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MISSOURI PUBLIC SERVICE COMMISSION

FILE NO. ER-2014-0258

REBUTTAL TESTIMONY

OF

WILLIAM R. DAVIS

ON

BEHALF OF

**UNION ELECTRIC COMPANY
d/b/a Ameren Missouri**

St. Louis, Missouri
January 2015

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REBUTTAL TESTIMONY
OF
WILLIAM R. DAVIS
FILE NO. ER-2014-0258

Q. Please state your name and business address.

A. My name is William (“Bill”) R. Davis. My business address is One Ameren Plaza, 1901 Chouteau Avenue, St. Louis, Missouri 63103.

Q. By whom and in what capacity are you employed?

A. I am an Economic Analysis and Pricing Manager for Union Electric Company d/b/a Ameren Missouri (“Ameren Missouri” or “Company”).

Q. Are you the same Bill Davis who filed direct testimony in this case?

A. Yes, I am.

Q. What is the purpose of your rebuttal testimony in this proceeding?

A. The purpose of my rebuttal testimony is to: 1) respond to the revenue requirement allocation proposals made by the Missouri Public Service Commission Staff (“Staff”), the Missouri Industrial Energy Consumers (“MIEC”), Wal-Mart Stores East, L.P and Sam's East, Inc. (“Wal-Mart”), and the Office of the Public Counsel (“OPC”); 2) respond to Wal-Mart’s rate design proposal for Large General service (“LGS”) and Small Primary service (“SPS”) classifications; 3) respond to Staff’s recommendation to keep the residential customer charge at \$8.00 per month; 4) respond to MIEC’s proposal to create a new special rate for aluminum smelters; 5) respond to issues concerning the Missouri Public Service Commission’s (“Commission”) inquiry into economic development rate design mechanisms; 6) respond to the Cities of O’Fallon and Ballwin

1 (the "Cities") regarding street lighting rates; 7) respond to the Missouri Division of
2 Energy's ("MDOE") issues concerning the Supplemental Service tariff; and
3 8) recommend the elimination of Ameren Missouri's Municipal Incandescent Street
4 Lighting rate classification.

5 **I. RESPONSE TO REVENUE ALLOCATION PROPOSALS**

6 **Q. Please summarize the positions of the parties with respect to how a**
7 **rate increase should be allocated.**

8 A. First, Staff has proposed a revenue neutral shift of +0.5% for Residential
9 and Large Transmission Service ("LTS") rate classes and -0.63% for Small General
10 service ("SGS"), LGS and SPS classes. After the revenue neutral shift, Staff has
11 proposed that pre-Missouri Energy Efficiency Investment Act ("MEEIA") energy
12 efficiency costs be directly assigned to each rate class, and then removed prior to
13 applying the final awarded rate increase as an equal percentage increase to each rate
14 class. The final step is to add back the directly assigned pre-MEEIA energy efficiency
15 costs.

16 MIEC has proposed that all of the charges for Large Primary Service ("LPS") and
17 LTS¹ should be increased by the overall system average percentage increase. In reading
18 MIEC's direct testimony, it seems Mr. Brubaker is silent on how increases to other
19 classes should be allocated. Mr. Brubaker also proposed that any revenue shortfall
20 caused by the adoption of a special and reduced rate for aluminum smelters should be
21 applied as an equal percentage increase to all remaining service classes.

22 Wal-Mart has proposed a multi-step process where the first step is a 25 percent
23 revenue neutral movement toward cost of service, per the Commission's approved cost of

1 service study results, to the revenue requirement for each rate class, followed by an equal
2 percentage allocation of the approved overall revenue requirement. Wal-Mart also
3 proposed that no rate class receive a rate increase greater than 9.65%. Because the
4 Company is requesting a 9.65% increase, if the rates are increased by the Company's
5 proposal, then Wal-Mart's proposed revenue requirement allocation would be identical to
6 my direct testimony recommendation for an equal percentage increase for all classes.

7 OPC has stated its class cost of service study indicates the Residential and SGS
8 classes are near the system average cost and should not receive a revenue neutral
9 increase. It is noteworthy that the aforementioned conclusion is based on the use of the
10 four coincident peak ("4 CP") version of the Peak & Average methodology ("P&A"),
11 which has been repeatedly rejected by the Commission. OPC's direct testimony was
12 silent about all other rate design issues.

13 **Q. Please comment on Staff's proposed revenue allocation.**

14 A. Staff's revenue allocation proposal, which contains moderate revenue neutral
15 shifts, has merit if one's goal is to bring rates more in line with cost of service results.
16 There is, however, one step in Staff's proposal that I completely disagree with, and that is
17 the proposal to retain the Residential customer charge at \$8.00 per month.

18 **Q. Please provide a comparison of the Company's original revenue**
19 **allocation proposal to Staff's proposed revenue allocation.**

20 A. The table below compares the revenue allocation proposal from my direct
21 testimony to a modified revenue allocation proposal that includes the revenue neutral
22 shifts proposed by Staff and the direct assignment of pre-MEEIA energy efficiency costs
23 proposed by Staff.

¹ Except the Low-Income Pilot Program and Energy Efficiency Program Charges.

1 **Table 1 – Comparison of Revenue Requirement Allocation Methodologies**
2 **Between the Company and Staff**

Customer Class	Revenue Allocation – Ameren Missouri Direct Testimony		Revenue Allocation – Staff’s Proposed Process	
	Proposed Base Revenue Requirement	Percentage Increase	Proposed Base Revenue Requirement	Percentage Increase
Residential Service	\$1,349,196,409	9.65%	\$1,355,496,504	10.16%
Small General Service	\$331,984,410	9.65%	\$330,092,232	9.02%
Large General Service	\$632,510,082	9.65%	\$628,537,401	8.96%
Small Primary Service	\$249,551,313	9.65%	\$247,901,741	8.92%
Large Primary Service	\$222,343,271	9.65%	\$222,433,376	9.69%
Large Transmission Service	\$174,702,997	9.65%	\$175,779,194	10.32%
Lighting Service	\$41,530,084	9.65%	\$41,578,026	9.77%
Metropolitan Sewer District	\$80,061	9.65%	\$80,154	9.77%
Total	\$3,001,898,628	9.65%	\$3,001,898,628	9.65%

3 Note: This table uses unrounded numbers to demonstrate that the methodologies result in the exact same revenue requirement total.

4 **Q. What is the significance of separating the energy efficiency program**
5 **costs out before applying revenue neutral shifts and/or rate increases?**

6 A. First, I will note that all of the MEEIA rider costs have been removed
7 from the Company’s revenue requirement because those costs are being collected in the
8 Energy Efficiency Investment Charge rider. However, there are energy efficiency
9 program costs from programs prior to 2013 that are still being amortized in rates. In my
10 direct testimony, I proposed first that all rate classes should be given an equal percentage
11 increase and then the pre-MEEIA energy efficiency charge should be developed based on
12 direct assignment of costs. Staff’s proposal is slightly different in that first the pre-
13 MEEIA costs will be removed from the revenues and then the rate increase will be
14 applied. In both methodologies the separate charge for pre-MEEIA costs would be the
15 same, but the overall effective rate increase would be different. Below is a table which
16 compares the two methods.

1 **Table 2 – Comparison of Revenue Requirement Allocation Methodologies**
2 **Options for Pre-MEEIA Costs**

Customer Class	Revenue Allocation <i>Before</i> Energy Efficiency Charge		Revenue Allocation <i>After</i> Energy Efficiency Charge	
	Proposed Base Revenue Requirement	Percentage Increase	Proposed Base Revenue Requirement	Percentage Increase
Residential Service	\$1,349,196,409	9.65%	\$1,348,806,676	9.61%
Small General Service	\$331,984,410	9.65%	\$332,168,641	9.71%
Large General Service	\$632,510,082	9.65%	\$632,475,198	9.64%
Small Primary Service	\$249,551,313	9.65%	\$249,451,885	9.60%
Large Primary Service	\$222,343,271	9.65%	\$222,433,376	9.69%
Large Transmission Service	\$174,702,997	9.65%	\$174,904,671	9.77%
Lighting Service	\$41,530,084	9.65%	\$41,578,026	9.77%
Metropolitan Sewer District	\$80,061	9.65%	\$80,154	9.77%
Total	\$3,001,898,928	9.65%	\$3,001,898,628	9.65%

3 Note: This table uses unrounded numbers to demonstrate that the methodologies result in the exact same revenue requirement total.

4 **Q. Is there any basis to treat energy efficiency differently than other**
5 **costs?**

6 A. Potentially. First, not all classes participate in the Company's energy
7 efficiency programs. The lighting classes and Metropolitan Sewer District ("MSD") do
8 not have energy efficiency charges because there are no programs being offered to those
9 rate classes. In addition, the LTS class does not receive any energy efficiency charges
10 because that class contains only one customer who has exercised its legal right to opt-out
11 of participating and paying for utility energy efficiency programs. In addition, the
12 Company maintains records regarding which rate classes are participating in energy
13 efficiency programs, and thus can directly assign costs accordingly. These basic facts
14 tend to support special treatment of energy efficiency costs when it comes to rate design.

15 However, if rates are not being set to strictly follow each class' cost of service
16 then there is no way to know which costs are assigned to each rate class. And because
17 the separate line item charges for energy efficiency will be the same whether a direct

1 assignment of energy efficiency costs is done before or after revenue allocations, each
2 customer class will ultimately be charged the appropriate rate for energy efficiency.

3 **Q. Do you have any other concerns about Staff's proposed revenue**
4 **allocation?**

5 A. Yes. The electric service agreement with MSD explicitly states that its
6 rate "shall be correspondingly increased or decreased by the same percentage as the
7 overall percentage applying to all of Company's standard rates." I do not believe Staff's
8 proposal would comply with this requirement of that agreement. However, modifying
9 Staff's proposal to meet the requirements of MSD's electric service agreement would
10 result in very minor changes to the proposed revenue allocations.

11 **II. RESPONSE TO WAL-MART'S RATE DESIGN PROPOSAL**

12 **Q. Please summarize Wal-Mart's rate design proposal for Large General**
13 **and Small Primary Service.**

14 A. Wal-Mart has proposed that, for LGS and SPS, the second and third block
15 energy rates should remain at their current levels and the customer charges should be
16 increased by the customer class percent revenue increase. Wal-Mart further proposes the
17 Commission then apply half of the remaining increase to the first block energy charge
18 and the other half to the demand charge.

19 In addition, Wal-Mart has requested the Commission order Ameren Missouri to
20 develop alternative rate designs for the LGS and SPS rate classes that more closely reflect
21 the Company's cost of service and do not use the Hours Use rate design for the energy
22 charge, and to present those alternatives in its next base rate case.

1 **Q. Please provide some history about how Ameren Missouri adopted its**
2 **current rate design for the LGS and SPS rate classes.**

3 A. Immediately preceding May 1980, the Company's rate structure for
4 customers who would generally fit in one of these two rate classifications, based on
5 service use and voltage service, were billed under declining block energy rates both with
6 (Large General Service) or without (Primary Service) a rate limiter, whereby the
7 customers' cents per kilowatt-hour ("kWh") billing could not exceed certain thresholds.
8 The Company's total cost (i.e., production, transmission, distribution, etc.) of providing
9 service to said customers was reflected in these rates.

10 Effective May 30, 1980, there was a material change in the rate structure for these
11 classes, whereby customers were billed a nominal monthly customer charge, monthly
12 demand charges that reflected a significant portion of fixed production costs,
13 transmission costs and distribution costs and, also, monthly energy charges that reflected
14 the Company's variable production costs along with the remaining portion of fixed
15 production costs not reflected in the monthly demand charges. Due to numerous
16 complaints from low load factor customers experiencing materially higher cents per kWh
17 realizations from this rate design, the Commission approved the addition of rate limiters²
18 effective March 7, 1981, for Large General Service and July 17, 1981, for Primary
19 Service customers. This rate design for both the Company's Large General Service and
20 Primary Service rate classes was in place through November 26, 1990.

21 Effective November 26, 1990, the Commission approved new rates that reflected
22 a settlement of a revenue complaint case and also a settlement of a rate design case (Case

1 No. EO-87-175). Within the rate design settlement, the Primary Service class was split
2 between a SPS class and a LPS class. Also, the rate design for both the LGS and the SPS
3 was restructured to eliminate the rate limiters and instead structured the rates with a
4 monthly customer charge reflecting customer-related costs, monthly demand charges
5 reflecting distribution-related costs and "Hours Use block" cents per kilowatt-hour
6 charges reflecting both transmission and fixed and variable production related costs. The
7 implementation of this rate structure significantly mitigated concerns of high cents per
8 kilowatt-hour customer bill realizations and, therefore, afforded the Company the
9 opportunity to eliminate the aforementioned rate limiters which had no cost support.
10 These rate structures have remained in effect for more than 24 years.

