COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF LOUISVILLE)	
GAS AND ELECTRIC COMPANY FOR)	
APPROVAL OF AN AMENDED)	CASE N
ENVIRONMENTAL COMPLIANCE PLAN AND)	CASEIN
A REVISED ENVIRONMENTAL SURCHARGE)	

CASE NO. 2020-00061

RESPONSE OF LOUISVILLE GAS AND ELECTRIC COMPANY TO COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION DATED JULY 31, 2020

FILED: AUGUST 14, 2020

VERIFICATION

COMMONWEALTH OF KENTUCKY)) COUNTY OF JEFFERSON)

The undersigned, **Daniel K. Arbough**, being duly sworn, deposes and says that he is Treasurer for Kentucky Utilities Company and Louisville Gas and Electric Company and an employee of LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

h.Ch **Daniel K. Arbough**

Subscribed and sworn to before me, a Notary Public in and before said County

and State, this 11th day of August 2020.

Schole (SEAL) Notary Public

Notary Public, ID No. 603967

My Commission Expires:

7/11/2022

VERIFICATION

COMMONWEALTH OF KENTUCKY))) **COUNTY OF JEFFERSON**

The undersigned, Robert M. Conroy, being duly sworn, deposes and says that he is Vice President, State Regulation and Rates, for Kentucky Utilities Company and Louisville Gas and Electric Company and an employee of LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

Robert M. Conroy

Subscribed and sworn to before me, a Notary Public in and before said County

and State, this 10th day of August 2020.

lychooler

Notary Public, ID No. 603967

My Commission Expires:

7/11/2022

Louisville Gas and Electric Company Response to Commission Staff's Second Request for Information Dated July 31, 2020

Case No. 2020-00061

Question No. 1

Witness: Robert M. Conroy

- Q-1. Refer to the Direct Testimony of Robert M. Conroy (Conroy Testimony) at 10. Provide the S&P Global Market Intelligence report (RRA Report) of major rate case decisions in the first half of 2020.
 - a. Explain whether LG&E agrees that the average return on equity (ROE) from the most recent RRA Report is lower than the one cited by LG&E for the 2019 ROE averages.
 - b. If 1.a. above is confirmed, explain whether LG&E agrees that ROE awards are trending downward and provide support for LG&E's position.
 - c. Confirm that the RRA reported ROE cited on page 10 of the Conroy Testimony is lower than the quarterly RRA report when LG&E was awarded an ROE of 9.725 percent in Case No. 2018-00295.²
- A-1.
- a. The July 22, 2020 RRA Report which covers the period January June of 2020 is provided with this response.³ This report confirms that the representation in Mr. Conroy's direct testimony filed March 31, 2020 remains reasonable, i.e., that the 9.725% ROE approved for LG&E and KU ("the Companies") in their 2018 base rate cases continues to be reasonable when compared with the ROEs approved by other commissions for vertically integrated electric utilities. Specifically, the July 22, 2020 RRA Report shows that the average ROE for vertically integrated electric utilities during the first six months of 2020 averaged 9.67%, with the median being 9.70% (see page 9, Table 3 for vertically integrated electric utilities). These results demonstrate the continued reasonableness of using 9.725% for the ECR tariffs until the next change in base rates. For the reasons stated in the response to Question No. 2, the Companies believe that any change from 9.725% should come as a result of the ROE that will be set in those base rate cases based on a fully developed record with analyses of expert witnesses.

² Case No. 2018-00295, *Electronic Application of Louisville Gas and Electric Company for an Adjustment of its Electric Rates* (Ky. PSC Apr. 30, 2019).

³ See Attachment No.1 to this data response which shows the reported authorized ROEs from major rate case decisions from S&P Global Market Intelligence for the period January - June of 2020. (The attached RRA Reports include both the published report itself and the published tables that are hyperlinked in the reports.)

- b. The Companies do not agree that ROE awards for vertically integrated electric utilities such as LG&E and KU are trending down. ROE awards for vertically integrated electric utilities as reported by RRA remain reasonably comparable to the 9.725% ROE. Please see the response to part (a) above and part (c) below. Please also see the response to Question No. 2 for a discussion on the recent shifts of beta values for electric utilities.
- c. The Companies read the request for information as referencing the April 11, 2019 quarterly RRA Report and comparing it to the RRA Report cited on page 10 of the Conroy Direct Testimony. The April 11, 2019 RRA Report is attached to this response as Attachment 2. It covers the period January March of 2019 which was just before the Commission issued its 9.725% decision in the Companies' last base rate cases on April 30, 2019.

For the three month period ending March 31, 2019, the April 11, 2019 RRA Report shows vertically integrated electric utilities were awarded a 9.72% average ROE and a 9.75% median ROE.⁴ These results are consistent with the 9.725% ROE approved by the Commission in the April 30, 2019 base rate case orders.

Finally, the Companies have also attached the January 31, 2020 RRA Report cited in Mr. Conroy's testimony as Attachment 3.

	Vertically Integrated Electric Utilities									
Time Period	Source	Average ROE	Median ROE							
2018	July 22, 2020	9.68%	9.73%							
	RRA Report									
1/19 - 3/19	April 11, 2019	9.72%	9.75%							
	RRA Report									
2019	July 22, 2020	9.73%	9.73%							
	RRA Report									
1/20 - 6/20	July 22, 2020	9.67%	9.70%							
	RRA Report									

The average and median ROE reported in these three RRA reports from 2018 through June 2020 are shown in the following table:⁵

As demonstrated in the table, depending on the time period, the RRA averages and medians for vertically integrated electric utilities are well within a range of reasonableness of the 9.725% ROE authorized for the Companies. The slight differences are immaterial, do not represent any sort of trend, and do not support any adjustment in this case.

⁴ See page 9, Table 3 for vertically integrated electric utilities in the April 11, 2019 RRA Report (Attachment 2).

⁵ The July 22, 2020 RRA Report shows ROEs for vertically integrated electric utilities for the first half of 2020. It also shows ROE data for calendar years 2018 and 2019. For 2019, the average ROE was 9.73% and the median was 9.73%. For 2018, the average was 9.68% and the median was 9.73% (see page 9, Table 3 of Attachment 1 for vertically integrated electric utilities).

Attachment 1 to Response to Question No. 1 Page 1 of 11 Conroy July 22, 2020 spglobal.com/marketintelligence

S&P Global Market Intelligence

RRA Regulatory Focus Major Rate Case Decisions -January - June 2020

The equity returns authorized electric and gas utilities nationwide edged downward in the first half of 2020. Several rate case decisions have been delayed until later this year due to the health and economic crisis triggered by the coronavirus outbreak that brought the U.S. economy to a near halt. Based on data gathered by Regulatory Research Associates, a group within S&P Global Market Intelligence, the average return on equity authorized electric utilities was 9.55% in all rate cases decided in the first half of 2020, below the 9.65% average for cases in full year 2019. There were 27 electric ROE determinations in the first half of 2020, versus 47 in full year 2019.

Included in those authorizations is a decision by the <u>Maine Public Utilities</u> <u>Commission</u> ordering a management inefficiency adjustment that reduced <u>Central Maine Power Co</u>'s ROE by 100 basis points to 8.25% due to imprudence associated with a new billing system. The PUC ordered that this downward ROE adjustment be lifted when the utility meets all performance benchmarks for all service quality metrics for at least 18 consecutive months beginning March 1, 2020, and formally demonstrates to the commission that the problems have been resolved. Calculation of the average electric ROE without the penalty results in a 9.58% ROE for the first half of 2020.

This data includes several limited-issue rider cases. Excluding these cases, the average authorized ROE was was 9.47% in electric rate cases decided in the first half of 2020, versus 9.64% observed in full year 2019. The difference between the ROE averages including rider cases and those excluding the rider cases is driven by ROE premiums allowed in certain states for riders that address recovery of specific generation projects.

The average ROE authorized gas utilities was 9.40% in cases decided during the first half of 2020 versus 9.71% in full year 2019. There were 12 gas cases that included an ROE determination in the first six months of 2020 versus 32 in full year 2019.

The 2020 averages are hovering at the lowest levels ever witnessed in the industry, and with the recent rate cuts by the U.S. Federal Reserve and current pandemic induced recession, even lower authorized returns may be on the horizon.

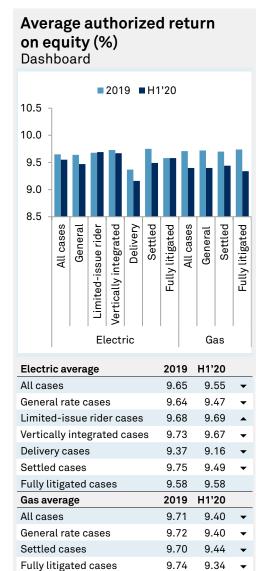
Lisa Fontanella, CFA Research Director

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For Detailed Data

Click <u>here</u> to see supporting data tables.



30-year bond yield2.58Data compiled July 20, 2020.

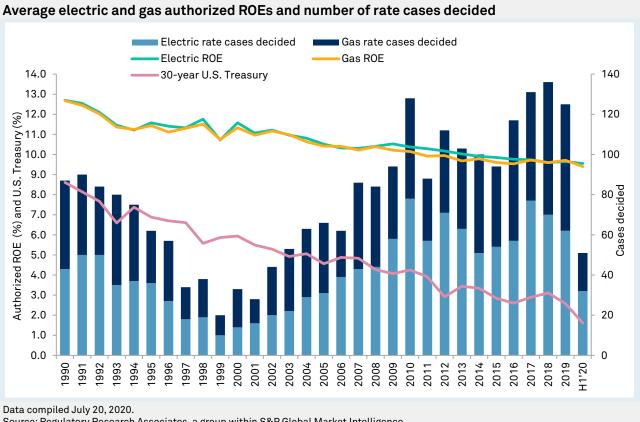
U.S. Treasury

Source: Regulatory Research Associates, a group within S&P Global Market Intelligence

2019

H1'20

1.62



Source: Regulatory Research Associates, a group within S&P Global Market Intelligence

In the first six months of 2020, the median ROE authorized in all electric utility rate cases was 9.45%, versus 9.60% in full year 2019; for gas utilities, the metric was 9.42% in the first half of 2020, versus 9.70% in full year 2019.

From a longer-term perspective, interest rates, as measured by the 30-year U.S. Treasury bond yield, fell almost steadily from the early 1980s until 2015 or so, placing downward pressure on authorized ROEs. Even though the decline has been less dramatic in the period since 1990, average authorized ROEs fell below 10% for gas utilities in 2011 and for electric utilities in 2014.

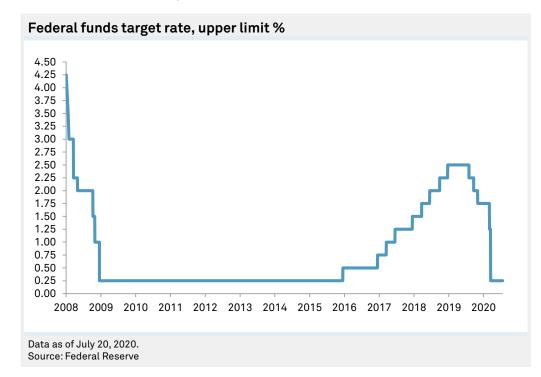
Since 2010, rate case activity has been robust, with 100 or more cases adjudicated in eight of the last ten calendar years. This count includes electric and gas cases where no ROEs have been specified; however, withdrawn cases are not included. After reaching an almost 30-year high in 2018, when almost 140 cases were decided, rate case activity moderated somewhat in 2019, with about 125 electric and gas cases resolved. Currently, there are about 90 rate cases pending; however, the current state of affairs due to COVID-19 has caused some companies to postpone rate case filings that were planned for this year. This backlog, coupled with the need to address COVID-19 pandemic-related costs and lost revenue may usher in an even more robust level of rate case activity in 2021 and beyond,

Absent the pandemic, increased costs associated with environmental compliance, generation and delivery infrastructure upgrades and expansion, renewable generation mandates, storm and disaster recovery, cybersecurity and employee benefits have contributed to an active rate case agenda over the last decade.

2

Major Rate Case Decisions

Rising interest rates over the past several years also likely contributed to the increased rate case activity. Beginning in 2015, the Federal Reserve began to gradually raise the federal funds rate, increasing them several times, up to 2.50% in December 2018. However, with concerns of slowing growth, fears of a global recession and the impact of U.S.-China trade tensions negatively weighing on the U.S. economy, the Fed, after more than a decade without a cut, lowered rates three times in 2019, the last reduction of which brought the federal funds rate to a range of 1.50% to 1.75%. Citing the economic fallout from the coronavirus outbreak, the Fed delivered two emergency rate cuts thus far this year, the first in early March, which cut rates by 50 basis points to 1.00% to 1.25%, and a second in mid-March, which slashed rates another 100 basis points to the current range of 0-0.25%.



While changes in the federal funds rate do not move in lockstep with longer-term treasuries and authorized ROEs do not move in lockstep with interest rates, the expectation is that as interest rates change, authorized ROEs would also change in similar fashion. However, several factors impact the timing and magnitude of such a shift. Normal regulatory lag, i.e., the amount of time it takes for a utility to put together a rate case filing and tender it to the commission and then for the commission to process the case, would without any other influences delay a change in average authorized ROEs relative to interest rates.

It is also worth noting that while both interest rates and authorized ROEs have generally been declining since 1990, the gap between authorized ROEs and interest rates widened somewhat over this period, largely as a result of an often-unstated understanding by regulators that the drop in interest rates caused by Federal Reserve intervention was unusual.

Capital structure trends

To offset the negative cash flow impact of 2017 federal tax reform, many utilities sought higher common equity ratios, and the average authorized equity ratios adopted by utility commissions in 2019 were modestly higher than the levels observed in 2018 and 2017. However, in cases decided during the first half of 2020, the average authorized equity ratio for electric utilities fell to 48.61%. For full years 2019, 2018 and 2017, the average equity ratios authorized in electric utility cases were 49.94%, 49.02% and 48.90%, respectively. The average allowed equity ratio for gas utilities



Major Rate Case Decisions

nationwide in cases decided in the first six months of 2020 was slightly higher than the levels observed in earlier full year periods. For the first six months of 2020, the average was 53.12%, versus 51.75% in 2019, 50.12% in 2018 and 49.88% in 2017.

Taking a longer-term view, equity ratios have generally increased over the last 15 years — the average equity ratio approved in electric rate cases decided during 2004 was 46.96%, while the average for gas utilities was 45.81%. Many commissions began approving more equity-rich capital structures in the wake of the 2008 financial crisis.

A more granular look at ROE trends

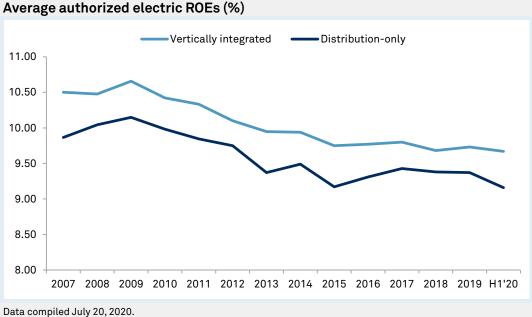
The discussion thus far has looked broadly at trends in authorized ROEs; the sections that follow provide a more granular view based upon the types of proceedings/decisions in which these ROEs were established.

RRA has observed that there can be significant differences between the average ROEs from one subcategory of cases to another.

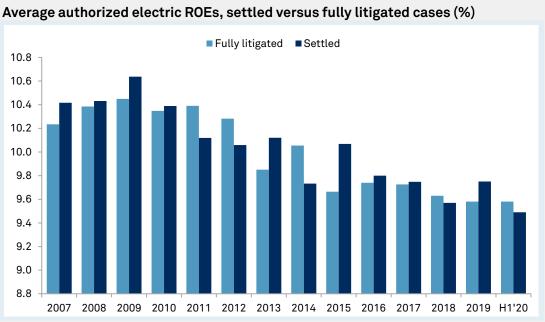
As a result of electric industry restructuring, certain states unbundled electric rates and implemented retail competition for generation. Commissions in those states now have jurisdiction only over the revenue requirement and return parameters for delivery operations.

Comparing electric vertically integrated cases versus delivery-only proceedings over the past several years, RRA finds that the annual average authorized ROEs in vertically integrated cases typically are about 30 to 65 basis points higher than in delivery-only cases, arguably reflecting the increased risk associated with ownership and operation of generation assets.

The industry average ROE for vertically integrated electric utilities was 9.67% in cases decided during the first six months of 2020, just below the 9.73% average level posted in full year 2019. For electric distribution-only utilities, the industry average ROE authorized in the first six months of 2020 was 9.16%, versus 9.37% in full year 2019. Included within the distribution returns for the first half of 2020 is the previously mentioned penalty ordered by the Maine PUC for Central Maine Power. Absent that 100 basis point penalty, a 9.31% average ROE is calculated for distribution only utilities in the first half of 2020.

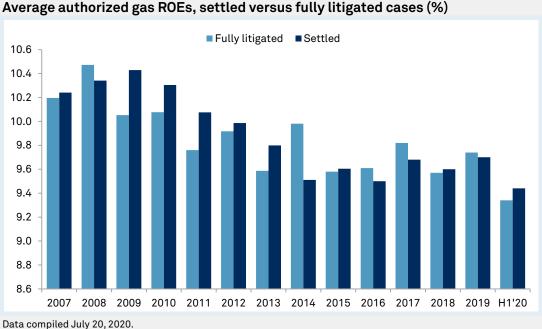


Settlements have frequently been used to resolve rate cases over the last several years, and in many cases, these settlements are "black box" in nature and do not specify the ROE and other typical rate case parameters underlying the stipulated rate change. However, some states preclude this type of treatment, and settlements must specify these values, if not the specific adjustments from which these values were derived.



Data compiled July 20, 2020.

Source: Regulatory Research Associates, a group within S&P Global Market Intelligence



Source: Regulatory Research Associates, a group within S&P Global Market Intelligence

5



Major Rate Case Decisions

For both electric and gas cases, RRA has found no discernible pattern in the average authorized ROEs in cases that were settled versus those that were fully litigated. In some years, the average authorized ROE was higher for fully litigated cases, in others, it was higher for settled cases, and in a handful of years, the authorized ROE was similar for both fully litigated and settled cases.

