

BEFORE THE PUBLIC UTILITY COMMISSION OF OREGON

UE 399

In the Matter of PACIFICORP, dba PACIFIC)
POWER, Request for a General Rate Revision,)

DIRECT TESTIMONY AND EXHIBITS OF

ALEX J. KRONAUER

ON BEHALF OF

WALMART INC.

JUNE 22, 2022

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Exhibits

Exhibit Walmart/101 – Alex J. Kronauer Witness Qualifications Statement

Exhibit Walmart/102 – Impact of Pacific Power's Proposed Return on Equity vs. Company's Currently Approved Return On Equity

Exhibit Walmart/103 – Reported Authorized Returns on Equity, Electric Utility Rate Cases Completed, 2019 to Present

Exhibit Walmart/104 – Calculation of Revenue Requirement Impact of Pacific Power's Proposed ROE vs. Average ROE Awarded to Vertically Integrated from 2019-Present

1 **I. Introduction**

2 **Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND OCCUPATION.**

3 A. My name is Alex J. Kronauer. My business address is 2608 SE J St., Bentonville, AR
4 72716-0550. I am employed by Walmart Inc. ("Walmart") as a Senior Manager, Energy
5 Services.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS DOCKET?

6 A. I am testifying on behalf of Walmart.

7 **Q. PLEASE DESCRIBE YOUR EDUCATION AND EXPERIENCE.**

8 In 2011, I earned a Master of Business Administration at the McCombs School of
9 Business at The University of Texas at Austin with a concentration in Finance and
10 Investment Management. From 2011 to 2012, I was a Senior Financial Analyst at TXU
11 Energy, a Texas-based power supplier. My duties included load forecasting and
12 analysis. From 2012 to 2019, I was a Financial Analyst and later a Senior Financial
13 Analyst at CyrusOne, a data center provider in Dallas. I was involved in several power-
14 related areas, including demand response, power procurement, and power expense
15 forecasting. I joined the Walmart Energy Department in July 2019 as a Senior
16 Manager. Since joining Walmart, I have completed several utility-related training
17 seminars and earned the Certified Rate of Return Analyst ("CRRRA") certification. My
18 Witness Qualifications Statement is attached as Walmart/101.

19 **Q. DO YOU HOLD ANY CERTIFICATIONS THAT ARE RELEVANT TO THE ISSUES BEFORE**
20 **THE COMMISSION IN THIS PROCEEDING?**

21 A. Yes, I am a member of the Society of Utility and Regulatory Financial Analysts

1 (“SURFA”). In 2022, I was awarded the CRRA professional designation by SURFA. The
2 CRRA designation is based on education, experience, and the successful completion
3 of a comprehensive written examination.

4 **Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY BEFORE THE PUBLIC UTILITY**
5 **COMMISSION OF OREGON ("COMMISSION")?**

6 A. Yes, I submitted testimony in case AR 651. Additionally, Walmart is a participant in
7 case UM 2143.

8 **Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY BEFORE OTHER STATE**
9 **REGULATORY COMMISSIONS?**

10 A. Yes, I have submitted testimony with state regulatory commissions in Arkansas,
11 Colorado, Massachusetts, New Mexico, New York, Ohio, Oregon, Pennsylvania, Texas,
12 and Washington.

13 **Q. ARE YOU SPONSORING ANY EXHIBITS WITH YOUR TESTIMONY?**

14 A. Yes. I am sponsoring the exhibits listed in the table of contents.

15 **Q. PLEASE BRIEFLY DESCRIBE WALMART'S OPERATIONS IN OREGON.**

16 A. As stated on Walmart's website, Walmart operates 45 retail units, one distribution
17 center, and employs over 13,000 associates in Oregon. In fiscal year ending 2022,
18 Walmart purchased approximately \$987 billion worth of goods and services from
19 suppliers, supporting over 17,000 jobs.¹

¹ <http://corporate.walmart.com/our-story/locations/united-states#/united-states/oregon>

1 **Q. PLEASE BRIEFLY DESCRIBE WALMART'S OPERATIONS WITHIN THE SERVICE**
2 **TERRITORY OF PACIFIC POWER ("PACIFIC POWER" OR "THE COMPANY").**

3 A. Walmart is a large customer of Pacific Power with 17 stores that take electric service
4 from the Company, primarily on the General Service Large Nonresidential 201 KW to
5 999 KW Delivery Service ("Schedule 30") rate schedule.

6

7 **II. Purpose of Testimony and Summary of Recommendations**

8 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

9 A. The purpose of my testimony is to address aspects of Pacific Power's rate case filing
10 and to provide recommendations to assist the Commission in thoroughly and carefully
11 considering the customer impact of the Company's proposed rate increase.

12 **Q. IN SETTING THE REVENUE REQUIREMENT, RETURN ON EQUITY ("ROE"), REVENUE**
13 **ALLOCATION, AND RATE DESIGN CHANGES FOR THE COMPANY, SHOULD THE**
14 **COMMISSION CONSIDER THE IMPACT OF THE PROPOSED RATE INCREASE ON**
15 **BUSINESS CUSTOMERS?**

16 A. Yes. Electricity is a significant operating cost for retailers such as Walmart. When
17 electric rates increase, the increased cost to retailers can put pressure on consumer
18 prices and on the other expenses required by a business to operate. The Commission
19 should thoroughly and carefully consider the impact on customers in examining the
20 requested revenue requirement and ROE, in addition to all other facets of this case,
21 to ensure that any increase in the Company's rates is the minimum amount necessary
22 to provide safe, adequate, and reliable service, while also providing Pacific Power the

1 opportunity to recover its reasonable and prudent costs and earn a reasonable return
2 on its investment.

3 **Q. PLEASE SUMMARIZE YOUR RECOMMENDATION TO THE COMMISSION.**

4 A. My recommendation to the Commission is as follows:

5 1. The Commission should closely examine the Company's increase in ROE, especially
6 when viewed in light of:

7 a. The customer impact of the resulting revenue requirement increase;

8 b. The use of a future test year, which reduces regulatory lag by allowing the
9 utility to include the most current information in its rates at the time they
10 will be in effect;

11 c. Recent rate case ROEs approved by the Commission;

12 d. Recent rate case ROEs approved by other state regulatory commissions;
13 and

14 e. The Company's currently approved ROE.

15 2. Walmart does not take a position on the Company's proposed Cost of Service
16 Study ("COSS"); however, to the extent that alternative cost of service models or
17 modifications to the Company's model are proposed by other parties, Walmart
18 reserves the right to address any such proposals.

19 3. For the purposes of this docket, and because the Company has proposed to reduce
20 the number of customer classes subject to Rate Mitigation Adjustment ("RMA")
21 charges and credits, Walmart does not oppose the Company's proposed rate

1 spread and application of the RMA at the Company's proposed revenue
2 requirement.

3 4. If the Commission determines that the appropriate revenue requirement is less
4 than that proposed by the Company, the Commission should use the first \$5.0
5 million of reduction in revenue from that proposed by the Company to reduce the
6 Company's proposed RMA charges for Schedules 28 and 30 to their current levels.

