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April 23, 2021

Public Service Commission
Attention: Steve Kahl
600 East Boulevard Avenue, Dept. 408
Bismarck, ND 58505-0480

Via e-mail and USPS

RE: Case No. PU-20-441, Northern States Power Company 2021 Electric Rate Increase

Dear Mr. Kahl:

The Direct Testimony and Exhibits of Steve W. Chriss on behalf of Walmart Inc. in the above-referenced matter are enclosed for filing.

Thank you for your attention to this matter.

Respectfully,

/s/ Julie A. Clark
Julie A. Clark

jac/imm
enc.

cc: Zeviel Simpser
Mitchell D. Armstrong
ALJ Hope Hogan
John Schuh
Dave A. Tschider
John B. Coffman

**BEFORE THE NORTH DAKOTA PUBLIC SERVICE COMMISSION
STATE OF NORTH DAKOTA**

**IN THE MATTER OF THE APPLICATION OF NORTHERN STATES)
POWER COMPANY FOR AUTHORITY TO INCREASE RATES FOR) CASE NO. PU-20-441
ELECTRIC SERVICE IN NORTH DAKOTA)**

DIRECT TESTIMONY AND EXHIBITS OF

STEVE W. CHRISS

ON BEHALF OF

WALMART INC.

APRIL 23, 2021

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1 **I. Introduction**

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

3 A. My name is Steve W. Chriss. My business address is 2608 SE J St., Bentonville, AR
4 72716. I am employed by Walmart Inc. (“Walmart”) as Director, Energy Services.

5 **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 A. In 2001, I completed a Master of Science in Agricultural Economics at Louisiana State
9 University. From 2001 to 2003, I was an Analyst and later a Senior Analyst at the
10 Houston office of Econ One Research, Inc., a Los Angeles-based consulting firm. My
11 duties included research and analysis on domestic and international energy and
12 regulatory issues. From 2003 to 2007, I was an Economist and later a Senior Utility
13 Analyst at the Public Utility Commission of Oregon (“PUC”) in Salem, Oregon. My
14 duties included appearing as a witness for PUC Staff in electric, natural gas, and
15 telecommunications dockets. I joined the energy department at Walmart in July 2007
16 as Manager, State Rate Proceedings. I was promoted to Senior Manager, Energy
17 Regulatory Analysis, in June 2011. I was promoted to my current position in October
18 2016 and the position was re-titled in October 2018. My Witness Qualifications
19 Statement is attached as Exhibit SWC-1.

1 **Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY BEFORE THE NORTH DAKOTA**
2 **PUBLIC SERVICE COMMISSION (“COMMISSION”)?**

3 A. Yes. I submitted testimony in Case No. PU-17-398.

4 **Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY BEFORE OTHER STATE**
5 **REGULATORY COMMISSIONS?**

6 A. Yes. I have submitted testimony in over 230 proceedings before 40 other utility
7 regulatory commissions. I have also submitted testimony before legislative
8 committees in Kansas, Missouri, North Carolina, and South Carolina. My testimony
9 has addressed topics including, but not limited to, cost of service and rate design,
10 return on equity (“ROE”), revenue requirements, ratemaking policy, large customer
11 renewable programs, qualifying facility rates, telecommunications deregulation,
12 resource certification, energy efficiency/demand side management, fuel cost
13 adjustment mechanisms, decoupling, and the collection of cash earnings on
14 construction work in progress.

15 **Q. ARE YOU SPONSORING EXHIBITS IN YOUR TESTIMONY?**

16 A. Yes. I am sponsoring the exhibits listed in the Table of Contents.

17 **Q. PLEASE BRIEFLY DESCRIBE WALMART’S OPERATIONS IN NORTH DAKOTA.**

18 A. As shown on Walmart’s website, Walmart operates 17 retail units and employs over
19 4,600 associates in North Dakota. In fiscal year ending 2021, Walmart purchased

1 \$54.8 million worth of goods and services from North Dakota-based suppliers,
2 supporting over 4,500 supplier jobs.¹

3 **Q. PLEASE BRIEFLY DESCRIBE WALMART’S OPERATIONS WITHIN NORTHERN STATES**
4 **POWER COMPANY’S (“NSP” OR “COMPANY”) SERVICE TERRITORY.**

5 A. Walmart has four stores and related facilities and one distribution center that take
6 electric service from NSP, primarily on the Company’s General Service (“GS”) and
7 General Time of Day Service (“GTOD”) schedules.

8

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

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

11 A. The purpose of my testimony is to respond to NSP’s rate case filing and to provide
12 recommendations to assist the Commission in its thorough and careful consideration
13 of the customer impact of the Company’s proposed rate increase.

14 **Q. IN SETTING THE REVENUE REQUIREMENT, ROE, ALLOCATION, AND RATE DESIGN**
15 **CHANGES FOR THE COMPANY, SHOULD THE COMMISSION CONSIDER THE IMPACT**
16 **OF THE PROPOSED RATE INCREASE ON BUSINESS CUSTOMERS?**

17 A. Yes. Electricity is a significant operating cost for retailers such as Walmart. When
18 electric rates increase, the increased cost to retailers can put pressure on consumer
19 prices and on the other expenses required by a business to operate. The Commission
20 should thoroughly and carefully consider the impact on customers in examining the

¹ <https://corporate.walmart.com/our-story/our-locations>

1 requested revenue requirement and ROE, in addition to all other facets of this case,
2 to ensure that any increase in the Company's rates is the minimum amount necessary
3 to provide safe, adequate, and reliable service, while also providing RMP the
4 opportunity to recover its reasonable and prudent costs and earn a reasonable return
5 on its investment.

6 **Q. PLEASE SUMMARIZE WALMART'S RECOMMENDATIONS TO THE COMMISSION.**

7 A. Walmart's recommendations to the Commission are as follows:

8 1) The Commission should closely examine the Company's proposed revenue
9 requirement increase and the associated proposed increase in ROE, especially when
10 viewed in light of:

- 11 a. The customer impact of the resulting revenue requirement increase as
12 discussed above;
- 13 b. The ability of the Company to implement an interim rate increase which has
14 allowed the Company to increase rates and revenue by approximately \$16.4
15 million prior to the full examination of their proposals in this case;²
- 16 c. The proposed use of a future test year, which reduces regulatory lag and,
17 therefore utility risk, by allowing the utility to include projected cost increases
18 in its rates at the time they will be in effect;
- 19 d. Recent rate case ROEs approved by the Commission; and
- 20 e. Recent rate case ROEs approved by commissions nationwide.

² See Order on Interim Rates, December 16, 2020.

- 1 2) For the purposes of this docket, Walmart recognizes that the Commission has
2 approved the “stratification” methodology for production capacity cost for a
3 number of years and does not propose an alternative production capacity cost
4 allocation methodology in this case.
- 5 3) Walmart does not take a position on the remainder of the Company’s proposed
6 cost of service study. However, to the extent that alternative cost of service
7 methodologies or modifications to the Company's methodology are proposed by
8 other parties, Walmart reserves the right to address any such changes in
9 accordance with the Commission’s procedures in this docket.
- 10 4) For the purposes of this docket, at the Company’s proposed revenue requirement,
11 Walmart does not oppose the Company’s proposed revenue allocation
12 methodology.
- 13 5) If the Commission determines that the appropriate revenue requirement is less
14 than that proposed by the Company, the Commission should start with the
15 Company’s proposed revenue allocation and use the reduction in revenue
16 requirement to further move individual rate classes towards cost of service-based
17 revenue levels.
- 18 6) Walmart does not oppose the Company’s proposal to increase the Energy Charge
19 Credit (“ECC”) from 1.05 cents/kWh to 1.25 cents/kWh.

1 **Q. DOES THE FACT THAT YOU MAY NOT ADDRESS AN ISSUE OR POSITION ADVOCATED**
2 **BY THE COMPANY INDICATE WALMART’S SUPPORT?**

3 A. No. The fact that an issue is not addressed herein or in related filings should not be
4 construed as an endorsement of, agreement with, or consent to any filed position.

5

6 **III. Revenue Requirement and Return on Equity**

7 **Q. WHAT REVENUE REQUIREMENT INCREASE DOES THE COMPANY PROPOSE IN ITS**
8 **FILING?**

9 A. The Company proposes a total revenue requirement increase for the forecast 2021
10 test year, of approximately \$19.197 million, or 9.3 percent, consisting of a base
11 revenue increase of \$39.4 million and the elimination of the recovery of \$20.2 million
12 in the current Transmission Cost Recovery and Renewable Energy Riders. *See Revised*
13 Direct Testimony of Greg P. Chamberlain, page 3, line 7 to line 12.

14 **Q. WHAT IS THE COMPANY’S PROPOSED ROE IN THIS DOCKET?**

15 A. The Company presents testimony to support a ROE of 10.2 percent, based on a range
16 of 9.95 percent to 11.04 percent. *See Direct Testimony of Dylan D’Ascendis, page 5,*
17 Table 2. The requested ROE at the Company’s proposed capital structure of 52.5
18 percent equity results in a proposed overall rate of return of 7.35 percent. *Id.*, page
19 3, Table 1.

1 **Q. WHAT IS YOUR UNDERSTANDING OF THE CURRENTLY APPROVED ROE AND EQUITY**
2 **RATIO FOR NSP?**

3 A. My understanding is that the currently effective ROE approved by the Commission for
4 the Company is 10.25 percent and the currently effective equity ratio is 52.56 percent.
5 However, it is important to note that the currently effective ROE was the result of a
6 negotiated multi-year rate plan, in which the initial year ROE was 9.75 percent, the
7 ROE for the second and third years was 10.0 percent, and the ROE beginning in the
8 fourth year was 10.25 percent. Additionally, the multi-year rate plan implemented an
9 earnings sharing mechanism to refund to customers certain earnings above the
10 authorized ROE during the term. See Order Adopting Settlement, Case No. PU-12-
11 813, page 5.

12 **Q. IS WALMART CONCERNED THAT THE COMPANY'S PROPOSED ROE IS EXCESSIVE?**

13 A. Walmart is concerned that the Company's proposed ROE of 10.2 percent is excessive,
14 especially in light of:

- 15 1) The customer impact of the resulting revenue requirement increase as discussed
16 above;
- 17 2) The ability of the Company to implement an interim rate increase which has
18 allowed the Company to increase rates and revenue by approximately \$16.4
19 million prior to the full examination of their proposals in this case;
- 20 3) The proposed use of a future test year, which reduces regulatory lag and,
21 therefore utility risk, by allowing the utility to include projected cost increases in
22 its rates at the time they will be in effect;

- 1 4) Recent rate case ROEs approved by the Commission; and
2 5) Recent rate case ROEs approved by commissions nationwide.

3

4 **A. Recent Rate Case ROEs Approved by the Commission**

5 **Q. IS THE COMPANY'S PROPOSED ROE SIGNIFICANTLY HIGHER THAN THE ROEs**
6 **APPROVED BY THE COMMISSION FROM 2017 TO PRESENT?**

7 A. Yes. Since 2017 the Commission has issued Orders with stated ROEs in two cases,
8 with the average of the ROEs approved equal to 9.71 percent. See Exhibit SWC-2.

9 **Q. IN WHICH OTHER CASES DID THE COMMISSION ISSUE ORDERS WITH STATED ROEs?**

10 A. The Commission issued Orders with stated ROEs in the following cases:

- 11 • Case No. PU-16-666, the MDU Resources Group Inc. general rate case that
12 completed in 2017, in which the Commission approved an ROE of 9.65 percent.
- 13 • Case No. PU-17-398, the Otter Tail Power Co. general rate case that completed in
14 2018, in which the Commission approved an ROE of 9.77 percent.

15 As such, the Company's proposed ROE of 10.2 percent is counter to recent
16 Commission ROE decisions. *Id.*

17

18 **B. National Utility Industry ROE Trends**

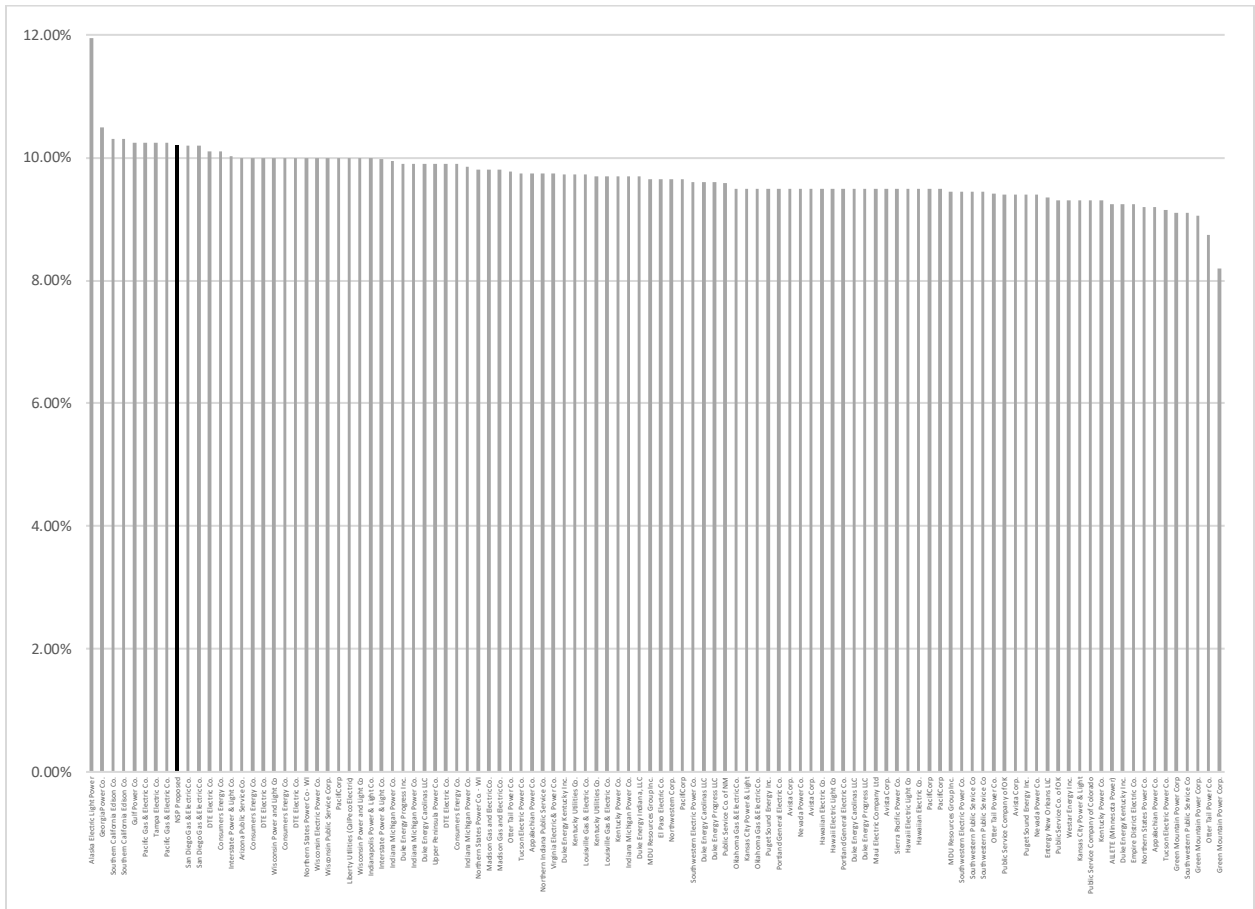
19 **Q. IS THE COMPANY'S PROPOSED ROE SIGNIFICANTLY HIGHER THAN THE ROEs**
20 **APPROVED BY OTHER UTILITY REGULATORY COMMISSIONS IN 2017, 2018, 2019,**
21 **2020, AND SO FAR IN 2021?**

22 A. Yes. According to data from S&P Global Market Intelligence, a financial news and

1 reporting company, the average of the 155 reported electric utility rate case ROEs
2 authorized by commissions to investor-owned utilities in 2017, 2018, 2019, 2020, and
3 so far in 2021, is 9.56 percent. The range of reported authorized ROEs for the period
4 is 8.20 percent to 11.95 percent, and the median authorized ROE is 9.58 percent. The
5 average and median values are significantly below the Company's proposed ROE of
6 10.2 percent. See Exhibit SWC-2. As such, the Company's proposed 10.2 percent ROE
7 is counter to broader electric industry trends.