Over the last several years, the annual average authorized ROEs in electric cases that involve limited-issue riders were typically meaningfully higher than those approved in general rate cases, driven primarily by the ROE premiums authorized in generation-related limited issue rider proceedings in Virginia. Limited-issue rider cases in which a separate ROE is determined have had limited use in the gas industry, as most of the gas riders rely on ROEs approved in a previous base rate case.

The following discussion focuses on the corresponding tables available here.

Table 1 shows the average ROE authorized in major electric and gas rate decisions annually since 1990 and by quarter since 2016, followed by the number of observations in each period. Table 2 indicates the composite electric and gas industry data for all major cases, summarized annually since 2004 and by guarter for the past six guarters.

Tables 3 and 4 provide comparisons since 2007 of average authorized ROEs for settled versus fully litigated cases, general rate cases versus limited-issue rider proceedings and vertically integrated cases versus delivery-only cases for electric and gas utilities, respectively.

The individual electric and gas cases decided in 2020 are listed in Table 5, with the decision date shown first, followed by the company name, the abbreviation for the state issuing the decision, the authorized rate of return, the ROE and the percentage of common equity in the adopted capital structure. Next, RRA indicates the month and year in which the adopted test year ended, whether the commission utilized an average or a year-end rate base and the amount of the permanent rate change authorized. The dollar amounts represent the permanent rate change ordered at the time decisions were rendered. Fuel adjustment clause rate changes are not reflected in this study.

The simple mean is utilized for the return averages. In addition, the average equity returns indicated in this report reflect the ROEs approved in cases that were decided during the specified time periods and are not necessarily representative of either the average currently authorized ROEs for utilities industrywide or the returns actually earned by the utilities.

Please note: In an effort to align data presented in this report with data available in S&P Global Market Intelligence's online database, earlier historical data provided in previous reports may not match historical data in this report due to certain differences in presentation, including the treatment of cases that were withdrawn or dismissed.

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Table 1: ROEs authorized January 1990-June 2020

		I	Electric utilitie	s	Gas utilities		
		Average	Median	Number of	Average	Median	Number of
Year	Period	ROE (%)	ROE (%)	observations	ROE (%)	ROE (%)	observations
1990	Full year	12.70	12.77	38	12.68	12.75	33
1991	Full year	12.54	12.50	42	12.45	12.50	31
1992	Full year	12.09	12.00	45	12.02	12.00	28
1993	Full year	11.46	11.50	28	11.37	11.50	40
1994	Full year	11.21	11.13	28	11.24	11.27	24
1995	Full year	11.58	11.45	28	11.44	11.30	13
1996	Full year	11.40	11.25	18	11.12	11.25	17
1997	Full year	11.33	11.58	10	11.30	11.25	12
1998	Full year	11.77	12.00	10	11.51	11.40	10
1999	Full year	10.72	10.75	6	10.74	10.65	6
2000	Full year	11.58	11.50	9	11.34	11.16	13
2001	Full year	11.07	11.00	15	10.96	11.00	5
2002	Full year	11.21	11.28	14	11.17	11.00	19
2003	Full year	10.96	10.75	20	10.99	11.00	25
2004	Full year	10.81	10.70	21	10.63	10.50	22
2005	Full year	10.51	10.35	24	10.41	10.40	26
2006	Full year	10.32	10.23	26	10.40	10.50	15
2007	Full year	10.30	10.20	38	10.22	10.20	35
2008	Full year	10.41	10.30	37	10.39	10.45	32
2009	Full year	10.52	10.50	40	10.22	10.26	30
2010	Full year	10.37	10.30	61	10.15	10.10	39
2011	Full year	10.29	10.17	42	9.92	10.03	16
2012	Full year	10.17	10.08	58	9.94	10.00	35
2013	Full year	10.03	9.95	49	9.68	9.72	21
2014	Full year	9.91	9.78	38	9.78	9.78	26
2015	Full year	9.85	9.65	30	9.60	9.68	16
	1st quarter	10.29	10.50	9	9.48	9.50	6
	2nd quarter	9.60	9.60	7	9.42	9.52	6
	3rd quarter	9.76	9.80	8	9.47	9.50	4
	4th quarter	9.57	9.58	18	9.68	9.73	10
2016	Full year	9.77	9.75	42	9.54	9.50	26
	1st quarter	9.87	9.60	15	9.60	9.25	3
	2nd quarter	9.63	9.50	14	9.47	9.60	7
	3rd guarter	9.66	9.60	5	10.14	9.90	6
	4th quarter	9.74	9.60	19	9.68	9.55	8
2017	Full year	9.74	9.60	53	9.72	9.60	24
	1st quarter	9.75	9.90	13	9.68	9.80	6
	2nd quarter	9.54	9.50	13	9.43	9.50	7
	3rd quarter	9.67	9.70	13	9.69	9.60	13
	4th quarter	9.42	9.50	11	9.53	9.60	14
018	Full year	9.60	9.58	48	9.59	9.60	40
	1st quarter	9.73	9.30 9.70	46 12	9.55	9.00 9.70	40 4
	2nd quarter	9.58	9.70	12	9.55	9.70	4 3
	3rd quarter	9.55	9.50 9.60	7	9.73	9.73	3
	4th quarter	9.55	9.60 9.68	16	9.80	9.90 9.70	22
019	Full year	9.70 9.65	9.68 9.60	47	9.73 9.71	9.70 9.70	32
	1st quarter	9.58	9.50	19	9.35	9.40	32 9
	2nd quarter	9.58 9.47	9.30 9.44	8	9.55 9.55	9.40 9.65	3
	Znu quanter	9.47 9.55	9.44 9.45	° 27	9.55 9.40	9.83 9.42	3 12

Data compiled July 20, 2020

Table 2: Electric and gas utilities summary

Electric utilities

			Number of		Number of	Common equity to total	Number of	Rate change	Number of
Year	Period	ROR (%)	observations	ROE (%)	observations	capital (%)	observations	amount (\$M)	observations
2004	Full year	8.71	20	10.81	21	46.96	19	1,806.3	29
2005	Full year	8.44	23	10.51	24	47.34	23	936.1	31
2006	Full year	8.32	26	10.32	26	48.54	25	1,318.1	39
2007	Full year	8.18	37	10.30	38	47.88	36	1,405.7	43
2008	Full year	8.21	39	10.41	37	47.94	36	2,823.2	44
2009	Full year	8.24	40	10.52	40	48.57	39	4,191.7	58
2010	Full year	8.01	62	10.37	61	48.63	57	4,921.9	78
2011	Full year	8.00	43	10.29	42	48.26	42	2,595.1	56
2012	Full year	7.95	51	10.17	58	50.69	52	3,080.7	69
2013	Full year	7.66	45	10.03	49	49.25	43	3,328.6	61
2014	Full year	7.60	32	9.91	38	50.28	35	2,053.7	51
2015	Full year	7.38	35	9.85	30	49.54	30	1,891.5	52
2016	Full year	7.28	41	9.77	42	48.91	41	2,332.1	57
2017	Full year	7.18	48	9.74	53	48.90	48	2,695.6	77
2018	Full year	6.90	49	9.60	48	49.02	49	1,880.4	67
	1st quarter	7.03	12	9.73	12	49.51	10	83.5	15
	2nd guarter	6.91	9	9.58	12	50.95	7	62.9	16
	3rd quarter	7.24	7	9.55	7	51.41	7	262.7	10
	4th quarter	6.85	16	9.70	16	49.12	16	1,268.1	20
2019	Full year	6.97	44	9.65	47	49.94	40	1,677.2	61
2010	1st quarter	6.82	20	9.58	19	48.72	21	683.8	21
	2nd quarter	6.74	7	9.47	8	48.27	7	422.3	10
2020	1st half	6.80	27	9.55	27	48.61	28	1,156.1	32
Gas u	tilities								
2004	Full year	8.51	23	10.63	22	45.81	22	306.0	33
2005	Full year	8.24	29	10.41	26	48.40	24	465.4	35
2006	Full year	8.44	17	10.40	15	47.24	16	392.5	23
2007	Full year	8.11	31	10.22	35	48.47	28	645.3	43
2008	Full year	8.49	33	10.39	32	50.35	32	700.0	40
2009	Full year	8.15	29	10.22	30	48.49	29	438.6	36
2010	Full year	7.99	40	10.15	39	48.70	40	776.5	50
2011	Full year	8.09	18	9.92	16	52.49	14	367.0	31
2012	Full year	7.98	30	9.94	35	51.13	32	264.0	41
2013	Full year	7.43	21	9.68	21	50.60	20	498.7	40
2014	Full year	7.65	27	9.78	26	51.11	28	544.2	48
2015	Full year	7.34	16	9.60	16	49.93	16	494.1	40
2016	Full year	7.08	28	9.54	26	50.06	26	1,263.8	59
2017	Full year	7.26	24	9.72	24	49.88	24	410.7	54
2018	Full year	7.00	45	9.59	40	50.12	44	939.1	66
	1st quarter	7.37	4	9.55	4	51.40	4	90.4	9
	2nd guarter	7.75	3	9.73	3	58.87	3	48.3	10
	3rd quarter	6.52	5	9.80	3	43.86	4	619.5	16
	4th quarter	7.20	21	9.73	22	52.33	20	697.2	28
	Full year	7.17	33	9.71	32	51.75	31	1,455.3	63
2019			00	01					
2019	•	7 22	Q	9.35	q	52 25	q	124 4	11
2019	1st quarter 2nd quarter	7.22 7.28	9 3	9.35 9.55	9 3	52.25 55.74	9 3	124.4 21.0	11 8

Data compiled July 20, 2020

Table 3: Electric authorized ROEs: 2007-2020 Q2

Settled versu	s fully litigated	cases								
		All cases		Settled cases			Fully litigated cases			
Year	Average ROE (%)	Median ROE (%)	Number of observations	Average ROE (%)	Median ROE (%)	Number of observations	Average ROE (%)	Median ROE (%)	Number of observations	
2007	10.30	10.20	38	10.42	10.33	14	10.23	10.15	24	
2008	10.41	10.30	37	10.43	10.25	17	10.39	10.54	20	
2009	10.52	10.50	40	10.64	10.62	16	10.45	10.50	24	
2010	10.37	10.30	61	10.39	10.30	34	10.35	10.10	27	
2011	10.29	10.17	42	10.12	10.07	16	10.39	10.25	26	
2012	10.17	10.08	58	10.06	10.00	29	10.28	10.25	29	
2013	10.03	9.95	49	10.12	9.98	32	9.85	9.75	17	
2014	9.91	9.78	38	9.73	9.75	17	10.05	9.83	21	
2015	9.85	9.65	30	10.07	9.72	14	9.66	9.62	16	
2016	9.77	9.75	42	9.80	9.85	17	9.74	9.60	25	
2017	9.74	9.60	53	9.75	9.60	29	9.73	9.56	24	
2018	9.60	9.58	48	9.57	9.63	26	9.63	9.53	22	
2019	9.65	9.60	47	9.75	9.73	20	9.58	9.50	27	
H1'2020	9.55	9.45	27	9.49	9.45	11	9.58	9.56	16	

General rate cases versus limited-issue riders

	All cases			G	General rate cases			Limited-issue riders		
Year	Average ROE (%)	Median ROE (%)	Number of observations	Average ROE (%)	Median ROE (%)	Number of observations	Average ROE (%)	Median ROE (%)	Number of observations	
2007	10.30	10.20	38	10.32	10.23	36	9.90	9.90	1	
2008	10.41	10.30	37	10.37	10.30	35	11.11	11.11	2	
2009	10.52	10.50	40	10.52	10.50	38	10.55	10.55	2	
2010	10.37	10.30	61	10.29	10.26	58	11.87	12.30	3	
2011	10.29	10.17	42	10.19	10.14	40	12.30	12.30	2	
2012	10.17	10.08	58	10.02	10.00	51	11.57	11.40	6	
2013	10.03	9.95	49	9.82	9.82	40	11.34	11.40	7	
2014	9.91	9.78	38	9.76	9.75	32	10.96	11.00	5	
2015	9.85	9.65	30	9.60	9.53	23	10.87	11.00	6	
2016	9.77	9.75	42	9.60	9.60	32	10.31	10.55	10	
2017	9.74	9.60	53	9.68	9.60	42	10.01	9.95	10	
2018	9.60	9.58	48	9.56	9.58	38	9.74	9.70	10	
2019	9.65	9.60	47	9.64	9.65	33	9.68	9.31	14	
H1'2020	9.55	9.45	27	9.47	9.48	18	9.69	9.42	9	

Vertically integrated cases versus delivery-only cases

		All cases		Vertic	ally integrated	cases	De	livery-only ca	ses
Year	Average ROE (%)	Median ROE (%)	Number of observations	Average ROE (%)	Median ROE (%)	Number of observations	Average ROE (%)	Median ROE (%)	Number of observations
2007	10.30	10.20	38	10.50	10.45	26	9.86	9.98	10
2008	10.41	10.30	37	10.48	10.47	26	10.04	10.25	9
2009	10.52	10.50	40	10.66	10.66	28	10.15	10.30	10
2010	10.37	10.30	61	10.42	10.40	41	9.98	10.00	17
2011	10.29	10.17	42	10.33	10.20	28	9.85	10.00	12
2012	10.17	10.08	58	10.10	10.20	39	9.75	9.73	12
2013	10.03	9.95	49	9.95	10.00	31	9.37	9.36	9
2014	9.91	9.78	38	9.94	9.90	19	9.49	9.55	13
2015	9.85	9.65	30	9.75	9.70	17	9.17	9.07	6
2016	9.77	9.75	42	9.77	9.78	20	9.31	9.33	12
2017	9.74	9.60	53	9.80	9.65	28	9.43	9.55	14
2018	9.60	9.58	48	9.68	9.73	23	9.38	9.50	15
2019	9.65	9.60	47	9.73	9.73	25	9.37	9.60	8
H1'2020	9.55	9.45	27	9.67	9.70	11	9.16	9.40	7

Data compiled July 20, 2020

Table 4: Gas authorized ROEs: 2007-2020 Q2

Settled versus fully litigated cases

	All cases				Settled cases			Fully litigated cases			
Year	Average ROE (%)	Median ROE (%)	Number of observations	Average ROE (%)	Median ROE (%)	Number of observations	Average ROE (%)	Median ROE (%)	Number of observations		
2007	10.22	10.20	35	10.24	10.18	22	10.20	10.40	13		
2008	10.39	10.45	32	10.34	10.28	20	10.47	10.68	12		
2009	10.22	10.26	30	10.43	10.40	13	10.05	10.15	17		
2010	10.15	10.10	39	10.30	10.15	12	10.08	10.10	27		
2011	9.92	10.03	16	10.08	10.08	8	9.76	9.80	8		
2012	9.94	10.00	35	9.99	10.00	14	9.92	9.90	21		
2013	9.68	9.72	21	9.80	9.80	9	9.59	9.60	12		
2014	9.78	9.78	26	9.51	9.50	11	9.98	10.10	15		
2015	9.60	9.68	16	9.60	9.60	11	9.58	9.80	5		
2016	9.54	9.50	26	9.50	9.50	16	9.61	9.58	10		
2017	9.72	9.60	24	9.68	9.60	17	9.82	9.50	7		
2018	9.59	9.60	40	9.60	9.60	24	9.57	9.50	16		
2019	9.71	9.70	32	9.70	9.70	20	9.74	9.72	12		
H1'2020	9.40	9.42	12	9.44	9.40	7	9.34	9.44	5		

