

Exhibit No.:  
Issues: Cost of Service, Revenue Allocation,  
and Rate Design  
Witness: Maurice Brubaker  
Type of Exhibit: Direct Testimony  
Sponsoring Party: Missouri Industrial Energy Consumers  
Case No.: ER-2011-0028  
Date Testimony Prepared: February 10, 2011

**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

\_\_\_\_\_)  
**In the Matter of Union Electric** )  
**Company, d/b/a Ameren Missouri's** ) **Case No. ER-2011-0028**  
**Tariff to Increase Its Annual** ) **Tariff No. YE-2011-0116**  
**Revenues for Electric Service** )  
\_\_\_\_\_)

Direct Testimony and Schedules of

**Maurice Brubaker**

**on Cost of Service, Revenue  
Allocation and Rate Design**

On behalf of

**Missouri Industrial Energy Consumers**

February 10, 2011



Project 9371









1 **INTRODUCTION AND SUMMARY**

2 **Q WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

3 A The purpose of my testimony is to present the results of an electric system class cost  
4 of service study for Ameren Missouri, to explain how the study should be used, and to  
5 recommend an appropriate allocation of any rate increase.

6 I also comment on Ameren Missouri's fuel adjustment clause ("FAC") and  
7 make suggestions for monitoring generation unit performance.

8 **Q HOW IS YOUR TESTIMONY ORGANIZED?**

9 A First, I present an overview of cost of service principles and concepts. This includes  
10 a description of how electricity is produced and distributed as well as a description of  
11 the various functions that are involved; namely, generation, transmission and  
12 distribution. This is followed by a discussion of the typical classification of these  
13 functionalized costs into demand-related costs, energy-related costs and  
14 customer-related costs.

15 With this as a background, I then explain the various factors which should be  
16 considered in determining how to allocate these functionalized and classified costs  
17 among customer classes.

18 Finally, I present the results of the detailed cost of service analysis for Ameren  
19 Missouri. This cost study indicates how individual customer class revenues compare  
20 to the costs incurred in providing service to them. This analysis and interpretation is  
21 then followed by recommendations with respect to the alignment of class revenues  
22 with class costs.

1 Q PLEASE SUMMARIZE YOUR TESTIMONY AND RECOMMENDATIONS.

2 A My testimony and recommendations may be summarized as follows:

- 3 1. Class cost of service is the starting point and most important guideline for  
4 establishing the level of rates charged to customers.
- 5 2. Ameren Missouri exhibits significant summer peak demands as compared to  
6 demands in other months.
- 7 3. There are two generally accepted methods for allocating generation and  
8 transmission fixed costs that would apply to Ameren Missouri. These are the  
9 coincident peak methodology and the average and excess ("A&E") methodology.
- 10 4. Ameren Missouri utilizes, for its generation allocation, the A&E method using four  
11 class non-coincident peaks. While I believe use of the two predominant summer  
12 peaks is more conceptually correct, in this case the difference between the two  
13 allocation factors for every class is insignificant. To minimize differences, I have  
14 elected to use Ameren Missouri's generation allocation factor.
- 15 5. The A&E methodology appropriately considers both class maximum demands  
16 and class load factor, as well as diversity between class peaks and the system  
17 peak.
- 18 6. In order to better reflect cost-causation, I have changed Ameren Missouri's  
19 treatment of production non-fuel O&M expenses. Ameren Missouri allocates a  
20 significant proportion of non-fuel production O&M expense on energy. Since  
21 these expenses are more a function of the existence of the generation facilities  
22 and the passage of time, I have instead classified and allocated them as a  
23 demand-related cost.
- 24 7. I have calculated income taxes at current rates based on the taxable income of  
25 each class.
- 26 8. The results of my class cost of service study with the change in methodology that  
27 I have applied are summarized on Schedule MEB-COS-4. Schedule  
28 MEB-COS-5 shows the adjustments required to move each class to its cost of  
29 service on a revenue neutral basis at present rates.
- 30 9. A modest realignment of class revenues to move them closer to costs should be  
31 implemented, as presented on Schedule MEB-COS-6.
- 32 10. In light of the disturbing degradation in the performance of Ameren Missouri's  
33 major generating units, the Commission should require annual reporting of key  
34 performance indicators, such as heat rate, equivalent availability factor and  
35 equivalent forced outage rate. This is discussed in detail in the testimony of Jim  
36 Dauphinais that is being filed concurrently.
- 37 11. The Commission should carefully monitor these parameters and remain open to  
38 taking corrective action if necessary. Such corrective action could include a

Maurice Brubaker  
Page 3

1 modification of the sharing percentage in the FAC or a suspension of the FAC in  
2 its entirety.

### 3 **COST OF SERVICE PROCEDURES**

#### 4 **Overview**

5 **Q PLEASE DESCRIBE THE COST ALLOCATION PROCESS.**

6 A The objective of *cost allocation* is to determine what proportion of the utility's total  
7 revenue requirement should be recovered from each customer class. As an aid to  
8 this determination, cost of service studies are usually performed to determine the  
9 portions of the total costs that are incurred to serve each customer class. The cost of  
10 service study identifies the cost responsibility of the class and provides the foundation  
11 for revenue allocation and rate design. For many regulators, cost-based rates are an  
12 expressed goal. To better interpret cost allocation and cost of service studies, it is  
13 important to understand the production and delivery of electricity.

#### 14 **Electricity Fundamentals**

15 **Q IS ELECTRICITY SERVICE LIKE ANY OTHER GOODS OR SERVICES?**

16 A No. Electricity is different from most other goods or services purchased by  
17 consumers. For example:

- 18 ▪ It cannot be stored; must be delivered as produced;
- 19 ▪ It must be delivered to the customer's home or place of business;
- 20 ▪ The delivery occurs instantaneously when and in the amount needed by the  
21 customer; and
- 22 ▪ Both the total quantity used (energy or kWh) by a customer and the rate of use  
23 (demand or kW) are important.



1           These unique characteristics differentiate electric utilities from other service-related  
2 industries.

3           The service provided by electric utilities is multi-dimensional. First, unlike  
4 most vital services, electricity must be delivered at the place of consumption – homes,  
5 schools, businesses, factories – because this is where the lights, appliances,  
6 machines, air conditioning, etc. are located. Thus, every utility must provide a path  
7 through which electricity can be delivered regardless of the customer's **demand** and  
8 **energy** requirements at any point in time.

9           Even at the same location, electricity may be used in a variety of applications.  
10 Homeowners, for example, use electricity for lighting, air conditioning, perhaps  
11 heating, and to operate various appliances. At any instant, several appliances may  
12 be operating (e.g., lights, refrigerator, TV, air conditioning, etc.). Which appliances  
13 are used and when reflects the second dimension of utility service – the rate of  
14 electricity use or **demand**. The demand imposed by customers is an especially  
15 important characteristic because the maximum demands determine how much  
16 capacity the utility is obligated to provide.

17           Generating units, transmission lines and substations and distribution lines and  
18 substations are rated according to the maximum demand that can safely be imposed  
19 on them. (They are not rated according to average annual demand; that is, the  
20 amount of energy consumed during the year divided by 8,760 hours.) On a hot  
21 summer afternoon when customers demand 9,000 megawatts (“MW”) of electricity,  
22 the utility must have at least 9,000 MW of generation, plus additional capacity to  
23 provide adequate reserves, so that when a consumer flips the switch, the lights turn  
24 on, the machines operate and air conditioning systems cool our homes, schools,  
25 offices, and factories.

1           Satisfying customers' demand for electricity over time – providing **energy** – is  
2 the third dimension of utility service. It is also the dimension with which many people  
3 are most familiar, because people often think of electricity simply in terms of  
4 kilowatthours (“kWh”). To see one reason why this isn't accurate, consider a more  
5 familiar commodity – tomatoes, for example.

