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Revenue Allocation,  
Rate Design  
**Witness:** Steve W. Chriss  
**Sponsoring Party:** Midwest Energy  
Consumers Group  
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**MISSOURI PUBLIC SERVICE COMMISSION**

**FILE NO. ER-2019-0335**

**DIRECT TESTIMONY AND EXHIBITS OF**

**STEVE W. CHRISS**

**ON BEHALF OF**

**MIDWEST ENERGY CONSUMERS GROUP**

**DECEMBER 18, 2019**

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## Exhibits

**Exhibit SWC-1:** Witness Qualifications Statement

**Exhibit SWC-2:** Calculation of FERC Form 1 Reported LGS Revenue per kWh Sold

**Exhibit SWC-3:** Calculation of Proposed LGS and SP Increases in Excess of Cost of Service Levels

**Exhibit SWC-4:** Calculation of Rate of Return Index Values

**Exhibit SWC-5:** Illustrative Example of MCEG Proposed Revenue Allocation, \$67.2 Million Reduction in Revenue Requirement

**Exhibit SWC-6:** Electronic Data Interchange Bill

**Exhibit SWC-7:** Cost of Service by Function, Ameren Cost of Service Study Results, Proposed LGS Rates, and Proposed SP Rates

**Exhibit SWC-8:** Derivation of Large General Service Revenue Requirement Using Ameren's Proposed Billing Units

**Exhibit SWC-9:** Derivation of Small Primary Service Revenue Requirement Using Ameren's Proposed Billing Units

**Exhibit SWC-10:** Derivation of Cost-Based Large General Service Wires Demand Charge

**Exhibit SWC-11:** Calculation of Effective Demand Rates, Proposed LGS Summer

**Exhibit SWC-12:** Derivation of MEGC Proposed Rate Design for Large General Service Revenue Requirement at Ameren's Proposed Revenue Requirement

1 **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,  
4 AR 72716-0550. I am employed by Walmart Inc. ("Walmart") as Director, Energy  
5 Services.

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

7 A. I am testifying on behalf of Midwest Energy Consumers Group ("MECG"), which is a  
8 corporation representing the interests of large commercial and industrial users of  
9 electricity. These large commercial and industrial users take electric service from  
10 Union Electric Company d/b/a Ameren Missouri ("Ameren" or "the Company")  
11 primarily on Service Classification No. 3(M) Large General Service Rate ("LGS"),  
12 Service Classification No. 4(M) Small Primary Service Rate ("SP"), and Service  
13 Classification No. 11(M) Large Primary Service Rate ("LP").

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

15 A. In 2001, I completed a Master of Science in Agricultural Economics at Louisiana State  
16 University. From 2001 to 2003, I was an Analyst and later a Senior Analyst at the  
17 Houston office of Econ One Research, Inc., a Los Angeles-based consulting firm. My  
18 duties included research and analysis on domestic and international energy and  
19 regulatory issues. From 2003 to 2007, I was an Economist and later a Senior Utility  
20 Analyst at the Public Utility Commission of Oregon in Salem, Oregon. My duties  
21 included appearing as a witness for PUC Staff in electric, natural gas, and

1 telecommunications dockets. I joined the energy department at Walmart in July  
2 2007 as Manager, State Rate Proceedings. I was promoted to Senior Manager,  
3 Energy Regulatory Analysis, in June 2011. I was promoted to my current position in  
4 October, 2016 and the position was re-titled in October, 2018. My Witness  
5 Qualifications Statement is attached as Exhibit SWC-1.

6 **Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY BEFORE THE MISSOURI PUBLIC**  
7 **SERVICE COMMISSION (“COMMISSION”)?**

8 A. Yes. I submitted testimony in Docket Nos. ER-2010-0036, EO-2012-0009, EC-2014-  
9 0224, ER-2014-0258, ER-2016-0023, EA-2016-0208, ER-2016-0179, ER-2016-0358,  
10 ET-2018-0063, ER-2018-0146, EM-2018-0012, and ER-2018-0145.

11 **Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY BEFORE OTHER STATE**  
12 **REGULATORY COMMISSIONS?**

13 A. Yes. I have submitted testimony in over 200 proceedings before 39 other utility  
14 regulatory commissions. I have also submitted testimony before legislative  
15 committees in Missouri, Kansas, North Carolina, and South Carolina. My testimony  
16 has addressed topics including, but not limited to, cost of service and rate design,  
17 return on equity, revenue requirements, ratemaking policy, large customer  
18 renewable programs, qualifying facility rates, telecommunications deregulation,  
19 resource certification, energy efficiency/demand side management, fuel cost  
20 adjustment mechanisms, decoupling, and the collection of cash earnings on  
21 construction work in progress.

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

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

3       **Q.     DO ENTITIES REPRESENTED BY MECG HAVE A SIGNIFICANT IMPACT ON**  
4       **MISSOURI'S ECONOMY?**

5       A.     Yes. For example, as shown on Walmart's website, Walmart operates 156 retail  
6       units and four distribution centers and employs over 40,000 associates in Missouri.  
7       In fiscal year ending 2019, Walmart purchased \$7.1 billion worth of goods and  
8       services from Missouri-based suppliers, supporting over 75,000 supplier jobs.<sup>1</sup>

9

10    **Purpose of Testimony and Summary of Recommendations**

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

12    A.     The purpose of my testimony is to provide MECG's response to class cost of service  
13    and rate design issues in Ameren's rate case filing and to provide recommendations  
14    to assist the Commission in its thorough and careful consideration of the customer  
15    impact of the Company's proposed rate increase.

16    **Q.     PLEASE SUMMARIZE MECG'S RECOMMENDATIONS TO THE COMMISSION.**

17    A.     MECG's recommendations to the Commission are as follows:

18       1) MECG does not take a position, at this time, on the Company's proposed class cost  
19       of service study with the exception that MECG does specifically support the use of

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

1 the four non-coincident peak Average & Excess demand allocator as a reasonable  
2 allocator for production cost. To the extent that alternative cost of service models  
3 or modifications to the Company's model are proposed by other parties, MECG  
4 reserves the right to address such proposals in rebuttal testimony.

5 2) If the Commission were to authorize Ameren its proposed revenue requirement  
6 decrease, MECG does not oppose the Company's proposed revenue allocation.

7 3) If the Commission awards a further revenue requirement decrease from that  
8 proposed by the Company, the Commission should address the above cost rates  
9 paid by the LGS and SP classes and make additional reductions in those rates.

10 Specifically, MECG recommends that the Commission allocate the additional  
11 revenue decrease using the following steps:

12 a. Start with the revenue allocation as proposed by the Company at the  
13 Company's proposed revenue requirement, with all customer classes  
14 receiving the proposed decrease; and

15 b. Allocate any additional decrease to SGS, LGS and SP, LPS, and Company  
16 Owned Lighting based on their ratio share of the revenue neutral shift  
17 required to bring all classes to cost of service.

18 4) The Commission should require Ameren to redesign LGS and SP as three part rates  
19 with demand charges and time varying energy charges and require all LGS and SP  
20 customers to be transitioned to those rates in its first rate case following the  
21 expected completion of the Company's Advanced Metering Infrastructure ("AMI")

1 deployment in 2025.

2 5) For the purposes of this docket, at the Company's proposed revenue requirement

3 for the LGS and SP classes, MECG:

4 1) Does not oppose the Company's proposed customer, on-peak energy, and  
5 off-peak energy charges, nor the Company's proposed changes to the Rider B  
6 credits and the reactive charge for SP;

7 2) Recommends that the Commission maintain the demand charges for the LGS  
8 and SP schedules at current levels; and

9 3) Recommends the Commission apply the proposed decrease on an equal  
10 percentage basis to the summer and winter energy charges.

11 6) If the Commission awards a further decrease for LGS and SP rate schedules from  
12 that proposed by the Company, then the Commission can then take larger steps to  
13 address the over-recovery of demand-related costs through energy charges and  
14 associated intra-class subsidies. Specifically, the Commission should set the demand  
15 charges per MECG's recommendation above and apply the approved reduction in  
16 the class revenue requirements by reducing all base rate energy charges on an equal  
17 percentage basis.

18 **Q. DOES THE FACT THAT YOU MAY NOT ADDRESS AN ISSUE OR POSITION**  
19 **ADVOCATED BY THE COMPANY INDICATE MECG'S SUPPORT?**

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



1 **General Concerns Regarding Ameren's Proposed Revenue Requirement**

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

4 A. My understanding is that Ameren has requested a revenue decrease in this docket  
5 of approximately \$0.8 million, based on a test year ending December 31, 2018, with  
6 certain pro forma adjustments to include known and measurable items through  
7 December 31, 2019. See Application at ¶¶6 and ¶¶7. My understanding is that the  
8 change in revenue requirement proposed by the Company reflects an increase in  
9 capital investment, depreciation, return, and income taxes, offset by a reduction in  
10 net base energy costs. See Direct Testimony of Warren Wood, page 4, line 20 to line  
11 23.

12 **Q. HAVE THE COMPANY'S RATES SIGNIFICANTLY INCREASED FOR LARGE USERS OVER**  
13 **THE LAST DECADE?**

14 A. Yes. For example, analysis for FERC Form 1 data shows that between 2008 and  
15 2018, Ameren's reported revenue per kWh sold to LGS customers has increased  
16 from \$0.0563/kWh to \$0.0847/kWh, an increase of 50.3 percent. Figure 1 and  
17 Exhibit SWC-2 show the increase in revenue per kWh sold and the cumulative  
18 percent increase over the period.