General rate cases versus limited-issue riders	
All 2222	

All cases			General rate cases			Limited-issue riders			
Average ROE (%)	Median ROE (%)	Number of observations	Average ROE (%)	Median ROE (%)	Number of observations	Average ROE (%)	Median ROE (%)	Number of observations	
10.22	10.20	35	10.22	10.20	35	_	_	0	
10.39	10.45	32	10.39	10.45	32	—	—	0	
10.22	10.26	30	10.22	10.26	30	—	—	0	
10.15	10.10	39	10.15	10.10	39	—	—	0	
9.92	10.03	16	9.91	10.05	15	10.00	10.00	1	
9.94	10.00	35	9.93	10.00	34	10.40	10.40	1	
9.68	9.72	21	9.68	9.72	21	—	—	0	
9.78	9.78	26	9.78	9.78	26	—	—	0	
9.60	9.68	16	9.60	9.68	16	—	—	0	
9.54	9.50	26	9.53	9.50	25	9.70	9.70	1	
9.72	9.60	24	9.73	9.60	23	9.50	9.50	1	
9.59	9.60	40	9.59	9.60	39	9.50	9.50	1	
9.71	9.70	32	9.72	9.72	30	9.60	9.60	2	
9.40	9.42	12	9.40	9.42	12	—	—	0	
	ROE (%) 10.22 10.39 10.22 10.15 9.92 9.94 9.68 9.78 9.60 9.54 9.72 9.59 9.71	ROE (%) ROE (%) 10.22 10.20 10.39 10.45 10.22 10.26 10.15 10.10 9.92 10.03 9.94 10.00 9.68 9.72 9.78 9.78 9.60 9.68 9.54 9.50 9.72 9.60 9.59 9.60 9.59 9.60 9.71 9.70	Average ROE (%)Median ROE (%)Number of observations10.2210.203510.3910.453210.2210.263010.1510.10399.9210.03169.9410.00359.689.72219.789.78269.609.68169.549.50269.729.60249.599.60409.719.7032	Average ROE (%)Median ROE (%)Number of observationsAverage ROE (%)10.2210.203510.2210.3910.453210.3910.2210.263010.2210.1510.103910.159.9210.00359.939.689.72219.689.789.78269.789.609.68169.609.549.50269.539.729.60249.739.599.60409.599.719.70329.72	Average ROE (%) Median ROE (%) Number of observations Average ROE (%) Median ROE (%) 10.22 10.20 35 10.22 10.20 10.39 10.45 32 10.39 10.45 10.22 10.26 30 10.22 10.26 10.15 10.10 39 10.15 10.10 9.92 10.03 16 9.91 10.05 9.94 10.00 35 9.93 10.00 9.68 9.72 21 9.68 9.72 9.78 9.78 26 9.78 9.78 9.60 9.68 16 9.60 9.68 9.54 9.50 26 9.53 9.50 9.72 9.60 24 9.73 9.60 9.71 9.70 32 9.72 9.72	Average ROE (%)Median observationsNumber of observationsAverage ROE (%)Median observations10.2210.203510.2210.203510.3910.453210.3910.453210.2210.263010.2210.263010.1510.103910.1510.10399.9210.03169.9110.05159.9410.00359.9310.00349.689.72219.689.72219.789.78269.789.78269.609.68169.609.68169.549.50269.539.50259.729.60249.739.60399.719.70329.729.7230	Average ROE (%) Median ROE (%) Number of observations Average ROE (%) Median ROE (%) Number of observations Average ROE (%) 10.22 10.20 35 10.22 10.20 35 - 10.39 10.45 32 10.39 10.45 32 - 10.22 10.26 30 10.22 10.26 30 - 10.12 10.26 30 10.22 10.26 30 - 9.92 10.03 16 9.91 10.05 15 10.00 9.94 10.00 35 9.93 10.00 34 10.40 9.68 9.72 21 9.68 9.72 21 - 9.78 9.78 26 9.78 26 - 9.60 9.68 16 9.60 9.68 16 - 9.54 9.50 26 9.53 9.50 25 9.70 9.72 9.60 24 9.73 9.60 </td <td>Average ROE (%) Median ROE (%) Number of observations Average ROE (%) Median ROE (%) Number of observations Average ROE (%) Median ROE (%) 10.22 10.20 35 10.22 10.20 35 — — — 10.39 10.45 32 10.39 10.45 32 — — — 10.22 10.26 30 10.22 10.26 30 — — — 10.15 10.10 39 10.15 10.10 39 — — — 9.92 10.03 16 9.91 10.05 15 10.00 10.00 9.94 10.00 35 9.93 10.00 34 10.40 10.40 9.68 9.72 21 — — — — — 9.78 9.78 26 9.78 9.78 26 — — 9.60 9.68 16 9.60 9.60 23 9.50</td> <td>Average ROE (%) Median ROE (%) Number of observations Average ROE (%) Median ROE (%) Number of observations Average ROE (%) Median ROE (%) Number of observations 10.22 10.20 35 10.22 10.20 35 — — 0 10.39 10.45 32 10.39 10.45 32 — — 0 10.22 10.26 30 10.22 10.26 30 — — 0 10.15 10.10 39 10.15 10.10 39 — — 0 9.92 10.03 16 9.91 10.05 15 10.00 10.40 1 9.94 10.00 35 9.93 10.00 34 10.40 14 9.68 9.72 21 — — 0 0 9.78 9.78 26 9.78 9.76 26 — — 0 9.60 9.60 24 9.73 9.</td>	Average ROE (%) Median ROE (%) Number of observations Average ROE (%) Median ROE (%) Number of observations Average ROE (%) Median ROE (%) 10.22 10.20 35 10.22 10.20 35 — — — 10.39 10.45 32 10.39 10.45 32 — — — 10.22 10.26 30 10.22 10.26 30 — — — 10.15 10.10 39 10.15 10.10 39 — — — 9.92 10.03 16 9.91 10.05 15 10.00 10.00 9.94 10.00 35 9.93 10.00 34 10.40 10.40 9.68 9.72 21 — — — — — 9.78 9.78 26 9.78 9.78 26 — — 9.60 9.68 16 9.60 9.60 23 9.50	Average ROE (%) Median ROE (%) Number of observations Average ROE (%) Median ROE (%) Number of observations Average ROE (%) Median ROE (%) Number of observations 10.22 10.20 35 10.22 10.20 35 — — 0 10.39 10.45 32 10.39 10.45 32 — — 0 10.22 10.26 30 10.22 10.26 30 — — 0 10.15 10.10 39 10.15 10.10 39 — — 0 9.92 10.03 16 9.91 10.05 15 10.00 10.40 1 9.94 10.00 35 9.93 10.00 34 10.40 14 9.68 9.72 21 — — 0 0 9.78 9.78 26 9.78 9.76 26 — — 0 9.60 9.60 24 9.73 9.

Data compiled July 20, 2020

Table 5: Electric and gas utility decisions

Electric utility decisions

					Common		
					equity as % of		Rate change
Date 01/08/20	Company Interstate Power and Light Co.	State	ROR (%) 7.23	ROE (%) 10.02	capital 51.00	Test year Rate base 12/20 Average	amount (\$) Footnotes 127.0 B. I
01/16/20	Consolidated Edison Co. of New York. Inc.	NY	6.61	8.80	48.00	12/20 Average	113.3 B. D. Z
01/22/20	Rockland Electric Co.	NJ	7.11	9.50	48.32	9/19 Year-end	12.0 B. D
01/23/20	Indiana Michigan Power Co.	MI	6.08	9.86	46.56	12/20 Average	36.4 B.*
02/03/20	Virginia Electric and Power Co.	VA	6.84	9.20	51.17	3/21 Average	-6.3 LIR,1
02/03/20	Virginia Electric and Power Co.	VA	6.84	9.20	51.17	3/21 Average	11.4 LIR,2
02/03/20	Virginia Electric and Power Co.	VA	7.35	10.20	51.17	3/21 Average	-20.3 LIR,3
02/03/20	Virginia Electric and Power Co.	VA	7.35	10.20	51.17	3/21 Average	0.7 LIR,4
02/06/20	PacifiCorp	CA	_	10.00	51.96	12/19 Average	-5.8
02/11/20	Public Service Co. of Colorado	CO	6.97	9.30	55.61	8/19 Average	280.5 5,6
02/14/20	CenterPoint Energy Houston Electric, LLC	тх	6.51	9.40	42.50	12/18 Year-end	55.9 B, D,Hy
02/18/20	Virginia Electric and Power Co.	VA	7.35	10.20 8.25	51.17 50.00	3/21 Average	-13.0 LIR,7
02/19/20	Central Maine Power Co.	NC	0.00	8.25 9.75	00.00	6/18 Average	17.4 D,Hy,8
02/24/20 02/25/20	Virginia Electric and Power Co. Appalachian Power Co.	VA	7.20 7.74	9.75 10.42	52.00 50.78	12/18 Year-end 4/21 Average	NA B, I,Hy,9 -6.3 LIR,10
02/25/20	Appalachian Power Co. AEP Texas Inc.	TX	6.45	9.40	42.50	4/21 Average 12/18 Year-end	-6.3 LIR,10 0.7 B, D,Hy
02/28/20	Oklahoma Gas and Electric Co.	AR	5.33	9.40	42.50	3/20 Year-end	5.2 B,11,*
03/11/20	Indiana Michigan Power Co.	IN	5.61	9.70	37.55	12/20 Year-end	77.1 7.*
03/17/20	Mississippi Power Co.	MS	7.57	3.70	53.00	12/20 Year-end	-16.7 B
03/18/20	Union Electric Co.	MO		_		12/18 -	-32.0 B,12
03/20/20	Virginia Electric and Power Co.	VA	6.84	9.20	51.17	5/21 Average	18.0 LIR,13
03/25/20	Avista Corp.	WA	7.21	9.40	48.50	12/18 —	28.5 B
2020	1st quarter: averages/total		6.82	9.58	48.72		683.8
	Observations		20	19	21		21
04/06/20	Kentucky Utilities Co.	VA	-	_	-	12/18 —	9.0 B
04/07/20	Northern States Power Co MN	MN	_	_			— 14
04/13/20	Virginia Electric and Power Co.	VA	6.84	9.20	51.17	5/20 Average	7.4 LIR,15
04/17/20	Fitchburg Gas and Electric Light Co.	MA	7.99	9.70	52.45	12/18 Year-end	1.1 B, D
04/27/20	Duke Energy Kentucky, Inc.	KY	6.41	9.25	48.23	3/21 Average	24.1
05/08/20	DTE Electric Co.	MI	5.46	9.90	38.32	4/21 Average	188.3 *
05/20/20	Southern Indiana Gas and Electric Co.	IN				10/19 Year-end	7.4 LIR,16
05/20/20	Southwestern Public Service Co.	NM	7.19	9.45	54.77	3/19 Year-end	31.0 B
05/21/20 06/26/20	Appalachian Power Co. Appalachian Power Company	VA	_	9.42	-	6/21 Year-end	4.0 LIR,17 50.1 B. LIR
06/26/20	Appalachian Power Company Duke Energy Indiana, LLC	IN N	5.71	9.70	40.98	12/19 — 12/20 Year-end	50.1 B, LIR 145.9 Z.*
06/30/20	Liberty Utilities (Granite State Electric) Corp.	NH	7.60	9.70	40.98	12/18 Year-end	4.2 B, D, Z, I
06/30/20	2nd quarter: averages/total	INFI	6.74	9.10	48.27	12/10 fedi-enu	4.2 8, 0, 2, 1
	Observations		7	8			11
2020	1st half: averages/total		6.80	9.55	48.61		1,156.1
	Observations		27	27	28		32
Gas utility de	cisions						
01/15/20	MDU Resources Group Inc.	WY	7.08	9.35	51.25	12/18 Year-end	0.8 B
01/16/20	Consolidated Edison Co. of New York. Inc.	NY	6.61	9.35	48.00	12/20 Average	83.9 B.7
01/24/20	Roanoke Gas Co.	VA	7.28	9.44	59.64	12/17 Average	7.3
01/29/20	Indiana Gas Co., Inc.	IN	7.20	3.44	55.04	6/19 Year-end	1.8 LIR,16
01/29/20	Southern Indiana Gas and Electric Co.	IN	_	_	_	6/19 Year-end	2.2 LIR,16
02/03/20	Cascade Natural Gas Corp.	WA	7.24	9.40	49.10	12/18 —	6.5 B
02/24/20	Atmos Energy Corp.	KS	7.03	9.10	56.32	3/19 Year-end	3.1
02/25/20	Questar Gas Co.	UT	7.18	9.50	55.00	12/20 Average	2.7 Z
02/28/20	Fitchburg Gas and Electric Light Co.	MA	7.99	9.70	52.45	12/18 Year-end	4.6 B,Z
02/28/20	Liberty Utilities (EnergyNorth Natural Gas) Corp.	NH	_	_	_		— 14
03/25/20	Avista Corp.	WA	7.21	9.40	48.50	12/18 —	8.0 B
03/26/20	Northern Utilities, Inc.	ME	7.34	9.48	50.00	12/18 Year-end	3.6 Hy
2020	1st quarter: averages/total		7.22	9.35	52.25		124.4
	Observations		9	9	9		11
04/21/20	Atmos Energy Corporation	ТХ	7.71	9.80	60.12		-0.3 B
04/28/20	Delta Natural Gas Co., Inc.	KY	-	-	-	12/19 Year-end	3.4 LIR,18
05/13/20	Missouri Gas Energy	MO	_	_	-	2/20 —	5.6 B, LIR, 19
05/13/20	Spire Missouri Inc.	MO	_	_		2/20 —	5.5 B, LIR, 19
05/19/20	Black Hills Colorado Gas, Inc.	CO	6.76	9.20	50.15	6/18 Average	-2.3
06/16/20	CenterPoint Energy Resources Corp.	TX	7.38	9.65	56.95	6/19 Year-end	4.0 B
06/23/20 06/24/20	Black Hills Kansas Gas Utility Co., LLC Northern Indiana Public Service Co.	KS IN	-	_	_	1/20 Year-end 12/19 Year-end	1.6 LIR,20 4.5 LIR,16
00/24/20	2nd quarter: averages/total	IIN	7.28	9.55	55.74	12/19 Tear-end	4.5 LIR,16 22.0
	Observations		7.28	9.55	30.74		22.0
2020	1st half: averages/total		7.23	9.40	53.12		a 146.4
2020	Observations		12	9.40	53.12		146.4
	0.001 1 41010		12	12	12		13

Data compiled July 20, 2020 Source: Regulatory Research Associates, a group within S&P Global Market Intelligence

Footnotes

Average Order followed stipulation or settlement by the parties. Decision particulars not necessarily precedent-setting or specifically adopted by the regulatory body

B-D-Hy I-

Order industries standalow or statumenten up ne parasas, pessasi parasami a non necessari procedent ser Applies to identification del service adopted. Interim rates implemented prior to the issuance of final order, normally under bond and subject to refund.

- I-LIR NA Z
 - - ation facility
- PryDianeLa 4-quala solution acoustic.
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 - by the company, as well as other intervenors in the proceeding. The order directs the company to submit compliance tartifs reflecting the decision within 30 days.
 7 Rate change was approved under Rider R, which is the mechanism through which the company recovers its investment in the Bear Garden power plant.
 8 Decision reflects date of written order issued on Feb. 19, 2020. The ROE authorized reflects a 100 basis point downward adjustment for poor service.
 The PUC ordered that this ROE disalwance be lifted when the utility meets all performance benchmarks for all service equality metrics for at least 18 consecutive months beginning March 1, 2020, and formally domorstrates to the commission that paroblems have been solved.
 9 Company, seeks reconsideration regarding coal ash cost recovery.
 11 Rate change pursuant to company's investment in the Dresden Generating Plant.
 11 Rate change pursuant to company's formula rate plan.
 12 The approved partial stetlements were largely silent regarding traditional rate case parameters, including capital structure and rate base, but notes that the stipulated return or equity is in a range of 9.4% to 9.4%.
 13 Reflects recovery of two utility-scale solar generation facilities, the 142-MW Cobinal Trail West Solar Facility and the 98-MW AC Spring Grove 1 Solar Facility.

 - 14 Case withdrawn. 15 Rate change approved under US-4, which is the mechanism through which the company will recover its investment in the roughly 100 megawatt utility-scale solar generation facility, Sadler Solar Facility, located in Greensville County, VA.

 - General Spinktain Today (source) and the spinktain source of the spinktain
 - 17 Rate change authorized authorized under company's energy efficiency rider. 18 Rate change authorized under the company's hipe replacement program rider. 19 Rate change authorized under the company's intrastructure system replacement surcharge rider. 20 Case involves company's gas system reliability surcharge.

April 11, 2019 spglobal.com/marketintelligence

RRA Regulatory Focus Major Rate Case Decisions — January - March 2019

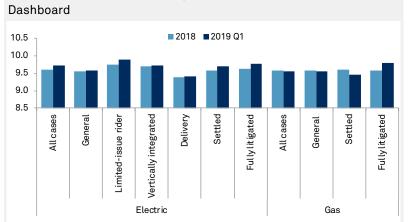
The average ROE authorized electric utilities was 9.73% in rate cases decided during the first quarter of 2019, somewhat above the 9.60% average for cases decided in calendar-2018. There were 12 electric ROE determinations in the first three months of 2019 versus 48 in the full year 2018. This data includes several limited-issue rider cases. Excluding these cases, the average authorized ROE was 9.57% in rate cases decided in the first quarter of 2019, largely in line with the 9.56% in full year 2018. The difference between the ROE averages including rider cases and those excluding the rider cases is largely driven by ROE premiums of up to 200 basis points approved by the Virginia State Corporation Commission in riders related to certain generation projects (see the Virginia Commission Profile).

The average ROE authorized gas utilities was 9.55% in the first quarter of 2019 versus 9.59% in full year 2018. There were only four gas cases that included an ROE determination in the first three months of 2019, versus 40 in 2018.

In the first three months of 2019, the median authorized ROE for all electric utilities was 9.7% versus 9.58% in full year 2018. For gas utilities, the median authorized ROE in the first three months of 2019 was 9.7% versus 9.6% in 2018.

From a longer-term perspective, interest rates, as measured by the 30-year U.S.

Treasury bond yield, fell almost steadily from the early 1980s until 2015 or so, placing downward pressure on authorized ROEs. Even though the decline has been less dramatic in the period since 1990, average authorized ROEs fell below 10% for gas utilities in 2011 and for electric utilities in 2014.



Authorized return on equity (%)

Electric	2018	Q1'19	
All cases	9.60	9.73	
General rate cases	9.56	9.57	
Limited-issue rider cases	9.74	9.90	
Vertically integrated cases	9.70	9.72	
Delivery cases	9.38	9.42	▲
Settled cases	9.57	9.69	
Fully litigated cases	9.63	9.78	
Gas			
All cases	9.59	9.55	•
General rate cases	9.59	9.55	•
Settled cases	9.60	9.47	•
Fully litigated cases	9.57	9.80	
U.S. Treasury			
30-year bond yield	3.11	3.03	
Data compiled April 9, 2019.			

Source: Regulatory Research Associates, a group within S&P Global Market Intelligence

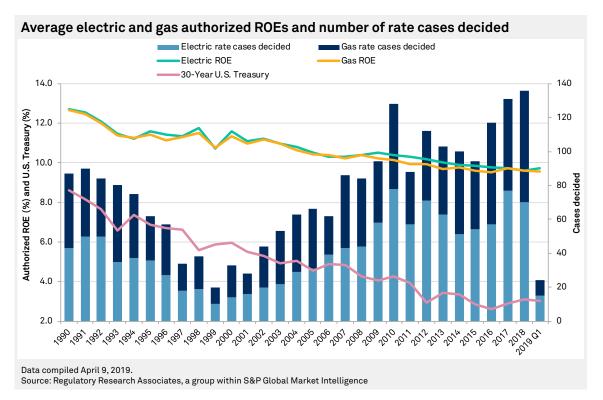
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RRA Regulatory Focus: Major Rate Case Decisions



After brisk rate case activity in 2018, where almost 140 cases were decided, there were 24 electric and gas cases resolved in the first quarter of 2019. In fact, since 2010 rate case activity has been robust, with 100 or more cases adjudicated in seven of the last nine calendar years. This count includes electric and gas cases where no ROEs have been specified; however, withdrawn cases are not included.