11 **Q. How does the Hours Use rate design work and why is it appropriate**
12 **for the LGS and SPS classes?**

13 A. Rather than structuring the declining energy blocks as fixed blocks for
14 customer classes with varying load diversities, it is more appropriate to vary the size of
15 the blocks based on the customer's relative size relationship between demand and energy
16 usage. To do this, the blocks are structured as "Hours Use blocks" in which the kWhs
17 billed in each block are determined by taking a "kWh per kilowatt ('kW') of demand"
18 factor times the customer's demand. For a block with an Hours Use block of 150 kWh
19 per kW demand, a customer with a 1,000 kW demand would have 1,000 x 150 or
20 150,000 kWh billed in that block whereas a customer with a demand of 100 kW would
21 have 100 x 150 or 15,000 kWh billed in that block. This allows the energy blocks to be
22 scalable to the customer's utilization of demand.

² Rate limiters cap the realized average \$/kilowatt-hour for each customer. In the event that a customer realized average \$/kilowatt-hour that exceeds the rate limiter then the total bill is reduced to match the rate

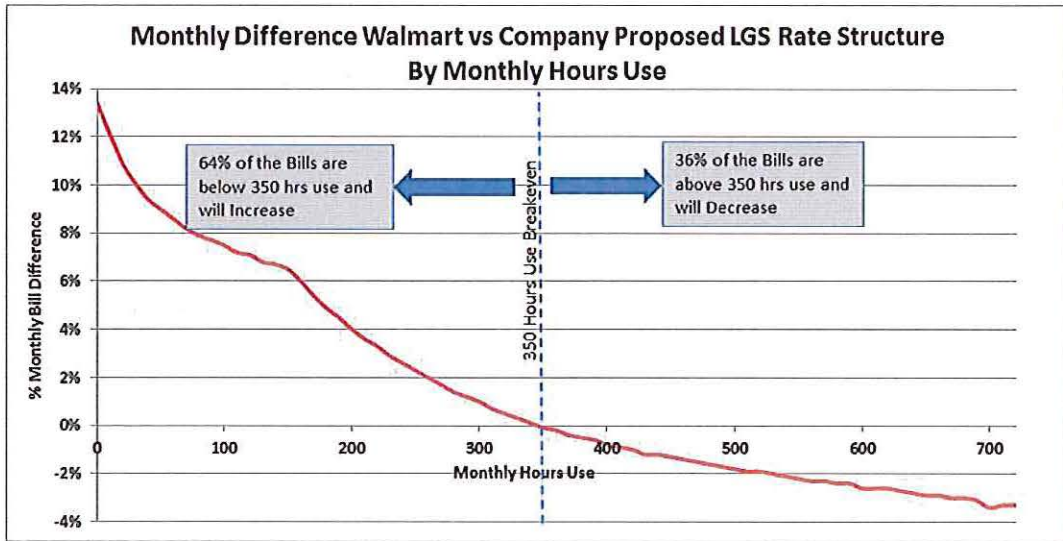
1 **Q. Did Wal-Mart provide a bill impact analysis on how its proposed rate**
2 **design changes would impact customers?**

3 A. No.

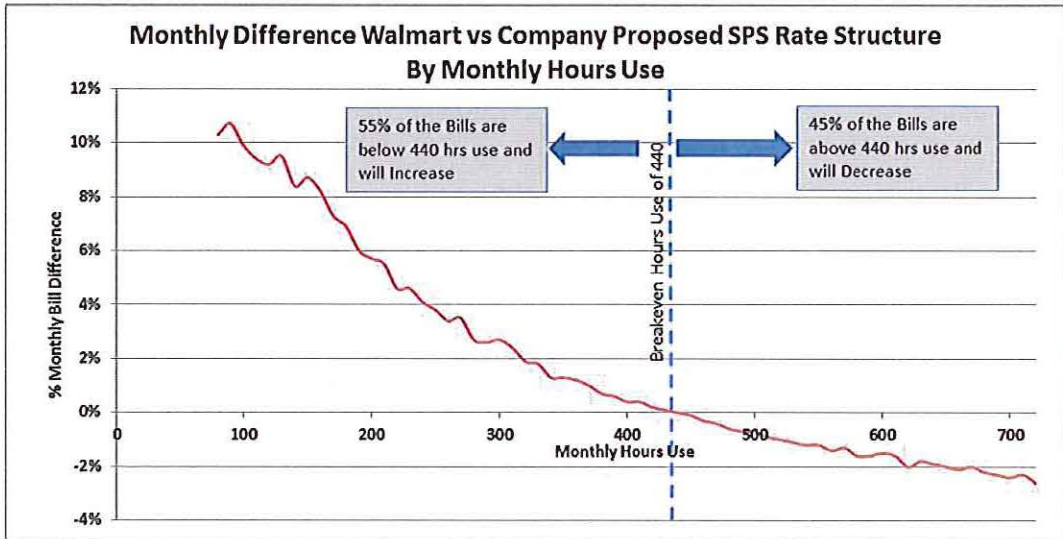
4 **Q. Have you performed a bill impact analysis of Wal-Mart's proposal?**

5 A. Yes. The charts below demonstrate the impact of Wal-Mart's proposal.
6 Using test year data, I have analyzed the monthly bills of all customers in LGS and SPS
7 rate classes. The charts show customers with lower load factors will be negatively
8 impacted relatively more than higher load factor customers will benefit. For example,
9 customers with low load factors could see double-digit percentage bill increases, which
10 would be *in addition to* the Commission-approved rate increase to their service classes.
11 It is also clear that only customers who can reach the third Hours Use block (which
12 implies 16 hour operations) would stand to benefit from Wal-Mart's proposal. But even
13 for those customers who will benefit, the savings would be limited to only a few percent
14 in most cases. This is not entirely surprising given the parameters of Wal-Mart's
15 proposal and the historical lessons of the previous rate designs for these service classes.

limiter.



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Q. Should the Commission order Ameren Missouri to explore alternative rate designs for the LGS and SPS rate classes?

A. No. The Hours Use rate design was explicitly developed to deal with the diversity of loads within the LGS and SPS classes. The Hours Use rate design equitably recovers costs from customers with varying load factors within the LGS and SPS classifications without the need for non-cost based rate limiters.

1 **III. MONTHLY RESIDENTIAL FIXED CHARGE**

2 **Q. Do you agree with Staff's rate design recommendation to keep the**
3 **Residential customer charge at its current level of \$8.00 per month?**

4 A. No. The Company's proposal of increasing the Residential customer
5 charge to \$8.77³ is fair and reasonable.

6 **Q. Why do you consider it to be fair and reasonable?**

7 A. For a few reasons: a) there is cost support for an even greater increase,
8 b) there are minimal customer impacts of the proposed increase, and c) the proposed
9 increase will help achieve some of the goals of the principles of a sound rate structure.

10 **Q. Staff states its class cost of service study ("CCOSS") only supports an**
11 **\$8.11 per month customer charge. Do you agree?**

12 A. No.

13 **Q. Please explain.**

14 A. Staff's CCOSS excludes a major portion of distribution costs that Staff has
15 classified *and allocated* as customer-related costs and inexplicably included those same
16 fixed costs as distribution demand-related costs.

17 **Q. Please explain the Staff's classification of distribution FERC Accounts**
18 **364-368.**

19 A. Staff has classified these accounts using the results of the Company's
20 zero-intercept method, as described in Company witness Warwick's direct testimony.

21 **Q. Please explain how Staff allocated the customer-related portion of**
22 **these distribution system costs.**

³ Excluding the additional \$0.03 monthly Low-Income Pilot Program charge.

1 A. Staff, like the Company, used its customer count allocator to allocate the
2 customer-related portion of these distribution costs to the various classes.

3 **Q. What is the significance of using such an allocator to allocate FERC**
4 **Accounts 364-369 to the distribution system?**

5 A. The significance is that Staff recognizes a portion of the costs of the
6 distribution system varies directly with the number of customers being served by that
7 system as opposed to how much those facilities are used. In short, a portion of those
8 costs is fixed and directly linked to the number of customers connected to the Company's
9 system. This is precisely why Ameren Missouri's current and past studies have shown
10 support for a much higher Residential customer charge. For example, Staff is using
11 allocators the same way as Ameren Missouri, but when it comes time to bundle costs to
12 determine the appropriate customer charge Staff treats all the costs as demand-related,
13 which artificially understates what the results of Staff's own study indicates the customer
14 charge should be.

15 **Q. Why would Staff allocate costs based on the number of customers and**
16 **then not include those costs in the monthly customer charge like other customer-**
17 **related costs?**

18 A. I cannot explain it. It stands to reason that if Staff believes those costs
19 vary with the number of customers, then these costs should be bundled consistent with
20 that allocation methodology.

21 **Q. What monthly Residential customer charge would Staff's class cost of**
22 **service study support if the portion of the distribution system that is neither**
23 **demand- nor energy-related were treated as customer-related?**

1 A. Staff's study would support a monthly customer charge of about \$20.

2 **Q. Does MIEC follow a similar process as Ameren Missouri regarding**
3 **the classification and allocation of the distribution costs (FERC Accounts 364-369)?**

4 A. Yes, with respect to how costs are allocated and subsequently bundled,
5 MIEC follows the same process as Ameren Missouri's CCOSS.

6 **Q. Does OPC follow a similar process as Ameren Missouri?**

7 A. Yes and no. Initially following the same process as the Company, ⁴ OPC
8 uses the results of the Company's zero-intercept model to classify the costs in distribution
9 plant Accounts 364-368. Unlike the Company, Staff and MIEC, who classify these costs
10 as demand-related and customer-related, OPC classifies the customer-related costs as
11 "other" and uses what they call a weighted meter investment allocator for that portion.
12 However, as Mr. Warwick mentions in his rebuttal testimony, the allocator used by OPC
13 for these costs is severely flawed. The significance is that if OPC were using an
14 appropriate allocator for what is typically considered customer-related costs, then OPC
15 would be following a process similar to the Company's.

16 **Q. Please explain why your second reason -- customer impacts -- suggests**
17 **it is reasonable and fair to increase the monthly customer charge to \$8.77 in this**
18 **case.**

19 A. An important consideration is the bill impact to customers. In this case
20 Ameren Missouri proposes to increase the customer charge by the same percentage as the
21 class revenue requirement increase, which makes it \$8.77. This approach would result in
22 all customers in the class receiving the same average rate increase. When the customer
23 charge does not increase by the same percentage as the overall class increase, then higher

1 than average usage customers will get a higher than average rate increase while lower
2 than average usage customers will get a lower than average rate increase. In the past five
3 rate cases, there has only been one increase in the Residential customer charge;⁵ however,
4 the variable charges have continued to increase such that for every 1% increase in the
5 monthly customer charge there has been a corresponding 5% increase in the variable
6 charges.

7 **Q. Are there reasons why a customer could have above average usage**
8 **that are largely beyond the customer's control?**

9 A. Yes. Electric space heating as a primary heating source would likely
10 result in higher than average energy consumption. And, as I have stated, these above
11 average usage customers will be negatively impacted if the customer charge is kept the
12 same as Staff proposes. While it may be technically possible for a customer to switch to
13 an alternate fuel source, there may be significant barriers to such switching. For instance,
14 there may not be a cost-effective alternative, the customer may not have the up-front
15 money for an expensive heating system conversion, or the customer may be a renter and
16 have no say in the selection of fuel sources.

17 **Q. Do you have more examples of why the monthly customer charge**
18 **should be increased to \$8.77 in this case?**

19 A. Yes. While the discussion thus far has centered on customer-related costs
20 as narrowly defined in the class cost of service studies, there is a broader rate design
21 question of how to properly set charges. In rate design, the challenge is balancing
22 multiple objectives even when some of those objectives are inherently in conflict. For

⁴ Staff and MIEC also use the results of the zero-intercept analysis.

1 example, common rate design principles such as bill stability, revenue stability, and price
2 signal may be in conflict. The most stable bill is one that consists entirely of fixed
3 charges, yet a bill consisting entirely of fixed charges would not send a price signal about
4 the variable cost of producing electricity. This leads to a dilemma about how much
5 weight should be ascribed to bill stability versus providing a price signal versus all of the
6 other rate design objectives.

