

Exhibit No.:	_____
Issues:	Cost of Service, Revenue Allocation, Rate Design
Witness:	Steve W. Chriss
Type of Exhibit:	Direct Testimony
Sponsoring Party:	Wal-Mart Stores East, LP and Sam's East, Inc.
Case No.:	ER-2014-0258
Date Testimony Prepared:	December 19, 2014

MISSOURI PUBLIC SERVICE COMMISSION

In the Matter of Union Electric Company, d/b/a)	
Ameren Missouri's Tariff to Increase Its Revenues)	Case No. ER-2014-0258
For Electric Service)	

DIRECT TESTIMONY AND SCHEDULES OF STEVE W. CHRISS

ON BEHALF OF

WAL-MART STORES EAST, LP AND SAM'S EAST, INC.

Dated: December 19, 2014

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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., Bentonville,
4 AR 72716-0550. I am employed by Wal-Mart Stores, Inc. as Senior Manager,
5 Energy Regulatory Analysis.

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

7 A. I am testifying on behalf of Wal-Mart Stores East, LP and Sam's East, Inc. (collectively
8 "Walmart").

9 **Q. ARE YOU THE SAME STEVE W. CHRISS WHO TESTIFIED IN THE REVENUE**
10 **REQUIREMENT PHASE OF THIS CASE?**

11 A. Yes.

12 **Q. ARE YOU SPONSORING ANY ADDITIONAL SCHEDULES WITH YOUR TESTIMONY?**

13 A. Yes. I am sponsoring the following schedules:

14 **Schedule SWC-8** – Calculation of Rate of Return Index ("RRI") by Customer
15 Class

16 **Schedule SWC-9** – Calculation of Large General Service ("LGS") and Small
17 Primary Service ("SP") Rate of Return Index Values

18 **Schedule SWC-10** – Demonstration of Proposed Revenue Allocation
19 Methodology

20 **Schedule SWC-11** – Determination of LGS and SP Cost of Service and
21 Revenues by Customer, Demand, and Energy

22 **Schedule SWC-12** – Ameren LGS Rate Design Workpaper

1 **Schedule SWC-13** – Ameren SP Rate Design Workpaper

2 **Schedule SWC-14** – Calculation of Effective Demand Rates, Proposed LGS

3 Summer

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

5 A. The purpose of my testimony is to respond to cost of service, revenue allocation, and
6 rate design issues related to the rate case filing of Union Electric Company d/b/a
7 Ameren Missouri (“Ameren” or “the Company”).

8

9 **Summary of Recommendations**

10 **Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS TO THE COMMISSION.**

11 A. My recommendations to the Commission are as follows:

12 1) The Commission should allocate any revenue increase in this docket using the
13 following steps:

14 1) Apply a 25 percent revenue neutral movement towards cost of service, per the
15 Commission’s approved cost of service study results, to the revenue
16 requirement for each rate class;

17 2) Allocate the approved overall revenue requirement increase on an equal
18 percent basis to all customer classes; and

19 3) If the difference between the Company’s proposed revenue requirement and
20 the Commission’s approved revenue requirement results in steps (1) and (2)
21 assigning a rate class an increase above 9.65 percent, mitigate that increase so
22 that no class receives a rate increase in excess of 9.65 percent.

1 2) For LGS and SP, the Commission should:

2 1) Maintain the second and third block energy rates at their current rates and
3 increase the customer charges by the customer class percent revenue
4 increase; and

5 2) Apply half of the remaining increase to the first block energy charge and the
6 other half of the remaining increase to the demand charge.

7 3) The Commission should order Ameren to develop alternative rate designs for LGS and
8 SP that more closely reflect the Company's cost of service and do not use the hours-
9 use rate design for the energy charge and present those alternatives in its next base
10 rate case.

11 4) The Commission should consider cost of service-based rates in its consideration of the
12 rate design question pursuant to the October 20, 2014, Order Directing Consideration
13 of a Rate Design Question.

14 The fact that an issue is not addressed herein or in related filings should
15 not be construed as an endorsement of any filed position.

16
17 **Cost of Service and Revenue Allocation**

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

20 **A.** Walmart advocates that rates be set based on the utility's cost of service. This
21 produces equitable rates that reflect cost causation, sends proper price signals, and
22 minimizes price distortions.

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

3 A. No. However, to the extent that alternative cost of service models or modifications
4 to the Company's model are proposed by other parties, Walmart reserves the right to
5 address any such changes in rebuttal testimony. My understanding is that the
6 Commission determined in Case No. ER-2010-0036 that the Company's cost of service
7 study was the "most reliable" of the studies submitted in that case. See Report and
8 Order, May 28, 2010, Case No. ER-2010-0036, page 87.

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

11 A. The Company represents this relationship in their cost of service results through the
12 use of class-specific rates of return. See Schedule WMW-1. These rates of return can
13 be converted into a rate of return index ("RRI"), which is an indexed measure of the
14 relationship of the rate of return for an individual rate class to the total system rate
15 of return. A RRI greater than 1.0 means that the rate class is paying rates in excess of
16 the costs incurred to serve that class, and a RRI less than 1.0 means that the rate class
17 is paying rates less than the costs incurred to serve that class. As such, those rate
18 classes with a RRI greater than 1.0 shoulder some of the revenue responsibility burden
19 for the classes with a RRI less than 1.0.

20 **Q. HAVE YOU CALCULATED A RRI BASED ON AMEREN'S COST OF SERVICE RESULTS?**

21 A. Yes, as shown in Table 1 below.

1

Table 1. Rate of Return Index, Ameren Proposed Cost of Service Study Results.