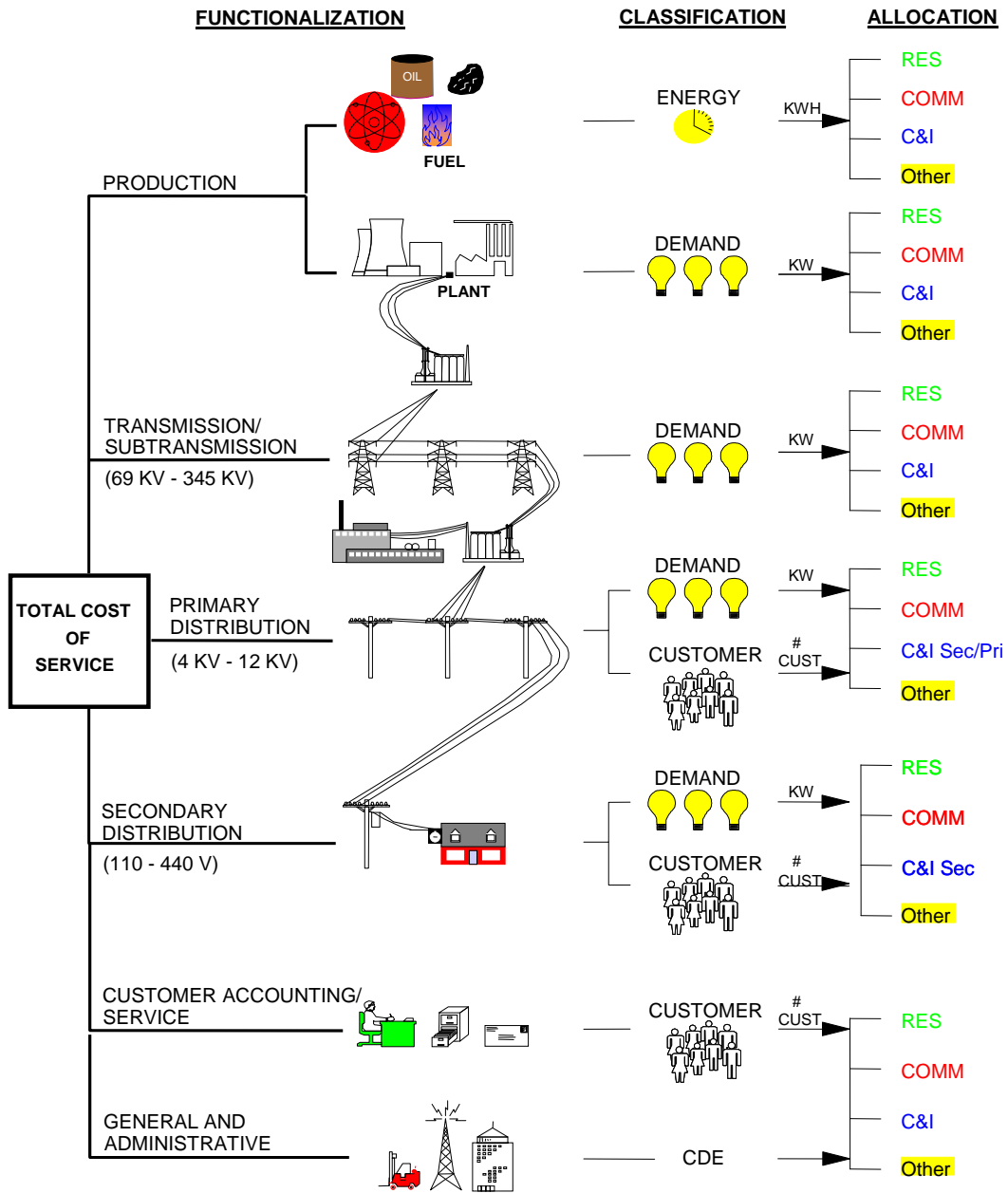
6           The tomatoes we buy at the supermarket for about \$2.00 a pound might  
7 originally come from Florida where they are bought for about 30¢ a pound. In  
8 addition to the cost of buying them at the point of production, there is the cost of  
9 bringing them to the state of Missouri and distributing them in bulk to local  
10 wholesalers. The cost of transportation, insurance, handling and warehousing must  
11 be added to the original 30¢ a pound. Then they are distributed to neighborhood  
12 stores, which adds more handling costs as well as the store's own costs of light, heat,  
13 personnel and rent. Shoppers can then purchase as many or few tomatoes as they  
14 desire at their convenience. In addition, there are losses from spoilage and damage  
15 in handling. These "line losses" represent an additional cost which must be  
16 recovered in the final price. What we are really paying for at the store is not only the  
17 vegetable itself, but the service of having it available in convenient amounts and  
18 locations. If we took the time and trouble (and expense) to go down to the wholesale  
19 produce distributor, the price would be less. If we could arrange to buy them in bulk  
20 in Florida, they would be even cheaper.

21           As illustrated in Figure 1, electric utilities are similar, except that in most cases  
22 (including Missouri), a single company handles everything from production on down  
23 through wholesale (bulk and area transmission) and retail (distribution to homes and  
24 stores). The crucial difference is that, unlike producers and distributors of tomatoes,  
25 electric utilities have an obligation to provide continuous reliable service. The

1 obligation is assumed in return for the exclusive right to serve all customers located  
2 within its territorial franchise. In addition to satisfying the energy (or kWh)  
3 requirements of its customers, the obligation to serve means that the utility must also  
4 provide the necessary facilities to attach customers to the grid (so that service can be  
5 used at the point where it is to be consumed) and these facilities must be responsive  
6 to changes in the kilowatt (“kW”) demands whenever they occur.

# Figure 1

## PRODUCTION AND DELIVERY OF ELECTRICITY



## A CLOSER LOOK AT THE COST OF SERVICE STUDY

1  
2 **Q PLEASE EXPLAIN HOW A COST OF SERVICE STUDY IS PREPARED.**

3 A To the extent possible, the unique characteristics that differentiate electric utilities  
4 from other service-related industries should be recognized in determining the cost of  
5 providing service to each of the various customer classes. The basic procedure for  
6 conducting a class cost of service study is simple. In an allocated cost of service  
7 study, we identify the different types of costs (**functionalization**), determine their  
8 primary causative factors (**classification**) and then apportion each item of cost  
9 among the various rate classes (**allocation**). Adding up the individual pieces gives  
10 the total cost for each customer class.

### Functionalization

11  
12 **Q PLEASE EXPLAIN FUNCTIONALIZATION.**

13 A Identifying the different levels of operation is a process referred to as  
14 **functionalization**. The utility's investment and expenses are separated by function  
15 (production, transmission, etc.). To a large extent, this is done in accordance with the  
16 Uniform System of Accounts.

17 Referring to Figure 1, at the top level there is generation. The next level is the  
18 extra high voltage transmission and subtransmission system (69,000 volts to 345,000  
19 volts). Then the voltage is stepped down to primary voltage levels of distribution –  
20 4,160 to 12,000 volts. Finally, the voltage is stepped down by pole and pad-mounted  
21 transformers at the "secondary" level to 110-440 volts used to serve homes,  
22 barbershops, light manufacturing and the like. Additional investment and expenses  
23 are required to serve customers at secondary voltages, compared to the cost of  
24 serving customers at higher voltage.

1           Each additional transformation, thus, requires additional investment, additional  
2 expenses and results in some additional electrical losses. To say that "a kilowatthour  
3 is a kilowatthour" is like saying that "a tomato is a tomato." It's true in one sense, but  
4 when you buy a kWh at home you're not only buying the energy itself but also the  
5 service of having it delivered right to your doorstep in convenient form. Those who  
6 buy at the bulk or wholesale level – like Large Transmission and Large Primary  
7 service customers – pay less because some of the expenses to the utility are  
8 avoided. (Actually, the expenses are borne by the customer who must invest in his  
9 own transformers and other equipment, or pay separately for some services.)

## 10 **Classification**

### 11 **Q     WHAT IS CLASSIFICATION?**

12 A     Once the costs have been functionalized, the next step is to identify the primary  
13 causative factor (or factors). This step is referred to as **classification**. Costs are  
14 classified as demand-related, energy-related or customer-related.

15           Looking at the production function, the amount of production plant capacity  
16 required is primarily determined by the peak rate of usage during the year (i.e., the  
17 demand). If the utility anticipates a peak demand of 9,000 MW – it must install and/or  
18 contract for enough generating capacity to meet that anticipated demand (plus some  
19 reserve to compensate for variations in load and capacity that is temporarily  
20 unavailable).

21           There will be many hours during the day or during the year when not all of this  
22 generating capacity will be needed. Nevertheless, it must be in place to meet the  
23 peak demands on the system. Thus, production plant investment is usually classified  
24 to demand. **Regardless of how production plant investment is classified, the**

1       **associated capital costs** (which include return on investment, depreciation, fixed  
2       operation and maintenance expenses, taxes and insurance) **are fixed**; that is, **they**  
3       **do not vary with the amount of kWhs generated and sold.** These fixed costs are  
4       determined by the amount of capacity (i.e., kW) which the utility must install to satisfy  
5       its obligation-to-serve requirement.

6               On the other hand, it is easy to see that the amount of fuel burned – and  
7       therefore the amount of fuel expense – is closely related to the amount of energy  
8       (number of kWhs) that customers use. Therefore, fuel expense is an energy-related  
9       cost.

10              Most other O&M expenses are fixed and therefore are classified as  
11       demand-related. Variable O&M expenses are classified as energy-related.  
12       Demand-related and energy-related types of operating costs are not impacted by the  
13       number of customers served.

14              Customer-related costs are the third major category. Obvious examples of  
15       customer-related costs include the investment in meters and service drops (the line  
16       from the pole to the customer's facility or house). Along with meter reading, posting  
17       accounts and rendering bills, these "customer costs" may be several dollars per  
18       customer, per month. Less obvious examples of customer-related costs may include  
19       the investment in other distribution accounts.

20              A certain portion of the cost of the distribution system – poles, wires and  
21       transformers – is required simply to attach customers to the system, regardless of  
22       their demand or energy requirements. This minimum or "skeleton" distribution system  
23       may also be considered a customer-related cost since it depends primarily on the  
24       number of customers, rather than demand or energy usage.

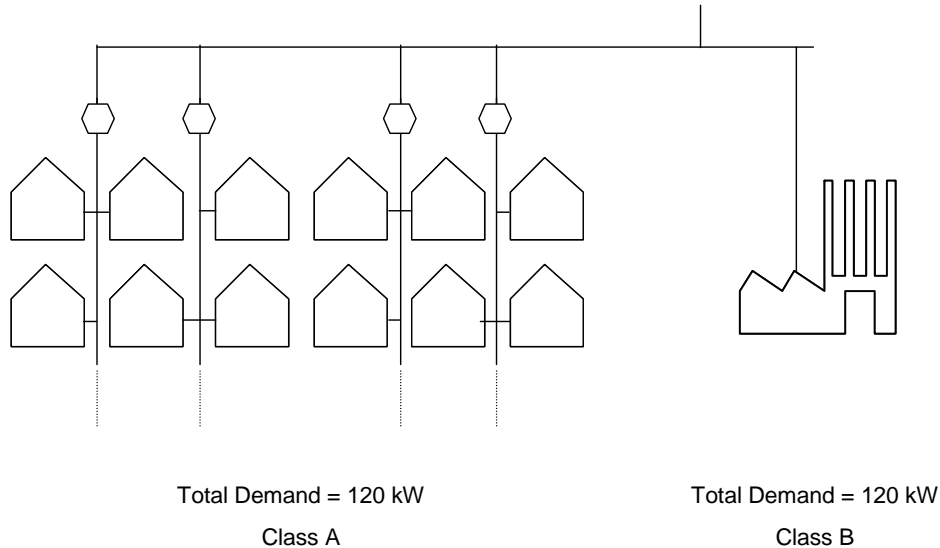
1           Figure 2, as an example, shows the distribution network for a utility with two  
2 customer classes, A and B. The physical distribution network necessary to attach  
3 Class A is designed to serve 12 customers, each with a 10-kW load, having a total  
4 demand of 120 kW. This is the same total demand as is imposed by Class B, which  
5 consists of a single customer. Clearly, a much more extensive distribution system is  
6 required to attach the multitude of small customers (Class A), than to attach the single  
7 larger customer (Class B), despite the fact that the total demand of each customer  
8 class is the same.

