

**Exhibit No.:**  
**Issue(s):** Cost of Service, Revenue Allocation, Rate Design  
**Witness:** Steve W. Chriss  
**Sponsoring Party:** The Midwest Energy Consumers Group  
**Type of Exhibit:** Direct Testimony  
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**MISSOURI PUBLIC SERVICE COMMISSION**

**FILE NO. ER-2016-0179**

**DIRECT TESTIMONY AND EXHIBITS OF**

**STEVE W. CHRISS**

**ON BEHALF OF**

**THE MIDWEST ENERGY CONSUMERS GROUP**

**DECEMBER 23, 2016**

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## Exhibits

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

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

**Exhibit SWC-3:** Calculation of Proposed Large General Service and Small Primary Increases in Excess of Cost of Service Levels

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

**Exhibit SWC-5:** Illustrative Example of MEGC Proposed Revenue Allocation, \$42.3 Million Reduction in Revenue Requirement from Company Proposed

**Exhibit SWC-6:** Illustrative Example of MEGC Proposed Revenue Allocation, \$71.2 Million Reduction in Revenue Requirement from Company Proposed

**Exhibit SWC-7:** Cost of Service by Function, Ameren Cost of Service Study Results, Proposed Large General Service Rates, and Proposed Small Primary Service Rates

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

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

**Exhibit SWC-11:** Calculation of Effective Demand Rates, Proposed Large General Service Summer

1 **Introduction**

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

3 A. My name is Steve W. Chriss. My business address is 2001 SE 10th St.,  
4 Bentonville, AR 72716-0550. I am employed by Wal-Mart Stores, Inc.  
5 (“Walmart”) as Director, Energy and Strategy Analysis.

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

7 A. I am testifying on behalf of the Midwest Energy Consumers Group (“MECG”). MECG  
8 is an incorporated association that represents large commercial and industrial users  
9 of electricity. MECG members take service primarily on Service Classification No.  
10 3(M) Large General Service Rate (“LGS”), Service Classification No. 4(M) Small  
11 Primary Service Rate (“SP”), and Service Classification No. 11(M) Large Primary  
12 Service Rate (“LP”).

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

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

1 2007 as Manager, State Rate Proceedings. I was promoted to Senior Manager,  
2 Energy Regulatory Analysis, in June 2011. I was promoted to my current position in  
3 October, 2016. My Witness Qualifications Statement is attached as Exhibit SWC-1.

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

6 A. Yes. I submitted testimony in Docket Nos. ER-2010-0036, EO-2012-0009, EC-2104-  
7 0224, ER-2014-0258, ER-2016-0023, and EA-2016-0208.

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

10 A. Yes. I have submitted testimony in over 150 proceedings before 37 other utility  
11 regulatory commissions. I have also submitted testimony before the Missouri House  
12 Committee on Utilities, the Missouri House Energy and Environment Committee, the  
13 Missouri Senate Veterans' Affairs, Emerging Issues, Pensions, and Urban Affairs  
14 Committee, and the Kansas House Standing Committee on Utilities and  
15 Telecommunications. My testimony has addressed topics including, but not limited  
16 to, cost of service and rate design, return on equity (“ROE”), revenue requirement,  
17 ratemaking policy, large customer renewable programs, qualifying facility rates,  
18 telecommunications deregulation, resource certification, energy efficiency/demand  
19 side management, fuel cost adjustment mechanisms, decoupling, and the collection  
20 of cash earnings on construction work in progress (“CWIP”).

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 MECG’S MEMBERS HAVE A SIGNIFICANT IMPACT ON MISSOURI’S ECONOMY?**

4       A.     Yes. For example, Walmart operates 158 retail units and four distribution centers  
5           and employs 44,356 associates in Missouri. In fiscal year ending 2016, Walmart  
6           purchased \$7.3 billion worth of goods and services from Missouri-based suppliers,  
7           supporting 59,953 supplier jobs.<sup>1</sup> Walmart is a large customer of Ameren, with 54  
8           stores, one distribution center, and related facilities that take electric service from  
9           Ameren.

10

11    **Purpose of Testimony and Summary of Recommendations**

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

13    A.     The purpose of my testimony is to provide MECG’s response to issues related to the  
14           rate case filing of Union Electric Company d/b/a Ameren Missouri (“Ameren” or “the  
15           Company”).

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

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

18           1)     The Commission should consider the impact on customers thoroughly and  
19                   carefully in their examination of all facets of this case, to ensure that any

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

1 increase in Ameren's rates is only the minimum amount necessary for the  
2 utility to provide adequate and reliable service.

3 2) MECG does not take a position on the Company's proposed cost of service  
4 study with the exception that MECG does specifically support the use of the  
5 four non-coincident peak Average & Excess demand allocator as a reasonable  
6 allocator for production cost. To the extent that alternative cost of service  
7 models or modifications to the Company's model are proposed by other  
8 parties, MECG reserves the right to address such changes in rebuttal  
9 testimony.

10 3) If the Commission were to award Ameren its proposed \$206 million revenue  
11 requirement increase, MECG does not oppose the Company's proposed  
12 revenue allocation. Such a methodology makes some movement on moving  
13 LGS and SP rates toward cost of service, but also recognizes the magnitude of  
14 Ameren's proposed rate increases for other classes.

15 4) If the Commission awards a revenue requirement increase lower than that  
16 proposed by the Company, the Commission should allocate the revenue  
17 increase using the following steps:

18 a) Start with the revenue allocation as proposed by the Company at the  
19 Company's proposed revenue requirement;

- 1                   b) Apply one-half of the reduction from the Company's proposed revenue  
2                   requirement to the approved revenue requirement to the LGS and SP  
3                   classes on a current base retail revenues basis;
- 4                   c) Set the increase for the SGS and LP classes at the system average  
5                   increase; and
- 6                   d) Apply the remaining reduction from the Company's proposed revenue  
7                   requirement to all other classes on an equal percentage basis.
- 8           5)    At the Company's proposed increases for the LGS and SP classes, MECG:
- 9                   a) Does not oppose the Company's proposed customer, on-peak energy,  
10                  and off-peak energy charges for the LGS and SP classes nor the  
11                  Company's proposed changes to the time-of-use customer charge, Rider  
12                  B credits, and reactive charge for SP; and
- 13                  b) Recommends that the Commission apply the remainder of the proposed  
14                  increase (that amount not collected through the proposed charges  
15                  referenced above) for the LGS and SP classes to each schedule's  
16                  respective demand charges using the Company's proposed  
17                  summer/winter differential of 2.69 for LGS and 2.76 for SP.
- 18           6)    If the Commission approves lower increases for the LGS and SP classes than  
19                  that proposed by the Company, the Commission should set the demand  
20                  charges per MECG's recommendation above, as if the Company received its  
21                  full revenue requirement proposal for LGS and SP, and apply the approved



1 reduction in the class revenue requirement by reducing all base rate energy  
2 charges on an equal percentage basis.