Customer Class	Rate of Return	Rate of Return Index Value
Residential	2.73%	0.62
Small General Service	6.12%	1.38
Large General Service/Small Primary	7.57%	1.71
Large Primary	4.22%	0.95
Large Transmission	1.64%	0.37
Lighting	4.58%	1.03
Total Missouri	4.44%	1.00

Sources: Schedule SWC-8 and Schedule WMW-1

2

3 **Q. DO THE RATES FOR LGS AND SP PROVIDE A RATE OF RETURN FOR THE COMPANY**
4 **ABOVE THEIR COST OF SERVICE LEVELS?**

5 A. Yes. As shown in Table 1, Ameren's cost of service model results show that LGS and
6 SP, with a RRI of 1.71, provide a rate of return significantly above the cost of service
7 level for each class.

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

10 A. Yes. As shown in Table 2, LGS and SP have provided a rate of return above their cost
11 of service levels in every rate case back to and including the Company's 2007 rate
12 case.

1

Table 2. LGS/SP Rate of Return, Ameren Cost of Service Study Results, Past Rate Cases.

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

Source: Schedule SWC-9

2

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

5 A. Yes. An examination of the "revenue neutral" results¹ of the Ameren class cost of
 6 service studies from the past five rate cases show that rates for LGS and SP have been
 7 set well in excess of cost of service since the 2007 rate case. Table 3 summarizes the
 8 Company's final class cost of service study results in each case.²

Table 3. 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%

Source: Exhibit SWC-3 and Exhibit SWC-4

¹ "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.

² Table 3 was presented in my Revenue Requirement testimony as Table 1.

1

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

5 A. Yes. For LGS and SP, the revenue neutral revenue change required is a reduction of
6 approximately \$59.8 million, or 7.44 percent. *See* Workpapers of William M. Warwick,
7 SCH 1.

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

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

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

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

20 A. Yes. In Case No. EC-2014-0224, Ameren witness Terry M. Jarrett states that "The
21 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, page
2 6, line 9 to line 10.

3 **Q. DOES THE COMPANY'S PROPOSED REVENUE ALLOCATION USE WHAT THE**
4 **COMPANY CHARACTERIZES AS "AN APPROPRIATE STARTING POINT" FOR THEIR**
5 **PROPOSED REVENUE ALLOCATION?**

6 A. No. The Company chooses to ignore its own cost of service study and proposes an
7 across the board equal percentage increase for all rate classes. See Direct Testimony
8 of William R. Davis, page 15, line 10 to line 11. This proposal by extension also ignores
9 all other cost of service studies that may be filed in this case, as an equal percentage
10 increase is not, as a general practice, intended to address inter-class subsidies at the
11 revenue allocation level, nor intra-class subsidies, at the class rate design level.

12 **Q. DO YOU HAVE CONCERNS WITH THE COMPANY'S PROPOSED REVENUE**
13 **ALLOCATION?**

14 A. Yes, as the Company recognizes in its filing that rates are not currently set at cost of
15 service levels, but fails to make any movement towards cost of service rate levels for
16 each customer class.

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

19 A. Yes. As I first discussed in my Revenue Requirement testimony, per Ameren's cost of
20 service study results in this case, at the Company's proposed revenue requirement
21 LGS and SP should receive a **1.1** percent increase. However, the Company has
22 proposed a **9.64** percent increase for both LGS and SP – about *8.5 percent above the*

1 *cost of service-based level* at the Company's proposed revenue requirement. See
2 Direct Testimony of William R. Davis, page 15, line 1, and page 17, line 1. As such,
3 Ameren is proposing that LGS rates be set approximately \$49.2 million above cost of
4 service for the LGS class and that SP rates be set approximately \$19.4 million above
5 cost of service for the SP class. See Schedule SWC-5.

6 **Q. DO THE COMPANY'S PROPOSED INCREASES CONSTITUTE EQUITABLE AND FAIR**
7 **INCREASES FOR LGS AND SP CUSTOMERS?**

8 A. No. Requiring LGS and SP customers to pay rates that are, in total, approximately
9 \$68.7 million, or 8.5 percent above cost of service is neither equitable nor fair. The
10 Company's proposal is also counter-intuitive when framed against their concern
11 about being able to compete against alternative fuels and other utilities, as the
12 Company is pursuing a revenue allocation in this case that makes their rates *less*
13 competitive against alternatives.

14 As such, the Commission should determine that it is appropriate as part of
15 this case to make some movement towards cost of service-based rates for the
16 customer classes.

17 **Q. WHAT IS YOUR RECOMMENDATION TO THE COMMISSION?**

18 A. The Commission should allocate any revenue increase in this docket using the
19 following steps:

- 20 1) Apply a 25 percent revenue neutral movement towards cost of service, per the
21 Commission's approved cost of service study results, to the revenue
22 requirement for each rate class;

- 1 2) Allocate the approved overall revenue requirement increase on an equal
2 percent basis to all customer classes; and
3 3) If the difference between the Company's proposed revenue requirement and
4 the Commission's approved revenue requirement results in steps (1) and (2)
5 assigning a rate class an increase above 9.65 percent, mitigate that increase so
6 that no class receives a rate increase in excess of 9.65 percent.

7 **Q. CAN YOU PROVIDE AN EXAMPLE OF YOUR RECOMMENDATION?**

8 A. Yes. I calculated a scenario in which the Commission approves (1) an overall revenue
9 requirement increase of approximately \$226 million, which represents the reduction
10 in revenue requirement from rejection of the Company's proposed increase in return
11 on equity as shown in my Revenue Requirement testimony and (2) the Company's
12 proposed cost of service study and the revenue neutral movements resulting from the
13 study results. See Schedule SWC-6 and Schedule SWC-10. The result of steps (1) and
14 (2) is that all classes except for LTS require no mitigation. The excess LTS revenue
15 would then be spread per Commission discretion across the other rate schedules so
16 that LTS would not experience an increase above 9.65 percent.

1 **Rate Design**

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

5 A. My understanding is that the Company proposes to apply the revenue requirement
6 increase to the charges contained in the LGS and SP schedules on an equal percentage
7 basis. See Direct Testimony of William R. Davis, page 17, line 7 to line 8.