7 **Q. DOES THE FACT THAT YOU MAY NOT ADDRESS AN ISSUE OR POSITION ADVOCATED**
8 **BY THE COMPANY INDICATE WALMART'S SUPPORT?**

9 A. No. The fact that an issue is not addressed herein or in related filings should not be
10 construed as an endorsement of any filed position.

11

12 **III. Revenue Requirement and Cost of Capital**

13 **Q. WHAT IS YOUR UNDERSTANDING OF THE COMPANY'S PROPOSED REVENUE**
14 **REQUIREMENT INCREASE IN THIS DOCKET?**

15 A. My understanding is that the Company proposes an annual base rate revenue
16 requirement increase of approximately \$84.4 million for the test year ending
17 December 31, 2023, with the exception of capital additions. See Application of
18 PacifiCorp d/b/a Pacific Power Request for a General Rate Revision, PacifiCorp's
19 Executive Summary, pages 1 and 2.

20 **Q. WHAT IS YOUR UNDERSTANDING OF THE COMPANY'S PROPOSED ROE AND**
21 **WEIGHTED AVERAGE COST OF CAPITAL ("WACC") IN THIS DOCKET?**

22 A. My understanding is that the Company proposes an ROE of 9.80 percent based on a

1 range of 9.90 percent to 10.75 percent. See Direct Testimony of Ann E. Bulkley, page
2 3. The Company proposes a cost of long-term debt of 4.38 percent, a cost of preferred
3 stock of 6.75 percent, and a capital structure of 52.25 percent equity, 0.01 percent
4 preferred stock, and 47.74 percent long-term debt for a proposed overall WACC of
5 7.21 percent. See Direct Testimony of Nikki L. Kobliha, page 3, Table 1.

6 **Q. IS WALMART CONCERNED ABOUT THE REASONABLENESS OF THE COMPANY'S**
7 **PROPOSED ROE?**

8 A. Yes, especially when viewed in light of:

- 9 1. The customer impact of the resulting revenue requirement increases;
- 10 2. The use of a future test year, which reduces regulatory lag by allowing the utility
11 to include the most current information in its rates at the time they will be in
12 effect;
- 13 3. Recent rate case ROEs approved by the Commission;
- 14 4. Recent rate case ROEs approved by other state regulatory commissions; and
- 15 5. The Company's currently approved ROE.

16

17 **A. Customer Impact**

18 **Q. WHAT IS YOUR UNDERSTANDING OF THE COMPANY'S CURRENTLY APPROVED ROE?**

19 A. My understanding is that the Company's currently authorized ROE is 9.50 percent.²

² See Case No. UE 374, *In the Matter of the PACIFICORP, dba Pacific Power, Request for a General Rate Revision, Order 20-473, issued December 19, 2020, page 31.*

1 **Q. HAVE YOU CALCULATED AN ESTIMATE OF THE IMPACT TO CUSTOMERS OF THE**
2 **DIFFERENCE BETWEEN THE CURRENTLY AUTHORIZED ROE OF 9.50 PERCENT AND**
3 **THE 9.80 PERCENT ROE PROPOSED BY THE COMPANY?**

4 A. Yes. Holding rate base constant and using the Company’s proposed cost of debt and
5 capital structure, the revenue requirement impact of the difference between the
6 currently authorized ROE of 9.50 percent and the Company’s proposed 9.80 percent
7 ROE is approximately \$8.5 million, or 10.1 percent of the proposed revenue
8 requirement increase. See Exhibit Walmart/102.

9

10 ***B. Recent ROEs Approved by the Commission***

11 **Q. IS THE COMPANY’S PROPOSED ROE SIGNIFICANTLY HIGHER THAN THE ROEs**
12 **APPROVED BY THE COMMISSION IN 2019, 2020, 2021, AND SO FAR IN 2022?**

13 A. Yes. During 2019, 2020, 2021, and so far in 2022, the Commission has issued an order
14 with stated ROEs in two dockets. See Exhibit Walmart/103.

15 **Q. IN WHICH ELECTRIC CASES DID THE COMMISSION ISSUE ORDERS WITH STATED**
16 **ROES?**

17 A. The Commission issued orders with stated ROEs in the following cases:
18

- 19 • Case UE 374, the PacifiCorp general electric rate case concluded in 2020 cited
 above, in which the Commission approved an ROE of 9.5 percent.³

³ *Id.*

- 1 • Case D-UE-394, the Portland General Electric general electric rate case concluded
2 in 2022, in which the Commission approved an ROE of 9.50 percent.⁴

3 As such, the Company's proposed 9.80 percent ROE is counter to recent Commission
4 actions regarding ROEs.

5
6 **C. National Utility Industry ROE and Weighted Equity Cost Trends**

7 **Q. HOW DOES THE COMPANY'S PROPOSED ROE COMPARE TO ELECTRIC ROEs**
8 **APPROVED BY OTHER UTILITY REGULATORY COMMISSIONS IN 2019, 2020, 2021,**
9 **AND SO FAR IN 2022?**

10 A. According to data from S&P Global Market Intelligence ("S&P Global"), a financial
11 news and reporting company, the average of the 118 reported electric utility rate case
12 ROEs authorized by commissions for investor-owned utilities in 2019, 2020, 2021, and
13 so far in 2022, is 9.46 percent. See Exhibit Walmart/103. Specifically, the average
14 approved ROE was 9.64 percent in 2019, 9.39 percent in 2020, 9.39 percent in 2021,
15 and 9.34 percent so far in 2022. *Id.* The range of reported authorized ROEs for the
16 period is 7.36 percent to 10.60 percent, and the median authorized ROE is 9.50
17 percent. *Id.* As such, the Company's proposed 9.80 percent ROE is counter to broader
18 electric industry trends.

19 **Q. SEVERAL OF THE REPORTED AUTHORIZED ROEs ARE FOR DISTRIBUTION-ONLY**

⁴ See *In the Matter of PORTLAND GENERAL ELECTRIC COMPANY, Request for a General Rate Revision*, Case UE 394, Order (issued April 25, 2022), Appendix A, page 1.

UTILITIES. WHAT IS THE AVERAGE AUTHORIZED ROE IN THE REPORTED GROUP FOR VERTICALLY INTEGRATED UTILITIES?

A. In the group reported by S&P Global, the average electric ROE for vertically-integrated utilities authorized over the same time period is 9.60 percent. *Id.* The average electric ROE authorized for vertically integrated utilities in 2019 was 9.73 percent, in 2020 it was 9.55 percent, 9.55 percent in 2021, and 9.47 percent so far in 2022. *Id.* As such, the Company's proposed ROE of 9.80 percent is counter to broader electric industry trends. In fact, as shown in Figure 1, the Company's proposed 9.80 percent ROE, if approved, would be tied for the 24th highest approved electric ROE (out of 83) for a vertically-integrated utility from 2019 to present. This would put the Company's proposed ROE within the top third of authorized ROEs for vertically integrated utilities.