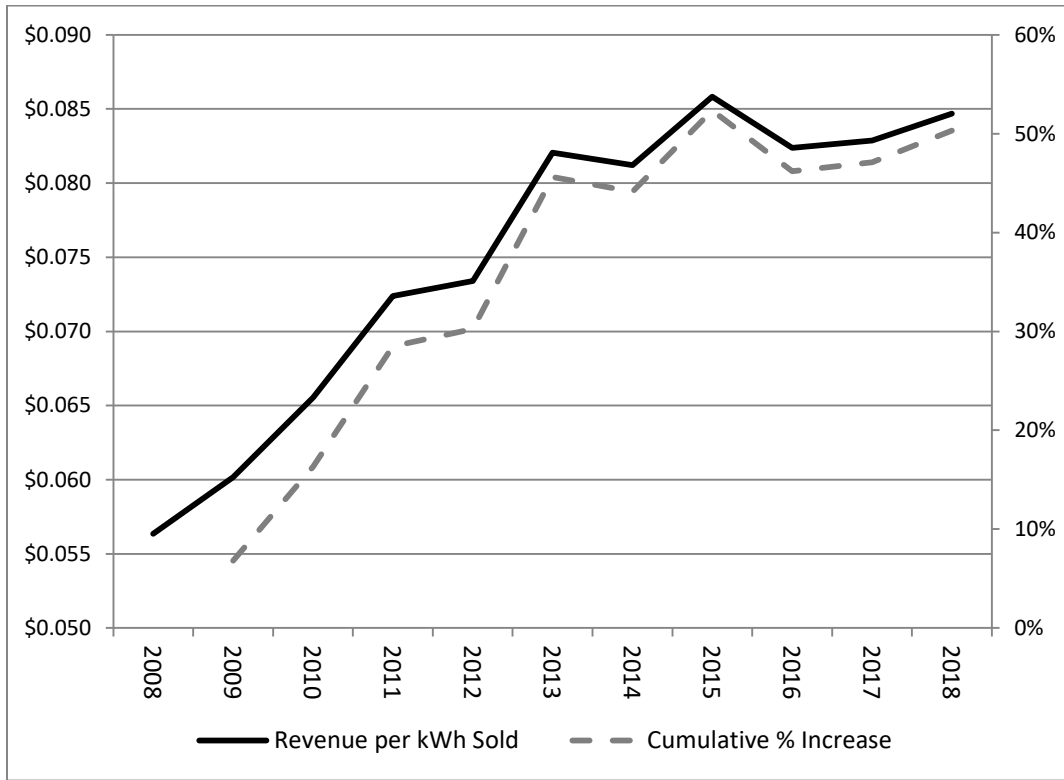


Figure 1. FERC Form 1 Reported LGS Revenue Per kWh Sold and Cumulative Percent Increase, 2008 - 2018. Source: Exhibit SWC-2

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**Q. HAVE LGS AND SP CUSTOMERS PAID RATES IN EXCESS OF COST OF SERVICE DURING THIS PERIOD AS WELL?**

A. Yes. As I will discuss in more detail below, LGS and SP customers have paid rates well in excess of cost of service for much of the time period shown in Figure 1.

**Q. PLEASE EXPLAIN.**

A. An examination of the revenue neutral<sup>2</sup> results for Ameren rate cases filed since 2007 shows that rates for the LGS and SP classes have been set well in excess of cost

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<sup>2</sup> Revenue neutral results represent the revenue change for each class necessary to bring that class to its cost of service level per the cost of service study results, as determined prior to any rate change granted to the utility.

1 of service since the 2007 rate case.<sup>3</sup> Table 1 summarizes the Company's final class  
2 cost of service study results in each rate case.

**Table 1. Summary of Revenue Changes, Per Ameren Cost of Service Study Results, Required to Move LGS and SP to Cost of Service in Previous Ameren Rate Cases.**

Rate Case	Revenue Change Required to Move LGS/SP to Cost of Service	
	(\$)	(%)
ER-2007-0002		
LGS	(\$43,441,000)	-10.2
SP	(\$8,148,000)	-4.5
ER-2008-0318 (LGS & SP)	(\$47,863,000)	-7.66
ER-2010-0036 (LGS & SP)	(\$64,785,000)	-9.74
ER-2011-0028 (LGS & SP)	(\$63,653,000)	-8.94
ER-2012-0166 (LGS & SP)	(\$59,937,000)	-7.99
ER-2014-0258 (LGS & SP)	(\$68,705,063)	-8.54
ER-2016-0179 (LGS & SP)	(\$85,207,204)	-10.10
ER-2019-0335 (LGS & SP)	(\$84,152,642)	-10.44

Source: Direct Testimony of Steve W. Chriss, Table 1 and Schedule SWC-3 on behalf of The Midwest Energy Consumers Group, Case No. ER-2016-0179, Case No. ER-2016-0179, Schedule WRD-3, and Schedule TH-D2.

3  
4 **Q. HAS AMEREN PROPOSED A REVENUE REQUIREMENT CHANGE FOR LGS AND SP**  
5 **CUSTOMERS THAT REFLECTS MOVEMENT TOWARDS THE COST TO SERVE THOSE**  
6 **CUSTOMERS?**

7 A. No. Per Ameren's cost of service study results in this case, at the Company's  
8 proposed revenue requirement, the LGS and SP classes should receive a 10.5  
9 percent decrease. However, the Company has proposed only a 0.03 percent  
10 decrease for LGS and a 0.04 percent increase for SP. See Direct Testimony of  
11 Michael W. Harding, page 7, table 3, and Schedule TH-D1. Ameren's proposal would

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<sup>3</sup> Since 2007, the LGS and SP classes have been treated together for purposes of conducting class cost of service studies.

1 mean that LGS and SP customers together would pay rates that are almost \$84  
2 million a year above cost of service levels. See Exhibit SWC-3.

3 **Q. SHOULD THE COMMISSION GENERALLY CONSIDER THE IMPACT OF THE**  
4 **PROPOSALS IN THIS DOCKET ON LGS AND SP CUSTOMERS IN SETTING THE CLASS**  
5 **REVENUE REQUIREMENTS AND RATE DESIGNS IN THE IMMEDIATE PROCEEDING?**

6 A. Yes. Electricity represents a significant portion of operating costs for large  
7 commercial and industrial customers. When rates increase, that increase in cost  
8 puts pressure on the other expenses required by a business to operate and can limit  
9 economic development within Missouri. The Commission should consider the  
10 impact on customers thoroughly and carefully in their examination of all facets of  
11 this case to ensure that Ameren's rates are set at the minimum amount necessary  
12 for the utility to provide adequate and reliable service while still earning a fair return  
13 on equity.

14 **Q. SHOULD THE COMMISSION GENERALLY CONSIDER THAT DECISIONS MADE IN THE**  
15 **IMMEDIATE PROCEEDING CAN HAVE LASTING CONSEQUENCES ON CUSTOMERS?**

16 A. Yes. While Ameren has not proposed a revenue requirement increase in this case,  
17 the specter of future increases, particularly without reconciliation of existing cost of  
18 service and revenue allocation issues, is a significant concern to large customers.  
19 The Company's proposed revenue requirement decrease, which will likely be further  
20 reduced due to the Commission's decisions on ROE and other revenue requirement  
21 issues in this case, provides a unique opportunity for the Commission to move rates

1 closer to cost of service levels while ensuring that all customers see some amount of  
2 rate relief.

3

4 **Cost of Service and Revenue Allocation**

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

7 A. MECG 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. DOES MECG TAKE A POSITION ON THE COMPANY'S PROPOSED CLASS COST OF**  
11 **SERVICE MODEL AT THIS TIME?**

12 A. MECG does not take a position on the Company's proposed class cost of service  
13 study with the exception that MECG does specifically support the use of the four  
14 non-coincident peak Average & Excess demand allocator as a reasonable allocator  
15 for fixed production cost. To the extent that alternative cost of service models or  
16 modifications to the Company's model are proposed by other parties, MECG  
17 reserves the right to address such proposals in rebuttal testimony.

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

20 A. The Company represents this relationship in their cost of service study results  
21 through the use of class-specific rates of return. See Schedule TH-D2. These rates of

1 return can be converted into a rate of return index (“RRI”), which is an indexed  
2 measure of the relationship of the rate of return for an individual rate class to the  
3 total system rate of return. An RRI greater than 1.0 means that the rate class is  
4 paying rates in excess of the costs incurred to serve that class, and an RRI less than  
5 1.0 means that the rate class is paying rates less than the costs incurred to serve that  
6 class. As such, those rate classes with an RRI greater than 1.0 shoulder some of the  
7 revenue responsibility burden for the classes with an RRI less than 1.0.

8 **Q. HAVE YOU CALCULATED A RRI FOR EACH CUSTOMER CLASS BASED ON AMEREN’S**  
9 **COST OF SERVICE RESULTS?**

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

**Table 2. Rate of Return Index, Ameren Proposed Cost of Service Study Results.**

Customer Class	Rate of Return (%)	RRI
Residential	4.94	0.67
Small General Service	7.51	1.02
Large General Service/Small Primary Service	11.35	1.54
Large Primary Service	10.69	1.45
Company Owned Lighting	11.25	1.53
Customer Owned Lighting	-3.74	(0.51)

Source: Exhibit SWC-4 and Schedule TH-D2.

11  
12 **Q. DO THE RATES FOR THE LGS AND SP CLASSES PROVIDE A RATE OF RETURN FOR**  
13 **THE COMPANY IN EXCESS OF THEIR COST OF SERVICE LEVELS?**

14 A. Yes. As shown in Table 2, Ameren’s cost of service results show that LGS and SP,  
15 with an RRI of 1.54, provide a rate of return significantly above the cost of service  
16 level for the class. Additionally, SGS, LPS, and Company Owned Lighting are paying

1 rates in excess of their respective cost of service levels, though SGS is much closer to  
2 cost of service than the other rate classes.

3 **Q. HAVE LGS AND SP RATES PROVIDED A RATE OF RETURN ABOVE THEIR COST OF**  
4 **SERVICE LEVELS SINCE THE COMPANY’S 2007 RATE CASE?**

5 A. Yes. As shown in Table 3, LGS and SP have provided a rate of return above their cost  
6 of service levels in every rate case going back to and including the Company’s 2007  
7 rate case. In total, as shown in Table 1 earlier in my testimony, this has resulted in  
8 LGS and SP customers paying rates well in excess of the Company’s cost of service  
9 since 2007.

**Table 3. LGS/SP Rate of Return, Ameren Cost of Service Study Results, Past Rate Cases.**

Case	LGS/SP Rate of Return (%)	Total Missouri Rate of Return (%)	Rate of Return Index Value
ER-2007-0002 (LGS)	5.86	2.74	2.14
ER-2007-0002 (SP)	4.47	2.74	1.63
ER-2008-0318	7.01	4.06	1.73
ER-2010-0036	6.12	1.89	3.24
ER-2011-0028	8.26	4.59	1.80
ER-2012-0166	6.32	2.89	2.19
ER-2014-0258	7.57	4.44	1.71
ER-2016-0179	9.73	5.41	1.80
Present Case	11.35	7.37	1.54

Source: Table 2, Direct Testimony of Steve W. Chriss, Table 3, on behalf of The Midwest Energy Consumers Group, Case No. ER-2016-0179.

10  
11 As shown in Table 3, very little movement has been made towards addressing the  
12 fact that LGS and SP rates are above cost of service. Rate relief for LGS and SP  
13 customers is long overdue.

