plans, which were renamed as the retirement savings plans. The base contribution account for an eligible employee, which is one who meets the minimum age and service requirements, but for whom membership in the defined-benefit plan is closed, is funded by employer contributions based on graduated percentages of the employee's pay, depending on his or her age.

In order to meet minimum participation requirements, Big Rivers' salaried employees defined benefit plan was merged into the bargaining employees defined benefit plan. The merger was effective January 1, 2014 for purposes of Internal Revenue Code and effective December 31, 2014 for all other purposes. Effective January 1, 2017, participation was frozen in the merged plan for highly compensated employees in order to comply with IRS code section 401(a)(26).

Effective December 31, 2021, all employees within the defined benefit plan were frozen. No employee shall accrue any benefits under the plan on or after December 31, 2021. The employees impacted will subsequently become eligible for the base contribution accounts described above.

The Company has adopted FASB ASC 715, *Compensation – Retirement Benefits*, including the requirement to recognize the funded status of its pension plan and other postretirement plans (Note 11 – Postretirement Benefits Other than Pensions). ASC 715 defines the funded status of a defined-benefit pension plan as the fair value of its assets less its projected benefit obligation, which includes projected salary increases and defines the funded status of any other postretirement plan as the fair value of its assets less its accumulated postretirement benefit obligation.

ASC 715 also requires an employer to measure the funded status of a plan as of the date of its year-end balance sheet and requires disclosure in the notes to the financial statements of certain additional information related to net periodic benefit costs for the next fiscal year. The Company's pension and other postretirement benefit plans are measured as of December 31, 2021 and 2020.

The following provides an overview of the Company's noncontributory defined-benefit pension plan.

(Dollars in thousands)

A reconciliation of the Company's benefit obligations of its noncontributory defined-benefit pension plan at December 31, 2021 and 2020 is as follows:

		2021	2020
Benefit obligation – beginning of period	$	23,439	21,620
Service cost – benefits earned during the period		649	597
Interest cost on projected benefit obligation		469	625
Plan curtailments		(4,437)	—
Benefits paid		(8,837)	(2,194)
Actuarial loss		1,860	2,791
Benefit obligation – end of period	$	13,143	23,439

Big Rivers' defined-benefit pension plan provides retirees and terminated employees with a lump-sum payment option. Benefits paid in 2021 include lump-sum payments totaling $8,749 – the result of nine former employees electing the lump-sum payment option. Benefits paid in 2020 include lump-sum payments totaling $2,154 – the result of three former employees electing the lump-sum payment option.

The accumulated benefit obligation for the defined-benefit pension plan was $13,143 and $18,998 at December 31, 2021 and 2020, respectively.

A reconciliation of the Company's pension plan assets at December 31, 2021 and 2020 is as follows:

		2021	2020
Fair value of plan assets – beginning of period	$	22,255	20,898
Employer contributions		47	222
Actual return on plan assets		1,711	3,329
Benefits paid		(8,837)	(2,194)
Fair value of plan assets – end of period	$	15,176	22,255

The funded status of the Company's pension plan at December 31, 2021 and 2020 is as follows:

		2021	2020
Benefit obligation – end of period	$	(13,143)	(23,439)
Fair value of plan assets – end of period		15,176	22,255
Funded status	$	2,033	(1,184)

(Dollars in thousands)

Components of net periodic pension costs for the years ended December 31, 2021, 2020, and 2019 were as follows:

		2021	2020	2019
Service cost	$	649	597	599
Interest cost		469	625	834
Expected return on plan assets		(1,221)	(1,318)	(1,194)
Amortization of prior service cost		(33)	(33)	(33)
Amortization of actuarial loss		130	41	325
Settlement and curtailment (gain) loss		(1,386)	289	268
Net periodic benefit cost	$	(1,392)	201	799

A reconciliation of the pension plan amounts in accumulated other comprehensive income at December 31, 2021 and 2020 is as follows:

		2021	2020
Prior service cost	$	—	(11)
Unamortized actuarial loss		(1,301)	(3,068)
Accumulated other comprehensive income	$	(1,301)	(3,079)

In 2021, $0 of prior service credit and $0 of actuarial loss is expected to be amortized to periodic pension benefit cost.

The recognized adjustments to other comprehensive income at December 31, 2021 and 2020 are as follows:

		2021	2020
Prior service cost	$	—	—
Unamortized actuarial gain/(loss)		(1,777)	483
Other comprehensive (income)/loss	$	(1,777)	483

At December 31, 2021 and 2020, amounts recognized in the balance sheets were as follows:

		2021	2020
Deferred credits and other	$	2,033	(1,184)

(Dollars in thousands)

Assumptions used to develop the projected benefit obligation and determine the net periodic benefit cost were as follows:

	2021	2020	2019
Discount rate – projected benefit obligation	2.57 %	2.05 %	2.99 %
Discount rate – net periodic benefit cost	2.05	2.99	4.12
Rates of increase in compensation levels	4.00	4.00	4.00
Expected long-term rate of return on assets	5.75	6.50	6.50

The expected long-term rate of return on plan assets for determining net periodic pension cost for each fiscal year is chosen by the Company from a best estimate range determined by applying anticipated long-term returns and long-term volatility for various asset categories to the target asset allocation of the plan. The expected long-term rate of return on assets is based on the median expected rate of return for a passively-managed portfolio plus the incremental return from active management.

Big Rivers utilizes a third-party investment manager for the plan assets, and has communicated thereto the Company's Retirement Plan Investment Policy which was revised in 2021, including a target asset allocation mix of 10% U.S. equities (an acceptable range of 5%–15%), 10% international equities (an acceptable range of 5%–15%), 60% Long-Term Government Fixed Income (an acceptable range of 50%-70%), and 20% U.S. Credit (an acceptable range of 10%–30%). The former policy in effect during 2020 included a target asset allocation mix of 50% U.S. equities (an acceptable range of 45%–55%), 15% international equities (an acceptable range of 10%–20%), and 35% fixed income (an acceptable range of 30%–40%). As of December 31, 2021, the investment allocation was 10% in U.S. equities, 9% in international equities, 62% in Long Term Government Fixed income and 19% in U.S. Credit. As of December 31, 2020 the investment allocation was 57% U.S. Equities, 13% International Equities and 30% Fixed income. The objective of the investment program seeks to (a) maximize return on investment, (b) minimize volatility, (c) minimize Company contributions, and (d) provide the employee benefit in accordance with the plan. The portfolio is well diversified and of high quality. The average quality of the fixed income investments must be "A" or better. The equity portfolio must also be of investment grade quality. The performance of the investment manager is reviewed semiannually.

(Dollars in thousands)

At December 31, 2021 and 2020, the fair value of Big Rivers' defined-benefit pension plan assets by asset category are as follows:

	Level 1	Level 2	December 31, 2021
Cash and money market	$ 578	—	578
Equity securities:			
Common stock	1,217	—	1,217
Mutual funds	1,667	—	1,667
Fixed:			
Corporate bonds and notes	—	11,714	11,714
	$ 3,462	11,714	15,176

	Level 1	Level 2	December 31, 2020
Cash and money market	$ 1,006	—	1,006
Equity securities:			
Common stock	9,494	—	9,494
Preferred stock	290	—	290
Mutual funds	6,025	—	6,025
Fixed:			
Tax exempt bonds and notes	—	54	54
Corporate bonds and notes	—	5,386	5,386
	$ 16,815	5,440	22,255

Expected retiree pension benefit payments projected to be required during the next ten years following 2021 are as follows:

	Amount
Year ending December 31:	
2022	$ 633
2023	515
2024	821
2025	721
2026	1,069
Thereafter	5,687
Total	$ 9,446

(b) Defined-Contribution Plans

Big Rivers has two defined-contribution retirement plans covering substantially all employees who meet minimum age and service requirements. Each plan has a thrift and 401(k) savings section allowing employees to contribute up to 75% of pay on a pretax and/or after-tax basis, with employer matching contributions equal to 60% of the first 6% contributed by the employee on a pretax basis.

A base contribution retirement section was added and the plan name changed from Thrift and 401(k) Savings to Retirement Savings, effective January 1, 2008, for the salaried plan and November 1, 2008, for the bargaining plan. The base contribution account is funded by employer contributions based on graduated percentages of pay, depending on the employee's age.

The Company's expense under these plans was $4,583, $4,518, and $4,749 for the years ended December 31, 2021, 2020 and 2019, respectively, recorded as operating expenses on the statement of operations.

(c) Deferred Compensation Plan

Big Rivers sponsors a nonqualified deferred compensation plan for its eligible employees who are members of a select group of management or highly compensated employees. The purpose of the plan is to allow participants to receive contributions or make deferrals that they could not receive or make under the salaried employees qualified defined-contribution retirement savings plan (formerly, the thrift and 401(k) savings plan) as a result of nondiscrimination rules and other limitations applicable to the qualified plan under the Internal Revenue Code. The nonqualified plan also allows a participant to defer a percentage of his or her pay on a pretax basis.

The nonqualified deferred compensation plan is unfunded, but the Company has chosen to finance its obligations under the plan, including any employee deferrals, through a rabbi trust. The trust assets remain a part of the Company's general assets, subject to the claims of its creditors. The employer contribution for December 31, 2021 and 2020 was $222 and $214, respectively, and the deferred compensation expense for December 31, 2021, 2020, and 2019 was $364, $388, and $248, respectively. As of December 31, 2021 and 2020, the trust assets were $1,653 and $1,333, and the deferred liability was $1,653 and $1,333, respectively.

(Dollars in thousands)

(8) Restricted Investments

The amortized costs and fair values (Level 1 measurement) of Big Rivers' restricted investments held for Member rate mitigation at December 31, 2021 and 2020 were as follows:

		2021		2020	
		Amortized costs	Fair values	Amortized costs	Fair values
Debt securities:					
U.S. Treasury – Money Market	$	—	—	666	666
Total	$	—	—	666	666

There were no gross unrealized gains or losses on restricted investments at December 31, 2021 and 2020.

		2021		2020	
		Gains	Losses	Gains	Losses
Debt securities:					
U.S. Treasury – Money Market	$	—	—	—	—
Total	$	—	—	—	—

Debt securities at December 31, 2021 and 2020 mature, according to their contractual terms, as follows (actual maturities may differ due to call or prepayment rights):

		2021		2020	
		Amortized costs	Fair values	Amortized costs	Fair values
In one year or less	$	—	—	666	666
Total	$	—	—	666	666

(Dollars in thousands)

Gross unrealized losses on investments and the fair values of the related securities, aggregated by investment category and length of time that individual securities have been in a continuous unrealized loss position at December 31, 2021 and 2020 were as follows:

		2021		2020	
		Less than 12 months		Less than 12 months	
		Losses	Fair values	Losses	Fair values
Debt securities:					
U.S. Treasury – Money Market	$	—	—	—	666
Total	$	—	—	—	666

There are no restricted investments as of December 31, 2021. None of the Company's restricted investments held for Member rate mitigation were in an unrealized loss position as of December 31, 2020.

In conjunction with the CFC $302,000 secured term loan (Note 4), Big Rivers was required to invest in CFC capital term certificates ("CTCs") equal to 14.29% of the Refinance Note. Proceeds of the Equity Note were used to purchase the investments in CTCs as required under the loan agreement. The interest rate on the CTCs was fixed at 4.28% and was equal to 80% of the Equity Note rate of 5.35%. The CTCs cannot be traded in the market, and therefore, they do not have readily determinable fair values and were accounted for at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar investment of the same issuer. During 2020, the Company sold the investments and used the proceeds to pay off the CFC Equity Note (see Note 4(a)).

(9) Short-Term Investments

At December 31, 2021, the Company's short-term investments included $353 of investments in debt securities which are included in the Company's balance sheet at amortized cost. At December 31, 2020, the Company's short-term investments included $5,103 of investments in debt securities and $1,500 of investments in certificates of deposit ("CDs"), which are both included in the Company's balance sheet at amortized cost. The investments in debt securities are classified as held-to-maturity, based on management's intent and ability to hold them to maturity. Both CDs and investments in debt securities are included in "Cash and Cash Equivalents" (if the original maturity date is less than or equal to three months) or "Short-term-investments" (if the original maturity date is greater than three months but less than one year).

(Dollars in thousands)

The amortized costs and fair values (Level 1 measurement) of Big Rivers' short-term investments at December 31, 2021 and 2020, were as follows:

		2021		2020	
		Amortized costs	Fair values	Amortized costs	Fair values
Debt securities:					
Corporate notes	$	—	—	1,201	1,196
U.S. Treasuries		353	352	3,902	3,894
Total debt securities		353	352	5,103	5,090
Other:					
Certificates of deposit		—	—	1,500	1,502
Total short-term investments	$	353	352	6,603	6,592

Gross unrealized gains and losses on short-term investments at December 31, 2021 and 2020, were as follows:

		2021		2020	
		Gains	Losses	Gains	Losses
Debt securities:					
Corporate notes	$	—	—	—	(5)
U.S. Treasuries		—	(1)	—	(8)
Total debt securities		—	(1)	—	(13)
Other:					
Certificates of deposit		—	—	2	—
Total short-term investments	$	—	(1)	2	(13)

(10) Fair Value of Other Financial Instruments

FASB ASC 820 defines fair value, establishes a framework for measuring fair value and expands disclosures about fair value measures. It applies under other accounting standards that require or permit fair value measurements and does not require any new fair value measurements.

(Dollars in thousands)

The carrying value of accounts receivable and accounts payable approximate fair value due to their short maturity. The carrying value of long-term accounts receivable is the net amount deemed certain of collection, which approximates fair value. At December 31, 2021 and 2020, the Company's cash and cash equivalents included short-term investments in an institutional U.S. government money market portfolio account classified as trading securities under ASC 320, *Investments – Debt and Equity Securities*, that were recorded at fair value which was determined using quoted market prices for identical assets without regard to valuation adjustment or block discount (a Level 1 measure), as follows:

	2021	2020
Institutional U.S. government money market portfolio	$ 3,926	11,000

It was not practical to estimate the fair value of patronage capital included within other deposits and investments due to these being untraded companies.

Big Rivers' long-term debt at December 31, 2021, consisted of CFC notes totaling $270,840, a CoBank note in the amount of $150,333, an RUS note totaling $218,827, and RUS guaranteed FFB loans totaling $63,764 (Note 4). The CFC, CoBank, RUS, and FFB debt is carried at amortized cost which approximates fair value.

(11) Postretirement Benefits Other than Pensions

Big Rivers provides certain postretirement medical benefits for retired employees and their spouses. Generally, except for generation bargaining retirees, Big Rivers pays 85% of the premium cost for all retirees age 62 to 65. The Company pays 25% of the premium cost for spouses age 55 to 61. Beginning at age 65, the Company pays 25% of the premium cost if the retiree is enrolled in Medicare Part B. For each generation bargaining retiree, Big Rivers establishes a retiree medical account at retirement equal to $1.40 per year of service up to 30 years. The account balance is credited with interest based on the 10-year treasury rate subject to a minimum of 2% and a maximum of 4%. The account is to be used for the sole purpose of paying the premium cost for the retiree and spouse.

The discount rates used in computing the postretirement benefit obligation and net periodic benefit cost were as follows:

	2021	2020	2019
Discount rate – projected benefit obligation	2.77%	2.44%	3.34%
Discount rate – net periodic benefit cost	2.44	3.34	4.34

(Dollars in thousands)

The healthcare cost trend rate assumptions as of December 31, 2021 and 2020 were as follows:

	2021	2020
Initial trend rate	5.48 %	5.73 %
Ultimate trend rate	4.50	4.50
Year ultimate trend is reached	2038	2038

A one-percentage-point change in assumed healthcare cost trend rates would have the following effects:

		2021	2020
One-percentage-point decrease:			
Effect on total service and interest cost components	$	(103)	(110)
Effect on year-end benefit obligation		(1,160)	(1,529)
One-percentage-point increase:			
Effect on total service and interest cost components	$	133	142
Effect on year-end benefit obligation		1,424	1,927

A reconciliation of the Company's benefit obligations of its postretirement plan at December 31, 2021 and 2020 is as follows:

		2021	2020
Benefit obligation – beginning of period	$	15,808	14,674
Service cost – benefits earned during the period		491	490
Interest cost on projected benefit obligation		354	472
Participant contributions		405	340
Benefits paid		(978)	(1,373)
Actuarial loss (gain)		(2,418)	1,205
Benefit obligation – end of period	$	13,662	15,808

(Dollars in thousands)

Big Rivers revised the eligibility requirements for postretirement medical with regard to age and service. Beginning January 1, 2013, eligibility for retirement is age 62 with 10 years of service. The service requirement is waived for active employees on December 31, 2012 who will not have 10 years of service at age 62. A reconciliation of the Company's postretirement plan assets at December 31, 2021 and 2020 is as follows:

		2021	2020
Fair value of plan assets – beginning of period	$	—	—
Employer contributions		573	1,033
Participant contributions		405	340
Benefits paid		(978)	(1,373)
Fair value of plan assets – end of period	$	—	—

The funded status of the Company's postretirement plan at December 31, 2021 and 2020 is as follows:

		2021	2020
Benefit obligation – end of period	$	(13,662)	(15,808)
Fair value of plan assets – end of period		—	—
Funded status	$	(13,662)	(15,808)

The components of net periodic postretirement benefit costs for the years ended December 31, 2021, 2020, and 2019 were as follows:

		2021	2020	2019
Service cost	$	491	490	447
Interest cost		354	472	544
Amortization of prior service cost		(112)	(112)	(138)
Amortization of gain		—	(20)	(198)
Curtailment recognized		—	—	(49)
Special termination benefits		—	—	204
Net periodic benefit cost	$	733	830	810

(Dollars in thousands)

A reconciliation of the postretirement plan amounts in accumulated other comprehensive income at December 31, 2021 and 2020 is as follows:

		2021	2020
Prior service credit	$	381	493
Unamortized actuarial gain		3,155	737
Accumulated other comprehensive income	$	3,536	1,230

In 2022, $112 of prior service cost and $137 of actuarial gain is expected to be amortized to periodic benefit cost.

The recognized adjustments to other comprehensive income (loss) at December 31, 2021 and 2020 are as follows:

		2021	2020
Prior service cost	$	(112)	(112)
Unamortized actuarial gain/(loss)		2,418	(1,205)
Amortization of net gain		—	(20)
Other comprehensive income/(loss)	$	2,306	(1,337)

At December 31, 2021 and 2020, amounts recognized in the balance sheets were as follows:

		2021	2020
Accounts payable	$	(1,262)	(1,424)
Deferred credits and other		(12,400)	(14,384)
Net amount recognized	$	(13,662)	(15,808)

(Dollars in thousands)

Expected retiree benefit payments projected to be required during the years following 2021 are as follows:

		Amount
Year:		
2022	$	1,262
2023		1,120
2024		925
2025		945
2026		916
Thereafter		4,414
Total	$	9,582

In addition to the postretirement plan discussed above, Big Rivers has another postretirement benefit plan, which vests a portion of accrued sick leave benefits to salaried employees upon retirement or death. To the extent an employee's sick leave hour balance exceeds 480 hours, such excess hours are paid at 20% of the employee's base hourly rate at the time of retirement or death. The accumulated obligation recorded for the postretirement sick leave benefit is $767 and $766 at December 31, 2021 and 2020, respectively. The postretirement expense recorded was $141, $96, and $61, for 2021, 2020, and 2019, respectively, and the benefits paid were $140, $7, and $67 for 2021, 2020, and 2019, respectively.

(12) Related Parties

For the years ended December 31, 2021, 2020, and 2019, Big Rivers had tariff sales to its members of $221,959, $226,152, and $256,280, respectively. In addition, for the years ended December 31, 2021, 2020, and 2019, Big Rivers had certain sales to Kenergy for the Domtar Paper Co. load of $4,673, $3,013, and $4,182, respectively.

At December 31, 2021 and 2020, Big Rivers had accounts receivable from its members of $19,912 and $20,926, respectively.

(13) Commitments and Contingencies

Big Rivers is involved in ongoing litigation with the City of Henderson and the City of Henderson Utility Commission doing business as Henderson Municipal Power and Light (collectively, "HMP&L") in which Big Rivers is seeking damages from HMP&L relating to HMP&L's refusal to pay the costs associated with Excess Henderson Energy produced at Station Two. HMP&L has filed a counterclaim alleging that if HMP&L is required to pay the costs of the Excess Henderson Energy, it is entitled to an offset for the revenues related to that energy. In December 2017, Big Rivers and HMP&L entered into an agreement to settle all claims relating to Excess Henderson Energy. Under the settlement agreement, HMP&L agreed to be responsible for all costs related to Excess Henderson Energy generated after the effective date of the settlement agreement. Big Rivers does not dispute that HMP&L is entitled to the Excess Henderson Energy-related revenues after the payment date in the settlement agreement if it pays the costs of that energy.