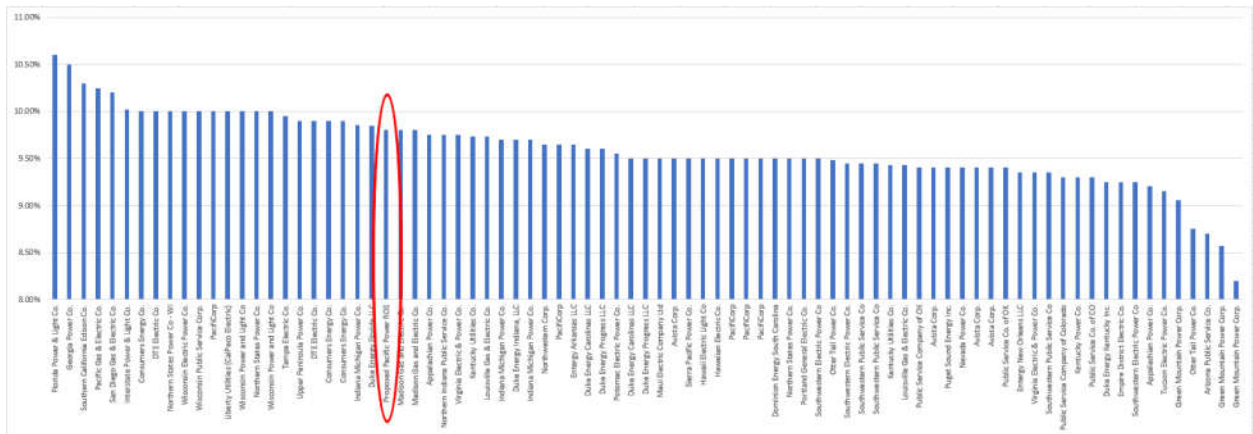


Figure 1. Pacific Power’s Proposed 9.80 Percent ROE Versus Authorized ROEs for Vertically Integrated Utilities, 2019 through Present. Source: Exhibit Walmart/103.

Q. WHAT IS THE DIFFERENCE IN REVENUE REQUIREMENT BETWEEN THE COMPANY’S PROPOSED 9.80 PERCENT ROE AND THE 9.60 PERCENT AVERAGE AUTHORIZED ROE

1 **FOR VERTICALLY INTEGRATED ELECTRIC UTILITIES FROM 2019 TO PRESENT?**

2 A. The difference in a return on rate base at the 9.80 percent ROE proposed by the
3 Company versus the 9.60 percent average authorized ROE for vertically integrated
4 utilities is an increase in revenue requirement of approximately \$6.1 million, or
5 roughly 7.2 percent of the Company's proposed revenue deficiency. See Exhibit
6 Walmart/104.

7 **Q. IS WALMART RECOMMENDING THAT THE COMMISSION SHOULD BE BOUND BY**
8 **ROEs AUTHORIZED BY OTHER STATE REGULATORY AGENCIES?**

9 A. No. Decisions of other state regulatory commissions are not binding on the
10 Commission. Additionally, each commission considers the specific circumstances in
11 each case in its determination of the proper ROE. Walmart is providing this
12 information to illustrate a national customer perspective on industry trends in
13 authorized ROE.

14

15 ***D. Conclusion***

16 **Q. WHAT IS YOUR RECOMMENDATION TO THE COMMISSION IN REGARD TO THE**
17 **COMPANY'S PROPOSED ROE?**

18 A. The Commission should closely examine the Company's requested increase in ROE,
19 especially when viewed in light of:

- 20 1. The customer impact of the resulting revenue requirement increase;
- 21 2. The use of a future test year, which reduces regulatory lag by allowing the
- 22 utility to include the most current information in its rates at the time they will

- 1 be in effect;
- 2 3. Recent rate case ROEs approved by the Commission;
- 3 4. Recent rate case ROEs approved by other state regulatory commissions; and
- 4 5. The Company's currently approved ROE.
- 5

6 **IV. Cost of Service and Rate Spread**

7 **Q. WHAT IS WALMART'S POSITION ON SETTING RATES BASED ON THE COST OF**
8 **SERVICE?**

9 A. Walmart advocates that rates be set based on the utility's cost of service for each rate
10 class. This produces equitable rates that reflect cost causation, send proper price
11 signals, and minimize price distortions.

12 **Q. DOES WALMART TAKE A POSITION ON THE COMPANY'S PROPOSED COSS AT THIS**
13 **TIME?**

14 A. No. However, to the extent that alternative cost of service models or modifications
15 to the Company's model are proposed by other parties, Walmart reserves the right to
16 address any such proposals.

17 **Q. HOW DOES THE COMPANY REPRESENT WHETHER RATES FOR A CUSTOMER CLASS**
18 **ACCURATELY REFLECT THE UNDERLYING COST CAUSATION?**

19 A. The Company does not represent this relationship through a metric per se, but instead
20 employs Schedule 299, the RMA, to assign receipt or payment of a subsidy to a
21 particular customer class. An RMA credit for a customer class means that the class is

1 receiving a subsidy, and as a result, paying rates less than the costs incurred to serve
2 that class. In total, those customer classes with an RMA charge are subsidizing the
3 classes that receive an RMA credit.

4 **Q. WHAT IS YOUR UNDERSTANDING OF THE COMPANY'S PROPOSED RATE SPREAD?**

5 A. My understanding is the Company proposes to use the class cost of service study
6 results as a guide to move all customer classes closer to their cost of service such that
7 the Company earns the overall rate of return of 7.21 percent from its customer base.
8 Additionally, the Company's proposal will result in no customer rate schedule class
9 receiving double the average increase due to implementation of the RMA. See Direct
10 Testimony of Robert M. Meredith, page 15, line 1 to line 7.

11 **Q. HAVE YOU EXAMINED THE PROPOSED RMA CHARGE FOR SCHEDULE 30?**

12 A. Yes. The Company proposes an RMA revenue requirement of \$6.43 million and a
13 charge of 0.502 cents/kWh for Schedule 30. See PAC/1110/Meredith/2 and
14 PAC/1101/Meredith/27.

15 **Q. WHAT IS THE CURRENT RMA CHARGE FOR SCHEDULE 30?**

16 A. The current RMA charge is 0.29 cents/kWh for Schedule 30. See
17 PAC/1110/Meredith/3. The current revenue requirement for the Schedule 30 RMA
18 charge is \$3.72 million. See PAC/1110/Meredith/2. As such, the Company has
19 proposed to move Schedule 30 customers away from rates that reflect cost of service.