9           Even though some additional customers can be attached without additional  
10 investment in some areas of the system, it is obvious that attaching a large number of  
11 customers requires investment in facilities, not only initially but on a continuing basis  
12 as a result of the need for maintenance and repair.

13           To the extent that the distribution system components must be sized to  
14 accommodate additional load beyond the minimum, the balance is a demand-related  
15 cost. Thus, the distribution system is classified as both demand-related and  
16 customer-related.



**Figure 2**  
**Classification of Distribution Investment**



1 **Demand vs. Energy Costs**

2 **Q WHAT IS THE DISTINCTION BETWEEN DEMAND-RELATED COSTS AND**  
3 **ENERGY-RELATED COSTS?**

4 **A** The difference between demand-related and energy-related costs explains the fallacy  
5 of the argument that "a kilowatthour is a kilowatt-hour." For example, Figure 3  
6 compares the electrical requirements of two customers, A and B, each using 100-watt  
7 light bulbs.

8 Customer A turns on all five of his/her 100-watt light bulbs for two hours.  
9 Customer B, by contrast, turns on two light bulbs for five hours. Both customers use  
10 the same amount of energy – 1,000 watt-hours or 1 kWh. However, Customer A  
11 utilized electric power at a higher rate, 500 watts per hour or 0.5 kW, than  
12 Customer B who demanded only 200 watts per hour or 0.2 kW.

13 Although both customers had precisely the same kWh energy usage,  
14 Customer A's kW demand was 2.5 times Customer B's. Therefore, the utility must

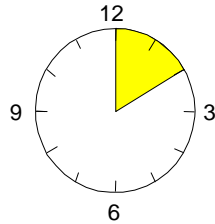
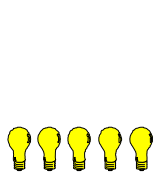
1 install 2.5 times as much generating capacity for Customer A as for Customer B. The  
2 cost of serving Customer A, therefore, is much higher.

3 **Q DOES THIS HAVE ANYTHING TO DO WITH THE CONCEPT OF LOAD FACTOR?**

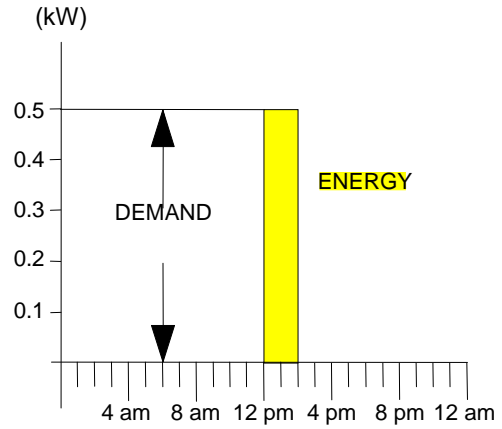
4 A Yes. Load factor is an expression of how uniformly a customer uses energy. In our  
5 example of the light bulbs, the load factor of Customer B would be higher than the  
6 load factor of Customer A because the use of electricity was spread over a longer  
7 period of time, and the number of kWhs used for each kW of demand imposed on the  
8 system is much greater in the case of Customer B.

# Figure 3 DEMAND VS. ENERGY

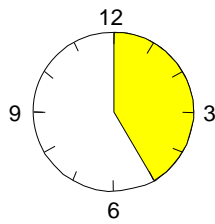
## CUSTOMER A



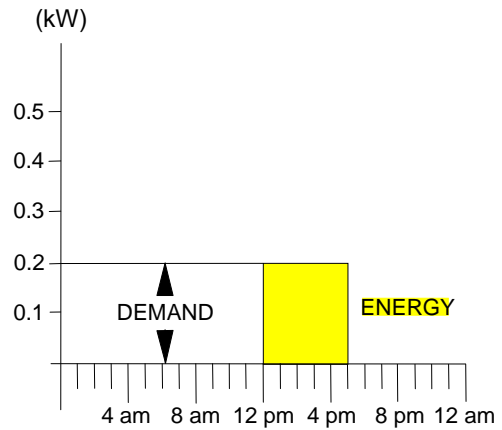
**ENERGY:** 500 watts x 2 hours = 1,000 watthours = 1.0 kWh  
**DEMAND:** 500 watts = 0.5 kW



## CUSTOMER B



**ENERGY:** 200 watts x 5 hours = 1,000 watthours = 1.0 kWh  
**DEMAND:** 200 watts = 0.2 kW



1           Mathematically, load factor is the average rate of use divided by the peak rate  
2 of use. A customer with a higher load factor is less expensive to serve, on a per kWh  
3 basis, than a customer with a low load factor, irrespective of size.

4           Consider also the analogy of a rental car which costs \$40/day and 20¢/mile. If  
5 Customer A drives only 20 miles a day, the average cost will be \$2.20/mile. But for  
6 Customer B, who drives 200 miles a day, spreading the daily rental charge over the  
7 total mileage gives an average cost of 40¢/mile. For both customers, the fixed cost  
8 rate (daily charge) and variable cost rate (mileage charge) are identical, but the  
9 average total cost per mile will differ depending on how intensively the car is used.  
10 Likewise, the average cost per kWh will depend on how intensively the generating  
11 plant is used. A low load factor indicates that the capacity is idle much of the time; a  
12 high load factor indicates a more steady rate of usage. Since industrial customers  
13 generally have higher load factors than residential or commercial customers, they are  
14 less costly to serve on a per-kWh basis. Again, we can say that "a kilowatthour is a  
15 kilowatthour" as to energy content, but there may be a big difference in how much  
16 generating plant investment is required to convert the raw fuel into electric energy.

## 17 **Allocation**

### 18 **Q     WHAT IS ALLOCATION?**

19 **A**     The final step in the cost of service analysis is the **allocation** of the costs to the  
20 customer classes. Demand, energy and customer allocation factors are developed to  
21 apportion the costs among the customer classes. Each factor measures the  
22 customer class's contribution to the system total cost.

23           For example, we have already determined that the amount of fuel expense on  
24 the system is a function of the energy required by customers. In order to allocate this

1 expense among classes, we must determine how much each class contributes to the  
 2 total kWh consumption and we must recognize the line losses associated with  
 3 transporting and distributing the kWh. These contributions, expressed in percentage  
 4 terms, are then multiplied by the expense to determine how much expense should be  
 5 attributed to each class. The energy allocators for Ameren Missouri's retail  
 6 customers are shown in Table 1.

| <b>TABLE 1</b>                         |  |                                     |
|--|--|-------------------------------------|
| <b><u>Energy Allocation Factor</u></b> |  |                                     |
| <b><u>Rate Class</u></b>               | <b><u>Energy<br/>Generated<br/>(MWh)</u></b> | <b><u>Allocation<br/>Factor</u></b> |
|  | <b>(1)</b>                                   | <b>(2)</b>                          |
| Residential                            | 14,913,623                                   | 37.64%                              |
| Small GS                               | 3,831,748                                    | 9.67%                               |
| Large GS/Small Primary                 | 12,500,133                                   | 31.55%                              |
| Large Primary                          | 3,958,728                                    | 9.99%                               |
| Large Transmission                     | 4,170,226                                    | 10.52%                              |
| Lighting                               | <u>250,005</u>                               | <u>0.63%</u>                        |
| Total                                  | 39,624,464                                   | 100.00%                             |

7 For demand-related costs, we construct an allocation factor by looking at the  
 8 important class demands. For purposes of discussion, Table 2 shows the calculation  
 9 of the factor for Ameren Missouri. (The selection and derivation of this factor is  
 10 discussed in more detail on pages 19 to 25.)

11 **Q DO THE RELATIONSHIPS BETWEEN THE ENERGY ALLOCATION FACTORS**  
 12 **AND THE DEMAND ALLOCATION FACTORS TELL US ANYTHING ABOUT**  
 13 **CLASS LOAD FACTOR?**

14 **A** Yes. Recall that load factor is a measure of the consistency or uniformity of use of  
 15 demand. Accordingly, customer classes' whose energy allocation factor is a larger

1 percentage than their demand allocation have an above-average load factor, while  
 2 customers whose demand allocation factor is higher than their energy allocation  
 3 factor have a below-average load factor.

4 These relationships are merely the result of differences in how electricity is  
 5 used. In the case of Ameren Missouri (as is true for essentially every other utility) the  
 6 large customer classes have above-average load factors, while the Residential and  
 7 Small GS customers have below-average load factors. (Load factors are presented  
 8 in Table 4, which is discussed later.)

**TABLE 2**  
**Demand Allocation Factor**  
**Production System**

| <u>Rate Class</u>      | <u>Production<br/>A&amp;E<br/>(MW)</u><br>(1) | <u>Allocation<br/>Factor<sup>2</sup></u><br>(2) |
|------------------------|---|---|
| Residential            | 3,710   | 46.68%  |
| Small GS               | 867   | 10.91%  |
| Large GS/Small Primary | 2,258   | 28.41%  |
| Large Primary          | 568   | 7.14%   |
| Large Transmission     | 487   | 6.13%   |
| Lighting               | <u>58</u>                                     | <u>0.74%</u>                                    |
| Total                  | 7,948 <sup>1</sup>                            | 100.00%   |

Notes:  
<sup>1</sup>The 7,948 MW is the MO Jurisdictional peak.  
<sup>2</sup>Column (2) is the A&E-4NCP allocation factor.

1 Q THE RATES, WHEN EXPRESSED PER KWH, CHARGED TO SMALL PRIMARY,  
 2 LARGE PRIMARY AND LARGE TRANSMISSION CUSTOMERS ARE  
 3 CURRENTLY LESS THAN THE RATES CHARGED TO OTHER CUSTOMERS.  
 4 DOES THE COST OF SERVICE STUDY INDICATE THAT THIS IS  
 5 APPROPRIATE?