On May 1, 2018, the contracts under which Big Rivers was operating Station Two terminated as a result of the Station Two units no longer being capable of the economically competitive production of electricity. To allow HMP&L time to make alternate arrangements for its power supply, Big Rivers continued to operate the units under the terms of the Station Two contracts until the units were retired on January 31, 2019. The termination of the Station Two contracts has given rise to disputes between the parties, including (i) a declaratory judgment action HMP&L has filed relating to the interpretation of the deed to the real estate on which the Station Two units were constructed; (ii) a claim HMP&L has filed seeking amounts HMP&L claims it is owed as a result of the annual budget settlement process that occurred during the term of the Station Two contracts; (iii) a claim HMP&L filed seeking a declaratory judgment on the percentage owed by each party for the decommissioning and post-closure compliance costs for the Station Two Ash Pond; (iv) a separate action HMP&L filed seeking a declaratory order that the December 2017 settlement agreement only applies to some of the Excess Henderson Energy; and (v) a proceeding Big Rivers filed with the KPSC to resolve all outstanding disputes between it and HMP&L arising out of the Station Two contracts (KSPC Case No. 2019-00269). HMP&L's claims relating to the annual budget settlement process, the Station Two Ash Pond, and the settlement agreement are being held in abeyance pending the outcome of the KPSC case and all appeals therefrom. On August 2, 2021, the KPSC entered a final order in Case No. 2019-00269, largely in Big Rivers' favor. HMP&L appealed that order to the Franklin Circuit Court, which is pending. On September 29, 2021, Big Rivers filed a proceeding with the KPSC asking the KPSC to enforce its final order from Case No. 2019-00269. That proceeding is pending. The Company believes there will be no material adverse effect to its financial statements when the litigation and disputes with HMP&L are resolved.

Big Rivers is involved in other litigation arising in the normal course of business. While the results of such litigation cannot be predicted with certainty, management, based upon advice of counsel, believes that the final outcome will not have a material adverse effect on the financial statements.

(14) Subsequent Events

In February 2022, Russia invaded the Ukraine. As of the date of this filing, the Company does not expect the invasion of the Ukraine to materially affect its 2022 results of operations or financial position. However, the Company cannot reasonably estimate the overall length or severity of this war, or the extent to which a prolonged war may affect the Company's financial position or results of operations beyond 2022.

See Note 5 relating the KPSC's March 15, 2022 clarification order for the KPSC's Order entered on June 25, 2020 in Case No. 2020-00064, *Electronic Application of Big Rivers Electric Corporation for Approval to Modify its MRSM Tariff, Cease Deferring Depreciation Expenses, Establish Regulatory Assets, Amortize Regulatory Assets, and Other Appropriate Relief*.

Management evaluated subsequent events up to and including March 31, 2022, the date the financial statements were available to be issued.

KPMG LLP
Suite 2400
400 West Market Street
Louisville, KY 40202

Independent Auditors' Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance With *Government Auditing Standards*

The Board of Directors
Big Rivers Electric Corporation

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of Big Rivers Electric Corporation (Big Rivers), which comprise Big Rivers' balance sheet as of December 31, 2021, and the related statements of operations, comprehensive income (loss), equities, and cash flows for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated March 31, 2022.

Report on Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered Big Rivers' internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of Big Rivers' internal control. Accordingly, we do not express an opinion on the effectiveness of the Big Rivers' internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis. A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses or significant deficiencies may exist that were not identified.

Report on Compliance and Other Matters

As part of obtaining reasonable assurance about whether Big Rivers' financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, and contracts, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of This Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

KPMG LLP

Louisville, Kentucky
March 31, 2022

KPMG LLP
Suite 2400
400 West Market Street
Louisville, KY 40202

Independent Auditors' Report on Compliance with Aspects of Contractual Agreements and Regulatory Requirements for Electric Borrowers

The Board of Directors
Big Rivers Electric Corporation
Henderson, Kentucky:

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of Big Rivers Electric Corporation (Big Rivers), which comprise the balance sheet of Big Rivers as of December 31, 2021 and the related statements of operations, comprehensive income, equities, and cash flows for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated March 31, 2022. In accordance with *Government Auditing Standards*, we have also issued our report dated March 31, 2022, on our consideration of Big Rivers' internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and other matters. No reports other than the reports referred to above related to our audit have been furnished to management.

In connection with our audit, nothing came to our attention that caused us to believe that Big Rivers failed to comply with the terms, covenants, provisions, or conditions of their loan, grant, and security instruments as set forth in 7 CFR Part 1773, *Policy on Audits of Rural Utilities Service Borrowers,* §1773.33, insofar as they relate to accounting matters as enumerated below.

- Accounting procedures;
- Accumulating and recording labor, material, and overhead costs, and the distribution of these costs to construction, retirement, and maintenance or other expense accounts;
- Reconciling property records to the general ledger;
- Clearing construction accounts and accruing depreciation on completed construction;
- Recording the retirement of property;
- Seeking approval of the sale, lease or transfer of capital assets and disposition of proceeds for the sale or lease of plant, material, or scrap;
- Maintaining control over materials and supplies;
- Preparing Financial and Operating Reports;
- Obtaining written RUS approval to enter into any contract for the management, operation, or maintenance of the borrower's system if the contract covers all or substantially all of the electric system;
- Disclosing material related party transactions in the financial statements in accordance with accounting principles generally accepted in the United States of America;
- Recording depreciation in accordance with accounting principles generally accepted in the United States of America;
- Complying with the requirements for the detailed schedule of deferred debits and deferred credits; and
- Complying with the requirements for the detailed schedule of investments.

Our audit was not directed primarily toward obtaining knowledge of noncompliance. Accordingly, had we performed additional procedures, other matters may have come to our attention regarding Big Rivers' noncompliance with the above-referenced terms, covenants, provisions, or conditions of the contractual agreements and regulatory requirements, insofar as they relate to accounting matters as enumerated above.

The purpose of this report on compliance with aspects of contractual agreements and regulatory requirements for electric borrowers is solely to describe the scope of our testing of compliance and the results of that testing, and not to provide an opinion on compliance based on the requirements of 7 CFR Part 1773, *Policy on Audits of Rural Utilities Service Borrowers and Grantees*. Accordingly, this report is not suitable for any other purpose.

KPMG LLP

Louisville, Kentucky
March 31, 2022

BIG RIVERS ELECTRIC CORPORATION

DETAILED SCHEDULE OF DEFERRED DEBITS AND CREDITS AS OF DECEMBER 31, 2021

DEFERRED DEBITS:	
Other Deferred Debits	$ 11,080,315
RUS Part A, Section B, Line 30	11,080,315
Regulatory Assets	361,521,216
Financing Fees	3,239,129
Deferred Income Taxes	0
DEFERRED CHARGES AND OTHER	**$ 375,840,660**
DEFERRED CREDITS:	
Regulatory liabilities – Member Rate Mitigation	$ 17,817,177
Regulatory liabilities – TIER Credit	35,725,765
Other Deferred Credits	250,000
RUS Part A, Section B, Line 59	53,792,942
Provision for pension and postretirement benefits	13,465,369
Provision for Asset Retirement Obligations	72,760,282
RUS Part A, Section B, Line 48	86,225,651
TOTAL DEFERRED CREDITS AND OTHER	**$ 140,018,593**

BIG RIVERS ELECTRIC CORPORATION

DETAILED SCHEDULE OF INVESTMENTS AS OF DECEMBER 31, 2021

Investments in associated organizations	$	13,688,752
Investments in economic development projects		10,000
RUS Part A, Section B, Lines 7-11	**$**	**13,698,752**

BIG RIVERS ELECTRIC CORPORATION

Financial Statements

December 31, 2022 and 2021

(With Independent Auditors' Report Thereon)

KPMG LLP
Suite 2400
400 West Market Street
Louisville, KY 40202

Independent Auditors' Report

The Board of Directors and Members
Big Rivers Electric Corporation:

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of Big Rivers Electric Corporation, which comprise the balance sheets as of December 31, 2022 and 2021, and the related statements of operations, comprehensive income (loss), equities, and cash flows for each of the years in the three-year period ended December 31, 2022, and the related notes to the financial statements.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the financial position of Big Rivers Electric Corporation, as of December 31, 2022 and 2021, and the results of operations, and cash flows thereof for each of the years in the three-year period ended December 31, 2022 in accordance with U.S. generally accepted accounting principles.

Basis for Opinion

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of Big Rivers Electric Corporation, and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with U.S. generally accepted accounting principles, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about Big Rivers Electric Corporation's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditors' Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS and *Government Auditing Standards*, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of Big Rivers Electric Corporation's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about Big Rivers Electric Corporation's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control related matters that we identified during the audit.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated March 22, 2023 on our consideration of Big Rivers Electric Corporation's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of Big Rivers Electric Corporation's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering Big Rivers Electric Corporation's internal control over financial reporting and compliance.

KPMG LLP

Louisville, Kentucky
March 22, 2023

BIG RIVERS ELECTRIC CORPORATION

Balance Sheets

December 31, 2022 and 2021

(Dollars in thousands)

Assets		2022	2021
Utility plant – net	$	944,112	892,988
Intangible plant		21,756	15,000
Other deposits and investments		20,217	16,643
Current assets:			
Cash and cash equivalents		50,027	29,913
Short-term investments		5,420	352
Accounts receivable		52,861	47,920
Fuel inventory		39,149	17,198
Nonfuel inventory		14,983	18,329
Prepaid expenses and other assets		1,650	5,250
Total current assets		164,090	118,962
Deferred charges and other assets:			
Regulatory assets		420,978	361,521
Long-term accounts receivable		4,486	8,293
Deferred charges and other		14,088	11,618
Total deferred charges and other assets		439,552	381,432
Total	$	1,589,727	1,425,025
Equities and Liabilities			
Capitalization:			
Equities	$	475,667	460,226
Long-term debt		744,841	669,295
Total capitalization		1,220,508	1,129,521
Current liabilities:			
Current maturities of long-term obligations		149,308	27,999
Line of credit		25,000	60,000
Purchased power payable		8,121	5,087
Accounts payable		54,442	42,698
Accrued expenses		10,940	18,567
Accrued interest		651	1,135
Regulatory liabilities – member rate mitigation		10,735	16,332
Total current liabilities		259,197	171,818
Deferred credits and other:			
Regulatory liabilities – member rate mitigation		976	1,485
Regulatory liabilities – TIER credit		26,566	35,726
Asset retirement obligations		69,267	72,760
Deferred credits and other		13,213	13,715
Total deferred credits and other		110,022	123,686
Commitments and contingencies (note 12)			
Total	$	1,589,727	1,425,025

See accompanying notes to financial statements.

BIG RIVERS ELECTRIC CORPORATION

Statements of Operations

Years ended December 31, 2022, 2021, and 2020

(Dollars in thousands)

		2022	2021	2020
Operating revenue	$	490,348	393,144	328,708
Total operating revenue		490,348	393,144	328,708
Operating expenses:				
Operations:				
Fuel for electric generation		125,354	130,019	83,939
Power purchased and interchanged		131,733	37,436	35,756
Production, excluding fuel		38,228	46,945	40,616
Transmission and other		35,991	34,735	37,042
Maintenance		34,401	32,082	36,947
Depreciation and amortization		72,465	172,136	54,630
Total operating expenses		438,172	453,353	288,930
Electric operating margin (loss)		52,176	(60,209)	39,778
Interest expense and other:				
Interest		41,267	28,575	33,393
Income tax benefit		—	—	(448)
Other – net		592	684	830
Total interest expense and other		41,859	29,259	33,775
Operating margin (loss)		10,317	(89,468)	6,003
Nonoperating margin:				
Interest income and other		3,710	14,072	4,192
Total nonoperating margin		3,710	14,072	4,192
Net margin (loss)	$	14,027	(75,396)	10,195

See accompanying notes to financial statements.

BIG RIVERS ELECTRIC CORPORATION

Statements of Comprehensive Income (Loss)

Years ended December 31, 2022, 2021, and 2020

(Dollars in thousands)

		2022	2021	2020
Net margin (loss)	$	14,027	(75,396)	10,195
Other comprehensive income (loss):				
Defined-benefit plans:				
Actuarial gain (loss)		(2,833)	3,066	(779)
Amortization of (gain) loss		1,727	(1,289)	296
Defined-benefit plans		(1,106)	1,777	(483)
Postretirement benefits other than pensions:				
Prior service cost		(238)	(112)	(112)
Actuarial (gain) loss		3,162	2,418	(1,205)
Amortization of gain		(404)	—	(20)
Postretirement benefits other than pensions		2,520	2,306	(1,337)
Other comprehensive income (loss)		1,414	4,083	(1,820)
Comprehensive income (loss)	$	15,441	(71,313)	8,375

See accompanying notes to financial statements.

BIG RIVERS ELECTRIC CORPORATION

Statements of Equities

Years ended December 31, 2022, 2021, and 2020

(Dollars in thousands)

	Retained margin	Other equities: Donated capital and memberships	Other equities: Consumers' contributions to debt service	Accumulated other comprehensive income/(loss)	Total equities
Balance – December 31, 2018	$ 502,030	764	3,681	(659)	505,816
Net margin	16,715	—	—	—	16,715
Pension and postretirement benefit plans	—	—	—	633	633
Balance – December 31, 2019	518,745	764	3,681	(26)	523,164
Net margin	10,195	—	—	—	10,195
Pension and postretirement benefit plans	—	—	—	(1,820)	(1,820)
Balance – December 31, 2020	528,940	764	3,681	(1,846)	531,539
Net margin (loss)	(75,396)	—	—	—	(75,396)
Pension and postretirement benefit plans	—	—	—	4,083	4,083
Balance – December 31, 2021	453,544	764	3,681	2,237	460,226
Net margin (loss)	14,027	—	—	—	14,027
Pension and postretirement benefit plans	—	—	—	1,414	1,414
Balance – December 31, 2022	$ 467,571	764	3,681	3,651	475,667

See accompanying notes to financial statements.

BIG RIVERS ELECTRIC CORPORATION

Statements of Cash Flows

Years ended December 31, 2022, 2021, and 2020

(Dollars in thousands)

		2022	2021	2020
Cash flows from operating activities:				
Net margin (loss)	$	14,027	(75,396)	10,195
Adjustments to reconcile net margin (loss) to net cash provided by operating activities:				
Depreciation and amortization		70,420	172,641	55,329
Interest compounded – RUS Series B Note		19,830	12,242	11,557
Interest income compounded – RUS Cushion of Credit (advance payments unapplied)		(41)	(111)	(169)
Forgiveness from long-term obligations		—	(9,941)	—
Noncash member rate mitigation revenue		—	—	(9,532)
Changes in certain assets and liabilities:				
Accounts receivable		(1,133)	(15,477)	(3,470)
Fuel and nonfuel inventory		(18,604)	2,321	13,333
Prepaid expenses and other		3,599	(121)	(831)
Deferred charges		10,824	(4,650)	(12,042)
Purchased power payable		3,034	1,374	1,011
Accounts payable		(1,189)	7,620	(3,706)
Accrued expenses		(8,110)	9,454	(2,085)
Other – net		(26,516)	(11,518)	6,619
Net cash provided by operating activities		66,141	88,438	66,209
Cash flows from investing activities:				
Capital expenditures		(180,040)	(149,396)	(61,154)
Proceeds from restricted investments and deposits		5,930	8,322	43,902
Purchases of restricted investments and other deposits and investments		(8,776)	(2,320)	(12,854)
Proceeds of short-term investments		51,919	6,994	11,074
Purchases of short-term investments		(56,988)	(744)	(8,239)
Net cash used in investing activities		(187,955)	(137,144)	(27,271)
Cash flows from financing activities:				
Principal payments on long-term obligations		(153,275)	(26,314)	(141,337)
Proceeds from long-term obligations		330,265	24,542	93,241
Proceeds from line of credit		45,000	75,000	83,300
Payments on line of credit		(80,000)	(15,000)	(83,300)
Payments on debt issuance costs		(62)	(362)	(1,175)
Net cash provided by (used in) financing activities		141,928	57,866	(49,271)
Net increase (decrease) in cash and cash equivalents		20,114	9,160	(10,333)
Cash and cash equivalents – beginning of year		29,913	20,753	31,086
Cash and cash equivalents – end of year	$	50,027	29,913	20,753
Supplemental cash flow information:				
Cash paid for interest	$	27,411	19,358	24,801
Cash paid for income taxes		—	1	—
Supplemental schedule of non-cash financing and investing activities:				
Change in regulatory assets associated with asset retirement obligations	$	14,792	22,319	13,476
Change in regulatory assets associated with utility plant		32,962	(99,315)	156,122
Change in deferred charges associated with asset retirement obligations		(3,378)	3,378	—
Purchases of utility plant in accounts payable		(10,508)	8,675	4,694

See accompanying notes to financial statements.

(1) Organization and Summary of Significant Accounting Policies

(a) General Information

Big Rivers Electric Corporation ("Big Rivers" or the "Company"), an electric generation and transmission cooperative, supplies wholesale power to its three member distribution cooperatives (Jackson Purchase Energy Corporation, Kenergy Corp. ("Kenergy"), and Meade County Rural Electric Cooperative Corporation ("Meade County RECC")) under all requirements contracts. Big Rivers also markets power to nonmember utilities, power marketers, and the Midcontinent Independent System Operator ("MISO"). The members provide electric power and energy to industrial, residential, and commercial customers located in portions of 22 western Kentucky counties. The wholesale power contracts with the members remain in effect until December 31, 2043. Rates to Big Rivers' members are established by the Kentucky Public Service Commission ("KPSC") and are subject to approval by the Rural Utilities Service ("RUS"). The financial statements of Big Rivers include the provisions of the Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") 980, Regulated Operations, and give recognition to the ratemaking and accounting practices of the KPSC and RUS.

(b) Estimates

The preparation of the financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses, and disclosure of contingent assets and liabilities. The estimates and assumptions used in the accompanying financial statements are based upon management's evaluation of the relevant facts and circumstances as of the date of the financial statements. Significant items subject to such estimates and assumptions include intangible asset recoverability, asset retirement obligations, pension and postretirement obligations, and other contingencies. Actual results may differ from those estimates.

(c) System of Accounts

Big Rivers maintains its accounting records in accordance with the Uniform System of Accounts as prescribed by RUS Bulletin 1767B-1, as adopted by the KPSC. These regulatory agencies retain authority and periodically issue orders on various accounting and ratemaking matters. Adjustments to RUS accounting have been made to make the financial statements consistent with generally accepted accounting principles in the United States of America.

(d) Revenue Recognition

Revenues generated from the Company's wholesale power sales are based on month-end meter readings and are recognized as earned when electricity is delivered. Capacity revenues are recognized in the period in which the Company provides capacity to a counterparty. MISO sales revenue is recognized based upon the megawatt-hours delivered in each hour at the market price.

(Dollars in thousands)

(e) Utility Plant and Depreciation

Utility plant is recorded at original cost, which includes the cost of contracted services, materials, labor, and overhead. In accordance with FASB ASC 835-20, *Interest – Capitalization of Interest*, the Company also includes capitalized interest on projects with an estimated total cost of $250 or more before consideration of capitalized interest. The interest capitalized is determined by applying the effective rate of Big Rivers' weighted average debt to the accumulated expenditures for qualifying projects included in construction in progress. Replacements of depreciable property units, except minor replacements, are charged to utility plant.

Depreciation of utility plant in service is recorded using the straight-line method over the estimated remaining service lives, as approved by the RUS and KPSC. During 2012, a depreciation study was completed to evaluate the remaining economic lives of the Company's assets and establish new depreciation rates. The study was approved by the RUS in 2012 and by the KPSC in 2014, with the rates becoming effective February 1, 2014. The annual composite depreciation rates used to compute depreciation expense are as follows:

Electric plant	0.35%–25.38%
Transmission plant	1.36%–2.29%
General plant	3.76%–9.88%

For 2022, 2021, and 2020, the average composite depreciation rates were 2.85%, 3.09%, and 3.19%, respectively. At the time utility plant is disposed of, the original cost plus cost of removal less salvage value of such utility plant is charged to accumulated depreciation, as required by the RUS. For 2022, 2021 and 2020, Big Rivers TIER credit was charged to depreciation and amortization as discussed in Note 5.