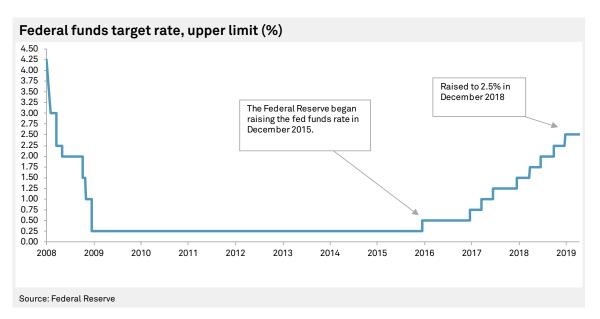
Increased costs associated with environmental compliance, generation and delivery infrastructure upgrades and expansion, renewable generation mandates, storm and disaster recovery, cybersecurity and employee benefits argue for the continuation of an active rate case agenda over the next few years. In addition, the need to address the impacts of the 2017 federal tax reform has caused rate case agendas to be more active than previously expected.

In addition, rising interest rates could also contribute to increased rate case activity. In 2015, the Federal Reserve began to gradually raise the federal funds rate. Subsequent to that hike, the Federal Reserve has increased rates by 25 basis points eight times, with the most recent hike occurring in December 2018, bringing the federal funds rate to the range of 2.25% to 2.5%. Although additional increases were anticipated in 2019, recent commentary from the Federal Reserve indicates a willingness to remain "patient" about hikes in 2019 due to a slowdown in the global economy and low inflationary pressures.

While increases in the federal funds rate do not move in lockstep with longer-term treasuries and authorized ROEs do not move in lockstep with interest rates, the expectation is that as interest rates rise, authorized ROEs would also begin to rise. However, several factors impact the timing and magnitude of this anticipated shift. Normal regulatory lag, i.e., the amount of time it takes for a utility to put together a rate case filing and tender it to the commission and then for the commission to process the case, would without any other influences delay a rise in average authorized ROEs relative to interest rates.

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RRA Regulatory Focus: Major Rate Case Decisions



Another consideration is that while authorized ROEs have fallen over time, the gap between authorized ROEs and interest rates has widened somewhat, largely as a result of an often-unstated understanding by regulators that the drop in interest rates caused by Federal Reserve intervention was unusual. Therefore, as interest rates rise, regulators may be content to allow the gap between interest rates and authorized ROEs to narrow to more "normal" ranges.

Capital structure trends

To offset the negative cash flow impact of federal tax reform, many utilities sought higher common equity ratios, and the average authorized equity ratios adopted by utility commissions in the first three months of 2019 were modestly higher than the levels observed in 2018 and 2017. The average authorized equity ratio for electric utility cases nationwide was 49.51% in the first three months of 2019, 49.02% in full year 2018 and 48.90% in 2017. The average allowed equity ratio for gas utilities nationwide was 51.40% in the first three months of 2019, 50.09% in 2018 and 49.88% in 2017.

The aforementioned averages include allowed equity ratios adopted by utility commissions in Arkansas, Florida, Indiana and Michigan — jurisdictions that authorize capital structures that include cost-free items or tax credit balances. Excluding these jurisdictions, the average authorized equity ratio for electric utilities nationwide was 50.86% for the first three months of 2019, 50.60% in cases decided during 2018 and 50.02% in 2017. For gas utilities, there were no determinations from the aforementioned states thus far in 2019, however, excluding these jurisictions from prior years, the average allowed equity ratio was 51.47% in 2018 versus 51.13% in 2017.

Taking a longer-term view, equity ratios have generally increased over the last 15 years — the average equity ratio approved in electric rate cases decided during 2004 was 46.96%, while the average for gas utilities was 45.81%. Many commissions began approving more equity-rich capital structures in the wake of the 2008 financial crisis.



RRA Regulatory Focus: Major Rate Case Decisions

A more granular look at ROE trends

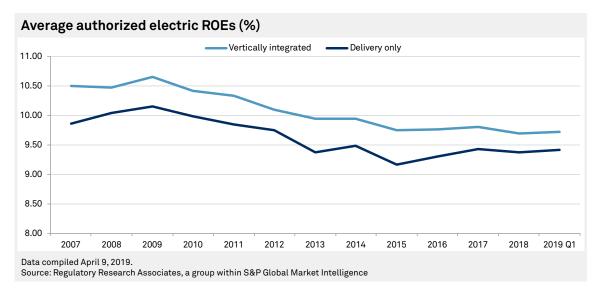
The discussion thus far has looked broadly at trends in authorized ROEs; the sections that follow provide a more granular view based upon the types of proceedings/decisions in which these ROEs were established.

Regulatory Research Associates, a group within S&P Global Market Intelligence, has observed that there can be significant differences between the ROE averages from one subcategory of cases to another.

As a result of electric industry restructuring, certain states unbundled electric rates and implemented retail competition for generation. Commissions in those states now have jurisdiction only over the revenue requirement and return parameters for delivery operations.

Comparing electric vertically integrated cases versus delivery-only proceedings over the past 12 years, RRA finds that the annual average authorized ROEs in vertically integrated cases typically are about 30 to 65 basis points higher than in delivery-only cases, arguably reflecting the increased risk associated with ownership and operation of generation assets.

The industry average ROE for vertically integrated electric utilities was 9.72%, based on rate cases concluded for the first quarter of 2019, versus 9.70% in full year 2018. For electric distribution-only utilities, the industry average ROE authorized in the first quarter of 2019 was 9.42% versus 9.38% in full year 2018.

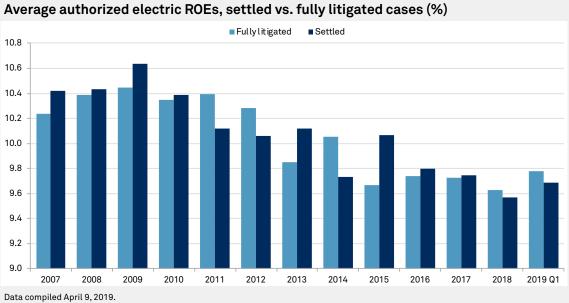


Settlements have frequently been used to resolve rate cases over the last several years, and in many cases, these settlements are "black box" in nature and do not specify the ROE and other typical rate case parameters underlying the stipulated rate change. However, some states preclude this type of treatment, and so, settlements must specify these values if not the specific adjustments from which these values were derived.

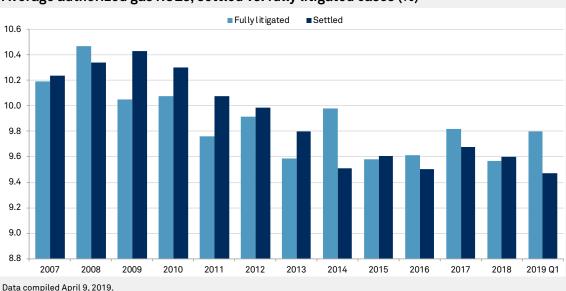
For both electric and gas cases, RRA has found no discernible pattern in the average authorized ROEs in cases that were settled versus those that were fully litigated. In some years, the average authorized ROE was higher for fully litigated cases, in others, it was higher for settled cases, and in a handful of years, the authorized ROE was similar for both fully litigated and settled cases.



RRA Regulatory Focus: Major Rate Case Decisions



Source: Regulatory Research Associates, a group within S&P Global Market Intelligence



Average authorized gas ROEs, settled vs. fully litigated cases (%)

Data compiled April 9, 2019. Source: Regulatory Research Associates, a group within S&P Global Market Intelligence

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RRA Regulatory Focus: Major Rate Case Decisions

Over the last several years, the annual average authorized ROEs in electric cases that involve limited-issue riders were typically meaningfully higher than those approved in general rate cases, driven by the ROE premiums authorized in Virginia. Limited-issue rider cases in which a separate ROE is determined have had limited use in the gas industry, as most of the gas riders rely on ROEs approved in a previous base rate case.

The following discussion focuses on the corresponding tables available here.

Table 1 shows the average ROE authorized in major electric and gas rate decisions annually since 1990 and by quarter since 2015, followed by the number of observations in each period. Table 2 indicates the composite electric and gas industry data for all major cases, summarized annually since 2004 and by quarter for the past five quarters.

Included in Tables 3 and 4 of the spreadsheet are comparisons since 2007 of average authorized ROEs for settled versus fully litigated cases, general rate cases versus limited issue rider proceedings and vertically integrated cases versus delivery-only cases for electric and gas utilities, respectively.

The individual electric and gas cases decided in 2019 are listed in Table 5 of the spreadsheet, with the decision date shown first, followed by the company name, the abbreviation for the state issuing the decision, the authorized rate of return, the ROE and the percentage of common equity in the adopted capital structure. Next, RRA indicates the month and year in which the adopted test year ended, whether the commission utilized an average or a year-end rate base and the amount of the permanent rate change authorized. The dollar amounts represent the permanent rate change ordered at the time decisions were rendered. Fuel adjustment clause rate changes are not reflected in this study.

The simple mean is utilized for the return averages. In addition, the average equity returns indicated in this report reflect the ROEs approved in cases that were decided during the specified time periods and are not necessarily representative of either the average currently authorized ROEs for utilities industrywide or the returns actually earned by the utilities.

Please note: In an effort to align data presented in this report with data available in S&P Global Market Intelligence's online database, earlier historical data provided in previous reports may not match historical data in this report due to certain differences in presentation, including the treatment of cases that were withdrawn or dismissed.

Subsequent to our publication of our year-end 2018 report, the New Mexico Public Regulation Commission issued a revised decision in an electric rate case decision, the outcome of which impacted several of our electric return determinations in 2018. The instant report reflects the newly revised numbers.

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Source: S&P Global Market Intelligence

Table 1: ROEs authorized January 1990-March 2019

		-	ectric utilitie			Gas utilitie	
		Average	Median	Number of	Average	Median	Number of
(ear	Period	ROE (%)	ROE (%)	observations	ROE (%)	ROE (%)	observations
990	Full year	12.70	12.77	38	12.68	12.75	33
991	Full year	12.54	12.50	42	12.45	12.50	31
992	Full year	12.09	12.00	45	12.02	12.00	28
993	Full year	11.46	11.50	28	11.37	11.50	40
994	Full year	11.21	11.13	28	11.24	11.27	24
995	Full year	11.58	11.45	28	11.44	11.30	13
996	Full year	11.40	11.25	18	11.12	11.25	17
997	Full year	11.33	11.58	10	11.30	11.25	12
998	Full year	11.77	12.00	10	11.51	11.40	10
999	Full year	10.72	10.75	6	10.74	10.65	6
000	Full year	11.58	11.50	9	11.34	11.16	13
001	Full year	11.07	11.00	15	10.96	11.00	5
2002	Full year	11.21	11.28	14	11.17	11.00	19
003	Full year	10.96	10.75	20	10.99	11.00	25
004	Full year	10.81	10.70	21	10.63	10.50	22
005	Full year	10.51	10.35	24	10.41	10.40	26
006	Full year	10.32	10.23	26	10.40	10.50	15
007	Full year	10.30	10.20	38	10.22	10.20	35
008	Full year	10.41	10.30	37	10.39	10.45	32
009	Full year	10.52	10.50	40	10.22	10.16	30
010	Full year	10.32	10.30	61	10.22	10.20	39
011	Full year	10.37	10.30	42	9.92	10.10	16
012	Full year	10.29	10.17	42 58	9.92	10.03	35
012	Full year	10.17	9.95	58 49	9.94	9.72	35 21
013	Full year	9.91	9.95 9.78	38	9.08	9.72	26
	1 of guartar	10.37	9.83	9	9.47	9.05	3
	1st quarter			9 7		9.03 9.50	3
	2nd quarter	9.73	9.60		9.43		
	3rd quarter	9.40	9.40	2	9.75	9.75	1
	4th quarter	9.62	9.55	12	9.68	9.75	9
015	Full year	9.85	9.65	30	9.60	9.68	16
	1st quarter	10.29	10.50	9	9.48	9.50	6
	2nd quarter	9.60	9.60	7	9.42	9.52	6
	3rd quarter	9.76	9.80	8	9.47	9.50	4
	4th quarter	9.57	9.58	18	9.68	9.73	10
016	Full year	9.77	9.75	42	9.54	9.50	26
	1st quarter	9.87	9.60	15	9.60	9.25	3
	2nd quarter	9.63	9.50	14	9.47	9.60	7
	3rd quarter	9.66	9.60	5	10.14	9.90	6
	4th quarter	9.74	9.60	19	9.68	9.55	8
017	Full year	9.74	9.60	53	9.72	9.60	24
	1st quarter	9.75	9.90	13	9.68	9.80	6
	2nd quarter	9.54	9.50	13	9.43	9.50	7
	3rd quarter	9.67	9.70	11	9.69	9.60	13
	4th quarter	9.42	9.50	11	9.53	9.60	14
018	Full year	9.60	9.58	48	9.59	9.60	40
2019	1st quarter	9.73	9.70	12	9.55	9.70	4

Data compiled April 9, 2019.

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Source: S&P Global Market Intelligence

Table 2: Electric and gas utilities summary table

Electric utilities

	Period	ROR (%)	Number of observations	ROE (%)	Number of observations	Common equity to total capital (%)	Number of observations	Rate change amount (\$M)	Number of observations
2004	Full year	8.71	20	10.81	21	46.96	19	1,806.3	29
2005	Full year	8.44	23	10.51	24	47.34	23	936.1	31
2006	Full year	8.32	26	10.32	26	48.54	25	1,318.1	39
2007	Full year	8.18	37	10.30	38	47.88	36	1,405.7	43
2008	Full year	8.21	39	10.41	37	47.94	36	2,823.2	44
2009	Full year	8.24	40	10.52	40	48.57	39	4,191.7	58
2010	Full year	8.01	62	10.37	61	48.63	57	4,921.9	78
2011	Full year	8.00	43	10.29	42	48.26	42	2,595.1	56
2012	Full year	7.95	51	10.17	58	50.69	52	3,080.7	69
2013	Full year	7.66	45	10.03	49	49.25	43	3,328.6	61
2014	Full year	7.60	32	9.91	38	50.28	35	2,053.7	51
2015	Full year	7.38	35	9.85	30	49.54	30	1,891.5	52
2016	Full year	7.28	41	9.77	42	48.91	41	2,332.1	57
2017	Full year	7.18	48	9.74	53	48.90	48	2,695.6	77
	1st quarter	6.89	13	9.75	13	48.89	13	592.6	14
	2nd quarter	6.78	13	9.54	13	47.94	13	372.4	18
	3rd quarter	7.14	11	9.63	11	51.42	11	272.4	13
	4th quarter	6.81	12	9.42	11	48.12	12	643.0	22
2018	Full year	6.90	49	9.60	48	49.02	49	1,876.0	67
2019	1st quarter	7.03	12	9.73	12	49.51	10	83.5	15

Gas utilities

	Period	ROR (%)	Number of observations	ROE (%)	Number of observations	Common equity to total capital (%)	Number of observations	Rate change amount (\$M)	Number of observations
2004	Full year	8.51	23	10.63	22	45.81	22	306.0	33
2005	Full year	8.24	29	10.41	26	48.40	24	465.4	35
2006	Full year	8.44	17	10.40	15	47.24	16	392.5	23
2007	Full year	8.11	31	10.22	35	48.47	28	645.3	43
2008	Full year	8.49	33	10.39	32	50.35	32	700.0	40
2009	Full year	8.15	29	10.22	30	48.49	29	438.6	36
2010	Full year	7.99	40	10.15	39	48.70	40	776.5	50
2011	Full year	8.09	18	9.92	16	52.49	14	367.0	31
2012	Full year	7.98	30	9.94	35	51.13	32	264.0	41
2013	Full year	7.43	21	9.68	21	50.60	20	498.7	40
2014	Full year	7.65	27	9.78	26	51.11	28	544.2	48
2015	Full year	7.34	16	9.60	16	49.93	16	494.1	40
2016	Full year	7.08	28	9.54	26	50.06	26	1,263.8	59
2017	Full year	7.26	24	9.72	24	49.88	24	410.7	54
	1st quarter	7.14	5	9.68	6	51.05	6	198.0	9
	2nd quarter	7.08	7	9.43	7	50.83	6	73.8	11
	3rd quarter	6.86	15	9.69	13	48.55	15	280.8	22
	4th quarter	7.04	17	9.53	14	50.89	16	386.0	24
2018	Full year	7.00	44	9.59	40	50.09	43	938.6	66
2019	1st quarter	7.37	4	9.55	4	51.40	4	90.4	9

Data compiled April 9, 2019.