6 A Yes. Table 3 shows the cost-based revenue requirement for each customer class.  
 7 Note that the cost, per unit, to serve the Small Primary, Large Primary and Large  
 8 Transmission customers is significantly less than the cost to serve the other  
 9 customers. In fact, similar relationships hold true on any electric utility system.

| <u>Rate Class</u>      | <u>Cost-Based Revenue</u><br>(1) | <u>Energy Sales (MWh)</u><br>(2) | <u>Cost per kWh</u><br>(3) |
|------------------------|----------------------------------|----------------------------------|----------------------------|
| Residential            | \$ 1,200,195                     | 13,822,362                       | 8.68¢                      |
| Small GS               | 259,679                          | 3,551,371                        | 7.31                       |
| Large GS/Small Primary | 637,637                          | 11,695,531                       | 5.45                       |
| Large Primary          | 168,868                          | 3,808,061                        | 4.43                       |
| Large Transmission     | 132,452                          | 4,119,018                        | 3.22                       |
| Lighting               | <u>38,909</u>                    | <u>231,712</u>                   | <u>16.79</u>               |
| Total                  | \$ 2,437,740                     | 37,228,054                       | 6.55¢                      |

10 As previously discussed, the reasons for these differences are: (1) load factor;  
 11 (2) delivery voltage; and (3) size.

12 The Primary and Transmission customers have higher load factors, as shown  
 13 in Table 4. Consequently, the capital costs related to production and transmission  
 14 are spread over a greater number of kWhs than is the case for lower load factor  
 15 classes, resulting in lower costs per kWh and hence lower rates.

**TABLE 4**  
**Comparative Load Factors**

| <u>Rate Class</u>      | <u>Energy<br/>Generated<br/>(MWh)</u><br>(1) | <u>Production<br/>A&amp;E<br/>(MW)</u><br>(2) | <u>Load Factor</u><br>(3) |
|------------------------|--|---|---------------------------|
| Residential            | 14,913,623                                   | 3,710   | 46%                       |
| Small GS               | 3,831,748                                    | 867   | 50%                       |
| Large GS/Small Primary | 12,500,133                                   | 2,258   | 63%                       |
| Large Primary          | 3,958,728                                    | 568   | 80%                       |
| Large Transmission     | 4,170,226                                    | 487   | 98%                       |
| Lighting               | <u>250,005</u>                               | <u>58</u>                                     | <u>49%</u>                |
| Total                  | 39,624,464                                   | 7,948   | 57%                       |

1 In addition, these customers take service at a higher voltage level. This means that  
 2 they do not cause the costs associated with lower voltage distribution. Losses  
 3 incurred in providing service also are lower. Table 5 lists voltage level and composite  
 4 loss percentages for the various classes. Losses are 7.89% at the secondary level,  
 5 3.96% at the primary level and 1.24% at the transmission level.

**TABLE 5**  
**Energy Loss Factors**

| <u>Rate Class</u>      | <u>Percent of Sale<br/>By Voltage Level</u> |                                    | <u>Composite Loss<br/>Percentage</u><br>(3) |
|------------------------|---|------------------------------------|---|
|                        | <u>Secondary</u><br>(1)                     | <u>Primary &amp; Higher</u><br>(2) |   |
| Residential            | 100%  | 0%                                 | 7.89%                                       |
| Small GS               | 100%  | 0%                                 | 7.89%                                       |
| Large GS/Small Primary | 67%   | 33%                                | 6.88%                                       |
| Large Primary          | 0%  | 100%                               | 3.96%                                       |
| Large Transmission     | 0%  | 100%                               | 1.24%                                       |
| Lighting               | 100%  | 0%                                 | 7.89%                                       |

Source: Ameren Missouri Cost of Service Study, A.F. 11 Worksheet.



1           The per capita sales to the Primary and Transmission classes are also much  
 2 greater than to the other classes, as shown in Table 6. Ameren Missouri sells over  
 3 52 million kWhs per Large Primary customer, but only about 13,245 kWhs per  
 4 Residential customer, or 3,900 times more per capita, as shown in Table 6. The  
 5 customer-related costs to serve Large Primary customers are not 3,900 times the  
 6 customer-related costs to serve the Residential customer.

| <b><u>Rate Class</u></b> | <b><u>Energy Sold<br/>(MWh)</u></b><br><b>(1)</b> | <b><u>Number of<br/>Customers</u></b><br><b>(2)</b> | <b><u>KWh Sold<br/>per Customer</u></b><br><b>(3)</b> |
|--------------------------|---|---|---|
| Residential              | 13,822,362  | 1,043,559   | 13,245  |
| Small GS                 | 3,551,371   | 143,745   | 24,706  |
| Large GS/Small Primary   | 11,695,531  | 10,775  | 1,085,386   |
| Large Primary            | 3,808,061   | 73  | 52,165,216  |
| Large Transmission       | 4,119,018   | 1   | 4,119,017,867   |
| Lighting                 | <u>231,712</u>                                    | <u>55,793</u>                                       | <u>4,153</u>  |
| Total                    | 37,228,054  | 1,253,946   | 29,689  |

7           These differences in the service and usage characteristics – load factor,  
 8 delivery voltage and size – result in a lower per unit cost to serve customers operating  
 9 at a higher load factor, taking service at higher delivery voltage and purchasing a  
 10 larger quantity of power and energy at a single delivery point.

11 **Utility System Characteristics**

12 **Q    WHAT IS THE IMPORTANCE OF UTILITY SYSTEM LOAD CHARACTERISTICS?**

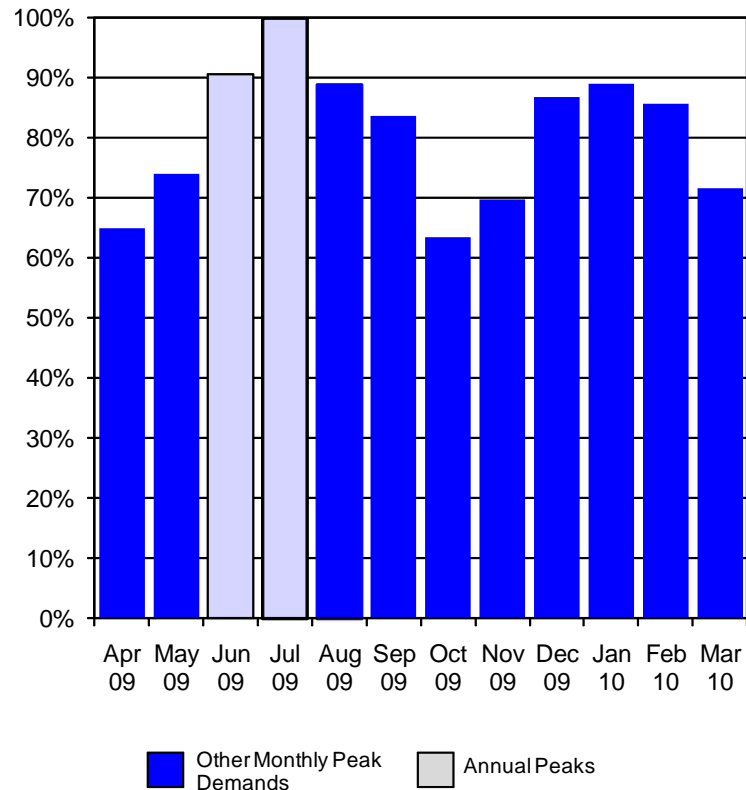
13 **A**Utility system load characteristics are an important factor in determining the specific  
 14 method which should be employed to allocate fixed, or demand-related costs on a  
 15 utility system. The most important characteristic is the annual load pattern of the

1 utility. These characteristics for Ameren Missouri are shown on Schedule  
2 MEB-COS-1. For convenience, it is also shown here as Figure 4.

## Figure 4

### AmerenUE

**Analysis of Ameren's (Missouri) Monthly Peak Demands  
as a Percent of the Annual System Peak  
For the Test Year Ended March 2010**



3 This shows the monthly system peak demands for the test year used in the study.  
4 The highlighted bar shows the month in which the highest peak occurred.

5 This analysis shows that summer peaks dominate the Ameren Missouri  
6 system. (This same information is presented in tabular form on  
7 Schedule MEB-COS-2.) This clearly shows that the system peak occurred in July,  
8 and was substantially higher than the monthly peaks occurring in the other months.  
9 The June peak was the closest, at 91% of the annual peak. The peaks in August and

1 September were 11% and 16%, respectively, lower than the annual peak. These  
2 lower loads simply are not representative of peak making weather and use of these  
3 lower demands as part of the allocation factor could distort the allocations and  
4 under-allocate costs to the most temperature sensitive loads.

5 **Q WHAT CRITERIA SHOULD BE USED TO DETERMINE AN APPROPRIATE**  
6 **METHOD FOR ALLOCATING PRODUCTION AND TRANSMISSION CAPACITY**  
7 **COSTS AMONG THE VARIOUS CUSTOMER CLASSES?**

8 A The specific allocation method should be consistent with the principle of  
9 cost-causation; that is, the allocation should reflect the contribution of each customer  
10 class to the demands that caused the utility to incur capacity costs.

11 **Q WHAT FACTORS CAUSE ELECTRIC UTILITIES TO INCUR PRODUCTION AND**  
12 **TRANSMISSION CAPACITY COSTS?**

13 A As discussed previously, production and transmission plant must be sized to meet the  
14 maximum demand imposed on these facilities. Thus, an appropriate allocation  
15 method should accurately reflect the characteristics of the loads served by the utility.  
16 For example, if a utility has a high summer peak relative to the demands in other  
17 seasons, then production and transmission capacity costs should be allocated  
18 relative to each customer class's contribution to the summer peak demands. If a  
19 utility has predominant peaks in both the summer and winter periods, then an  
20 appropriate allocation method would be based on the demands imposed during both  
21 the summer and winter peak periods. For a utility with a very high load factor and/or  
22 a non-seasonal load pattern, then demands in all months may be important.

1 **Q** **WHAT DO THESE CONSIDERATIONS MEAN IN THE CONTEXT OF THE**  
2 **AMEREN MISSOURI SYSTEM?**

3 A As noted, the Ameren Missouri load pattern has predominant summer peaks. This  
4 means that these demands should be the primary ones used in the allocation of  
5 generation and transmission costs. Demands in other months are of much less  
6 significance, do not compel the addition of generation capacity to serve them and  
7 should not be used in determining the allocation of costs.

8 **Q** **WHAT SPECIFIC RECOMMENDATIONS DO YOU HAVE?**

9 A The two most predominantly used allocation methods in the industry are the  
10 coincident peak method and the A&E demand method.