1 Q. HAS THE COMPANY CALCULATED THE REVENUE NEUTRAL REVENUE CHANGES  
2 REQUIRED TO BRING EACH CLASS TO COST OF SERVICE PER THE COMPANY'S COST  
3 OF SERVICE STUDY IN THIS CASE?

4 A. Yes, as shown in Table 4.

**Table 4. Revenue Neutral Shift Results, Ameren Proposed Cost of Service Study.**

Customer Class	Revenue Neutral Shift	
	(\$000)	(%)
Residential	\$104,970	8.21
Small General Service	(\$1,293)	-0.44
Large General Service/Small Primary Service	(\$84,111)	-10.44
Large Primary Service	(\$16,855)	-8.31
Company Owned Lighting	(\$4,230)	-11.88
Customer Owned Lighting	\$1,518	44.70

Source: MO ECCOS\_2018 Final, tab SCH 1, provided in response to MCEG 1.2.

5  
6 For LGS and SP specifically, the revenue neutral change required is a reduction of  
7 approximately \$84.11 million.

8 Q. DOES THE COMPANY STATE THAT EQUAL RATES OF RETURN FOR EACH CLASS ARE  
9 AN APPROPRIATE STARTING POINT WHEN DESIGNING RATES?

10 A. Yes. The Company states that equal rates of return for all customer classes are an  
11 appropriate starting point for designing rates for three reasons:

- 12 1) Equity and fairness to all electric customers;
- 13 2) Encouraging cost-effective utilization of electricity; and
- 14 3) Competition, in that cost-based electric rates permit the Company to  
15 compete with alternative fuels, co-generation, and other electric providers



1 for new commercial and industrial customers. See Direct Testimony of  
2 Michael W. Harding, page 4, line 3 to line 16.

3 **Q. HAS THE COMPANY STATED IN THE PAST THE ROLE OF A REGULATOR RELATIVE TO**  
4 **COST OF SERVICE IN THE SETTING OF RATES?**

5 A. Yes. In Case No. EC-2014-0224, Ameren witness Terry M. Jarrett states that “[t]he  
6 regulator’s job is to make sure the rates are fair according to the cost of service for  
7 each class.” See Case No. EC-2014-0224, Rebuttal Testimony of Terry M. Jarrett,  
8 page 6, line 9 to line 10.

9 **Q. WHAT IS YOUR UNDERSTANDING OF AMEREN’S PROPOSED REVENUE ALLOCATION**  
10 **IN THIS CASE?**

11 A. My understanding is that Ameren has put forth a two-step revenue allocation  
12 proposal:

13 1) Increase or decrease current base retail revenues on a revenue neutral basis  
14 unless the Commission determines that specific revenue neutral adjustments  
15 can be made based on the change in revenue requirement in this case; and

16 2) Allocate the increase or decrease on an equal percentage basis after any  
17 potential revenue neutral adjustments in step 1. See Direct Testimony of  
18 Michael W. Harding, page 6, line 5 to line 21.

19 **Q. WHAT IS MECG’S RECOMMENDATION TO THE COMMISSION IF THE COMMISSION**  
20 **WERE TO AWARD AMEREN ITS PROPOSED REVENUE REQUIREMENT DECREASE?**

21 A. If the Commission were to award Ameren its proposed \$800,000 revenue

1 requirement decrease, MECG does not oppose the Company's proposed revenue  
2 allocation.

3 **Q. WHAT IS MECG'S RECOMMENDATION TO THE COMMISSION IF THE COMMISSION**  
4 **AWARDS A REVENUE REQUIREMENT DECREASE LOWER THAN THAT PROPOSED BY**  
5 **THE COMPANY?**

6 A. If the Commission awards a further revenue requirement decrease from that  
7 proposed by the Company, the Commission should address the above cost rates  
8 paid by the LGS and SP classes and make additional reductions in those rates.  
9 Specifically, MECG recommends that the Commission allocate the additional  
10 revenue decrease using the following steps:

11 1) Start with the revenue allocation as proposed by the Company at the  
12 Company's proposed revenue requirement, with all customer classes  
13 receiving the proposed decrease; and

14 2) Allocate any additional decrease to SGS, LGS and SP, LPS, and Company  
15 Owned Lighting based on their ratio share of the revenue neutral shift  
16 required to bring all classes to cost of service.

17 **Q. PLEASE PROVIDE AN ILLUSTRATIVE EXAMPLE.**

18 A. Missouri Industrial Energy Consumers ("MIEC") has sponsored the testimony of Greg  
19 R. Meyer in this case in which Mr. Meyer recommends a reduction in revenue  
20 requirement for the Company of approximately \$67.2 million. See Direct Testimony  
21 of Greg R. Meyer, Table 1. As shown in Exhibit SWC-5 and Table 5, the proposed

1 allocation methodology, at a reduction of \$67.2 million, provides for rate relief for  
2 all customer classes while using the revenue requirement reduction to provide  
3 approximately a 62 percent movement towards cost of service-based rates for LGS  
4 and SP as well as the LP and Company owned lighting classes.

**Table 5. Results of MCEG Revenue Allocation Proposal, \$67.2 Million Reduction per MIEC Proposed Revenue Requirement.**

<b>Customer Class</b>	<b>Revenue Change (\$)</b>	<b>Revenue Change (%)</b>	<b>Subsidy Reduction (%)</b>
Residential	(\$362,335)	-0.03	
Small General Service	(\$915,767)	-0.31	70.8
Large General Service	(\$36,768,582)	-6.54	62.6
Small Primary Service	(\$15,931,142)	-6.54	62.7
Large Primary Service	(\$10,574,128)	-5.21	62.7
Company Owned Lighting	(\$2,644,806)	-7.43	62.5
Customer Owned Lighting	(\$3,196)	-0.09	

Source: Exhibit SWC-5.

5

6 **LGS and SP Rate Design**

7 **Q. DOES THE COMPANY MAKE ANY GENERAL STATEMENTS ABOUT ITS RATE DESIGN**  
8 **PHILOSOPHY?**

9 A. Yes. The Company states that it strives to “implement rate structures that are  
10 equitable to customers and provide appropriate price signals to encourage  
11 economically efficient outcomes.” The Company also highlights the principles of (1)  
12 equity, where costs are reflected in rates in a manner by which the cost causers pay  
13 for those costs, and (2) economic efficiency, where customers receive price signals  
14 through rates that encourage the efficient use of energy and minimize the total  
15 costs incurred on the system. See Direct Testimony of Steven M. Wills, page 14, line

1 6 to line 15.

2 **Q. DOES THE COMPANY STATE THAT THERE SHOULD BE A CONNECTION BETWEEN**  
3 **THE CLASSIFICATIONS OF COST IN THE COST OF SERVICE STUDY AND RATE**  
4 **DESIGN?**

5 A. Yes. The Company states that the customer, demand, and energy classifications of  
6 cost are “useful for reflecting cost causation down to the bills...in a way that is an  
7 extension of the cost allocation concept as applied at the class level.” Additionally,  
8 the Company states that under a three part rate structure, with customer, demand,  
9 and energy charges, there is a “logical mapping” of costs from the classifications of  
10 the cost of service study to rate design. In this structure, “customer charges are  
11 generally used to collect customer-related costs; demand charges generally collect  
12 demand-related costs; and energy charges generally collect energy-related costs.”  
13 *Id.*, page 21, line 10 to page 22, line 1.

14 **Q. DOES MECG AGREE WITH THE COMPANY’S STATEMENTS?**

15 A. Yes. As stated earlier in this testimony, MECG advocates that rates be set based on  
16 the utility's cost of service for each rate class. This produces equitable rates that  
17 reflect cost causation, sends proper price signals, and minimizes price distortions.

18 **Q. WHAT IS YOUR UNDERSTANDING OF THE CHARGES INCLUDED IN THE CURRENT**  
19 **LGS RATE DESIGN?**

20 A. My understanding is that the LGS rate design is, in my experience, a relatively  
21 complex schedule, and composed of the following charges:

- 1           1) Summer and winter customer charges, which are a \$/month charge, the level  
2           of which does not vary by season;
- 3           2) Summer and winter demand charges, which are a \$/kW charge based on  
4           “total billing demand,” which is determined as the maximum demand during  
5           the billing period, but no less than 100 kW;
- 6           3) Summer energy charges, which are a set of declining block hours-use \$/kWh  
7           charges based on the customer’s load factor for the billing month using the  
8           total billing demand for the month. There are three blocks built into the  
9           energy charges. The break-point for the first block is 150 kWh/kW of billing  
10          demand, and the break-point for the second block is 350 kWh/kW of billing  
11          demand;
- 12          4) Winter energy charges, which are a set of declining block hours-use \$/kWh  
13          charges based on the customer’s “base billing demand” for the winter  
14          month, which is the lesser of the total billing demand for the month or the  
15          maximum of the total billing demand for the customer for the preceding  
16          May, June, July, August, September, or October. There are three blocks built  
17          into the energy charges. The break-point for the first block is 150 kWh/kW of  
18          base billing demand, and the break-point for the second block is 350  
19          kWh/kW of base billing demand;
- 20          5) Winter seasonal energy charge, which is a \$/kWh charge applied to energy  
21          usage related to “seasonal billing demand,” which is the portion of total

1 billing demand in excess of base billing demand; and

2 6) Low income pilot program charge, which is a \$/month charge. See MO P.S.C.

3 Schedule 6, 3<sup>rd</sup> Revised, Sheet No. 56.

4 **Q. DO CURRENT BILLS ALSO INCLUDE A RATE REDUCTION RELATED TO THE TAX CUTS**  
5 **AND JOBS ACT OF 2017?**

6 A. Yes. The LGS schedule currently includes a federal tax rate reduction rate, which is a  
7 \$/kWh credit for all energy usage. *Id.*

8 **Q. DOES THE COMPANY DEFINE WHEN THE SUMMER AND WINTER RATES ARE**  
9 **APPLICABLE?**

10 A. Yes. In the tariff, the Company defines summer rates as being applicable during the  
11 four monthly billing periods of June through September, and winter rates as being  
12 applicable during the eight monthly billing periods of October through May. *Id.*

13 **Q. WHAT IS YOUR UNDERSTANDING OF THE STRUCTURE OF THE BASE CHARGES**  
14 **INCLUDED IN THE CURRENT SP RATE DESIGN?**

15 A. My understanding is that the structure of the base charges included in the current  
16 SP rate design are largely identical to those in the current LGS rate design, with the  
17 addition of reactive charges assessed on a \$/kVar basis. Additionally, total billing  
18 demand is determined as the maximum demand during peak hours or 50 percent of  
19 the maximum demand established during off-peak hours, and in no event less than  
20 100 kW. See MO P.S.C. Schedule No. 6, 3<sup>rd</sup> Revised, Sheet No. 57.