8 **Q. SEVERAL OF THE REPORTED AUTHORIZED ROEs ARE FOR DISTRIBUTION-ONLY**
9 **UTILITIES OR FOR ONLY A UTILITY'S DISTRIBUTION SERVICE RATES. WHAT IS THE**
10 **AVERAGE AUTHORIZED ROE IN THE REPORTED GROUP FOR VERTICALLY**
11 **INTEGRATED UTILITIES?**

12 A. In the group reported by S&P Global, the average ROE for vertically integrated utilities
13 authorized from 2017 through present is 9.69 percent, and the trend in these
14 averages has declined overall since 2017. The average ROE authorized for vertically
15 integrated utilities in 2017 was 9.80 percent; in 2018 it was 9.68 percent; in 2019 it
16 was 9.73 percent; in 2020 it was 9.55 percent; and so far in 2021 is 9.5 percent. *Id.*
17 As such, the Company's proposed 10.2 percent ROE is counter to broader electric
18 industry trends and, in fact, as shown in Figure 1, would be equal to the fifth highest
19 approved ROE for a vertically integrated utility from 2017 to present if approved by
20 the Commission.



1
 2 **Figure 1. NSP Proposed ROE Versus Authorized ROEs for Vertically Integrated Utilities, 2017 to present.**
 3 **Source: Exhibit SWC-2.**

4 **Q. WHAT IS THE REVENUE REQUIREMENT IMPACT IF THE COMMISSION WERE TO**
 5 **AWARD AN ROE OF 9.69 PERCENT, THE AVERAGE ROE AWARDED FOR VERTICALLY**
 6 **INTEGRATED UTILITIES FROM 2017 TO PRESENT?**

7 **A.** Assuming Company’s proposed cost of debt, preferred stock, and equity ratio,
 8 authorizing NSP an ROE of 9.69 percent instead of the requested 10.2 percent would
 9 result in a reduction to the requested revenue requirement increase of about \$2.5
 10 million, or about 13 percent of the Company’s net proposed revenue requirement
 11 increase. See Exhibit SWC-3.

1 **Q. IS WALMART RECOMMENDING THAT THE COMMISSION BE BOUND BY ROEs**
2 **AUTHORIZED BY OTHER STATE REGULATORY AGENCIES?**

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

8

9 ***E. Conclusion***

10 **Q. WHAT IS YOUR RECOMMENDATION TO THE COMMISSION IN REGARDS TO THE**
11 **COMPANY’S PROPOSED ROE?**

12 A. The Commission should closely examine the Company’s proposed revenue
13 requirement increase and the associated proposed increase in ROE, especially when
14 viewed in light of:

15 1) The customer impact of the resulting revenue requirement increase as discussed
16 above

17 2) The ability of the Company to implement an interim rate increase which has
18 allowed the Company to increase rates and revenue by approximately \$16.4
19 million prior to the full examination of their proposals in this case;

20 3) The proposed use of a future test year, which reduces regulatory lag and,
21 therefore utility risk, by allowing the utility to include projected cost increases in
22 its rates at the time they will be in effect;

- 1 4) Recent rate case ROEs approved by the Commission; and
2 5) Recent rate case ROEs approved by commissions nationwide.

3

4 **IV. Cost of Service Study and Revenue Allocation**

5 **Q. GENERALLY, WHAT IS WALMART'S POSITION ON SETTING RATES BASED ON THE**
6 **UTILITY'S COST OF SERVICE?**

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

10 **Q. WHAT IS YOUR UNDERSTANDING OF THE COMPANY'S PROPOSED PRODUCTION**
11 **CAPACITY COST ALLOCATION METHODOLOGY?**

12 A. My understanding is that the Company proposes to allocate production capacity cost
13 using an equivalent peaker methodology, or stratification. The stratification
14 methodology sets out the cost per kW of a combustion turbine as the benchmark
15 below which a generation resource's costs are functionalized as capacity-related and
16 above which a resource's costs are functionalized as energy-related. Then that
17 benchmark is applied for each generation type to determine the respective capacity
18 and energy costs. See Revised Direct Testimony of Michael Peppin, page 8, line 20 to
19 page 9, line 12.

1 **Q. DOES WALMART SUPPORT THE USE OF STRATIFICATION FOR PRODUCTION**
2 **CAPACITY COST ALLOCATION?**

3 A. Generally no, as the allocation of production capacity costs on an energy basis does
4 not represent the fixed nature of the costs, wherein they do not vary with the level of
5 output and must be paid even if there is no output. Ultimately, the manner of the
6 operation of a generation unit does not change the fact that the fixed costs are, in
7 fact, fixed.³ Additionally, the allocation of fixed costs on an energy basis introduces
8 shifts in cost responsibility from lower load factor classes to higher load factor classes,
9 which is a driver for the Company's use of the ECC for higher load factor customers.
10 Finally, stratification essentially hard codes the Company's generation into capacity-
11 related and energy-related resources irrespective of actual dispatch order in the
12 operations of the system. Policy changes or changes in dispatch that reflect the
13 environmental attributes of system resources could impact the validity of the
14 stratification results after rates have been made effective. However, for the purposes
15 of this docket, Walmart recognizes that the Commission has approved the
16 stratification methodology for a number of years and does not propose an alternative
17 production capacity cost allocation methodology in this case.

³ Pindyck, Robert S. and Daniel L. Rubinfeld, Microeconomics, 5th ed., 2001, page 206.

1 **Q. DOES WALMART TAKE A POSITION ON THE REMAINDER OF THE COMPANY'S**
2 **PROPOSED COST OF SERVICE METHODOLOGY AT THIS TIME?**

3 A. No. However, to the extent that alternative cost of service methodologies or
4 modifications to the Company's methodology are proposed by other parties, Walmart
5 reserves the right to address any such changes in accordance with the Commission's
6 procedures in this docket.

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

9 A. The Company reflects this relationship in their cost of service results using class-
10 specific rates of return. These rates of return can be converted into a rate of return
11 index ("RRI"), which is an indexed measure of the relationship of the rate of return for
12 an individual customer class to the total system rate of return. An RRI greater than
13 1.0 means that the customer class is paying rates in excess of costs incurred to serve
14 that class, and an RRI less than 1.0 means that the customer class is paying rates less
15 than the costs incurred to serve that class. As such, those rate classes with an RRI
16 greater than 1.0 are subsidizing the classes with an RRI less than 1.0.

17 **Q. HAS THE COMPANY CALCULATED CLASS RRIs BASED ON THE COMPANY'S COST OF**
18 **SERVICE RESULTS?**

19 A. Yes, as shown in Table 1 below:
20

1

Table 1. Customer Class Rates of Return and Rate of Return Index, Current Rates, NSP Proposed Cost of Service Study Results.

Customer Class	Rate of Return, Current (%)	RRI, Current
Residential	5.42	1.04
Small Non-Demand	6.89	1.32
Demand	5.01	0.96
<i>Secondary</i>	5.89	1.13
<i>Primary</i>	-0.64	-0.12
Street Lighting	-1.50	-0.29
Jurisdiction	5.21	1.00

Source: Exhibit ____ (MAP), schedule 4, page 1

2

3 **Q. WHAT IS YOUR UNDERSTANDING OF THE COMPANY’S REVENUE ALLOCATION**
 4 **PROPOSAL?**

5 A. My understanding is that the Company proposes to move classes closer to cost-based
 6 revenue requirement levels for each class, while moderating movement for the
 7 Lighting class. See Direct Testimony of Nicholas Paluck, page 5, line 3 to line 10.

8 **Q. IS THIS MOVEMENT REFLECTED IN THE PROPOSED RRI FOR EACH CLASS?**

9 A. Yes, as shown in Table 2 below.

Table 2. Customer Class Rate of Return Index, Current and Proposed Rates, NSP Proposed Cost of Service Study Results and Revenue Allocation.

Customer Class	RRI, Current	RRI, Proposed
Residential	1.04	1.03
Small Non-Demand	1.32	1.05
Demand	0.96	0.98
<i>Secondary</i>	1.13	1.12
<i>Primary</i>	-0.12	0.13
Street Lighting	-0.29	0.30
Jurisdiction	1.00	1.00

Source: Exhibit ____ (MAP), schedule 4, page 1

10

11 **Q. WHAT IS WALMART’S RECOMMENDATION TO THE COMMISSION ON THIS ISSUE?**

12 A. For the purposes of this docket, at the Company’s proposed revenue requirement,
 13 Walmart does not oppose the Company’s proposed revenue allocation methodology.

1 **Q. WHAT IS WALMART’S RECOMMENDATION TO THE COMMISSION IF IT DETERMINES**
2 **THAT A LOWER REVENUE REQUIREMENT IS APPROPRIATE?**

3 A. If the Commission determines that the appropriate revenue requirement is less than
4 that proposed by the Company, the Commission should start with the Company’s
5 proposed revenue allocation and use the reduction in revenue requirement to further
6 move individual rate classes towards cost of service-based revenue levels.

7

8 **V. General Service and General Time of Day Service Rate Design**

9 **Q. WHAT IS YOUR UNDERSTANDING OF THE COMPANY’S ENERGY CHARGE CREDIT FOR**
10 **COMMERCIAL & INDUSTRIAL DEMAND CUSTOMERS, INCLUDING GS AND GTOD**
11 **CUSTOMERS?**

12 A. My understand of the ECC is that it is a high load factor that is applied to a customer’s
13 monthly billed usage above 400 hours use (400 kWh/kW or 55 percent load factor) to
14 mitigate the negative impacts of the Company’s stratification of production capacity
15 cost allocation on high load factor customers. *See* Revised Direct Testimony of
16 Nicholas Paluck, page 11, line 16 to line 22.

17 **Q. WHAT IS YOUR UNDERSTANDING OF THE COMPANY’S PROPOSED CHANGE TO THE**
18 **ECC?**

19 A. My understanding is that the Company proposes to increase the ECC from 1.05
20 cents/kWh to 1.25 cents/kWh. The Company states that the change is designed to
21 maintain the relationship of the ECC to the combination of base energy and fuel rates.
22 *Id.*, page 12, line 9 to line 11.

1 **Q. WHAT IS WALMART’S RECOMMENDATION TO THE COMMISSION ON THIS ISSUE?**

2 A. Walmart does not oppose the Company’s proposal to increase the ECC from 1.05
3 cents/kWh to 1.25 cents/kWh.

4 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

5 A. Yes.

Steve W. Chriss

Walmart Inc.

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

EXPERIENCE

July 2007 – Present

Walmart Inc., Bentonville, AR

Director, Energy Services (October 2018 – Present)

Director, Energy and Strategy Analysis (October 2016 – October 2018)

Senior Manager, Energy Regulatory Analysis (June 2011 – October 2016)

Manager, State Rate Proceedings (July 2007 – June 2011)

June 2003 – July 2007

Public Utility Commission of Oregon, Salem, OR

Senior Utility Analyst (February 2006 – July 2007)

Economist (June 2003 – February 2006)

January 2003 - May 2003

North Harris College, Houston, TX

Adjunct Instructor, Microeconomics

June 2001 - March 2003

Econ One Research, Inc., Houston, TX

Senior Analyst (October 2002 – March 2003)

Analyst (June 2001 – October 2002)

EDUCATION

2001

Louisiana State University

M.S., Agricultural Economics

1997-1998

University of Florida

Graduate Coursework, Agricultural Education and Communication

1997

Texas A&M University

B.S., Agricultural Development

B.S., Horticulture

PRESENT MEMBERSHIPS

Arizona Independent Scheduling Administrators Association, Board

Arizonans for Electric Choice & Competition, Chairman

Edison Electric Institute National Key Accounts Program, Customer Advisory Group

Florida Advisory Council for Climate and Energy

Renewable Energy Buyers Alliance, Advisory Board

PAST MEMBERSHIPS

Southwest Power Pool, Corporate Governance Committee, 2019

TESTIMONY BEFORE REGULATORY COMMISSIONS

2021

New Mexico Case No. 20-00222-UT: In the Matter of the Joint Application of Avangrid, Inc., Avangrid Networks, Inc., NM Green Holdings, Inc., Public Service Company of New Mexico and PNM Resources, Inc. For Approval of the Merger of NM Green Holdings, Inc. with PNM Resources, Inc.; Approval of a General Diversification Plan; and All Other Authorizations and Approvals Requires to Consummate and Implement this Transaction.

2020

Arizona Docket No. E-01345A-19-0236: In the Matter of the Application of Arizona Public Service Company for a Hearing to Determine the Fair Value of Ratemaking Purposes, to Fix a Just and Reasonable Return Thereon and to Approve Rate Schedules Designed to Develop Such Return.