11 The coincident method utilizes the demands of customer classes occurring at  
12 the time of the system peak or peaks selected for allocation. In the case of Ameren  
13 Missouri, this would be one or more peaks occurring during the summer.

14 **Q** **WHAT IS THE A&E METHOD?**

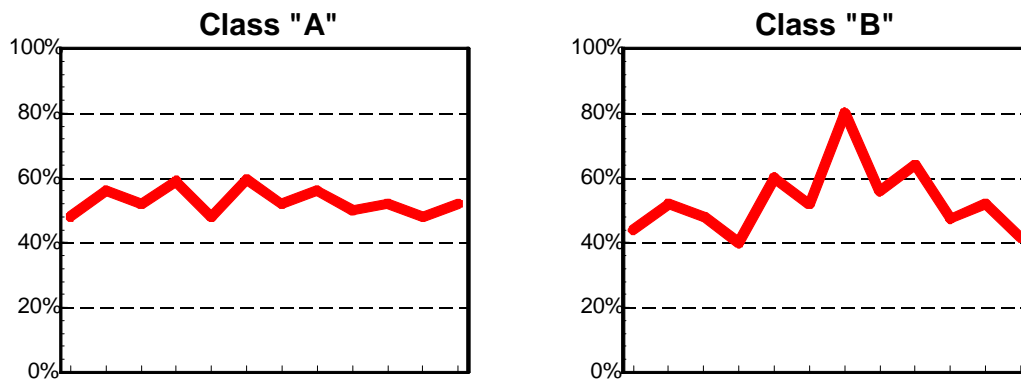
15 A The A&E method is one of a family of methods which incorporates a consideration of  
16 both the maximum rate of use (demand) and the duration of use (energy). As the  
17 name implies, A&E makes a conceptual split of the system into an “average”  
18 component and an “excess” component. The “average” demand is simply the total  
19 kWh usage divided by the total number of hours in the year. This is the amount of  
20 capacity that would be required to produce the energy if it were taken at the same  
21 demand rate each hour. The system “excess” demand is the difference between the  
22 system peak demand and the system average demand.

1 Under the A&E method, the average demand is allocated to classes in  
2 proportion to their average demand (energy usage). The difference between the  
3 system average demand and the system peak(s) is then allocated to customer  
4 classes on the basis of a measure that represents their "peaking" or variability in  
5 usage.<sup>1</sup>

6 **Q WHAT DO YOU MEAN BY VARIABILITY IN USAGE?**

7 A As an example, Figure 5 shows two classes that have different monthly usage  
8 patterns.

**Figure 5**  
**Load Patterns**



9 Both classes use the same total amount of energy and, therefore, have the same  
10 average demand. Class B, though, has a much greater maximum demand<sup>2</sup> than  
11 Class A. The greater maximum demand imposes greater costs on the utility system.  
12 This is because the utility must provide sufficient capacity to meet the projected

<sup>1</sup>NARUC Electric Utility Cost Allocation Manual, 1992, page 81.

<sup>2</sup>During any specified time period (e.g., month, year), the maximum demand of a class, regardless of when it occurs, is called the non-coincident peak demand.

1 maximum demands of its customers. There may also be higher costs due to the  
2 greater variability of usage of some classes. This variability requires that a utility  
3 cycle its generating units in order to match output with demand on a real time basis.  
4 The stress of cycling generating units up and down causes wear and tear on the  
5 equipment, resulting in higher maintenance cost.

6 Thus, the excess component of the A&E method is an attempt to allocate the  
7 additional capacity requirements of the system (measured by the system excess) in  
8 proportion to the "peakiness" of the customer classes (measured by the class excess  
9 demands).

10 **Q WHAT DEMAND ALLOCATION METHODOLOGY DO YOU RECOMMEND FOR**  
11 **GENERATION AND TRANSMISSION?**

12 **A** First, in order to reflect cost-causation the methodology must give predominant weight  
13 to loads occurring during the summer months. Loads during these months (the peak  
14 loads) are the primary driver that has caused, and continues to cause, the utility to  
15 expand its generation and transmission capacity, and therefore should be given  
16 predominant weight in the allocation of capacity costs.

17 Either a coincident peak allocation, using the demands during the peak  
18 summer months, or a version of an A&E allocation that uses class non-coincident  
19 peak loads occurring during the summer, would be most appropriate to reflect these  
20 characteristics. The results of both methods should be similar as long as only  
21 summer period peak loads are used. I will make my recommendations based on the  
22 A&E method. It considers the maximum class demands during the critical time  
23 periods, and is less susceptible to variations in the absolute hour in which peaks  
24 occur – producing a somewhat more stable result over time.

1           Based on test year load characteristics, I believe the most appropriate  
2 allocation would be A&E using June and July system peaks. The allocation factors  
3 for all classes under that approach are virtually identical to Ameren Missouri's  
4 A&E-4NCP allocation factors. (The Residential class is allocated slightly less costs  
5 with the A&E-4NCP method than with the A&E-2NCP method.) Because of the small  
6 difference, I have used Ameren Missouri's allocation factor in order to narrow the  
7 issues.

8           Schedule MEB-COS-3 shows the derivation of the demand allocation factor  
9 for generation using the four annual class non-coincident peaks.

10 **Q    REFERRING TO SCHEDULE MEB-COS-3, PLEASE EXPLAIN THE**  
11 **DEVELOPMENT OF THE A&E ALLOCATION FACTOR.**

12 **A**    Line 2 shows the average of the four non-coincident peaks for each class. Line 3  
13 shows the annual amount of energy required by each class. Line 4 is the average  
14 demand, in kW, which is determined by dividing the annual energy in line 3 by the  
15 number of hours (8,760) in a year. Line 5 shows the percentage relationship between  
16 the average demand for each class and the total system.

17           The class excess demand, shown on line 6, is equal to the non-coincident  
18 peak demand shown on line 2 minus the average demand that is shown on line 4.  
19 Line 7 shows the excess demand percentage, which is a relationship among the  
20 excess demand of each customer class and the total excess demand for all classes.

21           Finally, line 10 presents the composite A&E allocation factor. It is determined  
22 by weighting the average demand responsibility of each class (which is the same as  
23 each class's energy allocation factor) by the system load factor, and weighting the  
24 excess demand factor by the quantity one minus the system load factor.

1 **Making the Cost of Service Study – Summary**

2 **Q PLEASE SUMMARIZE THE PROCESS AND THE RESULTS OF A COST OF**  
3 **SERVICE ANALYSIS.**

4 A As previously discussed, the cost of service procedure involves three steps:

- 5 1. Functionalization – Identify the different functional "levels" of the system;
- 6 2. Classification – Determine, for each functional type, the primary cause or causes  
7 (customer, demand or energy) of that cost being incurred; and
- 8 3. Allocation – Calculate the class proportional responsibilities for each type of cost  
9 and spread the cost among classes.

10 **Q WHERE ARE YOUR COST OF SERVICE RESULTS PRESENTED?**

11 A The results are presented in Schedule MEB-COS-4. This cost of service study  
12 reflects results at present rates.

13 **Q REFERRING TO SCHEDULE MEB-COS-4, PLEASE EXPLAIN THE**  
14 **ORGANIZATION AND WHAT IS SHOWN.**

15 A Schedule MEB-COS-4 is a summary of the key elements and the results of the class  
16 cost of service study. The top section of the schedule shows the revenues, expenses  
17 and operating income based on my cost of service study.

18 The next section shows the major elements of rate base, and line 32 shows  
19 the rate of return at present rates for each customer class based on this cost of  
20 service study and Ameren Missouri's claimed revenue requirements.



1   **Q    HOW DOES YOUR STUDY DIFFER FROM THE ONE PRESENTED BY AMEREN**  
2   **MISSOURI?**

3   A    There are differences in the classification of certain non-fuel generation O&M  
4    expenses.

5           In addition, I have calculated the income taxes at present rates based on the  
6    taxable income of each class, instead of allocating income taxes on rate base. This  
7    approach changes the rates of return at present rates, but (when applied consistently)  
8    does not change the amount of the increase or decrease required to move to cost of  
9    service.

10  **Q    PLEASE ELABORATE ON THE DIFFERENT TREATMENT OF INCOME TAXES.**

11  A    The changes fall in two categories. First is the amount of income taxes included in  
12  the class cost of service study, and second is the calculation of income taxes by  
13  customer class.

14           With respect to the amount included in the cost of service study, Ameren  
15  Missouri includes in its present rate class cost of service study the amount of income  
16  taxes associated with its operations if it receives the full amount of the increase that it  
17  has requested. As a result, it includes \$208.4 million of income taxes in its present  
18  rate cost of service study shown in Schedule WMW-E1 and in other places. This  
19  amount includes roughly \$100.1 million of income taxes that Ameren Missouri would  
20  not incur if it did not receive its requested \$264 million rate increase. In my Schedule  
21  MEB-COS-4, total income taxes have been adjusted to the amount associated with  
22  present rates, which is approximately \$108.3 million.

23           In terms of the amount of income tax attributable to individual customer  
24  classes, Ameren Missouri allocates income taxes to classes based on each class'

1 rate base as a percentage of total rate base. This calculation essentially assumes  
2 that each customer class is producing the system average rate of return. However,  
3 the rates of return earned from the different classes are not equal, so Ameren's  
4 approach to allocating income taxes on rate base has the effect of over-allocating  
5 income taxes to classes whose rates of return are below average, and  
6 under-allocating income taxes to classes whose rates of return are above average.  
7 In my cost of service study, I have corrected for this problem by calculating income  
8 taxes separately for each customer class using a method that recognizes the  
9 appropriate income tax deductions for each class, and calculates the income tax  
10 obligation of each customer class as a function of its taxable income. This has the  
11 effect of increasing the income tax attributable to classes earning above system  
12 average rate of return, and reducing the income taxes charged to customers earning  
13 less than the system average rate of return.