Source: S&P Global Market Intelligence

Table 3: Electric authorized ROEs: 2007-2019 Q1

Settled versus fully litigated cases

		All cases			Settled of	cases	Ful	ly litigated c	ases
Year	Average ROE (%)	Median ROE (%)	Number of observations	Average ROE (%)	Median ROE (%)	Number of observations	Average ROE (%)	Median ROE (%)	Number of observations
2007	10.30	10.20	38	10.42	10.33	14	10.23	10.15	24
2008	10.41	10.30	37	10.43	10.25	17	10.39	10.54	20
2009	10.52	10.50	40	10.64	10.62	16	10.45	10.50	24
2010	10.37	10.30	61	10.39	10.30	34	10.35	10.10	27
2011	10.29	10.17	42	10.12	10.07	16	10.39	10.25	26
2012	10.17	10.08	58	10.06	10.00	29	10.28	10.25	29
2013	10.03	9.95	49	10.12	9.98	32	9.85	9.75	17
2014	9.91	9.78	38	9.73	9.75	17	10.05	9.83	21
2015	9.85	9.65	30	10.07	9.72	14	9.66	9.62	16
2016	9.77	9.75	42	9.80	9.85	17	9.74	9.60	25
2017	9.74	9.60	53	9.75	9.60	29	9.73	9.56	24
2018	9.60	9.58	48	9.57	9.63	26	9.63	9.53	22
2019 Q1	9.73	9.70	12	9.69	9.68	6	9.78	9.93	6

General rate cases versus limited-issue riders

		All cases		General r	ate cases		Limited-	issue riders	
Year	Average ROE (%)	Median ROE (%)	Number of observations	Average ROE (%)	Median ROE (%)	Number of observations	Average ROE (%)	Median ROE (%)	Number of observations
2007	10.30	10.20	38	10.32	10.23	36	9.90	9.90	1
2008	10.41	10.30	37	10.37	10.30	35	11.11	11.11	2
2009	10.52	10.50	40	10.52	10.50	38	10.55	10.55	2
2010	10.37	10.30	61	10.29	10.26	58	11.87	12.30	3
2011	10.29	10.17	42	10.19	10.14	40	12.30	12.30	2
2012	10.17	10.08	58	10.02	10.00	51	11.57	11.40	6
2013	10.03	9.95	49	9.82	9.82	40	11.34	11.40	7
2014	9.91	9.78	38	9.76	9.75	32	10.96	11.00	5
2015	9.85	9.65	30	9.60	9.53	23	10.87	11.00	6
2016	9.77	9.75	42	9.60	9.60	32	10.31	10.55	10
2017	9.74	9.60	53	9.68	9.60	42	10.01	9.95	10
2018	9.60	9.58	48	9.56	9.58	38	9.74	9.70	10
2019 Q1	9.73	9.70	12	9.57	9.63	6	9.90	10.20	6

Vertically integrated cases versus delivery-only cases

YearROE (%)ROE (%)observationsROE (%)ROE (%)ROE (%)ROE (%)ROE (%)ROE (%)ROE (%)observation200710.3010.203810.5010.45269.869.9810200810.4110.303710.4810.472610.0410.259200910.5210.504010.6610.662810.1510.3010201010.3710.306110.4210.40419.9810.0017201110.2910.174210.3310.20289.8510.0012201210.1710.085810.1010.20399.759.7312201310.039.95499.9510.00319.379.36920149.919.78389.949.90199.499.551320159.859.65309.759.70179.179.07620169.779.75429.779.78209.319.331220179.749.60539.809.65289.439.551420189.609.58489.709.75229.389.4316					Vert	ically				
YearROE (%)ROE (%)observationsROE (%)ROE (%)ROE (%)ROE (%)ROE (%)ROE (%)ROE (%)observation200710.3010.203810.5010.45269.869.9810200810.4110.303710.4810.472610.0410.259200910.5210.504010.6610.662810.1510.3010201010.3710.306110.4210.40419.9810.0017201110.2910.174210.3310.20289.8510.0012201210.1710.085810.1010.20399.759.7312201310.039.95499.9510.00319.379.36920149.919.78389.949.90199.499.551320159.859.65309.759.70179.179.07620169.779.75429.779.78209.319.331220179.749.60539.809.65289.439.551420189.609.58489.709.75229.389.4316			All cases	;	integra	ted cases		Delivery	-only cases	
200810.4110.303710.4810.472610.0410.259200910.5210.504010.6610.662810.1510.3010201010.3710.306110.4210.40419.9810.0017201110.2910.174210.3310.20289.8510.0012201210.1710.085810.1010.20399.759.7312201310.039.95499.9510.00319.379.36920149.919.78389.949.90199.499.551320159.859.65309.759.70179.179.07620169.779.75429.779.78209.319.331220179.749.60539.809.65289.439.551420189.609.58489.709.75229.389.4316	Year	•			•			•		Number of observations
200910.5210.504010.6610.662810.1510.3010201010.3710.306110.4210.40419.9810.0017201110.2910.174210.3310.20289.8510.0012201210.1710.085810.1010.20399.759.7312201310.039.95499.9510.00319.379.36920149.919.78389.949.90199.499.551320159.859.65309.759.70179.179.07620169.779.75429.779.78209.319.331220179.749.60539.809.65289.439.551420189.609.58489.709.75229.389.4316	2007	10.30	10.20	38	10.50	10.45	26	9.86	9.98	10
201010.3710.306110.4210.40419.9810.0017201110.2910.174210.3310.20289.8510.0012201210.1710.085810.1010.20399.759.7312201310.039.95499.9510.00319.379.36920149.919.78389.949.90199.499.551320159.859.65309.759.70179.179.07620169.779.75429.779.78209.319.331220179.749.60539.809.65289.439.551420189.609.58489.709.75229.389.4316	2008	10.41	10.30	37	10.48	10.47	26	10.04	10.25	9
201110.2910.174210.3310.20289.8510.0012201210.1710.085810.1010.20399.759.7312201310.039.95499.9510.00319.379.36920149.919.78389.949.90199.499.551320159.859.65309.759.70179.179.07620169.779.75429.779.78209.319.331220179.749.60539.809.65289.439.551420189.609.58489.709.75229.389.4316	2009	10.52	10.50	40	10.66	10.66	28	10.15	10.30	10
201210.1710.085810.1010.20399.759.7312201310.039.95499.9510.00319.379.36920149.919.78389.949.90199.499.551320159.859.65309.759.70179.179.07620169.779.75429.779.78209.319.331220179.749.60539.809.65289.439.551420189.609.58489.709.75229.389.4316	2010	10.37	10.30	61	10.42	10.40	41	9.98	10.00	17
201310.039.95499.9510.00319.379.36920149.919.78389.949.90199.499.551320159.859.65309.759.70179.179.07620169.779.75429.779.78209.319.331220179.749.60539.809.65289.439.551420189.609.58489.709.75229.389.4316	2011	10.29	10.17	42	10.33	10.20	28	9.85	10.00	12
20149.919.78389.949.90199.499.551320159.859.65309.759.70179.179.07620169.779.75429.779.78209.319.331220179.749.60539.809.65289.439.551420189.609.58489.709.75229.389.4316	2012	10.17	10.08	58	10.10	10.20	39	9.75	9.73	12
20159.859.65309.759.70179.179.07620169.779.75429.779.78209.319.331220179.749.60539.809.65289.439.551420189.609.58489.709.75229.389.4316	2013	10.03	9.95	49	9.95	10.00	31	9.37	9.36	9
20169.779.75429.779.78209.319.331220179.749.60539.809.65289.439.551420189.609.58489.709.75229.389.4316	2014	9.91	9.78	38	9.94	9.90	19	9.49	9.55	13
20179.749.60539.809.65289.439.551420189.609.58489.709.75229.389.4316	2015	9.85	9.65	30	9.75	9.70	17	9.17	9.07	6
2018 9.60 9.58 48 9.70 9.75 22 9.38 9.43 16	2016	9.77	9.75	42	9.77	9.78	20	9.31	9.33	12
	2017	9.74	9.60	53	9.80	9.65	28	9.43	9.55	14
2019 Q1 9.73 9.70 12 9.72 9.75 3 9.42 9.60 3	2018	9.60	9.58	48	9.70	9.75	22	9.38	9.43	16
Data compiled April 9, 2019	2019 Q1		9.70	12	9.72	9.75	3	9.42	9.60	3

Data compiled April 9, 2019.

Source: S&P Global Market Intelligence

Table 4: Gas average authorized ROEs: 2007-2019 Q1

Settled versus fully litigated cases

		All case	s		Settled case	ses	Fu	Fully litigated cases			
Veer	Average	Median	Number of observations	Average	Median	Number of observations	Average	Median	Number of Observations		
Year	ROE (%)	ROE (%)		ROE (%)	ROE (%)		ROE (%)	ROE (%)			
2007	10.22	10.20	35	10.24	10.18	22	10.20	10.40	13		
2008	10.39	10.45	32	10.34	10.28	20	10.47	10.68	12		
2009	10.22	10.26	30	10.43	10.40	13	10.05	10.15	17		
2010	10.15	10.10	39	10.30	10.15	12	10.08	10.10	27		
2011	9.92	10.03	16	10.08	10.08	8	9.76	9.80	8		
2012	9.94	10.00	35	9.99	10.00	14	9.92	9.90	21		
2013	9.68	9.72	21	9.80	9.80	9	9.59	9.60	12		
2014	9.78	9.78	26	9.51	9.50	11	9.98	10.10	15		
2015	9.60	9.68	16	9.60	9.60	11	9.58	9.80	5		
2016	9.54	9.50	26	9.50	9.50	16	9.61	9.58	10		
2017	9.72	9.60	24	9.68	9.60	17	9.82	9.50	7		
2018	9.59	9.60	40	9.60	9.60	24	9.57	9.50	16		
2019 Q1	9.55	9.70	4	9.47	9.70	3	9.80	9.80	1		

General rate cases versus limited-issue riders

		All case	s		General rat	e cases	Li	mited-issue	e riders
Year	Average ROE (%)	Median ROE (%)	Number of observations	Average ROE (%)	Median ROE (%)	Number of observations	Average ROE (%)	Median ROE (%)	Number of observations
2007	10.22	10.20	35	10.22	10.20	35	—	_	0
2008	10.39	10.45	32	10.39	10.45	32	—	—	0
2009	10.22	10.26	30	10.22	10.26	30	—	—	0
2010	10.15	10.10	39	10.15	10.10	39	—	—	0
2011	9.92	10.03	16	9.91	10.05	15	10.00	10.00	1
2012	9.94	10.00	35	9.93	10.00	34	10.40	10.40	1
2013	9.68	9.72	21	9.68	9.72	21	—	_	0
2014	9.78	9.78	26	9.78	9.78	26	—	_	0
2015	9.60	9.68	16	9.60	9.68	16	—	—	0
2016	9.54	9.50	26	9.53	9.50	25	9.70	9.70	1
2017	9.72	9.60	24	9.73	9.60	23	9.50	9.50	1
2018	9.59	9.60	40	9.59	9.60	39	9.50	9.50	1
2019 Q1	9.55	9.70	4	9.55	9.70	4	_	_	0

Data compiled April 9, 2019.

Source: S&P Global Market Intelligence

Table 5: Electric and gas utility decisions

Electric utility decisions

			ROR	ROE	Common equity as %	Test		Rate change
Date	Company	State	(%)	(%)	of capital	year	Rate base	amount (\$) Footnotes
1/2/19	Appalachian Power Company	VA	7.76	10.40	—	2/20	Average	7.2 B, LIR,1
1/2/19	Monongahela Power Company	WV	_	_	—	6/18	_	-100.9 B, LIR,2
1/9/19	Consumers Energy Company	MI	_	10.00	_	12/19	Average	-24.0 B
2/21/19	Puget Sound Energy, Inc.	WA	_	_	_	6/18	Year-end	0.0 B,3
2/27/19	Virginia Electric and Power Company	VA	6.87	9.20	51.37	3/20	_	-4.0 LIR,4
2/27/19	Virginia Electric and Power Company	VA	6.87	9.20	51.37	3/20	Average	38.4 LIR,5
2/27/19	Virginia Electric and Power Company	VA	7.38	10.20	51.37	3/20	Average	-8.6 LIR,6
2/27/19	Virginia Electric and Power Company	VA	7.38	10.20	51.37	3/20	Average	-3.5 LIR,7
2/27/19	Virginia Electric and Power Company	VA	7.38	10.20	51.37	3/20	Average	-4.3 LIR,8
2/27/19	Appalachian Power Company	WV	7.28	9.75	50.16	12/17	Average	44.2 B
3/6/19	Oklahoma Gas and Electric Company	AR	5.27	_	37.31	3/20	Year-end	3.3 B,9,*
3/13/19	Atlantic City Electric Company	NJ	7.08	9.60	49.94	12/18	Year-end	70.0 B, D
3/14/19	Orange and Rockland Utilities, Inc.	NY	6.97	9.00	48.00	12/19	Average	13.4 B, D, Z
3/14/19	Public Service Company of Oklahoma	OK	6.97	9.40	_	3/18	_	46.0 B
3/22/19	Potomac Edison Company	MD	7.15	9.65	52.82	6/18	Average	6.2 D
2019	1st quarter: averages/total		7.03	9.73	49.51			83.5
	Observations		12	12	10			15

Gas utility decisions

			ROR	ROE	Common equity as %	Test		Rate change
Date	Company	State	(%)	(%)	of capital	year	Rate base	amount (\$) Footnotes
1/4/19	Baltimore Gas and Electric Company	MD	7.09	9.80	52.85	7/18	Average	64.9
1/8/19	Oklahoma Natural Gas Company	OK	_	—	—	12/17	_	-5.9 B,10
1/18/19	Berkshire Gas Company	MA	8.33	9.70	54.00	12/17	_	2.4 B
1/29/19	Indiana Gas Company, Inc.	IN	_	—	—	6/18	Year-end	-13.1 LIR,11
1/29/19	Southern Indiana Gas and Electric Company	IN	_	—	—	6/18	Year-end	-0.8 LIR,11
2/5/19	Kansas Gas Service Company, Inc.	KS	_	_	_	12/17	_	21.5 B
2/21/19	Puget Sound Energy, Inc.	WA	_	_	_	6/18	Year-end	21.5 B,3
3/14/19	Orange and Rockland Utilities, Inc.	NY	6.97	9.00	48.00	12/19	Average	-7.5 B, Z
3/27/19	Duke Energy Kentucky, Inc.	KY	7.07	9.70	50.76	3/20	Average	7.4 B
2019	1st quarter: averages/total		7.37	9.55	51.40			90.4
	Observations		4	4	4			9

Data compiled April 9, 2019.

Source: Regulatory Research Associates, a group within S&P Global Market Intelligence

Footnotes

A- Average

B-	Order followed stipulation or settlement by the parties. Decision particulars not necessarily precedent-setting or specifically adopted by the regulatory body.
CWIP-	Construction work in progress
D-	Applies to electric delivery only
DCt	Date certain rate base valuation
E-	Estimated
F-	Return on fair value rate base
Hy-	Hypothetical capital structure utilized
I-	Interim rates implemented prior to the issuance of final order, normally under bond and subject to refund.
LIR	Limited-issue rider proceeding
M-	"Make-whole" rate change based on return on equity or overall return authorized in previous case.
R-	Revised
Te-	Temporary rates implemented prior to the issuance of final order.
Tr-	Applies to transmission service
U-	Double leverage capital structure utilized.
YE-	Year-end
Z-	Rate change implemented in multiple steps.
*	Capital structure includes cost-free items or tax credit balances at the overall rate of return.
1 2	This case addresses the company's investment in the Dresden Generating Plant. Relates to company's expanded net energy cost proceeding.
3	Rates were established under an expedited rate filing.
4	Rate change was approved under Rider B, which is the mechanism through which the company recovers the costs associated with the conversion of the Altavista, Hopewell and Southampton power stations to burn biomass fuels.
5	Rate change was approved under Rider GV, which is the mechanism through which the company recovers its investment in the Greensville County generation facility.
6	Rate change was approved under Rider R, which is the mechanism through which the company recovers its investment in the Bear Garden power plant.
7	Rate change was approved under Rider S, which is the mechanism through which the company recovers its investment in the Virginia City Hybrid Energy Center.
8	Rate change was approved under Rider W, which is the mechanism through which the company recovers its investment in the Warren County generation facility.
9	Rate change pursuant to company's formula rate plan.
10	Rate change pursuant to company's performance-based regulation plan.

11 Case established the rates to be charged to customers under the company's compliance and system improvement adjustment, or CSIA, mechanism, which includes both federally mandated pipeline-safety initiatives and projects that are permitted under the state's TDSIC statute.

RRA Regulatory Focus Major Rate Case Decisions -January - December 2019

Despite a declining interest rate environment, the equity returns authorized electric and gas utilities nationwide ticked up modestly in 2019. Based on data gathered by Regulatory Research Associates, a group within S&P Global Market Intelligence, the average return on equity authorized electric utilities was 9.65% in rate cases decided in 2019, somewhat above the 9.60% average for cases in 2018. There were 47 electric ROE determinations in 2019, versus 48 in 2018. Even so, the average is still hovering around the lowest levels witnessed in the industry, and with the recent rate cuts by the U.S. Federal Reserve, lower authorized returns may be on the horizon.

This data includes several limited-issue rider cases. Excluding these cases, the average authorized ROE was 9.64% in electric rate cases decided in 2019, largely in line with the 9.56% average observed in 2018. The difference between the ROE averages including rider cases and those excluding the rider cases is driven by ROE premiums allowed in certain states for riders that address recovery of specific generation projects.

The average ROE authorized gas utilities crept up to 9.71% for cases decided during 2019, versus 9.59% in 2018. There were 32 gas cases that included an ROE determination in 2019, versus 40 in 2018.

In 2019, the median ROE authorized in all electric utility rate cases was 9.60%, versus 9.58% in 2018; for gas utilities, the metric was 9.70%, versus 9.60% in 2018.

From a longer-term perspective, interest rates, as measured by the 30-year U.S. Treasury bond yield, fell almost steadily from the early 1980s until 2015 or so, placing downward pressure on authorized ROEs. Even though the decline has been less dramatic in the period since 1990, average authorized ROEs fell below 10% for gas utilities in 2011 and for electric utilities in 2014.

After reaching an almost 30-year high in 2018, when almost 140 cases were decided, rate case activity moderated somewhat in 2019, with about 125 electric and gas cases resolved. Since 2010, rate case activity has been robust, with 100 or more cases adjudicated in eight of the last ten calendar years. This count includes electric and gas cases where no ROEs have been specified; however, withdrawn cases are not included.

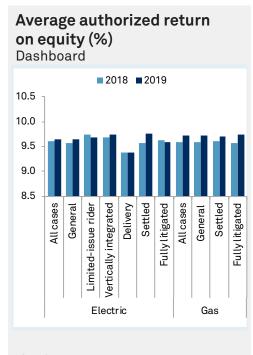
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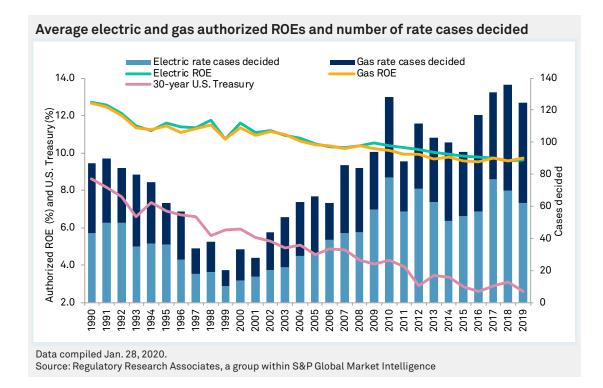
For Detailed Data

Click <u>here</u> to see supporting data tables.