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

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

7

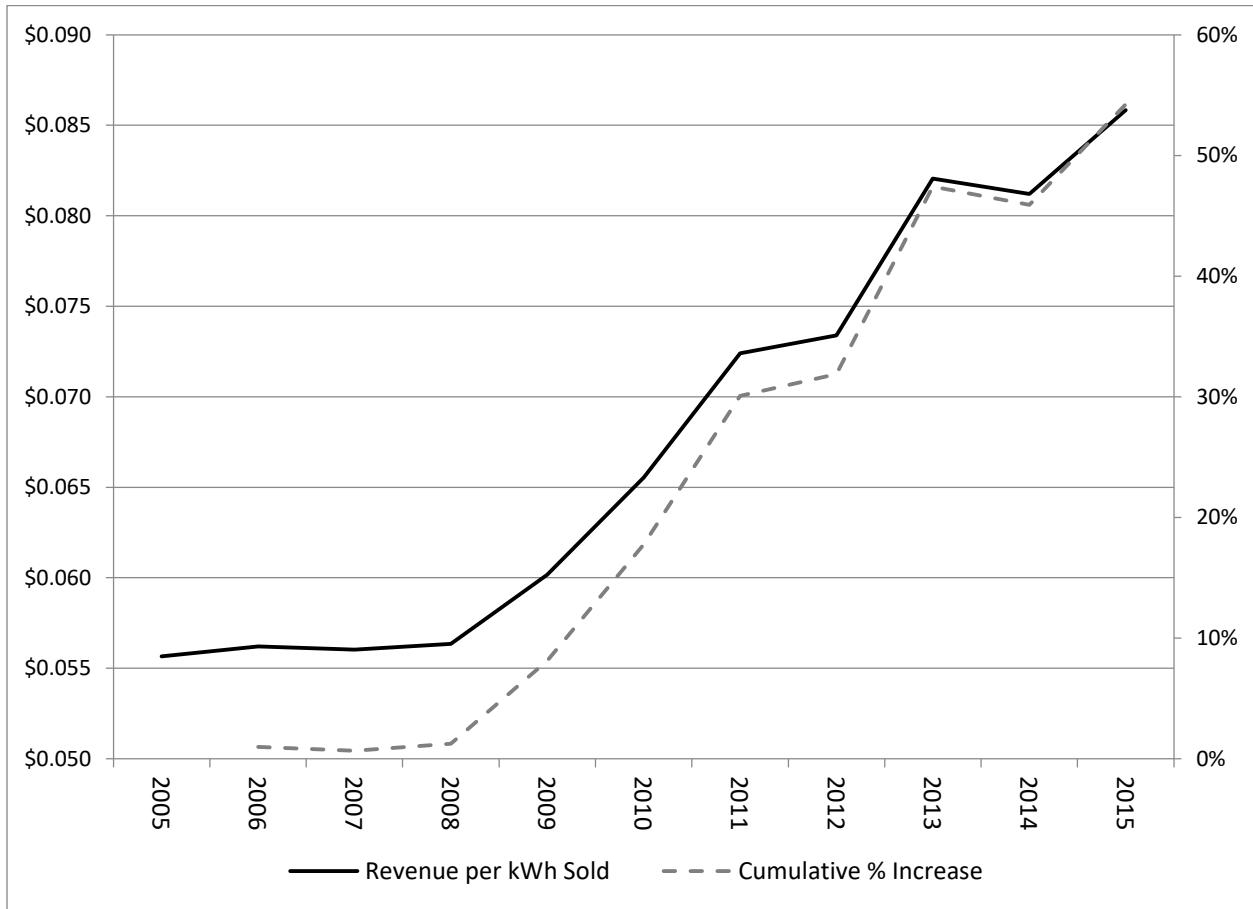
8 **General Concerns Regarding Ameren's Proposed Revenue Requirement Increase**

9 **Q. WHAT IS YOUR UNDERSTANDING OF THE COMPANY'S PROPOSED REVENUE**  
10 **REQUIREMENT?**

11 A. My understanding is that the Company proposes a total revenue requirement  
12 increase of approximately \$206 million, or 7.8 percent above current retail  
13 revenues. See Direct Testimony of Michael Moehn, page 4, line 13 to line 15.

14 **Q. HAVE THE COMPANY'S RATES SIGNIFICANTLY INCREASED FOR LARGE USERS IN**  
15 **THE PAST 10 YEARS?**

16 A. Yes. For example, analysis of FERC Form 1 data shows that between 2005 and 2015,  
17 Ameren's reported revenue per kWh sold to the LGS has increased from  
18 \$0.0557/kWh to \$0.0858/kWh, or 54.2 percent. Figure 1 and Exhibit SWC-2 show  
19 the increase in revenue per kWh sold and the cumulative percent increase over the  
20 period.



1  
2 **Figure 1. FERC Form 1 Reported LGS Revenue Per kWh Sold and Cumulative Percent Increase, 2005 - 2015.**

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

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

1       **Q.     PLEASE EXPLAIN.**

2       A.     An examination of the revenue neutral<sup>2</sup> results for Ameren rate cases filed since  
3       2007 show that rates for the LGS and SP classes have been set well in excess of cost  
4       of service since the 2007 rate case.<sup>3</sup> Table 1 summarizes the Company's final class  
5       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%

Source: Table 1, Direct Testimony of Steve W. Chriss, and Schedule SWC-5 on behalf of Wal-Mart Stores East, LP and Sam's East, Inc., Case No. ER-2014-0258.

6

7       **Q.     HAS AMEREN AGAIN PROPOSED AN INCREASE FOR LGS AND SP CUSTOMERS IN**  
8       **EXCESS OF THE COST TO SERVE THOSE CUSTOMERS?**

9       A.     Yes. Per Ameren's cost of service study results in this case, at the Company's  
10       proposed revenue requirement, the LGS and SP classes should receive a 3.4 percent  
11       *decrease*. However, the Company has proposed a 7.01 percent increase for LGS and  
12       a 6.98 percent increase for SP. See Direct Testimony of William R. Davis, page 7,

<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 increase granted to the utility.

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

1 table 2, and page 9, table 3. Both of the proposed increases are *more than 10*  
2 *percent above the cost of service-based level of rates* at the Company's proposed  
3 revenue requirement. As such, Ameren is proposing that LGS rates be set  
4 approximately \$62.7 million above cost of service for LGS and that SP rates be set  
5 approximately \$24.9 million above cost of service. In total, Ameren's proposal  
6 would mean that LGS and SP customers together would pay rates that are almost  
7 \$88 million a year above cost of service levels. See Exhibit SWC-3.

8 **Q. SHOULD THE COMMISSION GENERALLY CONSIDER THE IMPACT OF THE PROPOSED**  
9 **INCREASE ON LGS AND SP CUSTOMERS IN SETTING THE CLASS REVENUE**  
10 **REQUIREMENTS AND RATE DESIGNS IN THE IMMEDIATE PROCEEDING?**

11 A. Yes. Electricity represents a significant portion of operating costs for MEEG  
12 members. When rates increase, that increase in cost puts pressure on the other  
13 expenses required by a business to operate. The Commission should consider the  
14 impact on customers thoroughly and carefully in their examination of all facets of  
15 this case, to ensure that any increase in Ameren's rates is only the minimum amount  
16 necessary for the utility to provide adequate and reliable service.