14 **Q WHAT IS THE ISSUE WITH RESPECT TO CERTAIN NON-FUEL GENERATION**  
15 **COSTS?**

16 A Ameren Missouri has designated a substantial portion of its non-fuel generation  
17 operation and maintenance expenses as variable. This is the same approach it used  
18 in previous rate cases, including Case No. ER-2010-0036, Case No. ER-2008-0318  
19 and many previous cases. In Data Request MIEC No. 5-04 in Case  
20 No. ER-2008-0318, Ameren Missouri was asked for the studies which it made to  
21 reach its conclusions supporting this particular separation of fixed and variable  
22 generation O&M expenses. Ameren Missouri responded by saying "There are no  
23 studies." It simply stated that it had been making the same division for a number of  
24 years.

1           Accordingly, Ameren Missouri has no support for the particular classification of  
2 non-fuel generation, operation and maintenance expenses that it has used in its  
3 study. It is more conventional to allocate these costs on an “expenses follows plant”  
4 basis, this is to say, on a demand basis. The vast majority of these costs do not vary  
5 in any appreciable way with the number of kWhs generated, but occur as a function  
6 of the existence of the plants, the hours of operation and the passage of time. In fact,  
7 Ameren Missouri schedules the maintenance on its coal and nuclear generation units  
8 on a “passage of time” basis, not on a “kWh generated” basis. My study incorporates  
9 this classification.

10 **Q     IS THERE AN ISSUE WITH RESPECT TO THE ALLOCATION OF TRANSMISSION**  
11 **COSTS?**

12 A     Ameren Missouri has allocated transmission costs using the 12 monthly coincident  
13 peaks. The transmission system must be built to meet the system peak demand,  
14 which occurs in the summer; not the average of the 12 monthly peak demands, some  
15 of which are significantly lower (28% and more) than the summer peak demand. In  
16 this respect, the transmission system is similar to the generation system, and should  
17 be allocated in a similar fashion.

18 **Q     HAVE YOU MODIFIED AMEREN MISSOURI’S CLASS COST OF SERVICE STUDY**  
19 **TO IMPLEMENT THIS CHANGE IN THE ALLOCATION OF TRANSMISSION**  
20 **COSTS?**

21 A     No. In looking at the difference in allocation factors and the dollar magnitude of  
22 change in class cost responsibility, I determined that the dollar amounts of change

1 would not be material, and so in order to narrow the issues, I have simply used  
2 Ameren Missouri's allocation of transmission system costs.

3 **Q WHAT ARE THE RESULTS OF MIEC'S COST OF SERVICE STUDY?**

4 A As shown on line 32 of Schedule MEB-COS-4, at present rates all classes of service  
5 are producing a rate of return above the average, except for the Residential and  
6 Lighting classes.

7 **Q HAVE YOU PROVIDED THE FULL PRINTOUT OF YOUR CLASS COST OF  
8 SERVICE STUDY?**

9 A Yes. I have included the full printout of the cost of service study summarized on  
10 Schedule MEB-COS-4 as Attachment 1.

11 **Q HOW DID YOU USE AMEREN MISSOURI'S COST OF SERVICE MODEL IN  
12 PRODUCING YOUR CLASS COST OF SERVICE STUDY?**

13 A It was the starting point. The results of Ameren Missouri's allocation first were  
14 replicated by utilizing the data contained in its cost of service model. Many of  
15 Ameren Missouri's allocation factors and functionalizations and classifications have  
16 been utilized. The principal areas where I depart from Ameren Missouri and use a  
17 different approach were incorporated into the allocations. They have previously been  
18 explained in this testimony.

1 **ADJUSTMENT OF CLASS REVENUES**

2 **Q WHAT SHOULD BE THE PRIMARY BASIS FOR ESTABLISHING CLASS**  
3 **REVENUE REQUIREMENTS AND DESIGNING RATES?**

4 **A** Cost should be the primary factor used in both steps.

5 Just as cost of service is used to establish a utility's total revenue requirement,  
6 it should also be the primary basis used to establish the revenues collected from each  
7 customer class and to design rate schedules.

8 Factors such as simplicity, gradualism and ease of administration may also be  
9 taken into account, but the basic starting point and guideline throughout the process  
10 should be cost of service. To the extent practicable, rate schedules should be  
11 structured and designed to reflect the important cost-causative features of the service  
12 provided, and to collect the appropriate cost from the customers within each class or  
13 rate schedule, based upon the individual load patterns exhibited by those customers.

14 Electric rates also play a role in economic development, both with respect to  
15 job creation and job retention. This is particularly true in the case of industries where  
16 electricity is one of the largest components of the cost of production. Please see the  
17 testimony of Noranda witnesses for more elaboration on this issue.

18 **Q WHAT IS THE BASIS FOR YOUR RECOMMENDATION THAT COST BE USED AS**  
19 **THE PRIMARY FACTOR FOR THESE PURPOSES?**

20 **A** The basic reasons for using cost as the primary factor are equity, conservation, and  
21 engineering efficiency (cost-minimization).

1 **Q PLEASE EXPLAIN HOW EQUITY IS ACHIEVED BY BASING RATES ON COST.**

2 A When rates are based on cost, each customer pays what it costs the utility to provide  
3 service to that customer; no more and no less. If rates are based on anything other  
4 than cost factors, then some customers will pay the costs attributable to providing  
5 service to other customers – which is inherently inequitable.

6 **Q HOW DO COST-BASED RATES FURTHER THE GOAL OF CONSERVATION?**

7 A Conservation occurs when wasteful, inefficient use is discouraged or minimized. Only  
8 when rates are based on costs do customers receive a balanced price signal upon  
9 which to make their electric consumption decisions. If rates are not based on costs,  
10 then customers who are not paying their full costs may be misled into using  
11 electricity inefficiently in response to the distorted rate design signals they receive.

12 **Q WILL COST-BASED RATES ASSIST IN THE DEVELOPMENT OF**  
13 **COST-EFFECTIVE DEMAND-SIDE MANAGEMENT (“DSM”) PROGRAMS?**

14 A Yes. The success of DSM (both energy efficiency and demand response programs)  
15 depends, to a large extent, on customer receptivity. There are many actions that can  
16 be taken by consumers to reduce their electricity requirements. A major element in a  
17 customer's decision-making process is the amount of reduction that can be achieved  
18 in the electric bill as a result of DSM activities. If the bill received by a customer is  
19 subsidized by other customers; that is, the bill is determined using rates which are  
20 below cost, that customer will have less reason to engage in DSM activities than  
21 when the bill reflects the actual cost of the electric service provided.

22 For example, assume that the relevant cost to produce and deliver energy is  
23 8¢ per kWh. If a customer has an opportunity to install energy efficiency or DSM

1 equipment that would allow the customer to reduce energy use or demand, the  
2 customer will be much more likely to make that investment if the price of electricity  
3 equals the cost of electricity, i.e., 8¢ per kWh, than if the customer is receiving a  
4 subsidized rate of 6¢ per kWh.

5 **Q HOW DO COST-BASED RATES ACHIEVE THE COST-MINIMIZATION**  
6 **OBJECTIVE?**

7 A When the rates are designed so that the energy costs, demand costs and customer  
8 costs are properly reflected in the energy, demand and customer components of the  
9 rate schedules, respectively, customers are provided with the proper incentives to  
10 minimize their costs, which will in turn minimize the costs to the utility.

11 If a utility attempts to extract a disproportionate share of revenues from a class  
12 that has alternatives available (such as producing products at other locations where  
13 costs are lower), then the utility will be faced with the situation where it must discount  
14 the rates or lose the load, either in part or in total. To the extent that the load could  
15 have been served more economically by the utility, then either the other customers of  
16 the utility or the stockholders (or some combination of both) will be worse off than if  
17 the rates were properly designed on the basis of cost.

18 From a rate design perspective, overpricing the energy portion of the rate and  
19 underpricing the fixed components of the rate (such as customer and demand  
20 charges) will result in a disproportionate share of revenues being collected from large  
21 customers and high load factor customers. To the extent that these customers may  
22 have lower cost alternatives than do the smaller or the low load factor customers, the  
23 same problems noted above are created.

1 **Revenue Allocation**

2 **Q PLEASE REFER AGAIN TO SCHEDULE MEB-COS-4 AND SUMMARIZE THE**  
3 **RESULTS OF YOUR CLASS COST OF SERVICE STUDY.**

4 A As indicated on line 32 of Schedule MEB-COS-4, movement of all classes to cost of  
5 service will require an increase to the Residential and Lighting classes and a  
6 decrease to all other classes.

7 **Q WHAT ADJUSTMENTS TO REVENUES WOULD BE REQUIRED AT PRESENT**  
8 **RATES TO MOVE ALL CLASSES TO COST OF SERVICE?**

9 A This is shown on Schedule MEB-COS-5. The first five columns summarize the  
10 results of the cost of service study at present rates, and are taken from  
11 Schedule MEB-COS-4. The remaining columns of Schedule MEB-COS-5 determine  
12 the amount of increase or decrease, on a revenue neutral basis, required to move  
13 each customer class to the average rate of return at current revenue levels. That is, it  
14 shows the amount of increase or decrease required to have every class yield the  
15 same rate of return, before considering any overall increase in revenues. Note that  
16 the Residential class would require an increase of about \$106 million, or 9.7%, in  
17 order to move to cost of service. The Lighting class would require an increase of \$7.7  
18 million, or almost 25%. All other classes would require a corresponding decrease.  
19 The decreases range from about 10.4% for the LGS/SPS class to 5% for the LTS  
20 class.

21 **Q HOW DOES AMEREN MISSOURI PROPOSE TO ADJUST REVENUES?**

22 A Ameren Missouri proposes essentially an equal percentage across-the-board  
23 increase.



1 Q **WOULD AMEREN MISSOURI'S ALLOCATION MOVE CLASS RATES CLOSER**  
2 **TO COST OF SERVICE?**

3 A No. Ameren Missouri's allocation would essentially maintain the status quo in which  
4 the Residential class is below cost of service, and other classes are above cost of  
5 service.

6 Q **DO YOU HAVE AN ALTERNATIVE RECOMMENDATION FOR ALLOCATION OF**  
7 **AMEREN MISSOURI'S REVENUE REQUIREMENT?**

8 A Yes. I will focus on adjustments to be made on a revenue neutral basis at present  
9 rates. After having made my recommended revenue neutral adjustments at present  
10 rates, any overall change in revenues allowed to Ameren Missouri can then be  
11 applied on an equal percentage across-the-board basis to these adjusted class  
12 revenues.