1       **Q.     DO THE COMPANY’S ELECTRONIC DATA INTERCHANGE (“EDI”) BILLS, SUCH AS**  
2       **THOSE RECEIVED BY A CUSTOMER LIKE WALMART, TRANSPARENTLY**  
3       **COMMUNICATE LGS CUSTOMER USAGE AND THE BASE RATE CHARGES ASSESSED?**

4       A.     No. While the Company’s EDI bills do provide a line item for each charge, there is no  
5       indication of the calculations used to determine the kWh usage blocks for each of  
6       the energy charges, nor is there any indication of “base billing demand” or “seasonal  
7       billing demand” on winter bills that assess the seasonal energy charge on a portion  
8       of usage. As an example, of how this lack of information impacts the bill is that, for  
9       winter bills, there is no direct method by which a customer could calculate their  
10      energy block usages and verify that their billed charges are correct.

11      **Q.     DO YOU PROVIDE AN EXAMPLE OF THE INFORMATION RECEIVED BY A LGS**  
12      **CUSTOMER FROM THE COMPANY THROUGH AN EDI BILL?**

13      A.     Yes. Exhibit SWC-6 is the LGS portion of an EDI bill received by Walmart billed on  
14      winter rates<sup>4</sup>.

15      **Q.     DOES EXHIBIT SWC-6 HIGHLIGHT AN ADDITIONAL DEFICIENCY IN TRANSPARENCY**  
16      **AND THE ABILITY FOR CUSTOMERS TO UNDERSTAND THE RELATIONSHIP BETWEEN**  
17      **THEIR USAGE AND RATES CHARGED?**

18      A.     Yes. As shown on the EDI bill in the exhibit, the usage took place entirely in August  
19      and September, yet the usage is charged winter rates because the billing date is

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<sup>4</sup> The remainder of the bill contains charges for natural gas charges, which are not relevant to the instant docket and have been redacted.

1 October 1<sup>st</sup>. My understanding is that this is a result of Ameren's billing practices, in  
2 which the first five and last three bills of a calendar year will be billed on winter  
3 rates and the sixth through ninth bills will be billed on summer rates. This practice  
4 results in customers being charged for usage based on when it is billed, not when it  
5 is used. See MO P.S.C. Schedule No. 6, 1<sup>st</sup> Revised, Sheet No. 130.

6 The mismatch of usage period and billing period creates uncertainty for  
7 customers around the cost and value of their energy usage choices for the periods  
8 leading up to June and October, when the new seasonal rates are applied. Because  
9 a customer does not know when they are going to be billed, they cannot know what  
10 rates will be applied to their usage and cannot plan or respond accordingly.

11 **Q. WHAT IS YOUR UNDERSTANDING OF HOW THE COMPANY PROPOSES TO APPLY**  
12 **THE REVENUE REQUIREMENT DECREASE TO THE CHARGES CONTAINED IN THE LGS**  
13 **AND SP SCHEDULES?**

14 A. My understanding is that the Company proposes to apply the proposed revenue  
15 requirement decrease to the charges contained in the LGS and SP schedules on an  
16 equal percentage basis, with the exception of a small proposed increase in the  
17 monthly customer charge and changes to align the customer charge, Rider B credits,  
18 and the reactive charge for SP and Large Primary Service. See Direct Testimony of  
19 Michael W. Harding, page 10, line 7 to page 11, line 15.



1       **Q.     WHY DID THE COMPANY PROPOSE AN EQUAL PERCENTAGE CHANGE TO THE**  
2       **CHARGES FOR LGS AND SP?**

3       A.     My understanding is that the Company asserts that the proposed change will result  
4       in the same percentage rate decrease for all customers within each rate class, and  
5       that customers will “experience the same percentage rate decrease when compared  
6       to other classes.” *Id.*

7       **Q.     DOES THE COMPANY SPECIFICALLY STATE THAT CHARGING COST BASED RATES IS A**  
8       **DRIVER FOR LGS OR SP RATE DESIGN?**

9       A.     Not that I am aware of.

10      **Q.     IS MECG CONCERNED THAT ULTIMATELY ALL LGS AND SP CUSTOMERS WILL NOT**  
11      **EXPERIENCE THE SAME PERCENTAGE RATE DECREASE?**

12      A.     Yes, as the elimination of the federal tax reduction rate impacts the actual rate  
13      changes experienced by customers. As shown in Table 6, the total rate change  
14      impacts high load factor customers significantly, as the summer tail block energy  
15      charge and all winter energy charges increase significantly on a percentage basis  
16      while the demand charge is reduced.

1

**Table 6. Actual LGS Rate Change Percentages Versus Ameren Claimed Rate Change Percentages.**

Charge	Present	Federal Tax	Currently Effective Rate	Ameren Proposed	Actual Rate Change (%)	Ameren Claimed Rate Change (%)
<i>Summer</i>						
Customer	\$94.51/mth		\$94.51/mth	\$94.58/mth	0.07	0.07
LIPPC	\$0.56/mth		\$0.56/mth	\$0.56/mth	0.00	0.00
Energy First 150 kWh/kW	\$0.1058/kWh	(\$0.00462)/kWh	\$0.1012/kWh	\$0.0995/kWh	-1.66	-5.95
Energy Next 200 kWh/kW	\$0.0796/kWh	(\$0.00462)/kWh	\$0.0750/kWh	\$0.0749/kWh	-0.11	-5.90
Energy All Additional	\$0.0535/kWh	(\$0.00462)/kWh	\$0.0489/kWh	\$0.0503/kWh	2.91	-5.98
Demand	\$5.40/kW		\$5.40/kW	\$5.08/kW	-5.93	-5.93
<i>Winter</i>						
Customer	\$94.51/mth		\$94.51/mth	\$94.58/mth	0.07	0.07
LIPPC	\$0.56/mth		\$0.56/mth	\$0.56/mth	0.00	0.00
Energy First 150 kWh/kW	\$0.0665/kWh	(\$0.00462)/kWh	\$0.0619/kWh	\$0.0625/kWh	1.00	-6.02
Energy Next 200 kWh/kW	\$0.0494/kWh	(\$0.00462)/kWh	\$0.0448/kWh	\$0.0465/kWh	3.84	-5.87
Energy All Additional	\$0.0389/kWh	(\$0.00462)/kWh	\$0.0343/kWh	\$0.0366/kWh	6.77	-5.91
Demand	\$2.00/kW		\$2.00/kW	\$1.88/kW	-6.00	-6.00
Seasonal Energy	\$0.0389/kWh	(\$0.00462)/kWh	\$0.0343/kWh	\$0.0366/kWh	6.77	-5.91

Source: Schedule MWH-D3 and MWH-D4.

2

3 **Q. DOES THE COMPANY'S PROPOSED DECREASE TO BOTH DEMAND AND ENERGY**  
 4 **CHARGES APPEAR TO ALIGN WITH THE RATE CASE DRIVERS?**

5 A. No. As stated above, the Company's rate case drivers are increase capital  
 6 investment and associated depreciation, return, and income taxes, which should be  
 7 reflected in the rate design as increases in the demand charge, and a reduction in  
 8 net base energy costs, which should be reflected in decreases in the energy charges.

9 The Company does not propose to align the increase portion of the drivers with the

1 proposed rate design for LGS and SP.

2 **Q. DOES MECG HAVE CONCERNS WITH THE COMPANY'S RATE DESIGN PROPOSALS**  
3 **FOR THE LGS AND SP CLASSES?**

4 A. Yes. MECG's concerns with the rate design proposals for the LGS and SP classes are:

5 1) LGS and SP rates do not reflect the underlying cost of serving those classes;

6 2) LGS and SP rates shift cost responsibility within the rate classes in that they  
7 charge customers for demand-related (i.e., fixed) costs through energy (i.e.,  
8 variable) charges; and

9 3) The hours-use energy charge structure is not the most simple and  
10 transparent means to communicate energy and demand price signals and  
11 can unduly discriminate between customers who pursue actions that change  
12 energy consumption, such as energy efficiency.

13 **Q. WHAT IS YOUR UNDERSTANDING OF THE COST OF SERVICE STUDY RESULTS FOR**  
14 **LGS AND SP?**

15 A. My understanding is that Ameren incurs three types of costs to serve LGS and SP  
16 customers: Customer, Demand, and Energy. Demand costs are fixed costs incurred  
17 by the Company to size the system such that it can meet the peak kW demands  
18 imposed by the rate class and do not change with changes in how many kWh of  
19 energy are consumed by customers. Customer costs are also fixed costs, which are  
20 incurred based on the number of customers served by the Company, and do not  
21 vary by the size of each customer or how much energy the customers consume.

1 Energy costs are variable costs incurred by the Company in relation to the amount of  
 2 energy consumed by customers.

3 **Q. ARE THE MAJORITY OF COSTS INCURRED TO SERVE LGS AND SP CUSTOMERS**  
 4 **DEMAND-RELATED?**

5 A. Yes. See Table 7 below. Per Ameren’s cost of service study, approximately 63  
 6 percent of the costs incurred by the Company to serve LGS and SP customers are  
 7 demand-related while only 35 percent are energy related.

**Table 7. LGS and SP Cost of Service Study Results, Equalized Rate of Return vs. Proposed LGS and SP Revenue Requirements.**

Component	COSS Results		LGS Revenue Requirement		SP Revenue Requirement	
	(\$000)	(% of Total)	(\$000)	(% of Total)	(\$)	(% of Total)
Demand	\$544,775	63.2	\$72,533	12.9	\$21,494	8.8
Energy	\$301,025	34.9	\$477,457	84.9	\$219,829	90.1
Customer	\$16,448	1.9	\$12,189	2.2	\$2,590	1.1
<b>Total</b>	<b>\$862,247</b>	<b>100</b>	<b>\$562,180</b>	<b>100</b>	<b>\$243,913</b>	<b>100</b>

Source: Exhibit SWC-7

8  
 9 **Q. HOW DOES AMEREN PROPOSE TO COLLECT THE LGS AND SP REVENUE**  
 10 **REQUIREMENTS THROUGH THE PROPOSED RATE DESIGNS?**

11 A. Contrary to the results of its cost of service study and its own stated rate design  
 12 philosophy, Ameren proposes to inappropriately collect the majority of LGS and SP  
 13 revenue requirements through the energy charges, as opposed to setting all charges  
 14 to reflect the underlying cost of service study results and “logically mapping”  
 15 customer, demand, and energy costs to their respective charges. See Direct  
 16 Testimony of Steven M. Wills, page 21, line 19 to page 22, line 1.