20 **Q. DOES THE COMPANY PROPOSE THAT ANY OTHER CUSTOMER CLASSES BEAR**
21 **SUBSIDY BURDEN THROUGH THE RMA?**

1 A. Yes. The Company proposes that the RMA subsidy burden for Schedule 28 increase
2 from \$7.62 million to \$9.86 million. *Id.*

3 **Q. HAS PACIFIC POWER PROPOSED TO REDUCE THE NUMBER OF CUSTOMER CLASSES**
4 **SUBJECT TO RMA CHARGES OR CREDITS?**

5 A. Yes. Pacific Power has proposed to eliminate the RMA for classes 47, 48, and 848. See
6 PAC/1110/Meredith/2.

7 **Q. WHAT IS WALMART'S RECOMMENDATION TO THE COMMISSION ON THIS ISSUE AT**
8 **THE COMPANY'S PROPOSED REVENUE REQUIREMENT?**

9 A. For the purposes of this docket, and because the Company has proposed to reduce
10 the number of customer classes subject to RMA charges and credits, at the Company's
11 proposed revenue requirement, Walmart does not oppose the Company's proposed
12 rate spread and application of the RMA.

13 **Q. WHAT IS YOUR RECOMMENDATION TO THE COMMISSION IF IT DETERMINES THAT**
14 **A LOWER REVENUE REQUIREMENT IS APPROPRIATE?**

15 A. If the Commission determines that the appropriate revenue requirement is less than
16 that proposed by the Company, the Commission should use the first \$5.0 million of
17 reduction in revenue from that proposed by the Company to reduce the Company's
18 proposed RMA charges for Schedules 28 and 30 to their current levels.

19 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

20 A. Yes.

Alex J. Kronauer

Senior Manager, Energy Services

Walmart Stores, Inc.

Business Address: 2608 SE J Street, Bentonville, Arkansas 72716

Business Phone: (312) 231-6667

INDUSTRY EXPERIENCE

August 2019 – Present

Walmart Inc., Bentonville, AR

Senior Manager, Energy Services

May 2014 – July 2019

CyrusOne, Dallas, TX

Senior Financial Analyst

November 2012 – April 2014

CyrusOne, Dallas, TX

Financial Analyst

July 2011 – October 2012

TXU Energy (now Vistra Corporation), Irving, TX

Senior Financial Analyst

EDUCATION

2011 University of Texas at Austin, McCombs School of Business

MBA

2005 Colby College

B.A., Economics

INDUSTRY TRAINING

Earned the CRRA (Certified Rate of Return Analyst) designation, May 2022

Passed the Chartered Financial Analyst (CFA) level I exam

TESTIMONY BEFORE REGULATORY COMMISSIONS

2022

New York Public Service Commission Case No. 22-00217/22-E-0064: Proceeding On Motion Of The Commission As To The Rates, Charges, Rules, And Regulations Of Consolidated Edison Company Of New York, Inc. For Electric Service.

New York Public Service Commission Case No. 22-00218/22-G-0065: Proceeding On Motion Of The Commission As To The Rates, Charges, Rules, And Regulations Of Consolidated Edison Company Of New York, Inc. For Gas Service.

2021

Maryland Public Service Commission Docket No. 9670: In the Matter of the Application of Delmarva Power & Light Company for Adjustments to its Retail Rates

Colorado Public Utilities Commission Docket No. 21AL-0317E: In the Matter of Advice Letter No. 1857 — Electric Filed By Public Service Company of Colorado to Revise its Colorado PUC No. 8 — Electric To Revise Jurisdictional Base Rate Revenues, Implement New Base Rates for all Electric Rate Schedules, and Make Other Proposed Tariff Changes Effective August 2, 2021

Public Utility Commission of Texas Docket No. 52195/SOAH Docket No. 473-21-2606: Application of El Paso Electric Company to Change Rates

Public Utility Commission of Texas Docket No. 52397/SOAH Docket No. 473-21-3114: Application of Southwestern Electric Power Company to Implement a Net Interim Fuel Surcharge

Public Utilities Commission of Ohio Case No. 20-1651-EL-AIR: In the Matter of the Application of The Dayton Power and Light Company to Increase its Rates for Electric Distribution, Case No. 20-1652-EL-AAM: In the Matter of the Application of The Dayton Power and Light Company for Accounting Authority, and Case No. 20-1653-EL-ATA: In the Matter of the Application of The Dayton Power and Light Company for Approval of Revised Tariffs.

Public Utility Commission of Texas Docket No. 51802/SOAH Docket No. 473-21-0478: Application of Southwestern Public Service Company for Authority to Changes Rates.

Pennsylvania Public Utility Commission Docket No. R-2021-3024601: Pennsylvania Public Utility Commission v. PECO Energy Company – Electric Division.

New Mexico Public Regulation Commission Case No. 20-00238-UT: In the Matter of Southwestern Public Service Company's Application for: (1) Revision of its Retail Rates under Advice Notice No. 292; (2) Authorization and Approval to Abandon its Plant X Unit 3 Generating Station; and (3) other Associated Relief.

Colorado Public Utilities Commission Docket No. 20AL-0432E: In the Matter of Advice No. 1835-Electric of Public Service Company of Colorado to Revise its Colorado P.U.C. No. 8 – Electric Tariff to Eliminate the Currently Effective General Rate Schedule Adjustments to Place into Effect Revised Base Rates and other Phase II Tariff Proposals to Become Effective November 19 2020.

Public Utility Commission of Texas Docket No. 51547: Joint Report and Application of Texas-New Mexico Power Company, NM Green Holdings, Inc., and Avangrid, Inc. for Regulatory Approvals Under PURA §§ 14.101, 39.262 AND 39.915.

2020

New York Public Service Public Service Commission Case No. 20-E-0380: Proceeding on motion of the Commission as to the rates, charges, rules, and regulations of Niagara Mohawk Power Corporation d/b/a National Grid for electric service.

Maryland Public Service Commission Docket No. 9645: In the matter of the application of Baltimore Gas and Electric Company for an electric and gas multi-year plan.

Washington Utilities and Transportation Commission Docket UE-191024: In the matter of PacifiCorp for adjustments to its retail rates for electric energy.

Maryland Public Service Commission Docket No. 9630: In the matter of the application of Delmarva Power & Light Company for adjustments to its retail rates for the distribution of electric energy.

Arkansas Public Service Commission Docket No. 20-027-U. Issue: Demand Response participation.

2019

Arkansas Public Service Commission Docket No. 16-027. Issue: Net Metering Implementation.

KEY ACCOMPLISHMENTS

Created and maintained a Rate Monitor tool to assist Walmart's financial planning and analysis (FP&A) team with budgeting and forecasting. Scanned state PSC websites for potential rate changes and quantified rate change impacts by location by month from general rate cases, fuel adjustments, riders, and other items.

Analyzed, pitched, and secured executive approval for CyrusOne's first green energy commitment through a municipal utility. December 2018.

Implemented demand response program utilizing CyrusOne's backup generators, resulting in \$2.5mm of savings over 4 years (2015-2019). Demonstrated and ensured regulatory compliance.

Researched utility tariffs and coordinated with power utilities, contractors, and CyrusOne's commissioning teams to save over \$11mm over 3 years by minimizing utility ratchets and peak demand charges.