(f) Intangible Plant

Indefinite-lived intangible assets are tested for impairment annually, and more frequently when there is a triggering event. Annually, or when there is a triggering event, the Company first performs a qualitative assessment by evaluating all relevant events and circumstances to determine if it is more likely than not that the indefinite-lived intangible assets are impaired. Intangible plant was recorded as a result of the resolution from a certified dispute amongst Big Rivers, Meade County RECC, and Louisville Gas and Electric ("LG&E") in KPSC Case No. 2019-00370. During 2020, $15,000 was paid for the certified territorial rights which do not expire. This portion of the intangible plant has an indefinite life and is not subject to amortization. During 2022, the Company completed reliability projects in the amount of $6,756, which were transferred to LG&E in accordance with the resolution. Amortization expense of $116 was recorded in 2022 for the reliability projects using an amortization period of 43.67 years. Intangible plant is subject to impairment testing and if impaired, the carrying value is accordingly reduced. There was no impairment recorded in 2022 or 2021.

(g) Impairment Review of Long-Lived Assets

Long-lived assets and intangible assets subject to amortization are reviewed as facts and circumstances indicate that the carrying amount may be impaired. FASB ASC 360, *Property, Plant, and Equipment*, requires the evaluation of impairment by comparing an asset's carrying value to the estimated future cash flows the asset is expected to generate over its remaining useful life. If this evaluation were to conclude that the future cash flows were not sufficient to recover the carrying value of the asset, an impairment charge would be recorded based on the difference between the asset's carrying amount and its fair value (less costs to sell for assets to be disposed of by sale) as a charge to net margin.

(h) Asset Retirement Obligations

FASB ASC 410-20, *Asset Retirement and Environmental Obligations – Asset Retirement Obligations*, requires legal obligations associated with the retirement of long-lived assets to be recognized at fair value when incurred and capitalized as part of the related long-lived asset. The liability is accreted each period based on the credit-adjusted risk-free rate of return that existed when the liability, or portion thereof, was initially measured. The period accretion is recognized as an increase in the carrying amount of the liability, and the capitalized cost is depreciated over the useful life of the related asset. When the asset is retired, the entity settles the obligation for its recorded amount or incurs a gain or loss.

Big Rivers has recorded liabilities in its financial statements for asset retirement obligations ("AROs") related to the requirements of the U.S. Environmental Protection Agency's ("EPA") Disposal of Coal Combustion Residuals from Electric Utilities Rule ("CCR Final Rule") and Effluent Limitations Guidelines Rule ("ELG Final Rule") for the coal ash ponds located at its Green Station and the City of Henderson's Station Two ("Station Two") generating units. The CCR Final Rule was published in the Federal Register on April 17, 2015 and provides a comprehensive set of requirements for the safe disposal of CCRs, commonly known as coal ash, from coal-fired power plants. The EPA subsequently published an update to the CCR Final Rule, effective on September 28, 2020, allowing facilities to submit a demonstration for an extension to the deadline for unlined CCR surface impoundments to stop receiving waste. The Company submitted the demonstration in November 2020 requesting approval to operate its Green Station ash pond until June 2022, with closure commencing at that time. The ELG Final Rule was published in the Federal Register on November 3, 2015 and sets limits on the levels of toxic metals in wastewater that can be discharged from power plants. See Note 3 for further discussion of the Company's AROs.

In 2021, Big Rivers also recorded AROs for the closure of the landfill located at its Green Station and closure of Phase Two of the landfill located at its Wilson Station.

(i) Inventory

Inventories are carried at average cost and include coal, lime, limestone, oil and gas used for electric generation, and materials and supplies used for utility operations. Purchased emission allowances are recorded in inventory at actual cost by each vintage year. Allowances issued by the EPA are recorded at zero cost by each vintage year. Total purchased and EPA issued allowances are carried in inventory at a weighted average cost by each vintage year. Issuances of allowances are accounted for on a vintage basis using a monthly weighted average cost.

(j) Cash and Cash Equivalents

Big Rivers considers all short-term, highly liquid investments with original maturities of three months or less to be cash equivalents.

(k) Short-Term Investments

Short-term investments include investments in debt securities. The aforementioned short-term investments have original maturities of less than one year.

(l) Regulatory Assets and Liabilities

FASB ASC 980 applies to regulated entities for which rates are designed to recover the costs of providing service. In accordance with this FASB topic, certain items that would normally be reflected in the statement of operations are deferred on the balance sheet. Regulatory assets represent probable future revenues associated with certain incurred costs, which will be recovered from members through the regulated rate-making process. Regulatory assets are reduced during the period(s) in which the related costs are recovered through rates or when future recovery is no longer probable. Conversely, regulatory liabilities represent future reductions in revenues associated with amounts that are to be credited, or refunded, to members through the regulated rate-making process. Regulatory liabilities are reduced during the period(s) in which the related amounts are refunded to members through rates or when future refunding of the amounts is no longer probable.

(m) Long-Term Accounts Receivable

During 2021, the Company amended a market-based rate partial and full requirements contract with an existing non-member customer. The amendment included deferral of charges incurred by the customer during 2021. As of December 31, 2022, the total due from the customer was $7,099, with $4,486 recorded as long-term accounts receivable and $2,613 recorded in accounts receivable. The customer began making monthly installment payments during 2021 and will continue these payments through May 2027. An allowance for doubtful accounts is recorded if it is determined it is probable that the Company will not collect all principal and interest contractually due. There is no allowance recorded at December 31, 2022 or 2021.

(n) Other Deposits and Investments

Other deposits and investments consist primarily of patronage capital, cash collateral/margin call deposits, investments in associated organizations, and investments held in trust for a deferred compensation plan. Investments held in trust consist primarily of equities and money market accounts and are carried at fair value. Remaining deposits are recorded at their original cost as their cost approximates fair value due to the nature of the deposit.

(o) Income Taxes

Big Rivers was formed as a tax-exempt cooperative organization as described in Internal Revenue Code Section 501(c)(12). To retain tax-exempt status under this section, at least 85% of Big Rivers' annual income must be generated from transactions with the Company's members. In 1983, sales to nonmembers resulted in Big Rivers failing to meet the 85% requirement. Until Big Rivers can meet the 85% member income requirement, the Company will not be eligible for tax-exempt status and will be treated as a taxable cooperative.

As a taxable cooperative, Big Rivers is entitled to exclude the amount of patronage allocations to members from taxable income. Income and expenses related to nonpatronage-sourced operations are taxable to Big Rivers. Big Rivers files a federal income tax return and certain state income tax returns.

Under the provisions of FASB ASC 740, *Income Taxes*, Big Rivers is required to record deferred tax assets and liabilities for temporary differences between amounts reported for financial reporting purposes and amounts reported for income tax purposes on the tax return. Deferred tax assets and liabilities are determined based upon these temporary differences using enacted tax rates for the year in which these differences are expected to reverse. Deferred income tax expense or benefit is based on the change in assets and liabilities from period to period, subject to an ongoing assessment of realization. Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return are recorded only when the more-likely-than-not recognition threshold is satisfied and measured at the largest amount of benefit that is greater than 50% likely of being realized upon settlement.

(p) Patronage Capital

As provided in the Company's bylaws, Big Rivers accounts for each year's patronage-sourced income, both operating and non-operating, on a patronage basis. Notwithstanding any other provision of the bylaws, the amount to be allocated as patronage capital for a given year shall not be less than the greater of regular taxable patronage-sourced income or alternative minimum taxable patronage-sourced income.

(q) Derivatives

Management has reviewed the requirements of FASB ASC 815, *Derivatives and Hedging*, and has determined that certain contracts to which the Company is a party to meet the definition of a derivative under FASB ASC 815. The Company has elected the Normal Purchase and Normal Sale exception for these contracts, and therefore, the contracts are not required to be recognized at fair value in the financial statements.

(r) Fair Value Measurements

FASB ASC 820, *Fair Value Measurement*, defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal, or most advantageous, market for the asset or liability in an orderly transaction between market participants at the measurement date. ASC 820 establishes a three-level fair value hierarchy that prioritizes the inputs used to measure fair value. This hierarchy requires entities to maximize the use of observable inputs when possible. The three levels of inputs used to measure fair value are as follows:

- Level 1 – quoted prices in active markets for identical assets or liabilities;
- Level 2 – observable inputs other than quoted prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar assets and

liabilities in markets that are not active; or other inputs that are observable or can be corroborated by observable market data; and

- Level 3 – unobservable inputs that are supported by little or no market activity and that are significant to the fair values of the assets or liabilities, including certain pricing models, discounted cash flow methodologies, and similar techniques that use significant unobservable inputs.

(s) Deferred Loan Costs

The Company capitalizes costs incurred in connection with long-term debt. These costs are amortized using the effective interest method over the term of the respective debt financing agreements.

In accordance with ASU 2015-03, *Interest-Imputation of Interest (Subtopic 835-30)*, deferred loan costs related to a recognized debt liability are presented on the balance sheet as a direct deduction from the carrying amount of the related debt liability instead of being presented as an asset.

(t) Deferred Credits and Other

Deferred credits and other includes employee-related benefits and capacity revenue sales billed but not yet earned. Employee related benefits include, but are not limited to, pension and post-retirement benefit costs and amounted to $12,489 and $13,465 at December 31, 2022 and 2021, respectively. Deferred capacity revenue, which will be recognized within the next year, amounted to $724 and $250 at December 31, 2022 and 2021, respectively.

(u) New Accounting Guidance

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)* (ASU 2016-02). The main principle of this ASU requires that lessees recognize all leases (other than leases with a term of twelve months or less) on the balance sheet as lease liabilities, based upon the present value of the lease payments, with corresponding right of use assets. ASU 2016-02 also makes targeted changes to other aspects of the current guidance, including the lease classification criteria and the lessor accounting model. In May 2020, the FASB delayed the required implementation date of ASU 2016-02 for private entities by one year. The amendments in ASU 2016-02 are effective for the Company for annual reporting periods beginning after December 15, 2021. The Company assessed the impact of adopting the guidance and does not believe it has a material effect.

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*, which allows a company to irrevocably elect the fair value option on certain financial instruments. Subsequently, the FASB issued ASU 2019-04, *Codification Improvements to Topic 326, Financial Instruments – Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825, Financial Instruments* and ASU 2019-05, *Financial Instruments – Credit Losses (Topic 326): Targeted Transition Relief* in May 2019; ASU 2019-11, *Codification Improvements to Topic 326, Financial Instruments – Credit Losses* in November 2019; and ASU 2020-03, *Codification Improvements to Financial Instruments*, in March 2020. The effective date of the guidance for the Company will be for annual reporting periods beginning after December 15, 2022. The Company is currently assessing the impact of adopting the guidance but does not believe this guidance will have a material effect.

(Dollars in thousands)

(2) Utility Plant

The Company converted Green Station to a natural gas generating unit during 2022. Gross coal fired utility plant of $170,555 was retired after the conversion was complete. Additionally, the retirement of the coal fired assets resulted in a decrease of $103,732 to accumulated depreciation. The total coal fired utility plant, net, associated with this conversion in the amount of $66,823 was retired and recorded as a regulatory asset. See Note 5 for further discussion of the Company's regulatory asset balances related to the Green Station gas conversion. At December 31, 2022 and 2021, utility plant is summarized as follows:

		2022	2021
Classified plant in service:			
Production plant	$	1,366,409	1,484,121
Transmission plant		396,500	324,393
General plant		62,678	61,130
Other		67	67
		1,825,654	1,869,711
Less accumulated depreciation		1,095,847	1,151,975
		729,807	717,736
Construction in progress		214,305	175,252
Utility plant – net	$	944,112	892,988

Big Rivers' secured long-term debt obligations and the 2020 Amended and Restated Syndicated Senior Secured Credit Agreement, dated June 11, 2020, are secured under Big Rivers' Indenture dated as of July 1, 2009, as supplemented and amended (the "Indenture"), between Big Rivers and U.S. Bank National Association, as trustee (the "Indenture Trustee"). Obligations are secured under the Indenture by a mortgage lien on substantially all of Big Rivers' owned tangible, and certain intangible, properties including Big Rivers' production, transmission, general, and other Utility Plant. See Note 4 for further discussion of Big Rivers' Debt and Other Long-Term Obligations secured under its Indenture.

Depreciation expense on utility plant for the years ended December 31, 2022, 2021 and 2020, was $43,312, $41,187 and $21,119, respectively. The increase from 2020 to 2021 in depreciation expense on utility plant, net, is related to the discontinuation of the deferral of depreciation expense on the Wilson plant as of January 1, 2021. See Note 5 for discussion of Wilson plant depreciation.

Interest capitalized for the years ended December 31, 2022 and 2021, was $5,543 and $3,246, respectively.

As of December 31, 2022 and 2021, the Company had recorded an estimated $45,621 and $50,862, respectively, related to nonlegal removal costs included in accumulated depreciation as required by the RUS.

(Dollars in thousands)

(3) Asset Retirement Obligations

The Company has AROs arising from legal obligations associated with the retirements of certain long-lived assets. The liabilities were initially measured at fair value and subsequently adjusted for accretion expense and changes in estimated future cash flows. The corresponding asset retirement costs are capitalized as part of the carrying amount of the related long-lived assets and depreciated over their remaining useful lives. The following table presents the activity for the ARO liabilities for the years ended December 31, 2022 and 2021:

		2022		2021	
ARO balance at beginning of year	$	72,760		40,410	
Additional obligations incurred		—		22,442	(a)
Changes in estimated timing or cost		—		143	(b)
Accretion expense		3,553	(c)	10,020	(c)
Actual costs incurred		(7,046)		(255)	
ARO balance at end of year	$	69,267		72,760	

(a) An ARO liability was recorded in 2021 for closure costs associated with the Green Station landfill and Phase Two of the Wilson Station Landfill.

(b) During 2021, a favorable ruling was received in the final order of Case No. 2019-00269, which states the City of Henderson is liable for its share of closing the Station Two ash pond. As a result of this ruling, Big Rivers recorded an adjustment to the Station Two ash pond ARO liability to reflect both a change in cost estimate and extension of the final closure date. See Note 5 for further discussion of litigation with the City of Henderson.

(c) The 2022 and 2021 annual ARO accretion expense of $3,553 and $7,935, respectively, was deferred and included in the Regulatory Assets amount reported on the Company's balance sheet as of December 31, 2022 and 2021. The remaining 2021 ARO accretion expense of $2,085 was deferred and included in the Deferred Charges amount reported on the Company's balance sheet as of December 31, 2021. The KPSC final order in Case No. 2019-00435, the Environmental Compliance Plan, approved the recovery of the capital costs for ash pond closure through the environmental surcharge mechanism ("ESM") based on non-levelized amortization of the actual ash pond closure spending-to-date, allocable over a rolling 10-year period. This method ensures that cost recovery from Members through the ESM is based on actual project spending while also allowing Big Rivers to match its amortization expense with ESM revenue.

(Dollars in thousands)

(4) Debt and Other Long-Term Obligations

A detail of long-term debt at December 31, 2022 and 2021 is as follows:

		2022	2021
CFC Refinance Promissory Note, Series 2012B, serial note pricing, 4.30% effective interest rate, final maturity date of May 2032	$	173,143	187,540
RUS 2009 Series B Promissory Note, stated amount of $245,530, no stated interest rate, 5.80% imputed interest rate, maturing December 2023		115,891	218,827
CoBank Promissory Note, Series 2012A, 4.30% fixed interest rate, final maturity date of June 2032		139,008	150,333
2018 RUS Guaranteed FFB Loan, W8, 2.83% fixed interest rate, final maturity date of January 2033		20,169	22,322
2018 RUS Guaranteed FFB Loan, X8, 2.94% fixed interest rate, final maturity date of December 2043		16,209	16,900
2021 RUS Guaranteed FFB Loan, Y8A, 1.94% fixed interest rate, final maturity date of December 2043		24,542	24,542
2022 RUS Guaranteed FFB Loan, Y8B, 3.34% fixed interest rate, final maturity date of December 2043		122,765	—
2022 RUS Guaranteed FFB Loan, AA8, 2.31% fixed interest rate, final maturity date of December 2043		57,500	—
2022 CFC Loan 1, 4.58% fixed interest rate, final maturity date of September 2042		49,225	—
2022 CFC Loan 2, 4.82% fixed interest rate, final maturity date of September 2042		49,625	—
2022 CFC Farmer Mac Loan, 4.37% fixed interest rate, final maturity date of September 2042		49,207	—
CFC Promissory Note, Series 2020B, 2.49% fixed interest rate, final maturity date of February 2031		83,300	83,300
Total long-term debt		900,584	703,764
Less current maturities		149,308	27,999
Less unamortized deferred debt issuance costs		2,625	2,701
Less advance payments unapplied – RUS cushion of credit		3,810	3,769
Total long-term debt – net of current maturities, deferred debt issuance costs, and advance payments	$	744,841	669,295

(Dollars in thousands)

The following are scheduled maturities of long-term debt at December 31, 2022:

		Amount
Year:		
2023	$	149,308
2024		45,738
2025		45,007
2026		46,882
2027		46,073
Thereafter		567,576
Total	$	900,584

(a) National Rural Utilities Cooperative Finance Corporation (CFC) Refinance Note, 2012B

In July 2012, Big Rivers issued new debt with CFC in the form of a secured term loan in the amount of $302,000 (the “Refinance Note”). The Refinance Note is secured under Big Rivers’ Indenture, dated July 1, 2009 between the Company and U.S. Bank National Association, and consists of twenty individual notes with different fixed interest rates ranging from 3.05% to 5.35%. The Refinance Note has an effective interest rate of 4.30% and a final maturity date of May 2032.

(b) RUS Notes

On July 15, 2009, Big Rivers’ previous RUS debt was replaced with the RUS 2009 Promissory Note Series A (the “RUS Series A Note”) and the RUS 2009 Promissory Note Series B (the “RUS Series B Note”). The RUS Series A Note was repaid in full in 2018.

The RUS Series B Note has no stated interest rate, is recorded at an imputed interest rate of 5.80%, and is secured under Big Rivers’ Indenture. A prepayment of $122,765 of the $245,530 stated amount was made in May 2022. The remaining $122,765 of the RUS Series B Note is due December 2023.

(c) CoBank, ACB (CoBank) Promissory Note, Series 2012A

In July 2012, Big Rivers issued new debt with CoBank in the form of a secured term loan in the amount of $235,000, which is secured under Big Rivers’ Indenture. The loan has a fixed interest rate of 4.30% and a final maturity date of June 2032.

(d) 2018 RUS Guaranteed FFB Loan, W8

In April 2018, Big Rivers received a $25,630 loan from the Federal Financing Bank (“FFB”) (the “W8 Loan”) which is guaranteed by the RUS and secured under Big Rivers’ Indenture. The W8 Loan is for long-term financing of capital projects included in Big Rivers’ 2012 Environmental Compliance Plan (“ECP”) to comply with the EPA’s Mercury and Air Toxics Standards (“MATS”) rule. These capital projects were completed in 2016 and were originally funded with Big Rivers’ general funds. Accordingly, the proceeds of the W8 Loan were used to replenish Big Rivers’ general funds. The W8

Loan has a fixed interest rate of 2.828%, which includes a 0.125% RUS administration fee, and has a final maturity date of January 2033.

(e) 2018 RUS Guaranteed FFB Loan, X8

In April 2018, Big Rivers received a $17,965 loan from the FFB, (the "X8 Loan") which is guaranteed by the RUS and secured under Big Rivers' Indenture. The X8 Loan is for long-term financing of capital projects included in Big Rivers' 2013-2015 Transmission Construction Work Plan, which were completed in 2017 and were originally funded with Big Rivers' general funds. Accordingly, the proceeds of the X8 Loan were used to replenish Big Rivers' general funds. The X8 Loan has a fixed interest rate of 2.935%, which includes a 0.125% RUS administration fee, and has a final maturity date of December 2043.