Electric average	2018	2019	
All cases	9.60	9.65	
General rate cases	9.56	9.64	
Limited-issue rider cases	9.74	9.68	•
Vertically integrated cases	9.68	9.73	
Delivery cases	9.38	9.37	•
Settled cases	9.57	9.75	
Fully litigated cases	9.63	9.58	•
Gas average	2018	2019	
Gas average All cases	2018 9.59	2019 9.71	•
U U U U U U U U U U U U U U U U U U U			•
All cases	9.59	9.71	•
All cases General rate cases	9.59 9.59	9.71 9.72	•
All cases General rate cases Settled cases	9.59 9.59 9.60	9.71 9.72 9.70	•
All cases General rate cases Settled cases Fully litigated cases	9.59 9.59 9.60 9.57	9.71 9.72 9.70 9.74	•

Major Rate Case Decisions

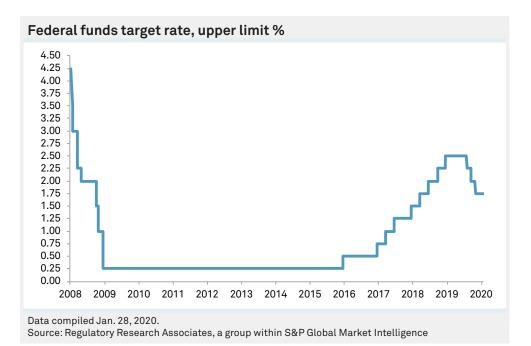


Increased costs associated with environmental compliance, generation and delivery infrastructure upgrades and expansion, renewable generation mandates, storm and disaster recovery, cybersecurity and employee benefits have contributed to an active rate case agenda over the last decade. RRA expects this trend to continue for the foreseeable future in light of the utilities' robust capital spending plans. In the last couple of years, the need to address the impacts of the 2017 federal tax reform has also caused rate case agendas to be more active than previously expected.

Rising interest rates over the past several years also likely contributed to the increased rate case activity. In 2015, the Federal Reserve began to gradually raise the federal funds rate. The Fed increased rates by 25 basis points nine times, with the last hike occurring in December 2018. However, with concerns of slowing growth, fears of a global recession and the impact of U.S.-China trade tensions negatively weighing on the U.S. economy, the Fed, after more than a decade without a cut, lowered rates three times last year; the new target range is now 1.50% to 1.75%.

While increases in the federal funds rate do not move in lockstep with longer-term treasuries and authorized ROEs do not move in lockstep with interest rates, the expectation is that as interest rates change, authorized ROEs would also begin to change in similar fashion. However, several factors impact the timing and magnitude of this anticipated shift. Normal regulatory lag, i.e., the amount of time it takes for a utility to put together a rate case filing and tender it to the commission and then for the commission to process the case, would without any other influences delay a change in average authorized ROEs relative to interest rates.

Major Rate Case Decisions



It is also worth noting that while both interest rates and authorized ROEs have generally been declining since 1990, the gap between authorized ROEs and interest rates widened somewhat over this period, largely as a result of an often-unstated understanding by regulators that the drop in interest rates caused by Federal Reserve intervention was unusual.

Capital structure trends

To offset the negative cash flow impact of federal tax reform, many utilities sought higher common equity ratios, and the average authorized equity ratios adopted by utility commissions in 2019 were modestly higher than the levels observed in 2018 and 2017. The average authorized equity ratio for electric utility cases nationwide was 49.94% in 2019, 49.02% in 2018 and 48.90% in 2017. The average allowed equity ratio for gas utilities nationwide was 51.75% in 2019, 50.09% in 2018 and 49.88% in 2017.

The aforementioned averages include allowed equity ratios adopted by utility commissions in Arkansas, Florida, Indiana and Michigan — jurisdictions that typically authorize capital structures that include cost-free items or tax credit balances. Excluding those occurrences, the average authorized equity ratio for electric utilities nationwide was 51.55% in 2019, 50.60% in cases decided during 2018 and 50.02% in 2017. For gas utilities, excluding these occurrences, the average authorized equity ratio and 51.13% in 2017.

Taking a longer-term view, equity ratios have generally increased over the last 15 years — the average equity ratio approved in electric rate cases decided during 2004 was 46.96%, while the average for gas utilities was 45.81%. Many commissions began approving more equity-rich capital structures in the wake of the 2008 financial crisis.

3

Major Rate Case Decisions

A more granular look at ROE trends

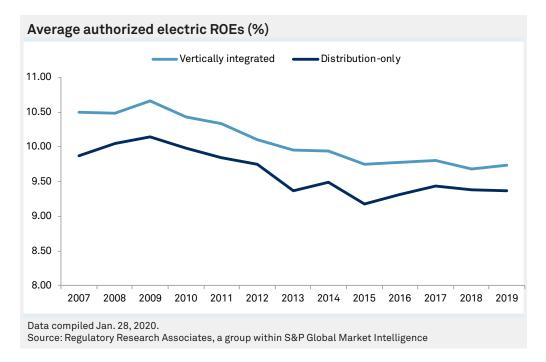
The discussion thus far has looked broadly at trends in authorized ROEs; the sections that follow provide a more granular view based upon the types of proceedings/decisions in which these ROEs were established.

RRA has observed that there can be significant differences between the average ROEs from one subcategory of cases to another.

As a result of electric industry restructuring, certain states unbundled electric rates and implemented retail competition for generation. Commissions in those states now have jurisdiction only over the revenue requirement and return parameters for delivery operations.

Comparing electric vertically integrated cases versus delivery-only proceedings over the past 12 years, RRA finds that the annual average authorized ROEs in vertically integrated cases typically are about 30 to 65 basis points higher than in delivery-only cases, arguably reflecting the increased risk associated with ownership and operation of generation assets.

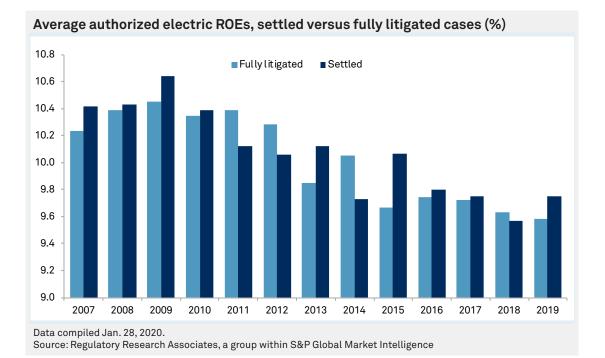
The industry average ROE for vertically integrated electric utilities was 9.73% for rate cases concluded in 2019, versus 9.68% in 2018. For electric distribution-only utilities, the industry average ROE authorized in 2019 was 9.37%, versus 9.38% in 2018.

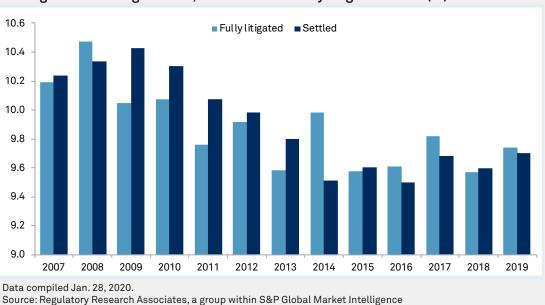


Settlements have frequently been used to resolve rate cases over the last several years, and in many cases, these settlements are "black box" in nature and do not specify the ROE and other typical rate case parameters underlying the stipulated rate change. However, some states preclude this type of treatment, and settlements must specify these values, if not the specific adjustments from which these values were derived.

For both electric and gas cases, RRA has found no discernible pattern in the average authorized ROEs in cases that were settled versus those that were fully litigated. In some years, the average authorized ROE was higher for fully litigated cases, in others, it was higher for settled cases, and in a handful of years, the authorized ROE was similar for both fully litigated and settled cases.

Major Rate Case Decisions





Average authorized gas ROEs, settled versus fully litigated cases (%)

Over the last several years, the annual average authorized ROEs in electric cases that involve limited-issue riders were typically meaningfully higher than those approved in general rate cases, driven by the ROE premiums authorized in Virginia. Limited-issue rider cases in which a separate ROE is determined have had limited use in the gas industry, as most of the gas riders rely on ROEs approved in a previous base rate case.

5

Major Rate Case Decisions

The following discussion focuses on the corresponding tables available here.

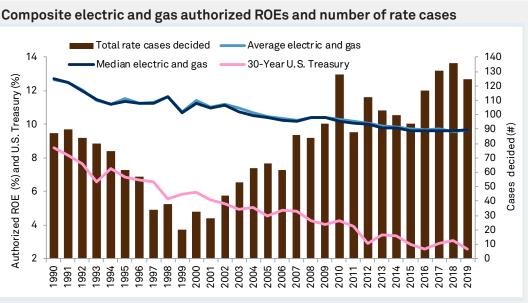
Table 1 shows the average ROE authorized in major electric and gas rate decisions annually since 1990 and by quarter since 2015, followed by the number of observations in each period. Table 2 indicates the composite electric and gas industry data for all major cases, summarized annually since 2004 and by quarter for the past six quarters.

Included in **Tables 3 and 4** are comparisons since 2007 of average authorized ROEs for settled versus fully litigated cases, general rate cases versus limited-issue rider proceedings and vertically integrated cases versus delivery-only cases for electric and gas utilities, respectively.

The individual electric and gas cases decided in 2019 are listed in **Table 5**, with the decision date shown first, followed by the company name, the abbreviation for the state issuing the decision, the authorized rate of return, the ROE and the percentage of common equity in the adopted capital structure. Next, RRA indicates the month and year in which the adopted test year ended, whether the commission utilized an average or a year-end rate base and the amount of the permanent rate change authorized. The dollar amounts represent the permanent rate change ordered at the time decisions were rendered. Fuel adjustment clause rate changes are not reflected in this study.

The simple mean is utilized for the return averages. In addition, the average equity returns indicated in this report reflect the ROEs approved in cases that were decided during the specified time periods and are not necessarily representative of either the average currently authorized ROEs for utilities industrywide or the returns actually earned by the utilities.

Table 6 and the graph below track the average and median equity return authorized for all electric and gas rate cases combined by year for the last 30 years. As the table indicates, since 1990, authorized ROEs have generally trended downward, reflecting the significant decline in interest rates and capital costs that has occurred over this time frame. The combined average and median equity returns authorized for electric and gas utilities in each of the years 1990 through 2019 and the number of observations for each year are presented in the accompanying chart.



Data compiled Jan. 28, 2020.

Source: Regulatory Research Associates, a group within S&P Global Market Intelligence

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Major Rate Case Decisions

Please note: In an effort to align data presented in this report with data available in S&P Global Market Intelligence's online database, earlier historical data provided in previous reports may not match historical data in this report due to certain differences in presentation, including the treatment of cases that were withdrawn or dismissed.

Subsequent to the publication of our year-end 2018 report, the New Mexico Public Regulation Commission issued a revised decision in an electric rate case decision, the outcome of which impacted several of our electric ROE statistics for 2018. The instant report reflects the revised numbers.

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Source: Regulatory Research Associates, a group within S&P Global Market Intelligence

Table 1: ROEs authorized January 1990-December 2019

			ectric utilitie			Gas utilities	
	•	Average	Median	Number of	Average	Median	Number of
Year	Period	ROE (%)	ROE (%)	observations	ROE (%)	ROE (%)	observations
1990	Full year	12.70	12.77	38	12.68	12.75	33
1991	Full year	12.54	12.50	42	12.45	12.50	31
1992	Full year	12.09	12.00	45	12.02	12.00	28
1993	Full year	11.46	11.50	28	11.37	11.50	40
1994	Full year	11.21	11.13	28	11.24	11.27	24
1995	Full year	11.58	11.45	28	11.44	11.30	13
1996	Full year	11.40	11.25	18	11.12	11.25	17
1997	Full year	11.33	11.58	10	11.30	11.25	12
1998	Full year	11.77	12.00	10	11.51	11.40	10
1999	Full year	10.72	10.75	6	10.74	10.65	6
2000	Full year	11.58	11.50	9	11.34	11.16	13
2001	Full year	11.07	11.00	15	10.96	11.00	5
2002	Full year	11.21	11.28	14	11.17	11.00	19
2003	Full year	10.96	10.75	20	10.99	11.00	25
2004	Full year	10.81	10.70	21	10.63	10.50	22
2005	Full year	10.51	10.35	24	10.41	10.40	26
2006	Full year	10.32	10.23	26	10.40	10.50	15
2007	Full year	10.30	10.20	38	10.22	10.20	35
2008	Full year	10.41	10.30	37	10.39	10.45	32
2009	Full year	10.41	10.50	40	10.33	10.45	30
2010	Full year	10.37	10.30	61	10.15	10.20	39
2010	Full year	10.37	10.30	42	9.92	10.03	16
2012	Full year	10.23	10.08	58	9.94	10.00	35
2012	Full year	10.03	9.95	49	9.68	9.72	21
2013	Full year	9.91	9.78	38	9.08	9.72	26
2014	1st quarter	10.37	9.83	9	9.47	9.05	3
	2nd quarter	9.73	9.60	3 7	9.47	9.50	3
	3rd quarter	9.73	9.00	2	9.43 9.75	9.50	3 1
		9.40		12	9.75		9
2015	4th quarter		9.55		9.60 9.60	9.75	9 16
2015	Full year	9.85	9.65	30 9		9.68	6
	1st quarter	10.29	10.50		9.48	9.50	
	2nd quarter	9.60	9.60	7	9.42	9.52	6
	3rd quarter	9.76	9.80	8	9.47	9.50	4
0040	4th quarter	9.57	9.58	18	9.68	9.73	10
2016	Full year	9.77	9.75	42	9.54	9.50	26
	1st quarter	9.87	9.60	15	9.60	9.25	3
	2nd quarter	9.63	9.50	14	9.47	9.60	7
	3rd quarter	9.66	9.60	5	10.14	9.90	6
~~ / =	4th quarter	9.74	9.60	19	9.68	9.55	8
2017	Full year	9.74	9.60	53	9.72	9.60	24
	1st quarter	9.75	9.90	13	9.68	9.80	6
	2nd quarter	9.54	9.50	13	9.43	9.50	7
	3rd quarter	9.67	9.70	11	9.69	9.60	13
	4th quarter	9.42	9.50	11	9.53	9.60	14
2018	Full year	9.60	9.58	48	9.59	9.60	40
	1st quarter	9.73	9.70	12	9.55	9.70	4
	2nd quarter	9.58	9.50	12	9.73	9.73	3
	3rd quarter	9.55	9.60	7	9.80	9.90	3
	4th quarter	9.70	9.68	16	9.73	9.70	22
2019	Full year	9.65	9.60	47	9.71	9.70	32

Source: Regulatory Research Associates, a group within S&P Global Market Intelligence

Table 2: Electric and gas utilities summary

Electric utilities

						Common equity to total capital		Rate change	
			Number of		Number of	(%)	Number of	amount	Number of
Year	Period	ROR (%)	observations	ROE (%)	observations	(70)	observations	(\$M)	observations
2004	Full year	8.71	20	10.81	21	46.96	19	1,806.3	29
2005	Full year	8.44	23	10.51	24	47.34	23	936.1	31
2006	Full year	8.32	26	10.32	26	48.54	25	1,318.1	39
2007	Full year	8.18	37	10.30	38	47.88	36	1,405.7	43
2008	Full year	8.21	39	10.41	37	47.94	36	2,823.2	44
2009	Full year	8.24	40	10.52	40	48.57	39	4,191.7	58
2010	Full year	8.01	62	10.37	61	48.63	57	4,921.9	78
2011	Full year	8.00	43	10.29	42	48.26	42	2,595.1	56
2012	Full year	7.95	51	10.17	58	50.69	52	3,080.7	69
2013	Full year	7.66	45	10.03	49	49.25	43	3,328.6	61
2014	Full year	7.60	32	9.91	38	50.28	35	2,053.7	51
2015	Full year	7.38	35	9.85	30	49.54	30	1,891.5	52
2016	Full year	7.28	41	9.77	42	48.91	41	2,332.1	57
2017	Full year	7.18	48	9.74	53	48.90	48	2,695.6	77
	1st quarter	6.89	13	9.75	13	48.89	13	592.6	14
	2nd quarter	6.78	13	9.54	13	47.94	13	372.4	18
	3rd quarter	7.14	11	9.67	11	51.42	11	272.4	13
	4th quarter	6.81	12	9.42	11	48.12	12	643.0	22
2018	Full year	6.90	49	9.60	48	49.02	49	1,880.4	67
	1st quarter	7.03	12	9.73	12	49.51	10	83.5	15
	2nd quarter	6.91	9	9.58	12	50.95	7	62.9	16
	3rd quarter	7.24	7	9.55	7	51.41	7	262.7	10
	4th quarter	6.85	16	9.70	16	49.12	16	1,409.8	19
2019	Full year	6.97	44	9.65	47	49.94	40	1,818.9	60

Gas utilities

			Number of		Number of	Common	Number of	Rate	Number of
	Period	ROR (%)	observations	ROE (%)	observations	equity to	observations	change	observations
2004	Full year	8.51	23	10.63	22	45.81	22	306.0	33
2005	Full year	8.24	29	10.41	26	48.40	24	465.4	35
2006	Full year	8.44	17	10.40	15	47.24	16	392.5	23
2007	Full year	8.11	31	10.22	35	48.47	28	645.3	43
2008	Full year	8.49	33	10.39	32	50.35	32	700.0	40
2009	Full year	8.15	29	10.22	30	48.49	29	438.6	36
2010	Full year	7.99	40	10.15	39	48.70	40	776.5	50
2011	Full year	8.09	18	9.92	16	52.49	14	367.0	31
2012	Full year	7.98	30	9.94	35	51.13	32	264.0	41
2013	Full year	7.43	21	9.68	21	50.60	20	498.7	40
2014	Full year	7.65	27	9.78	26	51.11	28	544.2	48
2015	Full year	7.34	16	9.60	16	49.93	16	494.1	40
2016	Full year	7.08	28	9.54	26	50.06	26	1,263.8	59
2017	Full year	7.26	24	9.72	24	49.88	24	410.7	54
	1st quarter	7.14	5	9.68	6	51.05	6	198.0	9
	2nd quarter	7.08	7	9.43	7	50.83	6	73.8	11
	3rd quarter	6.86	15	9.69	13	48.55	15	280.8	22
	4th quarter	7.04	17	9.53	14	50.89	16	386.5	24
2018	Full year	7.00	44	9.59	40	50.09	43	939.1	66
	1st quarter	7.37	4	9.55	4	51.40	4	90.4	9
	2nd quarter	7.75	3	9.73	3	58.87	3	47.6	9
	3rd quarter	6.52	5	9.80	3	43.86	4	619.6	16
	4th quarter	7.20	21	9.73	22	52.33	20	699.3	27
2019	Full year	7.17	33	9.71	32	51.75	31	1,456.8	61

Data compiled Jan. 29, 2020.