Reported Authorized Returns on Equity, Electric Utility Rate Cases Completed, 2019 to Present

State	Utility	Parent Company Ticker	Docket	Requested ROE	Order Date	Vertically Integrated (V) / Distribution Only (D)	Approved ROE	Difference	Applicant's Proxy Group (Y/N)	ROE Fully Litigated or Settled	Approved WACC	Approved Equity Ratio	Equity Contribution
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
								(8) - (5)					(8) X (13)
Michigan	Consumers Energy Co.	CMS	U-20134	10.75%	1/9/2019	V	10.00%	(75)		Settled	N/A	N/A	N/A
West Virginia	Appalachian Power Co.	AEP	18-0646-E-42T	10.22%	2/27/2019	V	9.75%	(47)		Settled	7.28%	50.16%	4.89%
New Jersey	Atlantic City Electric Co.	EXC	ER18080925	10.10%	3/13/2019	D	9.60%	(50)		Settled	7.08%	49.94%	4.79%
New York	Orange & Rockland Utilities Inc.	ED	18-E-0067	9.75%	3/14/2019	D	9.00%	(75)		Settled	6.97%	48.00%	4.32%
Oklahoma	Public Service Company of OK	AEP	PUD201800097	10.30%	3/14/2019	V	9.40%	(90)		Settled	6.97%	N/A	N/A
Maryland	Potomac Edison Co.	FE	9490	10.80%	3/22/2019	D	9.65%	(115)		Fully Litigated	7.15%	52.82%	5.10%
Kentucky	Kentucky Utilities Co.	PPL	2018-00294	10.42%	4/30/2019	V	9.73%	(69)		Settled	N/A	N/A	N/A
Kentucky	Louisville Gas & Electric Co.	PPL	2018-00295	10.42%	4/30/2019	V	9.73%	(69)		Settled	N/A	N/A	N/A
South Carolina	Duke Energy Carolinas LLC	DUL	2018-319-E	10.50%	5/1/2019	V	9.50%	(100)		Fully Litigated	7.16%	53.00%	5.04%
Michigan	DTE Electric Co.	DTE	U-20162	10.50%	5/2/2019	V	10.00%	(50)		Fully Litigated	5.48%	37.94%	3.79%
South Carolina	Duke Energy Progress LLC	DUK	2018-318-E	10.50%	5/8/2019	V	9.50%	(100)	Y	Fully Litigated	6.99%	53.00%	5.04%
South Dakota	Otter Tail Power Co.	OTTR	EL18-021	10.30%	5/14/2019	V	8.75%	(155)	Y	Fully Litigated	7.09%	52.92%	4.63%
Hawaii	Maui Electric Company Ltd	HE	2017-0150	10.60%	5/16/2019	V	9.50%	(110)		Settled	7.43%	57.02%	5.42%
Michigan	Upper Peninsula Power Co.		U-20276	10.50%	5/23/2019	V	9.90%	(60)		Settled	6.91%	N/A	N/A
Maryland	Potomac Electric Power Co.	EXC	9602	10.30%	8/12/2019	D	9.60%	(70)		Fully Litigated	7.45%	50.46%	4.84%
Vermont	Green Mountain Power Corp.		19-1932-TF	9.16%	8/29/2019	V	9.06%	(10)		Fully Litigated	6.85%	49.46%	4.48%
Wisconsin	Northern States Power Co - WI	XEL	4220-UR-124	N/A	9/4/2019	V	10.00%	N/A	Y	Settled	7.74%	52.52%	5.25%
Massachusetts	Massachusetts Electric Co.	NG	DPU-18-150	10.50%	9/30/2019	D	9.60%	(90)		Fully Litigated	7.56%	53.49%	5.14%
Montana	Northwestern Corp.	NWE	D2018.2.12	10.65%	10/29/2019	V	9.65%	(100)	Y	Settled	6.92%	49.38%	4.77%
Wisconsin	Wisconsin Electric Power Co.	WEC	05-UR-109	10.35%	10/31/2019	V	10.00%	(35)		Settled	7.49%	54.46%	5.45%
Wisconsin	Wisconsin Public Service Corp.	WEC	6690-UR-126	10.35%	10/31/2019	V	10.00%	(35)		Settled	7.22%	51.96%	5.20%
Louisiana	Entergy New Orleans LLC	ETR	UD-18-07	10.50%	11/7/2019	V	9.35%	(115)	Y	Fully Litigated	7.09%	50.00%	4.68%
Idaho	Avista Corp.	AVA	AVU-E-19-04	9.90%	11/29/2019	V	9.50%	(40)		Settled	7.35%	50.00%	4.75%
Illinois	Commonwealth Edison Co.	EXC	19-0387	8.91%	12/4/2019	D	8.91%	-		Fully Litigated	6.51%	47.97%	4.27%
Indiana	Northern Indiana Public Service Co.	NI	45159	10.80%	12/4/2019	V	9.75%	(105)		Settled	6.52%	47.86%	4.67%
Illinois	Ameren Illinois	AEE	19-0436	8.91%	12/16/2019	D	8.91%	-	Y	Fully Litigated	6.71%	50.00%	4.46%
Georgia	Georgia Power Co.	SO	42516	10.90%	12/17/2019	V	10.50%	(40)		Fully Litigated	N/A	56.00%	5.88%
Maryland	Baltimore Gas and Electric Co.	EXC	9610	10.30%	12/17/2019	D	9.70%	(60)		Settled	6.94%	N/A	N/A
California	Pacific Gas & Electric Co.	PCG	A-19-04-015	12.00%	12/19/2019	V	10.25%	(175)		Fully Litigated	7.81%	52.00%	5.33%
California	San Diego Gas & Electric Co.	SRE	A-19-04-017	12.38%	12/19/2019	V	10.20%	(218)		Fully Litigated	7.55%	52.00%	5.30%
California	Southern California Edison Co.	EIX	A-19-04-014	11.45%	12/19/2019	V	10.30%	(115)	Y	Fully Litigated	7.68%	52.00%	5.36%
Arkansas	Southwestern Electric Power Co.	AEP	19-008-U	10.50%	12/20/2019	V	9.45%	(105)		Settled	4.93%	33.71%	3.19%
Nevada	Sierra Pacific Power Co.	BRK.A	19-06002	10.21%	12/24/2019	V	9.50%	(71)		Settled	6.75%	50.92%	4.84%
Iowa	Interstate Power & Light Co.	LNT	RPU-2019-0001	10.25%	1/8/2020	V	10.02%	(23)	Y	Settled	7.23%	51.00%	5.11%
New York	Consolidated Edison Co. of NY	ED	19-E-0065	9.75%	1/16/2020	D	8.80%	(95)		Settled	6.61%	48.00%	4.22%
New Jersey	Rockland Electric Company	ED	ER19050552	9.60%	1/22/2020	D	9.50%	(10)		Settled	7.11%	48.32%	4.59%
Michigan	Indiana Michigan Power Co.	AEP	U-20359	10.50%	1/23/2020	V	9.86%	(64)		Settled	6.08%	46.56%	4.59%
California	PacifiCorp	BRK.A	A-18-04-002	10.60%	2/6/2020	V	10.00%	(60)		Fully Litigated	N/A	51.96%	5.20%
Colorado	Public Service Company of Colorado	XEL	19AL-0268E	10.20%	2/11/2020	V	9.30%	(90)	Y	Fully Litigated	6.97%	55.61%	5.17%
Texas	Centerpoint Energy	CNP	49421	10.40%	2/14/2020	D	9.40%	(100)		Settled	6.51%	42.50%	4.00%
Maine	Central Maine Power Co.	IBE	2018-00194	10.00%	2/19/2020	D	8.25%	(175)		Fully Litigated	6.30%	50.00%	4.13%
North Carolina	Virginia Electric & Power Co.	D	E-22 Sub 562	10.75%	2/24/2020	V	9.75%	(100)		Settled	7.20%	52.00%	5.07%