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

19 A. Yes. While Ameren does not propose any specific broad regulatory changes in this  
20 docket, the specter of such changes, particularly without reconciliation of existing

1 cost of service and revenue allocation issues, is a significant concern to large  
2 customers.

3 **Q. DOES THE FACT THAT THE LGS AND SP CLASSES PAY RATES THAT ARE WELL IN**  
4 **EXCESS OF COST OF SERVICE WORK AGAINST OTHER POLICY GOALS OF THE**  
5 **COMMISSION?**

6 A. Yes. For example, on September 7<sup>th</sup>, the Commission issued an order asking the  
7 parties to provide suggestions for the submission of an Infrastructure Efficiency  
8 Tariff. That order is related to the Commission's workshop in Case No. EW-2016-  
9 0041, where the Commission sought to consider mechanisms to promote the  
10 efficient use of existing electric system infrastructure. MECG notes that while an  
11 Infrastructure Efficiency Tariff may be a useful tool to entice business to use existing  
12 infrastructure, the most efficient means to attract such business would be rates that  
13 are set at cost of service. In this regard, it means little to attempt to attract business  
14 to certain locations in the Ameren service area, but then charge them rates that are  
15 10 percent above cost of service. Cost of service based rates are critical to the  
16 Commission's undertaking.

1 **Cost of Service and Revenue Allocation**

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

4 A. MECG advocates that rates be set based on the utility's cost of service. This  
5 produces equitable rates that reflect cost causation, send proper price signals, and  
6 minimize price distortions.

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

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

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

17 A. The Company represents this relationship in their cost of service results through the  
18 use of class-specific rates of return. See Schedule WRD-3. These rates of return can  
19 be converted into a rate of return index ("RRI"), which is an indexed measure of the  
20 relationship of the rate of return for an individual rate class to the total system rate  
21 of return. A RRI greater than 1.0 means that the rate class is paying rates in excess

1 of the costs incurred to serve that class, and a RRI less than 1.0 means that the rate  
2 class is paying rates less than the costs incurred to serve that class. As such, those  
3 rate classes with a RRI greater than 1.0 shoulder some of the revenue responsibility  
4 burden for the classes with a RRI less than 1.0.

5 **Q. HAVE YOU CALCULATED A RRI FOR EACH CUSTOMER CLASS BASED ON AMEREN'S**  
6 **COST OF SERVICE RESULTS?**

7 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	2.69%	0.50
Small General Service	7.04%	1.30
Large General Service/Small Primary Service	9.73%	1.80
Large Primary Service	6.52%	1.21
Company Owned Lighting	8.66%	1.60
Customer Owned Lighting	-14.81%	-2.74

Source: Exhibit SWC-4 and Schedule WRD-3.

8

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

11 A. Yes. As shown in Table 2, Ameren's cost of service results show that LGS and SP,  
12 with a RRI of 1.80, provide a rate of return significantly above the cost of service  
13 level for the class. Additionally, SGS and LP are both paying rates in excess of their  
14 respective cost of service levels, though the mismatch between the actual and cost  
15 of service levels is not as severe as for LGS and SP.

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

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

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

<b>Case</b>	<b>LGS/SP Rate of Return</b>	<b>Total Missouri Rate of Return</b>	<b>Rate of Return Index Value</b>
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
Present Case	9.73%	5.41%	1.80

Source: Table 2, Direct Testimony of Steve W. Chriss, and Schedule SWC-9 on behalf of Wal-Mart Stores East, LP and Sam’s East, Inc., Case No. ER-2014-0258.

8  
 9       As shown in Table 3, very little movement has been made towards addressing the  
 10      fact that LGS and SP rates are above cost of service. Specifically, while the RRI for  
 11      this class was at 1.73 in 2008, the RRI for this class is now 1.80. Rate relief for this  
 12      class is long overdue.



1       **Q.    HAS THE COMPANY CALCULATED THE REVENUE NEUTRAL REVENUE CHANGE**  
2       **REQUIRED TO BRING LGS AND SP TO COST OF SERVICE PER THE COMPANY’S COST**  
3       **OF SERVICE STUDY IN THIS CASE?**

4       A.    Yes.  For LGS and SP, the revenue neutral change required is a reduction of  
5       approximately \$85.2 million.  See MO ECCOS\_2016 Min size\_Final, tab SCH 1,  
6       provided in response to MECG 2.2.

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

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

- 11               1) Equity and fairness to all electric customers;  
12               2) Encouraging cost-effective utilization of electricity; and  
13               3) Competition, in that cost-based electric rates permit the Company to  
14               compete with alternative fuels, co-generation, and other electric providers  
15               for new commercial and industrial customers.  See Direct Testimony of  
16               William R. Davis, page 5, line 12 to page 6, line 11.

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

19       A.    Yes.  In Case No. EC-2014-0224, Ameren witness Terry M. Jarrett states that “The  
20       regulator’s job is to make sure the rates are fair according to the cost of service for

1 each class.” See Case No. EC-2014-0224, Rebuttal Testimony of Terry M. Jarrett,  
2 page 6, line 9 to line 10.

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

5 A. My understanding is that Ameren has put forth a three-step revenue allocation  
6 proposal:

7 1) The Company proposes a revenue neutral adjustment of 0.50% to the  
8 Residential class, with an offsetting negative adjustment applied mostly to  
9 LGS and SP and \$150,000 applied to Company-Owned Lighting, and a  
10 revenue neutral adjustment affecting the lighting classes;

11 2) The Company proposes to assign directly to applicable classes the portion of  
12 the revenue change that is attributable to pre-MEEIA energy efficiency costs;  
13 and

14 3) The Company proposes to apply any non-energy efficiency revenue increase  
15 awarded by the Commission in the final order on an equal percentage basis  
16 to all customer classes, with the exception of Customer-Owned Lighting. *Id.*,  
17 page 7, line 7 to page 8, line 17.

18 **Q. DOES THE COMPANY’S PROPOSAL MAKE SOME MOVEMENT TOWARDS COST OF**  
19 **SERVICE-BASED RATES FOR LGS AND SP?**

20 A. To some extent, yes, however there would still be a large gap between cost of  
21 service based rates and actual rate levels. The Company’s proposal effectively

1 eliminates 7.6 percent of the subsidy which currently is embedded in LGS and SP  
2 rates. Therefore, at this pace, it would take roughly 13 rate cases to eliminate the  
3 entire subsidy. At an average of a rate case every 19 months, it would take roughly  
4 21 years to get the LGS and SP rates to cost of service. See Exhibit SWC-5, column  
5 (5). Additionally, the Company proposes above average increases for SGS and LP,  
6 which are paying rates in excess of their respective cost of service levels, and this  
7 will exacerbate the subsidies embedded in those rates.