8 **Q. DO YOU HAVE CONCERNS WITH THE COMPANY'S RATE DESIGN PROPOSAL FOR LGS**
9 **AND SP?**

10 A. Yes. My concerns with the rate design proposal for LGS and SP is that it (1) does not
11 reflect the underlying cost of service and (2) it shifts cost responsibility within the rate
12 class in that it charges customers for demand-related costs on energy charges.
13 Additionally, I am concerned that the hours-use energy charge structure is not the
14 most simple and transparent rate to communicate energy and demand price signals.

15 **Q. WHAT PERCENT OF PROPOSED NON-ENERGY EFFICIENCY BASE REVENUES FOR THE**
16 **LGS AND SP ARE DEMAND-RELATED?**

17 A. The Company's workpapers indicate that, per the cost of service study results,
18 approximately 66.1 percent of non-energy efficiency base revenues for LGS and SP are
19 demand-related and approximately 31.7 percent are energy-related. See Exhibit
20 SWC-11. However, under the proposed rate designs for LGS and SP, a large portion
21 of these demand-related costs would be inappropriately collected on the energy
22 charges.

1 **Q. PLEASE EXPLAIN.**

2 A. Both LGS and SP utilize three-block "hours-use" rate structures as their energy
3 charges, which set the billing kWh for each block based on the kWh used for each kW
4 of billing demand, or load factor for the billing month. One rate is charged for the first
5 150 kWh used per kW of billing demand, a second lower rate is charged for the next
6 200 kWh used per kW of billing demand, and all additional kWh are charged the
7 lowest third block rate. For LGS, this proposed rate design would collect
8 approximately 86.4 percent of revenues on the \$/kWh energy charges and
9 approximately 11.7 percent of revenues on the demand charges. For SP, the proposed
10 rate design would collect approximately 90.5 percent of revenues on the \$/kWh
11 energy charges and approximately 8.4 percent on the demand charges. *Id.* The
12 Company's proposed demand charges do not even cover transmission and
13 distribution demand costs, which constitute approximately 19.8 percent of the costs
14 to serve LGS and SP. See Exhibit SWC-11.

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

18 A. No. The Company does not classify or allocate any of the demand-related costs on an
19 energy basis. These costs are incurred based on customer demand or number of
20 customers. Costs should be collected in a manner which reflects how they are
21 incurred, and collecting demand-related costs through an energy charge violates cost
22 causation principles.

1 **Q. DOES THE RECOVERY OF DEMAND-RELATED COSTS ON AN ENERGY CHARGE**
2 **DISADVANTAGE HIGHER LOAD FACTOR CUSTOMERS?**

3 A. Yes. The shift of demand-related costs from per kW demand charges to per kWh
4 energy charges results in a shift in demand cost responsibility from lower load factor
5 customers to higher load factor customers. This results in misallocation of cost
6 responsibility as higher load factor customers overpay for the demand-related costs
7 incurred by the Company to serve them.

8 **Q. CAN YOU PROVIDE A GENERAL ILLUSTRATION OF A SHIFT IN DEMAND COST**
9 **RESPONSIBILITY?**

10 A. Yes. To provide my illustration, I assume the following:

11 a) A utility has only two customers (Customer 1 and Customer 2), with individual
12 monthly peak demands of 20 kW for a total monthly system load of 40 kW.

13 b) The annual revenue requirement or cost to the utility associated with the
14 investment for the 40 kW infrastructure is \$2,000, and the entire cost will be
15 collected each year, so each customer has caused the utility to incur \$1,000 of
16 demand-related or fixed costs.

17 c) Customer 1 has a monthly demand of 20 kW and a load factor of 60 percent
18 and thus consumes 105,120 kWh/year (20 kW * 0.6 * 8760).

19 d) Customer 2 has a monthly demand of 20 kW and load factor of 30 percent and
20 thus consumes 52,560 kWh/year (20kW * 0.3 * 8760).

21 **Q. IF THE DEMAND-RELATED COSTS WERE CHARGED ON A PER KW BASIS, WHAT**
22 **WOULD THE PER KW CHARGE BE?**

1 A. The charge would be \$4.17 per kW-month ($\$2,000 / 40 \text{ kW} / 12 \text{ months}$). Each
2 customer would then pay \$1,000 for the demand-related cost they impose on the
3 system ($20 \text{ kW} * \$4.17/\text{kW} * 12$).

4 **Q. IF THE DEMAND-RELATED COSTS WERE CHARGED ON A PER KWH BASIS, WHAT**
5 **WOULD THE PER KWH CHARGE BE?**

6 A. If the utility were to charge the demand-related costs on a per kWh basis, the energy
7 charge would be 1.27 cents/kWh (or $\$0.0127/\text{kWh}$). This is calculated as follows:
8 $\$2,000 / 157,680 \text{ kWh}$, using total company sales (i.e., the sum of the two customers'
9 annual kWh usage) as the denominator.

10 **Q. WHAT WOULD EACH CUSTOMER PAY UNDER THE PER KWH CHARGE?**

11 A. Customer 1, who caused the utility to incur \$1,000 in demand-related costs, with a
12 load factor of 60 percent and an annual usage of 105,120 kWh, would pay \$1,333
13 ($\$0.0127/\text{kWh} * 105,120 \text{ kWh}$). Customer 2, who also caused the utility to incur
14 \$1,000 in demand-related costs, with a load factor of 30 percent and an annual usage
15 of 52,560 kWh, would pay \$667 ($\$0.0127/\text{kWh} * 52,560$).

16 **Q. IS THIS AN EQUITABLE RESULT?**

17 A. No. Even though each customer caused the utility to incur \$1,000 in demand costs,
18 the utility will be over-recovering from one customer and under-recovering from the
19 other. Under the per kWh scenario, the utility would over-recover from Customer 1,
20 the higher load factor customer, by \$333 (i.e. \$1,333 in revenues minus \$1,000 in
21 costs), and under-recover from Customer 2, the lower load factor customer, by \$333
22 (i.e. \$667 in revenues minus \$1,000 in costs).