Florida Docket No. 20200176-EI: In re: Petition by Duke Energy Florida, LLC for a Limited Proceeding to Approve Clean Energy Connection Program and Tariff and Stipulation.

Florida Docket No. 20200092-EI: In re: Storm Protection Plan Cost Recovery Clause.

Nevada Docket No. 20-05003: Application of Nevada Power Company d/b/a NV Energy Filed Under Advice Letter No. 504 to Establish Customer Price Stability Tariff Schedule No. CPST (the "Program") to Assist Certain Qualifying Customers During the COVID-19 Pandemic and Economic Downturn, and to Address Certain Customer Requests for Price Stability and Potential Cost Savings in Meeting Customer Specific Business Needs and Sustainability Objectives.

Nevada Docket No. 20-05004: Application of Sierra Pacific Power Company d/b/a NV Energy Filed Under Advice Letter No. 629-E to Establish Customer Price Stability Tariff Schedule No. CPST (the "Program") to Assist Certain Qualifying Customers During the COVID-19 Pandemic and Economic Downturn, and to Address Certain Customer Requests for Price Stability and Potential Cost Savings in Meeting Customer Specific Business Needs and Sustainability Objectives.

Utah Docket No. 20-035-04: Application of Rocky Mountain Power for the Authority to Increase its Retail Electric Utility Rates in Utah and for Approval of its Proposed Electric Service Schedules and Electric Service Regulations.

Wyoming Docket No. 20000-578-ER-20: In the Matter of the Application of Rocky Mountain Power for Authority to Increase its Retail Electric Service Rates by Approximately \$7.1 Million Per Year or 1.1 Percent, to Revise the Energy Cost Adjustment Mechanism, and to Discontinue Operations at Cholla Unit 4.

Virginia Case No. PUR-2020-00015: Application of Appalachian Power Company for a 2020 Triennial Review of the Rates, Terms and Conditions for the Provision of Generation, Distribution and Transmission Services Pursuant to §56-585.1 A of the Code of Virginia.

Oregon Docket No. UE 374: In the Matter of PacifiCorp d/b/a Pacific Power Request for a General Rate Revision.

Florida Docket No. 20200067-EI: In re: Review of 2020-2029 Storm Protection Plan pursuant to Rule 25-6.030, F.A.C., Tampa Electric Company.

Florida Docket No. 20200069-EI: In re: Review of 2020-2029 Storm Protection Plan pursuant to Rule 25-6.030, F.A.C., Duke Energy Florida, LLC.

Florida Docket No. 20200070-EI: In re: Review of 2020-2029 Storm Protection Plan pursuant to Rule 25-6.030, F.A.C., Gulf Power Company.

Florida Docket No. 20200071-EI: In re: Review of 2020-2029 Storm Protection Plan pursuant to Rule 25-6.030, F.A.C., Florida Power & Light Company.

North Carolina Docket No. E-2, Sub 1219: Application of Duke Energy Progress, LLC for Adjustment of Rates and Charges Applicable to Electric Service in North Carolina.

North Dakota Public Service Commission Case No. PU-20-441

Missouri Case No. ER-2019-0374: In the Matter of the Empire District Electric Company's Request for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in its Missouri Service Area.

North Carolina Docket No. E-7, Sub 1214: In the Matter of Application of Duke Energy Carolinas, LLC for Adjustment of Rates and Charges Applicable to Electric Service in North Carolina.

Texas Docket No. 49831: Application of Southwestern Public Service Company for Authority to Change Rates.

2019

Missouri Case No. ER-2019-0335: In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to Decrease its Revenues for Electric Service.

Michigan Case No. U-20561: In the Matter of the Application of DTE Electric Company for Authority to Increase its Rates, Amend its Rate Schedules and Rules Governing the Distribution and Supply of Electric Energy, and for Miscellaneous Accounting Authority.

Indiana Cause No. 45253: Petition of Duke Energy Indiana, LLC Pursuant to Ind. Code §§ 8-1-2-42.7 and 8-1-2-61, For (1) Authority to Modify its Rates and Charges for Electric Utility Service Through a Step-In of New Rates and Charges Using a Forecasted Test Period; (2) Approval of New Schedules of Rates and Charges, General Rules and Regulations, and Riders; (3) Approval of a Federal Mandate Certificate Under Ind. Code § 8-1-8.4-1; (4) Approval of Revised Electric Depreciation Rates Applicable to its Electric Plant in Service; (5) Approval of Necessary and Appropriate Accounting Deferral Relief; and (6) Approval of a Revenue Decoupling Mechanism for Certain Customer Classes.

Arizona Docket No. E-01933A-19-0228: In the Matter of the Application of Tucson Electric Power Company for the Establishment of Just and Reasonable Rates and Charges Designed to Realize a Reasonable Rate of Return on the Fair Value of the Properties of Tucson Electric Power Company Devoted to its Operations Throughout the State of Arizona and for Related Approvals.

Georgia Docket No. 42516: In Re: Georgia Power's 2019 Rate Case.

Colorado Proceeding No. 19AL-0268E: Re: In the Matter of Advice No. 1797-Electric of Public Service Company of Colorado to Revise its Colorado P.U.C. No. 8-Electric Tariff to Implement Rate Changes Effective on Thirty Days' Notice.

New York Case No. 19-E-0378: Proceeding on the Motion of the Commission as to the Rates, Charges, Rules, and Regulations of New York State Electric & Gas Corporation for Electric Service.

New York Case No. 19-E-0380: Proceeding on the Motion of the Commission as to the Rates, Charges, Rules, and Regulations of Rochester Gas & Electric Corporation for Electric Service.

Maryland Case No. 9610: In the Matter of the Application of Baltimore Gas and Electric Company for Adjustments to its Electric and Gas Base Rates.

Nevada Docket No. 19-06002: In the Matter of the Application by Sierra Pacific Power Company, D/B/A NV Energy, Filed Pursuant to NRS 704.110(3) and NRS 704.110(4), Addressing its Annual Revenue Requirement for General Rates Charged to All Classes of Electric Customers.

Florida Docket No. 20190061-EI: In Re: Petition of Florida Power & Light Company for Approval of FPL SolarTogether Program and Tariff.

North Dakota Public Service Commission Case No. PU-20-441

Wisconsin Docket No. 6690-UR-126: Application of Wisconsin Public Service Corporation for Authority to Adjust Electric and Natural Gas Rates – Test Year 2020.

Wisconsin Docket No. 5-UR-109: Joint Application of Wisconsin Electric Power Company and Wisconsin Gas LLC for Authority to Adjust Electric, Natural Gas, and Steam Rates – Test Year 2020.

New Mexico Case No. 19-00158-UT: In the Matter of the Application of Public Service Company of New Mexico for Approval of PNM Solar Direct Voluntary Renewable Energy Program, Power Purchase Agreement, and Advice Notice Nos. 560 and 561.

Indiana Cause No. 45235: Petition of Indiana Michigan Power Company, and Indiana Corporation, for Authority to Increase its Rates and Charges for Electric Utility Service through a Phase In Rate Adjustment; and for Approval of Related Relief Including: (1) Revised Depreciation Rates; (2) Accounting Relief; (3) Inclusion in Rate Base of Qualified Pollution Control Property and Clean Energy Project; (4) Enhancements to the Dry Sorbent Injection System; (5) Advanced Metering Infrastructure; (6) Rate Adjustment Mechanism Proposals; and (7) New Schedules of Rates, Rules and Regulations.

Iowa Docket No. RPU-2019-0001: In Re: Interstate Power and Light Company.

Texas Docket No. 49494: Application of AEP Texas Inc. for Authority to Change Rates.

Arkansas Docket No. 19-008-U: In the Matter of the Application of Southwestern Electric Power Company for Approval of a General Change in Rates and Tariffs.

Virginia Case No. PUR-2019-00050: Application of Virginia Electric and Power Company for Determination of the Fair Rate of Return on Common Equity Pursuant to § 56-585.1:1 of the Code of Virginia.

Indiana Docket No. 45159: Petition of Northern Indiana Public Service Company LLC Pursuant to Indiana Code §§ 8-1-2-42.7, 8-1-2-61 and Indiana Code §§ 1-2.5-6 for (1) Authority to Modify its Rates and Charges for Electric Utility Service Through a Phase In of Rates; (2) Approval of New Schedules of Rates and Charges, General Rules and Regulations, and Riders; (3) Approval of Revised Common and Electric Depreciation Rates Applicable to its Electric Plant in Service; (4) Approval of Necessary and Appropriate Accounting Relief; and (5) Approval of a New Service Structure for Industrial Rates.

Texas Docket No. 49421: Application of Centerpoint Energy Houston Electric, LLC for Authority to Change Rates.

Nevada Docket No. 18-11015: Re: Application of Nevada Power Company d/b/a NV Energy, Filed Under Advice No. 491, to Implement NV Greenenergy 2.0 Rider Schedule No. NGR 2.0 to Allow Eligible Commercial Bundled Service Customers to Voluntarily Contract with the Utility to Increase Their Use of Reliance on Renewable Energy at Current Market-Based Fixed Prices.

Nevada Docket No. 18-11016: Re: Application of Sierra Pacific Power Company d/b/a NV Energy, Filed Under Advice No. 614-E, to Implement NV Greenenergy 2.0 Rider Schedule No. NGR 2.0 to Allow Eligible Commercial Bundled Service Customers to Voluntarily Contract with the Utility to Increase Their Use of Reliance on Renewable Energy at Current Market-Based Fixed Prices.

Georgia Docket No. 42310: In Re: Georgia Power Company's 2019 Integrated Resource Plan and Application for Certification of Capacity From Plant Scherer Unit 3 and Plant Goat Rock Units 9-12 and Application for Decertification of Plant Hammond Units 1-4, Plant McIntosh Unit 1, Plant Langdale Units 5-6, Plant Riverview Units 1-2, and Plant Estatoah Unit 1.

North Dakota Public Service Commission Case No. PU-20-441

Wyoming Docket Nos. 20003-177-ET-18: In the Matter of the Application of Cheyenne Light, Fuel and Power Company D/B/A Black Hills Energy For Approval to Implement a Renewable Ready Service Tariff.

South Carolina Docket No. 2018-318-E: In the Matter of the Application of Duke Energy Progress, LLC For Adjustments in Electric Rate Schedules and Tariffs.

Montana Docket No. D2018.2.12: Application for Authority to Increase Retail Electric Utility Service Rates and for Approval of Electric Service Schedules and Rules and Allocated Cost of Service and Rate Design.

Louisiana Docket No. U-35019: In Re: Application of Entergy Louisiana, LLC for Authorization to Make Available Experimental Renewable Option and Rate Schedule ERO.

Arkansas Docket No. 18-037-TF: In the Matter of the Petition of Entergy Arkansas, Inc. For Its Solar Energy Purchase Option.

2018

South Carolina Docket No. 2017-370-E: Joint Application and Petition of South Carolina Electric & Gas Company and Dominion Energy, Inc., for Review and Approval of a Proposed Business Combination Between SCANA Corporation and Dominion Energy, Inc., as may be Required, and for a Prudency Determination Regarding the Abandonment of the V.C. Summer Units 2 & 3 Project and Associated Customer Benefits and Cost Recovery Plans.

Kansas Docket No. 18-KCPE-480-RTS: In the Matter of the Application of Kansas City Power & Light Company to Make Certain Changes in its Charges for Electric Service.

Virginia Case No. PUR-2017-00173: Petition of Wal-Mart Stores East, LP and Sam's East, Inc. for Permission to Aggregate or Combine Demands of Two or More Individual Nonresidential Retail Customers of Electric Energy Pursuant to § 56-577 A 4 of the Code of Virginia.

Virginia Case No. PUR-2017-00174: Petition of Wal-Mart Stores East, LP and Sam's East, Inc. for Permission to Aggregate or Combine Demands of Two or More Individual Nonresidential Retail Customers of Electric Energy Pursuant to § 56-577 A 4 of the Code of Virginia.

Oregon Docket No. UM 1953: In the Matter of Portland General Electric Company, Investigation into Proposed Green Tariff.

Virginia Case No. PUR-2017-00179: Application of Appalachian Power Company for Approval of an 100% Renewable Energy Rider Pursuant to § 56-577.A.5 of the Code of Virginia.

Missouri Docket No. ER-2018-0145: In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service.

Missouri Docket No. ER-2018-0146: In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service.

Kansas Docket No. 18-WSEE-328-RTS: In the Matter of the Joint Application of Westar Energy, Inc. and Kansas Gas and Electric Company for Approval to Make Certain Changes in their Charges for Electric Service.

Oregon Docket No. UE 335: In the Matter of Portland General Electric Company, Request for a General Rate Revision.

North Dakota Public Service Commission Case No. PU-20-441

North Dakota Case No. PU-17-398: In the Matter of the Application of Otter Tail Power Company for Authority to Increase Rates for Electric Utility Service in North Dakota.

Virginia Case No. PUR-2017-00179: Application of Appalachian Power Company for Approval of an 100 Percent Renewable Energy Rider Pursuant to § 56-577 A 5 of the Code of Virginia.

Missouri Case No. ET-2018-0063: In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri for Approval of 2017 Green Tariff.

New Mexico Case No. 17-00255-UT: In the Matter of Southwestern Public Service Company's Application for Revision of its Retail Rates Under Advice Notice No. 272.

Virginia Case No. PUR-2017-00157: Application of Virginia Electric and Power Company for Approval of 100 Percent Renewable Energy Tariffs for Residential and Non-Residential Customers.

Kansas Docket No. 18-KCPE-095-MER: In the Matter of the Application of Great Plains Energy Incorporated, Kansas City Power & Light Company, and Westar Energy, Inc. for Approval of the Merger of Westar Energy, Inc. and Great Plains Energy Incorporated.

North Carolina Docket No. E-7, Sub 1146: In the Matter of the Application of Duke Energy Carolinas, LLC for Adjustment of Rates and Charges Applicable to Electric Service in North Carolina.

Louisiana Docket No. U-34619: In Re: Application for Expedited Certification and Approval of the Acquisition of Certain Renewable Resources and the Construction of a Generation Tie Pursuant to the 1983 and/or/1994 General Orders.

Missouri Case No. EM-2018-0012: In the Matter of the Application of Great Plains Energy Incorporated for Approval of its Merger with Westar Energy, Inc.

2017

Arkansas Docket No. 17-038-U: In the Matter of the Application of Southwestern Electric Power Company for Approval to Acquire a Wind Generating Facility and to Construct a Dedicated Generation Tie Line.

