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Witness: Lena M. Mantle

Sponsoring Party: MO PSC Staff

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**MISSOURI PUBLIC SERVICE COMMISSION**

**UTILITY OPERATIONS DIVISION**

**SUPPLEMENTAL TESTIMONY**

**OF**

**LENA M. MANTLE**

**UNION ELECTRIC COMPANY  
d/b/a AMEREN MISSOURI**

**FILE NO. ER-2011-0028**

**Jefferson City, Missouri  
April 2011**

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Date 5/5/11 Reporter Ma  
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Q. Please state your name and business address.

A. My name is Lena M. Mantle, and my business address is Missouri Public Service Commission, P. O. Box 360, Jefferson City, Missouri 65102.

Q. What is your present position at the Missouri Public Service Commission?

A. I am the Manager of the Energy Department of the Utility Operations Division.

Q. Are you the same Lena M. Mantle that contributed to Staff's Revenue Requirement Cost of Service Report filed on February 8, 2011, and that filed surrebuttal testimony in this case on April 15, 2011?

A. Yes, I am.

Q. What is the purpose of this testimony?

A. The purpose of this testimony is to respond to the specifics of how Ameren Missouri proposes billing units be reduced in conjunction with continuation of its energy efficiency programs that it first discloses in the surrebuttal testimony of Ameren Missouri witness William R. Davis and the impact of the adjustment of the billing units on other aspects of the case.

Q. What is the result of Ameren Missouri's proposed billing units adjustment?

1 A. If the Commission agrees with Ameren Missouri and the normalized,  
2 annualized billing units, as estimated by the parties in this case, are adjusted then Ameren  
3 Missouri's rates would be higher than the rates calculated without the adjustment.

4 Q. Would you please explain why Ameren Missouri's rates would be higher?

5 A. A primary objective in designing rates is that the rate multiplied by the  
6 appropriate measure (e.g., kilowatt-hour (kWh) usage, kilowatt (kW) demand, etc.) results in  
7 the revenue requirement for each class. In the simplest case, rates are determined by dividing  
8 the revenue requirement by the normalized annualized billing units. For example, if the  
9 revenue requirement is \$100 and the normalized, annualized billing unit is 1,000 kWh, then  
10 the rate would be \$0.10/kWh ( $\$100/1,000 \text{ kWh}$ ). Therefore, the utility would collect its \$100  
11 when its customers use 1,000 kWh.

12 If the billing units are reduced as Mr. Davis proposes, the resulting rates would be  
13 higher. Using the example above, if the revenue requirement was \$100 and the billing units  
14 were reduced by 200 kWh to 800 kWh, the rate would be \$0.125/kWh.

15 Q. Would this result in the utility billing for more revenue than revenue  
16 requirement?

17 A. The utility would collect \$125 when the customers use 1,000 kWh, even  
18 though the revenue requirement is \$100. This would result in a 25% over collection of \$25.

19 Q. Is Ameren Missouri requesting this change so that it can get more than the  
20 revenue requirement established by the Commission in this case?

21 A. It is Ameren Missouri's position that its energy efficiency programs will  
22 reduce its kWh sales (i.e., reduce billing units) over the next two years and the adjustment that

1 it is requesting will result in the revenue set by the Commission. Staff agrees that this is the  
2 expected outcome as long as the reduced billing units actually occur.

3 Q. Will the adjustment proposed result in Ameren Missouri billing its revenue  
4 requirement as set by the Commission?

5 A. As in any rate case, the revenue requirement will be billed only if the  
6 customers' usage exactly matches the billing units in the rate case.

7 Q. Has Staff measured the difference in the rates due to the reduction in billing  
8 units proposed by Ameren Mo.?

9 A. I calculated the difference in the rates by applying the same rates to the billing  
10 units that were adjusted and the pre-adjustment billing units. Mr. Davis included as part of  
11 his surrebuttal testimony a schedule where he provided an estimate of the impact of Ameren  
12 Missouri's billing units adjustment proposal on the residential class rates. However, I could  
13 not find any estimate of the impact of the proposal on the rates of any other classes. I used  
14 Mr. Davis's analysis to calculate the impact on the residential class' revenue requirement  
15 before and after the adjustment to rates and followed the same procedure to estimate the  
16 impact on the non-residential classes. The inputs Mr. Davis used are not necessarily  
17 consistent with Staff's current positions; however these results give an indication of the  
18 magnitude of the impact. Staff results are shown in the following table.