8 **Q. WHAT IS MECG'S RECOMMENDATION TO THE COMMISSION IF THE COMMISSION**  
9 **WERE TO AWARD AMEREN ITS PROPOSED REVENUE REQUIREMENT INCREASE?**

10 A. If the Commission were to award Ameren its proposed revenue requirement  
11 increase, MECG does not oppose the Company's proposed revenue allocation. The  
12 Ameren position makes some movement towards cost of service, but recognizes the  
13 magnitude of Ameren's proposed rate increases for other classes.

14 **Q. WHAT IS MECG'S RECOMMENDATION TO THE COMMISSION IF THE COMMISSION**  
15 **AWARDS A REVENUE REQUIREMENT INCREASE LOWER THAN THAT PROPOSED BY**  
16 **THE COMPANY?**

17 A. If the Commission awards a revenue requirement increase lower than that proposed  
18 by the Company, the Commission can then take larger steps to address the above  
19 cost rates paid by LGS and SP. Specifically, MECG then recommends that the  
20 Commission allocate the revenue increase using the following steps:

- 1           1) Start with the revenue allocation as proposed by the Company at the
- 2           Company's proposed revenue requirement;
- 3           2) Apply one-half of the reduction from the Company's proposed revenue
- 4           requirement to the approved revenue requirement to the LGS and SP classes
- 5           on a current base retail revenues basis;
- 6           3) Set the increase for SGS and LP at the system average increase; and
- 7           4) Apply the remaining reduction from the Company's proposed revenue
- 8           requirement to all other classes on an equal percentage basis.

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

10          A.    MECG and Missouri Industrial Energy Consumers ("MIEC") co-sponsored the

11          testimony of Michael P. Gorman in which Mr. Gorman recommends a return on

12          equity for the Company of 9.2 percent, as opposed to the 9.9 percent ROE proposed

13          by the Company. If the Commission approves the MECG/MIEC recommendation,

14          this will reduce the approved revenue requirement by approximately \$42.3 million.

15          See Direct Testimony of Greg R. Meyer, Table 1. As shown in Exhibit SWC-5, the

16          proposed allocation methodology, at a reduction from the Company's proposed

17          revenue requirement of \$42.3 million, provides for rate relief for all customer

18          classes while using the revenue requirement reduction to provide approximately a

19          16.6 percent movement towards cost of service-based rates for LGS and SP.

1       **Q.     WOULD FURTHER REDUCTIONS ALLOW FOR FURTHER MOVEMENT TOWARDS**  
2       **COST OF SERVICE BASED RATES FOR LGS AND SP?**

3       A.     Yes. As shown in Exhibit SWC-6, I have applied \$71.2 million, which is the total of  
4       MIEC's revenue requirement adjustments to the approved revenue requirement.  
5       See Direct Testimony of Greg R. Meyer, Table 1. MECG's proposed revenue  
6       allocation methodology, at that level of revenue requirement, would result in a 22.8  
7       percent movement towards cost of service based rates for LGS and SP while  
8       providing overall rate relief for all customer classes.

9

10   **Rate Design**

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

14       A.     My understanding is that the Company proposes to apply any revenue requirement  
15       increase to the charges contained in the LGS schedule on an equal percentage basis  
16       according to the percentage revenue requirement increase for the class. For SP, my  
17       understanding is that the Company proposes to increase the monthly customer  
18       charge, the time-of-day customer charge, Rider B credits, and the reactive charge by  
19       7.77 percent and increase the other charges on an equal percentage basis according  
20       to the percentage revenue requirement increase for the class. See Direct Testimony  
21       of William R. Davis, page 11, line 17 to page 13, line 11.

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

3       A.     Yes. MECG’s concerns with the rate design proposals for the LGS and SP classes are:  
4             1) LGS and SP rates do not currently reflect the underlying cost of serving those  
5             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 PERCENT OF PROPOSED NON-ENERGY EFFICIENCY BASE REVENUES FOR LGS**  
14       **AND SP ARE DEMAND-RELATED?**

15       A.     The Company’s workpapers indicate that, per its cost of service study results,  
16             approximately 68.5 percent of the cost to serve the LGS and SP classes are demand-  
17             related while approximately 30 percent are energy-related. *See Exhibits SWC-7.*  
18             However, under the Company’s proposed rate designs for the LGS and SP classes, a  
19             large portion of these demand-related (fixed) costs would be inappropriately  
20             collected through energy (variable) charges.

1       **Q.     PLEASE EXPLAIN.**

2       A.     Both the LGS and SP rate schedules utilize three-block “hours-use” rate structures  
3       for the energy charges, which set the billing kWh for each block based on the kWh  
4       used for each kW of billing demand, or load factor for the billing month. One rate is  
5       charged for the first 150 kWh used per kW of billing demand, a second lower rate is  
6       charged for the next 200 kWh used per kW of billing demand, and all additional kWh  
7       are charged the lowest third block rate. For the LGS class, this proposed rate design  
8       would collect approximately 86 percent of non-energy efficiency base rate revenues  
9       through energy charges and approximately 11.6 percent of revenues through  
10      demand charges. For the SP class, the proposed rate design would collect  
11      approximately 90.8 percent of non-energy efficiency base rate revenues through  
12      energy charges and approximately 8.1 percent through demand charges. *Id* and  
13      Exhibits SWC-7 and SWC-8.

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

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

1 differentiation is appropriate) to best recover costs in a manner that reflects how  
2 those costs are incurred and allocated.

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

5 A. No. At the Company's proposed revenue requirement, the estimated cost-based  
6 transmission and distribution charge for LGS would be \$5.38/kW, versus the  
7 Company's proposed summer demand charge of \$5.17/kW and the proposed winter  
8 demand charge of \$1.92/kW. See Exhibit SWC-10 and Schedule WRD-1.

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

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

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

20 A. Yes. The shift in demand-related costs from per kW demand charges to per kWh  
21 energy charges results in a shift in demand cost responsibility from lower load factor



1 customers to higher load factor customers. This results in a misallocation of cost  
2 responsibility as higher load factor customers overpay for the demand-related costs  
3 incurred by the Company to serve them. In other words, higher load factor  
4 customers are paying for a portion of the demand-related costs that are incurred to  
5 serve the lower load factor customers simply because of the manner in which the  
6 Company collects those costs in rates.

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

9 A. Yes. By collecting a large percentage (currently 86-91%) of demand-related (fixed)  
10 costs through the variable energy charge, the Company has made itself more  
11 susceptible to weather-related and other fluctuations in usage than it would be  
12 were those costs recovered through a demand charge. A rate design that properly  
13 collects fixed costs through a \$/kW demand charge and variable costs through  
14 \$/kWh variable charges should provide greater revenue certainty and more stable  
15 utility earnings.