(f) 2021 RUS Guaranteed FFB Loan, Y8 A

In November 2021, Big Rivers received a $24,542 loan from the FFB, (the "Y8 A Loan") which is guaranteed by the RUS and secured under Big Rivers' Indenture. The Y8 A Loan is for long-term financing of capital projects included in Big Rivers' 2016-2019 Transmission Construction Work Plan, which were completed in 2020 and were originally funded with Big Rivers' general funds. Accordingly, the proceeds of the Y8 A Loan were used to replenish Big Rivers' general funds. The Y8 A Loan has a fixed interest rate of 1.936%, which includes a 0.125% RUS administration fee, and has a final maturity date of December 2043.

(g) 2022 RUS Guaranteed FFB Loan, Y8 B

In May 2022, Big Rivers received a $122,765 loan from the FFB, (the "Y8 B Loan") which is guaranteed by the RUS and secured under Big Rivers' Indenture. The Y8 B Loan was issued to refinance one-half of the RUS Series B Note maturing on December 31, 2023. The Y8 B Loan has a fixed interest rate of 3.342%, which includes a 0.125% RUS administration fee, and has a final maturity of December 2043.

(h) 2022 RUS Guaranteed FFB Loan, AA8

In February 2022, Big Rivers received a $57,500 loan from the FFB, (the "AA8 Loan") which is guaranteed by the RUS and secured under Big Rivers' Indenture. The AA8 Loan is for long-term financing of capital projects included in Big Rivers' 2020-1 Amendment to the 2020-2023 Transmission Construction Work Plan, which were completed in 2022 and were originally funded with Big Rivers' general funds. The AA8 Loan has a fixed interest rate of 2.312%, which includes a 0.125% RUS administration fee, and has a final maturity of December 2043.

(i) National Rural Utilities Cooperative Finance Corporation (CFC) Loan, 2022A

In 2022, Big Rivers issued new debt with CFC in the form of three secured term loans totaling $150,000, which are secured under Big Rivers' Indenture. CFC Term Loan One was advanced in April 2022 and has a stated interest rate of 4.58%; CFC Term Loan Two was advanced in July 2022 and has a stated interest rate of 4.82%; and CFC Farmer Mac Loan was advanced in April 2022 and has a stated interest rate of 4.374%. Each loan has a final maturity date of September 2042.

(j) Line of Credit (CFC Syndicated Line, Series 2020A)

On March 5, 2015, Big Rivers entered into a $130,000 Syndicated Senior Secured Credit Agreement (the “2015 Agreement”) with CFC, CoBank, Fifth Third Bank, KeyBank National Association, and Regions Bank. In conjunction with the 2015 Agreement, Big Rivers issued secured promissory notes (the “Series 2015A Notes”), equal to each lender’s commitment, which are secured under Big Rivers’ Indenture.

On September 19, 2017, the 2015 Agreement was amended to, among other things, reduce the total facility amount from $130,000 to $100,000, and extend the maturity date from March 5, 2018 to September 18, 2020.

On July 11, 2020, the existing 2015 Agreement, that was previously amended and restated in 2017, was replaced with a $150,000 Syndicated Secured Credit Agreement (the “2020 Agreement”) with CFC, CoBank, Fifth Third Bank, KeyBank National Association, Regions Bank, and Bank of America. In conjunction with the 2020 Agreement, Big Rivers issued secured promissory notes (the “Series 2020A Notes”), equal to each lender’s commitment, which are secured under Big Rivers’ Indenture.

As of December 31, 2022, Big Rivers had outstanding borrowings of $25,000 under the 2020 Agreement and $36,190 in issued letters of credit outstanding, which reduced its available borrowing capacity under the 2020 Agreement from $150,000 to $88,810.

As of December 31, 2021, Big Rivers had outstanding borrowings of $60,000 under the 2020 Agreement and $37,190 in issued letters of credit outstanding, which reduced its available borrowing capacity under the 2020 Agreement from $150,000 to $52,810.

(k) CFC Promissory Note, 2020B

On December 23, 2020, Big Rivers issued new debt with CFC in the form of a secured balloon note in the amount of $83,300 for the purpose of early redemption of the Series 2010A Bonds. This note is secured under Big Rivers’ Indenture, with a fixed interest rate of 2.49% and a final maturity date of February 2031.

(l) Old National Bank, Paycheck Protection Program (“PPP”) Note

In response to the COVID-19 pandemic, the federal government passed and signed the Coronavirus Aid, Relief, and Economic Security Act (“CARES Act) into law on March 27, 2020. This act allowed qualified businesses to borrow money through the Paycheck Protection Program administered by the Small Business Administration (“SBA) to cover payroll and other related expenses. On April 7, 2020, Big Rivers applied for PPP funds in the amount of $9,941. The unsecured loan was approved, and funds were received on April 21, 2020. On August 18, 2020, Big Rivers submitted an application requesting forgiveness of the $9,941 loan. Big Rivers received notice on August 17, 2021, that the PPP loan principal and accrued interest was forgiven in full and is recorded in the Interest income and other line on the statement of operations.

(m) RUS Cushion of Credit

In 2018, Big Rivers began participating in the cushion of credit program administered by the RUS in conjunction with the execution of the 2018 W8 and X8 RUS Guaranteed FFB Loans. Under the cushion of credit program, RUS borrowers may make voluntary irrevocable deposits into the cushion of credit account. Per the terms of the RUS' commitment to guarantee Big Rivers' W8 and X8 Loans, Big Rivers agreed to make an initial deposit of $3,200 to the cushion of credit account upon receipt of the loan funds and to make additional deposits, as needed, so that the balance at the beginning of each year going forward is equal to or greater than the annual payments due on the W8 and X8 Loans during the year. The interest rate dropped from 5% to 4% on October 1, 2020, and became a variable rate, which is equal to the one-year Treasury rate as of October 1 of each year. The rate in effect as of December 31, 2022, is 4.05%. During 2022, the cushion of credit account accrued interest at an annual rate of 0.09%.

Big Rivers' amounts in the cushion of credit account (deposits and accrued interest) may only be used to make scheduled principal and interest payments on the W8 and X8 Loans. As of December 31, 2022 and 2021, Big Rivers' balance in the RUS cushion of credit account was $3,810 and $3,769, respectively, which is included on the Company's balance sheet as a reduction to long-term debt.

(n) Covenants

Big Rivers is in compliance with all debt covenants associated with both its long-term and short-term debt obligations. The Company's Indenture and other debt agreements require that a Margins for Interest Ratio ("MFIR") of at least 1.10 be maintained for each fiscal year. The MFIR is the sum of margins for interest plus interest charges, divided by interest charges. The 2020 Agreement requires that Big Rivers, throughout the duration of the agreement, maintain a minimum Members' Equities' Balance at the end of each fiscal quarter-end and as of the last day of each fiscal year in an amount at least equal to $417,000 plus 50% of the cumulative positive net margin for the period from December 31, 2019, to the end of the Borrower's most recently ended fiscal year. Big Rivers' MFIR for the fiscal year ended December 31, 2022, was 1.30, taking into account the TIER Credit discussed in note 5, and its Equities balance was $475,667.

An MFIR of less than 1.10, per the Indenture and other debt agreements, may result in the following actions, restrictions, or consequences: Big Rivers may not secure additional debt under the Indenture; the Company must seek rates that are reasonably expected to yield a 1.10 MFIR; the Company must provide a written plan satisfactory to the RUS setting forth actions to be taken to achieve the specified MFIR on a timely basis; an event of default may occur; interest rates may increase; and its line of credit may be terminated with an acceleration of any outstanding amounts becoming due immediately.

(Dollars in thousands)

(5) Rate Matters

In connection with the rate matters discussed below, the following tables provide a summary of Regulatory Assets and Liabilities reflected in the Balance Sheet as of December 31, 2022 and 2021:

	Regulatory assets 2022	Regulatory assets 2021
Coleman plant deferred depreciation	$ 6,464	13,870
Wilson plant deferred depreciation	—	32,364
Non-FAC PPA	26,198	12,863
Asset retirement obligations	43,965	31,899
Environmental costs (CCR)	12,279	13,814
ECP case expense	137	233
Station Two contract termination	93,998	92,957
Coleman plant retire/decommission	134,158	132,615
Reid 1 plant retire/decommission	9,446	9,342
Green plant gas conversion	94,333	21,564
Total regulatory assets	$ 420,978	361,521

	Regulatory liabilities 2022	Regulatory liabilities 2021
Member rate mitigation	$ 11,711	17,817
TIER Credit	26,566	35,726
Total regulatory liabilities	$ 38,277	53,543

The rates charged to Big Rivers' members generally consist of a demand charge per kilowatt ("kW") and an energy charge per kilowatt-hour ("kWh") consumed as approved by the KPSC. The rates include specific demand and energy charges for its two classes of customers, the large industrial customers and the rural customers, under its jurisdiction. For the large industrial customers, the demand charge is generally based on each customer's maximum demand during the current month. For the rural customers, the demand charge is based on Maximum Adjusted Net Local Load (as defined in Big Rivers' tariff).

The Company has certain KPSC approved tariff riders; including a fuel adjustment clause, an environmental surcharge, and the Member Rate Stability Mechanism ("MRSM").

Coleman plant depreciation and Wilson plant depreciation:

The KPSC entered an order on October 29, 2013, granting Big Rivers an annual revenue increase of $54,227, effective August 20, 2013 (Case No. 2012-00535). In its order, the KPSC excluded the Coleman plant depreciation from rate recovery. The KPSC directed the Company to defer this depreciation expense and record the deferred amounts in a regulatory asset account. The KPSC's order indicated this action was being taken due to the planned temporary idling of Coleman, the length of time the plant would be idled, and the impact of the rate increase on customers. As of December 31, 2022, cumulative depreciation expense of $6,464 was deferred for the Coleman plant, which includes the TIER credit reduction from 2019, as discussed below. Management believes the remaining balance is probable of recovery in future rates. The Coleman plant was retired September 30, 2020, as described below for Case No. 2020-00064.

The KPSC entered an order on April 25, 2014, granting Big Rivers an annual revenue increase of $36,160, effective February 1, 2014 (Case No. 2013-00199). In its order, the KPSC approved Big Rivers' 2012 Depreciation Study, but excluded Wilson plant depreciation from rate recovery. The KPSC directed the Company to defer the Wilson depreciation expense and record in a regulatory asset account, similar to the Coleman depreciation expense deferral per the KPSC's order in Case No. 2012-00535. As of December 31, 2022, Big Rivers had fully recovered the deferred depreciation expense for the Wilson plant. The KPSC also approved Big Rivers' proposal to temporarily offset the rate increase by utilization of the MRSM. The KPSC further granted Big Rivers' proposed accounting treatment for transmission revenues related to the Hawesville smelter and authorized Big Rivers to pass the transmission revenues to its members through the MRSM. The net effect of this accounting treatment was the recognition of revenue on a monthly basis with an offset to the applicable regulatory liability accounts as the reserve funds were used to offset the impact of the base rate increase on the members' monthly bills.

Non-FAC PPA:

Effective July 17, 2009, the KPSC approved the implementation of the Non-Fuel Adjustment Clause-Purchased Power Adjustment ("Non-FAC PPA") which is a rate mechanism allowing Big Rivers to recover certain costs of purchased power that are not recoverable through its Fuel Adjustment Clause ("FAC"). An accrual is recorded monthly to a regulatory asset or liability account based on the difference between the actual purchased power costs recoverable through the Non-FAC PPA and the purchased power base cost included in base rates. The balance in the regulatory asset or liability account as of June 30 each year is billed or refunded to members during the following twelve-month period beginning September 1 through August 31 of the following year.

Asset Retirement Obligations:

The CCR Final Rule requires Big Rivers to address the eventual permanent closures of its Green Station coal ash pond and the coal ash pond at the City of Henderson, Kentucky's Station Two, as well as its landfills at Green Station and Wilson Station. Big Rivers recorded asset retirement obligations for its ash ponds at its Green Station and Station Two generating stations and for its landfills at Green Station and Wilson Station. See Note 3 for further discussion of the Company's asset retirement obligations.

On January 5, 2016, the KPSC issued an order in Case No. 2015-00333 approving Big Rivers' request to establish regulatory assets for the deferral of certain expenses it would incur for compliance with the CCR Final Rule, including accretion and depreciation expense related to the Green Station and Station Two ash ponds' AROs and other incremental expenses. On June 11, 2021, the KPSC issued an order in Case No. 2021-00079 approving Big Rivers' requests to establish a regulatory asset for the deferral of certain expenses related to the Green Station and to recover those deferred expenses through a levelized amortization of the deferred amount over the period from 2022 through 2043. The ARO for the Green Station landfill is recorded in this regulatory asset. On October 25, 2022, the KPSC issued an order in Case No. 2022-00201, approving Big Rivers' request to establish regulatory assets for the deferral of certain expenses it would incur for compliance with the CCR Final Rule, including accretion and depreciation expense related to the ARO for the Wilson Station landfill.

Environmental Costs (CCR) and ECP Case Expense:

On August 6, 2020, the KPSC approved Big Rivers' 2020 Environmental Compliance Plan ("2020 ECP"), (1) granting Big Rivers the authority to close the Green Station and Station Two ash ponds; (2) granting Big Rivers the authority to move the Coleman Station flue gas desulfurization system ("FGD") to Wilson Station to replace Wilson's FGD; (3) conditionally granting Big Rivers' request to establish regulatory assets for the accretion and depreciation expense related to the Coleman Station legacy ash ponds, should the CCR Final Rule be extended to apply to such legacy ash ponds; (4) conditionally granting Big Rivers the authority to close the Coleman Station ash ponds, should the CCR Final Rule be extended to apply to such legacy ash ponds; (5) authorizing Big Rivers to amortize the Green Station and Station Two ash pond AROs through its environmental surcharge; (6) conditionally authorizing Big Rivers to amortize the costs incurred to close the Coleman Station ash pond through its environmental surcharge should the CCR Final Rule be extended to apply to the Coleman Station ash ponds; (7) authorizing Big Rivers to amortize the regulatory asset for CCR-related expenses through its environmental surcharge; and (8) authorizing Big Rivers to establish a regulatory asset for the costs of preparing and prosecuting the 2020 ECP case, the recovery of which regulatory asset was approved in Case No. 2021-00061.

As of December 31, 2022, the total amount of CCR-related expenses and costs for asset retirement obligations deferred and included in Regulatory Assets on the Company's balance sheet was $56,244, and the costs of preparing and prosecuting the ECP case that have been deferred and included in Regulatory Assets on the Company's balance sheet was $137.

Station Two Contract Termination:

On August 29, 2018, the KPSC entered an order (Case No. 2018-00146) (i) finding that the Station Two units were no longer capable of the normal, continuous, reliable operation for the economically competitive production of electricity; (ii) finding that the Station Two contracts, except for the Joint Facilities Agreement, have therefore terminated pursuant to their own terms; (iii) granting Big Rivers' request for authority to continue to operate Station Two under terms of the Station Two contracts for a period up to May 31, 2019; and (iv) reserving a ruling on Big Rivers' request for authority to establish a Station Two regulatory asset. The remaining issues in this case were resolved with a Settlement Agreement between the Office of the Attorney General, the Kentucky Industrial Utility Customers ("KIUC"), and Big Rivers. The Settlement Agreement provided, among other things, that the KPSC would approve the Station Two regulatory asset. On October 23, 2018, the KPSC issued a final order approving the Settlement Agreement in full. RUS approved the Settlement Agreement on February 22, 2019. As of December 31, 2022, the total amount of the Station Two contract termination included in the Regulatory Assets on the Company's balance sheet was $93,998. This includes Station Two assets transferred from utility plant to Regulatory Assets and the Company's portion of decommissioning costs incurred to date.

Demand Side Management:

On December 12, 2018, the KPSC approved Big Rivers' request to phase out its existing Demand Side Management ("DSM") programs, to establish a new Low-Income Weatherization Program, and to establish a regulatory liability for the savings associated with the phase out of the existing DSM programs. As of

December 31, 2022, the DSM savings were no longer recorded in a Regulatory Liability based on the ruling received in Case No. 2020-00064, as discussed below.

Coleman Plant and Reid 1 Plant Retire/Decommission:

On June 25, 2020, the KPSC entered an order in Case No. 2020-00064 approving a Settlement Agreement, as modified by the Commission, between Big Rivers, KIUC and the Attorney General, which approved Big Rivers' requests to: (1) establish regulatory assets for the remaining net book value of Coleman Station and Reid Station Unit 1 at retirement, and for the costs to decommission those units; (2) cease charging DSM savings to a regulatory liability; (3) utilize the existing DSM regulatory liability in 2020 and 80% of equity headroom in 2021 to reduce Smelter Load Mitigation (SLM) regulatory assets (the Wilson and Coleman depreciation regulatory assets; the Coleman, Reid 1, and Station Two retirement and decommissioning regulatory assets; and a regulatory asset through which the costs related to a focused management audit were deferred); and (4) recover the amounts deferred in those regulatory assets through amortization. The KPSC also approved replacing the TIER Credit mechanism in Big Rivers' MRSM tariff with a new TIER Credit mechanism. Under the new TIER Credit, in years in which Big Rivers earns in excess of a 1.30 TIER, 40% of the excess margins will be returned to Big Rivers' members over the following year through a monthly bill credit. The remaining 60% of the excess margins will be deferred in regulatory liability accounts, with a minimum required balance of $9,000, to be utilized in a year in which Big Rivers does not achieve a 1.30 TIER or to further decrease the balance of the regulatory assets with KPSC approval. The first $700 of the bill credit each year will be allocated to Rural customers, and any bill credit over $700 will be allocated between the Rural and Large Industrial customers based on revenues.

On March 8, 2022, Big Rivers filed a motion for clarification of the KPSC's Order entered on June 25, 2020, in Case No. 2020-00064. Specifically, Big Rivers asked the KPSC to clarify that the utilization of equity headroom to reduce the Smelter Load Mitigation ("SLM") regulatory assets is not recoverable from its members. The KPSC issued an order on March 15, 2022, clarifying the June 25, 2020 Order, by stating that Big Rivers' member equity headroom in 2021 to record a one-time amortization of the SLM regulatory assets is not recoverable from Big Rivers' members in current or future rates. Big Rivers recorded $84,945 for utilization of its equity headroom as a charge to amortization expense in 2021. During 2022 and 2021, the Company reduced the SLM regulatory asset balances by recording amortization of $39,770 and $108,989, respectively. The amortization recorded was ordered in Case No. 2020-00064 and includes the equity headroom adjustment in 2021, annual TIER credit allocation, and monthly amortization.

Green Plant Gas Conversion:

On June 11, 2021, the KPSC granted Big Rivers a certificate of public convenience and necessity ("CPCN") to convert Big Rivers' two existing coal-fired generating units at its Green Station to run on natural gas, authorized the gas conversion assets to be depreciated over a seven-year period, and granted Big Rivers the authority to establish a regulatory asset to defer recognition of the costs that Big Rivers expects to incur as a result of the retirement of certain Green Station assets that will no longer be utilized after the conversion. The gas conversion was completed in late May 2022. The costs incurred as a result of the gas conversion, including the retirement of the assets in the amount of $66,823, discussed in Note 2, were recorded in the regulatory asset. The gas conversion assets are being depreciated over a seven-year period beginning in June 2022. As of December 31, 2022, the total amount of this regulatory asset incurred to date was $94,333.

Regulatory Liabilities:

On June 25, 2020, the KPSC approved changes to the company's MRSM tariff. In years in which Big Rivers earns margins in excess of a 1.30 TIER, excluding the utilization of equity headroom, 40% of the excess margins will be returned as a monthly bill credit, the new TIER Credit, to Big Rivers' members over the following year through the MRSM tariff. The remaining 60% of the excess margins will be deferred in regulatory liability accounts. Big Rivers' new TIER Credit was $29,277 for 2022, with 40%, or $11,711 to be returned to members through bill credits over a twelve-month period beginning February 2022. This amount is recorded as a regulatory liability at December 31, 2022, presented between current and long-term maturities based on the timing of future bill credits expected to be provided to the members. The remaining 60%, or $17,566, was also deferred in regulatory liability accounts and is expected to offset the regulatory assets, as described above, subject to KPSC approval. The regulatory liability of $9,000 remaining from 2022 will continue to remain as a minimum required balance as described above. The new TIER Credit was recorded as depreciation and amortization expense on the statement of operations.

On February 28, 2022, Big Rivers filed an application with the KPSC, Case No. 2022-00028, for review of its MRSM charge for calendar year 2021. In its application, Big Rivers proposed to use the regulatory liability amount in excess of the minimum required balance of $9,000 that was established in Case No. 2020-00064, discussed above, or $26,726, to further reduce the SLM Regulatory Assets in 2022. The KPSC approved Big Rivers' proposal on July 6, 2022.