7 **Q. Are the majority of Ameren Missouri's Residential costs fixed?**

8 A. Yes. About 80% of costs are fixed yet only 10% of those fixed costs are
9 being collected in fixed charges.

10 **Q. If the Commission were to approve an \$8.77 monthly Residential**
11 **customer charge, would that be out of line with other Missouri electric utilities?**

12 A. No. The table below shows the monthly Residential customer charges for
13 each of Missouri's investor-owned utilities. This table shows that each of the other
14 investor-owned utilities regulated by this Commission has a Residential customer charge
15 higher than Ameren Missouri's current charge, and it also shows that the Company's
16 proposed \$8.77 monthly charge would still be the lowest amongst investor owned utilities
17 in the state.

⁵ The monthly customer charge increased from \$7.25/month to \$8/month in Case No. ER-2010-0036. In that rate case the Residential customer charge increased by the average increase of the Residential class.

1 **Table 3 – Missouri Investor-Owned Utility Residential Customer Charges**

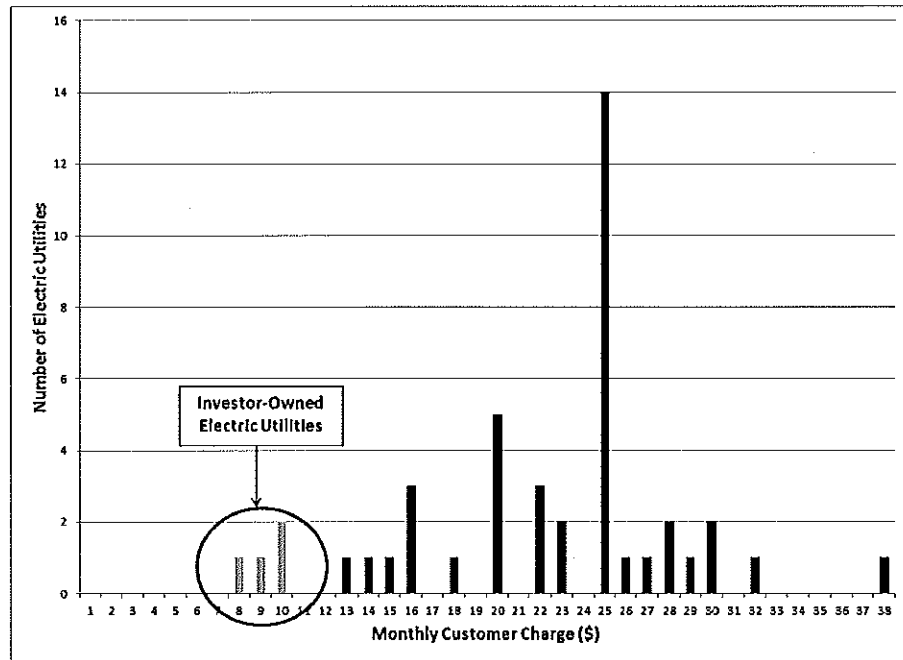
Company	Current Residential Customer Charge
Ameren Missouri ⁽¹⁾	\$8.00
Empire District Electric Co. ⁽²⁾	\$12.52
Kansas City Power & Light Co. ⁽³⁾	\$9.00
KCP&L Greater Missouri Operations Co. – L&P ⁽⁴⁾	\$9.54
KCP&L Greater Missouri Operations Co. – MPS ⁽⁵⁾	\$10.43

- 2 (1) Mo. P.S.C. Schedule No. 5, Sheet No. 28 (Excludes Low-Income Pilot Program)
3 (2) P.S.C. Mo. No. 5, Section 1, Sheet No. 1
4 (3) P.S.C. Mo. No. 7, Sheet No. 5A
5 (4) P.S.C. Mo. No. 1, Sheet No. 18
6 (5) P.S.C. Mo. No. 1, Sheet No. 51

7 Looking beyond investor-owned utilities, a recent survey of 38 Missouri electric
8 cooperatives shows that the average monthly Residential customer charge for Missouri
9 cooperatives is \$23.70, with a minimum of \$14 and a maximum of \$38. The monthly
10 customer charge that is most common within the cooperative group is \$25. In fact, 60%
11 of Missouri cooperatives have a monthly customer charge of \$25 or greater. The chart
12 below clearly illustrates that the customer charges of the investor-owned utilities (green
13 bars) are materially lower than the Missouri cooperatives (black bars).

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**Chart 1 – Comparison of Monthly Electric Customer Charges
State of Missouri**



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Q. Are there other examples where customers pay entirely fixed bills for various services?

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A. Yes. Cable, internet, and landline phone service are commonly billed as entirely fixed monthly bills. There also are a large number of cell phone plans that use entirely fixed monthly bills for unlimited data, texting, and domestic phone calls. And sewer service can be paid for with entirely fixed monthly bills.

10

In addition, it is not uncommon for natural gas or water utilities to have entirely fixed charges to recover all of the fixed costs associated with the distribution of natural gas or water. I also provided testimony showing that municipal and cooperative fixed monthly charges for residential electric service routinely exceed \$20 per month.

14

Q. What is your recommendation regarding an increase to the monthly Residential customer charge?

15

1 A. Ameren Missouri proposes to increase the monthly Residential customer
2 charge only moderately, from \$8.00 to \$8.77. An increase to at least this level is fully
3 supported by multiple CCOSS and results in a consistent increase for residential
4 customers of all consumption levels.

5 **IV. RESPONSE TO PROPOSED SERVICE TO ALUMINUM**
6 **SMELTERS RATE**

7 **Q. Please summarize the proposed rate for service to aluminum smelters.**

8 A. Under Noranda Aluminum, Inc.'s ("Noranda") proposal, the proposed rate
9 would initially be set at \$32.50/megawatt-hour ("MWh") with an automatic annual
10 escalation of 1% and a term of seven years. Customers on this rate would not be subject
11 to Ameren Missouri's fuel adjustment charges.

12 **Q. Is this proposal similar to what Noranda requested in the recent rate**
13 **shift case (File No. EC-2014-0224)?**

14 A. Yes. Although the terms have been somewhat modified, qualitatively it is
15 a very similar proposal.

16 **Q. Before you get into a discussion of Noranda's current proposal, can**
17 **you explain how the Commission determined what portion of the Company's total**
18 **revenue requirement should be recovered from each rate class in Ameren**
19 **Missouri's last rate case (File No. ER-2012-0166)?**

20 A. Ameren Missouri, along with several other parties in the case – including
21 MIEC, which included Noranda as a member – each submitted a CCOSS in the
22 Company's last rate case. This was done (and typically is done) because the various
23 classes of customers the Company serves have different service and usage characteristics
24 and, thus, different costs of service. The Commission has long recognized that an

1 equitable, non-discriminatory rate structure must recognize these differences. CCOSS
2 are designed to capture and quantify those differences so that the Commission can assign
3 the Company's overall revenue requirement to each rate class in an equitable manner.

4 After those CCOSS were submitted, several parties submitted a Non-Unanimous
5 Stipulation and Agreement ("Agreement"), which set forth those parties' agreement
6 regarding how any revenue increase authorized by the Commission should be applied to
7 the rates of the Company's customer classes. MIEC was a signatory to that Agreement.
8 And although Ameren Missouri was not a signatory, it did not object to the Agreement.

9 The Commission approved the Agreement, and new rates were ultimately
10 developed using the methodology set forth in the Agreement. Similarly, in previous
11 Ameren Missouri rate cases, MIEC and other parties also filed non-unanimous settlement
12 agreements on the rate design issue. Each of those agreements was approved and used by
13 the Commission in setting rates.⁶

14 **Q. As a result of those settlement agreements, is it true Noranda received**
15 **lower than average rate increases in Ameren Missouri's last several rate filings?**

16 **A.** Yes. The table below shows Noranda has received lower than average
17 rate increases in each of Ameren Missouri's last five rate cases. The pattern of below
18 average rate increases for Noranda is abundantly apparent, but this table clearly depicts
19 two cases (File Nos. ER-2007-0002 and ER-2010-0036) where Noranda received rate
20 increases substantially below the average.

⁶ An exception was in Case No. ER-2010-0036 where there was an objection to the filed agreement. In that case, the Commission ultimately modified the agreement by rejecting the agreed-upon rate reduction for Noranda and instead approved a small increase in rates for Noranda.

1

Table 1 – Recent Ameren Missouri Rate Increases

Rate Case	Overall Increase	Noranda's Increase
ER-2007-0002	2.07%	-5.40%
ER-2008-0318	7.75%	6.10%
ER-2010-0036	10.40%	0.10%
ER-2011-0028	7.11%	5.20%
ER-2012-0166	10.05%	6.60%

2 **Q. How does Noranda's current base rate compare to the results of the**
3 **CCOSS study in this case?**

4 A. Noranda's current average base rate is \$37.95/MWh. Using Ameren
5 Missouri's CCOSS and the proposed base rate revenue requirement in this case,
6 Noranda's average base rate should increase to \$43.32/MWh. Purely from a cost
7 perspective, Ameren Missouri's CCOSS indicates Noranda's rate should increase by 14%
8 as a result of this rate case. However, Ameren Missouri has proposed an equal
9 percentage increase for all classes, which would result in an average rate of \$41.61/MWh
10 for Noranda (a 9.65% increase).

11 MIEC has proposed an Aluminum Smelters rate starting at \$32.50/MWh with an
12 automatic annual 1% escalation for a seven-year term. Therefore, in the first year, the
13 proposed rate would be \$10.82/MWh less than Noranda's cost of service (or \$9.11/MWh
14 less than Ameren Missouri's proposed rate). Such a proposed rate would create an
15 immediate, substantial and undue disparity between the rates the New Madrid smelter
16 would be charged and Ameren Missouri's costs to provide service to the smelter.

17 **Q. Did MIEC's witness Maurice Brubaker sponsor a CCOSS in this rate**
18 **case that calculated the cost to serve Noranda?**

19 A. Yes. Mr. Brubaker sponsored a CCOSS on behalf of MIEC in this case.

1 **Q. Did Mr. Brubaker's CCOSS produce results similar to Ameren**
2 **Missouri's?**

3 A. Yes. Although Mr. Brubaker's analysis is predicated on a different rate
4 increase, qualitatively the results are similar in that his analysis concludes Noranda
5 should receive an above average rate increase purely from a cost perspective. Therefore,
6 there is no cost basis to support a significant reduction in the rate for Noranda, a
7 statement with which I believe that Mr. Brubaker and other Noranda and MIEC witnesses
8 will agree.⁷

9 **Q. Please explain what level of subsidy Noranda seeks with its request in**
10 **this case.**

11 A. The proposed Aluminum Smelter rate is 25% below Ameren Missouri's
12 current cost of providing service to the New Madrid smelter, which equates to \$45.4
13 million annually below the CCOSS results.⁸

14 **Q. Do you have concerns about implementing rates based on such a large**
15 **deviation from the cost of service?**

16 A. Yes. My first concern is about the sheer magnitude of the difference
17 between Noranda's proposed rate and the costs Ameren Missouri actually incurs to
18 provide electric service to the smelter. A rate that is significantly less than the cost of
19 service is a major – and likely unprecedented – departure from the Commission's
20 traditional ratemaking policies and practices, is not justified by any difference in the

⁷ File No. EC-2014-0224, Hearing Tr., p. 222, l. 18-22, 06/16/2014.

⁸ Ameren Missouri has proposed an equal percentage increase for all rate classes in this case. Using that methodology would result in a rate for Noranda of \$41.61/MWh which would reduce the annual subsidy to about \$38 million.

1 character of the service Ameren Missouri provides to Noranda, and may be considered
2 unduly discriminatory.

3 Another concern I have is about how, or even if, Noranda would ever return to a
4 cost of service-based rate. The Commission uses cost of service as the primary basis for
5 the rate design aspect of utility ratemaking. As a result, when Noranda's rates are no
6 longer linked to the cost of service, I am concerned there will be nothing to guide the
7 Commission regarding how the rate subsidy Noranda proposes can be unwound in future
8 periods. For instance, Noranda proposes to set a price at \$32.50 per MWh with an
9 automatic annual 1% escalation. I believe it is very likely the annual escalation in future
10 costs to serve Noranda will exceed 1% annually. If that occurs, then the deviation
11 between Noranda's rate and its cost of service will expand in each subsequent rate case.