1       **Q.     PLEASE EXPLAIN.**

2       A.     As described above, both the LGS and SP rate schedules utilize three-block “hours-  
3           use” rate structures for the energy charges, which set the billing kWh for each block  
4           based on the kWh used for each kW of billing demand, or load factor for the billing  
5           month. One rate is charged for the first 150 kWh used per kW of billing demand, a  
6           second lower rate is charged for the next 200 kWh used per kW of billing demand,  
7           and all additional kWh are charged the lowest third block rate. As shown in Table 6,  
8           for the LGS class, this proposed rate design would collect approximately 85 percent  
9           of non-energy efficiency base rate revenues through energy charges and  
10          approximately 13 percent of revenues through demand charges. For the SP class,  
11          the proposed rate design would collect approximately 90 percent of non-energy  
12          efficiency base rate revenues through energy charges and approximately 8.8 percent  
13          through demand charges. In summary, 63 percent of Ameren’s costs to serve LGS  
14          and SP are demand related, but the Company collects 85-90 percent of its revenues  
15          through energy charges.

16       **Q.     WHICH OF THE COMPANY’S FUNCTIONAL COSTS SHOULD BE RECOVERED**  
17       **THROUGH DEMAND CHARGES?**

18       A.     The Company’s production demand (capacity), transmission, and distribution  
19          demand costs should be recovered through demand charges. These costs are fixed  
20          and incurred to serve customer kW demands on the system regardless of how many  
21          kWh are consumed. Optimally the costs for each of the three functions would be

1 recovered through its own unbundled demand charge (or charges if time or seasonal  
2 differentiation is appropriate) to best recover costs in a manner that reflects how  
3 those costs are incurred and allocated.

4 **Q. IS THE COLLECTION OF DEMAND-RELATED COSTS THROUGH AN ENERGY CHARGE**  
5 **CONSISTENT WITH THE COMPANY'S CLASSIFICATION AND ALLOCATION OF**  
6 **DEMAND-RELATED COSTS?**

7 A. No. In its class cost of service study, the Company does not classify or allocate any  
8 of its demand-related costs on an energy basis. Rather, these costs are incurred,  
9 and therefore classified, based on customer demand or number of customers. Costs  
10 should be collected in a manner that reflects how they are incurred. As such,  
11 collecting demand-related (fixed) costs through an energy (variable) charge violates  
12 cost causation principles.

13 **Q. DOES THE RECOVERY OF DEMAND-RELATED COSTS THROUGH AN ENERGY CHARGE**  
14 **DISADVANTAGE HIGHER LOAD FACTOR CUSTOMERS?**

15 A. Yes. The shift in demand-related costs from per kW demand charges to per kWh  
16 energy charges results in a shift in demand cost responsibility from lower load factor  
17 customers to higher load factor customers. This results in a misallocation of cost  
18 responsibility as higher load factor customers overpay for the demand-related costs  
19 incurred by the Company to serve them. In other words, higher load factor  
20 customers are paying for a portion of the demand-related costs that are incurred to  
21 serve the lower load factor customers simply because of the manner in which the

1 Company collects those costs in rates.

2 **Q. DO THE COMPANY'S PROPOSED DEMAND CHARGES EVEN COVER THE COST OF**  
3 **DISTRIBUTION AND TRANSMISSION SERVICE?**

4 A. No. At the Company's proposed revenue requirement, and focusing solely on the  
5 wires (non-generation) costs, the estimated cost-based transmission and  
6 distribution charge for LGS would be \$4.90/kW. In comparison, a blended summer  
7 and winter demand charge for distribution and transmission service would be  
8 \$2.99/kW at the Company's proposed revenue requirement. See Exhibit SWC-10.

9 **Q. WOULD THE PROPER COLLECTION OF DEMAND-RELATED (FIXED) COSTS THROUGH**  
10 **A DEMAND CHARGE PROVIDE BENEFITS TO THE COMPANY?**

11 A. Yes. By collecting a large percentage of a class revenue requirement through energy  
12 charges, the Company subjects itself to under- and over-collection of its revenue  
13 requirement due to fluctuations in customer usage. As such, issues such as weather  
14 and the economy will have a greater impact on the utility versus a rate design in  
15 which an appropriate amount of revenue requirement is collected through the  
16 demand charge.

17 **Q. DOES THE HOURS-USE RATE STRUCTURE, WITH DECLINING ENERGY RATES AS**  
18 **LOAD FACTOR INCREASES, ADDRESS SOME OF THE SHIFT IN COST RESPONSIBILITY?**

19 A. Upon examination, it does not appear that the hours-use structure addresses the  
20 shift in cost responsibility. On its face, the hours-use structure should benefit higher  
21 load factor customers as the energy rates decline as a customer moves up through

1 the blocks.<sup>5</sup> Additionally, as a customer's load factor increases, the billed cost per  
2 kWh can decrease as the customer and demand charge portions of the bill are  
3 spread over more kWh. However, in the face of rate designs that ignore cost of  
4 service study results, these purported benefits are largely illusory.

5 To understand the underlying responsibility for demand costs – that is, which  
6 customers are paying for demand costs incurred by the Company and how much  
7 they are paying for it – it is important to look at the underlying demand cost  
8 recovery on a \$/kW basis, which is the same basis upon which demand-related costs  
9 are incurred. To do so, the cost of service-based demand and energy charges must  
10 be calculated.

11 **Q. HAVE YOU ESTIMATED A COST OF SERVICE-BASED DEMAND AND ENERGY**  
12 **CHARGES FOR LGS AT THE COMPANY'S PROPOSED REVENUE REQUIREMENT?**

13 A. Yes. Assuming the demand charge recovers 63.2 percent of base rate revenues,  
14 consistent with the Company's cost of service study results, the cost of service-  
15 based \$/kW demand charge for LGS for the summer period would be \$20.60/kW  
16 and for the winter period would be \$11.47/kW. Additionally, the cost of service-  
17 based energy charge for the summer period is \$0.03349/kWh and for the winter  
18 period is \$0.02003/kWh. See Exhibit SWC-11.

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19  
<sup>5</sup> It should be noted that hours-use blocks are additive – a customer in a higher block also pays the respective charges for usage in the earlier blocks.



1       **Q.     WHAT IS THE NEXT REQUIRED CALCULATION?**

2       A.     The next required calculation is the estimated effective demand cost per kW  
3             charged to customers across a range on monthly load factors or hours of use in a  
4             720-hour month. The estimated effective demand cost is the sum of fixed costs  
5             recovered through the hours-use energy charges plus the demand charge. To isolate  
6             the fixed costs recovered through the hours-use energy charges, I subtracted the  
7             cost of service-based energy charge from the Company's proposed LGS energy  
8             charges for the summer period. For the purposes of the calculation, I assumed that  
9             the customer's load, when operating in any hour, is 500 kW. *Id.*

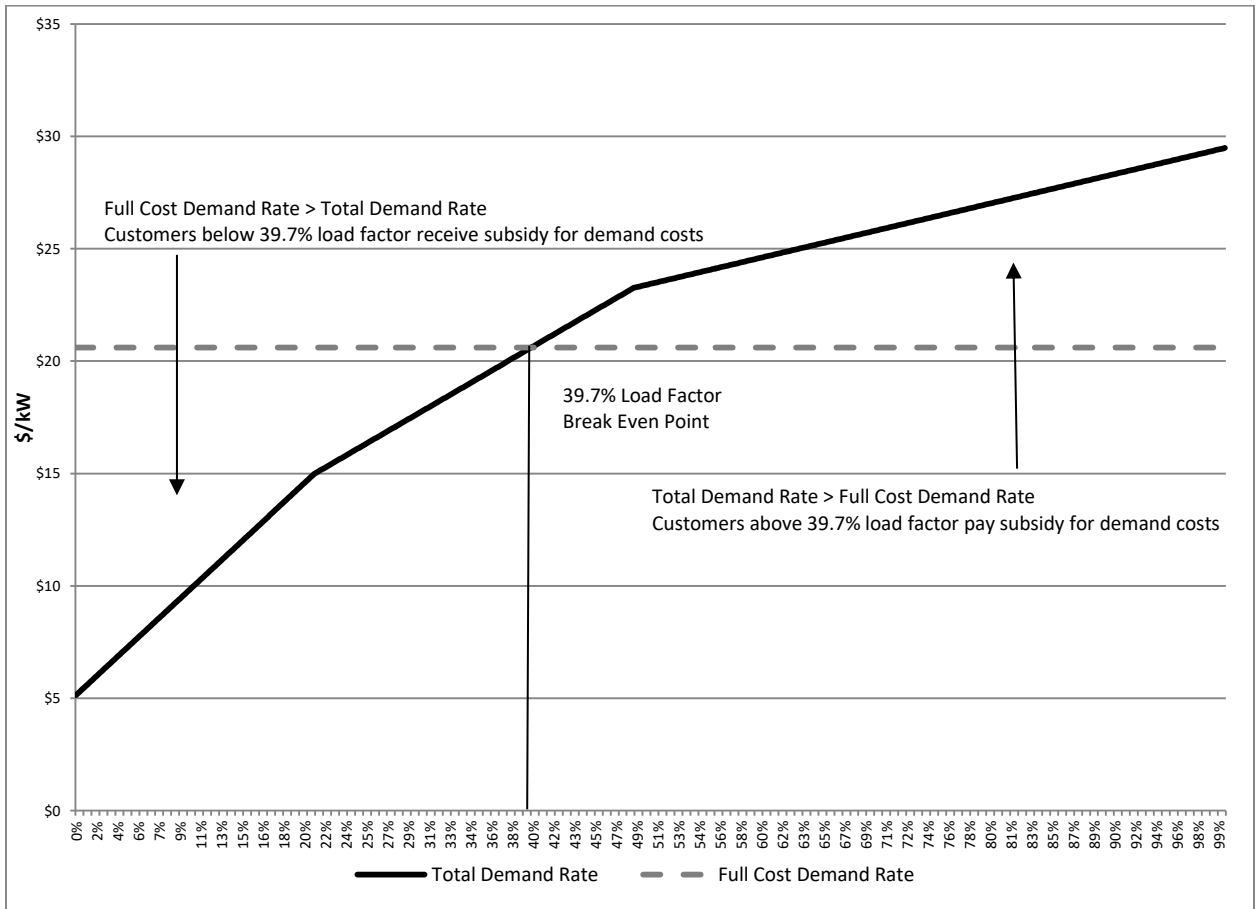


Figure 2. Effective \$/kW Charged to Customers by Load Factor, LGS Summer (720 Hour Month)

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2  
3  
4  
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7  
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11

**Q. WHAT DOES YOUR ANALYSIS SHOW?**

A. As calculated in Exhibit SWC-11 and shown in Figure 2, as load factor increases, the cost per kW charged to customers for demand-related costs increases. This result is a concern, as the demand-related cost incurred to serve a customer *does not change* with the customer's load factor, and, like an increase in per kWh energy consumption, an increase in load factor should not result in an increase in the demand-related cost per kW charged to that customer. This design does not reward the more efficient utilization of the Company's facilities and instead just shifts costs

1 responsibility within the customer class. When compared to the cost of service-  
2 based demand charge, a number of customers would not just be effectively charged  
3 a higher rate for demand-related costs, but would be charged a rate that exceeds  
4 the cost of service-based level.