Reported Authorized Returns on Equity, Electric Utility Rate Cases Completed, 2019 to Present

State	Utility	Parent Company Ticker	Docket	Requested ROE	Order Date	Vertically Integrated (V) / Distribution Only (D)	Approved ROE	Difference	Applicant's Proxy Group (Y/N)	ROE Fully Litigated or Settled	Approved WACC	Approved Equity Ratio	Equity Contribution
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
								(8) - (5)					(8) X (13)
Texas	AEP Texas Inc.	AEP	49494	10.50%	2/27/2020	D	9.40%	(110)		Settled	6.45%	42.50%	4.00%
Indiana	Indiana Michigan Power Co.	AEP	45235	10.50%	3/11/2020	V	9.70%	(80)		Fully Litigated	5.61%	37.55%	3.64%
Washington	Avista Corp.	AVA	UE-190334	9.90%	3/25/2020	V	9.40%	(50)		Settled	7.21%	48.50%	4.56%
Massachusetts	Fitchburg Gas & Electric Light	UTL	DPU 19-130	10.50%	4/17/2020	D	9.70%	(80)		Settled	7.99%	52.45%	5.09%
Kentucky	Duke Energy Kentucky Inc.	DUK	2019-00271	9.80%	4/27/2020	V	9.25%	(55)	Y	Fully Litigated	6.41%	48.23%	4.46%
Michigan	DTE Electric Co.	DTE	U-20561	10.50%	5/8/2020	V	9.90%	(60)		Fully Litigated	5.46%	38.32%	3.79%
New Mexico	Southwestern Public Service Co	XEL	19-00170-UT	10.10%	5/20/2020	V	9.45%	(65)	Y	Settled	7.19%	54.77%	5.18%
Indiana	Duke Energy Indiana, LLC	DUK	45253	10.40%	6/29/2020	V	9.70%	(70)	Y	Fully Litigated	5.71%	40.98%	3.98%
New Hampshire	Liberty Utilities Granite St	AQN	DE-19-064	10.00%	6/30/2020	D	9.10%	(90)		Settled	7.60%	52.00%	4.73%
Missouri	Empire District Electric Co.	AQN	ER-2019-0374	9.95%	7/1/2020	V	9.25%	(70)		Settled	6.77%	46.00%	4.26%
Washington	Puget Sound Energy Inc.		UE-190529	9.50%	7/8/2020	V	9.40%	(10)		Fully Litigated	7.39%	48.50%	4.56%
Maryland	Delmarva Power & Light Co.	EXC	9630	10.30%	7/14/2020	D	9.60%	(70)		Fully Litigated	6.84%	50.53%	4.85%
Hawaii	Hawaii Electric Light Co.	HE	2018-0368	10.50%	7/28/2020	V	9.50%	(100)		Settled	7.52%	56.83%	5.40%
California	Liberty Utilities (CalPeco Electric)	AQN	A-18-12-001	10.30%	8/27/2020	V	10.00%	(30)		Fully Litigated	7.63%	52.50%	5.25%
Vermont	Green Mountain Power Corp.		20-1407-TF	8.20%	8/27/2020	V	8.20%	-		Fully Litigated	6.43%	49.87%	4.09%
Texas	Southwestern Public Service Co	XEL	49831	10.10%	8/27/2020	V	9.45%	(65)	Y	Settled	7.13%	54.62%	5.16%
Hawaii	Hawaiian Electric Co.	HE	2019-0085	10.50%	10/22/2020	V	9.50%	(100)		Settled	7.37%	56.83%	5.40%
New Jersey	Jersey Central Power & Light Co.	FE	ER20020146	10.15%	10/28/2020	D	9.60%	(55)		Settled	7.40%	51.44%	4.94%
New York	NY State Electric & Gas Corp	IBE	19-E-0378	9.50%	11/19/2020	D	8.80%	(70)		Settled	6.10%	48.00%	4.22%
New York	Rochester Gas & Electric Corp	IBE	19-E-0380	9.50%	11/19/2020	D	8.80%	(70)		Settled	6.62%	48.00%	4.22%
Virginia	Appalachian Power Co.	AEP	PUR-2020-00015	9.90%	11/24/2020	V	9.20%	(70)		Fully Litigated	N/A	N/A	N/A
Wisconsin	Madison Gas and Electric Co.	MGEE	3270-UR-123 (Elec)	9.80%	11/24/2020	V	9.80%	-		Settled	6.95%	55.00%	5.39%
Illinois	Ameren Illinois	AEE	20-0381	8.38%	12/9/2020	D	8.38%	-	Y	Fully Litigated	6.39%	50.00%	4.19%
Illinois	Commonwealth Edison Co.	EXC	20-0393	8.38%	12/9/2020	D	8.38%	-		Fully Litigated	6.28%	48.16%	4.04%
Nevada	Nevada Power Co.	BRK.A	20-06003	10.08%	12/10/2020	V	9.40%	(68)		Settled	7.14%	N/A	N/A
Washington	PacifiCorp	BRK.A	UE-191024	10.20%	12/14/2020	V	9.50%	(70)		Settled	7.17%	49.10%	4.66%
New Hampshire	Public Service Co. of NH	ES	DE-19-057	10.40%	12/15/2020	D	9.30%	(110)	Y	Settled	6.87%	54.40%	5.06%
Maryland	Baltimore Gas and Electric Co.	EXC	9645	10.10%	12/16/2020	D	9.50%	(60)		Fully Litigated	6.75%	52.00%	4.94%
Michigan	Consumers Energy Co.	CMS	U-20697	10.50%	12/17/2020	V	9.90%	(60)		Fully Litigated	5.67%	N/A	N/A
Oregon	PacifiCorp	BRK.A	UE 374	9.80%	12/18/2020	V	9.50%	(30)		Fully Litigated	7.14%	50.00%	4.75%
Arizona	Tucson Electric Power Co.	FTS	E-1933A-19-0028	10.00%	12/22/2020	V	9.15%	(85)		Fully Litigated	7.04%	53.08%	4.86%
Wisconsin	Wisconsin Power and Light Co	LNT	6680-UR-122 (Elec)	N/A	12/23/2020	V	10.00%	N/A	Y	Fully Litigated	7.26%	52.53%	5.25%
Utah	PacifiCorp	BRK.A	20-035-04	9.80%	12/30/2020	V	9.65%	(15)		Fully Litigated	7.34%	52.50%	5.07%
Kentucky	Kentucky Power Co.	AEP	C-2020-00174	10.00%	1/13/2021	V	9.30%	(70)		Fully Litigated	6.19%	43.25%	4.02%
North Carolina	Duke Energy Carolinas LLC	DUK	D-E-7, Sub 1214	10.50%	3/31/2021	V	9.60%	(90)	Y	Settled	7.04%	52.00%	4.99%
North Carolina	Duke Energy Progress LLC	DUK	D-E-2, Sub 1219	10.50%	4/16/2021	V	9.60%	(90)	Y	Settled	6.92%	52.00%	4.99%
Florida	Duke Energy Florida LLC	DUK	D-20210016-EI	9.85%	5/4/2021	V	9.85%	-	Y	Settled	N/A	N/A	N/A
Wyoming	PacifiCorp	BRK.A	20000-578-ER-20	9.80%	5/18/2021	V	9.50%	(30)		Fully Litigated	7.19%	51.00%	4.85%
District of Columbia	Potomac Electric	EXC	FC-1156	9.70%	6/4/2021	D	9.28%	(42)		Fully Litigated	7.17%	50.68%	4.70%
Maryland	Potomac Electric Power Co.	EXC	C-9655	10.20%	6/23/2021	V	9.55%	(65)		Fully Litigated	7.21%	50.50%	4.82%
New Mexico	El Paso Electric Co.		C-20-00104-UT	10.30%	6/28/2021	D	9.00%	(130)		Fully Litigated	7.18%	49.21%	4.43%
Kentucky	Kentucky Utilities Co.	PPL	C-2020-00349	10.00%	6/30/2021	V	9.43%	(57)		Settled	NA	NA	N/A