12 **Q. Have you quantified how far below its cost of service Noranda's rate**
13 **could be after seven years of service under its proposed rate subsidy?**

14 A. Yes, I evaluated how Noranda's proposed rate would compare to its cost
15 of service after seven years. For purposes of my evaluation, I also assumed cost of
16 service increases equal to the annual amounts included in Ameren Missouri's preferred
17 resource plan from its 2014 Integrated Resource Plan. This analysis shows that at the end
18 of seven years Noranda's rate would be nearly 36% below its cost of service, which
19 results in a further 78% increase in the subsidy, up to \$81 million per year. Because costs
20 are rising much faster than Noranda's proposed rate, the gap between Noranda's proposed
21 rate and its actual cost of service expands with each passing year. As this gap increases,
22 it would likely be impossible, as a practical matter, to eliminate that subsidy after seven
23 years because moving from a subsidized rate to a cost of service-based rate overnight

1 would produce a significant rate shock for Noranda. Consequently, I am concerned that
2 eliminating the subsidy at the end of the seven-year proposed effective period and
3 moving to a cost-based rate will not be accomplished in a single rate change but will,
4 instead, require a very lengthy phase-in to avoid severe rate shock. That suggests
5 Ameren Missouri's other customers will be on the hook to subsidize rates for Noranda
6 well beyond the proposed seven-year period and likely at an even greater level than
7 Noranda is requesting today.

8 **Q. Did the Commission recognize the risk of Noranda's proposal turning**
9 **into a permanent subsidy in its *Report and Order* from Noranda's rate design**
10 **complaint case?⁹**

11 **A.** Yes, one of the Commission's findings of fact stated, "[c]learly, Noranda
12 would not be willing, or able, to withstand a 34 percent rate increase in year eleven¹⁰ to
13 return to cost-based rates. As a result, the subsidy could, in effect, become permanent."
14 Although some of the numbers and terms have been modified in this rate case, the new
15 proposal would put Noranda's rate, in relation to its cost of service, in nearly the identical
16 situation at the end of the seven-year term proposed here as the previous ten-year
17 proposal denied by this Commission.

18 **Q. Have you estimated the total cost shift from Noranda to Ameren**
19 **Missouri's other customers is Noranda's proposal is accepted?**

20 **A.** Yes, over the seven-year implementation period of the Aluminum Smelter
21 rate, Noranda would shift more than \$400 million in costs to other Ameren Missouri
22 customers.

⁹File No. EC-2014-0224, Report and Order.

¹⁰Noranda was proposing a 10-year rate plan in its Complaint.

1 **Q. Is there any cost basis to support the requested rate for Noranda?**

2 A. None at all. The rate proposed by Noranda is substantially below the rate
3 indicated by all cost of service studies presented in this case, including the one presented
4 by MIEC (on behalf of Noranda and other large energy consumers). In addition, it is
5 likely that over the proposed seven-year effective period, Noranda's rate will only further
6 diverge from its actual cost of service, making removal of the subsidy even more
7 difficult, as I previously explained.

8 **Q. Could Noranda qualify for Ameren Missouri's Economic**
9 **Development and Retention Rider ("EDRR")?**

10 A. No. First, the overall dollar magnitude of Noranda's requested discount
11 was never contemplated in the development of Ameren Missouri's EDRR. Furthermore,
12 there are several terms of the rider that Noranda simply does not meet. The following is a
13 basic comparison of Noranda's proposal to the terms of EDRR.

- 14 • Rider EDRR only applies in conjunction with approved government
15 subsidies, which suggests elected officials have already weighed in on the
16 issue. To the Company's knowledge, Noranda has not sought from state
17 or local governments such incentives or subsidies related to their current
18 rate subsidy request.
- 19 • The maximum discount available under Rider EDRR is 15% and if the
20 customer does not meet the terms of the agreement it must refund the
21 subsidy amounts. In contrast, my testimony shows that Noranda's request
22 would immediately result in rates 25% below its cost of service¹¹ and the

¹¹ Noranda's rate would be 22% below the Company's proposed revenue requirement allocation.

- 1 subsidy would continue to grow substantially by the end of the proposed
2 seven-year term.
- 3 • Rider EDRR has a maximum term of 5 years while Noranda is seeking a
4 seven- year term.
 - 5 • Large Transmission Service (Noranda's rate classification) is not eligible
6 for Rider EDRR because the rider is specifically limited to Large General
7 Service, Small Primary Service, and Large Primary Service. The terms of
8 the rider would also preclude a newly formed rate class from qualifying.
 - 9 • Noranda is also requesting an automatic annual 1% limitation on future
10 rate increases and an exemption from the Fuel Adjustment Clause charges,
11 both of which are not permitted under Rider EDRR.
 - 12 • To qualify for Rider EDRR a customer must demonstrate a need for a
13 discounted, rate, yet Ameren Missouri witness Robert Mudge's rebuttal
14 testimony suggests Noranda does not need a discount to remain
15 competitive.
 - 16 • Tariff participants must also be able to furnish the Company with
17 documentation necessary to verify their intent to select a viable electric
18 supply option outside the Company's service territory. Not only has
19 Noranda not provided this information to Ameren Missouri, it can't do so
20 unless it is going to buy or build a smelter elsewhere.
 - 21 • In addition, the tariff requires that if the customer fails to fulfill the entire
22 term of the contract, any agreed upon discounts become void and shall be
23 repaid by the customer. In Noranda's recent rate shift case, Mr. Kip

1 Smith, Noranda's CEO, testified that Noranda would be unable to agree to
2 such terms.¹²

3 In summary, even if economic development and retention was a legitimate reason
4 to temporarily deviate the smelter's rates from the cost of service study, Noranda's
5 proposal doesn't qualify for a discounted rate under Ameren Missouri's approved tariff
6 on the subject.

7 **V. UNFAIRNESS OF LIMITING A NORANDA SUBSIDY TO AMEREN**
8 **MISSOURI CUSTOMERS**

9 **Q. You mentioned the fact that only Ameren Missouri's other customers**
10 **would pay the proposed subsidy. Please elaborate on your concerns about that**
11 **aspect of the proposal.**

12 A. The New Madrid smelter is in the "Bootheel" region¹³ of Missouri, while
13 Ameren Missouri has customers spread out over a large part of the state, with 72% of
14 those customers located in the greater St. Louis Metropolitan Area (St. Louis City, St.
15 Louis County, Jefferson County, and St. Charles County). To demonstrate this point
16 visually, I have included a map (Schedule WRD-R4) that shows Ameren Missouri's
17 customer density by zip code. If it is true, as Dr. Haslag's testimony suggests, that
18 closure of the smelter would impact the state's economy as a whole, then the appropriate
19 subsidy, if one is appropriate, should burden all of Missouri's citizens and not just
20 Ameren Missouri's other customers.

21 **Q. How many customers does Ameren Missouri have in the Bootheel**
22 **region?**

¹² File No. EC-2014-0224, Hearing Tr. p. 217, l. 12-25, p. 218-219, and P. 220, l. 1-8, 06/16/2014.

¹³ The Bootheel region includes Scott, Stoddard, New Madrid, Mississippi, Dunklin, and Pemiscot Counties.

1 A. Ameren Missouri has approximately 1.2 million electric customers
2 statewide, but only about 39,000 customers are in the Bootheel region (only about 3% of
3 its total customer base). That means Noranda's proposal would require 97% of Ameren
4 Missouri's customers to subsidize a company that primarily benefits, at most, the
5 remaining 3%.

6 **Q. Would your conclusions materially change if you were to expand your**
7 **analysis to encompass a geographic area larger than just the Bootheel region?**

8 A. No, and to prove this, I expanded my analysis to look at the entire
9 Southeast Missouri region.¹⁴ Even with a greatly expanded geographic scope, Southeast
10 Missouri would only represent 7.6% of Ameren Missouri's customers as compared to 3%
11 for the Bootheel region alone.

12 **Q. What percentage of households in the Bootheel region are Ameren**
13 **Missouri customers?**

14 A. About 53% of households in the Bootheel region are Ameren Missouri
15 customers.¹⁵ Looking at the most recently available census data for the Bootheel
16 counties, I determined there are a total of nearly 60,000 households in that region, and
17 that Ameren Missouri serves about 31,500 residential customers (one residential
18 customer roughly equates to a household).

19 **Q. Does this mean that 47% of households in the Bootheel will not be**
20 **impacted by Noranda's rate shift request?**

21 A. Yes, the remaining households are served by municipal electric suppliers
22 or electric cooperatives. But because Noranda's proposal only involves increases to

¹⁴ Southeast Missouri includes the same six counties as the Bootheel plus the counties of Bollinger, Cape Girardeau, Perry, Ste. Genevieve, St. Francois, Iron, Wayne, Carter, Shannon, and Reynolds.

1 Ameren Missouri's electric rates, the rates charged to customers of the electric
2 cooperatives and municipal utilities will not be affected. For example, the City of New
3 Madrid, which is where Noranda's aluminum smelter is located, is served by a municipal
4 utility. Consequently, none of the residents of New Madrid – who clearly benefit from
5 the smelter continuing its operation – will pay one penny of the subsidies Noranda is
6 asking the Commission to approve in this case. In contrast, Ameren Missouri's customers
7 in Excelsior Springs – in the northwestern portion of Missouri – will pay subsidies under
8 Noranda's proposal, as will all of Ameren Missouri's other customers in the St. Louis
9 region, in north-central and central Missouri, and at the Lake of the Ozarks. As I stated
10 earlier, if the smelter truly benefits the Southeast Missouri region or the state as a whole,
11 the burden of providing a subsidy to the smelter should not fall exclusively on Ameren
12 Missouri's customers.

13 **VI. MISSOURI'S GENERAL ASSEMBLY IS THE APPROPRIATE FORUM**
14 **FOR NORANDA TO SEEK RELIEF**

15 **Q. Does the potential economic impact of closing the New Madrid**
16 **smelter warrant the public subsidies Noranda is seeking in this case?**

17 **A.** I believe that is a question for the state legislature to answer. Because the
18 proposed Aluminum Smelter rate is below the incremental cost to serve Noranda, the
19 only potential justification to approve such a public subsidy for Noranda is the desire to
20 avoid the negative impacts to the state's Gross Domestic Product ("GDP"), employment,
21 and tax revenues that would result from a closure of the New Madrid smelter. Those are
22 not utility ratemaking issues, so providing subsidies to Noranda is not an issue this
23 Commission can or should address. Instead, it is an issue that can and should be

¹⁵ The results are nearly identical if I expand the analysis to include the entire Southeast Missouri region.

1 addressed and decided by Missouri's General Assembly. Ameren Missouri witness John
2 Reed also addresses this issue in his rebuttal testimony.

3 **Q. Why do you believe the issue of whether to grant Noranda economic**
4 **relief is better suited for the state legislature to decide?**

5 A. If Dr. Haslag's testimony is true, the continued viability of the New
6 Madrid smelter is an issue of statewide importance. It is not an Ameren Missouri issue or
7 a utility ratemaking issue. And it most certainly is not an issue that Ameren Missouri's
8 other customers should be forced to resolve by themselves. Because of the magnitude of
9 the financial assistance Noranda is requesting, and also because a majority of economic
10 impacts are, according to Dr. Haslag, felt at the state level, it makes much more sense for
11 the state legislature, composed of elected representatives from across the entire state, to
12 decide whether and how to provide economic relief to Noranda. It is simply not fair to
13 require the Commission to make that decision or to push the costs and risks of the
14 proposed subsidies solely on the backs of Ameren Missouri customers.

15 **Q. Has the Missouri legislature taken action in the past to provide**
16 **assistance to Noranda?**

17 A. Yes. The Missouri legislature passed, and the governor signed into law, a
18 statute which provides Noranda the ability to choose its electric supplier, an option that
19 applies to no other customer in the state. I address the Missouri legislature's prior
20 legislation relating to Noranda further below.

21 **Q. Do you think MIEC would agree that the legislature is the most**
22 **appropriate forum for this type of rate subsidy?**

1 A. I certainly would have thought so prior to the filing of Noranda's rate
2 design complaint case, and MIEC's filing in support of that proposal. In 2012, the
3 Commission opened a working docket (File No. EW-2013-0045) to explore affordability
4 options for low-income customers. MIEC provided comments that said, in part, "[the
5 affordability of utility rates] is an income problem that all Missourians must address and
6 solve, but it cannot be solved by changing the price of particular goods or services
7 (whether groceries, rent or utility service)."¹⁶ MIEC's comments further stated, "[t]he
8 Legislature is best equipped to address the issue of low-income assistance and to develop
9 solutions for low-income Missourians. The MIEC believes that it is unwise and even
10 counterproductive to use the utility ratemaking process to establish or implement social
11 welfare goals."¹⁷

12 In addition, I would also point out that MIEC argued in File No. EW-2013-0045
13 that it is unlawful for the Commission to approve rates that are not based upon a
14 difference in the character of the service being provided. The subsidy Noranda seeks
15 here has nothing to do with any differences in how the New Madrid smelter is served by
16 Ameren Missouri (the cost differences associated with Noranda's service versus service
17 provided to other customer classes have already been accounted for in the above-
18 discussed class cost of service studies and in the rates the Commission set in Ameren
19 Missouri's last rate case). MIEC's comments in File No. EW-2013-0045 are attached to
20 my testimony as Schedule WRD-R5.