5 **Q. IN YOUR OPINION, IS THE HOURS-USE STRUCTURE THE MOST SIMPLE AND**  
6 **TRANSPARENT MANNER IN WHICH TO COMMUNICATE ENERGY AND DEMAND**  
7 **PRICE SIGNALS?**

8 A. No. The hours-use structure is not the simplest manner to send price signals as it  
9 requires the analyst to have more than a surface level understanding of the rate  
10 structure in order to understand the interplay of the energy rates and load factor.  
11 Additionally, it is not the most transparent structure. In addition to the underlying  
12 demand-related cost recovery issue discussed above, it does not provide clear  
13 energy and demand price signals. Further, changes in billed demand and energy  
14 have cost impacts that are not easily calculated without a copy of the tariff and a  
15 spreadsheet. Finally, as discussed above, these issues are exacerbated by the  
16 method in which Ameren bills the rate. Critical information for analysis is excluded  
17 from the EDI bills and the rate applied to usage depends, not on when energy was  
18 used, but when it was billed.

19 **Q. CAN THE HOURS-USE STRUCTURE UNDULY DISCRIMINATE BETWEEN CUSTOMERS**  
20 **WHO INSTALL ENERGY EFFICIENCY MEASURES?**

21 A. Yes, and this can be shown with a simple example. Assume two customers have the

1 same monthly billing demand. One of the customers has a load factor of 40 percent  
2 and the other has a load factor of 70 percent. Both customers install the same  
3 energy efficiency measure that operates in the same manner and at the same time  
4 for both customers, and that measure has no effect on the monthly billing demand.  
5 Using Ameren's proposed LGS summer rates, the customer with the 40 percent load  
6 factor will save 7.5 cents/kWh, while the customer with the 70 percent load factor  
7 will save only 5.0 cents/kWh, even though the energy efficiency measure for each  
8 had the same impact on customer usage and the utility's system. It should also be  
9 noted that some of the incremental amount of savings is attributable to demand-  
10 related costs collected through the energy charges, even though the customer did  
11 not actually reduce demand on the system. This is neither a cost-based nor  
12 equitable result.

13 **Q. IS AMEREN CURRENTLY DEPLOYING AMI?**

14 A. Yes. See Direct Testimony of Warren Wood, page 8, line 16 to line 22.

15 **Q. WHAT BENEFITS OF AMI DOES THE COMPANY PRESENT AS IT RELATES TO RATES?**

16 A. The Company presents the following benefits of AMI as it relates to rates:

- 17 1) AMI meters facilitate the Company's ability to bill more complex rates;
- 18 2) AMI data can facilitate analysis of the impact that adoption of different rate  
19 structures has on customer bills, enabling more informed customer decision-  
20 making about the best rate options;
- 21 3) AMI data allows the Company to present customers with more detailed and

1                   timely usage information and provide insights regarding new and different  
2                   ways that customers can change usage to manage their bills and respond to  
3                   price signals; and

4                   4) Smart devices could potentially leverage price or other signals to automate  
5                   load shifting to benefit the utility system or reduce customer bills. See Direct  
6                   Testimony of Steven M. Wills, page 11, line 9 to page 12, line 3.

7                   **Q. DOES MECG GENERALLY AGREE WITH THE COMPANY’S STATED BENEFITS?**

8                   A. Yes. However, rate designs not based on the utility’s cost of service, such as the  
9                   hours-use rate designs featured in Ameren’s current and proposed LGS and SP rate  
10                  designs, do not best leverage AMI technology, which, with usage visibility, can allow  
11                  for transparent, cost-based, and actionable time of use rate options. The benefits of  
12                  AMI are far less likely to be realized by LGS and SP customers without a complete  
13                  restructuring of those rate schedules.

14                  **Q. DOES THE COMPANY DISCUSS TRANSITIONING TO NEW RATE STRUCTURES AS  
15                  PART OF THE AMI DEPLOYMENT?**

16                  A. Yes, as the Company recognizes a significant need to “modernize” rate structures,  
17                  though they primarily target residential rates. *Id.*, page 4, line 19 to line 20.

18                  **Q. DOES THE COMPANY SPECIFY A PREFERRED RATE STRUCTURE AS PART OF ITS  
19                  ANALYSIS OF MODERN RATE STRUCTURES?**

20                  A. Yes. The Company states that the three-part rate with demand charge, which is  
21                  defined as “a three part rate with a customer, demand, and time varying energy

1 charge,” is the top candidate based on the criteria of being grounded in cost of  
2 service analysis and performing well in respect to the promotion of equity and  
3 efficiency. In fact, the Company states that the three part rate with demand charge  
4 “is significantly better than any other rate.” *Id.*, page 5, line 6 to page 6, line 16.

5 **Q. DID THE COMPANY INCLUDE ANY HOURS-USE RATE STRUCTURES, LIKE THOSE**  
6 **USED FOR LGS AND SP, IN ITS ANALYSIS OF MODERN RATES?**

7 A. No. *Id.* MECG agrees with this exclusion, as all evidence shows that hours-use rate  
8 structures are not modern nor appropriate structures for the future of electric  
9 ratemaking.

10 **Q. DOES MECG AGREE WITH THE COMPANY’S ASSESSMENT OF THE THREE PART RATE**  
11 **WITH DEMAND CHARGE?**

12 A. Yes. The Company’s three part rate with demand charge concept, particularly with  
13 the inclusion of time varying energy rates, can be easily implemented in a cost-based  
14 manner, is fundamentally sound, and leads to transparent, understandable, and  
15 actionable rates.

16 **Q. IN RECOGNITION OF THE BENEFITS TO CUSTOMERS OF AMI, SHOULD THE**  
17 **COMMISSION REQUIRE A TRANSITION AWAY FROM HOURS-USE RATES AS PART**  
18 **OF THIS CASE?**

19 A. Yes. The Commission should require Ameren to redesign LGS and SP as three part  
20 rates with demand charges and time varying energy charges and require all LGS and  
21 SP customers to be transitioned to those rates in its first rate case following the

1 expected completion of the Company's AMI deployment in 2025.

2 **Q. WHAT IS MECG'S RECOMMENDATION TO THE COMMISSION AT THE COMPANY'S**  
3 **PROPOSED REVENUE REQUIREMENTS FOR THE LGS AND SP CLASSES?**

4 A. For the purposes of this docket, at the Company's proposed revenue requirement  
5 for the LGS and SP classes, MECG:

6 1) Does not oppose the Company's proposed customer, on-peak energy,  
7 and off-peak energy charges, nor the Company's proposed changes to the Rider B  
8 credits and the reactive charge for SP;

9 2) Recommends the Commission maintain the demand charges for each  
10 schedule at current levels; and

11 3) Recommends the Commission apply the proposed decrease on an equal  
12 percentage basis to the summer and winter energy charges.

13 **Q. HAVE YOU CALCULATED ILLUSTRATIVE RATES FOR LGS PER MECG'S PROPOSAL?**

14 A. Yes, as shown in Exhibit SWC-12.

15 **Q. WHAT IS MECG'S RECOMMENDATION TO THE COMMISSION IF THE COMMISSION**  
16 **APPROVES A LOWER LGS AND SP CLASS REVENUE REQUIREMENT THAN THAT**  
17 **PROPOSED BY THE COMPANY?**

18 A. If the Commission awards a decrease for these classes that is lower than that  
19 proposed by the Company, then the Commission can then take larger steps to  
20 address the over-recovery of demand-related costs through energy charges and  
21 associated intra-class subsidies. Specifically, the Commission should set the demand

1 charges per MCEG's recommendation above and apply the approved reduction in  
2 the class revenue requirement by reducing all base rate energy charges on an equal  
3 percentage basis.

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

5 A. Yes.



# Steve W. Chriss

Walmart Inc.

Business Address: 2001 SE 10<sup>th</sup> Street, Bentonville, AR, 72716-0550

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## 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

Renewable Energy Buyers Alliance, Advisory Board

## PAST MEMBERSHIPS

Southwest Power Pool, Corporate Governance Committee, 2019

## TESTIMONY BEFORE REGULATORY COMMISSIONS

2019

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.

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.

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 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.

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.

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-EI: 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.

#### *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 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.

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.

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.

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-EI: 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.

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-El: 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.

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.

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® 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.

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 Peak, 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*

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**

*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, 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.

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?, 36<sup>th</sup> 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.

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, 40<sup>th</sup> 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 29<sup>th</sup> 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 19<sup>th</sup> 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.

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.