Reported Authorized Returns on Equity, Electric Utility Rate Cases Completed, 2019 to Present

State	Utility	Parent Company Ticker	Docket	Requested ROE	Order Date	Vertically Integrated (V) / Distribution Only (D)	Approved ROE	Difference	Applicant's Proxy Group (Y/N)	ROE Fully Litigated or Settled	Approved WACC	Approved Equity Ratio	Equity Contribution	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
								(8) - (5)					(8) X (13)	
Kentucky	Louisville Gas & Electric Co.	PPL	C-2020-00350 (elec.)	10.00%	6/30/2021	V	9.43%	(57)		Settled	NA	NA	N/A	
New Jersey	Atlantic City Electric Co.	EXC	D-ER20120746	10.30%	7/14/2021	D	9.60%	(70)		Settled	6.99%	50.21%	4.82%	
South Carolina	Dominion Energy South Carolina	D	D-2020-125-E	10.25%	7/21/2021	V	9.50%	(75)		Settled	NA	51.62%	4.90%	
Delaware	Delmarva Power & Light Co.	EXC	D-20-0149	10.30%	8/5/2021	D	9.60%	(70)		Fully Litigated	6.80%	NA	N/A	
North Dakota	Northern States Power Co.	XEL	C-PU-20-441	10.20%	8/18/2021	V	9.50%	(70)	Y	Settled	6.97%	52.50%	4.99%	
Vermont	Green Mountain Power Corp.		21-1963-TF	8.57%	8/31/2021	V	8.57%	-		Fully Litigated	6.67%	50.42%	4.32%	
Idaho	Avista Corp.	AVA	C-AVU-E-21-01	9.90%	9/1/2021	V	9.40%	(50)		Settled	7.05%	50.00%	4.70%	
Washington	Avista Corp.	AVA	D-UE-200900	9.90%	9/27/2021	V	9.40%	(50)		Settled	7.12%	48.50%	4.56%	
Florida	Tampa Electric Co.	EMA	D-20210034-EI	10.75%	10/21/2021	V	9.95%	(80)		Settled	6.26%	45.07%	4.48%	
Florida	Florida Power & Light Co.	NEE	D-20210015-EI	11.50%	10/26/2021	V	10.60%	(90)		Settled	NA	NA	N/A	
Maine	Versant Power		D-2020-00316	9.35%	10/28/2021	D	9.35%	-		NA	6.57%	49.00%	4.58%	
Arizona	Arizona Public Service Co.	PNW	D-E-01345A-19-0236	10.00%	11/2/2021	V	8.70%	(130)	Y	Settled	6.62%	54.67%	4.76%	
Minnesota	Otter Tail Power Co.	OTTR	D-E-017/GR-20-719	10.20%	11/4/2021	V	9.48%	(72)	Y	Fully Litigated	7.18%	52.50%	4.98%	
Ohio	Ohio Power Co.	AEP	C-20-0585-EL-AIR	10.15%	11/17/2021	D	9.70%	(45)		Settled	7.28%	43.43%	4.21%	
New York	Central Hudson Gas & Electric	FTS	C-20-E-0428	9.10%	11/18/2021	D	9.00%	(10)		Settled	6.48%	50.00%	4.50%	
Texas	Southwestern Electric Power Co	AEP	D-51415	10.35%	11/18/2021	V	9.25%	(110)		Fully Litigated	6.69%	49.37%	4.57%	
Virginia	Virginia Electric & Power Co.	D	C-PUR-2021-00058	10.80%	11/18/2021	V	9.35%	(145)		Settled	6.92%	51.92%	4.85%	
Wisconsin	Madison Gas and Electric Co.	MGEE	D-3270-UR-124 (Elec)	9.80%	11/23/2021	V	9.80%	-		Settled	7.18%	55.00%	5.39%	
Wisconsin	Northern States Power Co.	XEL	D-4220-UR-125 (Elec)	10.00%	11/18/2021	V	10.00%	-	Y	Settled	7.31%	52.50%	5.25%	
Wisconsin	Wisconsin Power and Light Co	LNT	D-6680-UR-123 (Elec)	10.00%	11/18/2021	V	10.00%	-	Y	Settled	7.48%	52.50%	5.25%	
Illinois	Commonwealth Edison Co.	EXC	D-21-0367	7.36%	12/1/2021	D	7.36%	-		Fully Litigated	5.72%	48.70%	3.58%	
Arkansas	Entergy Arkansas LLC	ETR	D-16-036-FR (2021 review)	N/A	12/7/2021	V	9.65%	-	Y	Settled	5.17%	37.75%	3.64%	
Illinois	Ameren Illinois	AEE	D-21-0365	7.36%	12/13/2021	D	7.36%	-	Y	Fully Litigated	5.78%	51.00%	3.75%	
New Jersey	Rockland Electric Company	ED	D-ER21050823	10.00%	12/15/2021	D	9.60%	(40)		Settled	7.08%	48.51%	4.66%	
Michigan	Consumers Energy Co.	CMS	C-U-20963	10.50%	12/22/2021	V	9.90%	(60)		Fully Litigated	5.62%	41.84%	4.14%	
Oklahoma	Public Service Co. of OK	AEP	Ca-PUD202100055	10.00%	12/28/2021	V	9.40%	(60)		Settled	6.74%	N/A	N/A	
New York	Niagara Mohawk Power Corp.	NG.	C-20-E-0380	9.50%	1/20/2022	D	9.00%	(50)		Settled	6.08%	48.00%	4.32%	
New Mexico	Southwestern Public Service Co	XEL	C-20-00238-UT	10.35%	2/16/2022	V	9.35%	(100)	Y	Settled	7.07%	54.72%	5.12%	
Indiana	Indiana Michigan Power Co.	AEP	Ca-45576	10.00%	2/23/2022	V	9.70%	(30)		Settled	5.78%	40.70%	3.95%	
Colorado	Public Service Co. of CO	XEL	D-21AL-0317E	10.00%	3/16/2022	V	9.30%	(70)	Y	Settled	6.82%	55.69%	5.18%	
New York	Orange & Rockland Utlts Inc.	ED	C-21-E-0074	9.50%	4/14/2022	D	9.20%	(30)		Settled	6.77%	48.00%	4.42%	
New Hampshire	Unitil Energy Systems Inc.	UTL	D-DE-21-030	10.00%	5/12/2022	D	9.20%	(80)		Settled	7.42%	52.00%	4.78%	
Oregon	Portland General Electric Co.	POR	D-UE-394	9.50%	4/25/2022	V	9.50%	-	Y	Settled	6.81%	50.00%	4.75%	
Arkansas	Southwestern Electric Power Co	AEP	D-21-070-U	10.35%	5/23/2022	V	9.50%	(85)		Fully Litigated	NA	44.54%	4.23%	
Entire Period														
# of Decisions				118										
Average	(All Utilities)			10.09%			9.46%	(64)			6.85%	49.80%	4.69%	
Average	(Distribution Only)			9.72%			9.13%	(59)			6.82%	49.40%	4.50%	
Average	(Vertically Integrated Only)			10.26%			9.60%	(66)			6.86%	50.00%	4.79%	
Median	(All Utilities)			10.20%			9.50%				6.97%	50.42%	4.75%	