1 **Q. DOES THE COMPANY'S HOURS-USE STRUCTURE MITIGATE SOME OF THE SHIFT OF**
2 **DEMAND-COSTS TO HIGH LOAD FACTOR CUSTOMERS?**

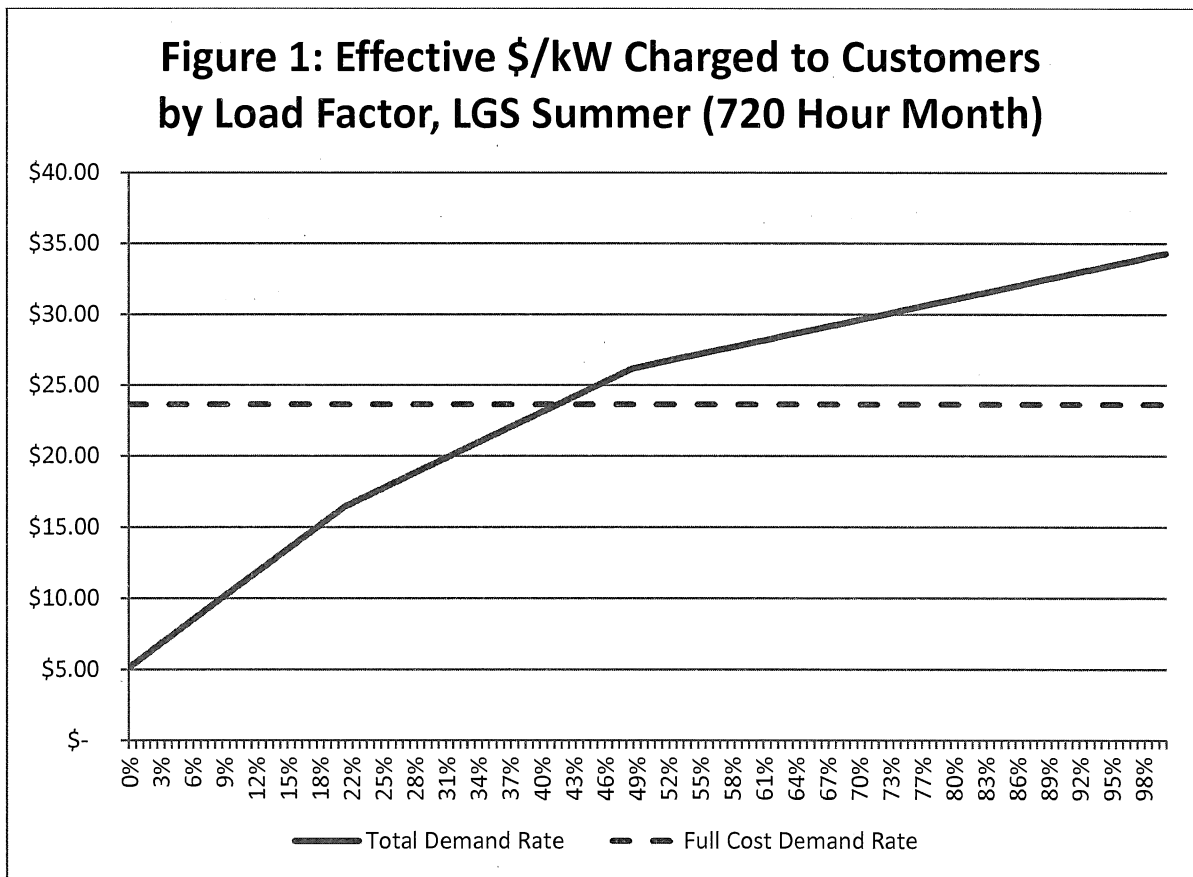
3 A. No, as it appears that a significant amount of demand costs are proposed to be
4 recovered in the third, or high load factor, block. See Schedule SWC-14, column (6).

5 **Q. PLEASE EXPLAIN.**

6 A. I performed an analysis of the proposed LGS summer rates to derive the effective cost
7 per kW charged across a range of load factors based on a 720 hour (30 day) month for
8 a 1,000 kW customer. To do this, I first calculated a flat cost of service-based \$/kWh
9 energy rate to represent the energy component of the LGS cost of service. *Id.*, line (3)
10 to line (6). I assumed that the \$/kWh energy rate is flat across all kWh of usage, and
11 subtracted the energy rate from the hours-use charge to determine the effective
12 hours-use \$/kWh demand-related rate for each block and applied that rate to each of
13 the 720 hours in the month. *Id.*, line (13), column (1) to column (6). I divided the cost
14 to the customer of the demand portion of the energy rate by 1,000 kW to determine
15 the cost per kW and added the Company's proposed demand charge in order to
16 determine the total effective cost per kW for the customer. I then estimated a full
17 cost demand charge for LGS summer rates to determine the \$/kW subsidy received
18 or paid at a given load factor for the month.

1 Q. WHAT DOES YOUR ANALYSIS SHOW?

2 A. My analysis highlights two issues. First, Figure 1 shows, as load factor increases, the
3 cost per kW charged to customers for demand-related costs increases. Second, as
4 load factor increases from zero to 41.3 percent, the cost per kW charged to customers
5 for demand-related costs is below the full cost demand rate and, as such, a subsidy is
6 received by the customer. As load factor increases beyond 41.4 percent, the customer
7 overpays for demand by an increasing amount.



8
9
10
11

These results are a concern, because as discussed above, the demand-related cost incurred to serve a customer does not change with that customer's load factor, and, like an increase in per kWh energy consumption, an increase in load factor

1 should not result in an increase in the demand-related cost per kW charged to that
2 customer.

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

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

13 **Q. WHAT IS YOUR RECOMMENDATION TO THE COMMISSION?**

14 A. For the LGS and SP rate designs, the Commission should:

- 15 1) Maintain the second and third block energy rates at their current rates and
16 increase the customer charges by the customer class percent revenue
17 increase; and
18 2) Apply half of the remaining increase to the first block energy charge and the
19 other half of the remaining increase to the demand charge.