21 **Q. You mentioned earlier that the Missouri legislature had previously**
22 **enacted legislation dealing with electric service for Noranda. Please explain.**

¹⁶ MIEC's comments filed in File No. EW-2013-0045, p. 2.

¹⁷ *Id.*

1 A. In 2003, the legislature passed, and the governor signed, a law¹⁸
2 specifically tailored to aluminum smelting facilities (i.e., Noranda). The law allows
3 Noranda expanded rights to purchase and contract for power that no other customer in
4 Missouri has – effectively a "retail choice" statute for Noranda alone.

5 **Q. What was the context for the law's passage?**

6 A. For many years (decades, as I understand it) Noranda had taken service
7 from Associated Electric Cooperative, Inc. ("AECI") under a cost-based contract. A few
8 years before the legislation was passed, the AECI contract ended and Noranda could not
9 secure continued cost-based service from AECI. Thereafter, for a few years Noranda
10 acquired its power under a market-based contract with a power marketing company.
11 Noranda then approached the General Assembly looking for more options and flexibility
12 in securing electric service, resulting in the statute I mentioned above.

13 **Q. Did Noranda take advantage of the statute?**

14 A. No. Instead, Noranda sought to become Ameren Missouri's customer and
15 agreed to do so under a cost-based rate¹⁹ to be regulated and set by this Commission. In
16 advocating for an extension of Ameren Missouri's service territory to include Noranda's
17 property, Noranda stated:

18 • “Noranda can reasonably expect to receive fair treatment in future rate
19 proceedings with rates that *reflect the cost of the service provided to*
20 *Noranda*” (emphasis added).²⁰

¹⁸ Section 91.026, RSMo.

¹⁹ Noranda's rate was initially set at \$32.50 per MWh.

²⁰ Noranda's Pre-Hearing Brief, Case No. EA-2005-0180, citing to the sworn Direct Testimony of Noranda's Manager of Energy Procurement George W. Swogger.

- 1 • “[t]he regulated service offered by AmerenUE substantially met Noranda’s
2 *goal of a cost based supply*” (emphasis added).²¹

3 Now, Noranda has totally reversed its position and is seeking Commission action to
4 approve a *non-cost* based rate that has not been authorized by any enabling legislation,
5 and which, if approved, would result in a significant rate subsidy whose costs would be
6 borne solely by Ameren Missouri’s other customers.

7 **Q. How does the initial rate paid by Noranda as an Ameren Missouri**
8 **customer compare to the retail rate they are seeking in this case?**

9 A. Noranda’s request in this case is for the same retail rate as it paid when it
10 first became a retail Ameren Missouri customer. That rate was also \$32.50/MWh and
11 was set almost ten years ago.

12 **VII. RESPONSE TO ECONOMIC ANALYSIS OF THE NEW MADRID**
13 **ALUMINUM SMELTER**

14 **Q. Did Dr. Haslag file an updated economic analysis addressing the**
15 **impact of the New Madrid aluminum smelter?**

16 A. Yes. Dr. Haslag’s analysis is virtually identical to his analysis presented
17 in the recent rate design complaint case and in previous rate cases, with the exception that
18 the inputs have been updated to reflect more current information. In fact, the results in
19 this case are very similar to those presented in the recent rate shift complaint case.

20 **Q. Do you have any concerns about Dr. Haslag’s analysis?**

21 A. Yes. Dr. Haslag’s analysis falls short of providing key context for the
22 decision the Commission is facing. For instance, in the recent rate design complaint case,
23 Commissioner Hall questioned Dr. Haslag about how the shift of cost responsibility from

²¹ *Id.*

1 Noranda to other Ameren Missouri customers would affect consumer purchases of other
2 goods and services. Below is an excerpt from that questioning.²²

3 **Q. But it would affect -- so it would affect their**
4 **consumption of electricity to some extent?**

5
6 A. Yes.

7
8 **Q. And then it would also affect their purchase of other**
9 **goods and services --**

10
11 A. That's correct.

12
13 **Q. -- to some extent?**

14
15 A. Yes.

16
17 **Q. But as you sit here today, you wouldn't be able to**
18 **quantify that?**

19
20 A. I didn't look at it. I don't know what the -- what the
21 effect would be.

22 Basically Dr. Haslag testified that a rate shift will alter consumer spending
23 patterns, but he has not provided the Commission with information about those changes.
24 This is a fairness issue. The Commission is faced with deciding whether it is fair for
25 other customers to shoulder higher electricity bills, which will reduce their consumption
26 of other goods and services. And customers would be required to do this so a large
27 corporation will get a lower electricity bill, and so the economic activity associated with
28 that corporation will continue to contribute to the state's GDP. This highlights the flaw
29 in just looking at GDP as a measure for decision making of this type. The
30 microeconomic impacts of Noranda's proposed rate -- i.e. the impact on each of Ameren
31 Missouri's other customers -- also should be considered.

²² File No. EC-2014-0224, Hearing Tr. p. 601, l. 20-25, p. 206 l. 1-7, 06/17/2014.

1 **Q. Can you provide the Commission with additional perspective about**
2 **the numbers in Dr. Haslag's testimony regarding the impact closure of the New**
3 **Madrid smelter would have on the State of Missouri?**

4 A. Yes. Even if one were to accept Dr. Haslag's testimony, the specific
5 impacts quantified in his study regarding the possible economic effects of the smelter's
6 closure are not sufficient to justify requiring Ameren Missouri's customers, alone, to
7 provide an economic bailout to Noranda. For example, Dr. Haslag's testimony discusses
8 the impact of Noranda on the state's GDP, taxes, and unemployment insurance. While
9 the conclusions Dr. Haslag reaches about the impact the smelter's closure would have on
10 these three measures are not unimportant, Noranda's potential impact on these statistics is
11 not large from a statewide perspective. According to Dr. Haslag, Missouri's GDP in 2014
12 was about \$261 billion. He estimates Noranda's contribution to the state's 2014 GDP to
13 be about \$600 million, which translates to about 0.2% of the state's total GDP.

14 Dr. Haslag also testifies that if the New Madrid smelter closes the State of
15 Missouri would lose about \$23 million per year in tax revenue. However, the total
16 operating budget for the state of Missouri is about \$25 billion, with about \$8 billion
17 coming from general revenues alone. Therefore, Noranda's contribution is only 0.1% of
18 the total operating budget and only 0.3% of general revenues.

19 Dr. Haslag also estimated the potential impact closing the New Madrid smelter
20 would have to unemployment insurance at between \$3.6 million and \$9.4 million. The
21 total annual unemployment insurance budget for the state is about \$440 million, which
22 means that closing Noranda's New Madrid Smelter would have a *one-time* impact to the
23 state's unemployment insurance fund of 1-2%. But the impact of Noranda's proposal on

1 Ameren Missouri's other customers will not be a one-time occurrence. Instead, it will
2 last seven years or longer. And even if the subsidy sought in this case is approved, there
3 is no guarantee Noranda won't layoff some or all of its employees, which would also
4 trigger the unemployment fund impact discussed by Dr. Haslag.

5 **Q. Did the Commission determine in Noranda's rate design complaint**
6 **case²³ that Noranda is important for the economy of southeast Missouri and for**
7 **Missouri as a whole?**

8 **A.** Yes, the Commission acknowledged that fact in the rate shift complaint
9 case, yet the Commission still denied Noranda's subsidy request. I do not suggest
10 Noranda is economically unimportant to the Southeast Missouri region or the state as a
11 whole; instead, my testimony is designed to provide the Commission with additional
12 context to help give appropriate weight to all relevant economic impacts when making a
13 decision about Noranda's proposal in this case.

14 **VIII. RESPONSE REGARDING ECONOMIC DEVELOPMENT RATE DESIGN**
15 **MECHANISMS**

16 **Q. Is Ameren Missouri supportive of forming a collaborative process to**
17 **further investigate the Commission's questions about economic development rate**
18 **design mechanisms?**

19 **A.** Yes. Staff explicitly supports forming a collaborative, and OPC stated
20 additional dialogue beyond the scope of testimony is merited. Ameren Missouri concurs
21 with each of those viewpoints.

²³ File No. EC-2014-0224.

1 **Q. What are the advantages of forming a collaborative?**

2 A. One major advantage is a collaborative can be formed at the state level so
3 all regulated utilities can participate, which could include electric, natural gas, and water
4 utilities. In addition, there may be best practices beyond tariff changes that can be
5 shared. For instance, OPC mentioned the difference in tariff access on utility web sites.

6 **Q. Please provide some examples of issues a collaborative on this topic**
7 **could explore.**

8 A. First, each of the specific questions asked by the Commission can be
9 further investigated to the extent necessary. In addition, the MDOE provided testimony
10 asking the Commission to require recipients of economic development benefits to also
11 participate in energy efficiency programs. While the Company is not opposed to the
12 concept, there are issues related to that proposal that need to be explored. For example,
13 energy efficiency programs are approved in three-year increments, while the MDOE's
14 proposal would require participants to implement all projects within the contract term
15 period, which could be as long as five years. My concern with this type of timing
16 difference is that cost recovery of program incentives is linked to the three-year
17 implementation plan, and the Company may not be able to pay out rebates for projects
18 implemented outside the three-year implementation window. I also am concerned the
19 programs may change between implementation periods, which would catch customers
20 with five-year contracts straddling two program periods.

21 The MDOE also requests the Commission to approve an exemption related to
22 Section 393.1124.14, RSMo, (customers receiving certain state tax credits cannot also
23 participate in energy efficiency programs). I am not a lawyer, but I do not think the

1 Commission can waive a statutory requirement. But if a collaborative found this issue to
2 be of sufficient value, then it is possible a broadly-supported proposal for a legislative
3 change could be made.

4 A final example of why a collaborative would be beneficial is OPC's testimony
5 about applying an economic development discount to entire geographic regions. While
6 the idea seems intriguing on its face, more research to properly identify candidate areas
7 and to determine whether temporary discounts on electric rates are motivation enough to
8 encourage residential customers and/or smaller businesses to move to a particular area to
9 the degree that the electric system's utilization would improve materially. Contrasting the
10 load characteristics of residential customers and smaller businesses to higher load factor
11 customers that currently qualify for economic development discounts would be another
12 important research topic, assuming the goal is to support a more efficient utilization of
13 existing resources.

14 **Q. Are utility economic development rate design mechanisms the only**
15 **economic development tool for communities?**

16 **A.** No. OPC's testimony implies the Kansas City Power & Light Company's
17 ("KCP&L's") economic development riders are more successful than Ameren Missouri's
18 because their terms are more flexible and favorable. But that conclusion cannot be
19 accepted without more investigation. There may be many reasons why a business
20 chooses to locate in KCP&L's service area, including incentives offered by local
21 communities in that area. Furthermore, it may be beneficial for the collaborative to
22 discuss the consistency, or lack thereof, between Missouri investor-owned utilities in the
23 context of potential competition between the utilities.

1 **IX. RESPONSE TO THE CITIES OF O'FALLON AND BALLWIN**

2 **Q. The Cities of O'Fallon and Ballwin make a plea to purchase Ameren**
3 **Missouri's streetlights in their respective cities. Why won't Ameren Missouri sell its**
4 **street lights to the Cities?**

5 A. There are safety, operational, business, and policy reasons why Ameren
6 Missouri is not interested in selling its street lights, and Mr. David Wakeman addresses
7 those reasons in his rebuttal testimony.

8 **Q. The Cities have submitted testimony about the increases in their**
9 **lighting bills because of the Company's requested rate increase. Are there other,**
10 **more positive impacts to the Cities as a result of this case?**

11 A. Yes, as a result of this case the Cities will see increases in their gross
12 receipts tax revenue that are substantially greater than the increases their lighting bills.
13 For instance, Robert Kuntz testified for the City of Ballwin that its annual street lighting
14 bill will increase by about \$47,500; yet, if the Company's request is approved the City of
15 Ballwin's gross receipts tax revenue will increase by over \$150,000 per year. Similarly,
16 Steve Bender, for the City of O'Fallon, testified that its annual street lighting bill will
17 increase by about \$97,000; yet, if the Company's request is approved the City of
18 O'Fallon's gross receipts tax revenue will increase by over \$291,500 per year.