Reported Authorized Returns on Equity, Electric Utility Rate Cases Completed, 2019 to Present

State (1)	Utility (2)	Parent Company Ticker (3)	Docket (4)	Requested ROE (5)	Order Date (6)	Vertically Integrated (V) / Distribution Only (D) (7)	Approved ROE (8)	Difference (9) (8) - (5)	Applicant's Proxy Group (Y/N) (10)	ROE Fully Litigated or Settled (11)	Approved WACC (12)	Approved Equity Ratio (13)	Equity Contribution (14) (8) X (13)
	Maximum	(All Utilities)		12.38%			10.60%				7.99%	57.02%	5.88%
	Minimum	(All Utilities)		7.36%			7.36%				4.93%	33.71%	3.19%
	Oregon		2	9.65%			9.50%	(15)			6.98%	50.00%	4.75%
	Applicant Proxy Group Settled			10.02%			9.42%	(59)			6.89%	51.42%	4.83%
	Fully Litigated			10.17%			9.53%	(64)			6.92%	50.04%	4.75%
				9.99%			9.35%	(65)			6.75%	49.52%	4.62%
2019													
	# of Decisions		33										
	Average	(All Utilities)		10.43%			9.64%	(79)			7.02%	50.33%	4.85%
	Average	(Distribution Only)		9.95%			9.37%	(58)			7.05%	50.38%	4.70%
	Average	(Distribution Only, exc. IL FRP)		10.29%			9.53%	(77)			7.19%	50.94%	4.84%
	Average	(Vertically Integrated Only)		10.59%			9.73%	(86)			7.01%	50.32%	4.90%
2020													
	# of Decisions		42										
	Average	(All Utilities)		10.00%			9.39%	(62)			6.82%	49.77%	4.67%
	Average	(Distribution Only)		9.83%			9.10%	(73)			6.79%	49.22%	4.48%
	Average	(Distribution Only, exc. IL FRP)		10.07%			9.21%	(86)			6.86%	49.24%	4.54%
	Average	(Vertically Integrated Only)		10.10%			9.55%	(56)			6.84%	50.12%	4.78%
2021													
	# of Decisions		35										
	Average	(All Utilities)		9.93%			9.39%	(54)			6.76%	49.51%	4.61%
	Average	(Distribution Only)		9.39%			8.99%	(41)			6.71%	48.97%	4.36%
	Average	(Distribution Only, exc. IL FRP)		9.90%			9.39%	(51)			6.94%	48.72%	4.56%
	Average	(Vertically Integrated Only)		10.15%			9.55%	(60)			6.78%	49.75%	4.72%
2022													
	# of Decisions		8										
	Average	(All Utilities)		9.90%			9.34%	(56)			6.68%	49.21%	4.59%
	Average	(Distribution Only)		9.67%			9.13%	(53)			6.76%	49.33%	4.51%
	Average	(Distribution Only, exc. IL FRP)		9.67%			9.13%	(53)			6.76%	49.33%	4.51%
	Average	(Vertically Integrated Only)		10.04%			9.47%	(57)			6.62%	49.13%	4.64%

Source: S&P Global Market Intelligence

Last Updated: 6/16/21

Ω Utility did not file a full rate case, approved ROE based on a settlement

¥ Weighted to include ratemaking-principles rate base and ROE

μ S&P incorrectly reports this value as 9.6%

Calculation of Revenue Requirement Impact of Pacific Power's Proposed ROE vs. Average ROE Awarded to Vertically-Integrated Utilities from 2019-Present

	Source	Capital Component	Percent of Total Capital	Cost	Weighted Cost
1		Long-Term Debt	47.74%	4.38%	2.09%
2	<i>Nikki L. Kobliha Direct, page 3, Table 1, Walmart/103</i>	Preferred Stock	0.01%	6.75%	0.00%
3		Common Equity	52.25%	9.60%	5.02%
4		WACC with National Average Vertically-Integrated ROE			7.11%
5	<i>Application, Executive Summary, Exhibit A</i>	Rate Base			\$ 4,199,121,534
6	4 X 5	Return on Rate Base at National Average ROE			\$ 298,422,956
			Percent of Total Capital	Cost	Weighted Cost
7		Long-Term Debt	47.74%	4.38%	2.09%
8	<i>Nikki L. Kobliha Direct, page 3, Table 1</i>	Preferred Stock	0.01%	6.75%	0.00%
9		Common Equity	52.25%	9.80%	5.12%
10		Rate of Return at Requested ROE			7.21%
11	<i>Application, Executive Summary, Exhibit A</i>	Rate Base			\$ 4,199,121,534
12	10 X 11	Return on Rate Base with Proposed ROE			\$ 302,848,497
13	12 - 6	Difference in Return on Rate Base			\$ 4,425,541
14	<i>Exhibit Accompanying Direct Testimony of Sherona L. Cheung, page 1.5</i>	Revenue Conversion Factor			1.3710
15	13 X 14	Difference in Revenue Requirement			\$ 6,067,417
16	<i>Exhibit Accompanying Direct Testimony of Sherona L. Cheung, page 1.5</i>	Proposed Revenue Deficiency			\$ 84,399,519
17	15 / 16	Difference as a Percent of Proposed Revenue Deficiency			7.2%