20 Additionally, the Commission should order Ameren to develop alternative
21 rate designs for LGS and SP that more closely reflect the Company's cost of service

1 and do not use the hours-use rate design for the energy charge and present those
2 alternatives in its next base rate case.
3

4 **Commission Order Directing Consideration of a Certain Rate Design Question**

5 **Q. WHAT IS YOUR UNDERSTANDING OF THE COMMISSION'S ORDER DIRECTING**
6 **CONSIDERATION OF A CERTAIN RATE DESIGN QUESTION?**

7 A. My understanding is that in its October 20, 2014, Order, the Commission asks whether
8 rate design mechanisms should be established to promote stability or growth of
9 customer levels in geographic locations where there is under-utilization of existing
10 infrastructure.

11 **Q. IS THERE A RELATIONSHIP BETWEEN THE REVENUE ALLOCATION AND RATE DESIGN**
12 **ISSUES DISCUSSED ABOVE AND THE COMMISSION'S OCTOBER 20, 2014 ORDER**
13 **DIRECTING CONSIDERATION OF RATE DESIGN AND UTILIZATION OF EXISTING**
14 **INFRASTRUCTURE?**

15 A. Absolutely. As I describe above, LGS and SP customers already pay rates that are well
16 above cost of service and the Company proposes to continue that practice in the
17 amount of \$68.7 million per year. Additionally, the Small General Service ("SGS") class
18 also pays rates that are above cost of service, and the Company proposes an increase
19 for those customers that is approximately 4.5 percent higher than a cost of service-
20 based increase. See Direct Testimony of William R. Davis, Table 3 and Table 4.

21 Ameren has approximately 156,725 non-residential, non-lighting
22 customers. Of those customers, approximately 145,756 are SGS customers, 10,248

1 are LGS customers, and 650 are SP customers. See Workpapers of William R. Davis,
2 Summary. Of Ameren's approximately 156,725 non-residential, non-lighting
3 customers, 156,654 are on rate schedules for which customers are proposed to over-
4 pay their costs of service by at least 4.5 percent. Additionally, as discussed in my
5 Revenue Requirement testimony, Ameren's revenue per kWh for LGS has increased
6 47.8 percent from 2004 to 2013. See Schedule SWC-2. These are factors that impact
7 businesses that cannot be ignored in any consideration of rate designs meant to grow
8 or sustain customer levels.

9 **Q. SHOULD THE COMMISSION CONSIDER COST OF SERVICE-BASED RATES IN ITS**
10 **CONSIDERATION OF THE RATE DESIGN QUESTION?**

11 A. Yes, the Commission should consider cost of service-based rates in its consideration
12 of the rate design question. Addressing the underlying issues within the Company's
13 rates may help to reduce the need for special economic development tariffs.

14
15 **Large Transmission Service and Noranda Aluminum**

16 **Q. IS THERE, AT THE TIME OF FILING OF THIS TESTIMONY, AN ACTIVE FILED PROPOSAL**
17 **REGARDING THE LTS SCHEDULE AND NORANDA?**

18 A. No. However, given that a non-unanimous stipulation was filed earlier in the case
19 regarding Noranda rates, I anticipate that such a proposal may be filed in the rate
20 design round of testimony. Generally, Walmart reserves the right to fully address any
21 filed proposals in rebuttal testimony.

1 **Q. SHOULD THE COMMISSION'S DETERMINATION OF ANY FILED PROPOSAL IMPACT ITS**
2 **CONSIDERATION OF BASE REVENUE ALLOCATION OR RATE DESIGN?**

3 A. No. Unless any filed proposal would constitute a permanent modification to the
4 Company's base rates, that proposal should not impact the consideration of base rate
5 issues such as revenue allocation or rate design.

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

7 A. Yes.

Customer Class	Rate of Return (%) (1)	Rate of Return Index Value (2) (1) / Total Missouri
Residential	2.73%	0.62
Small General Service	6.12%	1.38
Large General Service/Small Primary	7.57%	1.71
Large Primary	4.22%	0.95
Large Transmission	1.64%	0.37
Lighting	4.58%	1.03
Total Missouri	4.44%	1.00

Source: Schedule WMW-1

Case	LGS/SP Rate of Return (%) (1)	Total Missouri Rate of Return (%) (2)	Rate of Return Index Value (3) (1) / (3)
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
Present Case	7.57%	4.44%	1.71

Sources:

- Case No. ER-2007-0002, Exhibit WMW-1
- Case No. ER-2008-0318, Exhibit WMW-E1
- Case No. ER-2010-0036, Exhibit WMW-E1
- Case No. ER-2011-0028, Exhibit WMW-E1
- Case No. ER-2012-0166, Exhibit WMW-E1

Revenue Requirement Decrease From Proposed	\$ (37,503,000)
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Customer Class	Current Revenues	Proposed Increase	Allocation of Proposed Increase	Revenue Neutral Shift, Ameren COSS	25 Percent Movement	Allocation of Overall RR Reduction	Net Revenue Change	Amount to Mitigate	
	(\$)	(\$)	(%)	(\$)	(\$)	(\$)	(\$)	(%)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
			(2) / Total		(4) x 0.25	RRR x (3)	(2) + (5) + (6)	(7) / (1)	
								(9)	
								(8) - (2)	
Residential	\$ 1,230,497,365	\$ 118,691,987	45.0%	\$ 62,576,000	\$ 15,644,000	\$ (16,860,154)	\$ 117,475,833	9.55%	\$ -
Small General Service	\$ 302,777,223	\$ 29,203,178	11.1%	\$ (13,391,000)	\$ (3,347,750)	\$ (4,148,301)	\$ 21,707,127	7.17%	\$ -
Large General Service	\$ 576,863,372	\$ 55,613,798	21.1%	\$ (42,943,155)	\$ (10,735,789)	\$ (7,899,920)	\$ 36,978,089	6.41%	\$ -
Small Primary	\$ 227,596,391	\$ 21,940,323	8.3%	\$ (16,942,845)	\$ (4,235,711)	\$ (3,116,615)	\$ 14,587,997	6.41%	\$ -
Large Primary	\$ 202,782,047	\$ 19,541,992	7.4%	\$ 1,030,000	\$ 257,500	\$ (2,775,933)	\$ 17,023,559	8.40%	\$ -
Large Transmission	\$ 159,333,049	\$ 15,361,303	5.8%	\$ 9,830,000	\$ 2,457,500	\$ (2,182,068)	\$ 15,636,735	9.81%	\$ 275,432
Lighting	\$ 37,876,368	\$ 3,653,717	1.4%	\$ (158,000)	\$ (39,500)	\$ (519,009)	\$ 3,095,208	8.17%	\$ -
MSD	\$ 73,018	\$ 7,044	0.0%	\$ -	\$ -	\$ (1,001)	\$ 6,043	8.28%	\$ -
Total	\$ 2,737,798,833	\$ 264,013,342					\$ 226,510,592		