19 **Q. Do the Cities take service under other rate classifications in addition**
20 **to street lighting?**

21 A. Yes, the Cities take service under both SGS and LGS rate classifications.
22 In addition, O'Fallon has an account taking Residential service.

1 **Q. Would the increases in gross receipts tax revenues also cover the**
2 **Cities' increases in costs for its other electric services?**

3 A. Yes. From the accounts I have identified, and assuming the Company
4 receives its requested 9.65% increase, both of the Cities will receive gross receipts tax
5 revenues in excess of their entire increase in electricity costs. For instance, the City of
6 Ballwin's entire electricity costs would increase by about \$68,800; yet, if the Company's
7 request is approved the City of Ballwin's gross receipts tax revenue will increase by over
8 \$150,000 per year, which is more than double that amount. The City of O'Fallon's entire
9 electricity costs would increase by about \$226,500; yet, if the Company's request is
10 approved the City of O'Fallon's gross receipts tax revenue will increase by over
11 \$291,500 per year, which is about 30% more than that amount.

12 **Q. The City of O'Fallon's witness, Mr. Bender, complains that the**
13 **Company's company-owned Rate Schedule 5(M) rates are excessive and that the**
14 **customer-owned Rate Schedule 6(M) rate option would be preferable to the Cities.**
15 **Please respond.**

16 A. First, I will note that the Company's, Staff's, and MIEC's CCROSS show
17 that the lighting class as a whole has rates that closely reflect its underlying costs. That
18 being said, although the lighting class as a whole is close to its cost of service, the
19 individual rate schedules within the lighting class may not be.

20 **Q. Are the customer-owned lighting rates close to what the Company's**
21 **cost of service study indicates they should be?**

22 A. No. While it is true that the overall lighting class is close to its cost of
23 service, in File No. ER-2011-0028, the Company presented a detailed lighting CCROSS

1 indicating that the customer-owned lighting rates need to increase substantially to reflect
2 the actual cost of service.

3 **Q. What are the differences in costs between Company-owned lighting**
4 **and customer-owned lighting?**

5 A. The Company-owned lighting rate includes all applicable costs, including
6 the lighting fixtures, poles, wires, maintenance, customer service, installation costs, etc.
7 Under the 6(M) customer-owned lighting tariff, the Company can optionally provide
8 maintenance for replacing light bulbs and photoelectric sensors, but the customer is
9 responsible for all other costs, including the costs of the lighting fixtures, poles, customer
10 service, installation costs, etc. It is also important to understand that regardless who
11 owns the direct street lighting investment (e.g. lighting fixtures), lighting service also
12 includes substantial costs associated with producing and delivering electricity (e.g. power
13 plants, substations, distribution circuits, transformers, etc.)

14 **Q. Has Ameren Missouri performed an updated analysis for Rate**
15 **Schedules 5(M) and 6(M)?**

16 A. Yes. I have modified the CCOSS described in Mr. Warwick's direct
17 testimony to further break down the lighting class. This new analysis provides
18 information about how close each rate schedule is to its underlying costs. Consistent
19 with the previously mentioned lighting study, the results indicate the Rate Schedule 5(M)
20 rates are currently above the cost of service while the Rate Schedule 6(M) rates are
21 significantly below the cost of service. Setting rates for the two lighting rate schedules
22 would require a shift of about \$3.8 million as an increase to Rate Schedule 6(M) and a
23 decrease to Rate Schedule 5(M). Because Rate Schedule 6(M) is much smaller than Rate

1 Schedule 5(M), the \$3.9 million shift would roughly double the rates for Rate Schedule
2 6(M) and reduce the rates for Rate Schedule 5(M) by about 11%.

3 **Q. How would fully cost-based lighting rate schedules impact the**
4 **ownership-switching analysis numbers in the testimony of the Mr. Bender on behalf**
5 **of the City of O'Fallon?**

6 A. Mr. Bender testified that the annual bill under Rate Schedule 6(M) would
7 be \$180,000 per year under current 6(M) rates. That amount could increase to more than
8 \$360,000 per year if rates were increased to fully reflect costs. At the same time, if cost-
9 based lighting rates were adopted, the Cities Rate Schedule 5(M) bills would drop by
10 about 11%. Overall it is apparent that cost-based rates within the lighting class would
11 materially decrease the benefits associated with moving to Rate Schedule 6(M).

12 **Q. Should the Commission consider moving the lighting rate schedules to**
13 **full cost-based rates?**

14 A. Over a sufficient time period to avoid rate shock, I believe that is a
15 prudent course of action to consider. As I mentioned above, assuming the overall
16 revenue requirement for the lighting class is held constant, moving to rates within the
17 lighting class that are more reflective of costs would also reduce the rates for the Rate
18 Schedule 5(M) customers, which account for large majority of the lighting customers.

19 **Q. Are there other considerations that would impact a decision adjusting**
20 **or shifting the lighting rate schedules to more closely reflect cost-based rates?**

21 A. Yes. First is that the Company's 5(M) tariff is competing with its 6(M)
22 tariff. Therefore, it makes sense that the rates should be comparable in terms of
23 reflecting costs. Second, the Commission also would need to consider the potential

1 implementation of LED street lighting. If LED street lights are implemented in the
2 future, it would be helpful to align the 5(M) and 6(M) lighting rates to help ensure the
3 Company-owned and customer-owned LED street lighting rates are priced in a way that
4 promotes efficient economic decisions between the competing options.

5 **Q. Regarding LED street lights, have you performed analysis to illustrate**
6 **the potential costs or benefits of converting the street lights to LEDs for the Cities?**

7 A. Yes.

8 **Q. Did your analysis show that the Cities would benefit from converting**
9 **Company street lights that serve the Cities to LEDs?**

10 A. No. The results show that the conversion would not be cost effective. In
11 summary, it would result in a net lifetime cost increase of about \$638,000 for the City of
12 Ballwin. Ballwin's cost effectiveness analysis shows that, over the lifetime of the LED
13 street lights, the benefits would only return 66¢ for every dollar spent. Similarly, an LED
14 conversion would result in a net lifetime cost increase of nearly \$1.2 million for the City
15 of O'Fallon. O'Fallon's cost effectiveness analysis shows that, over the lifetime of the
16 LED street lights, the benefits would only return 70¢ for every dollar spent.

17 **Q. If LED street lights are more efficient than alternative street lighting**
18 **options, then why wouldn't the Cities benefit from an LED conversion?**

19 A. LED street lights have a significant up-front cost compared to other street
20 lighting alternatives. In addition, a large majority of the Cities street lights have post-top
21 High Pressure Sodium lights and the Company's LED analysis indicates that there is not
22 a cost effective LED alternative for the post-top style lights that the Cities have.
23 However, the Company's LED analysis also shows that the up-front costs for LED street

1 lights are declining rapidly so it is possible that an LED conversion may become cost
2 effective in the future.

3 **Q. Mr. Bender takes the Company's \$100 termination fee in the 5(M)**
4 **tariff to mean that \$100 is the value the Company places on a street lighting fixture**
5 **after three or ten years. Is that correct?**

6 A. No.

7 **Q. What is the purpose of the \$100 termination fee in the 5(M) tariff?**

8 A. The purpose is to simply give the customer pause before requesting that a
9 light be removed or that lighting service be eliminated without sufficient reason, since those
10 requests can have significant impacts on the Company and its customers. Said another way,
11 the \$100 is not designed to represent the full cost of the facilities affected by the request;
12 rather it is an intentional barrier to prevent uneconomic allocation of resources. With respect
13 to removing or changing a lamp, for example, the fee was designed to prevent a customer
14 from requesting that the Company install a mercury vapor light, then three months later
15 requesting that the Company change the light to a high pressure sodium light. In the case of
16 termination, the \$100 per lamp fee reflects the fact that costs will be incurred but it does not
17 represent the full cost of the overall street lighting system as an integrated part of its
18 distribution system.

19 **X. RESPONSE TO MDOE REGARDING SUPPLEMENTAL SERVICE**

20 **Q. What is the purpose of standby/supplementary service charges,**
21 **generally, and the Company's Rider E, specifically?**

22 A. Customer-owned generation, including Combined Heat and Power, can
23 have either minimal or dramatic impacts on the characteristics of the Company's load that
24 is not self-served by the customer. Standby/supplementary service tariffs are common

1 throughout the electric utility industry to collect costs from customers whose load is
2 different from the class they would be in if not for their self-supply. The structure of
3 Rider E results in either no impact or minimal impact to a customer when the
4 characteristics of the load served by the Company are only nominally different than if the
5 customer did not self-supply. Where a customer's characteristics vary more significantly,
6 Rider E results will have a greater impact.

7 **Q. Has Rider E been a barrier to Combined Heat and Power ("CHP")**
8 **projects?**

9 A. No, I don't believe so. First, since Rider E only applies to customers that
10 receive service at a primary voltage or higher, it does not apply to the vast majority of the
11 Company's customers. Second, there is no evidence CHP projects contemplated by
12 customers have not moved forward due to Rider E. In fact, of the two projects that have
13 contacted Ameren Missouri in the last five years, none came to fruition, and it is likely
14 Rider E would have had no financial impact to one of the projects and only minimal
15 impacts to the other. In addition, no customers have requested interconnection studies for
16 a CHP project in the past five years.

17 **Q. What other factors could be contributing to the dearth of CHP**
18 **activity in the Company's service area given ICF International's contention of**
19 **significant CHP potential in Missouri?**

20 A. First, the ICF study cited by MDOE was of the "technical potential" for
21 Missouri, whereas a study of the economic potential would produce dramatically lower
22 results. Two of the most significant factors to consider when evaluating CHP are the
23 capital cost of the installation and the electric rates that will be avoided. It is very likely

1 that the low penetration of CHP in the Company's service area, and in Missouri as a
2 whole, is most correlated to the generally lower electric rates of the state. In terms of
3 capital cost, the primary barrier to CHP is the continued proper functioning of a
4 customer's existing infrastructure (i.e. steam boilers). Like a residential customer making
5 a decision to purchase a high efficiency furnace, it is seldom economic to do so if the
6 existing furnace is functioning properly. However, when it is already determined that the
7 furnace needs to be replaced, the incremental cost of securing a higher efficiency
8 replacement is much more easily justified.

9 **Q. Has Ameren Missouri studied the cost effectiveness of Combined Heat**
10 **and Power?**

11 A. Yes. Combined Heat and Power was included in Ameren Missouri's 2013
12 demand-side management market potential study, which was performed by the consulting
13 firm EnerNOC.

14 **Q. Did Ameren Missouri's 2013 demand-side management market**
15 **potential study estimate the economic potential of Combined Heat and Power in its**
16 **service territory?**

17 A. Yes. The analysis determined that Combined Heat and Power is not cost
18 effective until the year 2025.

19 **Q. MDOE expresses concerns about the contract demand being set too**
20 **high. Can you please respond?**

21 A. Yes. MDOE claimed that Rider E is inflexible. However, Rider E does
22 not preclude a customer from requesting reconsideration of the contract demand or the
23 Company agreeing to a revised contract demand if it is determined that the customer's

1 service characteristics have changed and the current contract demand will not recur. For
2 instance, if a customer experienced an extraordinary event with its CHP equipment,
3 experienced a permanent change in load characteristics, or if a customer implemented a
4 load management system in the event of a CHP outage then that customer could petition
5 Ameren Missouri to renegotiate its contract demand.

6 **Q. Is Rider E a complex and confusing rate structure, as suggested by**
7 **MDOE?**

8 A. No. It is a very simple tariff whose structure is just a minimum bill based
9 on a single contract demand. Whether the minimum bill has any impact on the customer
10 is determined by the level of variance that a customer's self-supply causes from the class
11 norm the Company used to set rates. Rider E is a two sheet tariff with a reference to a
12 third sheet. In comparison, the two standby tariffs referenced by MDOE as preferable are
13 16 pages and 8 pages, respectively, and each contains numerous billing parameters.
14 These are much more complicated tariffs than Rider E.

15 **Q. Should the Company's Rider E be eliminated, as suggested by**
16 **Mr. Schroeder?**

17 A. No. Mr. Miller's and Mr. Schroeder's testimonies appear to be a solution
18 in search of a problem. Moreover, each witness' testimony undermines his own argument
19 that Rider E is an undue barrier to CHP adoption. For example, Mr. Miller acknowledges
20 the necessity of standby rates when on page 10 of his direct testimony he states
21 "[s]tandby rates are necessary when and if the full requirements rate cannot accurately
22 recover the fully allocated embedded costs that the utility incurs..." Further, Rider E has
23 no financial impact on a customer that self-supplies if the service supplied by the

1 Company is “fundamentally similar” to the service they would require if they did not
2 self-supply, which Mr. Schroeder deems appropriate. The only time Rider E financially
3 impacts a customer is when Mr. Schroeder’s statement is not true and the service
4 provided by the Company is materially different than if the customer did not self-supply.