(6) Income Taxes

At December 31, 2022, Big Rivers had a Non-Patron Net Operating Loss ("NOL") Carryforward of approximately $36,172 expiring at various times between 2029 and 2037 which was entirely offset by a full valuation allowance.

The Tax Cuts and Jobs Act of 2017 ("TCJA") amendment to Section 174 requires U.S.-based and non-U.S.-based research and experimental (R&E) expenditures to be capitalized and amortized over a period of five or fifteen years, respectively, for amounts incurred in tax years starting after December 31, 2021. The Company does not expect the Section 174 capitalization rule to have a material impact on operations.

(Dollars in thousands)

The components of the net deferred tax assets as of December 31, 2022 and 2021 were as follows:

		2022	2021
Deferred tax assets:			
Net operating loss carryforward	$	9,025	8,802
Fixed asset basis difference		3,466	6,901
Total deferred tax assets		12,491	15,703
Deferred tax liabilities:			
RUS Series B Note		(3,343)	(3,343)
Bond refunding costs		(46)	(51)
Total deferred tax liabilities		(3,389)	(3,394)
Net deferred tax asset (pre-valuation allowance)		9,102	12,309
Valuation allowance		(9,102)	(12,309)
Net deferred tax asset	$	—	—

A reconciliation of the Company’s effective tax rate for 2022, 2021, and 2020 is as follows:

	2022	2021	2020
Federal rate	21.0 %	21.0 %	21.0 %
State rate – net of federal benefit	4.0	4.0	4.0
Permanent differences	0.6	—	0.2
Patronage allocation to members	(25.6)	(25.0)	(25.2)
Alternative minimum tax credit recovery	—	—	(4.6)
Effective tax rate	— %	— %	(4.6)%

The Company files a federal income tax return, as well as certain state income tax returns. The years currently open for federal income tax examination are 2018 through 2020. The major state tax jurisdiction currently open for income tax examination is Kentucky for years 2018 through 2021. The Company has not recorded any unrecognized tax benefits or liabilities related to federal or state income taxes.

The Company classifies tax-related interest and penalties as an operating expense on the statement of operations and accrued expenses on the balance sheet. No material tax-related interest or penalties have been recorded during 2022, 2021, or 2020.

(Continued)

(7) Pension Plans

(a) Defined-Benefit Plans

Big Rivers has a noncontributory defined-benefit pension plan covering substantially all employees who meet minimum age and service requirements and who were employed by the Company prior to the plan closure dates cited below. The plan provides benefits based on the participants' years of service and the five highest consecutive years' compensation during the last ten years of employment. Big Rivers' policy is to fund such plan in accordance with the requirements of the Employee Retirement Income Security Act of 1974.

Prior to January 1, 2014, Big Rivers had two separate defined-benefit pension plans. The salaried employees' defined-benefit plan was closed to new entrants effective January 1, 2008, and the bargaining employees' defined-benefit plan was closed to new hires effective November 1, 2008. The Company simultaneously established base contribution accounts in the defined-contribution thrift and 401(k) savings plans, which were renamed as the retirement savings plans. The base contribution account for an eligible employee, which is one who meets the minimum age and service requirements, but for whom membership in the defined-benefit plan is closed, is funded by employer contributions based on graduated percentages of the employee's pay, depending on his or her age.

In order to meet minimum participation requirements, Big Rivers' salaried employees defined benefit plan was merged into the bargaining employees defined benefit plan. The merger was effective January 1, 2014, for purposes of Internal Revenue Code and effective December 31, 2014, for all other purposes. Effective January 1, 2017, participation was frozen in the merged plan for highly compensated employees in order to comply with IRS code section 401(a)(26).

Effective December 31, 2021, all employees within the defined benefit plan were frozen. No employee shall accrue any benefits under the plan on or after December 31, 2021. The employees impacted will subsequently become eligible for the base contribution accounts described above.

The Company has adopted FASB ASC 715, *Compensation – Retirement Benefits*, including the requirement to recognize the funded status of its pension plan and other postretirement plans (Note 10 – Postretirement Benefits Other than Pensions). ASC 715 defines the funded status of a defined-benefit pension plan as the fair value of its assets less its projected benefit obligation, which includes projected salary increases and defines the funded status of any other postretirement plan as the fair value of its assets less its accumulated postretirement benefit obligation.

ASC 715 also requires an employer to measure the funded status of a plan as of the date of its year-end balance sheet and requires disclosure in the notes to the financial statements of certain additional information related to net periodic benefit costs for the next fiscal year. The Company's pension and other postretirement benefit plans are measured as of December 31, 2022 and 2021.

The following provides an overview of the Company's noncontributory defined-benefit pension plan.

(Dollars in thousands)

A reconciliation of the Company's benefit obligations of its noncontributory defined-benefit pension plan at December 31, 2022 and 2021, is as follows:

		2022	2021
Benefit obligation – beginning of period	$	13,143	23,439
Service cost – benefits earned during the period		—	649
Interest cost on projected benefit obligation		324	469
Plan curtailments		—	(4,437)
Benefits paid		(5,268)	(8,837)
Actuarial loss (gain)		(577)	1,860
Benefit obligation – end of period	$	7,622	13,143

Big Rivers' defined-benefit pension plan provides retirees and terminated employees with a lump-sum payment option. Benefits paid in 2022 include lump-sum payments totaling $5,181 – the result of seven former employees electing the lump-sum payment option. Benefits paid in 2021 include lump-sum payments totaling $8,749 – the result of nine former employees electing the lump-sum payment option.

The accumulated benefit obligation for the defined-benefit pension plan was $7,622 and $13,143 at December 31, 2022 and 2021, respectively.

A reconciliation of the Company's pension plan assets at December 31, 2022 and 2021, is as follows:

		2022	2021
Fair value of plan assets – beginning of period	$	15,176	22,255
Employer contributions		47	47
Actual return on plan assets		(2,868)	1,711
Benefits paid		(5,268)	(8,837)
Fair value of plan assets – end of period	$	7,087	15,176

The funded status of the Company's pension plan at December 31, 2022 and 2021, is as follows:

		2022	2021
Benefit obligation – end of period	$	(7,622)	(13,143)
Fair value of plan assets – end of period		7,087	15,176
Funded status (under)/over	$	(535)	2,033

(Dollars in thousands)

Components of net periodic pension costs for the years ended December 31, 2022, 2021, and 2020, were as follows:

		2022	2021	2020
Service cost	$	—	649	597
Interest cost		324	469	625
Expected return on plan assets		(541)	(1,221)	(1,318)
Amortization of prior service cost		—	(33)	(33)
Amortization of actuarial loss		—	130	41
Settlement and curtailment (gain) loss		1,727	(1,386)	289
Net periodic benefit cost	$	1,510	(1,392)	201

A reconciliation of the pension plan amounts in accumulated other comprehensive income at December 31, 2022 and 2021, is as follows:

		2022	2021
Prior service cost	$	—	—
Unamortized actuarial loss		(2,407)	(1,301)
Accumulated other comprehensive income	$	(2,407)	(1,301)

The recognized adjustments to other comprehensive income at December 31, 2022 and 2021, are as follows:

		2022	2021
Prior service cost	$	—	—
Unamortized actuarial gain/(loss)		1,106	(1,777)
Other comprehensive (income)/loss	$	1,106	(1,777)

At December 31, 2022 and 2021, amounts recognized in the balance sheets were as follows:

		2022	2021
Deferred credits and other	$	(535)	2,033

(Dollars in thousands)

Assumptions used to develop the projected benefit obligation and determine the net periodic benefit cost were as follows:

	2022	2021	2020
Discount rate – projected benefit obligation	5.39 %	2.57 %	2.05 %
Discount rate – net periodic benefit cost	2.57	2.05	2.99
Rates of increase in compensation levels	N/A	4.00	4.00
Expected long-term rate of return on assets	3.65	5.75	6.50

The expected long-term rate of return on plan assets for determining net periodic pension cost for each fiscal year is chosen by the Company from a best estimate range determined by applying anticipated long-term returns and long-term volatility for various asset categories to the target asset allocation of the plan. The expected long-term rate of return on assets is based on the median expected rate of return for a passively-managed portfolio plus the incremental return from active management.

Big Rivers utilizes a third-party investment manager for the plan assets, and has communicated thereto the Company's Retirement Plan Investment Policy, including a target asset allocation mix of 10% U.S. equities (an acceptable range of 5%–15%), 10% international equities (an acceptable range of 5%–15%), 60% Long-Term Government Fixed Income (an acceptable range of 50%-70%), and 20% U.S. Credit (an acceptable range of 10%–30%). As of December 31, 2022, the investment allocation was 9% in U.S. equities, 10% in international equities, 62% in Long Term Government Fixed income and 19% in U.S. Credit. As of December 31, 2021, the investment allocation was 10% in U.S. equities, 9% in international equities, 62% in Long Term Government Fixed income and 19% in U.S. Credit. The objective of the investment program seeks to (a) maximize return on investment, (b) minimize volatility, (c) minimize Company contributions, and (d) provide the employee benefit in accordance with the plan. The portfolio is well diversified and of high quality. The average quality of the fixed income investments must be "A" or better. The equity portfolio must also be of investment grade quality. The performance of the investment manager is reviewed semiannually.

(Dollars in thousands)

At December 31, 2022 and 2021, the fair value of Big Rivers' defined-benefit pension plan assets by asset category are as follows:

	Level 1	Level 2	December 31, 2022
Cash and money market	$ 190	—	190
Equity securities:			
Common stock	398	—	398
Mutual funds	940	—	940
Fixed:			
Corporate bonds and notes	—	5,559	5,559
	$ 1,528	5,559	7,087

	Level 1	Level 2	December 31, 2021
Cash and money market	$ 578	—	578
Equity securities:			
Common stock	1,217	—	1,217
Mutual funds	1,667	—	1,667
Fixed:			
Corporate bonds and notes	—	11,714	11,714
	$ 3,462	11,714	15,176

Expected retiree pension benefit payments projected to be required during the next ten years following 2022 are as follows:

	Amount
Year ending December 31:	
2023	$ 386
2024	557
2025	461
2026	678
2027	691
Thereafter	4,402
Total	$ 7,175

(b) Defined-Contribution Plans

Big Rivers has two defined-contribution retirement plans covering substantially all employees who meet minimum age and service requirements. Each plan has a thrift and 401(k) savings section allowing employees to contribute up to 75% of pay on a pretax and/or after-tax basis, with employer matching contributions equal to 60% of the first 6% contributed by the employee on a pretax basis.

A base contribution retirement section was added and the plan name changed from Thrift and 401(k) Savings to Retirement Savings, effective January 1, 2008, for the salaried plan and November 1, 2008, for the bargaining plan. The base contribution account is funded by employer contributions based on graduated percentages of pay, depending on the employee's age.

The Company's expense under these plans was $3,738, $4,583, and $4,518 for the years ended December 31, 2022, 2021 and 2020, respectively, recorded as operating expenses on the statement of operations.

(c) Deferred Compensation Plan

Big Rivers sponsors a nonqualified deferred compensation plan for its eligible employees who are members of a select group of management or highly compensated employees. The purpose of the plan is to allow participants to receive contributions or make deferrals that they could not receive or make under the salaried employees qualified defined-contribution retirement savings plan (formerly, the thrift and 401(k) savings plan) as a result of nondiscrimination rules and other limitations applicable to the qualified plan under the Internal Revenue Code. The nonqualified plan also allows a participant to defer a percentage of his or her pay on a pretax basis.

The nonqualified deferred compensation plan is unfunded, but the Company has chosen to finance its obligations under the plan, including any employee deferrals, through a rabbi trust. The trust assets remain a part of the Company's general assets, subject to the claims of its creditors. The employer contribution for December 31, 2022 and 2021, was $301 and $222, respectively, and the deferred compensation expense for December 31, 2022, 2021, and 2020, was $16, $364, and $388, respectively. As of December 31, 2022 and 2021, the trust assets were $1,779 and $1,653, and the deferred liability was $1,779 and $1,653, respectively. The company classifies trust assets as other deposits and investments and the deferred liability as deferred credits and other on the balance sheet.

(8) Short-Term Investments

At December 31, 2022, the Company's short-term investments included $5,420 of investments in debt securities which are included in the Company's balance sheet at amortized cost. At December 31, 2021, the Company's short-term investments included $353 of investments in debt securities which are included in the Company's balance sheet at amortized cost. The investments in debt securities are classified as held-to-maturity, based on management's intent and ability to hold them to maturity. Both CDs and investments in debt securities are included in "Cash and Cash Equivalents" (if the original maturity date is less than or equal to three months) or "Short-term-investments" (if the original maturity date is greater than three months but less than one year).

(Dollars in thousands)

The amortized costs and fair values (Level 1 measurement) of Big Rivers' short-term investments at December 31, 2022 and 2021, were as follows:

		2022		2021	
		Amortized costs	Fair values	Amortized costs	Fair values
Debt securities:					
Corporate notes	$			—	—
U.S. Treasuries		5,420	5,394	353	352
Total debt securities		5,420	5,394	353	352
Other:					
Certificates of deposit		—	—	—	—
Total short-term investments	$	5,420	5,394	353	352

Gross unrealized gains and losses on short-term investments at December 31, 2022 and 2021, were as follows:

		2022		2021	
		Gains	Losses	Gains	Losses
Debt securities:					
Corporate notes	$			—	—
U.S. Treasuries		—	(26)	—	(1)
Total debt securities		—	(26)	—	(1)
Other:					
Certificates of deposit		—	—	—	—
Total short-term investments	$	—	(26)	—	(1)

(9) Fair Value of Other Financial Instruments

FASB ASC 820 defines fair value, establishes a framework for measuring fair value and expands disclosures about fair value measures. It applies under other accounting standards that require or permit fair value measurements and does not require any new fair value measurements.

(Dollars in thousands)

The carrying value of accounts receivable, net of allowance of $1,423 at December 31, 2022 and 2021, and accounts payable approximate fair value due to their short maturity. The carrying value of long-term accounts receivable is the net amount deemed certain of collection, which approximates fair value. At December 31, 2022 and 2021, the Company's cash and cash equivalents included short-term investments in an institutional U.S. government money market portfolio account classified as trading securities under ASC 320, *Investments – Debt and Equity Securities*, that were recorded at fair value which was determined using quoted market prices for identical assets without regard to valuation adjustment or block discount (a Level 1 measure), as follows:

		2022	2021
Institutional U.S. government money market portfolio	$	147	3,926

It was not practical to estimate the fair value of patronage capital included within other deposits and investments due to these being untraded companies.

Big Rivers' long-term debt at December 31, 2022, consisted of CFC notes totaling $404,501, a CoBank note in the amount of $139,008, a RUS note totaling $115,891, and RUS guaranteed FFB loans totaling $241,184 (Note 4). The CFC, CoBank, RUS, and FFB debt is carried at amortized cost. We determined the fair value of debt utilizing a discounted cash flow model. Key inputs to the model included the weighted average term of the debt outstanding and market interest rates for similarly situated utility borrowers as of the balance sheet dates.

		2022		2021	
		Carrying Amount	Fair Value	Carrying Amount	Fair Value
Long-term debt	$	900,584	853,220	703,764	831,841

(10) Postretirement Benefits Other than Pensions

Big Rivers provides certain postretirement medical benefits for retired employees and their spouses. Generally, except for generation bargaining retirees, Big Rivers pays 85% of the premium cost for all retirees age 62 to 65. The Company pays 25% of the premium cost for spouses age 55 to 61. Beginning at age 65, the Company pays 25% of the premium cost if the retiree is enrolled in Medicare Part B. For each generation bargaining retiree, Big Rivers establishes a retiree medical account at retirement equal to $1.40 per year of service up to 30 years. The account balance is credited with interest based on the 10-year treasury rate subject to a minimum of 2% and a maximum of 4%. The account is to be used for the sole purpose of paying the premium cost for the retiree and spouse.

(Dollars in thousands)

The discount rates used in computing the postretirement benefit obligation and net periodic benefit cost were as follows:

	2022	2021	2020
Discount rate – projected benefit obligation	5.39%	2.77%	2.44%
Discount rate – net periodic benefit cost	2.77%/4.42%/4.69%	2.44	3.34

The healthcare cost trend rate assumptions as of December 31, 2022 and 2021, were as follows:

	2022	2021
Initial trend rate	6.70 % / 6.65 %	5.48 %
Ultimate trend rate	4.00	4.50
Year ultimate trend is reached	2047	2038

A one-percentage-point change in assumed healthcare cost trend rates would have the following effects:

		2022	2021
One-percentage-point decrease:			
Effect on total service and interest cost components	$	(79)	(103)
Effect on year-end benefit obligation		(726)	(1,160)
One-percentage-point increase:			
Effect on total service and interest cost components	$	98	133
Effect on year-end benefit obligation		863	1,424

A reconciliation of the Company's benefit obligations of its postretirement plan at December 31, 2022 and 2021, is as follows:

		2022	2021
Benefit obligation – beginning of period	$	13,662	15,808
Service cost – benefits earned during the period		358	491
Interest cost on projected benefit obligation		439	354
Participant contributions		496	405
Plan amendments / Special termination benefits		382	—
Benefits paid		(1,771)	(978)
Actuarial loss (gain)		(3,162)	(2,418)
Benefit obligation – end of period	$	10,404	13,662

(Dollars in thousands)

Big Rivers revised the eligibility requirements for postretirement medical with regard to age and service. Beginning January 1, 2013, eligibility for retirement is age 62 with 10 years of service. The service requirement is waived for active employees on December 31, 2012, who will not have 10 years of service at age 62. The eligibility requirements for postretirement medical were revised again on July 1, 2022, to remove the 10 years of service requirement. A reconciliation of the Company's postretirement plan assets at December 31, 2022 and 2021, is as follows:

		2022	2021
Fair value of plan assets – beginning of period	$	—	—
Employer contributions		1,275	573
Participant contributions		496	405
Benefits paid		(1,771)	(978)
Fair value of plan assets – end of period	$	—	—

The funded status of the Company's postretirement plan at December 31, 2022 and 2021 is as follows:

		2022	2021
Benefit obligation – end of period	$	(10,404)	(13,662)
Fair value of plan assets – end of period		—	—
Funded status	$	(10,404)	(13,662)

The components of net periodic postretirement benefit costs for the years ended December 31, 2022, 2021, and 2020 were as follows:

		2022	2021	2020
Service cost	$	358	491	490
Interest cost		439	354	472
Amortization of prior service cost		(96)	(112)	(112)
Amortization of gain		(284)	—	(20)
Curtailment recognized		(24)	—	—
Special termination benefits		144	—	—
Net periodic benefit cost	$	537	733	830

(Dollars in thousands)

A reconciliation of the postretirement plan amounts in accumulated other comprehensive income at December 31, 2022 and 2021 is as follows:

		2022	2021
Prior service credit	$	23	381
Unamortized actuarial gain		6,034	3,155
Accumulated other comprehensive income	$	6,057	3,536

The recognized adjustments to other comprehensive income (loss) at December 31, 2022 and 2021, are as follows:

		2022	2021
Prior service cost	$	(238)	(112)
Unamortized actuarial gain/(loss)		3,162	2,418
Amortization of net gain		(404)	—
Other comprehensive income/(loss)	$	2,520	2,306

At December 31, 2022 and 2021, amounts recognized in the balance sheets were as follows:

		2022	2021
Accounts payable	$	(1,554)	(1,262)
Deferred credits and other		(8,850)	(12,400)
Net amount recognized	$	(10,404)	(13,662)

Expected retiree benefit payments projected to be required during the years following 2022 are as follows:

		Amount
Year:		
2023	$	1,554
2024		1,213
2025		988
2026		874
2027		858
Thereafter		3,727
Total	$	9,214

In addition to the postretirement plan discussed above, Big Rivers has another postretirement benefit plan, which vests a portion of accrued sick leave benefits to salaried employees upon retirement or death. To the extent an employee's sick leave hour balance exceeds 480 hours, such excess hours are paid at 20% of the employee's base hourly rate at the time of retirement or death. The accumulated obligation recorded for the postretirement sick leave benefit is $718 and $767 at December 31, 2022 and 2021, respectively. The postretirement expense recorded was $30, $141, and $96, for 2022, 2021, and 2020, respectively, and the benefits paid were $79, $140, and $7 for 2022, 2021, and 2020, respectively.