13 Q **PLEASE EXPLAIN YOUR SPECIFIC PROPOSAL.**

14 A I have set forth my recommended revenue neutral adjustments on  
15 Schedule MEB-COS-6. I have expressed my recommendation in terms of a range of  
16 values, rather than as a specific amount. Given the relatively wide disparity in rates  
17 of return by customer class and the importance of moving toward cost of service while  
18 considering impacts, I believe that class increases on a revenue neutral basis within  
19 the range described on Schedule MEB-COS-6 would be reasonable.

1 **FUEL ADJUSTMENT CLAUSE**

2 **Q ARE YOU FAMILIAR WITH AMEREN MISSOURI'S FAC?**

3 A Yes.

4 **Q HOW DO INCENTIVES TO BE EFFICIENT AND CONTROL COSTS CHANGE**  
5 **WHEN COST RECOVERY MOVES FROM BASE RATES TO AN FAC?**

6 A The incentive to be efficient and control costs is less when a utility is allowed to  
7 pass-through all, or substantially all, of its incurred costs to its customers. When the  
8 utility must retain these costs and manage them in base rates, the incentive which the  
9 utility has is maximized because any increases or decreases in the level of costs are  
10 retained by stockholders.

11 **Q CAN A UTILITY REALLY INFLUENCE ITS NET FUEL COSTS?**

12 A Yes. There are many factors that influence the level of fuel and purchased power  
13 costs. Some of these are: (1) the skill of the utility in negotiating its fuel and  
14 purchased power contracts; (2) the skill of the utility in taking advantage of purchases  
15 and sales in the economy market; (3) the skill and diligence of a utility in maintaining  
16 its generation facilities and in restoring efficient units to service after unexpected  
17 outages; (4) the skill of the utility in planning and managing its maintenance outages;  
18 (5) the skill and success of the utility in hedging transactions for its fuel supplies; and  
19 (6) the management decisions regarding the type, size and timing of facilities added  
20 to the utility's generation portfolio. Clearly, there are many factors that influence the  
21 ultimate level of fuel costs incurred by a utility. Certainly, there are factors beyond the  
22 control of the utility, but there are many factors that the utility can manage.

1    **Q     CAN YOU GIVE AN EXAMPLE OF WHERE, WITH AN FAC, THE INTEREST OF**  
2           **THE UTILITY’S CUSTOMERS AND ITS STOCKHOLDERS MAY DIVERGE, WHILE**  
3           **THEY WOULD BE CONGRUENT WITHOUT AN FAC?**

4    A     Yes. Consider the circumstance where an efficient base load generating unit  
5           unexpectedly goes out of service. Assume that the utility can restore the unit to  
6           service more quickly if it spends \$50,000 on overtime labor, expedited parts delivery,  
7           etc. Assume also that by expending these additional funds for maintenance, the  
8           utility would reduce fuel cost by \$75,000. Clearly, the rational economic decision is to  
9           spend the extra dollars for maintenance in order to bring the unit back into service  
10          more quickly.

11                 Consider now what happens under two different scenarios. If the utility does  
12           not have an FAC, it experiences the full cost of the additional maintenance, but it  
13           retains the full benefit of the reduced fuel cost, making it better off as a result of  
14           incurring this extra maintenance cost. With an FAC mechanism that allows the utility  
15           to pass-through all, or substantially all, of its fuel-related costs, foregoing the extra  
16           maintenance would benefit stockholders by \$50,000, while the utility would be  
17           allowed to collect the additional fuel cost (or substantially all of it) from customers  
18           through the FAC. Should the utility choose this route, customers clearly would be  
19           worse off than if there had not been an FAC.

20   **Q     AREN’T UTILITIES HELD TO A PRUDENCY STANDARD?**

21   A     Yes, but it is very difficult to conduct a detailed audit of all of the decisions that go into  
22           a utility’s procurement of fuel and purchased power, the maintenance of its  
23           generating fleet, and other factors that influence the level of these costs. The  
24           complexity of auditing the utility’s generation function is overwhelming in comparison

1 to the more limited analysis required for the Purchased Gas Adjustment (PGA) filings  
2 of the gas utilities. The number of decisions required to be investigated in the case of  
3 a PGA is relatively small. However, in the case of an electric utility, there are hourly  
4 transactions involving purchases and sales, decisions respecting acquisition of  
5 various kinds of fuel supplies in different markets, preventive maintenance practices,  
6 speed and cost of recovering from forced outages and similar decisions and actions.  
7 Thus, a rigorous audit of electric utility generation and purchased power costs is  
8 much more challenging and difficult to accomplish than a PGA audit.

9 **Q ARE THERE OTHER CONCERNS THAT ARISE WHEN AN FAC REPLACES**  
10 **BASE RATE RECOVERY?**

11 A Yes. In addition to the occurrence of specific events discussed above is the issue of  
12 the overall performance of the generation fleet. Efficient, low-cost generating  
13 depends upon a high level of performance from the nuclear and coal-fired generation  
14 facilities that are the low-cost producers of electricity. If the overall efficiency (usually  
15 measured by heat rate) degrades, the availability of the units decrease, or the forced  
16 outage rates increase, then customers will see higher costs than if unit performance  
17 were maintained or improved. The change in incentive noted above makes it  
18 important for the Commission to monitor key performance levels such as equivalent  
19 availability factor and equivalent forced outage rate.

1    **Q     ARE THESE PERFORMANCE MEASURES IN ADDITION TO WHAT IS ALREADY**  
2    **MONITORED?**

3    A     The availability factor and forced outage rate metrics would be an addition; however,  
4         providing periodic reports on unit heat rates is already a part of the reporting  
5         requirement.

6    **Q     IS MIEC OFFERING EVIDENCE WITH RESPECT TO THE PERFORMANCE OF**  
7    **AMEREN MISSOURI'S GENERATING UNITS?**

8    A     Yes. My colleague, Mr. Dauphinais, provides testimony setting forth the results of his  
9         review of these key metrics over time.

10   **Q     WHAT DO YOU CONCLUDE FROM MR. DAUPHINAIS' EVIDENCE?**

11   A     His evidence reveals disturbing trends in unit availability and in forced outage rates  
12         for Ameren Missouri's coal fleet. Over time, the forced outage rates have increased  
13         and the availability factors have decreased.

14   **Q     WHAT RECOMMENDATIONS DO YOU HAVE?**

15   A     I recommend that the Commission establish a procedure for routinely monitoring the  
16         heat rate, the equivalent availability factor and the equivalent forced outage rate of  
17         Ameren Missouri's generating units. In particular, I recommend that Ameren Missouri  
18         be required to report these statistics for its units (individually and fleet average) , as  
19         well as for peer units, on at least an annual basis. The report should be filed as soon  
20         after the conclusion of a calendar year as the necessary data can be processed and  
21         provided. The data should be filed with the Commission and made available not only  
22         to Commission Staff and the Office of Public Counsel, but also to interested parties

1           who generally participate in Ameren Missouri PSC matters. The information should  
2           be the subject of a technical conference in conjunction with the first proposed change  
3           in the level of the FAC that occurs after the annual report is received.

4   **Q       DO YOU HAVE ANY RECOMMENDATIONS IN ADDITION TO MONITORING?**

5   A       Not at this time. Monitoring is, in my view, the most important thing that could be  
6           done at this point. If unit performance continues to deteriorate and if Ameren  
7           Missouri cannot provide a satisfactory explanation for the level of its unit  
8           performance, then the Commission should remain open to consideration of actions  
9           such as changing the sharing percentage in the FAC, or even revoking the right for  
10          Ameren Missouri to have an FAC.

11   **Q       DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

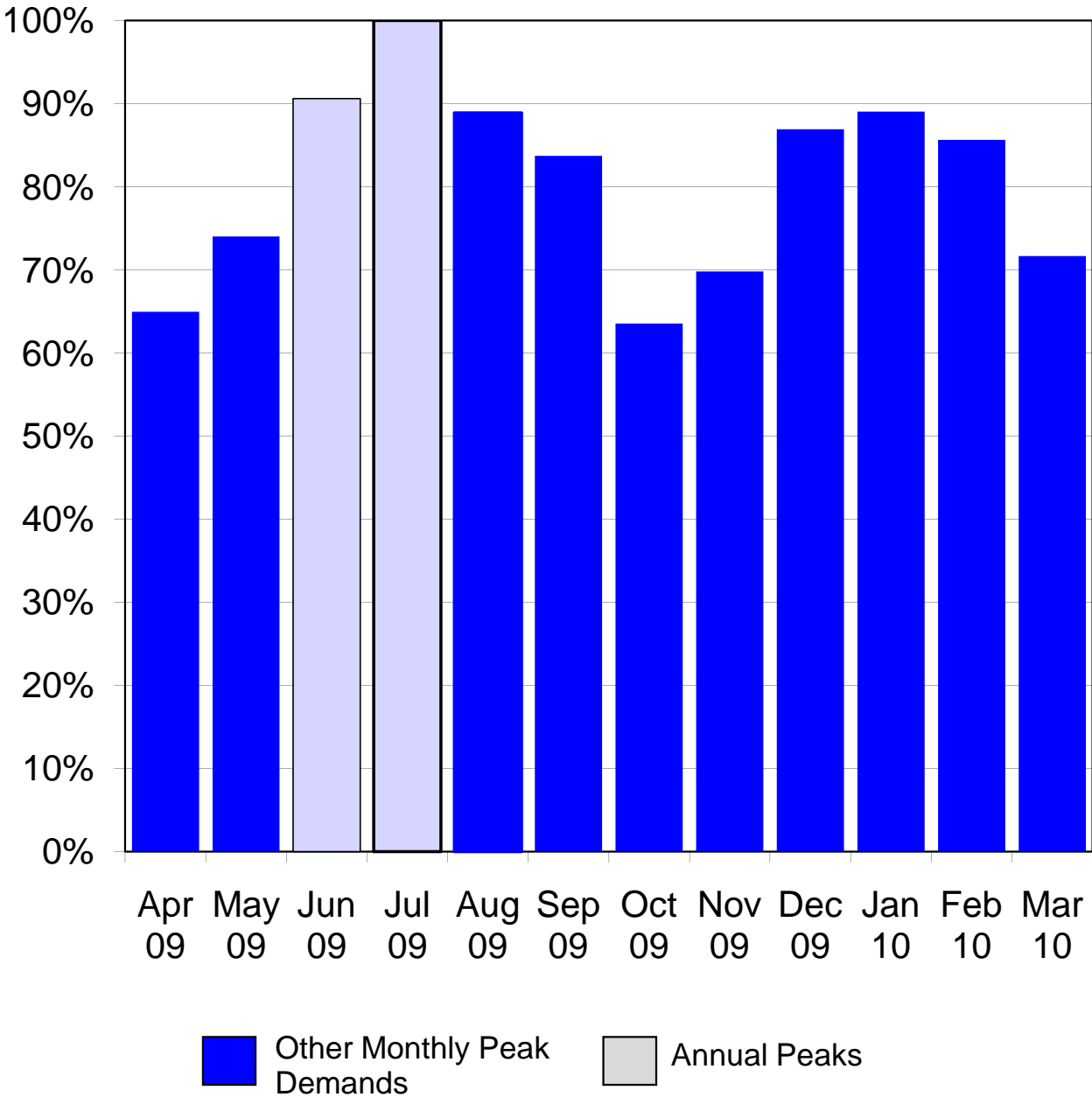
12   A       Yes, it does.