Note: The LGS and SP revenue neutral shifts sum to (\$59,886,000) per the COSS and are allocated on the basis of current revenues.

Sources:

(1) - (2): Direct Testimony of William R. Davis, Table 4

(4): UE_DIR-UE-DIR_007-Att-MO ECCOS_2015 Filed 7_3_14.xls, SCH 2

Function	Cost of Service by Function		Large General Service		Small Primary	
	Class Cost of Service		Revenue by Function		Revenue by Function	
	(\$000)	(%)	(\$000)	(%)	(\$000)	(%)
	(1)	(2)	(3)	(4)	(5)	(6)
	(1) / Total		(3) / Total		(5) / Total	
Customer	\$ 17,957	2.2%	\$ 12,109	1.9%	\$ 2,631	1.1%
<i>Production - Demand</i>	\$ 376,932	46.3%				
<i>Transmission - Demand</i>	\$ 35,600	4.4%				
<i>Distribution - Demand</i>	\$ 124,989	15.4%				
Total Demand	\$ 537,521	66.1%	\$ 73,357	11.7%	\$ 20,867	8.4%
Energy	\$ 258,015	31.7%	\$ 542,149	86.4%	\$ 225,016	90.5%
Total Non-EE Revenue	\$ 813,493	166%	\$ 627,614	100%	\$ 248,514	100%

Sources:

Schedule SWC-12 and Schedule SWC-13

William M. Warwick Workpapers, Unbundled

**Large General Service Rate Comparison
Ameren Missouri
Weather Normalized-12 months ending March 2014
Growth to December 2014**

<u>Billing Components</u>				
<u>Summer (June - September)</u>				
	<u>Rate</u>	<u>Units</u>	<u>\$</u>	
Customer Charge	Per Month	\$88.32	41,449	\$3,660,804
Customer Charge TOD	Per Month	\$107.82	164	\$17,637
Low Income Program Charge	Per Month	\$0.00	41,613	\$0
<u>Energy Charge (¢ per kWh)</u>				
First 150 kWh per KW		9.89 ¢	1,163,123,672	\$115,032,931
Next 200 kWh per KW		7.44 ¢	1,263,783,662	\$94,025,504
All over 350 kWh per KW		5.00 ¢	504,528,272	\$25,226,414
TOD On Peak Adjust. per Kwh		1.17 ¢	5,589,865	\$65,401
TOD Off Peak Adjust. per Kwh		-0.66 ¢	11,780,036	-\$77,748
Energy Efficiency per Kwh		0.08 ¢	2,931,435,606	\$2,345,148
Opt Out EE per Kwh		-0.08 ¢	61,561,735	-\$49,249
<u>Demand</u>				
Per KW of Billing Demand		\$4.62	8,516,045	\$39,344,128
<u>Winter (October - May)</u>				
Customer Charge	Per Month	\$88.32	82,853	\$7,317,570
Customer Charge TOD	Per Month	\$107.82	312	\$33,631
Low Income Program Charge	Per Month	\$0.00	83,165	\$0
<u>Energy Charge (¢ per kWh)</u>				
First 150 kWh per KW		6.23 ¢	1,894,055,751	\$117,999,673
Next 200 kWh per KW		4.62 ¢	2,061,036,697	\$95,219,895
All over 350 kWh per KW		3.63 ¢	848,824,811	\$30,812,341
Seasonal Energy Charge		3.63 ¢	437,409,324	\$15,877,958
TOD On Peak Adjust. per Kwh		0.35 ¢	8,747,861	\$30,618
TOD Off Peak Adjust. per Kwh		-0.20 ¢	18,866,345	-\$37,733
Energy Efficiency per Kwh		0.05 ¢	5,241,326,584	\$2,620,663
Opt Out EE per Kwh		-0.05 ¢	106,807,282	-\$53,404
<u>Demand</u>				
Per KW of Billing Demand		\$1.71	16,053,326	\$27,451,187
			8,172,762,190	\$576,863,372

Target	\$632,510,082								
Increase	9.78%								
Proposed Rate	\$96.96	\$4,018,926	96.96	\$4,018,798					
	\$118.34	\$19,358	118.36	\$19,362					
	\$0.00	\$0	0.00	\$0					
	10.86	\$126,315,231	10.857	\$126,282,117				\$33,114	
	8.17	\$103,251,125	8.168	\$103,220,353				\$30,772	
	5.49	\$27,698,602	5.489	\$27,693,330				\$5,272	
	1.28	\$71,550	1.28	\$71,797				-\$247	
	-0.72	-\$84,816	-0.72	-\$85,351				\$535	
	0.08	\$2,345,148	0.08	\$2,277,922				\$67,227	
	-0.08	-\$49,249	-0.08	-\$47,838				-\$1,412	
	\$5.07	\$43,176,349	5.072	\$43,191,630					
	\$96.96	\$8,033,419	96.96	\$8,033,163					
	\$118.34	\$36,912	118.36	\$36,920					
	\$0.00	\$0	0.00	\$0					
	6.84	\$129,553,413	6.839	\$129,538,980				\$14,434	
	5.06	\$104,288,457	5.072	\$104,531,544				-\$243,088	
	3.97	\$33,698,345	3.985	\$33,825,510				-\$127,165	
	3.97	\$17,365,150	3.985	\$17,430,680				-\$65,530	
	0.38	\$33,242	0.38	\$33,612				-\$370	
	-0.22	-\$41,506	-0.22	-\$41,423				-\$83	
	0.05	\$2,620,663	0.0456	\$2,392,056				\$228,608	
	-0.05	-\$53,404	-0.0456	-\$48,745				-\$4,659	
	\$1.88	\$30,180,253	1.877	\$30,135,667					
		\$632,477,169		\$632,510,082					
		\$55,613,798							
Variance		-\$32,913		\$0					