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	Revenues Using Adjusted Billing Units & Adjusted Rates	Revenues Using Current Billing Units & Adjusted Rates	Difference	% Difference
Residential	\$1,208,637,087	\$1,228,864,638	\$20,227,552	1.65%
Small General Service	\$309,147,543	\$309,979,975	\$832,432	0.27%
Large General Service	\$566,935,122	\$569,666,690	\$2,731,568	0.48%
Small Primary Service	\$214,774,216	\$216,250,954	\$1,476,738	0.68%
Large Primary Service	\$200,117,957	\$200,828,589	\$710,631	0.35%
Total	\$2,499,611,925	\$2,525,590,846	\$25,978,920	1.03%

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Q. Would you please explain the significance of this table?

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A. The column labeled "Revenues Using Adjusted Billing Units & Adjusted Rates" is the estimated rate revenue for Ameren Missouri if the rates calculated from the adjusted billing units are applied to the adjusted billing units. The column labeled "Revenues Using Current Billing Units & Adjusted Rates" contains the revenue when the pre-adjusted billing units are applied to the higher, adjusted rates.

9

Q. Why isn't the Large Transmission Service Class included in the table?

10

A. According to Mr. Davis, he calculated the reduction to usage for each of the classes Ameren Missouri's energy-efficiency programs target. There are no energy efficiency programs for the Large Transmission Service class.

13

Q. Would the Ameren Missouri bill the higher revenues shown in the table above since the actual billing units are higher than what was used to calculate the rates?

14

1           A.     For each class, Ameren Missouri would bill the additional revenue only if the  
2 class's usage did not change between this case and the next case. If Ameren Missouri  
3 achieves the energy efficiency that it estimates in its proposal and there was no growth in the  
4 class's usage, then, for the first twelve months after the new rates went into effect, Ameren  
5 Missouri would bill more than the class revenue requirement the Commission establishes in  
6 this case. For the next twelve months, assuming that the class loads only change by the  
7 amount Ameren Missouri estimates and there was no growth in the customer class, Ameren  
8 Missouri would bill less than the class revenue requirement the Commission establishes in  
9 this case. The objective is to balance the extra that Ameren Missouri earns in the first twelve  
10 months with lower amount in the last twelve months.

11           Q.     Would all customers' bills increase if the billing units were adjusted as  
12 proposed?

13           A.     All the customers except lighting and large transmission service customers  
14 would see an increase in their bills if the billing units are adjusted as proposed by Ameren  
15 Missouri. However, the customers that participate in energy efficiency programs or install  
16 energy efficiency measures on their own after the effective date of the new rates, will see  
17 lower bills.

18           Q.     On page 5 lines 8 -9 in his surrebuttal testimony, Mr. Davis states that Net  
19 Base Fuel Costs are excluded from his adjustment, yet he did not describe how Ameren  
20 Missouri intended to accomplish this. Did he exclude Net Base Fuel Costs from his  
21 adjustment?

22           A.     Mr. Davis removes Net Base Fuel costs (i.e., the fuel and purchased power  
23 costs net of off-system sales revenues) in his analysis using the fuel adjustment clause NBFC

1 | rate<sup>1</sup> and the amount of reduction in billing units Ameren Missouri estimated would be  
2 | achieved through its programs.

3 | Q. If the Commission orders a reduction in billing units, is what Mr. Davis did the  
4 | proper way to remove Net Base Fuel Costs?

5 | A. No, it is not. Ameren Missouri's method does not remove enough of the  
6 | variable components of Net Base Fuel Cost. The NBFC rate is an average fuel and purchased  
7 | power cost net of off-system sales revenues divided by the hourly retail load requirements at  
8 | transmission. Because power plants are dispatched from least cost to highest cost (taking into  
9 | account generation and system constraints) the marginal fuel cost is higher than the average  
10 | fuel cost. Any reduction in usage due to energy efficiency would be at the margin. Therefore  
11 | a reduction in usage due to energy efficiency should reduce the need for the fuel cost of the  
12 | most costly generation in that hour, not the average fuel cost for the hour. In addition, the  
13 | reduction in usage would result in more generation being available to make off-system sales  
14 | thereby reducing the net fuel costs even more.

15 | Q. Is there a better way to estimate the reduction in Net Base Fuel costs?

16 | A. Yes. A better method would be to run the fuel and purchased power model  
17 | with the hourly loads reduced by the sum of the billing unit reduction plus losses to  
18 | transmission.

19 | Q. Did Staff estimate the reduction in Net Base Fuel Costs using its fuel model?