Texas Docket No. 47461: Application of Southwestern Electric Power Company for Certificate of Convenience and Necessity Authorization and Related Relief for the Wind Catcher Energy Connection Project.

Oklahoma Cause No. PUD 201700267: Application of Public Service Company of Oklahoma for Approval of the Cost Recovery of the Wind Catcher Energy Connection Project; A Determination There is Need for the Project; Approval for Future Inclusion in Base Rates Cost Recovery of Prudent Costs Incurred by PSO for the Project; Approval of a Temporary Cost Recovery Rider; Approval of Certain Accounting Procedures Regarding Federal Production Tax Credits; Waiver of OAC 165:35-38-5(E); And Such Other Relief the Commission Deems PSO is Entitled.

Nevada Docket No. 17-06003: In the Matter of the Application of Nevada Power Company, d/b/a NV Energy, Filed Pursuant to NRS 704.110(3) and (4), Addressing Its Annual Revenue Requirement for General Rates Charged to All Classes of Customers.

North Carolina Docket No. E-2, Sub 1142: In the Matter of the Application of Duke Energy Progress, LLC for Adjustment of Rates and Charges Applicable to Electric Service in North Carolina.

North Dakota Public Service Commission Case No. PU-20-441

Oklahoma Cause No. PUD 201700151: Application of Public Service Company of Oklahoma, an Oklahoma Corporation, for an Adjustment in its Rates and Charges and the Electric Service Rules, Regulations and Conditions of Service for Electric Service in the State of Oklahoma.

Kentucky Case No. 2017-00179: Electronic Application of Kentucky Power Company for (1) a General Adjustment of its Rates for Electric Service; (2) an Order Approving its 2017 Environmental Compliance Plan; (3) an Order Approving its Tariffs and Riders; (4) an Order Approving Accounting Practices to Establish Regulatory Assets and Liabilities; and (5) an Order Granting All Other Requested Relief.

New York Case No. 17-E-0238: Proceeding on Motion of the Commission as to the Rates, Charges, Rules, and Regulations of Niagara Mohawk Power Corporation for Electric and Gas Service.

Virginia Case No. PUR-2017-00060: Application of Virginia Electric and Power Company for Approval of 100 Percent Renewable Energy Tariffs Pursuant to §§ 56-577 A 5 and 56-234 of the Code of Virginia.

New Jersey Docket No. ER17030308: In the Matter of the Petition of Atlantic City Electric Company for Approval of Amendments to its Tariff to Provide for an Increase in Rates and Charges for Electric Service Pursuant to N.J.S.A. 48:2-21 and N.J.S.A. 48:2-21.1, for Approval of a Grid Resiliency Initiative and Cost Recovery Related Thereto, and for Other Appropriate Relief.

Texas Docket No. 46831: Application of El Paso Electric Company to Change Rates.

Oregon Docket No. UE 319: In the Matter of Portland General Electric Company, Request for a General Rate Revision.

New Mexico Case No. 16-00276-UT: In the Matter of the Application of Public Service Company of New Mexico for Revision of its Retail Electric Rates Pursuant to Advice No. 533.

Minnesota Docket No. E015/GR-16-664: In the Matter of the Application of Minnesota Power for Authority to Increase Rates for Electric Service in Minnesota.

Ohio Case No. 16-1852-EL-SSO: In the Matter of the Application of Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to §4928.143, Ohio Rev. Code, In the Form of an Electric Security Plan.

Texas Docket No. 46449: Application of Southwestern Electric Power Company for Authority to Change Rates.

Arkansas Docket No. 16-052-U: In the Matter of the Application of Oklahoma Gas and Electric Company for Approval of a General Change in Rates, Charges, and Tariffs.

Missouri Case No. EA-2016-0358: In the Matter of the Application of Grain Belt Express Clean Line LLC for a Certificate of Convenience and Necessity Authorizing it to Construct, Own, Operate, Control, Manage and Maintain a High Voltage, Direct Current Transmission Line and an Associated Converter Station Providing an Interconnection on the Maywood-Montgomery 345 kV Transmission Line.

Florida Docket No. 160186-Ei: In Re: Petition for Increase in Rates by Gulf Power Company.

2016

Missouri Case No. ER-2016-0179: In the Matter of Union Electric Company d/b/a Ameren Missouri Tariffs to Increase its Revenues for Electric Service.

North Dakota Public Service Commission Case No. PU-20-441

Kansas Docket No. 16-KCPE-593-ACQ: In the Matter of the Joint Application of Great Plains Energy Incorporated, Kansas City Power & Light Company, and Westar Energy, Inc. for Approval of the Acquisition of Westar Energy, Inc. by Great Plains Energy Incorporated.

Missouri Case No. EA-2016-0208: In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri for Permission and Approval and a Certificate of Public Convenience and Necessity Authorizing it to Offer a Pilot Distributed Solar Program and File Associated Tariff.

Utah Docket No. 16-035-T09: In the Matter of Rocky Mountain Power's Proposed Electric Service Schedule No. 34, Renewable Energy Tariff.

Pennsylvania Public Utility Commission Docket No. R-2016-2537359: Pennsylvania Public Utility Commission v. West Penn Power Company.

Pennsylvania Public Utility Commission Docket No. R-2016-2537352: Pennsylvania Public Utility Commission v. Pennsylvania Electric Company.

Pennsylvania Public Utility Commission Docket No. R-2016-2537355: Pennsylvania Public Utility Commission v. Pennsylvania Power Company.

Pennsylvania Public Utility Commission Docket No. R-2016-2537349: Pennsylvania Public Utility Commission v. Metropolitan Edison Company.

Michigan Case No. U-17990: In the Matter of the Application of Consumers Energy Company for Authority to Increase its Rates for the Generation and Distribution of Electricity and for Other Relief.

Florida Docket No. 160021-El: In Re: Petition for Rate Increase by Florida Power & Light Company.

Minnesota Docket No. E-002/GR-15-816: In the Matter of the Application of Northern States Power Company for Authority to Increase Rates for Electric Service in the State of Minnesota.

Colorado Public Utilities Commission Docket No. 16AL-0048E: Re: In the Matter of Advice Letter No. 1712-Electric Filed by Public Service Company of Colorado to Replace Colorado PUC No.7-Electric Tariff with Colorado PUC No. 8-Electric Tariff.

Colorado Public Utilities Commission Docket No. 16A-0055E: Re: In the Matter of the Application of Public Service Company of Colorado for Approval of its Solar*Connect Program.

Missouri Public Service Commission Case No. ER-2016-0023: In the Matter of the Empire District Electric Company of Joplin, Missouri for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in the Missouri Service Area of the Company.

Georgia Public Service Commission Docket No. 40161: In Re: Georgia Power Company's 2016 Integrated Resource Plan and Application for Decertification of Plant Mitchell Units 3, 4A and 4B, Plant Kraft Unit 1 CT, and Intercession City CT.

Oklahoma Corporation Commission Cause No. PUD 201500273: In the Matter of Oklahoma Gas and Electric Company for an Order of the Commission Authorizing Applicant to Modify its Rates, Charges, and Tariffs for Retail Electric Service in Oklahoma.

New Mexico Case No. 15-00261-UT: In the Matter of the Application of Public Service Company of New Mexico for Revision of its Retail Electric Rates Pursuant to Advice Notice No. 513.

North Dakota Public Service Commission Case No. PU-20-441

2015

Indiana Utility Regulatory Commission Cause No. 44688: Petition of Northern Indiana Public Service Company for Authority to Modify its Rates and Charges for Electric Utility Service and for Approval of: (1) Changes to its Electric Service Tariff Including a New Schedule of Rates and Charges and Changes to the General Rules and Regulations and Certain Riders; (2) Revised Depreciation Accrual Rates; (3) Inclusion in its Basic Rates and Charges of the Costs Associated with Certain Previously Approved Qualified Pollution Control Property, Clean Coal Technology, Clean Energy Projects and Federally Mandated Compliance Projects; and (4) Accounting Relief to Allow NIPSCO to Defer, as a Regulatory Asset or Liability, Certain Costs for Recovery in a Future Proceeding.

Public Utility Commission of Texas Docket No. 44941: Application of El Paso Electric Company to Change Rates.

Arizona Corporation Commission Docket No. E-04204A-15-0142: In the matter of the Application of UNS Electric, Inc. for the Establishment of Just and Reasonable Rates and Charges Designed to Realized a Reasonable Rate of Return on the Fair Value of the Properties of UNS Electric, Inc. Devoted to its Operations Throughout the State of Arizona, and for Related Approvals.

Rhode Island Public Utilities Commission Docket No. 4568: In Re: National Grid's Rate Design Plan.

Oklahoma Corporation Commission Cause No. PUD 201500208: Application of Public Service Company of Oklahoma, an Oklahoma Corporation, for an Adjustment in its Rates and Charges and the Electric Service Rules, Regulations and Conditions of Service for Electric Service in the State of Oklahoma.

Public Service Commission of Wisconsin Docket No. 4220-UR-121: Application of Northern States Power Company, A Wisconsin Corporation, for Authority to Adjust Electric and Natural Gas Rates.

Arkansas Public Service Commission Docket No. 15-015-U: In the Matter of the Application of Entergy Arkansas, Inc. for Approval of Changes in Rates for Retail Electric Service.

New York Public Service Commission Case No. 15-E-0283: Proceeding on Motion of the Commission as to the Rates, Charges, Rules, and Regulations of New York State Electric & Gas Corporation for Electric Service.

New York Public Service Commission Case No. 15-G-0284: Proceeding on Motion of the Commission as to the Rates, Charges, Rules, and Regulations of New York State Electric & Gas Corporation for Gas Service.

New York Public Service Commission Case No. 15-E-0285: Proceeding on Motion of the Commission as to the Rates, Charges, Rules, and Regulations of Rochester Gas & Electric Corporation for Electric Service.

New York Public Service Commission Case No. 15-G-0286: Proceeding on Motion of the Commission as to the Rates, Charges, Rules, and Regulations of Rochester Gas & Electric Corporation for Gas Service.

Public Utilities Commission of Ohio Case No. 14-1693-EL-RDR: In the Matter of the Application Seeking Approval of Ohio Power Company's Proposal to Enter Into an Affiliate Power Purchase Agreement for Inclusion in the Power Purchase Agreement Rider.

Public Service Commission of Wisconsin Docket No. 6690-UR-124: Application of Wisconsin Public Service Corporation for Authority to Adjust Electric and Natural Gas Rates.

Arkansas Public Service Commission Docket No. 15-034-U: In the Matter of an Interim Rate Schedule of Oklahoma Gas and Electric Company Imposing a Surcharge to Recover All Investments and Expenses Incurred Through Compliance with Legislative or Administrative Rules, Regulations, or Requirements

North Dakota Public Service Commission Case No. PU-20-441

Relating to the Public Health, Safety or the Environment Under the Federal Clean Air Act for Certain of its Existing Generation Facilities.

Kansas Corporation Commission Docket No. 15-WSEE-115-RTS: In the Matter of the Application of Westar Energy, Inc. and Kansas Gas and Electric Company to Make Certain Changes in their Charges for Electric Service.

Michigan Public Service Commission Case No. U-17767: In the Matter of the Application of DTE Electric Company for Authority to Increase its Rates, Amend its Rate Schedules and Rules Governing the Distribution and Supply of Electric Energy, and for Miscellaneous Accounting Authority.

Public Utility Commission of Texas Docket No. 43695: Application of Southwestern Public Service Company for Authority to Change Rates.

Kansas Corporation Commission Docket No. 15-KCPE-116-RTS: In the Matter of the Application of Kansas City Power & Light Company to Make Certain Changes in its Charges for Electric Service.

Michigan Case No. U-17735: In the Matter of the Application of the Consumers Energy Company for Authority to Increase its Rates for the Generation and Distribution of Electricity and for Other Relief.

Kentucky Public Service Commission Case No. 2014-00396: Application of Kentucky Power Company for a General Adjustment of its Rates for Electric Service; (2) an Order Approving its 2014 Environmental Compliance Plan; (3) an Order Approving its Tariffs and Riders; and (4) an Order Granting All Other Required Approvals and Relief.

Kentucky Public Service Commission Case No. 2014-00371: In the Matter of the Application of Kentucky Utilities Company for an Adjustment of its Electric Rates.

Kentucky Public Service Commission Case No. 2014-00372: In the Matter of the Application of Louisville Gas and Electric Company for an Adjustment of its Electric and Gas Rates.

2014

Ohio Public Utilities Commission Case No. 14-1297-EL-SSO: In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company and the Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. 4928.143 in the Form of an Electric Security Plan.

West Virginia Case No. 14-1152-E-42T: Appalachian Power Company and Wheeling Power Company, Both d/b/a American Electric Power, Joint Application for Rate Increases and Changes in Tariff Provisions.

Oklahoma Corporation Commission Cause No. PUD 201400229: In the Matter of the Application of Oklahoma Gas and Electric Company for Commission Authorization of a Plan to Comply with the Federal Clean Air Act and Cost Recovery; and for Approval of the Mustang Modernization Plan.

Missouri Public Service Commission Case No. ER-2014-0258: In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariff to Increase its Revenues for Electric Service.

Pennsylvania Public Utility Commission Docket No. R-2014-2428742: Pennsylvania Public Utility Commission v. West Penn Power Company.

Pennsylvania Public Utility Commission Docket No. R-2014-2428743: Pennsylvania Public Utility Commission v. Pennsylvania Electric Company.

Pennsylvania Public Utility Commission Docket No. R-2014-2428744: Pennsylvania Public Utility Commission v. Pennsylvania Power Company.

Walmart Inc.
Exhibit SWC-1

North Dakota Public Service Commission Case No. PU-20-441

Pennsylvania Public Utility Commission Docket No. R-2014-2428745: Pennsylvania Public Utility Commission v. Metropolitan Edison Company.

Washington Utilities and Transportation Commission Docket No. UE-141368: In the Matter of the Petition of Puget Sound Energy to Update Methodologies Used to Allocate Electric Cost of Service and For Electric Rate Design Purposes.

Washington Utilities and Transportation Commission Docket No. UE-140762: 2014 Pacific Power & Light Company General Rate Case.

West Virginia Public Service Commission Case No. 14-0702-E-42T: Monongahela Power Company and the Potomac Edison Company Rule 42T Tariff Filing to Increase Rates and Charges.