EE		Pre-MEEIA
Summer		\$2,295,899
Winter		\$2,567,260
		\$4,863,159
		\$4,863,159

			Total Pre-MEEIA
	KWH	Allocation for Seasons	\$4,573,395
Summer	2,869,873,871	\$275,912,530	0.488 \$2,230,084
Winter	5,134,519,303	\$289,921,200	0.512 \$2,343,310
Total		\$565,833,730	

**Small Primary Service Rate Comparison
Ameren Missouri
Weather Normalized-12 months ending March 2014
Growth to December 2014**

<u>Billing Components</u>			
<u>Summer (June - September)</u>			
	Rate	Units	\$
Customer Charge Per Month	\$299.60	2,581	\$773,221
Customer Charge TOD Per Month	\$319.10	80	\$25,440
Low Income Program Ch Per Month	\$0.00	2,661	\$0
<u>Energy Charge (¢ per kWh)</u>			
First 150 kWh per KW	9.56 ¢	426,374,728	\$40,761,424
Next 200 kWh per KW	7.20 ¢	518,519,003	\$37,333,368
All over 350 kWh per KW	4.83 ¢	362,631,332	\$17,515,093
TOD On Peak Adjust. per Kwh	0.85 ¢	14,767,819	\$125,526
TOD Off Peak Adjust. per Kwh	-0.48 ¢	30,611,835	-\$146,937
Energy Efficiency per Kwh	0.09 ¢	1,307,525,062	\$1,176,773
Opt Out EE per Kwh	-0.09 ¢	85,416,638	-\$76,875
<u>Demand</u>			
Per KW of Billing Demand	\$3.82	2,904,959	\$11,096,944
Billing Kvars	35 ¢	539,541	\$188,839
<u>Rider B 34kv</u>			
Per KW	114 ¢	325,931	-\$371,561
<u>Rider B 138kv</u>			
Per KW	135 ¢	2,354	-\$3,178
<u>Winter (October - May)</u>			
Customer Charge Per Month	\$299.60	5,179	\$1,551,647
Customer Charge TOD Per Month	\$319.10	155	\$49,576
Low Income Program Ch Per Month	\$0.00	5,334	\$0
<u>Energy Charge (¢ per kWh)</u>			
First 150 kWh per KW	6.02 ¢	705,889,897	\$42,494,572
Next 200 kWh per KW	4.47 ¢	869,363,383	\$38,860,543
All over 350 kWh per KW	3.50 ¢	623,212,439	\$21,812,435
Seasonal Energy Charge	3.50 ¢	175,041,509	\$6,126,453
TOD On Peak Adjust. per Kwh	0.32 ¢	24,528,233	\$78,490
TOD Off Peak Adjust. per Kwh	-0.17 ¢	51,839,857	-\$88,128
Energy Efficiency per Kwh	0.06 ¢	2,373,507,227	\$1,424,104
Opt Out EE per Kwh	-0.06 ¢	166,671,696	-\$100,003
<u>Demand</u>			
Per KW of Billing Demand	\$1.39	5,321,815	\$7,397,322
Billing Kvars	35 ¢	837,881	\$293,258
<u>Rider B 34kv</u>			
Per KW	114 ¢	610,802	-\$696,315
<u>Rider B 138kv</u>			
Per KW	135 ¢	4,180	-\$5,642
		3,681,032,289	\$227,596,391

Target	\$249,551,313				
Increase	0.09817				
Proposed Rate					
	\$328.50	\$847,807	299.60	\$773,221	-\$74,586
	\$349.88	\$27,894	350.43	\$27,938	\$44
	\$0.00	\$0	0.00	\$0	
	10.50	\$44,769,346	10.499	\$44,763,037	-\$6,309
	7.92	\$41,066,705	7.907	\$40,998,444	-\$68,261
	5.30	\$19,219,461	5.304	\$19,234,578	\$15,117
	0.93	\$137,341	0.93	\$137,850	\$509
	-0.53	-\$162,243	-0.53	-\$161,362	\$881
	0.09	\$1,176,773	0.09	\$1,162,152	-\$14,621
	-0.09	-\$76,875	-0.09	-\$75,920	\$955
	\$4.20	\$12,200,828	4.20	\$12,186,348	-\$14,480
	38	\$205,025	38.44	\$207,378	\$2,352
	125	-\$407,414	125.19	-\$408,038	-\$624
	148	-\$3,484	148.25	-\$3,490	-\$6
	\$328.50	\$1,701,322	329.01	\$1,703,975	\$2,653
	\$349.88	\$54,358	350.43	\$54,443	\$85
	\$0.00	\$0	0.00	\$0	
	6.61	\$46,659,322	6.611	\$46,666,331	\$7,009
	4.91	\$42,685,742	4.909	\$42,675,544	-\$10,198
	3.84	\$23,931,358	3.844	\$23,953,797	\$22,439
	3.84	\$6,721,594	3.844	\$6,727,896	\$6,302
	0.35	\$85,849	0.35	\$86,196	\$347
	-0.19	-\$98,496	-0.19	-\$96,779	\$1,716
	0.05	\$1,186,754	0.05	\$1,276,821	\$90,067
	-0.05	-\$83,336	-0.05	-\$89,660	-\$6,325
	\$1.53	\$8,142,376	1.53	\$8,123,529	-\$18,847
	38	\$318,395	38.44	\$322,048	\$3,653
	125	-\$763,503	125.19	-\$764,673	-\$1,170
	148	-\$6,186	148.25	-\$6,196	-\$11
		\$249,536,714		\$249,475,405	
Variance		-\$14,599			-\$75,908