16 **Q. HAVE OTHER UTILITIES RECOGNIZED THE EFFECT OF COLLECTING FIXED COSTS**  
17 **THROUGH AN ENERGY CHARGE MAY HAVE ON REVENUES?**

18 A. Yes. In its recent rate case, Empire District Electric recognized the problem caused  
19 by collecting demand-related (fixed) costs through energy (variable) charges. There,  
20 Empire witness Overcast stated "Volumetric rates provide no revenue stability for  
21 the utility, since the bulk of costs do not change with volume, and any change in

1 kWh from the weather normalized volume of sales will inevitably produce either too  
2 much or too little revenue.” See Direct Testimony of Edwin Overcast, Case No. ER-  
3 2014-0351, filed August 29, 2014, at page 24.

4 **Q. DOES THE COMPANY’S HOURS-USE STRUCTURE MITIGATE SOME OF THE SHIFT OF**  
5 **DEMAND-COSTS TO HIGH LOAD FACTOR CUSTOMERS?**

6 A. No. It appears that a significant amount of demand costs are proposed to be  
7 recovered in the third, or high load factor, block. See Exhibit SWC-11.

8 **Q. PLEASE EXPLAIN.**

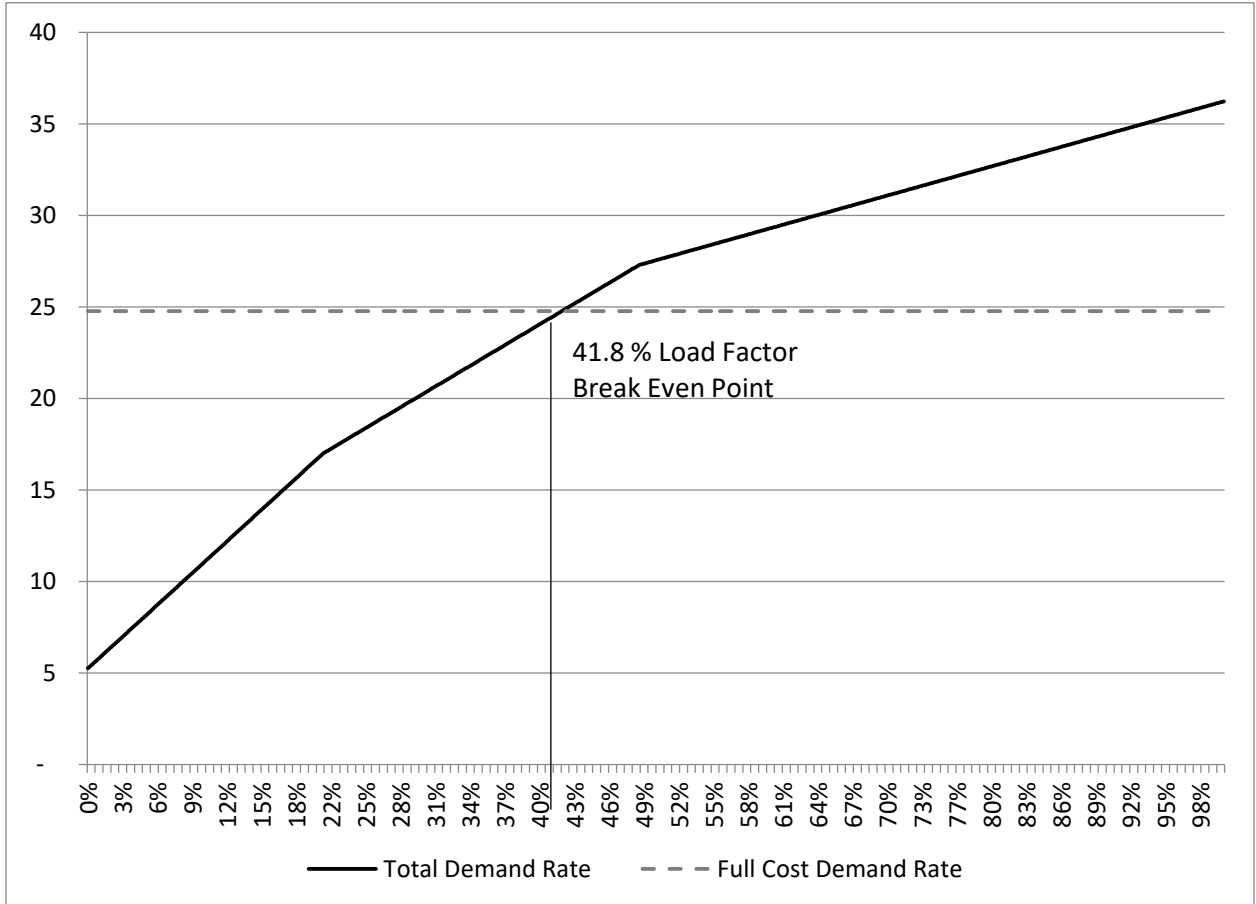
9 A. I performed an analysis of the proposed LGS summer rates to derive the effective  
10 cost per kW charged across a range of load factors based on a 720 hour (30 day)  
11 month for a 1,000 kW customer.<sup>4</sup> To do this, I first calculated a flat cost of service-  
12 based \$/kWh summer energy rate to represent the energy component of the LGS  
13 cost of service. I assumed that the \$/kWh energy rate is flat across all kWh of usage,  
14 and subtracted the energy rate from the hours-use charge to determine the  
15 effective hours-use \$/kWh demand-related rate for each block and applied that rate  
16 to each of the 720 hours in the month. I divided the cost to the customer of the  
17 demand portion of the energy rate by 1,000 kW to determine the cost per kW and  
18 added the Company’s proposed demand charge in order to determine the total  
19 effective cost per kW for the customer. I then estimated a full cost demand charge

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<sup>4</sup> The analysis assumes that the cost of service by function relative to the total class cost of service for the summer is the same as the overall test year class cost of service study.

1 to determine the \$/kW subsidy received or paid at a given load factor for the month.

2 *Id.*



3  
4 **Figure 2. Effective \$/kW Charged to Customers by Load Factor, LGS Summer (720 Hour Month)**

5  
6 **Q. WHAT DOES YOUR ANALYSIS SHOW?**

7 A. My analysis highlights two issues. First, as Figure 2 shows, as load factor increases,  
8 the customer cost for demand-related costs increases. Second, as load factor  
9 increases from zero to 41.8 percent, the recovery of demand-related costs is below  
10 the full cost demand rate and, as such, a subsidy is received by the customer. As

1 load factor increases beyond 41.8 percent, the customer overpays for demand by an  
2 increasing amount and subsidizes the lower load factor customers.

3 These results are a concern because the demand-related costs incurred to serve  
4 a customer does not change with that customer's load factor, and an increase in  
5 load factor should not result in an increase in the demand-related per kW charges to  
6 that customer. The hours-use rate structure proposed by Ameren penalizes  
7 customers for efficiently using the Company's system.

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

11 A. No. The hours-use structure is not the simplest manner as it requires the analyst to  
12 have more than a basic understanding of the rate structure in order to understand  
13 the interplay of the energy rate and load factor. Additionally, it is not the most  
14 transparent structure, as, in addition to the underlying demand-related cost  
15 recovery issue discussed above, it does not provide clear energy and demand price  
16 signals, as changes in billed demand and energy have impacts that are not easily  
17 calculated without a copy of the tariff and a spreadsheet.