Ohio Public Utilities Commission Case No. 14-841-EL-SSO: In the Matter of the Application of Duke Energy Ohio for Authority to Establish a Standard Service Offer Pursuant to Section 4928.143, Revised Code, in the Form of Case No. 14-841-EL-SSO an Electric Security Plan, Accounting Modifications and Tariffs for Generation Service.

Colorado Public Utilities Commission Docket No. 14AL-0660E: Re: In the Matter of the Advice Letter No. 1672-Electric Filed by Public Service Company of Colorado to Revise its Colorado PUC No. 7-Electric Tariff to Implement a General Rate Schedule Adjustment and Other Rate Changes Effective July 18, 2014.

Maryland Case No. 9355: In the Matter of the Application of Baltimore Gas and Electric Company for Authority to Increase Existing Rates and Charges for Electric and Gas Service.

Mississippi Public Service Commission Docket No. 2014-UN-132: In Re: Notice of Intent of Entergy Mississippi, Inc. to Modernize Rates to Support Economic Development, Power Procurement, and Continued Investment.

Nevada Public Utilities Commission Docket No. 14-05004: Application of Nevada Power Company d/b/a NV Energy for Authority to Increase its Annual Revenue Requirement for General Rates Charged to All Classes of Electric Customers and for Relief Properly Related Thereto.

Utah Public Service Commission Docket No. 14-035-T02: In the Matter of Rocky Mountain Power's Proposed Electric Service Schedule No. 32, Service From Renewable Energy Facilities.

Florida Public Service Commission Docket No. 140002-EG: In Re: Energy Conservation Cost Recovery Clause.

Public Service Commission of Wisconsin Docket No. 6690-UR-123: Application of Wisconsin Public Service Corporation for Authority to Adjust Electric and Natural Gas Rates.

Connecticut Docket No. 14-05-06: Application of the Connecticut Light and Power Company to Amend its Rate Schedules.

Virginia Corporation Commission Case No. PUE-2014-00026: Application of Appalachian Power Company for a 2014 Biennial Review for the Provision of Generation, Distribution and Transmission Services Pursuant to § 56-585.1 A of the Code of Virginia.

Virginia Corporation Commission Case No. PUE-2014-00033: Application of Virginia Electric and Power Company to Revise its Fuel Factor Pursuant to Va. Code § 56-249.6.

North Dakota Public Service Commission Case No. PU-20-441

Arizona Corporation Commission Docket No. E-01345A-11-0224 (Four Corners Phase): In the Matter of Arizona Public Service Company for a Hearing to Determine the Fair Value of Utility Property of the Company for Ratemaking Purposes, to Fix and Just and Reasonable Rate of Return Thereon, to Approve Rate Schedules Designed to Develop Such Return.

Minnesota Public Utilities Commission Docket No. E-002/GR-13-868: In the Matter of the Application of Northern States Power Company, for Authority to Increase Rates for Electric Service in Minnesota.

Utah Public Service Commission Docket No. 13-035-184: In the Matter of the Application of Rocky Mountain Power for Authority to Increase its Retail Electric Utility Service Rates in Utah and for Approval of its Proposed Electric Service Schedules and Electric Service Regulations.

Missouri Public Service Commission Case No. EC-2014-0224: In the Matter of Noranda Aluminum, Inc.'s Request for Revisions to Union Electric Company d/b/a Ameren Missouri's Large Transmission Service Tariff to Decrease its Rate for Electric Service.

Oklahoma Corporation Commission Cause No. PUD 201300217: Application of Public Service Company of Oklahoma to be in Compliance with Order No. 591185 Issued in Cause No. PUD 201100106 Which Requires a Base Rate Case to be Filed by PSO and the Resulting Adjustment in its Rates and Charges and Terms and Conditions of Service for Electric Service in the State of Oklahoma.

Public Utilities Commission of Ohio Case No. 13-2386-EL-SSO: In the Matter of the Application of Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to §4928.143, Ohio Rev. Code, in the Form of an Electric Security Plan.

2013

Oklahoma Corporation Commission Cause No. PUD 201300201: Application of Public Service Company of Oklahoma for Commission Authorization of a Standby and Supplemental Service Rate Schedule.

Georgia Public Service Commission Docket No. 36989: Georgia Power's 2013 Rate Case.

Florida Public Service Commission Docket No. 130140-EI: Petition for Rate Increase by Gulf Power Company.

Public Utility Commission of Oregon Docket No. UE 267: In the Matter of PACIFICORP, dba PACIFIC POWER, Transition Adjustment, Five-Year Cost of Service Opt-Out.

Illinois Commerce Commission Docket No. 13-0387: Commonwealth Edison Company Tariff Filing to Present the Illinois Commerce Commission with an Opportunity to Consider Revenue Neutral Tariff Changes Related to Rate Design Authorized by Subsection 16-108.5 of the Public Utilities Act.

Iowa Utilities Board Docket No. RPU-2013-0004: In Re: MidAmerican Energy Company.

South Dakota Public Utilities Commission Docket No. EL12-061: In the Matter of the Application of Black Hills Power, Inc. for Authority to Increase its Electric Rates. (filed with confidential stipulation)

Kansas Corporation Commission Docket No. 13-WSEE-629-RTS: In the Matter of the Applications of Westar Energy, Inc. and Kansas Gas and Electric Company for Approval to Make Certain Changes in their Charges for Electric Service.

Public Utility Commission of Oregon Docket No. UE 263: In the Matter of PACIFICORP, dba PACIFIC POWER, Request for a General Rate Revision.

North Dakota Public Service Commission Case No. PU-20-441

Arkansas Public Service Commission Docket No. 13-028-U: In the Matter of the Application of Entergy Arkansas, Inc. for Approval of Changes in Rates for Retail Electric Service.

Virginia State Corporation Commission Docket No. PUE-2013-00020: Application of Virginia Electric and Power Company for a 2013 Biennial Review of the Rates, Terms, and Conditions for the Provision of Generation, Distribution, and Transmission Services Pursuant to § 56-585.1 A of the Code of Virginia.

Florida Public Service Commission Docket No. 130040-El: Petition for Rate Increase by Tampa Electric Company.

South Carolina Public Service Commission Docket No. 2013-59-E: Application of Duke Energy Carolinas, LLC, for Authority to Adjust and Increase Its Electric Rates and Charges.

Public Utility Commission of Oregon Docket No. UE 262: In the Matter of PORTLAND GENERAL ELECTRIC COMPANY, Request for a General Rate Revision.

New Jersey Board of Public Utilities Docket No. ER12111052: In the Matter of the Verified Petition of Jersey Central Power & Light Company For Review and Approval of Increases in and Other Adjustments to Its Rates and Charges For Electric Service, and For Approval of Other Proposed Tariff Revisions in Connection Therewith; and for Approval of an Accelerated Reliability Enhancement Program ("2012 Base Rate Filing")

North Carolina Utilities Commission Docket No. E-7, Sub 1026: In the Matter of the Application of Duke Energy Carolinas, LLC for Adjustment of Rates and Charges Applicable to Electric Service in North Carolina.

Public Utility Commission of Oregon Docket No. UE 264: PACIFICORP, dba PACIFIC POWER, 2014 Transition Adjustment Mechanism.

Public Utilities Commission of California Docket No. 12-12-002: Application of Pacific Gas and Electric Company for 2013 Rate Design Window Proceeding.

Public Utilities Commission of Ohio Docket Nos. 12-426-EL-SSO, 12-427-EL-ATA, 12-428-EL-AAM, 12-429-EL-WVR, and 12-672-EL-RDR: In the Matter of the Application of the Dayton Power and Light Company Approval of its Market Offer.

Minnesota Public Utilities Commission Docket No. E-002/GR-12-961: In the Matter of the Application of Northern States Power Company for Authority to Increase Rates for Electric Service in Minnesota.

North Carolina Utilities Commission Docket E-2, Sub 1023: In the Matter of Application of Progress Energy Carolinas, Inc. For Adjustment of Rates and Charges Applicable to Electric Service in North Carolina.

2012

Public Utility Commission of Texas Docket No. 40443: Application of Southwestern Electric Power Company for Authority to Change Rates and Reconcile Fuel Costs.

South Carolina Public Service Commission Docket No. 2012-218-E: Application of South Carolina Electric & Gas Company for Increases and Adjustments in Electric Rate Schedules and Tariffs and Request for Mid-Period Reduction in Base Rates for Fuel.

Kansas Corporation Commission Docket No. 12-KCPE-764-RTS: In the Matter of the Application of Kansas City Power & Light Company to Make Certain Changes in its Charges for Electric Service.

North Dakota Public Service Commission Case No. PU-20-441

Kansas Corporation Commission Docket No. 12-GIMX-337-GIV: In the Matter of a General Investigation of Energy-Efficiency Policies for Utility Sponsored Energy Efficiency Programs.

Florida Public Service Commission Docket No. 120015-EI: In Re: Petition for Rate Increase by Florida Power & Light Company.

California Public Utilities Commission Docket No. A.11-10-002: Application of San Diego Gas & Electric Company (U 902 E) for Authority to Update Marginal Costs, Cost Allocation, and Electric Rate Design.

Utah Public Service Commission Docket No. 11-035-200: In the Matter of the Application of Rocky Mountain Power for Authority to Increase its Retail Electric Utility Service Rates in Utah and for Approval of its Proposed Electric Service Schedules and Electric Service Regulations.

Virginia State Corporation Commission Case No. PUE-2012-00051: Application of Appalachian Power Company to Revise its Fuel Factor Pursuant to § 56-249.6 of the Code of Virginia.

Public Utilities Commission of Ohio Case Nos. 11-346-EL-SSO, 11-348-EL-SSO, 11-349-EL-AAM, and 11-350-EL-AAM: In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to Section 4928.143, Revised Code, in the Form on an Electric Security Plan and In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Approval of Certain Accounting Authority.

New Jersey Board of Public Utilities Docket No. ER11080469: In the Matter of the Petition of Atlantic City Electric for Approval of Amendments to Its Tariff to Provide for an Increase in Rates and Charges for Electric Service Pursuant to N.J.S.A. 48:2-21 and N.J.S.A. 48:2-21.1 and For Other Appropriate Relief.

Public Utility Commission of Texas Docket No. 39896: Application of Entergy Texas, Inc. for Authority to Change Rates and Reconcile Fuel Costs.

Missouri Public Service Commission Case No. EO-2012-0009: In the Matter of KCP&L Greater Missouri Operations Notice of Intent to File an Application for Authority to Establish a Demand-Side Programs Investment Mechanism.

Colorado Public Utilities Commission Docket No. 11AL-947E: In the Matter of Advice Letter No. 1597-Electric Filed by Public Service Company of Colorado to Revise its Colorado PUC No. 7-Electric Tariff to Implement a General Rate Schedule Adjustment and Other Changes Effective December 23, 2011.

Illinois Commerce Commission Docket No. 11-0721: Commonwealth Edison Company Tariffs and Charges Submitted Pursuant to Section 16-108.5 of the Public Utilities Act.

Public Utility Commission of Texas Docket No. 38951: Application of Entergy Texas, Inc. for Approval of Competitive Generation Service tariff (Issues Severed from Docket No. 37744).

California Public Utilities Commission Docket No. A.11-06-007: Southern California Edison's General Rate Case, Phase 2.

2011

Arizona Corporation Commission Docket No. E-01345A-11-0224: In the Matter of Arizona Public Service Company for a Hearing to Determine the Fair Value of Utility Property of the Company for Ratemaking Purposes, to Fix and Just and Reasonable Rate of Return Thereon, to Approve Rate Schedules Designed to Develop Such Return.

North Dakota Public Service Commission Case No. PU-20-441

Oklahoma Corporation Commission Cause No. PUD 201100087: In the Matter of the Application of Oklahoma Gas and Electric Company for an Order of the Commission Authorizing Applicant to Modify its Rates, Charges, and Tariffs for Retail Electric Service in Oklahoma.

South Carolina Public Service Commission Docket No. 2011-271-E: Application of Duke Energy Carolinas, LLC for Authority to Adjust and Increase its Electric Rates and Charges.

Pennsylvania Public Utility Commission Docket No. P-2011-2256365: Petition of PPL Electric Utilities Corporation for Approval to Implement Reconciliation Rider for Default Supply Service.

North Carolina Utilities Commission Docket No. E-7, Sub 989: In the Matter of Application of Duke Energy Carolinas, LLC for Adjustment of Rates and Charges Applicable to Electric Service in North Carolina.

Florida Public Service Commission Docket No. 110138: In Re: Petition for Increase in Rates by Gulf Power Company.

Public Utilities Commission of Nevada Docket No. 11-06006: In the Matter of the Application of Nevada Power Company, filed pursuant to NRS 704.110(3) for authority to increase its annual revenue requirement for general rates charged to all classes of customers to recover the costs of constructing the Harry Allen Combined Cycle plant and other generating, transmission, and distribution plant additions, to reflect changes in the cost of capital, depreciation rates and cost of service, and for relief properly related thereto.

North Carolina Utilities Commission Docket Nos. E-2, Sub 998 and E-7, Sub 986: In the Matter of the Application of Duke Energy Corporation and Progress Energy, Inc., to Engage in a Business Combination Transaction and to Address Regulatory Conditions and Codes of Conduct.

Public Utilities Commission of Ohio Case Nos. 11-346-EL-SSO, 11-348-EL-SSO, 11-349-EL-AAM, and 11-350-EL-AAM: In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to Section 4928.143, Revised Code, in the Form on an Electric Security Plan and In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Approval of Certain Accounting Authority.

Virginia State Corporation Commission Case No. PUE-2011-00037: In the Matter of Appalachian Power Company for a 2011 Biennial Review of the Rates, Terms, and Conditions for the Provision of Generation, Distribution, and Transmission Services Pursuant to § 56-585.1 A of the Code of Virginia.

Illinois Commerce Commission Docket No. 11-0279 and 11-0282 (cons.): Ameren Illinois Company Proposed General Increase in Electric Delivery Service and Ameren Illinois Company Proposed General Increase in Gas Delivery Service.

Virginia State Corporation Commission Case No. PUE-2011-00045: Application of Virginia Electric and Power Company to Revise its Fuel Factor Pursuant to § 56-249.6 of the Code of Virginia.

Utah Public Service Commission Docket No. 10-035-124: In the Matter of the Application of Rocky Mountain Power for Authority to Increase its Retail Electric Utility Service Rates in Utah and for Approval of its Proposed Electric Service Schedules and Electric Service Regulations.