EE	Pre-MEEIA
Summer	\$1,099,898
Winter	\$1,324,101
	\$2,423,999

	KWH	Allocation for Seasons	Total Pre-MEEIA
Summer	1,222,108,424	\$107,599,416	0.478
Winter	2,206,835,531	\$117,597,091	0.522
Total		\$225,196,507	\$2,273,392
			\$1,086,232
			\$1,187,160

Rate	LGS Summer	
Customer Demand	1,000	kW
LGS Summer Non-EE Revenues	\$ 304,466,325	
% Energy, Cost of Service Study	31.7%	
Non-EE Energy Revenues, COS	\$ 96,567,369	
Total Billing kWh	2,931,435,606	kWh
Cost of Service Energy Rate	\$ 0.03294	/kWh
Proposed Billing Demand Rate (BDR)	\$ 5.07	/kW
% Demand, Cost of Service Study	66.1%	
Non-EE Demand Revenues, COS	\$ 201,178,183	
Total Billing kW	8,516,045	
Full Cost Demand Rate (FCDR)	\$ 23.62	/kW

Hours of Use	kWh	Load Factor	Proposed Energy Rate	Cost of Service Energy Rate	Demand Portion of Energy Rate	Billed Demand Cost from Energy Rate	Effective Demand Rate from Energy Rate	Total Demand Rate
(1)	(2)	(3)	(\$/kWh)	(\$/kWh)	(\$/kWh)	(\$)	(\$/kW)	(\$/kW)
			(4)	(5)	(6)	(7)	(8)	(9)
			Ex SWC-7		(4) - (5)		(7) / kW Demand	(8) + BDR
1	1,000	0.1%	\$ 0.10860	\$ 0.03294	\$ 0.07566	\$ 76	\$ 0.08	\$ 5.15
72	72,000	10.0%	\$ 0.10860	\$ 0.03294	\$ 0.07566	\$ 5,447	\$ 5.45	\$ 10.52
144	144,000	20.0%	\$ 0.10860	\$ 0.03294	\$ 0.07566	\$ 10,895	\$ 10.89	\$ 15.96
150	150,000	20.8%	\$ 0.10860	\$ 0.03294	\$ 0.07566	\$ 11,349	\$ 11.35	\$ 16.42
216	216,000	30.0%	\$ 0.08170	\$ 0.03294	\$ 0.04876	\$ 14,567	\$ 14.57	\$ 19.64
288	288,000	40.0%	\$ 0.08170	\$ 0.03294	\$ 0.04876	\$ 18,077	\$ 18.08	\$ 23.15
297	297,000	41.3%	\$ 0.08170	\$ 0.03294	\$ 0.04876	\$ 18,516	\$ 18.52	\$ 23.59
298	298,000	41.4%	\$ 0.08170	\$ 0.03294	\$ 0.04876	\$ 18,565	\$ 18.56	\$ 23.63
350	350,000	48.6%	\$ 0.08170	\$ 0.03294	\$ 0.04876	\$ 21,100	\$ 21.10	\$ 26.17
360	360,000	50.0%	\$ 0.05490	\$ 0.03294	\$ 0.02196	\$ 21,320	\$ 21.32	\$ 26.39
432	432,000	60.0%	\$ 0.05490	\$ 0.03294	\$ 0.02196	\$ 22,901	\$ 22.90	\$ 27.97
504	504,000	70.0%	\$ 0.05490	\$ 0.03294	\$ 0.02196	\$ 24,482	\$ 24.48	\$ 29.55
576	576,000	80.0%	\$ 0.05490	\$ 0.03294	\$ 0.02196	\$ 26,063	\$ 26.06	\$ 31.13
648	648,000	90.0%	\$ 0.05490	\$ 0.03294	\$ 0.02196	\$ 27,644	\$ 27.64	\$ 32.71
720	720,000	100.0%	\$ 0.05490	\$ 0.03294	\$ 0.02196	\$ 29,225	\$ 29.22	\$ 34.29

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

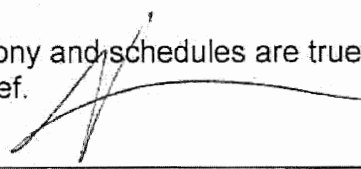
In the Matter of Union Electric Company, d/b/a)
Ameren Missouri's Tariff to Increase Its Revenues) Case No. ER-2014-0258
for Electric Service)

AFFIDAVIT OF STEVE W. CHRISS

STATE OF ARKANSAS)
) ss:
COUNTY OF BENTON)

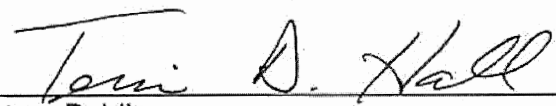
Steve W. Chriss, being first duly sworn, deposes and states that:

1. He is employed by Wal-Mart Stores, Inc., as Senior Manager, Energy Regulatory Analysis in Bentonville, Arkansas;
2. He is the witness sponsoring the accompanying testimony entitled Direct Testimony Of Steve W. Chriss;
3. Said testimony was prepared by him and under his direction and supervision;
4. If inquiries were made as to the facts and schedules in said testimony, he would respond as therein set forth; and
5. The aforesaid testimony and testimony and schedules are true and correct to the best of his knowledge, information and belief.



Steve W. Chriss

Subscriber and sworn to or affirmed before me this 19th day of December, 2014,
by Steve W. Chriss.



Notary Public

My Commission No: _____

My Commission Expires: 9-28-15

(SEAL)