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

20 A. Yes, and this can be shown with a simple example. Assume two customers have the  
21 same monthly billing demand. One of the customers has a load factor of 40 percent

1 and the other has a load factor of 70 percent. Both customers install the same  
2 energy efficiency measure and that measure has no effect on the monthly billing  
3 demand. Using Ameren's proposed LGS summer rates, the customer with the 40  
4 percent load factor will save 8.3 cents/kWh while the customer with the 70 percent  
5 load factor will save only 5.6 cents/kWh, even though the energy efficiency measure  
6 for each had the same impact on customer usage and the utility's system. It should  
7 also be noted that some of the incremental amount of savings is attributable to  
8 demand-related costs collected through the energy charges, even though the  
9 customer did not actually reduce demand on the system. This is neither a cost-  
10 based nor equitable result.

11 **Q. IS MECG ADVOCATING FOR THE ELIMINATION OF THE HOURS-USE STRUCTURE FOR**  
12 **LGS AND SP AT THIS TIME?**

13 A. No. MECG instead proposes a measured approach that first seeks to begin to  
14 remedy the under-collection of demand-related costs through the existing demand  
15 charges in this case, and may propose to unwind the hours-use energy charges in  
16 future cases.

17 **Q. WHAT IS MECG'S RECOMMENDATION TO THE COMMISSION AT THE COMPANY'S**  
18 **PROPOSED INCREASES FOR THE LGS AND SP CLASSES?**

19 A. At the Company's proposed increases for the LGS and SP classes, MECG:

- 20 1) Does not oppose the Company's proposed customer, on-peak energy, and  
21 off-peak energy charges for the LGS and SP classes nor the Company's

1 proposed changes to the time-of-use customer charge, Rider B credits, and  
2 reactive charge for SP; and

3 2) Recommends the Commission apply the remainder of the proposed increase  
4 (that amount not collected through the proposed charges referenced above)  
5 for the LGS and SP classes to each schedule's respective demand charges  
6 using the Company's proposed summer/winter differential of 2.69 for LGS  
7 and 2.76 for SP.

8 **Q. WHAT IS MECG'S RECOMMENDATION TO THE COMMISSION IF THE COMMISSION**  
9 **APPROVES A LOWER LGS AND SP CLASS INCREASE THAN THAT PROPOSED BY THE**  
10 **COMPANY?**

11 A. If the Commission awards an increase for these classes that is lower than that  
12 proposed by the Company, then the Commission can then take larger steps to  
13 address the under-recovery of demand-related costs through demand charges and  
14 associated intra-class subsidies. If the Commission approves lower increases for the  
15 LGS and SP classes than that proposed by the Company, the Commission should set  
16 the demand charges per MECG's recommendation above, as if the Company  
17 received its full revenue requirement proposal for LGS and SP, and apply the  
18 approved reduction in the class revenue requirement by reducing all base rate  
19 energy charges on an equal percentage basis.

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

21 A. Yes.

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## EXPERIENCE

July 2007 – Present

**Wal-Mart Stores, Inc.**, Bentonville, AR

**Director, Energy and Strategy Analysis** (October 2016 – Present)

**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

## TESTIMONY BEFORE REGULATORY COMMISSIONS

2016

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.

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-El: Petition for Rate Increase by Tampa Electric Company.

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

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

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

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

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

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

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

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

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

*2012*

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

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

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

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 Peakers, Environmental Retrofits and other generating, transmission and distribution plant additions, to reflect changes in cost of service and for relief properly related thereto.

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

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

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

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

#### *2008*

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

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

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

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

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

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

*2007*

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**

*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, The Business Case for Clean Energy, Minnesota Conservative Energy Forum, 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)		
2005	6,902,782	\$ 383,068,829	1,210,452	\$ 68,457,618	8,113,234	\$ 451,526,447	\$ 0.0557	
2006	6,825,279	\$ 382,443,150	1,138,014	\$ 65,138,353	7,963,293	\$ 447,581,503	\$ 0.0562	1.0%
2007	7,209,112	\$ 402,488,478	1,136,504	\$ 65,058,386	8,345,616	\$ 467,546,864	\$ 0.0560	0.7%
2008	7,217,909	\$ 404,821,983	1,091,791	\$ 63,361,204	8,309,700	\$ 468,183,187	\$ 0.0563	1.2%
2009	7,080,575	\$ 423,487,422	942,887	\$ 59,330,101	8,023,462	\$ 482,817,523	\$ 0.0602	8.1%
2010	7,348,264	\$ 479,441,021	981,778	\$ 66,527,092	8,330,042	\$ 545,968,113	\$ 0.0655	17.8%
2011	7,273,526	\$ 524,713,967	969,043	\$ 72,008,088	8,242,569	\$ 596,722,055	\$ 0.0724	30.1%
2012	7,163,079	\$ 523,948,387	941,992	\$ 70,870,800	8,105,071	\$ 594,819,187	\$ 0.0734	31.9%
2013	7,153,501	\$ 584,937,006	923,052	\$ 77,741,042	8,076,553	\$ 662,678,048	\$ 0.0820	47.4%
2014	7,238,416	\$ 586,009,104	925,273	\$ 76,899,511	8,163,689	\$ 662,908,615	\$ 0.0812	45.9%
2015	7,181,050	\$ 614,896,646	915,833	\$ 80,126,654	8,096,883	\$ 695,023,300	\$ 0.0858	54.2%
Change in Annual Revenue, 2010 - 2015						\$ 149,055,187		
Change in Annual Revenue, 2005 - 2015						\$ 243,496,853		

Sources:  
 2004 - 2015 / 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		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	\$ 603,408,285	\$ 645,685,579	\$ 42,277,294	7.01%	-3.4%	\$ (20,515,882)	\$ 62,793,176
Small Primary Service	\$ 239,989,465	\$ 256,730,304	\$ 16,740,839	6.98%	-3.4%	\$ (8,159,642)	\$ 24,900,481
<b>Total</b>	<b>\$ 843,397,750</b>	<b>\$ 902,415,883</b>	<b>\$ 59,018,133</b>			<b>\$ (28,675,524)</b>	<b>\$ 87,693,657</b>

Sources:

- (1) - (4) Direct Testimony of William R. Davis, page 9, table 3
- (5) Direct Testimony of William R. Davis, page 7, table 2

### Calculation of Rate of Return Index Values

<b>Customer Class</b>	<b>Rate of Return</b>	<b>RRI</b>
	(%)	
	(1)	(2)
Residential	2.69%	0.50
Small General Service	7.04%	1.30
Large General Service/Small Primary Service	9.73%	1.80
Large Primary Service	6.52%	1.21
Company Owned Lighting	8.66%	1.60
Customer Owned Lighting	-14.81%	(2.74)
<b>Total Missouri</b>	<b>5.41%</b>	<b>1.00</b>

Source: Schedule WRD-3



Illustrative Example of MECG Proposed Revenue Allocation, \$42.3 Million Reduction in Revenue Requirement from Company Proposed