Calculation of FERC Form 1 Reported LGS Revenue Per kWh Sold

Year	Commercial Sales		Industrial Sales		Total LGS Sales		Revenue per kWh Sold (\$/kWh) (7) (6) / (5) / 1000	Cumulative % Increase (%) (8)
	Sales (MWH) (1)	Revenue (\$) (2)	Sales (MWH) (3)	Revenue (\$) (4)	Sales (MWH) (5) (1) + (3)	Revenue (\$) (6) (2) + (4)		
2008	7,217,909	\$ 404,821,983	1,091,791	\$ 63,361,204	8,309,700	\$ 468,183,187	\$ 0.0563	
2009	7,080,575	\$ 423,487,422	942,887	\$ 59,330,101	8,023,462	\$ 482,817,523	\$ 0.0602	6.8%
2010	7,348,264	\$ 479,441,021	981,778	\$ 66,527,092	8,330,042	\$ 545,968,113	\$ 0.0655	16.3%
2011	7,273,526	\$ 524,713,967	969,043	\$ 72,008,088	8,242,569	\$ 596,722,055	\$ 0.0724	28.5%
2012	7,163,079	\$ 523,948,387	941,992	\$ 70,870,800	8,105,071	\$ 594,819,187	\$ 0.0734	30.3%
2013	7,153,501	\$ 584,937,006	923,052	\$ 77,741,042	8,076,553	\$ 662,678,048	\$ 0.0820	45.6%
2014	7,238,416	\$ 586,009,104	925,273	\$ 76,899,511	8,163,689	\$ 662,908,615	\$ 0.0812	44.1%
2015	7,181,050	\$ 614,896,646	915,833	\$ 80,126,654	8,096,883	\$ 695,023,300	\$ 0.0858	52.4%
2016	7,168,064	\$ 588,880,866	894,348	\$ 75,250,088	8,062,412	\$ 664,130,954	\$ 0.0824	46.2%
2017	7,017,603	\$ 580,221,852	863,099	\$ 72,888,052	7,880,702	\$ 653,109,904	\$ 0.0829	47.1%
2018	7,260,729	\$ 613,262,354	864,726	\$ 74,894,444	8,125,455	\$ 688,156,798	\$ 0.0847	50.3%
Change in Annual Revenue, 2008 - 2018						\$ 219,973,611		

Sources:

2008 - 2018 / Q4 FERC Form 1, Union Electric Company, page 304.

Calculation of Proposed LGS and SP Increases in Excess of Cost of Service Levels

Customer Class	Current Retail	Proposed Base	Proposed Base Revenue		Cost of Service Base Revenue		Proposed
	Revenues	Revenue Requirement	Adjustment	Adjustment	Adjustment	Adjustment	Increase in Excess of Cost of Service
	(\$)	(\$)	(\$)	(%)	(\$)	(%)	(\$)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
			(2) - (1)	(3) / (1)		(1) X (5)	(3) - (6)
Large General Service	\$ 562,423,013	\$ 562,252,254	\$ (170,759)	-0.03%	-10.4%	\$ (58,716,963)	\$ 58,546,204
Small Primary Service	\$ 243,422,690	\$ 243,331,477	\$ (91,213)	-0.04%	-10.4%	\$ (25,413,329)	\$ 25,322,116
<b>Total</b>	<b>\$ 805,845,703</b>	<b>\$ 805,583,731</b>	<b>\$ (261,972)</b>			<b>\$ (84,130,291)</b>	<b>\$ 83,868,319</b>

Sources:

- (1) - (4) Direct Testimony of Michael W. Harding, page 7, table 3
- (5) Direct Testimony of Michael W. Harding, page 5, table 2



### Calculation of Rate of Return Index Values

<b>Customer Class</b>	<b>Rate of Return</b>	<b>RRI</b>
	(%)	
	(1)	(2)
Residential	4.94%	0.67
Small General Service	7.51%	1.02
Large General Service/Small Primary Service	11.35%	1.54
Large Primary Service	10.69%	1.45
Company Owned Lighting	11.25%	1.53
Customer Owned Lighting	-3.74%	(0.51)
<b>Total Missouri</b>	<b>7.37%</b>	<b>1.00</b>

Source: Schedule TH-D2

## Illustrative Example of MECG Proposed Revenue Allocation, \$67.2 Million Reduction in Revenue Requirement

Customer Class	Normalized Retail Revenues	Ameren Proposed Base Revenue Requirement	Ameren Proposed Change	Revenue Neutral Shift		Apply RNS Portion to Each Class	Total Revenue Change		Reduction in Subsidy
				(\$000)	(%)		(\$)	(%)	
	(1)	(2)	(3)	(4)	(5)	(6)	(8)	(9)	(10)
			(2) - (1)		(4) / Total				(8) / (4)
R1 Residential	\$ 1,278,256,444	\$ 1,277,894,109	\$ (362,335)				\$ (362,335)	-0.03%	
R2 Small General Service	\$ 295,121,638	\$ 295,011,973	\$ (109,665)	\$ (1,293,000)	1.21%	\$ (806,102)	\$ (915,767)	-0.31%	70.8%
R3 Large General Service	\$ 562,423,013	\$ 562,252,254	\$ (170,759)	\$ (58,703,499)	55.13%	\$ (36,597,823)	\$ (36,768,582)	-6.54%	62.6%
R4 Small Primary Service	\$ 243,422,690	\$ 243,331,477	\$ (91,213)	\$ (25,407,501)	23.86%	\$ (15,839,929)	\$ (15,931,142)	-6.54%	62.7%
R5 Large Primary Service	\$ 202,942,497	\$ 202,876,368	\$ (66,129)	\$ (16,855,000)	15.83%	\$ (10,507,999)	\$ (10,574,128)	-5.21%	62.7%
R6 Company-Owned Lighting	\$ 35,602,359	\$ 35,594,684	\$ (7,675)	\$ (4,230,000)	3.97%	\$ (2,637,131)	\$ (2,644,806)	-7.43%	62.5%
R7 Customer-Owned Lighting	\$ 3,391,008	\$ 3,387,812	\$ (3,196)				\$ (3,196)	-0.09%	
R8 Metropolitan Sewer District	\$ 74,966	\$ 74,922	\$ (44)				\$ (44)	-0.06%	
<b>R9 Total</b>	<b>\$ 2,621,234,615</b>	<b>\$ 2,620,423,599</b>	<b>\$ (811,016)</b>	<b>\$ (106,489,000)</b>	<b>100%</b>	<b>\$ (66,388,984)</b>	<b>\$ (67,200,000)</b>	<b>-2.56%</b>	
R10 Proposed System Average Increase								-0.03%	
R11 Revenue Requirement Reduction	\$ (67,200,000)								
R13 Ameren Proposed Reduction	\$ (811,016)								
R14 Remaining Reduction After Applying Ameren Proposed	\$ (66,388,984)								

## Sources:

Direct Testimony of Michael W. Harding, table 3

MO ECCOS\_2018 Final, tab SCH 1, provided in response to MECG 1.2

-----  
Account: \_\_\_\_\_

Billing Date: 10/01/19 PR=Product/Service 00=Original

Visit AmerenMissouri.com to view bill inserts which contain useful and important information about electricity, ways to save energy, and safety around electricity and natural gas.  
Important Message for Gas Customers - Be Safe. If you ever smell gas, call Ameren Missouri to investigate the problem. Before you dig, call 1.800.DIG.RITE to locate underground gas pipelines for you.

-----  
Service Account: \_\_\_\_\_  
-----

Remittance Address: AMEREN MISSOURI  
P.O. Box 88068  
Chicago, IL 60680

Billing Address: WAL-MART STORES EAST LP

Meter Location: \_\_\_\_\_

(No Discount) Net Due Date: 10/23/19

Total Due:

ELECTRIC SERVICE:  
 AssignID:003

Classification of METER

Category of Measurement	Value	Unit of Mea	Begin	Ending	Significance
Actual/Actual		KWH			Total
Usage Multiplier		Code:			

Meter:  
 Rate Class: 006  
 Description: Total kWh  
 Location:

Service Period Start Date: 08/27/19 Service Period End Date: 09/29/19

ELECTRIC SERVICE:  
 AssignID:004

Classification of METER

Category of Measurement	Value	Unit of Mea	Begin	Ending	Significance
Actual/Actual		KW			Total
Usage Multiplier		Code:			

Meter:  
 Rate Class: 006  
 Description: Peak kW  
 Location:

Service Period Start Date: 08/27/19 Service Period End Date: 09/29/19

ELECTRIC SERVICE:  
 AssignID:005  
 Classification of RATE

Rate Class: 006  
 Description: Rate 3M Large General Service  
 Location:

Service Period Start Date: 08/27/19 Service Period End Date: 09/29/19

CHARGES:

Amount Rate	Unit Of Mea	Quantity	Description
.0389	KWH		Seasonal Energy Charge
2	KW		Demand Charge
.0665	KWH		Base Energy Charge / Hours Used
.0494	KWH		Base Energy Charge / Hours Used
.0389	KWH		Base Energy Charge / Hours Used
			Customer Charge

ALLOWANCE:

Amount Rate	Unit Of Mea	Quantity	Description

CHARGES:

Amount Rate	Unit Of Mea	Quantity	Description

ALLOWANCE:

Amount Rate	Unit Of Mea	Quantity	Description

NON-CHARGES:

Amount Rate	Unit Of Mea	Quantity	Description

TAXES:

Amount Rate	Unit Of Mea	Quantity	Description
			STATE SALES TAX

TAXES:

Amount Rate	Unit Of Mea	Quantity	Description
			LS

TAXES:

Amount Rate	Unit Of Mea	Quantity	Description
			MUNICIPAL CHARGE

\*\*\* TOTAL DUE:

Missouri State Sales Tax

Missouri Local Sales Tax

Municipal Charge - Service

Energy Efficiency Program Charge  
 Energy Efficiency Investment Charge

Federal Tax Rate Reduction

Missouri State Sales Tax

Missouri Local Sales Tax

Municipal Charge - Service

**Cost of Service by Function, Ameren Cost of Service Study Results, Proposed LGS Rates,  
and Proposed SP Rates**

Function	Function		Large General Service Revenue by Function		Small Primary Service Revenue by Function	
	Proposed	Proposed	Proposed	Proposed	Proposed	Proposed
	(\$)	(%)	(\$)	(%)	(\$)	(%)
	(1)	(2)	(3)	(4)	(5)	(6)
	(1) / Total		(3) / Total		(5) / Total	
Customer	\$ 16,448	1.91%	\$ 12,189	2.2%	\$ 2,590	1.06%
<i>Production - Demand</i>	\$ 362,397	42.03%				
<i>Transmission - Demand</i>	\$ 76,564	8.88%				
<i>Distribution - Demand</i>	\$ 105,814	12.27%				
Total Demand	\$ 544,775	63.18%	\$ 72,533	12.9%	\$ 21,494	8.81%
Energy	\$ 301,025	34.91%	\$ 477,457	84.9%	\$ 219,829	90.13%
<b>Total Non-EE Revenue</b>	<b>\$ 862,247</b>	<b>100.00%</b>	<b>\$ 562,180</b>	<b>100.0%</b>	<b>\$ 243,913</b>	<b>100.0%</b>

Sources:

MO ECCOS\_2018 Final provided to MECG in response to MECG 1.1  
Exhibit SWC-8  
Exhibit SWC-9