Source: Regulatory Research Associates, a group within S&P Global Market Intelligence

Table 3: Electric authorized ROEs: 2007-2019

Settled versus fully litigated cases

		All cases			Settled of	ases	Ful	ly litigated	cases
	Average	Median	Number of	Average	Median	Number of	Average	Median	Number of
Year	ROE (%)	ROE (%)	observatio	ROE (%)	ROE (%)	observatio	ROE (%)	ROE (%)	observatio
2007	10.30	10.20	38	10.42	10.33	14	10.23	10.15	24
2008	10.41	10.30	37	10.43	10.25	17	10.39	10.54	20
2009	10.52	10.50	40	10.64	10.62	16	10.45	10.50	24
2010	10.37	10.30	61	10.39	10.30	34	10.35	10.10	27
2011	10.29	10.17	42	10.12	10.07	16	10.39	10.25	26
2012	10.17	10.08	58	10.06	10.00	29	10.28	10.25	29
2013	10.03	9.95	49	10.12	9.98	32	9.85	9.75	17
2014	9.91	9.78	38	9.73	9.75	17	10.05	9.83	21
2015	9.85	9.65	30	10.07	9.72	14	9.66	9.62	16
2016	9.77	9.75	42	9.80	9.85	17	9.74	9.60	25
2017	9.74	9.60	53	9.75	9.60	29	9.73	9.56	24
2018	9.60	9.58	48	9.57	9.63	26	9.63	9.53	22
2019	9.65	9.60	47	9.75	9.73	20	9.58	9.50	27

General rate cases versus limited-issue riders

	All cases			General	rate cases		Limited-is	Limited-issue riders		
	Average	Median	Number of	Average	Median	Number of	Average	Median	Number of	
Year	ROE (%)	ROE (%)	observatio	ROE (%)	ROE (%)	observatio	ROE (%)	ROE (%)	observatio	
2007	10.30	10.20	38	10.32	10.23	36	9.90	9.90	1	
2008	10.41	10.30	37	10.37	10.30	35	11.11	11.11	2	
2009	10.52	10.50	40	10.52	10.50	38	10.55	10.55	2	
2010	10.37	10.30	61	10.29	10.26	58	11.87	12.30	3	
2011	10.29	10.17	42	10.19	10.14	40	12.30	12.30	2	
2012	10.17	10.08	58	10.02	10.00	51	11.57	11.40	6	
2013	10.03	9.95	49	9.82	9.82	40	11.34	11.40	7	
2014	9.91	9.78	38	9.76	9.75	32	10.96	11.00	5	
2015	9.85	9.65	30	9.60	9.53	23	10.87	11.00	6	
2016	9.77	9.75	42	9.60	9.60	32	10.31	10.55	10	
2017	9.74	9.60	53	9.68	9.60	42	10.01	9.95	10	
2018	9.60	9.58	48	9.56	9.58	38	9.74	9.70	10	
2019	9.65	9.60	47	9.64	9.65	33	9.68	9.31	14	

Vertically integrated cases versus delivery-only cases

				Ver	tically				
		All cases		integra	ated cases		Delivery-	only cases	
	Average	Median	Number of	Average	Median	Number of	Average	Median	Number of
Year	ROE (%)	ROE (%)	observatio	ROE (%)	ROE (%)	observatio	ROE (%)	ROE (%)	observatio
2007	10.30	10.20	38	10.50	10.45	26	9.86	9.98	10
2008	10.41	10.30	37	10.48	10.47	26	10.04	10.25	9
2009	10.52	10.50	40	10.66	10.66	28	10.15	10.30	10
2010	10.37	10.30	61	10.42	10.40	41	9.98	10.00	17
2011	10.29	10.17	42	10.33	10.20	28	9.85	10.00	12
2012	10.17	10.08	58	10.10	10.20	39	9.75	9.73	12
2013	10.03	9.95	49	9.95	10.00	31	9.37	9.36	9
2014	9.91	9.78	38	9.94	9.90	19	9.49	9.55	13
2015	9.85	9.65	30	9.75	9.70	17	9.17	9.07	6
2016	9.77	9.75	42	9.77	9.78	20	9.31	9.33	12
2017	9.74	9.60	53	9.80	9.65	28	9.43	9.55	14
2018	9.60	9.58	48	9.68	9.73	23	9.38	9.50	15
2019	9.65	9.60	47	9.73	9.73	25	9.37	9.60	8
Data compile	ed Jan. 29, 202	20.							

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Source: Regulatory Research Associates, a group within S&P Global Market Intelligence

Table 4: Gas	average	authorized ROEs:
	2007-2	019

Settled versus fully litigated cases

		All cases			Settled c	ases	Ful	Ily litigated	cases
	Average	Median	Number of	Average	Median	Number of	Average	Median	Number of
Year	ROE (%)	ROE (%)	observations	ROE (%)	ROE (%)	observatio	ROE (%)	ROE (%)	observations
2007	10.22	10.20	35	10.24	10.18	22	10.20	10.40	13
2008	10.39	10.45	32	10.34	10.28	20	10.47	10.68	12
2009	10.22	10.26	30	10.43	10.40	13	10.05	10.15	17
2010	10.15	10.10	39	10.30	10.15	12	10.08	10.10	27
2011	9.92	10.03	16	10.08	10.08	8	9.76	9.80	8
2012	9.94	10.00	35	9.99	10.00	14	9.92	9.90	21
2013	9.68	9.72	21	9.80	9.80	9	9.59	9.60	12
2014	9.78	9.78	26	9.51	9.50	11	9.98	10.10	15
2015	9.60	9.68	16	9.60	9.60	11	9.58	9.80	5
2016	9.54	9.50	26	9.50	9.50	16	9.61	9.58	10
2017	9.72	9.60	24	9.68	9.60	17	9.82	9.50	7
2018	9.59	9.60	40	9.60	9.60	24	9.57	9.50	16
2019	9.71	9.70	32	9.70	9.70	20	9.74	9.72	12

General rate cases versus limited-issue riders

		All cases			General ra	ate cases	Lin	nited-issue	riders
	Average	Median	Number of	Average	Median	Number of	Average	Median	Number of
Year	ROE (%)	ROE (%)	observations	ROE (%)	ROE (%)	observatio	ROE (%)	ROE (%)	observations
2007	10.22	10.20	35	10.22	10.20	35	—	_	0
2008	10.39	10.45	32	10.39	10.45	32		—	0
2009	10.22	10.26	30	10.22	10.26	30	—	—	0
2010	10.15	10.10	39	10.15	10.10	39		—	0
2011	9.92	10.03	16	9.91	10.05	15	10.00	10.00	1
2012	9.94	10.00	35	9.93	10.00	34	10.40	10.40	1
2013	9.68	9.72	21	9.68	9.72	21		—	0
2014	9.78	9.78	26	9.78	9.78	26		—	0
2015	9.60	9.68	16	9.60	9.68	16		—	0
2016	9.54	9.50	26	9.53	9.50	25	9.70	9.70	1
2017	9.72	9.60	24	9.73	9.60	23	9.50	9.50	1
2018	9.59	9.60	40	9.59	9.60	39	9.50	9.50	1
2019	9.71	9.70	32	9.72	9.72	30	9.60	9.60	2
Data comp	iled Jan. 29, 202	20							

Data compiled Jan. 29, 2020.

Source: Regulatory Research Associates, a group within S&P Global Market Intelligence

Table 5: Electric and gas utility decisions

Electric utility decisions

					Common equity as % of		Rate change
ate	Company	State	ROR (%)	ROE (%)	capital	Test year Rate base	amount (\$) Footnote
01/02/19	Appalachian Power Co.	VA	7.76	10.40	_	2/20 Average	7.2 B, LIR,1
01/02/19	Monongahela Power Co.	WV	-	-	-	6/18 —	-100.9 B, LIR,2
01/09/19	Consumers Energy Co.	MI	—	10.00	—	12/19 Average	-24.0 B
02/21/19	Puget Sound Energy Inc.	WA	-	-	-	6/18 Year-end	0.0 B,3
02/27/19	Virginia Electric and Power Co.	VA	6.87	9.20	51.37	3/20 —	-4.0 LIR,4
02/27/19	Virginia Electric and Power Co.	VA	6.87	9.20	51.37	3/20 Average	38.4 LIR,5
02/27/19	Virginia Electric and Power Co.	VA	7.38	10.20	51.37	3/20 Average	-8.6 LIR,6
02/27/19	Virginia Electric and Power Co.	VA	7.38	10.20	51.37	3/20 Average	-3.5 LIR,7
02/27/19	Virginia Electric and Power Co.	VA	7.38	10.20	51.37	3/20 Average	-4.3 LIR,8
02/27/19	Appalachian Power Co.	WV	7.28	9.75	50.16	12/17 Average	44.2 B
03/06/19	Oklahoma Gas and Electric Co.	AR	5.27	_	37.31	3/20 Year-end	3.3 B,*,9
03/13/19	Atlantic City Electric Co.	NJ	7.08	9.60	49.94	12/18 Year-end	70.0 B, D
03/14/19	Orange and Rockland Utilities Inc.	NY	6.97	9.00	48.00	12/19 Average	13.4 B, D, Z
03/14/19	Public Service Co. of Oklahoma	OK	6.97	9.40	_	3/18 —	46.0 B
03/22/19	Potomac Edison Co.	MD	7.15	9.65	52.82	6/18 Average	6.2 D
2019	1st quarter: averages/total		7.03	9.73	49.51		83.5
	Observations	-	12	12	10		15
04/02/19	Duke Energy Florida LLC	FL		10.50		 2/20_Automatic	29.2 B, LIR,10
04/15/19	Virginia Electric and Power Co.	VA	6.87	9.20	51.37	2/20 Average	10.4 LIR,11
04/23/19	Emera Maine	ME	_		_		— D,12
04/30/19	Kentucky Utilities Co.	KY	-	9.73	-	4/20 —	55.9 B
04/30/19	Louisville Gas and Electric Co.	KY	_	9.73		4/20 —	2.1 B
05/01/19	Duke Energy Carolinas LLC	SC	7.16	9.50	53.00	12/17 Year-end	106.9
05/02/19	DTE Electric Co.	MI	5.48	10.00	37.94	4/20 Average	273.3 *
05/02/19	Appalachian Power Co.	VA	_	9.42	-	6/20 —	0.0 LIR,13
05/02/19	Virginia Electric and Power Co.	VA	6.87	9.20	51.37	6/20 —	17.9 LIR,14
05/08/19	Duke Energy Progress LLC	SC	6.99	9.50	53.00	12/17 Year-end	41.5
05/14/19	Otter Tail Power Co.	SD	7.09	8.75	52.92	12/17 Average	4.8 1
05/16/19	Southern California Edison Co.	CA	7.43	_	_	12/18 Average	-523.0 Z
05/16/19	Maui Electric Co. Ltd.	HI	7.43	9.50	57.02	12/18 Average	12.2 I
05/23/19	Upper Peninsula Power Co.	MI	6.91	9.90	_	12/19 Average	1.8 B
05/29/19	Southern Indiana Gas and Electric Co.	IN	_	_	_	10/18 Year-end	4.1 LIR,15
06/12/19	Northern Indiana Public Service Co.	IN	_	-	-	11/18 Year-end	16.7 LIR.15
06/18/19	MDU Resources Group Inc.	MT	_	_	_	12/17 —	9.3 B, I,Z
00,10,10	2nd quarter: averages/total		6.91	9.58	50.95	.2	62.9
	Observations		9	12	7		16
07/03/19	Virginia Electric and Power Co.	VA	7.39	10.20	51.37	8/20 Average	3.1 LIR,16
07/03/19	Virginia Electric and Power Co.	VA	6.87	9.20	51.37	8/20 Average	1.8 LIR,17
07/30/19	Empire District Electric Co.	KS	_	_	_		0.0 B
08/05/19	Virginia Electric and Power Co.	VA	6.81	9.20	51.17	10/20 —	104.3 LIR,18
08/12/19	Potomac Electric Power Co.	MD	7.45	9.60	50.46	1/19 Average	10.3 D
08/29/19	Green Mountain Power Corp.	VT	6.85	9.06	49.46	9/20 Average	16.7 Z
09/04/19	Northern States Power Co WI	WI	7.74	10.00	52.52	12/20 Average	0.7 Z
09/19/19	Oklahoma Gas and Electric Co.	OK	_	_	_	9/18 —	0.0 B
09/26/19	San Diego Gas & Electric Co.	CA	_	_	_	12/19 Average	35.7 Z
09/30/19	Massachusetts Electric Co.	MA	7.56	9.60	53.49	12/17 Year-end	90.1 D, Z
	3rd quarter: averages/total		7.24	9.55	51.41		262.7
	Observations		7	7	7		10
10/08/19	Duke Energy Indiana LLC	IN	_	_	_	12/18 Year-end	23.5 LIR,15
10/31/19	Wisconsin Electric Power Co.	WI	7.49	10.00	54.46	12/20 —	81.3 B
10/31/19	Wisconsin Public Service Corp.	WI	7.22	10.00	51.96	12/20 —	38.6 B
11/01/19	Virginia Electric and Power Co.	VA	6.83	9.20	51.17	1/21 Average	-18.0 LIR,19
11/07/19	Entergy New Orleans LLC	LA	7.09	9.35	50.00	12/18 Year-end	124.9 20,21
11/27/19	Southern Indiana Gas and Electric Co.	IN	_	_	_	4/19 Year-end	7.2 LIR,15
11/29/19	Avista Corp.	ID	7.35	9.50	50.00	12/18 Year-end	-7.2 B
12/04/19	Commonwealth Edison Co.	IL	6.51	8.91	47.97	12/18 Year-end	-3.1 D
12/04/19	Northern Indiana Public Service Co.	IN	6.52	9.75	47.86	12/19 Year-end	42.7 B, Z,*
12/13/19	Entergy Arkansas LLC	AR	5.23	_	36.49	12/20 Average	10.1 B,*,9
12/16/19	Ameren Illinois Co.	IL	6.71	8.91	50.00	12/18 Year-end	-3.0 D
12/17/19	Georgia Power Co.	GA	0.71	10.50	56.00		909.0 Z
12/17/19	Baltimore Gas and Electric Co.	MD	6.94	9.70		7/19 —	25.0 B, D,22
12/17/19	Northern Indiana Public Service Co.	IN	0.54	5.70	_	6/19 Year-end	44.8 LIR,15
12/18/19	Pacific Gas and Electric Co.	CA	7.81	10.25	52.00	12/20 —	44.8 LIR, 15 46.0 23
12/19/19	San Diego Gas & Electric Co.	CA	7.61	10.25	52.00	12/20 —	46.0 23
		CA					
12/19/19	Southern California Edison Co.		7.68	10.30	52.00	12/20 —	- 23.0
12/19/19	NSTAR Electric Co.	MA			_		33.6 D,24
10/29/19	NorthWestern Corp.	MT	6.92	9.65	49.38		6.5 B, I
12/20/19	Southwestern Electric Power Co.	AR	4.93	9.45	33.71	12/18 Year-end	52.8 B,*
12/24/19	Sierra Pacific Power Co.	NV	6.75	9.50	50.92		-5.0 B
	4th quarter: averages/total		6.85	9.70	49.12		1,409.8
	Observations		16	16	16		19
2019	Averages/total Observations		6.97 44	9.65 47	49.94 40		1,818.9 60

Gas utility decisions

					Common		
					equity as		Rate
					% of		change
Date	Company	State	ROR (%)	ROE (%)	capital	Test year Rate base	amount (\$) Footnotes
01/04/19	Baltimore Gas and Electric Co.	MD	7.09	9.80	52.85	7/18 Average	64.9
01/08/19	Oklahoma Natural Gas Co.	OK	-	_	_	12/17 —	-5.9 B,24
01/18/19	Berkshire Gas Co.	MA	8.33	9.70	54.00	12/17 —	2.4 B
01/29/19	Indiana Gas Co. Inc.	IN	-	_	-	6/18 Year-end	-13.1 LIR,25
01/29/19	Southern Indiana Gas and Electric Co.	IN	_	_	_	6/18 Year-end	-0.8 LIR,25
02/05/19	Kansas Gas Service Co. Inc.	KS	_	_	_	12/17 —	21.5 B
02/21/19	Puget Sound Energy Inc.	WA	_	_	_	6/18 Year-end	21.5 B,3
03/14/19	Orange and Rockland Utilities Inc.	NY	6.97	9.00	48.00	12/19 Average	-7.5 B, Z
03/27/19	Duke Energy Kentucky Inc.	KY	7.07	9.70	50.76	3/20 Average	7.4 B
2019	1st quarter: averages/total		7.37	9.55	51.40		90.4
	Observations		4	4	4		9
04/23/19	Atmos Energy Corp.	KS	_	—	_	12/18 —	1.6 LIR,26
04/30/19	Delta Natural Gas Co. Inc.	KY	_	_	_	12/18 Year-end	2.7 LIR,27
04/30/19	Louisville Gas and Electric Co.	KY	-	9.73	_	4/20 —	18.6 B