5 **Q. Is there any economic rationale for the terms of Rider E?**

6 **A.** Yes. While extreme examples can be created, Rider E is designed to treat
7 most customers that deploy CHP no differently than primary service customers without
8 CHP. To the extent that the CHP customer’s service characteristics are similar to the
9 primary service class for which the rates were designed, using generally accepted
10 ratemaking principles, those customers see no impact from Rider E. However, Rider E
11 recognizes that a primary service customer with CHP may self-supply from 0%-100% of
12 the available CHP capacity, and that the primary service rates established for the class
13 may not adequately recover costs where the load to be served by the Company is
14 intermittent in nature.

15 Rider E is consistent with basic ratemaking principles in that i) energy purchases
16 are made at the same rates as all other primary service customers, ii) a portion of fixed
17 costs are intended to be collected through demand charges and those charges are
18 seasonally differentiated, iii) to the extent that the service characteristics of a CHP
19 customer are similar to the primary service class, they will not pay any Rider E minimum
20 charges, and iv) to the extent that the service characteristics of a CHP customer are NOT
21 similar to the class, Rider E provides a mechanism for recovering costs that would
22 otherwise go uncollected.

1 It is generally accepted that the more intermittent the service requirements of a
2 customer's load are the higher the ratio of fixed costs to variable costs resulting in an
3 overall higher rate when evaluated on a kWh basis. Any utility rate that has a demand
4 charge component will have this characteristic. This is not an error, and constitutes
5 generally accepted and sound ratemaking. To the extent that condition iv) above is true,
6 the demand charges associated with the primary service rate will not adequately recover
7 the fixed costs, and Rider E is the mechanism to ensure that CHP customers do not
8 unfairly avoid fixed costs through demand rates that were established on a basis that does
9 not apply to them.

10 **Q. Is Rider E arbitrary, capricious, and unduly discriminatory?**

11 A. No. Rider E was specifically approved by the Commission in October
12 1982 as being in compliance with its adoption of the Public Utilities Regulatory Policy
13 Act ("PURPA") rules at that time. Because Rider E was put into place more than
14 30 years ago, the Company was unable to produce the original underlying quantitative
15 economic analysis for Rider E in response to MDOE's data requests. However, that does
16 not automatically mean that Rider E is discriminatory. In fact, the Commission ruled that
17 Rider E was lawful under PURPA and its own rules in the face of a formal complaint in
18 1996. In addition, the primary service charges to which Rider E is applicable adhere to
19 sound ratemaking principals and have been approved by the Commission during each of
20 the Company's past rate cases as just and reasonable.

21 **Q. Should the Commission modify or eliminate Ameren Missouri's**
22 **Supplemental Service Rider in this case?**

1 A. No. MDOE did not demonstrate that standby rates are inherently unjust,
2 that the structure of Rider E is discriminatory, or offer anything more than generic and
3 general proposals for what MDOE would prefer as an alternative to Rider E. Further, it is
4 noteworthy that no customers have been assessed the Rider E minimum charge in at least
5 the past three years, and no customers have requested interconnection studies for CHP
6 projects in the past 5 years.

7 **Q. Is Ameren Missouri willing to perform additional analysis related to**
8 **its Supplemental Service tariff for its next rate case?**

9 A. Yes. Ameren Missouri is reluctant to implement changes in this case
10 because there is not enough time to perform the detailed analysis necessary to investigate
11 some of the issues raised by MDOE. Any analysis performed will also need to consider
12 the bill impacts to the existing customer taking service under the current tariff. However,
13 the Company is willing to investigate those issues and be prepared with additional
14 analyses in Ameren Missouri's next rate case.

15 **Q. Is there any harm in waiting until Ameren Missouri's next rate case to**
16 **present more detailed analysis on this topic?**

17 A. Not at all. There is only one customer taking service under Ameren
18 Missouri's Supplemental Service tariff today. In addition, there have been no charges
19 billed under the Supplemental Service rider, nor does Ameren Missouri have any pending
20 inquiries related to Combined Heat and Power interconnections.

21 **Q. Would the State Energy Plan be a forum to discuss issues surrounding**
22 **Combined Heat and Power?**

1 A. Yes. Although I am unaware of any existing overarching statewide
2 objectives specifically related to the advancement of CHP in Missouri, the State Energy
3 Plan is considering many topics, and it is likely CHP is a topic under discussion. It is
4 entirely possible there may be output from that process to help guide future changes to
5 Ameren Missouri's Supplemental Service tariff.

6 **XI. RESPONSE TO STAFF'S LED STREET LIGHTING**
7 **RECOMMENDATION**

8 **Q. What is Staff recommending the Commission do in this case related to**
9 **LED street lights?**

10 A. Staff recommends that the Commission order Ameren Missouri to
11 continue to study the cost-effectiveness of replacement of all or parts of existing
12 company-owned street lights with LED lights and, no later than twelve months following
13 the Commission's Report and Order in this case, to file either proposed LED lighting
14 tariffs or an update to the Commission on when it will file a proposed LED lighting tariff
15 to replace existing company-owned street lights.

16 **Q. Is Ameren Missouri already required to provide Staff with an annual**
17 **analysis about the cost-effectiveness of LED street lights?**

18 A. Yes, the Commission has ordered Ameren Missouri to provide Staff with
19 annual updates to its economic analysis of LED street lights.²⁴

20 **Q. Is Ameren Missouri going to submit its next annual update about**
21 **LED street lights before the twelve-month deadline recommended by Staff in this**
22 **case?**

²⁴ Order from File No. ER-2012-0166.

1 A. Yes. The Company will submit an update before the end of 2015, which
2 is at least 6 months earlier than the expected 12-month anniversary of the Report and
3 Order in this rate case.

4 **Q. Is Commission action needed on this topic?**

5 A. No. The Company is already required to provide Staff with an economic
6 analysis of LED street lights and the annual report stands on its own. Ameren Missouri's
7 analyses have thoroughly discussed issues related to LED street lights. To the extent the
8 economic analysis changes and other implementation barriers are removed, the report
9 will reflect those updates.

10 **Q. Is there another forum to discuss the potential implementation of**
11 **LED street lights?**

12 A. Yes. My understanding is that there is an open docket exploring the
13 effectiveness of the MEEIA rules. It would be far more productive to discuss this topic
14 in that forum and for the stakeholders to look for ways to include company-owned LED
15 street lights under MEEIA and count toward potential carbon limitations. In fact, a
16 positive step toward LED street light implementation could be for the Commission to
17 direct its Staff, as part of the MEEIA rules working docket,²⁵ to provide a draft rule
18 provision that allows company-owned street lighting to be included as part of a utility's
19 energy efficiency program and document how the drafted rule addresses the regulatory
20 barriers that Ameren Missouri has documented in its latest LED street lighting report.

21 **XII. INCANDESCENT MUNICIPAL STREET LIGHTING TARIFF**

22 **Q. Is Ameren Missouri proposing any changes to its Rate Schedule 7(M)**
23 **Municipal Street Lighting – Incandescent tariff?**

1 A. Yes, I am proposing this service classification be completely eliminated.

2 **Q. Why is Ameren Missouri proposing the elimination of its Rate**
3 **Schedule 7(M) street lighting tariff?**

4 A. When this rate case was filed in July 2014, there were only six customers
5 taking service under Rate Schedule 7(M), with total annual revenues of \$3,755. Two of
6 the customers were taking service as unmetered lighting customers and four as metered
7 service customers. Since that time, the four customers with metered service have opted
8 to switch to the Company's Rate Schedule 6(M) lighting service, while the two
9 unmetered accounts have terminated service under Rate Schedule 7(M).

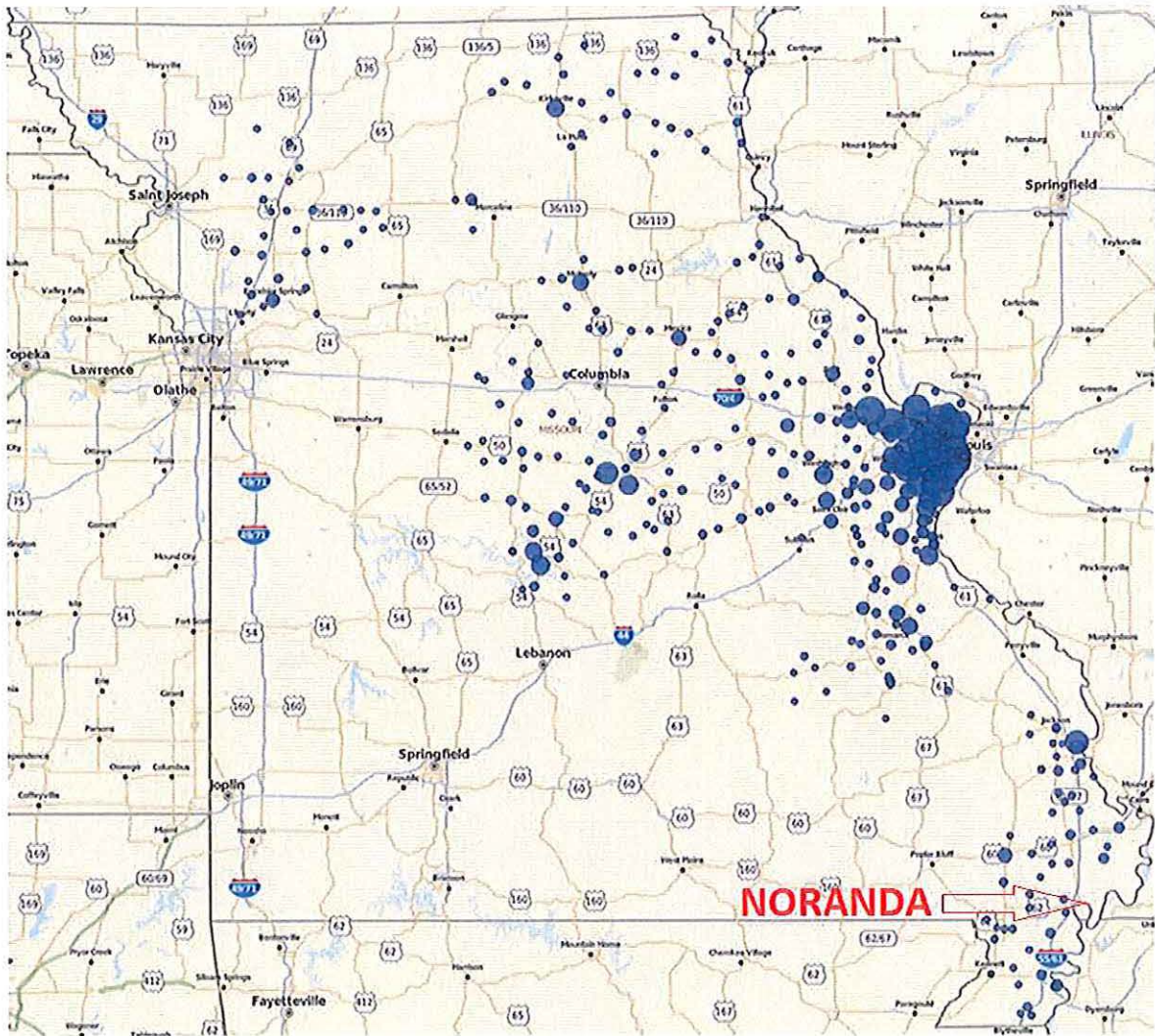
10 In summary, due to the fact that there no longer are any active customers in the
11 Rate Schedule 7(M) rate classification and that incandescent street lights are no longer
12 being installed, I am proposing the Commission order the Company to eliminate Rate
13 Schedule 7(M) in its compliance tariff filing.

14 **Q. Does this conclude your rebuttal testimony?**

15 A. Yes, it does.

²⁵ File No. EW-2015-0105.

Figure 1 – Ameren Missouri Customer Density Map by Zip Code



BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of a Working Case to Consider the)
Establishment of a Low-Income Customer)
Class or Other Means to Help Make Electric) **File No. EW-2013-0045**
Utility Services Affordable)

COMMENTS OF THE MISSOURI INDUSTRIAL ENERGY CONSUMERS

Pursuant to the Commission’s Order dated August 8, 2012, the Missouri Industrial Energy Consumers (“MIEC”) provides the following comments regarding the establishment of a low-income customer class or other approaches to the affordability of residential customer electric service.