**Derivation of Large General Service Revenue Requirement Using Ameren's Proposed  
Billing Units**

<b>LGS</b>	<b>Billing Units</b>	<b>Rates</b>	<b>Revenue</b>
Customer Charge			
Summer Bills	42,869 \$	94.58 \$	4,054,550
Winter Bills	85,588 \$	94.58 \$	8,094,913
TOD Bills	422 \$	94.58 \$	39,913
Low Income Charge	128,878 \$	0.56 \$	72,172
Demand Charge			
Summer	8,415,461 \$	5.08 \$	42,750,542
Winter	15,841,921 \$	1.88 \$	29,782,811
Energy Charge			
Summer kWh			
First 150 HU	1,088,670,145 \$	0.0995 \$	108,322,679
Next 200 HU	1,227,101,130 \$	0.0749 \$	91,909,875
Over 350 HU	544,941,909 \$	0.0503 \$	27,410,578
On-Peak	5,132,746 \$	0.0118 \$	60,566
Off-Peak	10,161,490 \$	(0.0067) \$	(68,082)
Winter kWh			
First 150 HU	1,806,780,968 \$	0.0625 \$	112,923,811
Next 200 HU	1,967,603,188 \$	0.0465 \$	91,493,548
Over 350 HU	815,554,369 \$	0.0366 \$	29,849,290
Seasonal Energy	425,124,456 \$	0.0366 \$	15,559,555
On-Peak	8,172,589 \$	0.0036 \$	29,421
Off-Peak	16,914,385 \$	(0.0020) \$	(33,829)
Total kWh	7,875,776,165	\$	562,252,314

Sources:  
Schedule MWH-D4

**Derivation of Small Primary Service Revenue Requirement Using Ameren's Proposed Billing Units**

SP	Billing Units	Rates	Revenue
Customer Charge			
Summer Bills	2,594 \$	324.46 \$	841,649
Winter Bills	5,184 \$	324.46 \$	1,682,001
TOD Bills	204 \$	324.46 \$	66,190
Low Income Charge	7,982 \$	0.56 \$	4,470
Demand Charge			
Summer	2,952,992 \$	4.38 \$	12,934,104
Winter	5,383,657 \$	1.59 \$	8,560,014
Energy Charge			
Summer kWh			
First 150 HU	445,470,612 \$	0.0962 \$	42,854,273
Next 200 HU	546,944,101 \$	0.0724 \$	39,598,753
Over 350 HU	420,351,651 \$	0.0485 \$	20,387,055
On-Peak	14,388,590 \$	0.0086 \$	123,742
Off-Peak	30,109,489 \$	(0.0048) \$	(144,526)
Winter kWh			
First 150 HU	745,793,217 \$	0.0606 \$	45,195,069
Next 200 HU	920,390,284 \$	0.0450 \$	41,417,563
Over 350 HU	673,232,614 \$	0.0352 \$	23,697,788
Seasonal Energy	190,479,780 \$	0.0352 \$	6,704,888
On-Peak	27,009,248 \$	0.0032 \$	86,430
Off-Peak	54,198,316 \$	(0.0017) \$	(92,137)
Reactive Charge	1,336,133 \$	0.36 \$	481,008
Rider B			
115 kV	4,727 \$	(1.37) \$	(6,476)
69 kV	921,980 \$	(1.15) \$	(1,060,277)
Total kWh	3,942,662,259	\$	243,331,581
		Ameren Proposed	\$ 243,331,477
		Rounding	\$ 104

Source:  
Schedule MWH-D4



**Derivation of Cost-Based Large General Service Wires Demand Charge**

R1		LGS Base Revenue	\$	562,180,142	
R2		Transmission Portion of Cost, Ameren CCOSS		8.88%	
R3	R1 x R2	Cost-Based Transmission Revenue Requirement	\$	49,919,126	
R4		Demand Billing Determinants		24,257,382	kW
R5	R3 / R4	Cost-Based Transmission Demand Charge	\$	2.06	/kW
R6		Distribution Portion of Cost, Ameren CCOSS		12.27%	
R7	R1 X R6	Cost-Based Distribution Revenue Requirement	\$	68,990,346	
R8		Demand Billing Determinants		24,257,382	kW
R9	R7 / R8	Cost-Based Distribution Demand Charge	\$	2.84	/kW
R10	R5 + R9	<b>Total Wires Distribution Charge</b>	\$	<b>4.90</b>	<b>/kW</b>
R11		Ameren Proposed Total Demand Charge Revenues	\$	72,533,353	
R12	R11 / R8	<b>Total Proposed Blended Demand Charge</b>	\$	<b>2.99</b>	<b>/kW</b>

Sources:  
 Exhibit SWC-7  
 Exhibit SWC-8

Calculation of Effective Demand Rates, Proposed LGS Summer

(1)	Rate	LGS Summer	
(2)	Customer Demand	1,000	kW
		<b>Summer</b>	<b>Winter</b>
(3)	LGS Non-EE Revenues	\$ 274,448,224	\$ 287,703,928
(4)	% Energy, Cost of Service Study	34.9%	34.9%
(5)	(3) x (4) Non-EE Energy Revenues, COS	\$ 95,814,369	\$ 100,442,152
(6)	Total Billing kWh	2,860,713,184 kWh	5,015,062,981 kWh
(7)	(5) / (6) Cost of Service Energy Rate	\$ 0.03349 /kWh	\$ 0.02003 /kWh
(8)	Proposed Billing Demand Rate (BDR)	\$ 5.08 /kW	\$ 1.92 /kW
(9)	% Demand, Cost of Service Study	63.2%	63.2%
(10)	(3) x (9) Non-EE Demand Revenues, COS	\$ 173,398,676	\$ 181,773,740
(11)	Total Billing kW	8,415,461	15,841,921
(12)	(10) / (11) Full Cost Demand Rate (FCDR)	\$ 20.60 /kW	\$ 11.47 /kW

(13)	Hours of Use	kWh	Load Factor	Proposed Energy Rate	Cost of Service Energy Rate	Demand Portion of Energy Rate	Billed Demand Cost from Energy Rate	Effective Demand Rate from Energy Rate	Total Demand Rate	Effective Subsidy (Received) / Paid
	(1)	(2)	(3)	(\$/kWh) (4) Ex SWC-7	(\$/kWh) (5)	(\$/kWh) (6) (4) - (5)	(\$) (7)	(\$/kW) (8) (7) / kW Demand	(\$/kW) (9) (8) + BDR	(\$/kW) (10) (9) - FCDR
	1	1,000	0.1%	\$ 0.09950	\$ 0.03349	\$ 0.06601	\$ 66	\$ 0.07	\$ 5.15	\$ (15.46)
	100	100,000	13.9%	\$ 0.09950	\$ 0.03349	\$ 0.06601	\$ 6,601	\$ 6.60	\$ 11.68	\$ (8.92)
	150	150,000	20.8%	\$ 0.09950	\$ 0.03349	\$ 0.06601	\$ 9,901	\$ 9.90	\$ 14.98	\$ (5.62)
	200	200,000	27.8%	\$ 0.07490	\$ 0.03349	\$ 0.04141	\$ 11,971	\$ 11.97	\$ 17.05	\$ (3.55)
	285	285,000	39.6%	\$ 0.07490	\$ 0.03349	\$ 0.04141	\$ 15,491	\$ 15.49	\$ 20.57	\$ (0.03)
	286	286,000	39.7%	\$ 0.07490	\$ 0.03349	\$ 0.04141	\$ 15,532	\$ 15.53	\$ 20.61	\$ 0.01
	300	300,000	41.7%	\$ 0.07490	\$ 0.03349	\$ 0.04141	\$ 16,112	\$ 16.11	\$ 21.19	\$ 0.59
	350	350,000	48.6%	\$ 0.07490	\$ 0.03349	\$ 0.04141	\$ 18,182	\$ 18.18	\$ 23.26	\$ 2.66
	400	400,000	55.6%	\$ 0.05030	\$ 0.03349	\$ 0.01681	\$ 19,023	\$ 19.02	\$ 24.10	\$ 3.50
	500	500,000	69.4%	\$ 0.05030	\$ 0.03349	\$ 0.01681	\$ 20,703	\$ 20.70	\$ 25.78	\$ 5.18
	600	600,000	83.3%	\$ 0.05030	\$ 0.03349	\$ 0.01681	\$ 22,384	\$ 22.38	\$ 27.46	\$ 6.86
	700	700,000	97.2%	\$ 0.05030	\$ 0.03349	\$ 0.01681	\$ 24,065	\$ 24.06	\$ 29.14	\$ 8.54
	720	720,000	100.0%	\$ 0.05030	\$ 0.03349	\$ 0.01681	\$ 24,401	\$ 24.40	\$ 29.48	\$ 8.88

Sources:  
 Exhibit SWC-7  
 Exhibit SWC-8

**Derivation of MCEG Proposed Rate Design for Large General Service Revenue Requirement at Ameren's Proposed Revenue Requirement**

<b>LGS</b>	<b>Billing Units</b>	<b>Rates</b>	<b>Revenue</b>
Customer Charge			
Summer Bills	42,869 \$	94.58 \$	4,054,531
Winter Bills	85,588 \$	94.58 \$	8,094,867
TOD Bills	422 \$	94.59 \$	39,917
Low Income Charge	128,878 \$	0.56 \$	72,172
Demand Charge			
Summer	8,415,461 \$	5.40 \$	45,443,490
Winter	15,841,921 \$	2.00 \$	31,683,842
Energy Charge			
Summer kWh			
First 150 HU	1,088,670,145 \$	0.0986 \$	107,296,340
Next 200 HU	1,227,101,130 \$	0.0742 \$	90,990,562
Over 350 HU	544,941,909 \$	0.0498 \$	27,158,571
On-Peak	5,132,746 \$	0.0118 \$	60,566
Off-Peak	10,161,490 \$	(0.0067) \$	(68,082)
Winter kWh			
First 150 HU	1,806,780,968 \$	0.0619 \$	111,925,767
Next 200 HU	1,967,603,188 \$	0.0460 \$	90,545,609
Over 350 HU	815,554,369 \$	0.0362 \$	29,553,263
Seasonal Energy	425,124,456 \$	0.0362 \$	15,405,245
On-Peak	8,172,589 \$	0.0036 \$	29,421
Off-Peak	16,914,385 \$	(0.0020) \$	(33,829)
Total kWh	7,875,776,165	\$	562,252,253
		Ameren Proposed	\$ 562,252,314
		Rounding	\$ 61

Sources:  
 Schedule MWH-D4