Customer Class	Normalized Retail Revenues	Ameren Proposed Base Revenue Requirement	Ameren Proposed Change	System Average Increase	Movement Towards Cost of Service	Apply 50% to LGS and SP on Base Revenues	Set SGS and LP at Average Increase	Apply 50% to All Other Classes	Total Revenue Change	New System Average Increase	Movement Towards Cost of Service
	(\$) (1)	(\$) (2)	(\$) (3) (2) - (1)	(\$) (4) (1) X R10	(\$) (5) (4) - (3)	(\$) (6)		(\$) (7)	(\$) (8) (%)	(\$) (9) (10) (1) X R9	(\$) (11)
R1 Residential	\$ 1,255,462,780	\$ 1,359,483,065	\$ 104,020,285					\$ (12,181,269)	\$ 91,839,016	7.32%	
R2 Small General Service	\$ 309,645,053	\$ 333,870,544	\$ 24,225,491				\$ (5,116,476)		\$ 19,109,015	6.17%	
R3 Large General Service	\$ 603,408,285	\$ 645,685,579	\$ 42,277,294	\$ 46,838,850	\$ 4,561,556	\$ (15,131,752)			\$ 27,145,542	4.50%	\$ 37,237,921
R4 Small Primary Service	\$ 239,989,465	\$ 256,730,304	\$ 16,740,839	\$ 18,628,897	\$ 1,888,058	\$ (6,018,248)			\$ 10,722,591	4.47%	\$ 14,810,385
R5 Large Primary Service	\$ 209,571,770	\$ 225,964,945	\$ 16,393,175				\$ (3,459,947)		\$ 12,933,228	6.17%	
R6 Company-Owned Lighting	\$ 36,570,811	\$ 38,895,085	\$ 2,324,274					\$ (354,832)	\$ 1,969,442	5.39%	
R7 Customer-Owned Lighting	\$ 3,785,618	\$ 4,161,916	\$ 376,298					\$ (36,730)	\$ 339,568	8.97%	
R8 Metropolitan Sewer District	\$ 76,826	\$ 82,892	\$ 6,066					\$ (745)	\$ 5,321	6.93%	
R9 Total	\$ 2,658,510,608	\$ 2,864,874,330	\$ 206,363,722		\$ 6,449,614 7.6%	\$ (21,150,000)	\$ (8,576,422)	\$ (12,573,578)	\$ 164,063,722	6.17%	\$ 14,180,173 16.6%
R10 Proposed System Average Increase										7.76%	
R11 Revenue Requirement Reduction	\$ 42,300,000										
R12 Resulting Revenue Requirement Increase	\$ 164,063,722										
R13 Resulting System Average Increase										6.17%	
R14 Equal % Decrement										0.97%	
R15 LGS/SP Cost of Service Revenue Neutral Change per Ameren CCOSS	\$ (85,207,856)										

Source:  
Direct Testimony of William R. Davis, Table 3

Illustrative Example of MCEG Proposed Revenue Allocation, \$71.2 Million Reduction in Revenue Requirement from Company Proposed

Customer Class	Normalized Retail Revenues	Ameren Proposed Base Revenue Requirement	Ameren Proposed Change	System Average Increase	Movement Towards Cost of Service	Apply 50% to LGS and SP on Base Revenues	Set SGS and LP at Average Increase	Apply 50% to All Other Classes	Total Revenue Change	New System Average Increase	Movement Towards Cost of Service
	(\$) (1)	(\$) (2)	(\$) (3) (2) - (1)	(\$) (4) (1) X R10	(\$) (5) (4) - (3)	(\$) (6)	(\$) (7)	(\$) (8)	(\$) (9)	(\$) (10) (1) X R9	(\$) (11)
R1 Residential	\$ 1,255,462,780	\$ 1,359,483,065	\$ 104,020,285					\$ (20,712,246)	\$ 83,308,039	6.64%	
R2 Small General Service	\$ 309,645,053	\$ 333,870,544	\$ 24,225,491				\$ (8,482,549)		\$ 15,742,942	5.08%	
R3 Large General Service	\$ 603,408,285	\$ 645,685,579	\$ 42,277,294	\$ 46,838,850	\$ 4,561,556	\$ (25,469,993)			\$ 16,807,301	2.79%	\$ 30,678,422
R4 Small Primary Service	\$ 239,989,465	\$ 256,730,304	\$ 16,740,839	\$ 18,628,897	\$ 1,888,058	\$ (10,130,007)			\$ 6,610,832	2.75%	\$ 12,201,520
R5 Large Primary Service	\$ 209,571,770	\$ 225,964,945	\$ 16,393,175				\$ (5,738,149)		\$ 10,655,026	5.08%	
R6 Company-Owned Lighting	\$ 36,570,811	\$ 38,895,085	\$ 2,324,274					\$ (603,334)	\$ 1,720,940	4.71%	
R7 Customer-Owned Lighting	\$ 3,785,618	\$ 4,161,916	\$ 376,298					\$ (62,454)	\$ 313,844	8.29%	
R8 Metropolitan Sewer District	\$ 76,826	\$ 82,892	\$ 6,066					\$ (1,267)	\$ 4,799	6.25%	
<b>R9 Total</b>	<b>\$ 2,658,510,608</b>	<b>\$ 2,864,874,330</b>	<b>\$ 206,363,722</b>		<b>\$ 6,449,614</b>	<b>\$ (35,600,000)</b>	<b>\$ (14,220,698)</b>	<b>\$ (21,379,302)</b>	<b>\$ 135,163,722</b>	<b>5.08%</b>	<b>\$ 19,461,808</b>
					<b>7.6%</b>						<b>22.8%</b>
R10 Proposed System Average Increase										7.76%	
R11 Revenue Requirement Reduction	\$ 71,200,000										
R12 Resulting Revenue Requirement Increase	\$ 135,163,722										
R13 Resulting System Average Increase										5.08%	
R14 Equal % Decrement										1.65%	
R15 LGS/SP Cost of Service Revenue Neutral Change per Ameren CCOSS	\$ (85,207,856)										

Source:  
Direct Testimony of William R. Davis, Table 3

**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	
	(\$) (1)	(%) (2) (1) / Total	(\$) (3)	(%) (4) (3) / Total	(\$) (5)	(%) (6) (5) / Total
Customer	\$ 10,815	1.33%	\$ 12,580	2.0%	\$ 2,705	1.06%
<i>Production - Demand</i>	\$ 392,396	48.16%				
<i>Transmission - Demand</i>	\$ 60,818	7.47%				
<i>Distribution - Demand</i>	\$ 105,172	12.91%				
Total Demand	\$ 558,386	68.54%	\$ 74,407	11.6%	\$ 20,874	8.16%
Energy	\$ 245,498	30.13%	\$ 554,584	86.4%	\$ 232,120	90.78%
<b>Total Non-EE Revenue</b>	<b>\$ 814,699</b>	<b>100.00%</b>	<b>\$ 641,571</b>	<b>100.0%</b>	<b>\$ 255,699</b>	<b>100.0%</b>