Maryland Public Utilities Commission Case No. 9249: In the Matter of the Application of Delmarva Power & Light for an Increase in its Retail Rates for the Distribution of Electric Energy.

North Dakota Public Service Commission Case No. PU-20-441

Minnesota Public Utilities Commission Docket No. E002/GR-10-971: In the Matter of the Application of Northern States Power Company d/b/a Xcel Energy for Authority to Increase Rates for Electric Service in Minnesota.

Michigan Public Service Commission Case No. U-16472: In the Matter of the Detroit Edison Company for Authority to Increase its Rates, Amend its Rate Schedules and Rules Governing the Distribution and Supply of Electric Energy, and for Miscellaneous Accounting Authority.

2010

Public Utilities Commission of Ohio Docket No. 10-2586-EL-SSO: In the Matter of the Application of Duke Energy Ohio for Approval of a Market Rate Offer to Conduct a Competitive Bidding Process for Standard Service Offer Electric Generation Supply, Accounting Modifications, and Tariffs for Generation Service.

Colorado Public Utilities Commission Docket No. 10A-554EG: In the Matter of the Application of Public Service Company of Colorado for Approval of a Number of Strategic Issues Relating to its DSM Plan, Including Long-Term Electric Energy Savings Goals, and Incentives.

Public Service Commission of West Virginia Case No. 10-0699-E-42T: Appalachian Power Company and Wheeling Power Company Rule 42T Application to Increase Electric Rates.

Oklahoma Corporation Commission Cause No. PUD 201000050: Application of Public Service Company of Oklahoma, an Oklahoma Corporation, for an Adjustment in its Rates and Charges and Terms and Conditions of Service for Electric Service in the State of Oklahoma.

Georgia Public Service Commission Docket No. 31958-U: In Re: Georgia Power Company's 2010 Rate Case.

Washington Utilities and Transportation Commission Docket No. UE-100749: 2010 Pacific Power & Light Company General Rate Case.

Colorado Public Utilities Commission Docket No. 10M-254E: In the Matter of Commission Consideration of Black Hills Energy's Plan in Compliance with House Bill 10-1365, "Clean Air-Clean Jobs Act."

Colorado Public Utilities Commission Docket No. 10M-245E: In the Matter of Commission Consideration of Public Service Company of Colorado Plan in Compliance with House Bill 10-1365, "Clean Air-Clean Jobs Act."

Public Service Commission of Utah Docket No. 09-035-15 *Phase II*: In the Matter of the Application of Rocky Mountain Power for Approval of its Proposed Energy Cost Adjustment Mechanism.

Public Utility Commission of Oregon Docket No. UE 217: In the Matter of PACIFICORP, dba PACIFIC POWER Request for a General Rate Revision.

Mississippi Public Service Commission Docket No. 2010-AD-57: In Re: Proposal of the Mississippi Public Service Commission to Possibly Amend Certain Rules of Practice and Procedure.

Indiana Utility Regulatory Commission Cause No. 43374: Verified Petition of Duke Energy Indiana, Inc. Requesting the Indiana Utility Regulatory Commission to Approve an Alternative Regulatory Plan Pursuant to Ind. Code § 8-1-2.5-1, *ET SEQ.*, for the Offering of Energy Efficiency Conservation, Demand Response, and Demand-Side Management Programs and Associated Rate Treatment Including Incentives Pursuant to a Revised Standard Contract Rider No. 66 in Accordance with Ind. Code §§ 8-1-2.5-1 *ET SEQ.* and 8-1-2-42 (a); Authority to Defer Program Costs Associated with its Energy Efficiency Portfolio of Programs; Authority to Implement New and Enhanced Energy Efficiency Programs, Including the Powershare®

North Dakota Public Service Commission Case No. PU-20-441

Program in its Energy Efficiency Portfolio of Programs; and Approval of a Modification of the Fuel Adjustment Clause Earnings and Expense Tests.

Public Utility Commission of Texas Docket No. 37744: Application of Entergy Texas, Inc. for Authority to Change Rates and to Reconcile Fuel Costs.

South Carolina Public Service Commission Docket No. 2009-489-E: Application of South Carolina Electric & Gas Company for Adjustments and Increases in Electric Rate Schedules and Tariffs.

Kentucky Public Service Commission Case No. 2009-00459: In the Matter of General Adjustments in Electric Rates of Kentucky Power Company.

Virginia State Corporation Commission Case No. PUE-2009-00125: For acquisition of natural gas facilities Pursuant to § 56-265.4:5 B of the Virginia Code.

Arkansas Public Service Commission Docket No. 10-010-U: In the Matter of a Notice of Inquiry Into Energy Efficiency.

Connecticut Department of Public Utility Control Docket No. 09-12-05: Application of the Connecticut Light and Power Company to Amend its Rate Schedules.

Arkansas Public Service Commission Docket No. 09-084-U: In the Matter of the Application of Entergy Arkansas, Inc. For Approval of Changes in Rates for Retail Electric Service.

Missouri Public Service Commission Docket No. ER-2010-0036: In the Matter of Union Electric Company d/b/a AmerenUE for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in the Company's Missouri Service Area.

Public Service Commission of Delaware Docket No. 09-414: In the Matter of the Application of Delmarva Power & Light Company for an Increase in Electric Base Rates and Miscellaneous Tariff Charges.

2009

Virginia State Corporation Commission Case No. PUE-2009-00030: In the Matter of Appalachian Power Company for a Statutory Review of the Rates, Terms, and Conditions for the Provision of Generation, Distribution, and Transmission Services Pursuant to § 56-585.1 A of the Code of Virginia.

Public Service Commission of Utah Docket No. 09-035-15 *Phase I*: In the Matter of the Application of Rocky Mountain Power for Approval of its Proposed Energy Cost Adjustment Mechanism.

Public Service Commission of Utah Docket No. 09-035-23: In the Matter of the Application of Rocky Mountain Power for Authority To Increase its Retail Electric Utility Service Rates in Utah and for Approval of Its Proposed Electric Service Schedules and Electric Service Regulations.

Colorado Public Utilities Commission Docket No. 09AL-299E: Re: The Tariff Sheets Filed by Public Service Company of Colorado with Advice Letter No. 1535 – Electric.

Arkansas Public Service Commission Docket No. 09-008-U: In the Matter of the Application of Southwestern Electric Power Company for Approval of a General Change in Rates and Tariffs.

Oklahoma Corporation Commission Docket No. PUD 200800398: In the Matter of the Application of Oklahoma Gas and Electric Company for an Order of the Commission Authorizing Applicant to Modify its Rates, Charges, and Tariffs for Retail Electric Service in Oklahoma.

North Dakota Public Service Commission Case No. PU-20-441

Public Utilities Commission of Nevada Docket No. 08-12002: In the Matter of the Application by Nevada Power Company d/b/a NV Energy, filed pursuant to NRS §704.110(3) and NRS §704.110(4) for authority to increase its annual revenue requirement for general rates charged to all classes of customers, begin to recover the costs of acquiring the Bighorn Power Plant, constructing the Clark Peakers, Environmental Retrofits and other generating, transmission and distribution plant additions, to reflect changes in cost of service and for relief properly related thereto.

New Mexico Public Regulation Commission Case No. 08-00024-UT: In the Matter of a Rulemaking to Revise NMPRC Rule 17.7.2 NMAC to Implement the Efficient Use of Energy Act.

Indiana Utility Regulatory Commission Cause No. 43580: Investigation by the Indiana Utility Regulatory Commission, of Smart Grid Investments and Smart Grid Information Issues Contained in 111(d) of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. § 2621(d)), as Amended by the Energy Independence and Security Act of 2007.

Louisiana Public Service Commission Docket No. U-30192 *Phase II (February 2009)*: Ex Parte, Application of Entergy Louisiana, LLC for Approval to Repower Little Gypsy Unit 3 Electric Generating Facility and for Authority to Commence Construction and for Certain Cost Protection and Cost Recovery.

South Carolina Public Service Commission Docket No. 2008-251-E: In the Matter of Progress Energy Carolinas, Inc.'s Application For the Establishment of Procedures to Encourage Investment in Energy Efficient Technologies; Energy Conservation Programs; And Incentives and Cost Recovery for Such Programs.

2008

Colorado Public Utilities Commission Docket No. 08A-366EG: In the Matter of the Application of Public Service Company of Colorado for approval of its electric and natural gas demand-side management (DSM) plan for calendar years 2009 and 2010 and to change its electric and gas DSM cost adjustment rates effective January 1, 2009, and for related waivers and authorizations.

Public Service Commission of Utah Docket No. 07-035-93: In the Matter of the Application of Rocky Mountain Power for Authority to Increase its Retail Electric Utility Service Rates in Utah and for Approval of its Proposed Electric Service Schedules and Electric Service Regulations, Consisting of a General Rate Increase of Approximately \$161.2 Million Per Year, and for Approval of a New Large Load Surcharge.

Indiana Utility Regulatory Commission Cause No. 43374: Petition of Duke Energy Indiana, Inc. Requesting the Indiana Utility Regulatory Commission Approve an Alternative Regulatory Plan for the Offering of Energy Efficiency, Conservation, Demand Response, and Demand-Side Management.

Public Utilities Commission of Nevada Docket No. 07-12001: In the Matter of the Application of Sierra Pacific Power Company for authority to increase its general rates charged to all classes of electric customers to reflect an increase in annual revenue requirement and for relief properly related thereto.

Louisiana Public Service Commission Docket No. U-30192 *Phase II*: Ex Parte, Application of Entergy Louisiana, LLC for Approval to Repower Little Gypsy Unit 3 Electric Generating Facility and for Authority to Commence Construction and for Certain Cost Protection and Cost Recovery.

Colorado Public Utilities Commission Docket No. 07A-420E: In the Matter of the Application of Public Service Company of Colorado For Authority to Implement and Enhanced Demand Side Management Cost Adjustment Mechanism to Include Current Cost Recovery and Incentives.

2007

North Dakota Public Service Commission Case No. PU-20-441

Louisiana Public Service Commission Docket No. U-30192: Ex Parte, Application of Entergy Louisiana, LLC for Approval to Repower Little Gypsy Unit 3 Electric Generating Facility and for Authority to Commence Construction and for Certain Cost Protection and Cost Recovery.

Public Utility Commission of Oregon Docket No. UG 173: In the Matter of PUBLIC UTILITY COMMISSION OF OREGON Staff Request to Open an Investigation into the Earnings of Cascade Natural Gas.

2006

Public Utility Commission of Oregon Docket No. UE 180/UE 181/UE 184: In the Matter of PORTLAND GENERAL ELECTRIC COMPANY Request for a General Rate Revision.

Public Utility Commission of Oregon Docket No. UE 179: In the Matter of PACIFICORP, dba PACIFIC POWER AND LIGHT COMPANY Request for a general rate increase in the company's Oregon annual revenues.

Public Utility Commission of Oregon Docket No. UM 1129 *Phase II*: Investigation Related to Electric Utility Purchases From Qualifying Facilities.

2005

Public Utility Commission of Oregon Docket No. UM 1129 *Phase I Compliance*: Investigation Related to Electric Utility Purchases From Qualifying Facilities.

Public Utility Commission of Oregon Docket No. UX 29: In the Matter of QWEST CORPORATION Petition to Exempt from Regulation Qwest's Switched Business Services.

2004

Public Utility Commission of Oregon Docket No. UM 1129 *Phase I*: Investigation Related to Electric Utility Purchases From Qualifying Facilities.

TESTIMONY BEFORE LEGISLATIVE BODIES

2020

Regarding Missouri Senate Joint Resolution 34: Written testimony submitted to the Missouri Senate Transportation, Infrastructure and Public Safety Committee, January 30, 2020.

2019

Regarding North Carolina Senate Bill 559: Written testimony submitted to the North Carolina Committee on Agriculture/Environment/Natural Resources, April 17, 2019.

Regarding Missouri Senate Joint Resolution 25: Written testimony submitted to the Missouri Senate Committee on Judiciary, March 28, 2019.

Regarding South Carolina House Bill 3659: Written testimony submitted to the South Carolina Senate Committee on Judiciary, March 14, 2019.

Regarding Kansas Senate Bill 69: Written testimony submitted to the Kansas Committee on Utilities, February 19, 2019.

2018

Regarding Missouri Senate Bill 564: Testimony before the Missouri Senate Committee on Commerce, Consumer Protection, Energy and the Environment, January 10, 2018.

2017

Regarding Missouri Senate Bill 190: Testimony before the Missouri Senate Committee on Commerce, Consumer Protection, Energy and the Environment, January 25, 2017.

2016

Regarding Missouri House Bill 1726: Testimony before the Missouri House Energy and Environment Committee, April 26, 2016.

2014

Regarding Kansas House Bill 2460: Testimony Before the Kansas House Standing Committee on Utilities and Telecommunications, February 12, 2014.

2012

Regarding Missouri House Bill 1488: Testimony Before the Missouri House Committee on Utilities, February 7, 2012.

2011

Regarding Missouri Senate Bills 50, 321, 359, and 406: Testimony Before the Missouri Senate Veterans' Affairs, Emerging Issues, Pensions, and Urban Affairs Committee, March 9, 2011.

AFFIDAVITS

2015

Supreme Court of Illinois, Docket No. 118129, Commonwealth Edison Company et al., respondents, v. Illinois Commerce Commission et al. (Illinois Competitive Energy Association et al., petitioners). Leave to appeal, Appellate Court, First District.

2011

Colorado Public Utilities Commission Docket No. 11M-951E: In the Matter of the Petition of Public Service Company of Colorado Pursuant to C.R.S. § 40-6-111(1)(d) for Interim Rate Relief Effective on or before January 21, 2012.

ENERGY INDUSTRY PUBLICATIONS AND PRESENTATIONS

Panelist, Delivering 100% Carbon Free Energy: Options & Issues, Northwestern Center on Law, Business, and Economics, March 16, 2021.

Electric Company Updates and Discussion on Best Practices for Serving National Corporate Customers Webinar, Edison Electric Institute, March 9, 2021.

Panelist, ComEd Fleet Electrification Webinar, December 10, 2020.

Panelist, Corporate Offtaker Perspectives Panel, Southeast Renewable Energy Summit, November 18, 2020.

Panelist, EEI National Key Accounts – Connections that Mean Business for Corporate Customers, EEI Fall National Key Accounts Workshop, October 28, 2020.

Panelist, COVID-19, a Catalyzer or a Barrier to Decarbonization?, Power & Renewables Summit 2020, September 28, 2020.