2019	Averages/total		7.17	9.71			
	Observations				20 51.75		27
	4th quarter: averages/total		7.20 21	9.73 22	52.33 20		699.3 27
2/26/19	Mountaineer Gas Co.	WV	7.24	9.75		12/18 Average	12.4 B
2/20/19	Washington Gas Light Co.	VA	7.22	9.20	53.48	12/19 Average	13.2 I
2/20/19	Columbia Gas of Kentucky Inc.	KY	7.62	-	52.42	12/20 Year-end	4.2 LIR,34
2/19/19	Atlanta Gas Light Co.	GA	_	10.25	56.00	7/20 Average	65.3
2/19/19	Southern California Gas Co.	CA	7.30	10.05	52.00	12/20 —	— 23
2/19/19	San Diego Gas & Electric Co.	CA	7.55	10.20	52.00	12/20 —	— 23
2/18/19	Columbia Gas of Maryland Inc.	MD	7.26	9.60	52.90	6/19 Average	1.0 33
2/18/19	Interstate Power and Light Co.	IA	7.02	9.60	51.00	12/20 Average	11.8 B
2/17/19	Baltimore Gas and Electric Co.	MD	6.97	9.75	_	7/19 —	54.0 B
2/11/19	Black Hills Gas Distribution LLC	WY	6.98	9.40	50.23	12/18 Year-end	13.2 B
2/06/19	Columbia Gas of Virginia Inc.	VA	6.68	9.70	_	12/20 Average	6.1 LIR,31
2/06/19	SEMCO Energy, Inc.	MI	-	9.87	54.00	12/20 —	19.9 B
1/26/19	Washington Gas Light Co.	VA	-	-	-	12/20 Average	12.4 LIR,31
1/21/19	Kansas Gas Service Co. Inc.	KS	-	-	-	6/19 Year-end	4.2 LIR,26
1/13/19	New Jersey Natural Gas Co.	NJ	6.95	9.60	54.00	8/19 Year-end	62.2 B
1/13/19	Elizabethtown Gas Co.	NJ	7.13	9.60	51.50	8/19 Year-end	34.0 B
1/07/19	Entergy New Orleans LLC	LA	7.09	9.35	50.00	12/18 Year-end	-3.3 20,21
0/31/19	Wisconsin Public Service Corp.	WI	7.22	10.00	51.96	12/20 —	9.6 B
0/31/19	Wisconsin Gas LLC	WI	7.32	10.20	52.02	12/20 —	1.6 B
0/31/19	Wisconsin Electric Power Co.	WI	7.49	10.00	54.46	12/20 —	15.7 B
0/31/19	Piedmont Natural Gas Co. Inc.	NC	7.14	9.70	52.00	12/18 Year-end	82.8 B
0/30/19	Spire Missouri Inc.	MO				5/19 Year-end	4.8 B, LIR,
0/30/19	Missouri Gas Energy	MO		-	-	5/19 Year-end	4.0 B, LIR,
						9/18 Average	
10/16/19	Northwest Natural Gas Co.	WA	7.16	9.40	49.00		5.1 B
10/15/19	Northern Indiana Public Service Co.	IN	7.42	9.70	55.50	3/19 — 4/19 Year-end	7.3 LIR,15
0/08/19	Washington Gas Light Co.	MD	7.42	9.40	53.50	3/19 —	27.0 B,22
0/08/19	Avista Corp.	OR	7.24	9.40	50.00	12/20 Year-end	3.6 B
0/02/19	Peoples Natural Gas Co. LLC	PA	7.20	9.13	34.20	9/20 Average 10/20 —	59.5 B
0/02/19	Northern Illinois Gas Co.	L	7.20	9.73	54.20	9/20 Average	167.7
	3rd quarter: averages/total Observations		6.52	9.60	43.00		16
9/26/19	Consumers Energy Co.	MI	5.84 6.52	9.90 9.80	41.78 43.86	9/20 Average	143.5 * 619.6
9/26/19	Southern California Gas Co.	CA			44 70	12/19 Average	314.4 Z
9/26/19	San Diego Gas & Electric Co.	CA		-	-	12/19 Average	71.7 Z
9/24/19	Atmos Energy Corp.		_			9/20 Year-end	2.9 LIR,27
		FA KY	_	_	_		30.0 B,32
)9/12/19	UGI Utilities Inc.	PA	_	_	_	9/20 —	
)9/04/19)9/12/19	Pacific Gas and Electric Co.	CA	7.74	-	52.52	12/20 Average 12/19 Average	31.3 Z
09/04/19	Northern States Power Co WI	WI	7.74	9.50	52.52	12/20 Average	4.9 LIR,31
)8/29/19	Virginia Natural Gas Inc.	VA	6.86	9.50	48.74	8/20 Average	4.9 LIR.31
08/29/19	CenterPoint Energy Resources Corp.	OK	7.40			12/18 Year-end	1.9 24
)8/28/19	Vectren Energy Delivery of Ohio Inc.	OH	7.48	_	52.50	9/18 Date Certair	22.7 B
)8/23/19	CenterPoint Energy Resources Corp.	AR	4.68	_	32.38	9/20 Year-end	7.3 B,*,9
08/21/19	Union Electric Co.	MO	_	_		6/18 —	-20.2 B
08/20/19	Oklahoma Natural Gas Co.	OK	_	_	_	12/18 —	-28.2 B
07/29/19	Southern Indiana Gas and Electric Co.	IN	_	_	_	12/18 —	4.1 LIR.25
)7/29/19	Indiana Gas Co. Inc.	IN	_	_	_	12/18 —	10.4 LIR.25
07/17/19	New Mexico Gas Co. Inc.	NM	_			9/17 —	2.5 B. Z
	Observations		3	3	3		9
0,1210	2nd guarter: averages/total		7.75	9.73	58.87	12/11	47.6
06/12/19	Columbia Gas of Virginia Inc.	VA	-		_	12/17 —	9.5 B. I.30
05/21/19	Atmos Energy Corp.	TX	7.97	9.80	60.18	12/17 Year-end	2.2 B
)5/20/19	Atmos Energy Corp.	TN	7.79	_	58.38	5/20 Average	0.0 B,29
)5/07/19	Atmos Energy Corp.	KY	7.49	9.65	58.06	3/20 Average	-0.3
15/03/19			_	_	_		6.4 LIR.28
05/03/19	Missouri Gas Energy Spire Missouri Inc.	MO MO	_	_	_	11/18 — 11/18 —	

Footnotes

- Average A-
- В-Order followed stipulation or settlement by the parties. Decision particulars not necessarily precedent-setting or specifically adopted by the regulatory body.
- D-|-
- Applies to electric delivery only. Interim rates implemented prior to the issuance of final order, normally under bond and subject to refund. Limited-issue rider proceeding.
- LIR
- Z-
- Rate change implemented in multiple steps. Capital structure includes cost-free items or tax credit balances at the overall rate of return. This case addresses the company's investment in the Dresden Generating Plant.
- 2 Relates to company's expanded net energy cost proceeding.
- Rates were established under an expedited rate filing. Rates were established under an expedited rate filing. Rate change was approved under Rider B, which is the mechanism through which the company recovers the costs associated with the conversion of the Altavista, 3 4 5 6 7 Rate change was approved under Rider GV, which is the mechanism through which the company recovers its investment in the Greensville County generation facility. Rate change was approved under Rider R, which is the mechanism through which the company recovers its investment in the Bear Garden power plant. Rate change was approved under Rider S, which is the mechanism through which the company recovers its investment in the Virginia City Hybrid Energy Center.
- Rate change was approved under Rider W, which is the mechanism through which the company recovers its investment in the Warren County generation facility. Rate change pursuant to company's formula rate plan. Reflects recovery of two solar projects, a 74.9-MW facility in Hamilton County, Fla., and a 74.9-MW facility in Columbia County, Fla.

- Reflects recovery of two utility-scale solar generation facilities, the 142-MW Colonial Trail West Solar Facility and the 98-MW AC Spring Grove 1 Solar Facility. Rate case withdrawn at company request.
- Modest revenue requirement increase authorized under company's energy efficiency rider
- Rate change was approved under Rider DSM, which is the mechanism through which the company is permitted to collect a cash return on demand-side management Case involves company's transmission, distribution and storage system improvement charge rate adjustment mechanism.
- 8 9 10 11 12 13 14 15 16 17 Rate change was approved under Rider BW, which is the mechanism through which the company recovers its investment in the Brunswick County Power Station. Rate change was approved under Rider US-2, which is the mechanism through which the company recovers its investment in three utility-scale solar facilities: Scott Solar; Whitehouse Solar; and Woodland Solar.
- 18 19 Rate change was approved under Rider E, which is the mechanism through which the company recovers costs to comply with state and federal environmental regulati Rate change was approved under Rider U, which is the mechanism through which the company recovers its investment in projects to underground certain "at risk"
- distribution facilities 20
- The authorized ROE and equity percentage of capital were explicitly stated in the 11/7/19 order, but the company submitted compliance filings on 12/9/19 specifying the other rate case parameters shown for this case. The city council has not yet acted on the compliance filings. On 12/6/19, the company appealed the 11/7/19 decision to the Civil District Court for the Parish of New Orleans.
- 21 22 23 24 25 26 27 28 29 30 Settlement and order state that the return metrics "set no precedent, and have no broader applicability."
- Case involved only the determination of cost-of-capital parameters. Rate change pursuant to company's performance-based regulation plan.
- Case established the rates to be charged to customers under the company's compliance and system improvement adjustment mechanism. Case involves company's gas system reliability surcharge.
- Case involves the company's pipe replacement program rider
- Case involves the company's infrastructure system replacement surcharge rider. Rate change under company's annual rate mechanism.
- While settlement is silent with respect to the ROE underlying the rate increase, a 9.7% ROE is to be used for future non-base-rate revenue requirement changes and for
- the annual earnings test. Rate change was approved under company's rider pertaining to investment made under Virginia Steps to Advance Virginia Energy infrastructure program.
- Consolidated rate case for UGI Utilities' gas division, UGI Central Penn Gas and UGI Penn Natural Gas. Approved increase estimated.
- 31 32 33 34
- Case involves company's accelerated main replacement program rider.

Source: Regulatory Research Associates, a group within S&P Global Market Intelligence

Table 6: Composite electric and gas annualauthorized ROEs: 1990-2019

	Average	Median	No. of		Average	Median	No. of
Year	ROE (%)	ROE (%)	Observations	Year	ROE (%)	ROE (%)	Observations
1990	12.69	12.75	71	2005	10.46	10.40	50
1991	12.50	12.50	73	2006	10.35	10.25	41
1992	12.06	12.00	73	2007	10.26	10.20	73
1993	11.40	11.50	68	2008	10.40	10.39	69
1994	11.23	11.22	52	2009	10.39	10.43	70
1995	11.53	11.38	41	2010	10.28	10.22	100
1996	11.26	11.25	35	2011	10.19	10.10	58
1997	11.31	11.28	22	2012	10.09	10.00	93
1998	11.64	11.65	20	2013	9.92	9.80	70
1999	10.73	10.70	12	2014	9.86	9.78	64
2000	11.44	11.25	22	2015	9.76	9.65	46
2001	11.04	11.00	20	2016	9.68	9.60	68
2002	11.19	11.16	33	2017	9.73	9.60	77
2003	10.98	10.75	45	2018	9.59	9.60	88
2004	10.72	10.50	43	2019	9.68	9.70	79

Data compiled Jan. 29, 2020.

Louisville Gas and Electric Company Response to Commission Staff's Second Request for Information Dated July 31, 2020

Case No. 2020-00061

Question No. 2

Witness: Daniel K. Arbough / Robert M. Conroy

- Q-2. The most recent Commission awarded ROE for an investor-owned electric utility is 9.25 percent.⁶ Provide support for LG&E's proposed ROE of 9.725 percent in comparison to this recent Commission awarded ROE.
- A-2. Producing the kind and quantity of evidence sufficient to satisfy *Bluefield* and *Hope* criteria⁷ requires a fully developed record typically found only in base rate cases. For that very reason the Commission has made a standard practice of applying the ROE established in a utility's most recent base rate case to the utility's environmental surcharge (i.e., ECR for KU and LG&E) calculations until the utility's next base rate case.⁸ It is therefore consistent with the Commission's established practice that the Companies proposed to continue using the 9.725% ROE, recognizing that: the Companies intend to file base rate cases in the near future; the 9.725% ROE was approved by the Commission slightly more than a year ago in its final orders in those base rate cases; and the 9.725% was affirmed by the Commission less than ten months ago in the Companies' most recent six-month and two-year ECR review proceedings.⁹

Given the inherent lag between the case record and regulators' decisions, the historical average ROEs referenced in the RRA reports for 2020 and the Commission's awarded ROE for Duke Energy Kentucky of 9.25% in April 2020 do not reflect the substantial increase in common equity risk associated with utility stocks since the onset of the COVID-19 pandemic. This higher risk level is documented by the significant increase in beta values associated with electric utility stocks. As shown in the attached table, the average beta value reported by Value Line for the stocks in its electric utility industry group increased

⁶ See Case No. 2019-00271, Electronic Application of Duke Energy Kentucky, Inc. for 1) an Adjustment of the Electric Rates; 2) Approval of New Tariffs; 3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; and 4) All other Required Approvals and Relief (Ky. PSC Apr. 27, 2020), Order at 46.

⁷ Big Sandy Community Action Program v. Chaffins, 502 S.W.2d 526 (Ky. 1973); Drummond v. Todd County Bd. of Educ., 349 S.W.3d 316 (Ky. App. 2011).

⁸ The Commission explicitly acknowledged its established practice in its final orders in the Companies' 2008 base rate cases: "Typically, an electric utility with an environmental surcharge approved pursuant to KRS 278.183 uses the ROE from its most recent rate case in the return component of the environmental costs included in its surcharge." Case No. 2008-00251, Order at 7; Case No. 2008-00252, Order at 8.

⁹ Electronic Examination by the Public Service Commission of the Environmental Surcharge Mechanism of Kentucky Utilities Company for the Two-Year Billing Period Ending April 30, 2019, Case No. 2019-00205, Order (Ky. PSC Oct. 22, 2019); Electronic Examination by the Public Service Commission of the Environmental Surcharge Mechanism of Louisville Gas and Electric Company for the Two-Year Billing Period Ending April 30, 2019, Case No. 2019-00206, Order (Ky. PSC Oct. 22, 2019).

from 0.59 as of December 31, 2019 to 0.86 as of July 3, 2020.¹⁰ While U.S. Treasury bond yields have moved lower due to a "flight to safety" and unprecedented Federal Reserve monetary policies, the increase in utility beta values demonstrates a significant increase in risk associated with utility common stocks. Thus, it is evident that while some components of a thorough ROE analysis might indicate a lower ROE, other components might indicate a higher ROE. This is yet another reason supporting the continued reasonableness of the 9.725% ROE for the Companies.

The Companies also note that the Commission recently decided an infrastructure mechanism case for Kentucky American Water. Although the Final Order in that case does not expressly state the authorized ROE, the mechanism revenue requirement that was authorized in that case was based on an overall cost of capital submitted by the utility that included a 9.7% ROE (which was the ROE authorized in Kentucky American Water's last base rate case).¹¹

The Companies also believe that the 9.25% ROE in the Duke Energy Kentucky case cannot be reasonably considered for application in this case without a more developed record. Such a record is typically based on competing expert witness testimony, composition of relevant proxy groups, credit ratings, and risk factors that are considered by the Commission in authorizing a new ROE. The authorized 9.725% is the product of such a record and should be used for the Companies in these ECR Plan proceedings.

¹⁰ The companies listed in the table showing beta values are the utilities comprising Value Line's widely recognized Electric Industry Group.

¹¹ See the "Pre-Tax Return" tab of the Excel file that Kentucky American Water filed on May 28, 2020 in response to Item 4 of the Commission's Second Set of Post-Hearing Data Requests in Case No. 2020-00027.

ELECTRIC UTILITY INDUSTRY BETA

			(a) P of	(b)
	<u>SYM</u>	<u>Company</u>	<u>Bet</u> 12/31/2019	<u>7/3/2020</u>
1	ALE	ALLETE	0.65	0.85
2	LNT	Alliant Energy	0.60	0.80
3	AEE	Ameren Corp.	0.55	0.80
4	AEP	American Elec Pwr	0.55	0.75
5	AGR	Avangrid, Inc.	0.40	0.80
6	AVA	Avista Corp.	0.60	0.95
7	BKH	Black Hills Corp.	0.70	1.00
8	CNP	CenterPoint Energy	0.80	1.15
9	CMS	CMS Energy Corp.	0.50	0.80
10	ED	Consolidated Edison	0.45	0.75
11	D	Dominion Energy	0.55	0.80
12	DTE	DTE Energy Co.	0.55	0.90
13	DUK	Duke Energy Corp.	0.50	0.85
14	EIX	Edison International	0.55	0.90
15	EE	El Paso Electric Co.	0.65	0.50
16	ETR	Entergy Corp.	0.60	0.95
17	EVRG	Evergy Inc.	n/a	1.05
18	ES	Eversource Energy	0.55	0.90
19	EXC	Exelon Corp.	0.65	0.90
20	FE	FirstEnergy Corp.	0.65	0.85
21	FTS	Fortis Inc.	0.60	0.80
22	HE	Hawaiian Elec.	0.55	0.80
23	IDA	IDACORP, Inc.	0.55	0.80
24	MGEE	MGE Energy	0.55	0.70
25	NEE	NextEra Energy, Inc.	0.55	0.85
26	NWE	NorthWestern Corp.	0.60	0.90
27	OGE	OGE Energy Corp.	0.75	1.05
28	OTTR	Otter Tail Corp.	0.70	0.85
29	PNW	Pinnacle West Capital	0.50	0.85
30	PNM	PNM Resources	0.60	0.90
31	POR	Portland General Elec.	0.55	0.85
32	PPL	PPL Corp.	0.70	1.05
33	PEG	Pub Sv Enterprise Grp.	0.65	0.90
34	SRE	Sempra Energy	0.70	0.95
35	SO	Southern Company	0.50	0.90
36	WEC	WEC Energy Group	0.50	0.80
37	XEL	Xcel Energy Inc.	<u>0.50</u>	<u>0.75</u>
		Average	0.59	0.86

(a) The Value Line Investment Survey (Nov. 15 & Dec. 13, 2019; Jan. 24, 2020).

(b) The Value Line Investment Survey, *Summary & Index* (Jul. 3, 2020).