(11) Related Parties

For the years ended December 31, 2022, 2021, and 2020, Big Rivers had tariff sales to its members of $298,514, $221,959, and $226,152, respectively. In addition, for the years ended December 31, 2022, 2021, and 2020, Big Rivers had certain sales to Kenergy for the Domtar Paper Co. load of $4,726, $4,673, and $3,013, respectively.

At December 31, 2022 and 2021, Big Rivers had accounts receivable from its members of $31,421 and $19,912, respectively.

(12) Commitments and Contingencies

Big Rivers is involved in ongoing litigation with the City of Henderson and the City of Henderson Utility Commission doing business as Henderson Municipal Power and Light (collectively, "HMP&L") in which Big Rivers is seeking damages from HMP&L relating to HMP&L's refusal to pay the costs associated with Excess Henderson Energy produced at Station Two. HMP&L has filed a counterclaim alleging that if HMP&L is required to pay the costs of the Excess Henderson Energy, it is entitled to an offset for the revenues related to that energy. In December 2017, Big Rivers and HMP&L entered into an agreement to settle all claims relating to Excess Henderson Energy. Under the settlement agreement, HMP&L agreed to be responsible for all costs related to Excess Henderson Energy generated after the effective date of the settlement agreement. Big Rivers does not dispute that HMP&L is entitled to the Excess Henderson Energy-related revenues after the payment date in the settlement agreement if it pays the costs of that energy.

On May 1, 2018, the contracts under which Big Rivers was operating Station Two terminated as a result of the Station Two units no longer being capable of the economically competitive production of electricity. To allow HMP&L time to make alternate arrangements for its power supply, Big Rivers continued to operate the units under the terms of the Station Two contracts until the units were retired on January 31, 2019. The termination of the Station Two contracts has given rise to disputes between the parties, including (i) a claim HMP&L has filed seeking amounts HMP&L claims it is owed as a result of the annual budget settlement process that occurred during the term of the Station Two contracts; (ii) a claim HMP&L filed seeking a declaratory judgment on the percentage owed by each party for the decommissioning and post-closure compliance costs for the Station Two Ash Pond; (iii) a separate action HMP&L filed seeking a declaratory order that the December 2017 settlement agreement only applies to some of the Excess Henderson Energy; and (iv) a proceeding Big Rivers filed with the KPSC to resolve all outstanding disputes between it and HMP&L arising out of the Station Two contracts (KSPC Case No. 2019-00269). HMP&L's claims relating to the annual budget settlement process, the Station Two Ash Pond, and the settlement agreement are being held in abeyance pending the outcome of the KPSC case and all appeals therefrom.

On August 2, 2021, the KPSC entered a final order in Case No. 2019-00269, largely in Big Rivers' favor. HMP&L appealed that order to the Franklin Circuit Court, which is pending. On September 29, 2021, Big Rivers filed a proceeding with the KPSC asking the KPSC to enforce its final order from Case No. 2019-00269. That proceeding is pending. The Company believes there will be no material adverse effect to its financial statements when the litigation and disputes with HMP&L are resolved.

Big Rivers is involved in other litigation arising in the normal course of business. While the results of such litigation cannot be predicted with certainty, management, based upon advice of counsel, believes that the final outcome will not have a material adverse effect on the financial statements.

(13) Subsequent Events

Management evaluated subsequent events up to and including March 22, 2023, the date the financial statements were available to be issued.

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Independent Auditors' Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance With *Government Auditing Standards*

The Board of Directors
Big Rivers Electric Corporation

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, the financial statements of Big Rivers Electric Corporation (Big Rivers), which comprise Big Rivers' balance sheet as of December 31, 2022, and the related statements of operations, comprehensive income (loss), equities, and cash flows for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated March 22, 2023.

Report on Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered Big Rivers' internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of Big Rivers' internal control. Accordingly, we do not express an opinion on the effectiveness of the Big Rivers' internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses or significant deficiencies may exist that have not been identified.

Report on Compliance and Other Matters

As part of obtaining reasonable assurance about whether Big Rivers' financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of This Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

KPMG LLP

Louisville, Kentucky
March 22, 2023

KPMG LLP
Suite 2400
400 West Market Street
Louisville, KY 40202

Independent Auditors' Report on Compliance with Aspects of Contractual Agreements and Regulatory Requirements for Electric Borrowers

The Board of Directors
Big Rivers Electric Corporation
Owensboro, Kentucky:

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of Big Rivers Electric Corporation (Big Rivers), which comprise the balance sheet of Big Rivers as of December 31, 2022 and the related statements of operations, comprehensive income (loss), equities, and cash flows for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated March 22, 2023. In accordance with *Government Auditing Standards*, we have also issued our report dated March 22, 2023, on our consideration of Big Rivers' internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. No reports other than the reports referred to above related to our audit have been furnished to management.

In connection with our audit, nothing came to our attention that caused us to believe that Big Rivers failed to comply with the terms, covenants, provisions, or conditions of their loan, grant, and security instruments as set forth in 7 CFR Part 1773, *Policy on Audits of Rural Utilities Service Borrowers,* §1773.33, insofar as they relate to accounting matters as enumerated below.

- Accounting procedures;
- Accumulating and recording labor, material, and overhead costs, and the distribution of these costs to construction, retirement, and maintenance or other expense accounts;
- Reconciling property records to the general ledger;
- Clearing construction accounts and accruing depreciation on completed construction;
- Recording the retirement of property;
- Seeking approval of the sale, lease or transfer of capital assets and disposition of proceeds for the sale or lease of plant, material, or scrap;
- Maintaining control over materials and supplies;
- Preparing Financial and Operating Reports;
- Obtaining written RUS approval to enter into any contract for the management, operation, or maintenance of the borrower's system if the contract covers all or substantially all of the electric system;
- Disclosing material related party transactions in the financial statements in accordance with accounting principles generally accepted in the United States of America;
- Recording depreciation in accordance with accounting principles generally accepted in the United States of America;
- Complying with the requirements for the detailed schedule of deferred debits and deferred credits; and
- Complying with the requirements for the detailed schedule of investments.

Our audit was not directed primarily toward obtaining knowledge of noncompliance. Accordingly, had we performed additional procedures, other matters may have come to our attention regarding Big Rivers' noncompliance with the above-referenced terms, covenants, provisions, or conditions of the contractual agreements and regulatory requirements, insofar as they relate to accounting matters as enumerated above.

The purpose of this report on compliance with aspects of contractual agreements and regulatory requirements for electric borrowers is solely to describe the scope of our testing of compliance and the results of that testing, and not to provide an opinion on compliance based on the requirements of 7 CFR Part 1773, *Policy on Audits of Rural Utilities Service Borrowers and Grantees*. Accordingly, this report is not suitable for any other purpose.

KPMG LLP

Louisville, Kentucky
March 22, 2023

BIG RIVERS ELECTRIC CORPORATION

DETAILED SCHEDULE OF DEFERRED DEBITS AND CREDITS AS OF DECEMBER 31, 2022

DEFERRED DEBITS:	
Other Deferred Debits	$ 13,820,570
RUS Part A, Section B, Line 30	13,820,570
Regulatory Assets	420,978,205
Financing Fees	2,893,098
Deferred Income Taxes	0
DEFERRED CHARGES AND OTHER	**$ 437,691,873**
DEFERRED CREDITS:	
Regulatory liabilities – Member Rate Mitigation	$ 11,710,705
Regulatory liabilities – TIER Credit	26,566,058
Other Deferred Credits	723,750
RUS Part A, Section B, Line 59	39,000,513
Provision for pension and postretirement benefits	12,489,366
Provision for Asset Retirement Obligations	69,266,682
RUS Part A, Section B, Line 48	81,756,048
TOTAL DEFERRED CREDITS AND OTHER	**$ 120,756,561**

BIG RIVERS ELECTRIC CORPORATION

DETAILED SCHEDULE OF INVESTMENTS AS OF DECEMBER 31, 2022

Investments in associated organizations	$	14,535,048
Investments in economic development projects		10,000
RUS Part A, Section B, Lines 7-11	**$**	**14,545,048**

IN THE MATTER OF:
ELECTRONIC TARIFF FILING OF BIG RIVERS ELECTRIC CORPORATION
AND KENERGY CORP. TO REVISE THE
LARGE INDUSTRIAL CUSTOMER STANDBY SERVICE TARIFF
CASE NO. 2023-00312

JOINT RESPONSE OF BIG RIVERS ELECTRIC CORPORATION AND KENERGY CORP.
TO KIMBERLY-CLARK CORPORATION'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-6: ***Please provide all BREC filings or reports provided to the Midcontinent Independent System Operator ("MISO") on or after January 1, 2020.***

RESPONSE: Big Rivers objects to this request as vague and overly broad, as it seeks "filings" and "reports" over nearly four (4) years without regard to the content of those submissions. Big Rivers further objects to the extent this request seeks information that is readily available or more accessible to Kimberly Clark Corporation from other sources. Subject to the foregoing, Big Rivers states that it has not provided MISO with any relevant filings or reports during the referenced timeframe; prior to 2020, Big Rivers did communicate with MISO representatives regarding Kimberly Clark Corporation's then-contemplated behind-the-meter generation, and a copy of that e-mail exchange is attached.

Witness: Terry Wright, Jr. (Big Rivers)

For the Objection(s): Counsel

IN THE MATTER OF:
ELECTRONIC TARIFF FILING OF BIG RIVERS ELECTRIC CORPORATION
AND KENERGY CORP. TO REVISE THE
LARGE INDUSTRIAL CUSTOMER STANDBY SERVICE TARIFF
CASE NO. 2023-00312

JOINT RESPONSE OF BIG RIVERS ELECTRIC CORPORATION AND KENERGY CORP.
TO KIMBERLY-CLARK CORPORATION'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-7: Please provide all BREC filings or reports provided to the Federal Energy Regulatory Commission on or after January 1, 2020.

RESPONSE:

A listing of all BREC filings or reports provided to the Federal Energy Regulatory Commission are publicly available and can be found at the following link: https://elibrary.ferc.gov/eLibrary/search. Since January 1, 2020, BREC has submitted filings or reports in the following FERC dockets:

ER23-1380
ER22-1860
ER22-1221
ER22-1097
ER22-496
ER22-495
ER21-1510
QM21-21
ER21-1240
ER20-1269
ER19-809
ER19-776

Witness: Nathanial A. Berry (Big Rivers)

IN THE MATTER OF:
ELECTRONIC TARIFF FILING OF BIG RIVERS ELECTRIC CORPORATION
AND KENERGY CORP. TO REVISE THE
LARGE INDUSTRIAL CUSTOMER STANDBY SERVICE TARIFF
CASE NO. 2023-00312

JOINT RESPONSE OF BIG RIVERS ELECTRIC CORPORATION AND KENERGY CORP.
TO KIMBERLY-CLARK CORPORATION'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-8: ***Please provide BREC's most recent class cost of service study including any electronic models and workpapers with all formulae intact.***

RESPONSE: Please see the joint response of Big Rivers and Kenergy to Domtar Paper Company's Request No. 1-3.

Witness: John Wolfram

IN THE MATTER OF:
ELECTRONIC TARIFF FILING OF BIG RIVERS ELECTRIC CORPORATION
AND KENERGY CORP. TO REVISE THE
LARGE INDUSTRIAL CUSTOMER STANDBY SERVICE TARIFF
CASE NO. 2023-00312

JOINT RESPONSE OF BIG RIVERS ELECTRIC CORPORATION AND KENERGY CORP.
TO KIMBERLY-CLARK CORPORATION'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-9: ***Please identify all generation production capacity owned or controlled by BREC including the accredited capacity of each unit, the technology of each unit, and the historical hourly dispatch of each unit for the most recent 12 months.***

RESPONSE: The following table shows 2023-2024 seasonal accredited capacity in MISO:

2023-2024 MISO Seasonal Accredited Capacity (MW)

	Summer	Fall	Winter	Spring
Green1	[redacted]			
Green2				
Reid CT				
Wilson				
SEPA				

A full description of Big Rivers' capacity resources can be found in Big Rivers' 2023 IRP, including in Section 2.2.3 of the IRP, which was filed in Case No. 2023-00310, and which may be downloaded from the Commission's website at https://psc.ky.gov/Case/ViewCaseFilings/2023-00310. Hourly generation data is provided in response to KC 1-20.

Witness: Nathanial A. Berry (Big Rivers)

REQUEST NO. 1-10: ***Please itemize all power purchases by BREC during the past 3 years, the identity of the source of each power purchase, the MWh quantities of power purchased, the MW capacity of each power purchase, and the price paid by BREC for that power purchase.***

RESPONSE: Big Rivers objects to this request as overly broad and unduly burdensome. Big Rivers further objections because this request seeks irrelevant or inappropriate information, as well as proprietary information of third parties that are not parties to this proceeding.

Subject to the foregoing, Big Rivers has a contract with Southeastern Power Administration (SEPA) to purchase up to 178 MWs of energy. This volume fluctuates on a weekly basis based on hydrological conditions. Additional past purchases are shown in Big Rivers' responses to the Commission Staff's initial information requests in recent cases, as follows:

- the attachment to Big Rivers' response to Item No. 12(a) filed in Case No. 2023-00013;[1]
- Big Rivers' response to Item No. 12(a) filed in Case No. 2022-00268;[2] and

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[1] *In the Matter of: An Electronic Examination of the Application of the Fuel Adjustment Clause of Big Rivers Electric Corporation from November 1, 2020 through October 31, 2022*, Case No. 2023-0001, Responses to Commission Staff's First Request for Information in Appendix B of the Commission's Order dated September 6, 2023, (Sept. 22, 2023) available at , https://psc.ky.gov/pscecf/2023-00013/senthia.santana%40bigrivers.com/09222023105930/CN_2023-00013_-_1st_Staff_FAC_DRs_-_Redacted.pdf

[2] *In the Matter of: An Electronic Examination of the Application of the Fuel Adjustment Clause of Big Rivers Electric Corporation from November 1, 2021 through April 30, 2022*, Case No. 2022-00268, Responses to

- Big Rivers' response to Item No. 12(a) filed in Case No. 2022-00041.[3]

Please see also the attachment to the joint response of Big Rivers and Kenergy to Item No. 4 of this request, Big Rivers' reports to the United States Department of Agriculture Rural Utilities Services (RUS), which include power purchase information.

Witness: Terry Wright, Jr. (Big Rivers)

Commission Staff' First Request for Information (Sept. 30, 2022), *available at* https://psc.ky.gov/pscecf/2022-00268/senthia.santana%40bigrivers.com/09302022111049/Big_Rives_Rsp_to_PSC_1st_IRs_Redacted.pdf .

[3] *In the Matter of: An Electronic Examination of the Application of the Fuel Adjustment Clause of Big Rivers Electric Corporation from May 1, 2021 through October 31, 2021*, Case No. 2022-00041, Responses to the Commission Staff's First Request for Information (April 14, 2022), *available at* https://psc.ky.gov/pscecf/2022-00041/tyson.kamuf%40bigrivers.com/04142022015101/BR_Rsps_to_Staffs_1st_Information_Request.pdf .

IN THE MATTER OF:
ELECTRONIC TARIFF FILING OF BIG RIVERS ELECTRIC CORPORATION
AND KENERGY CORP. TO REVISE THE
LARGE INDUSTRIAL CUSTOMER STANDBY SERVICE TARIFF
CASE NO. 2023-00312

JOINT RESPONSE OF BIG RIVERS ELECTRIC CORPORATION AND KENERGY CORP.
TO KIMBERLY-CLARK CORPORATION'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-11: ***Please itemize all power sales by BREC during the past 3 years outside its system, the MWh quantities of power sold with each transaction, the MW capacity associated with each power sale, and the price received by BREC for each power sale transaction.***

RESPONSE: Big Rivers objects to this request as overly broad and unduly burdensome. Big Rivers further objections because this request seeks irrelevant or inappropriate information, as well as proprietary information of third parties that are not parties to this proceeding.

Subject to the foregoing, please see Big Rivers' responses to the Commission Staff's initial information requests in recent proceedings before the Commission, as follows:

- the attachment to Big Rivers' response to Item No. 12(b) filed in Case No. 2023-00013;[1]
- Big Rivers' response to Item No. 12(b) filed in Case No. 2022-00268;[2] and

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[1] *In the Matter of: An Electronic Examination of the Application of the Fuel Adjustment Clause of Big Rivers Electric Corporation from November 1, 2020 through October 31, 2022,* Case No. 2023-0001, Responses to Commission Staff's First Request for Information (Sept. 22, 2023), *available at* https://psc.ky.gov/pscecf/2023-00013/senthia.santana%40bigrivers.com/09222023105930/CN_2023-00013_-_1st_Staff_FAC_DRs_-_Redacted.pdf

[2] *In the Matter of: An Electronic Examination of the Application of the Fuel Adjustment Clause of Big Rivers Electric Corporation from November 1, 2021 through April 30, 2022*, Case No. 2022-00268, Responses to Commission Staff' First Request for Information (Sept. 30, 2022), *available at* https://psc.ky.gov/pscecf/2022-00268/senthia.santana%40bigrivers.com/09302022111049/Big_Rives_Rsp_to_PSC_1st_IRs_Redacted.pdf .

- Big Rivers' response to Item No. 12(b) filed in Case No. 2022-00041.[3]

Please see also the attachment to the joint response of Big Rivers and Kenergy to Item No. 4 of this request, Big Rivers' reports to the United States Department of Agriculture Rural Utilities Services (RUS), which include sales of electricity.

Witness: Terry Wright, Jr. (Big Rivers)

[3] *In the Matter of: An Electronic Examination of the Application of the Fuel Adjustment Clause of Big Rivers Electric Corporation from May 1, 2021 through October 31, 2021*, Case No. 2022-00041, Responses to the Commission Staff's First Request for Information (April 14, 2022), *available at* https://psc.ky.gov/pscecf/2022-00041/tyson.kamuf%40bigrivers.com/04142022015101/BR_Rsps_to_Staffs_1st_Information_Request.pdf .

REQUEST NO. 1-12: ***Please itemize all capacity purchases by BREC during the past 3 years, the identity of the source of capacity, the MW quantities of capacity purchased, and the price paid by BREC for that capacity.***

RESPONSE: Big Rivers objects to this request as overly broad and unduly burdensome. Big Rivers further objections because this request seeks irrelevant or inappropriate information, as well as proprietary information of third parties that are not parties to this proceeding.

Subject to the foregoing, please see Big Rivers' response to Item No. 3 of the Commission Staff's Second Request for Information in Case No. 2023-00013,[1] which provides a breakdown of the MISO Capacity Market seasonal prices for Planning Year 23-24.

Witness: Terry Wright, Jr. (Big Rivers)

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[1] *In the Matter of: An Electronic Examination of the Application of the Fuel Adjustment Clause of Big Rivers Electric Corporation from November 1, 2020 through October 31, 2022,* Case No. 2023-0001, Responses to Commission Staff's Second Request for Information (Oct. 20, 2023), *available at* https://psc.ky.gov/pscecf/2023-00013/senthia.santana%40bigrivers.com/10202023124332/CN_2023-00013-Full_Rsp_to_2nd_IRs_-_Redacted.pdf.

IN THE MATTER OF:
ELECTRONIC TARIFF FILING OF BIG RIVERS ELECTRIC CORPORATION
AND KENERGY CORP. TO REVISE THE
LARGE INDUSTRIAL CUSTOMER STANDBY SERVICE TARIFF
CASE NO. 2023-00312

JOINT RESPONSE OF BIG RIVERS ELECTRIC CORPORATION AND KENERGY CORP.
TO KIMBERLY-CLARK CORPORATION'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-13: ***Please itemize all capacity sales by BREC during the past 3 years outside its system, the MW quantities of capacity sold with each transaction, and the price received by BREC for each capacity transaction.***

RESPONSE: Big Rivers objects to this request as overly broad and unduly burdensome. Big Rivers further objections because this request seeks irrelevant or inappropriate information, as well as proprietary information of third parties that are not parties to this proceeding.

Subject to the foregoing, please see Big Rivers' response to Item No. 12 of this request.