20 | A. No, it did not. Different energy efficiency programs impact usage at different  
21 | times of the day, season and year. For example, a program designed to increase the use of  
22 | energy efficient air conditioners would impact usage in the summer, but not in the winter. A

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<sup>1</sup> NBFC rates are set in a rate case as the rate case fuel and purchased power costs net of off-system sales revenues divided by the hourly retail load requirements at transmission.

1 program that provides incentives for energy efficient lighting for residential customers would  
2 have less impact in the summer, when more natural lighting is used, than in the winter.  
3 Hourly impacts are estimated as part of the demand-side resource and integrated resource  
4 planning process. To properly estimate the impact of the energy efficiency billing unit  
5 reductions, the hourly reductions should be used to reduce the loads input into the fuel model.  
6 Due to Staff's work load and that Mr. Davis did not propose his method until he filed  
7 surrebuttal testimony, Staff did not have the time to run the fuel and purchased power model  
8 with the hourly loads reduced by the sum of the billing unit reduction plus losses to  
9 transmission to estimate an appropriate reduction in Net Base Fuel Costs.

10 Q. Would adjusting billing units as Ameren Missouri proposes also affect the  
11 NBFC rates in Ameren Missouri's fuel adjustment clause?

12 A. Yes, it would. The fuel adjustment clause NBFC rates should also be  
13 recalculated with the reduced billing units and Net Base Fuel Costs calculated using the fuel  
14 model.

15 Q. With Ameren Missouri's billing unit adjustment proposal for energy-efficiency  
16 programs, are there also different resulting rates for customers who opt-out of the energy  
17 efficiency programs as the Missouri Energy Efficiency Investment Act—MEEIA (Section  
18 393.1075.7, RSMo.) allows?

19 A. Because Mr. Davis only provided a sample calculation for the residential class,  
20 whose customers cannot opt-out of demand-side charges, I do not know how Ameren  
21 Missouri would handle the provision in MEEIA that requires that none of the costs or other  
22 charges implemented in accordance with MEEIA be assigned to these customers.



1 Q. Is an increase in rates as a result in a reduction in billing units a "charge" to  
2 recover demand-side program costs?

3 A. At this time Staff does not have a position regarding whether or not the  
4 increased rates due to a reduction in billing units is a "demand-side cost" or a "charge." If  
5 Ameren Missouri filed for cost recovery under MEEIA in a separate case as recommended by  
6 Staff, then all parties would have a chance to provide input on such questions. Since Ameren  
7 Missouri first presented its position in its rebuttal case and only provided a sample of how the  
8 new rates were calculated in its surrebuttal position, Staff and other parties to this case have  
9 not had much opportunity to develop their positions.

10 Q. Is the increase in revenues sought by Ameren Missouri through reduced billing  
11 units the only demand-side cost to Ameren Missouri customers in this case?

12 A. No, it is not. There is an "Energy Efficiency charge" included on Ameren  
13 Missouri's proposed tariff sheets for all of its rate classes except for the lighting and large  
14 transmission classes that Ameren Missouri filed with its minimum filing requirements in this  
15 case. This energy efficiency charge, given the current billing determinants, results in an  
16 estimated recovery by Ameren Missouri of an additional \$19 million annually.

17 Q. Does Staff have other concerns regarding Ameren Missouri's proposal to  
18 reduce billing determinants?

19 A. Yes. The proposed kWh reductions are based on Ameren Missouri's forecast  
20 of energy savings from its demand-side programs. Staff witness John A. Rogers, in his  
21 supplemental testimony, describes the concerns that Staff has regarding Ameren Missouri's  
22 estimation of program savings.

1           In addition to this concern, Ameren Missouri is using forecasted energy savings.  
2 Rates are set on historical, not forecasted, costs. If the Commission chooses to adopt Ameren  
3 Missouri's method of reducing billing units, the reduction should be based on revenues not  
4 billed due to the energy savings since the last rate case.

5           Finally, Staff is concerned with Mr. Davis' proposal for a billing unit correction in  
6 Ameren Missouri's next general rate case. Mr. Davis provides no details as to how this is to  
7 be done other than the "correction" should be returned or collected over the first twelve  
8 months that new rates are in effect using phased rates. While theoretically this may be  
9 appealing, the actual implementation would be difficult. First, the Commission would have to  
10 determine exactly what the energy savings were between this rate case and the next one.  
11 Then it would have to determine how much additional revenue was billed due to the change in  
12 billing determinants. A decision would need to be made as to whether or not the additional  
13 revenue provided enough revenue to cover the "throughput disincentive." Only then could an  
14 amount be "returned or collected." This would occur while the traditional rate case issues  
15 were also being addressed in the case.

16           Q.     Does this conclude your supplemental testimony?

17           A.     Yes, it does.