Sources:

MO ECCOS\_2016 Min size\_Final, tab Unbundles, provided in response to MCEG 2.2  
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	42,290 \$	98.91 \$	4,182,904
Winter Bills	84,459 \$	98.91 \$	8,353,840
TOD Bills	388 \$	112.72 \$	43,735
Low Income Charge	127,137 \$	0.50 \$	63,569
Demand Charge			
Summer	8,529,012 \$	5.17 \$	44,094,992
Winter	15,787,327 \$	1.92 \$	30,311,668
Energy Charge			
Summer kWh			
First 150 HU	1,141,221,926 \$	0.1107 \$	126,333,267
Next 200 HU	1,252,694,918 \$	0.0833 \$	104,349,487
Over 350 HU	522,107,462 \$	0.0560 \$	29,238,018
On-Peak	4,594,412 \$	0.0131 \$	60,187
Off-Peak	9,415,429 \$	(0.0074) \$	(69,674)
Energy Eff	2,843,088,287 \$	0.0007 \$	1,990,162
Winter kWh			
First 150 HU	1,954,789,919 \$	0.0698 \$	136,444,336
Next 200 HU	2,105,899,549 \$	0.0517 \$	108,875,007
Over 350 HU	867,480,713 \$	0.0407 \$	35,306,465
Seasonal Energy	345,260,038 \$	0.0407 \$	14,052,084
On-Peak	9,074,758 \$	0.0040 \$	36,299
Off-Peak	19,052,439 \$	(0.0022) \$	(41,915)
Energy Eff	5,144,999,758 \$	0.0004 \$	2,058,000
Total kWh	8,189,454,525	\$	645,682,429

Sources:  
Schedule WRD-1  
Schedule WRD-4

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

SP	Billing Units	Rates	Revenue
Customer Charge			
Summer Bills	2,592 \$	337.28 \$	874,230
Winter Bills	5,211 \$	337.28 \$	1,757,566
TOD Bills	220 \$	333.35 \$	73,337
Low Income Charge	8,022 \$	0.50 \$	4,011
Demand Charge			
Summer	2,952,050 \$	4.29 \$	12,664,296
Winter	5,296,748 \$	1.55 \$	8,209,960
Energy Charge			
Summer kWh			
First 150 HU	425,434,558 \$	0.1072 \$	45,606,585
Next 200 HU	523,039,769 \$	0.0807 \$	42,209,309
Over 350 HU	384,040,875 \$	0.0541 \$	20,776,611
On-Peak	13,981,066 \$	0.0095 \$	132,820
Off-Peak	28,984,854 \$	(0.0054) \$	(156,518)
Energy Eff	1,213,282,368 \$	0.0007 \$	849,298
Winter kWh			
First 150 HU	719,288,239 \$	0.0675 \$	48,551,956
Next 200 HU	878,081,788 \$	0.0502 \$	44,079,706
Over 350 HU	641,104,716 \$	0.0392 \$	25,131,305
Seasonal Energy	147,826,764 \$	0.0392 \$	5,794,809
On-Peak	23,818,081 \$	0.0035 \$	83,363
Off-Peak	47,347,288 \$	(0.0019) \$	(89,960)
Energy Eff	2,177,312,636 \$	0.0004 \$	870,925
Reactive Charge	1,414,269 \$	0.40 \$	565,708
Rider B			
115 kV	4,540 \$	(1.52) \$	(6,901)
69 kV	927,819 \$	(1.28) \$	(1,187,608)
Rider EDR		\$	(70,000)
Total kWh	3,718,816,709	\$	256,724,807

Sources:  
Schedule WRD-1  
Schedule WRD-4

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

R1		LGS Non-EE Base Revenue	\$	641,570,698	
R2		Transmission Portion of Cost, Ameren CCOSS		7.47%	
R3	R1 x R2	Cost-Based Transmission Revenue Requirement	\$	47,893,819	
R4		Demand Billing Determinants		24,316,339	kW
R5	R3 / R4	Cost-Based Transmission Demand Charge	\$	1.97	/kW
R6		Distribution Portion of Cost, Ameren CCOSS		12.91%	
R7	R1 X R6	Cost-Based Distribution Revenue Requirement	\$	82,822,335	
R8		Demand Billing Determinants		24,316,339	kW
R9	R7 / R8	Cost-Based Distribution Demand Charge	\$	3.41	/kW
R10	R5 + R9	<b>Total Wires Distribution Charge</b>	\$	<b>5.38</b>	<b>/kW</b>

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	\$ 308,198,667	\$ 333,343,400
(4)	% Energy, Cost of Service Study	30.1%	30.1%
(5)	(3) x (4) Non-EE Energy Revenues, COS	\$ 92,871,301	\$ 100,448,310
(6)	Total Billing kWh	2,916,024,306 kWh	5,273,430,219 kWh
(7)	(5) / (6) Cost of Service Energy Rate	\$ 0.03185 /kWh	\$ 0.01905 /kWh
(8)	Proposed Billing Demand Rate (BDR)	\$ 5.17 /kW	\$ 1.92 /kW
(9)	% Demand, Cost of Service Study	68.5%	68.5%
(10)	(3) x (9) Non-EE Demand Revenues, COS	\$ 211,236,077	\$ 228,470,009
(11)	Total Billing kW	8,529,012	15,787,327
(12)	(10) / (11) Full Cost Demand Rate (FCDR)	\$ 24.77 /kW	\$ 14.47 /kW

(13)	Hours of Use	kWh	Load Factor (%)	Proposed Energy Rate (\$/kWh)	Cost of Service Energy Rate (\$/kWh)	Demand Portion of Energy Rate (\$/kWh)	Billed Demand Cost from Energy Rate	Effective Demand Rate from Energy Rate	Total Demand Rate	Effective Subsidy (Received) / Paid
							(\$)	(\$/kW)	(\$/kW)	(\$/kW)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
				Ex SWC-7		(4) - (5)		(7) / kW Demand	(8) + BDR	(9) - FCDR
	1	1,000	0.1%	\$ 0.11070	\$ 0.03185	\$ 0.07885	\$ 79	\$ 0.08	\$ 5.25	\$ (19.52)
	150	150,000	20.8%	\$ 0.11070	\$ 0.03185	\$ 0.07885	\$ 11,828	\$ 11.83	\$ 17.00	\$ (7.77)
	301	301,000	41.8%	\$ 0.08330	\$ 0.03185	\$ 0.05145	\$ 19,597	\$ 19.60	\$ 24.77	\$ 0.00
	350	350,000	48.6%	\$ 0.08330	\$ 0.03185	\$ 0.05145	\$ 22,118	\$ 22.12	\$ 27.29	\$ 2.52
	720	720,000	100.0%	\$ 0.05600	\$ 0.03185	\$ 0.02415	\$ 31,054	\$ 31.05	\$ 36.22	\$ 11.46

Sources:  
 Exhibit SWC-7  
 Exhibit SWC-8