Witness: Terry Wright, Jr. (Big Rivers)

IN THE MATTER OF:
ELECTRONIC TARIFF FILING OF BIG RIVERS ELECTRIC CORPORATION
AND KENERGY CORP. TO REVISE THE
LARGE INDUSTRIAL CUSTOMER STANDBY SERVICE TARIFF
CASE NO. 2023-00312

JOINT RESPONSE OF BIG RIVERS ELECTRIC CORPORATION AND KENERGY CORP.
TO KIMBERLY-CLARK CORPORATION'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-14: ***In reference to the "Billing" section of the proposed LICSS tariff, please provide copies of all cost studies, models, and workpapers relied upon in formulating the rates found in the Standard Rate Schedule Large Industrial Customer ("LIC") tariff, including any workpapers, in Excel format with working formulas.***

RESPONSE: Please see the joint response of Big Rivers and Kenergy to Domtar Paper Company's Request No. 1-2.

Witness: John Wolfram

IN THE MATTER OF:
ELECTRONIC TARIFF FILING OF BIG RIVERS ELECTRIC CORPORATION
AND KENERGY CORP. TO REVISE THE
LARGE INDUSTRIAL CUSTOMER STANDBY SERVICE TARIFF
CASE NO. 2023-00312

JOINT RESPONSE OF BIG RIVERS ELECTRIC CORPORATION AND KENERGY CORP.
TO KIMBERLY-CLARK CORPORATION'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-15: ***According to any cost-of-service study relied upon to formulate the LIC rate schedule, what is the embedded unit cost of generation capacity for Large Industrial Customers?***

15.1. Please explain in detail how the unit cost is derived from any cost-of service study and provide all supporting workpapers and calculations, in Excel format with working formula where applicable.

RESPONSE: This information was provided in response to Item KC 1-1 in Case No. 2021-00289, which has been incorporated into the record in the instant case. The most recent class cost of service studies prepared for Big Rivers were filed in Case No. 2021-00061. Two studies were prepared: the preferred study (using 12 CP allocation instead of Average & Excess for production demand) is provided as a CONFIDENTIAL electronic file. The net embedded cost of generation capacity for the LIC class is $14.2541/kW per unit 12 CP, and $12.3359/kW per unit of individual LIC customer monthly kW demands.

15.1 Please see the response above.

Witness: John Wolfram

REQUEST NO. 1-16: ***According to any cost-of-service study relied upon to formulate the LIC rate schedule, what is the embedded unit cost of transmission capacity for Large Industrial Customers?***

16.1. Please explain in detail how the unit cost is derived from any cost-of-service study and provide all supporting workpapers and calculations, in Excel format with working formula where applicable.

RESPONSE: This information was provided in response to Item KC 1-1 in Case No. 2021-00289, which has been incorporated into the record in the instant case. The most recent class cost of service studies prepared for Big Rivers were filed in Case No. 2021-00061. Two studies were prepared; the preferred study (using 12 CP allocation instead of Average & Excess for production demand) is provided as a CONFIDENTIAL electronic file. The net embedded cost of transmission capacity for the LIC class is $5.9188/kW per unit 12 CP, and $5.1223/kW per unit of individual LIC customer monthly kW demands.

16.1 Please see the response above.

Witness: John Wolfram

REQUEST NO. 1-17: ***Are loads from the planned Nucor facility in Brandenburg, Meade County, Kentucky, incorporated into any cost-of-service study relied upon to formulate this proposed tariff?***

17.1. If yes, please explain.

RESPONSE: No.

17.1 N/A

Witness: John Wolfram

IN THE MATTER OF:
ELECTRONIC TARIFF FILING OF BIG RIVERS ELECTRIC CORPORATION
AND KENERGY CORP. TO REVISE THE
LARGE INDUSTRIAL CUSTOMER STANDBY SERVICE TARIFF
CASE NO. 2023-00312

JOINT RESPONSE OF BIG RIVERS ELECTRIC CORPORATION AND KENERGY CORP.
TO KIMBERLY-CLARK CORPORATION'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-18: ***Does BREC currently provide transmission service to either the Sebree aluminum smelter or the Hawesville aluminum smelter?***

18.1. If yes, please explain how the transmission service costs to serve the smelters is reflected in any cost-of-service study relied upon to formulate the proposed tariff.

18.2. If yes, please provide the agreements that address such provision of transmission service.

RESPONSE: MISO provides transmission services to the smelters. The smelters pay the Attachment-O rate to MISO. There is no contract between Big Rivers and either smelter for the current provision of transmission service.

Witness: Terry Wright, Jr. (Big Rivers)

IN THE MATTER OF:
ELECTRONIC TARIFF FILING OF BIG RIVERS ELECTRIC CORPORATION
AND KENERGY CORP. TO REVISE THE
LARGE INDUSTRIAL CUSTOMER STANDBY SERVICE TARIFF
CASE NO. 2023-00312

JOINT RESPONSE OF BIG RIVERS ELECTRIC CORPORATION AND KENERGY CORP.
TO KIMBERLY-CLARK CORPORATION'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-19: ***Please provide, in workable Excel format with all formulas intact, 8760 hourly load data for BREC's system members for the most recent annual time period over which BREC has the requested data available.***

RESPONSE: Please see the Excel file provided with this response.

Witness: Terry Wright, Jr. (Big Rivers)

IN THE MATTER OF:
ELECTRONIC TARIFF FILING OF BIG RIVERS ELECTRIC CORPORATION
AND KENERGY CORP. TO REVISE THE
LARGE INDUSTRIAL CUSTOMER STANDBY SERVICE TARIFF
CASE NO. 2023-00312

JOINT RESPONSE OF BIG RIVERS ELECTRIC CORPORATION AND KENERGY CORP.
TO KIMBERLY-CLARK CORPORATION'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-20: ***Please provide, in workable Excel format with all formulas intact, 8760 hourly load data for each of BREC's generation resources for the most recent annual time period over which BREC has the requested data available.***

RESPONSE: Please see the Excel file provided with this response.

Witness: Terry Wright, Jr. (Big Rivers)

IN THE MATTER OF:
ELECTRONIC TARIFF FILING OF BIG RIVERS ELECTRIC CORPORATION
AND KENERGY CORP. TO REVISE THE
LARGE INDUSTRIAL CUSTOMER STANDBY SERVICE TARIFF
CASE NO. 2023-00312

JOINT RESPONSE OF BIG RIVERS ELECTRIC CORPORATION AND KENERGY CORP.
TO KIMBERLY-CLARK CORPORATION'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-21: ***Under the LICSS Pilot, Kimberly-Clark currently provides Kenergy with its forecasted load and generation on a daily basis as well as its planned maintenance outages. Please explain how BREC and Kenergy use this information in its operations and planning.***

RESPONSE: Kenergy objects to this requests to this request on the basis that Kimberly-Clark does not provide such information to Kenergy.

Big Rivers responds that Kimberly-Clark forecasted load and generation is currently used on a daily basis to determine the amount of Load that Big Rivers must purchase in the Day-Ahead Market from MISO. For example, if Big Rivers knows that Kimberly-Clark's generator is going to be offline in advance of the Day-Ahead Market, Big Rivers would buy enough power to cover Kimberly-Clark's entire Load; likewise, if Big Rivers knows that Kimberly-Clark's generator is going to be online, then Big Rivers would purchase the difference between Kimberly-Clark's Load Forecast and its expected generation output. The information provided by Kimberly-Clark helps control Day-Ahead versus Real-time exposure.

Witness: Terry Wright, Jr. (Big Rivers)

For the Objection(s): Counsel

IN THE MATTER OF:
ELECTRONIC TARIFF FILING OF BIG RIVERS ELECTRIC CORPORATION
AND KENERGY CORP. TO REVISE THE
LARGE INDUSTRIAL CUSTOMER STANDBY SERVICE TARIFF
CASE NO. 2023-00312

JOINT RESPONSE OF BIG RIVERS ELECTRIC CORPORATION AND KENERGY CORP.
TO KIMBERLY-CLARK CORPORATION'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 22- ***Regarding the definition of "Self-Supply Capacity" in the proposed tariff:***

22.1. Please explain what is meant by "accredited by MISO," including the following:

22.1.1. Please explain what prompted the change in definition from the LICSS Pilot tariff.

22.1.2. Please provide the accreditation requirements and procedures to be followed to become "electric capacity accredited by MISO for the Standby Customer's generating unit(s)."

22.1.3. Please explain which entity would apply for MISO accreditation; that is, does BREC seek such accreditation or must this accreditation be pursued by the Standby Customer?

22.1.4. Please provide any examples of behind-the-meter customer generation that has obtained the accreditation contemplated in the proposed definition of "Self-Supply Capacity."

22.1.5. What is BREC's understanding of whether and, if so, the extent to which Kimberly-Clark's behind-the-meter customer generation has obtained MISO capacity accreditation?

22.1.6. What is BREC's projected impact of this standard on LICSS customers?

22.2. Please explain what happens if such accreditation from MISO is not possible, including, but not limited to the following circumstances:

22.2.1. Please explain what happens if a facility is not eligible under MISO's eligibility requirements.

22.2.2. Please explain how the Standby Service would be managed while the MISO accreditation request is pending.

22.2.3. Would Standby Customers have to enter the MISO generation interconnection queue?

22.3. Is BREC aware of any other Kentucky utilities that require Standby Customers to be accredited by MISO?

22.3.1. If so, please list those utilities and provide the relevant tariff language.

22.3.2. Is BREC aware of any other utilities in the MISO footprint that require Standby Customers to be accredited by MISO?

22.3.3. If so, please list those utilities and provide the relevant tariff language.

22.4. How does BREC's proposal recognize and account for any seasonal variation in the actual capacity of a customer's self-generation?

RESPONSE: Please see the joint responses of Big Rivers and Kenergy to Item Nos. 6, 7, 8, and 14 of Commission Staff's First Request for Information in this matter.

Witness: Terry Wright, Jr. (Big Rivers)

IN THE MATTER OF:
ELECTRONIC TARIFF FILING OF BIG RIVERS ELECTRIC CORPORATION
AND KENERGY CORP. TO REVISE THE
LARGE INDUSTRIAL CUSTOMER STANDBY SERVICE TARIFF
CASE NO. 2023-00312

JOINT RESPONSE OF BIG RIVERS ELECTRIC CORPORATION AND KENERGY CORP.
TO KIMBERLY-CLARK CORPORATION'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-23: ***Regarding BREC's requirement to meet its MISO Resource Adequacy Requirement ("MRAP") and its MISO Planning Reserve Margin ("MPRM"):***

23.1. Please provide the BREC system demand levels used to determine its most recent MRAP and MPRM.

23.2. Please provide BREC's MPRM level(s) from the most recent twelve (12) months including all relevant calculations used to determine those levels. Please provide any workpapers used to support these calculations, in Excel format, with working formulas.

23.3. Will BREC include a Standby Customer's generation capacity to meet its MRAP and/or its MPRM? Please provide a detailed explanation of the answer.

23.4. If BREC includes a Standby Customer's generation capacity, what percentage of the customer's generation capacity is included to meet these requirements?

23.5. What planning reserve margin does BREC plan for to meet its peak demand requirements?

23.6. What values has BREC or MISO calculated as the MRAP and MPRM for the Kimberly-Clark load?

23.7. What values has BREC or MISO calculated as the MRAP and MPRM for any LICSS customers other than Kimberly-Clark?

23.8. While the existing LICSS Pilot tariff has been in effect, has BREC needed to secure electricity above and beyond the MPRM in order to meet backup demand from Kimberly-Clark for an unplanned outage?

23.8.1. If so, please identify the date and the length of time for each instance where BREC provided electricity above and beyond the MPRM in order to meet backup demand from Kimberly-Clark.

23.8.2. If so, where and at what cost did BREC secure such additional electricity? Please provide documentation of any additional costs incurred, including a description of each occurrence and details regarding same.

23.9. While the existing LICSS Pilot tariff has been in effect, has BREC needed to secure electricity above and beyond the MPRM in order to meet maintenance demand from Kimberly-Clark for a planned outage?

23.9.1. If so, please identify the date and the length of time for each instance where BREC provided electricity above and beyond the MPRM in order to meet maintenance demand from Kimberly-Clark.

23.9.2. If so, where and at what cost did BREC secure such additional electricity? Please provide documentation of any additional costs incurred, including a description of each occurrence and details regarding same.

<u>RESPONSE:</u>

23.1. The Coincident Peak that Big Rivers submitted for PY23-24 were as follows: 736 MWs for Summer 2023, 687.6 MWs for Fall 2023, 745.2 MWs for Winter 2023-2024, and 656.3 MWs for Spring 2024.

23.2. Please see the joint response of Big Rivers and Kenergy to Commission Staff's Request No. 1-4 for an overview of BREC's PRMR position. This chart does not include counterparty buys and sells.

23.3. Big Rivers will not include a Standby Customer's generation capacity to meet our MRAP and/or PRMR Requirement. Instead, we will take this Capacity and sell it into the MISO PRA on behalf of the Standby Customer.

23.4. Please see response to the preceding item.

23.5. The Planning Reserve Margin (%) is provided by MISO on an annual basis. This value changes each Planning Year.

23.6. Big Rivers does not calculate MRAP and MPRM on a customer level as MISO's focus is how Big Rivers' total Load impacts MISO's overall Peak.

23.7. Big Rivers does not calculate MRAP and MPRM on a customer level.

23.8 & 23.9. Please see the provided Excel file "KCC_PRMR (KCC 1-23).xlsx." For Planning Year 22-23, Kimberly-Clark Corporation was above its MPRM 84 hours. For Planning Year 23-24 (Jun – Sep), Kimberly-Clark Corporation was above its MPRM for 24 hours. On the LoadAbovePRMR Tab, the periods are demonstrated where Net Load is greater than PRMR.

Witness: Terry Wright, Jr. (Big Rivers)

IN THE MATTER OF:
ELECTRONIC TARIFF FILING OF BIG RIVERS ELECTRIC CORPORATION
AND KENERGY CORP. TO REVISE THE
LARGE INDUSTRIAL CUSTOMER STANDBY SERVICE TARIFF
CASE NO. 2023-00312

JOINT RESPONSE OF BIG RIVERS ELECTRIC CORPORATION AND KENERGY CORP.
TO KIMBERLY-CLARK CORPORATION'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-24: ***Please itemize all electric capacity accredited by MISO that is owned and operated by BREC by generating unit, including the accredited capacity for each unit.***

RESPONSE:

2023-2024 MISO Seasonal Accredited Capacity (MW)

	Summer	Fall	Winter	Spring
Green1	[redacted]			
Green2				
Reid CT				
Wilson				

Witness: Terry Wright, Jr. (Big Rivers)

IN THE MATTER OF:
ELECTRONIC TARIFF FILING OF BIG RIVERS ELECTRIC CORPORATION
AND KENERGY CORP. TO REVISE THE
LARGE INDUSTRIAL CUSTOMER STANDBY SERVICE TARIFF
CASE NO. 2023-00312

JOINT RESPONSE OF BIG RIVERS ELECTRIC CORPORATION AND KENERGY CORP.
TO KIMBERLY-CLARK CORPORATION'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-25: ***Please provide the monthly peak demands for BREC system for the most recent twelve (12) months available.***

RESPONSE: Please see the joint response of Big Rivers and Kenergy to Item No. 4 of the Commission Staff's First Request for Information in this matter. See also Section 4.3 and Appendix A to Big Rivers' 2023 Integrated Resource Plan filed on September 1, 2023 in Case No. 2023-00310, available on the Commission's website through the following link: https://psc.ky.gov/Case/ViewCaseFilings/2023-00310

Witness: Terry Wright, Jr. (Big Rivers)

REQUEST NO. 1-26: ***Please provide BREC's monthly system losses for the most recent twelve (12) months available.***

RESPONSE: Big Rivers objects to this request as overly broad and unduly burdensome. Subject to the foregoing, for annual and forecast system losses, see Table 2.2.8(a) and Appendix A of Big Rivers' 2023 Integrated Resource Plan filed in Case No. 2023-00310, and available on the Commission's website through the following link: https://psc.ky.gov/Case/ViewCaseFilings/2023-00310.

Witness: Terry Wright, Jr. (Big Rivers)

For the objection(s): Counsel

REQUEST NO. 1-27: ***Regarding the statement that "Big Rivers is proposing to pass through to the Standby Customer the actual costs associated with the Standby Customer's self-generation," please describe how these costs are calculated.***

27.1. Please provide the precedent for this approach.

27.2. Please provide the rationale for this approach.

27.3. Please list the costs that are included in this calculation.

27.4. Please explain how each cost listed would be documented and available for review by the Standby Customer.

27.5. Please explain how BREC has taken into account the various operational characteristics of the self-generation systems, including, but not limited to, outage rates.

27.6. Please explain how this approach accounts for the difference in costs to BREC associated with scheduled outages and unplanned outages.

RESPONSE: Big Rivers objects to this request to the extent it seeks legal analysis or legal conclusions. Big Rivers further objects to the extent this request seeks information, or requires Big Rivers to create information, that is readily available or more accessible to Kimberly Clark Corporation from itself or other sources. The request is also vague, and the statement on which it is based omits parts of the sentence of testimony from which it is derived. Subject to the foregoing, Big Rivers refers Kimberly Clark Corporation to Big Rivers' responses to Staff's First

Request for Information (including but not limited to PSC 1-3, 1-6, 1-7, 1-8, 1-9, 1-11, 1-12, 1-13, 1-14, 1-15, 1-16, and 1-18) and otherwise states as follows.

27.1 Commission precedent is replete with support for cost-based rates. As stated by Big Rivers' witness, Nathan Berry, "In lieu of an administrative charge, Big Rivers is proposing to pass through to the Standby Customer the actual costs associated with the Standby Customer's self-generation, such as the actual costs of services from ACES Power Marketing." This approach is designed to minimize cross-subsidization and promote the alignment of cost-causers with cost-payers. The Company welcomes the opportunity to work cooperatively with customers and prospective customers in connection with billing and related issues.

27.2 Please see the response to KC 1-27.1, above.

27.3. The tariff proposed by Big Rivers identifies the bases for charges to customers thereunder. Certain charges—including those passed through from third-parties—are not known to or knowable by Big Rivers, due in part to new and oft-changing requirements and frameworks employed by MISO, particularly as those impact customer-owned generation resources. Subject to the foregoing, please see Big Rivers' response to Commission Staff Request 1-11.

27.4. Once any third-party pass-through charges are known to Big Rivers, they will be communicated to the Standby Customer.

27.5. Under the proposed LICSS Tariff, MISO would be the one to take into account the operational characteristics of the self-generation systems. MISO utilizes the outage rate as one of their main inputs when they are assessing the reliability impact of the Resource and when awarding their Capacity Accreditation. As far as ACES' charges are concerned, the higher the outage rate the more time that would be spent updating the unit availability in the MISO Demand Side Resource Interface (DSRI), which could lead to a higher ACES charge.

27.6. With regard to ACES' charges, ACES would go into DSRI and update the Unit Status for either a planned or unplanned Outage, so their costs would be similar.

Witness: Terry Wright, Jr. (Big Rivers)

For the Objection(s): Counsel

REQUEST NO. 1-28: ***In reference to the proposed LICSS Term and Condition Number 2:***

28.1. Please provide all BREC "requirements and procedures for interconnection."

28.2. Are all BREC requirements and procedures for interconnection subject to review and approval by the Commission?

28.3. Is it BREC's understanding that Kimberly-Clark is currently in compliance with all BREC requirements and procedures for interconnection?

RESPONSE:

28.1. Connections to the transmission system owned by Big Rivers are subject to the requirements described in the company's *Facility Interconnection Requirements*, a document publicly available at: https://www.oasis.oati.com/brec/index.html (select the link labeled BREC Connection_Requirements).

28.2. Big Rivers objects to the extent that this request seeks legal analysis or legal conclusions. Subject to the foregoing, the requirements applicable to customers seeking to interconnect have historically been an integral part of relevant special contracts, which are reviewed and approved by the Commission.

28.3. Big Rivers is not aware of any current Kimberly-Clark connection requirement deficiencies.

Witness: Christopher S. Bradley (Big Rivers)

For the objections(s): Counsel

REQUEST NO. 1-29: ***In reference to the proposed LICSS Term and Condition Number 4:***

29.1. What new or additional facilities are necessary for BREC to provide LICSS service to Kimberly-Clark?

29.2. Please identify and quantify all types of "costs" that BREC could assess to LICSS customers pursuant to Term and Condition Number 4.

29.3. What charges, if any, has BREC incurred from ACES to provide LICSS service to Kimberly-Clark during calendar years 2022 and 2023? If BREC has incurred such charges, please explain how BREC determined the allocation of those charges to Kimberly-Clark.