Panelist, What Organized Markets Can Do for You, REBA Connect: Virtual Member Summit 2020, June 2, 2020.

Panelist, Expanding Future Procurement Options, REBA Connect: Virtual Member Summit 2020, May 13, 2020.

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Panelist, Renewable Energy Options for Large Utility Customers, NARUC Center for Partnership & Innovation Webinar Series, January 16, 2020.

Panelist, Pathways to Integrating Customer Clean Energy Demand in Utility Planning, REBA: Market Innovation webinar, January 13, 2020.

Panelist, Should Full Electrification of Energy Systems be Our Goal? If it's No Longer Business as Usual, What Does That Mean for Consumers?, National Association of State Utility Consumer Advocates 2019 Annual Meeting, San Antonio, Texas, November 18, 2019.

Panelist, Fleet Electrification, Federal Utility Partnership Working Group Seminar, Washington, DC, November 8, 2019.

Panelist, Tackling the Challenges of Extreme Weather, Edison Electric Institute Fall National Key Accounts Workshop, Las Vegas, Nevada, October 8, 2019.

Panelist, Fleet Electrification: Tackling the Challenges and Seizing the Opportunities for Electric Trucks, Powering the People 2019, Washington, D.C., September 24, 2019.

Panelist, From the Consumer Perspective, Mid-American Regulatory Conference 2019 Annual Meeting, Des Moines, Iowa, August 13, 2019.

Panelist, Redefining Resiliency: Emerging Technologies Benefiting Customers and the Grid, EPRI 2019 Summer Seminar, Chicago, Illinois, August 12, 2019.

Panelist, Energy Policies for Economic Growth, 2019 Energy Policy Summit, NCSL Legislative Summit, Nashville, Tennessee, August 5, 2019.

Panelist, Gateway to Energy Empowerment for Customers, Illumination Energy Summit, Columbus, Ohio, May 15, 2019.

Panelist, Advancing Clean Energy Solutions Through Stakeholder Collaborations, 2019 State Energy Conference of North Carolina, Raleigh, North Carolina, May 1, 2019.

Panelist, Fleet Electrification: Getting Ready for the Transition, Edison Electric Institute Spring National Key Accounts Workshop, Seattle, Washington, April 8, 2019.

Panelist, Where the Fleet Meets the Pavement, Which Way to Electrification of the U.S. Transportation System?, Washington, D.C., April 4, 2019.

Panelist, Improving Renewable Energy Offerings: What Have We Learned?, Advanced Energy Economy Webinar, March 26, 2019.

Speaker, National Governors Association Southeast Regional Transportation Electrification Workshop, Nashville, Tennessee, March 11, 2019.

Speaker, Walmart Spotlight: A Day in the Life of a National Energy Manager, Touchstone Energy Cooperatives Net Conference 2019, San Diego, California, February 12, 2019.

Panelist, National Accounts: The Struggle is Real, American Public Power Association Customer Connections Conference, Orlando, Florida, November 6, 2018.

North Dakota Public Service Commission Case No. PU-20-441

Panelist, Getting in Front of Customers Getting Behind the Meter Solutions, American Public Power Association Customer Connections Conference, Orlando, Florida, November 6, 2018.

Panelist, Sustainable Fleets: The Road Ahead for Electrifying Fleet Operations, EEI National Key Accounts 2018 Fall Workshop, San Antonio, Texas, October 23, 2018.

Panelist, Meeting Corporate Clean Energy Requirements in Virginia, Renewable Energy Buyers Alliance Summit, Oakland, California, October 15, 2018.

Panelist, What Are the Anticipated Impacts on Pricing and Reliability in the Changing Markets?, Southwest Energy Conference, Phoenix, Arizona, September 21, 2018.

Speaker, Walmart's Project Gigaton – Driving Renewable Energy Sourcing in the Supply Chain, Smart Energy Decisions Webcast Series, July 11, 2018.

Panelist, Customizing Energy Solutions, Edison Electric Institute Annual Convention, San Diego, California, June 7, 2018.

Powering Ohio Report Release, Columbus, Ohio, May 29, 2018.

Panelist, The Past, Present, and Future of Renewable Energy: What Role Will PURPA, Mandates, and Collaboration Play as Renewables Become a Larger Part of Our Energy Mix?, 36th National Regulatory Conference, Williamsburg, Virginia, May 17, 2018.

Panelist, Sustainability Milestone Deep Dive Session, Walmart Global Sustainability Leaders Summit, Bentonville, Arkansas, April 18, 2018.

Panelist, The Customer's Voice, Tennessee Valley Authority Distribution Marketplace Forum, Murfreesboro, Tennessee, April 3, 2018.

Panelist, Getting to Yes with Large Customers to Meet Sustainability Goals, The Edison Foundation Institute for Electric Innovation Powering the People, March 7, 2018.

Panelist, The Corporate Quest for Renewables, 2018 NARUC Winter Policy Summit, Washington, D.C., February 13, 2018.

Panelist, Solar and Renewables, Touchstone Energy Cooperatives NET Conference 2018, St. Petersburg, Florida, February 6, 2018.

Panelist, Missouri Public Service Commission November 20, 2017 Workshop in File No. EW-2017-0245.

Panelist, Energy and Climate Change, 2017-18 Arkansas Law Review Symposium: Environmental Sustainability and Private Governance, Fayetteville, Arkansas, October 27, 2017.

Panelist, Customer – Electric Company – Regulator Panel, Edison Electric Institute Fall National Key Accounts Workshop, National Harbor, Maryland, October 12, 2017.

Panelist, What Do C&I Buyers Want, Solar Power International, Las Vegas, Nevada, September 12, 2017.

Panelist, Partnerships for a Sustainable Future, American Public Power Association National Conference, Orlando, Florida, June 20, 2017.

North Dakota Public Service Commission Case No. PU-20-441

Panelist, Corporate Renewable Energy Buyers in the Southeast, SEARUC 2017, Greensboro, Georgia, June 12, 2017.

Panelist, Transitioning Away from Traditional Utilities, Utah Association of Energy Users Annual Conference, Salt Lake City, Utah, May 18, 2017.

Panelist, Regulatory Approaches for Integrating and Facilitating DERs, New Mexico State University Center for Public Utilities Advisory Council Current Issues 2017, Santa Fe, New Mexico, April 25, 2017.

Presenter, Advancing Renewables in the Midwest, Columbia, Missouri, April 24, 2017.

Panelist, Leveraging New Energy Technologies to Improve Service and Reliability, Edison Electric Institute Spring National Key Accounts Workshop, Phoenix, Arizona, April 11, 2017.

Panelist, Private Sector Demand for Renewable Power, Vanderbilt Law School, Nashville, Tennessee, April 4, 2017.

Panelist, Expanding Solar Market Opportunities, 2017 Solar Power Colorado, Denver, Colorado, March 15, 2017.

Panelist, Renewables: Are Business Models Keeping Up?, Touchstone Energy Cooperatives NET Conference 2017, San Diego, California, January 30, 2017.

Panelist, The Business Case for Clean Energy, Minnesota Conservative Energy Forum, St. Paul, Minnesota, October 26, 2016.

Panelist, M-RETS Stakeholder Summit, Minneapolis, Minnesota, October 5, 2016.

Panelist, 40th Governor's Conference on Energy & the Environment, Kentucky Energy and Environment Cabinet, Lexington, Kentucky, September 21, 2016.

Panelist, Trends in Customer Expectations, Wisconsin Public Utility Institute, Madison, Wisconsin, September 6, 2016.

Panelist, The Governor's Utah Energy Development Summit 2015, May 21, 2015.

Mock Trial Expert Witness, The Energy Bar Association State Commission Practice and Regulation Committee and Young Lawyers Committee and Environment, Energy and Natural Resources Section of the D.C. Bar, Mastering Your First (or Next) State Public Utility Commission Hearing, February 13, 2014.

Panelist, Customer Panel, Virginia State Bar 29th National Regulatory Conference, Williamsburg, Virginia, May 19, 2011.

Chriss, S. (2006). "Regulatory Incentives and Natural Gas Purchasing – Lessons from the Oregon Natural Gas Procurement Study." Presented at the 19th Annual Western Conference, Center for Research in Regulated Industries Advanced Workshop in Regulation and Competition, Monterey, California, June 29, 2006.

Chriss, S. (2005). "Public Utility Commission of Oregon Natural Gas Procurement Study." Public Utility Commission of Oregon, Salem, OR. Report published in June, 2005. Presented to the Public Utility Commission of Oregon at a special public meeting on August 1, 2005.

North Dakota Public Service Commission Case No. PU-20-441

Chriss, S. and M. Radler (2003). "Report from Houston: Conference on Energy Deregulation and Restructuring." USAEE Dialogue, Vol. 11, No. 1, March, 2003.

Chriss, S., M. Dwyer, and B. Pulliam (2002). "Impacts of Lifting the Ban on ANS Exports on West Coast Crude Oil Prices: A Reconsideration of the Evidence." Presented at the 22nd USAEE/IAEE North American Conference, Vancouver, BC, Canada, October 6-8, 2002.

Contributed to chapter on power marketing: "Power System Operations and Electricity Markets," Fred I. Denny and David E. Dismukes, authors. Published by CRC Press, June 2002.

Contributed to "Moving to the Front Lines: The Economic Impact of the Independent Power Plant Development in Louisiana," David E. Dismukes, author. Published by the Louisiana State University Center for Energy Studies, October 2001.

Dismukes, D.E., D.V. Mesyanzhinov, E.A. Downer, S. Chriss, and J.M. Burke (2001). "Alaska Natural Gas In-State Demand Study." Anchorage: Alaska Department of Natural Resources.

Reported Authorized Returns on Equity, Electric Utility Rate Cases Completed, 2017 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)
Wyoming	MDU Resources Group Inc.	MDU	2004-117-ER-16	10.10%	1/18/2017	V	9.45%	(65)		Settled	7.25%	50.99%	4.82%
New York	Consolidated Edison Co. of NY	ED	16-E-0060	9.75%	1/24/2017	D	9.00%	(75)		Settled	6.82%	48.00%	4.32%
Michigan	DTE Electric Co.	DTE	U-18014	10.50%	1/31/2017	V	10.10%	(40)		Fully Litigated	5.55%	37.49%	3.79%
Maryland	Delmarva Power & Light Co.	EXC	9424	10.60%	2/15/2017	D	9.60%	(100)		Fully Litigated	6.74%	49.10%	4.71%
New Jersey	Rockland Electric Company	ED	ER-16050428	10.20%	2/22/2017	D	9.60%	(60)		Settled	7.47%	49.70%	4.77%
Arizona	Tucson Electric Power Co.	FTS	E-01933A-15-0322	10.35%	2/24/2017	V	9.75%	(60)		Settled	7.04%	50.03%	4.88%
Michigan	Consumers Energy Co.	CMS	U-17990	10.70%	2/28/2017	V	10.10%	(60)		Fully Litigated	5.94%	40.75%	4.12%
Minnesota	Otter Tail Power Co.	OTTR	E-017/GR-15-1033	10.05%	3/2/2017	V	9.41%	(64)		Fully Litigated	7.51%	52.50%	4.94%
Oklahoma	Oklahoma Gas & Electric Co.	OGE	PUD 201500273	10.25%	3/20/2017	V	9.50%	(75)	Y	Fully Litigated	7.69%	53.31%	5.06%
Florida	Gulf Power Co.	NEE	160186-EI	11.00%	4/4/2017	V	10.25%	(75)		Settled	N/A	N/A	N/A
New Hampshire	Liberty Utilities Granite St	AQN	DE-16-383	10.30%	4/12/2017	D	9.40%	(90)		Settled	7.64%	50.00%	4.70%
New Hampshire	Unitil Energy Systems Inc.	UTL	DE-16-384	10.30%	4/20/2017	D	9.50%	(80)		Settled	8.34%	50.97%	4.84%
Missouri	Kansas City Power & Light	EVRG	ER-2016-0285	9.90%	5/3/2017	V	9.50%	(40)	Y	Fully Litigated	7.43%	49.20%	4.67%
Minnesota	Northern States Power Co.	XEL	E-022/GR-15-826	10.00%	5/11/2017	V	9.20%	(80)	Y	Settled	7.08%	52.50%	4.83%
Arkansas	Oklahoma Gas & Electric Co.	OGE	16-052-U	10.25%	5/18/2017	V	9.50%	(75)	Y	Settled	5.42%	36.38%	3.46%
Delaware	Delmarva Power & Light Co.	EXC	16-0649	10.60%	5/23/2017	D	9.70%	(90)		Settled	N/A	N/A	N/A
North Dakota	MDU Resources Group Inc.	MDU	PU-16-666	10.00%	6/16/2017	V	9.65%	(35)		Settled	7.36%	51.40%	4.96%
Kentucky	Kentucky Utilities Co.	PPL	2016-00370	10.23%	6/22/2017	V	9.70%	(53)		Settled	N/A	N/A	N/A
Kentucky	Louisville Gas & Electric Co.	PPL	2016-00371	10.23%	6/22/2017	V	9.70%	(53)		Settled	N/A	N/A	N/A
District of Columbia	Potomac Electric Power Co.	EXC	FC-1139	10.60%	7/24/2017	D	9.50%	(110)		Fully Litigated	7.46%	49.14%	4.67%
Arizona	Arizona Public Service Co.	PNW	E-01345A-16-0036	10.50%	8/15/2017	V	10.00%	(50)	Y	Settled	7.85%	55.80%	5.58%
New Jersey	Atlantic City Electric Co.	EXC	ER-17030308	10.10%	9/22/2017	D	9.60%	(50)		Settled	7.60%	50.47%	4.85%
Texas	Oncor Electric Delivery Co.	SRE	46957	10.25%	9/28/2017	D	9.80%	(45)		Settled	7.44%	42.50%	4.17%
Maryland	Potomac Electric Power Co.	EXC	9443	10.10%	10/20/2017	D	9.50%	(60)		Fully Litigated	7.43%	50.15%	4.76%
California	Pacific Gas & Electric Co.	PCG	Advice No. 5148-E	10.25%	10/26/2017	V	10.25%	-		Settled	7.69%	52.00%	5.33%
California	San Diego Gas & Electric Co.	SRE	Advice No. 3120-E	10.20%	10/26/2017	V	10.20%	-		Settled	7.55%	52.00%	5.30%
California	Southern California Edison Co.	EIX	Advice No. 3665-E	10.30%	10/26/2017	V	10.30%	-	Y	Settled	7.61%	48.00%	4.94%
Florida	Tampa Electric Co.	EMA	20170210-EI	N/A	11/6/2017	V	10.25%	N/A		Settled	N/A	N/A	N/A
Alaska	Alaska Electric Light Power	AVA	U-16-086	13.80%	11/15/2017	V	11.95%	(185)		Settled	8.91%	58.18%	6.95%
Massachusetts	NSTAR Electric Co.	ES	17-05	10.50%	11/30/2017	D	10.00%	(50)		Fully Litigated	7.33%	53.34%	5.33%
Massachusetts	Western Massachusetts Electric	ES	17-05	10.50%	11/30/2017	D	10.00%	(50)		Fully Litigated	7.26%	54.51%	5.45%
Washington	Puget Sound Energy Inc.		UE-170033	9.80%	12/5/2017	V	9.50%	(30)		Settled	7.60%	48.50%	4.61%
Illinois	Ameren Illinois	AEE	17-0197	8.40%	12/6/2017	D	8.40%	-	Y	Fully Litigated	7.04%	50.00%	4.20%
Illinois	Commonwealth Edison Co.	EXC	17-0196	8.40%	12/6/2017	D	8.40%	-		Fully Litigated	6.47%	45.89%	3.85%
Wisconsin	Northern States Power Co. - WI	XEL	4220-UR-123	10.00%	12/7/2017	V	9.80%	(20)	Y	Fully Litigated	7.56%	51.45%	5.04%
Texas	El Paso Electric Co.	EE	46831	10.50%	12/14/2017	V	9.65%	(85)		Settled	7.73%	48.35%	4.67%
Texas	Southwestern Electric Power Co.	AEP	46449	10.00%	12/14/2017	V	9.60%	(40)		Fully Litigated	7.18%	48.46%	4.65%
Oregon	Portland General Electric Co.	POR	UE 319	9.75%	12/18/2017	V	9.50%	(25)	Y	Settled	7.35%	50.00%	4.75%
New Mexico	Public Service Co. of NM	PNM	16-00276-UT	10.13%	12/20/2017	V	9.58%	(55)	Y	Settled	7.23%	49.61%	4.75%
Vermont	Green Mountain Power Corp		17-3112-INV	9.50%	12/21/2017	V	9.10%	(40)		Settled	6.87%	48.60%	4.42%