Assisting low-income utility customers and other Missouri citizens in need is an important and worthy goal. The MIEC member companies regularly commit resources to help Missourians in need, and the MIEC recently supported and helped fund a low-income assistance pilot program for Ameren customers. There are many ways the Commission, the utilities and their customers can assist low-income Missourians. However, as explained below, the MIEC does not believe the Commission has the legal authority or a sound policy basis to establish a low-income customer class.

The Commission’s Order requested comments regarding the following issues:

1. The practicality of establishing such a class, including the effect on revenues and costs,
2. Proposed guidelines for inclusion in such a class,
3. Proposed verification procedures for participants,
4. The effect on the company’s bad debt expense,
5. Similar low-income rate-classes established in other states,

6. The legality of establishing a low-income rate-class, and
7. The appropriate rate or rate-formula for a low-income rate-class.

Following is the MIEC's position and response to the specific issues set forth in the Commission's Order.

1. **The Practicality of Establishing Such a Class, Including The Effect on Revenues and Costs**
2. **Proposed Guidelines for Inclusion in Such a Class**
3. **Proposed Verification Procedures for Participants**

The MIEC believes it would be impractical to establish a low-income customer class, even if it were legally permissible to do so. Establishing a low-income class would require the utility to obtain and track a large amount of personal income information with respect to each of its customers thought to be eligible. The utility would need to establish monitoring procedures, as well as enforcement procedures, to ensure that customers who do not qualify do not participate. Utilities are not suited or equipped to conduct these activities, and it would be improper for utilities to engage in such activities.

The severe economic downturn has greatly increased the need for assistance to low-income Missourians. This is an income problem that all Missourians must address and solve, but it cannot be solved by changing the price of particular goods or service (whether groceries, rent or utility service). Creating lower rates for customers who are identified as low-income, and subsidizing those lower rates with higher rates on other customers or lower returns for utilities, does not address the income side of the policy equation. The Legislature is best equipped to address the issue of low-income assistance and to develop solutions for low-income Missourians.

The MIEC believes that it is unwise and even counterproductive to use the utility ratemaking process to establish or implement social welfare goals. The subsidy to the customer

blurs the price signal and reduces the incentive for energy efficiency. Better price signals are achieved if assistance is provided that can be used to provide for general needs.

The effect of establishing a low-income customer class on utility revenues, without any separate mechanism to fund such a program, would be a reduction in revenues. Utilities would be correct to argue that failure to provide a funding mechanism would be confiscatory and therefore unlawful for that reason alone.

4. The Effect on the Company's Bad Debt Expense

The effect of establishing a low-income customer class on the utilities' bad debt expense is not clear. While it may seem that funding for low-income customers would reduce bad debt expense, it is also possible that such funding could simply be used to continue, or even increase, current consumption levels. Moreover, the significant administrative costs to manage such a program could eliminate any potential decrease in bad debt.

5. Similar Low-Income Rate-Classes Established In Other States

Some states that have adopted such subsidies have approached the issue by establishing a maximum surcharge that can be recovered from any given customer's bill to fund the subsidies. For example, the state of Utah caps the maximum amount of surcharge that can be collected on any customer's monthly bill at \$50; Illinois caps the surcharge at \$4.80 per monthly bill for a customer smaller than 10,000 kW, and at \$360 per month for a customer larger than 10,000 kW. Wisconsin caps the surcharges at \$148 per month per account, with an umbrella maximum of \$750 per month for the sum of all accounts of any particular customer. And, in Pennsylvania funding for the Low Income Usage Reduction Program ("LIURP") is provided entirely by residential customers, while the Customer Assistance Programs ("CAP") are funded 75% by residential customers, 20% by commercial customers, 2% by industrial customers and 3% by all

other customers. The concept behind these caps is to the impact of subsidies that would be counterproductive to the preservation and creation of jobs needed to propel economic development.

6. **The Legality of Establishing a Low-Income Rate-Class**

Section 393.130 provides:

2. No ... electrical corporation ... shall directly or indirectly by any special rate, rebate, drawback or other device or method, charge, demand, collect or receive from any person or corporation a greater or less compensation for gas, electricity, water, sewer or for any service rendered or to be rendered or in connection therewith, except as authorized in this chapter, than it charges, demands, collects or receives from any other person or corporation for doing a like and contemporaneous service with respect thereto under the same or substantially similar circumstances or conditions

3. No ... electrical corporation ... shall make or grant any undue or unreasonable preference or advantage to any person, corporation or locality, or to any particular description of service in any respect whatsoever, or subject any particular person, corporation or locality or any particular description of service to any undue or unreasonable prejudice or disadvantage in any respect whatsoever.

The questions then are: (1) whether the Commission is proposing a “special rate” for persons of one class even though the service is provided to those persons under “the same or substantially similar circumstances or conditions” as those not in the favored class; and (2) whether any proposal to subsidize one class of customers by overcharging another class, or other classes, of customers is providing an “undue or unreasonable” preference to the subsidized class or an “undue or unreasonable” prejudice or disadvantage to the subsidizing class or classes. Because the proposal is clearly designed to provide a “special rate” or “preference” for persons of one class at the “prejudice” or “disadvantage” of persons of another class or classes receiving like service, subsections 393.130.2 and .3 appear to prohibit the “special rate.”

The Missouri Supreme Court long ago concluded that differences in rates must be based upon differences in service. In *State ex Rel. The Laundry, Inc. and Overland laundry Company*

v. *Public Service Commission*, 34 S.W.2d 37 (Mo. 1931), the Supreme Court addressed the appropriate standard under what is now subsections 393.130.2 and 3. There, a large commercial laundry operation that used over 500,000 gallons of water a month sought to be included under a rate class for manufacturers who consumed over 500,000 gallons of water each month. The evidence showed that the manufacturers' rate was below the water company's cost of service and that the water company adopted the special rate for the purpose of luring manufacturers to the water company's service territory in order to serve the manufacturer's employees that would presumably locate there as well. The court cited section 393.130's predecessor statute, and a Public Service Commission decision, in concluding that the discrimination against the laundry company compared to other large users of water and employers was illegal because it was not "bottomed upon any dissimilarity or difference in service or operative conditions[.]" *Id.* at 45. In so concluding, it cited with approval the Missouri Public Service Commission in *Civic League of St. Louis et al. v. City of St. Louis*, 4 Mo. P.S.C. 412:

In the Missouri act (Public Service Commission Law) supervision and regulation seek to require all public utilities operating in the State, whether owned by private persons, corporations or municipalities, not only to serve the public at reasonable rates or charges, but to require them also to serve the public efficiently and without unjust discrimination. The consensus of opinion everywhere is that such requirements are imperatively demanded by modern industrial conditions. Of course, as observed by the Supreme Court of the United States in a leading case, such equality of rights does not prevent differences in the modes and kinds of service and different charges based thereon. [[Western Union Tel. Co. v. Call Pub. Co.](#), 181 U.S. 92, 100.] In brief, in charges for service or in rate-making, reasonable classification may be adopted... . However, laws designed to enforce equality of service and charges and prevent unjust discrimination, as the Missouri act, **require the same charge for doing a like and contemporaneous service (e.g., supplying water) under the same or substantially similar circumstances or conditions.** To impart this idea more completely or to amplify, our law in express terms forbids granting undue or unreasonable preference or advantage to any person, corporation or locality, or to any particular description of service in any respect whatsoever, or subjecting any person, corporation, or locality, or any particular description of service to any undue or unreasonable prejudice or disadvantage in any respect whatsoever. [P.S.C. Law, art. IV, sec. 68.] In brief,

rates or charges to be valid must not be unjust, unreasonable, unjustly discriminatory, or unduly preferential. Our statute demands reasonable and non-discriminatory rates... . **Accordingly, even at common law, it is not admissible for a public service company to demand a different rate, charge or hire from various persons for an identical kind of service under identical conditions.** Such partiality cannot square with the obligations of public employment. The public duty must be discharged for the equal benefit of all, and obviously to permit discrimination or inequality in the service or charges is to ignore the public obligation. [[Messenger v. Pacific Railroad Co.](#), 36 N.J.L. 407, 37 N.J.L. 531.] The common right of all involves the obligation to **give equal rights to all for the same service.** [[Fitzgerald & Co. v. Grand Trunk Railroad Co.](#), 63 Vt. 169, 22 Atl. 76.] The services must be open to all on equal terms. Discrimination is opposed to sound public policy. [[Schofield v. Railway Co.](#), 43 Ohio St. 571, 3 N.E. 907.] **The common law today forbids all discrimination between two applicants who ask the same service.** [2 Wyman, Public Service Corporations, sec. 1290.] ... Thus the principle of equality designed to be enforced by legislation and judicial decision forbids any difference in charge which is not based upon difference of service and even when based upon difference of service must have some reasonable relation to the amount of difference, and cannot be so great as to produce unjust discrimination. [[Western Union Telegraph Co. v. Call Pub. Co.](#), 181 U.S. 92, 100, 103.] ... While the principles of the common law are operative, except so far as they have been modified by constitution or legislation (R.S. 1909, sec. 8047; [Duke v. Harper](#), 66 Mo. 51; [Reaume v. Chambers](#), 22 Mo. 36; [Lindell v. McNair](#), 4 Mo. 380), whatever may have been the common law rule relating to unjust discrimination, our legislation now controls and is to be construed and applied according to its spirit in the light of the unsatisfactory conditions prevailing with respect to the service and rates of public utilities ... prior to its enactment... . **The Commission has had occasion to consider carefully the policy of the law relating to discrimination in rates on the part of the public service companies of various kinds, and has held invariably that any inequality of service or charges and unjust discriminations in whatever form practiced fall within the condemnation of the Public Service Commission Act; that all unjust discriminations respecting rates or charges are in violation of public duty, contrary to the common law, and against sound public policy; and that statutes forbidding unjust discriminations of whatever character are merely declaratory of the common-law rule which is founded on public policy and requires one engaged in a public calling to charge a reasonable and uniform price or rate to all persons for the same service rendered under the same or substantially similar circumstances or conditions... . Our conclusion, therefore, is that the schedule of rates providing a less charge for water for purely manufacturing purposes than for general use, is plainly unjust discrimination under the well settled rule of the common law, as well as under the Public Service Commission Act, which is merely declaratory of the common law rule, because it distinctly appears that the classification therein is unreasonable and unjust.**

Id. at 44-45. (Emphasis added).

The Missouri Supreme Court also cited a decision of the United States Supreme Court:

Speaking to the subject of unjust discrimination by public utility corporations in respect to rates and service, the United States Supreme Court, through Mr. Justice BREWER, thus announced in [Western Union Telegraph Co. v. Call Pub. Co., 181 U.S. 92, 100](#): "All individuals have equal rights both in respect to service and charges. Of course, such equality of right does not prevent differences in the modes and kinds of service and different charges based thereon. There is no cast-iron line of uniformity which prevents a charge from being above or below a particular sum, or requires that the service shall be exactly along the same lines. **But that principle of equality does forbid any difference in charge which is not based upon difference in service, and even when based upon difference of service, must have some reasonable relation to the amount of difference, and cannot be so great as to produce an unjust discrimination.**"

Id. at 45. (Emphasis added).

In conclusion, subsections 393.130.2 and .3 prohibit any preference or prejudice in rates unless the difference is based upon a difference of service. The proposal contemplated herein would subject customers with identical service requirements to different rates and, as such, would violate subsections 393.130.2 and .3.

7. **The Appropriate Rate or Rate-Formula for a Low-Income Rate-Class**

As noted above, it is MIEC's position that the goal of low-income assistance is a worthy and important goal that all Missourians should work to achieve. However, establishment of a low-income customer class is not good policy and is not a lawful means to achieve this goals. In the event the Commission rejects the MIEC's legal and policy arguments outlined above, any low-income customer class or program should be funded within the residential class.

Respectfully submitted,

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BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

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

AFFIDAVIT OF WILLIAM R. DAVIS

STATE OF MISSOURI)
) ss
CITY OF ST. LOUIS)

William Davis, being first duly sworn on his oath, states:

1. My name is William R. Davis. I am employed by Union Electric Company, d/b/a Ameren Missouri, as an Economic Analysis and Pricing Manager.

2. Attached hereto and made a part hereof for all purposes is my Rebuttal Testimony on behalf of Union Electric Company, d/b/a Ameren Missouri, consisting of 52 pages and Schedule(s) WRD-4 TO WRD-5, all of which have been prepared in written form for introduction into evidence in the above-referenced docket.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct.

William R. Davis
William R. Davis

Subscribed and sworn to before me this 16th day of January, 2015.

Beckie J. Eaves
Notary Public

My commission expires: 2-21-18