RESPONSE:

29.1. Big Rivers is not aware of new or additional facilities presently necessary in connection with the provision of service to Kimberly-Clark under the LICSS tariff schedule.

29.2. New or additional facilities could include metering, instrument transformers, communication equipment, and other related equipment as necessary to provide remote access to generator information. This would also include costs related to replacing equipment as it wears out over time.

29.3. Big Rivers has not attempted to quantify ACES related LICSS expenses in 2022 and 2023 nor require ACES to keep track of all their service hours related to LICSS customers, as there was no need under the effective LICSS tariff. Under the proposed LICSS tariff, Big Rivers will need to coordinate with ACES so they may track these hours and calculate the charges appropriately.

Witnesses: Christopher S. Bradley, Subparts 29.1 and 29.2 only

Terry Wright, Jr., Subpart 29.3 only

IN THE MATTER OF:
ELECTRONIC TARIFF FILING OF BIG RIVERS ELECTRIC CORPORATION
AND KENERGY CORP. TO REVISE THE
LARGE INDUSTRIAL CUSTOMER STANDBY SERVICE TARIFF
CASE NO. 2023-00312

JOINT RESPONSE OF BIG RIVERS ELECTRIC CORPORATION AND KENERGY CORP.
TO KIMBERLY-CLARK CORPORATION'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-30: ***In reference to the proposed LICSS Term and Condition Number 5:***

30.1. Please identify and quantify all MISO charges, fees, penalties, or other costs that BREC would assess pursuant to this provision.

30.2. For each such charge, fee, penalty, or other cost identified in response to 23.1, [30.1] please explain how BREC determined the allocation of such item to LICSS customers.

RESPONSE: Please see the joint response of Big Rivers and Kenergy to Item Nos. 14 and 15 of the First Request for Information of Domtar Paper Company, LLC filed in this matter.

Witness: Terry Wright, Jr. (Big Rivers)

IN THE MATTER OF:
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LARGE INDUSTRIAL CUSTOMER STANDBY SERVICE TARIFF
CASE NO. 2023-00312

JOINT RESPONSE OF BIG RIVERS ELECTRIC CORPORATION AND KENERGY CORP.
TO KIMBERLY-CLARK CORPORATION'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-31: ***In reference to the proposed LICSS Term and Condition No. 6, please explain what is intended by the term "transmit energy."***

RESPONSE: The intent of Condition No. 6 is to ensure that a behind-the-meter generator does not jeopardize the safety and reliability of the transmission system by placing unexpected or unnecessary energy onto the grid. As long as the Standby Customer's generator is producing less power than the Standby Customer's Load, the risk of overload or other issues is avoided and there would not be transmission of energy by Kimberly-Clark onto the grid.

Witness: Terry Wright, Jr. (Big Rivers)

IN THE MATTER OF:
ELECTRONIC TARIFF FILING OF BIG RIVERS ELECTRIC CORPORATION
AND KENERGY CORP. TO REVISE THE
LARGE INDUSTRIAL CUSTOMER STANDBY SERVICE TARIFF
CASE NO. 2023-00312

JOINT RESPONSE OF BIG RIVERS ELECTRIC CORPORATION AND KENERGY CORP.
TO KIMBERLY-CLARK CORPORATION'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-32: ***In reference to the proposed LICSS Term and Condition No. 8:***

32.1. Please explain what is intended by the term "reasonable protection".

32.2. Please explain what is intended by the term "systems" and identify what "systems" are being referenced.

RESPONSE:

32.1. The term "reasonable protection" refers to the devices and protocols reasonably necessary or appropriate to avoid negative impacts to Big Rivers or its Member-Owners as a consequence of a customer's generator, including relays, circuit breakers, and related equipment necessary to automatically isolate the connected generation facilities during abnormal conditions.

32.2. The term "systems" refers to the Big Rivers' transmission system or Member-Owner distribution system to which the generation facility is connected.

Witness: Christopher S. Bradley (Big Rivers)

REQUEST NO. 1-33: ***In reference to the proposed LICSS Term and Condition No. 9:***

33.1. Please explain why BREC determined that this provision should be included in the proposed LICSS tariff.

33.2. What are the repercussions, under the proposed LICSS tariff, if an LICSS customer is determined not to have complied with this provision?

33.3. Is BREC claiming authority to administer LICSS customers' compliance with this provision? If so, what is the basis of that claimed authority?

RESPONSE:

33.1. The intent of the provision is to ensure the continued safe and reliable operation of the transmission system following the connection of customer-owned generation equipment. Ensuring the safety of those who operate and maintain the transmission system by following all applicable codes, laws, regulations, and generally accepted utility practices is a fundamental expectation that warrants inclusion. Protecting other transmission system users from inappropriate power quality and other issues, including voltage sags and swings, further supports the requirement for lawful, compliant customer-generators.

33.2. Big Rivers objects to this request to the extent is seeks legal analyses or legal conclusions. Subject to the foregoing, violation of an approved tariff may authorize Kenergy and/or Big Rivers to take appropriate remedial measures, up to and including disconnection of the customer's generator from the Big Rivers transmission system and termination of service. Notably, Kenergy's tariff already specifically authorizes termination of service if customers fail to comply with applicable codes and rules. *See* Kenergy's Rate Schedule 113 ("Kenergy may refuse or terminate service to a customer if the customer does not comply with state, municipal or other codes, rules and regulations applying to such service"). Likewise, 807 KAR 5:006 allows a utility to terminate service for noncompliance with the utility's tariffed rules; for dangerous conditions; and for noncompliance "with state, municipal, or other codes."

33.3. Big Rivers objects to this request as vague (particularly the word "administer"), and further objects to this request to the extent is seeks legal analyses or legal conclusions. Subject to the foregoing, Kenergy and Big Rivers have the authority to ensure their tariff provisions are followed. *See, e.g.*, KRS 278.030(2) ("Every utility shall furnish adequate, efficient and reasonable service, and may establish reasonable rules governing the conduct of its business and the conditions under which it shall be required to render service."). Kimberly-Clark is a customer of Kenergy. Kimberly-Clark has a special contract with Kenergy that requires Kimberly-Clark to abide by Kenergy's applicable tariffs, rules and regulations and the Commission's rules and regulations. *See* First Amended and Restated Agreement for Electric Service dated November 13, 2008, between Kenergy and Kimberly-Clark (the "Retail Agreement"), Sections 1.02 and 12.01. As noted above, both Kenergy's tariff and the Commission's regulations allow Kenergy to terminate service if Kimberly-Clark violates applicable codes or creates dangerous conditions.

Further, the December 9, 2008, letter agreement between Big Rivers and Kenergy, which was included in Kimberly-Clark Hearing Exhibit 1 in Case No. 2021-00289, authorizes Big Rivers to enforce the covenants Kimberly-Clark agreed to in the Retail Agreement. A copy of the letter agreement can also be found on the Commission's website through the following link: https://psc.ky.gov/Home/Library?type=Tariffs&folder=Electric%5CKenergy%20Corp%5CContracts%5CBig%20Rivers%20Electric%20Corporation%5CKimberly-Clark%20Corporation.

Witness: Christopher S. Bradley (Big Rivers)

For the objection(s): Counsel

IN THE MATTER OF:
ELECTRONIC TARIFF FILING OF BIG RIVERS ELECTRIC CORPORATION
AND KENERGY CORP. TO REVISE THE
LARGE INDUSTRIAL CUSTOMER STANDBY SERVICE TARIFF
CASE NO. 2023-00312

JOINT RESPONSE OF BIG RIVERS ELECTRIC CORPORATION AND KENERGY CORP.
TO KIMBERLY-CLARK CORPORATION'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-34: ***In reference to the proposed LICSS Term and Condition Number 10:***

34.1. What is intended by the term "Public Liability"?

34.2. Please provide all bases for the dollar amounts specified in 10.a. and 10.b.

34.3. What authority does BREC have to propose to require these types of insurance coverage by an LICSS customer?

RESPONSE: Big Rivers objects to the extent that this request seeks legal analysis or legal conclusions. Notwithstanding these objections, Big Rivers responds as follows.

34.1. General Commercial Liability.

34.2. The dollar amounts specified in 10.a. and 10.b. are consistent with market expectations and are minimum amounts intended to reflect the attendant risks, as further described in the Response to subpart 34.3, which follows.

34.3. The provision of service to a LICSS customer requires Big Rivers to interconnect and interface with sizeable customer-owned generation. The likelihood that Big Rivers may sustain damage to its property or injury to its personnel is increased with respect to a LICSS customer, and the potential for significant financial impacts is likewise elevated due to the risks attendant to the service provided. Big Rivers embraces an obligation to provide safe and reliable service at fair, just and reasonable rates to all its customers, and sensible insurance requirements promote that end.

Witness: Terry Wright, Jr. (Big Rivers)

For the Objection(s): Counsel

IN THE MATTER OF:
ELECTRONIC TARIFF FILING OF BIG RIVERS ELECTRIC CORPORATION
AND KENERGY CORP. TO REVISE THE
LARGE INDUSTRIAL CUSTOMER STANDBY SERVICE TARIFF
CASE NO. 2023-00312

JOINT RESPONSE OF BIG RIVERS ELECTRIC CORPORATION AND KENERGY CORP.
TO KIMBERLY-CLARK CORPORATION'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-35: ***In reference to the proposed LICSS Term and Condition Number 11, which states "Standby Customers with a non-dispatchable generation facility shall not be entitled to a capacity payment[,]" please define "non-dispatchable" and please explain, if the generation were dispatchable for purposes of Number 11, by whom would it be dispatchable?***

35.1. Please describe what is intended by this Term and Condition.

35.2. Please explain the "capacity payment" to which this provision is referring.

35.3. Please provide the precedent for this approach.

35.4. Please provide the rationale for this approach.

35.5. To receive the "capacity payment" would the self-supply generation be dispatchable by MISO, BREC, or the customer?

35.6. How would the Standby Customer's Standby Service be impacted if the Standby Customer's generation is not dispatchable?

35.7. Is it BREC's understanding that Kimberly-Clark's generation is currently dispatchable or non-dispatchable?

RESPONSE:

If the resource is registered with MISO as a Traditional Resource, it would be required to follow a 5-minute dispatch, which means that whenever MISO has committed the unit and the unit has come online and is stable it would receive a new operating instruction every 5 minutes. If the resource is registered as an LMR-BTMG (Load Modifying Resource - Behind-the-Meter-Generator), it would be required to follow an hourly dispatch under an Emergency Condition. Under this hourly dispatch, the resource would be given a quantity of power to produce, and it would have to meet or exceed that amount by the end of the hour. A non-dispatchable unit would not be able to follow either a 5-minute or hourly dispatch, depending on registration type.

35.1. The intention of the provision is to ensure a customer is not credited with a capacity payment when its generator does not meet the MISO requirements necessary to generate a capacity payment from the MISO Planning Resource Auction.

35.2. Under the proposed tariff, Demand Charges for Backup Power Service are billed at Big Rivers' Standard Rate LIC – Large Industrial Customer tariff rate, less a credit equal to the Self-Supply Capacity times the MISO Planning Resource Auction ("PRA") Auction Clearing Prices ("ACP") for the Big Rivers zone for the applicable resource auction time period. Non-dispatchable generation resources are ineligible for the Self-Supply Capacity credit.

35.3. and 35.4. Big Rivers objects to the extent that this request seeks legal research. Subject to this objection, please refer to the Direct Testimony of Nathan A. Berry, beginning at page 5 thereof, and to the other subparts of this request. In brief, if a resource were to register as an LMR-BTMG, it would be required to respond to MISO's dispatch instruction under an Emergency Condition. If a resource cannot follow MISO's instruction under an Emergency Condition, then it would not be eligible for a Capacity payment from MISO. Again, Big Rivers merely seeks to apportion the customer its share of any MISO capacity payment received as a result of the customer's generator (if any).

35.5. MISO. Please see the balance of this response.

35.6. The Standby Customer's Standby Service would not be impacted. However, they would not be eligible for the Capacity Credit described in 35.2.

35.7. Big Rivers' understanding is that Kimberly-Clark's generation would be considered as dispatchable, as it is able to come online and could meet or exceed an instruction from MISO on an hourly level.

Witness: Terry Wright, Jr. (Big Rivers)

For the objections: Counsel

REQUEST NO. 1-36: ***In reference to the proposed LICSS Term and Condition Number 12:***

36.1. Please identify "all facilities" that would be necessary for an LICSS customer to "meet and maintain eligibility as a MISO capacity resource."

36.2. Is it BREC's understanding that all such facilities are in place for Kimberly-Clark to "meet and maintain eligibility as a MISO capacity resource"? If no, please explain what additional facilities are necessary.

36.3. Please identify and quantify all "non-performance costs" that could be assessed to an LICSS customer pursuant to this Term and Condition.

RESPONSE: Big Rivers objects to this request to the extent it seeks information that is readily available or more accessible to Kimberly-Clark Corporation from other sources. Subject to the foregoing, please refer to the most recent version of MISO Business Practices Manual (BPM) No. 26 "Demand Response" and MISO BPM-011 Resource Adequacy, as well as the MISO Tariff, for current MISO requirements and penalties. A copy of the MISO BMPs can be downloaded through the following link: https://www.misoenergy.org/legal/business-practice-manuals/ and the MISO tariff through the following link: https://www.misoenergy.org/legal/tariff/.

Witness: Terry Wright, Jr. (Big Rivers)

For the objection(s): Counsel

REQUEST NO. 1-37: ***In reference to the proposed LICSS Term and Condition Number 13 that "[a]ny and all costs incurred by BREC as a result of the Standby Customer's generator's failure to generate . . . may be charged to the Standby Customer in addition to all other charges":***

37.1. Please explain how such costs would be determined.

37.2. Please explain whether BREC would be required to demonstrate a nexus between the failure to generate and costs incurred by BREC.

37.3. Please explain, and provide all tariff and contractual bases, for any LICSS customer obligation to provide "ancillary services necessary to maintain reliability on the Big Rivers system."

37.4. Please define "RSG," and provide all tariff and contractual bases for the assessment of MISO RSG charges on an LICSS customer.

37.5. Please explain whether BREC considers the "failure to generate" to include both planned and unplanned outages.

37.6. Please describe how this approach accounts for the fact that a Standby Customer is already paying a demand charge equal to that paid by LIC customers.

RESPONSE: Big Rivers objects to this request to the extent it seeks information that is readily available or more accessible to Kimberly-Clark Corporation from other sources. Subject to the foregoing, please refer to the most recent version of MISO BPM-011 Resource Adequacy, which can be downloaded through the following link, https://cdn.misoenergy.org/BPM-005%20Market%20Settlements49550.zip.

Witness: Terry Wright, Jr. (Big Rivers)

For the objection(s): Counsel

IN THE MATTER OF:
ELECTRONIC TARIFF FILING OF BIG RIVERS ELECTRIC CORPORATION
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LARGE INDUSTRIAL CUSTOMER STANDBY SERVICE TARIFF
CASE NO. 2023-00312

JOINT RESPONSE OF BIG RIVERS ELECTRIC CORPORATION AND KENERGY CORP.
TO KIMBERLY-CLARK CORPORATION'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-38: ***In reference to the proposed LICSS Term and Condition Number 14:***

38.1. Is it BREC's understanding that Kimberly-Clark has already paid "for all interconnection costs arising out of the Standby Customer's generator"? If it is not, please identify and quantify any additional costs.

RESPONSE: Big Rivers objects to this request to the extent it seeks information that is readily available or more accessible to Kimberly-Clark Corporation from other sources. Subject to the foregoing, Big Rivers states that interconnection costs are impacted based on the registration path taken by the Customer. Assuming the customer seeks to register as an LMR-BTMG, Big Rivers is not presently aware of any interconnection costs that the Kimberly-Clark would be charged.

Witness: Terry Wright, Jr. (Big Rivers)

For the objection(s): Counsel

REQUEST NO. 1-39: ***In reference to the proposed LICSS Term and Condition Number 15:***

39.1. Please explain how BREC justifies reserving a right to discontinue sales to the Standby Customer during an emergency (akin to interruptible service), despite the customer paying a full demand charge to compensate BREC for ensuring that it has capacity (firm service).

39.2. Please define, and provide the tariff basis for the definition of "system emergencies."

39.3. Please provide any examples in BREC's other rate offerings where customers pay a discount for interruptible service.

39.4. Please provide any examples in BREC's other rate offerings where customers that are paying for firm service are required to agree that their service may be interrupted.

RESPONSE:

39.1. During system emergencies, Big Rivers and Kenergy may discontinue sales in accordance with 807 KAR 5:054 Section 6.

39.2. Big Rivers objects to this request to the extent it seeks legal analysis or legal conclusions. Subject to the foregoing, Big Rivers states that "system emergency" is not a defined term in the proposed Tariff, and it is intended to have its common meaning. Reference is also made to "system emergency" as defined by 807 KAR 5:054, which means "a condition on a utility's system which may result in imminent significant disruption of service to customers or may imminently endanger life or property."

39.3. Please see Big Rivers' Tariff, SECTION 2 - Voluntary Price Curtailable Service Rider

39.4. All retail customers served by Big Rivers' Members are subject to service interruptions in connection with system emergencies.

Witness: Terry Wright, Jr. (Big Rivers)

For the Objections: Counsel

IN THE MATTER OF:
ELECTRONIC TARIFF FILING OF BIG RIVERS ELECTRIC CORPORATION
AND KENERGY CORP. TO REVISE THE
LARGE INDUSTRIAL CUSTOMER STANDBY SERVICE TARIFF
CASE NO. 2023-00312

JOINT RESPONSE OF BIG RIVERS ELECTRIC CORPORATION AND KENERGY CORP.
TO KIMBERLY-CLARK CORPORATION'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-40: ***Please explain the implications under this proposed LICSS when BREC experiences system outages that forces the outage of the Standby Customer's self-generation.***

RESPONSE: Big Rivers objects to this request as vague (particularly the word "implications"). Subject to the foregoing, Big Rivers states that, to the extent the customer can safely re-start and operate its self-generation during an outage situation, the customer has the option to self-supply its load as an island with no connection to the Big Rivers system.

Witness: Christopher S. Bradley (Big Rivers)

For the objection(s): Counsel

IN THE MATTER OF:
ELECTRONIC TARIFF FILING OF BIG RIVERS ELECTRIC CORPORATION
AND KENERGY CORP. TO REVISE THE
LARGE INDUSTRIAL CUSTOMER STANDBY SERVICE TARIFF
CASE NO. 2023-00312

JOINT RESPONSE OF BIG RIVERS ELECTRIC CORPORATION AND KENERGY CORP.
TO KIMBERLY-CLARK CORPORATION'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-41: ***Please provide any Loss of Load Probability studies applicable or relevant to BREC.***

RESPONSE: A copy of MISO's "Planning Year 2023-2024 Loss of Load Expectation Study Report" can be found through the following link: https://cdn.misoenergy.org/PY%202023-2024%20LOLE%20Study%20Report626798.pdf

Witness: Terry Wright, Jr. (Big Rivers)

REQUEST NO. 1-42: ***Please provide an unredacted version of any redacted documents from the incorporated proceedings.***

RESPONSE: Big Rivers objects to this request as overly burdensome to the extent that it seeks information already in possession of Kimberly-Clark. Big Rivers also objects to this request because it seeks information protected from disclosure by the Commission and applicable law. Subject to the foregoing, Big Rivers states that Kimberly-Clark was previously provided unredacted copies of all documents filed in Case No. 2021-00289.[1] In Case No. 2023-00063,[2] the only redacted information filed into the record was filed by Kimberly-Clark. Finally, in Case No. 2023-00017,[3] the only redacted information was filed by Domtar Paper Company under a Petition for Confidential Treatment dated January 11, 2023. On August 10, 2023, the Commission granted confidential treatment of the redacted information for five (5) years.

Witness: Nathanial A. Berry (Big Rivers)

For the objection(s): Counsel

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[1] *In the Matter of: Electronic Tariff Filing of Big Rivers Electric Corporation and Energy Corp. to Implement a New Standby Service Tariff,* Case No. 2021-00289.

[2] *In the Matter of: Kimberly-Clark Corporation, Complainant v. Big Rivers Electric Corporation and Kenergy Corp., Defendants,* Case No. 2023-00063.

[3] *In the Matter of: Domtar Paper Company, LLC, Complainant v. Big Rivers Electric Corporation and Kenergy Corp., Defendants,* Case No. 2023-00017.