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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)
Idaho	Avista Corp.	AVA	AVU-E-17-01	9.90%	12/28/2017	V	9.50%	(40)		Settled	7.61%	50.00%	4.75%
Nevada	Nevada Power Co.	BRK.A	17-06003	10.10%	12/29/2017	V	9.50%	(60)		Fully Litigated	8.00%	49.99%	4.75%
Kentucky	Kentucky Power Co.	AEP	2017-00179	10.31%	1/18/2018	V	9.70%	(61)		Settled	6.44%	41.68%	4.04%
Oklahoma	Public Service Co. of OK	AEP	PUD 201700151	10.00%	1/31/2018	V	9.30%	(70)		Fully Litigated	6.88%	48.51%	4.51%
Iowa	Interstate Power & Light Co.	LNT	RPU-2017-0001	10.57%	2/2/2018	V	9.98%	(59)	Y	Settled	7.49%	49.02%	4.89%
North Carolina	Duke Energy Progress Inc.	DUK	E-2, Sub 1142	10.75%	2/23/2018	V	9.90%	(85)		Settled	7.09%	52.00%	5.15%
Minnesota	ALLETE (Minnesota Power)	ALE	E-015/GR-16-664	10.15%	3/12/2018	V	9.25%	(90)	Y	Fully Litigated	7.06%	53.81%	4.98%
New York	Niagara Mohawk Power Corp.	NG	17-E-0238	9.79%	3/15/2018	D	9.00%	(79)		Settled	6.53%	48.00%	4.32%
Michigan	Consumers Energy Co.	CMS	U-18322	10.50%	3/29/2018	V	10.00%	(50)		Fully Litigated	5.89%	40.89%	4.09%
Michigan	Indiana Michigan Power Co.	AEP	U-18370	10.60%	4/12/2018	V	9.90%	(70)		Fully Litigated	5.76%	36.38%	3.60%
Kentucky	Duke Energy Kentucky Inc.	DUK	2017-00321	10.30%	4/13/2018	V	9.73%	(57)		Fully Litigated	6.83%	49.25%	4.79%
Connecticut	Connecticut Light and Power	ES	17-10-46	10.50%	4/18/2018	D	9.25%	(125)		Settled	7.09%	53.00%	4.90%
Michigan	DTE Electric Co.	DTE	U-18255	10.50%	4/18/2018	V	10.00%	(50)		Fully Litigated	5.34%	36.84%	3.68%
Washington	Avista Corp.	AVA	UE-170485	9.90%	4/26/2018	V	9.50%	(40)		Fully Litigated	7.50%	48.50%	4.61%
Indiana	Indiana Michigan Power Co.	AEP	44967	10.60%	5/30/2018	V	9.95%	(65)		Settled	5.51%	35.73%	3.56%
Maryland	Potomac Electric Power Co.	EXC	9472	10.10%	5/31/2018	D	9.50%	(60)		Settled	7.03%	50.44%	4.79%
New York	Central Hudson Gas & Electric	FTS	17-E-0459	9.50%	6/14/2018	D	8.80%	(70)		Settled	6.44%	48.00%	4.22%
Hawaii	Hawaiian Electric Co.	HE	2016-0328	10.60%	6/22/2018	V	9.50%	(110)		Settled	7.57%	57.10%	5.42%
North Carolina	Duke Energy Carolinas LLC	DUK	E-7, Sub 1146	10.75% †	6/22/2018	V	9.90%	(85)		Settled	7.35%	52.00%	5.15%
Maine	Versant Power		2017-00198	9.50%	6/28/2018	D	9.35%	(15)		Fully Litigated	7.18%	49.00%	4.58%
Hawaii	Hawaii Electric Light Co	HE	2015-0170	10.60%	6/29/2018	V	9.50%	(110)		Settled	7.80%	56.69%	5.39%
District of Columbia	Potomac Electric Power Co.	EXC	FC-1150	10.10%	8/8/2018	D	9.53%	(57)		Settled	7.45%	50.44%	4.81%
Delaware	Delmarva Power & Light Co.	EXC	17-0977	10.10%	8/21/2018	D	9.70%	(40)		Settled	6.78%	50.52%	4.90%
Rhode Island	Narragansett Electric Co.	NG	4770 (electric)	10.10%	8/24/2018	D	9.28%	(82)		Settled	6.97%	50.95%	4.73%
New Mexico	Southwestern Public Service Co	XEL	17-00255-UT	10.25%	9/5/2018	V	9.10%	(115)	Y	Fully Litigated	7.24%	53.97%	4.91%
Wisconsin	Wisconsin Power and Light Co	LNT	6680-UR-121 (Elec)	10.00%	9/14/2018	V	10.00%	-	Y	Settled	7.08%	52.00%	5.20%
Wisconsin	Madison Gas and Electric Co.	MGEE	3270-UR-122 (Elec)	9.80%	9/20/2018	V	9.80%	-		Settled	7.10%	56.06%	5.49%
North Dakota	Otter Tail Power Co.	OTTR	PU-17-398	10.30%	9/26/2018	V	9.77%	(53)	Y	Settled	7.64%	52.50%	5.13%
Ohio	Dayton Power and Light Co.	AES	15-1830-EL-AIR	10.50%	9/26/2018	D	9.999% *	(50)		Settled	7.27%	47.52%	4.75%
Kansas	Westar Energy Inc.	EVRG	18-WSEE-328-RTS	9.85%	9/27/2018	V	9.30%	(55)	Y	Settled	7.06%	51.24%	4.77%
Pennsylvania	UGI Utilities Inc.	UGI	R-2017-2640058	11.25%	10/4/2018	D	9.85%	(140)		Fully Litigated	7.48%	54.02%	5.32%
New Jersey	Public Service Electric Gas	PEG	ER18010029	10.30%	10/29/2018	D	9.60%	(70)		Settled	6.99%	54.00%	5.18%
Indiana	Indianapolis Power & Light Co.	AES	45029	10.32%	10/31/2018	V	9.99%	(33)		Settled	6.59%	39.67%	3.96%
Illinois	Ameren Illinois	AEE	18-0807	8.69%	11/1/2018	D	8.69%	-	Y	Fully Litigated	6.99%	50.00%	4.35%
Illinois	Commonwealth Edison Co.	EXC	18-0808	8.69%	12/4/2018	D	8.69%	-		Fully Litigated	6.52%	47.11%	4.09%
Kansas	Kansas City Power & Light	EVRG	18-KCPE-480-RTS	9.85%	12/13/2018	V	9.30%	(55)	Y	Settled	7.07%	49.09%	4.57%
Oregon	Portland General Electric Co.	POR	UE-335	9.50%	12/14/2018	V	9.50%	-	Y	Settled	7.30%	50.00%	4.75%
Ohio	Duke Energy Ohio Inc.	DUK	17-0032-EL-AIR	10.40%	12/19/2018	D	9.84%	(56)	Y	Settled	7.54%	50.75%	4.99%
Texas	Texas-New Mexico Power Co.	PNM	48401	10.50%	12/20/2018	D	9.65%	(85)	Y	Settled	7.89%	45.00%	4.34%

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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)
Vermont	Green Mountain Power Corp.		18-0974-TF	9.30%	12/21/2018	D	9.30%	-		Fully Litigated	5.26%	49.85%	4.64%
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)	Y	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 Ω	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%

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(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
								(8) - (5)					(8) X (13)
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%
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)		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	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	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	E-2, Sub 1219	10.50%	4/16/2021	V	9.60%	(90)	Y	Settled	6.93%	52.00%	4.99%

Reported Authorized Returns on Equity, Electric Utility Rate Cases Completed, 2017 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)
Entire Period													
# of Decisions			155										
Average	(All Utilities)			10.18%			9.56%	(62)			7.00%	49.57%	4.73%
Average	(Distribution Only)			9.94%			9.31%	(63)			7.01%	49.67%	4.62%
Average	(Vertically Integrated Only)			10.31%			9.69%	(62)			7.01%	49.53%	4.79%
Median	(All Utilities)			10.25%			9.58%				7.11%	50.00%	4.77%
Maximum	(All Utilities)			13.80%			11.95%				8.91%	58.18%	6.95%
Minimum	(All Utilities)			8.20%			8.20%				4.93%	33.71%	3.19%
North Dakota			2	10.15%			9.71%	(44)			7.50%	51.95%	5.04%
Applicant Proxy Group				10.05%			9.49%	(55)			7.14%	50.65%	4.81%
Settled				10.26%			9.62%	(63)			7.13%	49.90%	4.79%
Fully Litigated				10.08%			9.47%	(61)			6.84%	49.16%	4.65%
2017													
# of Decisions			42										
Average	(All Utilities)			10.22%			9.68%	(54)			7.30%	49.44%	4.77%
Average	(Distribution Only)			10.04%			9.43%	(61)			7.31%	49.52%	4.66%
Average	(Distribution Only, exc. IL FRP)			10.32%			9.60%	(72)			7.41%	49.81%	4.78%
Average	(Vertically Integrated Only)			10.31%			9.80%	(50)			7.29%	49.40%	4.83%
2018													
# of Decisions			38										
Average	(All Utilities)			10.14%			9.55%	(59)			6.92%	48.99%	4.67%
Average	(Distribution Only)			9.96%			9.38%	(58)			6.96%	49.91%	4.68%
Average	(Distribution Only, exc. IL FRP)			10.14%			9.47%	(66)			6.99%	50.11%	4.75%
Average	(Vertically Integrated Only)			10.27%			9.68%	(60)			6.89%	48.32%	4.67%
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)			6.99%	48.53%	4.48%

Reported Authorized Returns on Equity, Electric Utility Rate Cases Completed, 2017 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) (8) - (5)	(10)	(11)	(12)	(13)	(14) (8) X (13)
Average	(Vertically Integrated Only)			10.10%			9.55%	(56)			6.84%	50.12%	4.78%
2021													
# of Decisions			3										
Average	(All Utilities)			10.33%			9.50%	(83)			6.72%	49.08%	4.67%
Average	(Vertically Integrated Only)			10.33%			9.50%	(83)			6.72%	49.08%	4.67%

Source: S&P Global Market Intelligence

Last Updated: 4/21/2021

* Due to Rounding, the ROE Award is reported as 10.00 on the S&P Global Website.

‡ S&P incorrectly reports this value as 9.9%

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 Northern States Power's Proposed ROE vs. National Average ROE, Vertically Integrated Utilities, Proposed Capital Structure

(1) Exhibit ___ (BCH-1), REVISED Schedule 3A NSP's requested rate of return (after-tax basis) 7.35%

1) Calculate Rate of Return Using the National Average ROE

	Capital Component	Percent of Total Capital	Cost	Weighted Cost
(2)	Exhibit ___ (BCH-1), REVISED Schedule 3A Long Term Debt	46.96%	4.22%	1.98%
(3)	Exhibit ___ (BCH-1), REVISED Schedule 3A Short Term Debt	0.54%	1.00%	0.01%
(4)	Exhibit ___ (BCH-1), REVISED Schedule 3A Common Equity	52.50%	9.69%	5.09%
(5)	SUM(2-4)	Rate of Return at National Average ROE		7.07%

2) Calculate Revenue Requirement Impact at the Proposed ROE

(6)	Exhibit ___ (BCH-1), REVISED Schedule 3A	Rate Base (\$000)	\$	676,916,776
(7)	= (5)	Rate of Return (ROE = 10.0%)		7.07%
(8)	(6) x (7)	Adjusted Income Requirement (\$000) (ROE = 10.0%)	\$	47,887,543
(9)	Exhibit ___ (BCH-1), REVISED Schedule 3A	Consumer Energy's Proposed Income Requirement (\$000)	\$	49,753,383
(10)	(9) - (8)	Difference in Income Requirement (\$000)	\$	1,865,840
(11)	Exhibit ___ (BCH-1), REVISED Schedule 3A	Conversion Factor		1.3228
(12)	(10) X (11)	Difference in Revenue Requirement (\$000)	\$	2,468,202
(13)	Exhibit ___ (BCH-1), REVISED Schedule 3A	Net Requested Revenue Requirement Increase (\$000)	\$	19,197,034
(14)	(12) / (13)	Percent of Increase from ROE Differential		12.86%