\\Doc\Shares\ProlawDocs\TSK\9371\Testimony - BA\191765.doc

# Ameren Missouri

## Analysis of Ameren's (Missouri) Monthly Peak Demands as a Percent of the Annual System Peak (Weather Normalized and with Losses) For the Test Year Ended March 2010

---



## Ameren Missouri

**Analysis of Ameren's Monthly Peak Demands  
as a Percent of the Annual System Peak  
(Weather Normalized and with Losses)  
For the Test Year Ended March 2010**

| <u>Line</u> | <u>Description</u> | <u>Total<br/>Company<br/>MW</u><br>(1) | <u>Percent</u><br>(2) |
|-------------|--------------------|--|-----------------------|
| 1           | January            | 7,077                                  | 89.0%                 |
| 2           | February           | 6,808                                  | 85.7%                 |
| 3           | March              | 5,697                                  | 71.7%                 |
| 4           | April              | 5,164                                  | 65.0%                 |
| 5           | May                | 5,883                                  | 74.0%                 |
| 6           | June               | 7,202                                  | 90.6%                 |
| 7           | July               | 7,948                                  | 100.0%                |
| 8           | August             | 7,065                                  | 88.9%                 |
| 9           | September          | 6,655                                  | 83.7%                 |
| 10          | October            | 5,051                                  | 63.6%                 |
| 11          | November           | 5,549                                  | 69.8%                 |
| 12          | December           | 6,909                                  | 86.9%                 |

Source: Ameren Missouri COS, System\_CP Worksheet



## Ameren Missouri

### Development of Average and Excess Demand Allocator Based on 4 Non-Coincident Peaks For the Test Year Ended March 2010

| Line       | Description                         | Missouri<br>Retail<br>(1) | Residential<br>(2) | Small<br>General<br>Service<br>(3) | Large<br>General<br>Service<br>(4) | Large<br>Primary<br>Service<br>(5) | Large<br>Trans.<br>Service<br>(6) | Lighting<br>Service<br>(7) |
|------------|-------------------------------------|---------------------------|--------------------|------------------------------------|------------------------------------|------------------------------------|-----------------------------------|----------------------------|
| 1          | Missouri System Peak                | 7,948                     |                    |                                    |                                    |                                    |                                   |                            |
| 2          | Avg of 4 Highest Monthly NCP Values | 8,067.5                   | 3,779.8            | 882.0                              | 2,286.9                            | 571.6                              | 487.8                             | 59.5                       |
| 3          | Energy Sales with Losses - MWh      | 39,624,464                | 14,913,623         | 3,831,748                          | 12,500,133                         | 3,958,728                          | 4,170,226                         | 250,005                    |
| 4          | Average Demand - kW                 | 4,523.3                   | 1,702.5            | 437.4                              | 1,427.0                            | 451.9                              | 476.1                             | 28.5                       |
| 5          | Average Demand - Percent            | 100.0%                    | 37.6%              | 9.7%                               | 31.5%                              | 10.0%                              | 10.5%                             | 0.6%                       |
| 6          | Class Excess Demand - kW            | 3,544.2                   | 2,077.3            | 444.5                              | 859.9                              | 119.7                              | 11.7                              | 31.0                       |
| 7          | Class Excess Demand - Percent       | 100.0%                    | 58.6%              | 12.5%                              | 24.3%                              | 3.4%                               | 0.3%                              | 0.9%                       |
| Allocator: |                                     |                           |                    |                                    |                                    |                                    |                                   |                            |
| 8          | Annual Load Factor * Average Demand | 0.569118                  | 0.214201           | 0.055035                           | 0.179537                           | 0.056858                           | 0.059896                          | 0.003591                   |
| 9          | (1-LF) * Excess Demand              | <u>0.430882</u>           | <u>0.252551</u>    | <u>0.054045</u>                    | <u>0.104544</u>                    | <u>0.014550</u>                    | <u>0.001428</u>                   | <u>0.003763</u>            |
| 10         | Average and Excess Demand Allocator | 1.000000                  | 0.466752           | 0.109080                           | 0.284081                           | 0.071408                           | 0.061324                          | 0.007354                   |

Notes:

Line 4 equals Line 3 ÷ 8.760

Line 6 equals Line 2- Line 4

System Annual Load Factor 56.91%

1 - Load Factor 43.09%

Source: Ameren Missouri COS, A.F.1-4NCP Worksheet.

**AMEREN MISSOURI**

**Electric Cost of Service Allocation Study  
at Present Rates**

**Includes MIEC Classification Adjustments and MIEC's Alternative Income Tax Calculation**

| Line | Description                             | Missouri     | Residential  | Small<br>Gen Serv | Large G.S./<br>Small Primary | Large<br>Primary | Large<br>Trans | Lighting   |
|------|---|--------------|--------------|-------------------|------------------------------|------------------|----------------|------------|
|      |   | (1)          | (2)          | (3)               | (4)                          | (5)              | (6)            | (7)        |
| 1    | BASE REVENUE                            | \$ 2,437,740 | \$ 1,094,131 | \$ 280,137        | \$ 711,918                   | \$ 181,019       | \$ 139,375     | \$ 31,160  |
| 2    | OTHER REVENUE                           | 71,988       | 40,263       | 6,911             | 16,441                       | 4,171            | 3,558          | 645        |
| 3    | LIGHTING REVENUE                        | -            | -            | -                 | -                            | -                | -              | -          |
| 4    | SYSTEM, OFF-SYS SALES & DISP OF ALLOW   | 389,344      | 146,722      | 37,697            | 122,978                      | 38,947           | 41,027         | 1,972      |
| 5    | RATE REVENUE VARIANCE                   | -            | -            | -                 | -                            | -                | -              | -          |
| 6    | TOTAL OPERATING REVENUE                 | \$ 2,899,072 | \$ 1,281,117 | \$ 324,745        | \$ 851,337                   | \$ 224,136       | \$ 183,960     | \$ 33,777  |
| 7    | TOTAL PROD, T&D, CUST, AND A&G EXP      | 1,791,698    | 808,103      | 184,008           | 501,346                      | 145,815          | 131,152        | 21,274     |
| 8    | TOTAL DEPR AND AMMORT EXPENSES          | 426,931      | 229,259      | 46,749            | 103,393                      | 23,586           | 15,028         | 8,916      |
| 9    | REAL ESTATE AND PROPERTY TAXES          | 135,868      | 70,858       | 15,082            | 33,611                       | 8,104            | 5,689          | 2,524      |
| 10   | INCOME TAXES: MIEC's Alternative Method | 108,322      | 15,187       | 19,405            | 55,825                       | 11,463           | 7,647          | (1,204)    |
| 11   | PAYROLL TAXES                           | 23,610       | 12,010       | 2,524             | 6,027                        | 1,562            | 1,049          | 437        |
| 12   | FEDERAL EXCISE TAX                      | -            | -            | -                 | -                            | -                | -              | -          |
| 13   | REVENUE TAXES                           | -            | -            | -                 | -                            | -                | -              | -          |
| 14   | TOTAL OPERATING EXPENSES                | \$ 2,486,430 | \$ 1,135,417 | \$ 267,768        | \$ 700,201                   | \$ 190,532       | \$ 160,565     | \$ 31,947  |
| 15   | NET OPERATING INCOME                    | \$ 412,642   | \$ 145,700   | \$ 56,977         | \$ 151,136                   | \$ 33,605        | \$ 23,395      | \$ 1,830   |
| 16   | GROSS PLANT IN SERVICE                  | 14,123,637   | 7,367,710    | 1,564,609         | 3,499,664                    | 840,651          | 589,474        | 261,530    |
| 17   | RESERVES FOR DEPRECIATION               | 5,937,666    | 3,120,303    | 661,771           | 1,449,116                    | 343,867          | 239,882        | 122,727    |
| 18   | NET PLANT IN SERVICE                    | \$ 8,185,971 | \$ 4,247,407 | \$ 902,838        | \$ 2,050,548                 | \$ 496,783       | \$ 349,592     | \$ 138,803 |
| 19   | MATERIALS & SUPPLIES - FUEL             | 371,450      | 139,979      | 35,965            | 117,326                      | 37,157           | 39,142         | 1,881      |
| 20   | MATERIALS & SUPPLIES -LOCAL             | 45,574       | 28,896       | 5,327             | 7,875                        | 1,575            | 1              | 1,900      |
| 21   | CASH WORKING CAPITAL                    | 25,804       | 11,639       | 2,650             | 7,221                        | 2,100            | 1,889          | 306        |
| 22   | CUSTOMER ADVANCES & DEPOSITS            | (19,537)     | (23)         | (16,017)          | (3,498)                      | -                | -              | -          |
| 23   | ACCUMULATED DEFERRED INCOME TAXES       | (1,799,209)  | (938,319)    | (199,719)         | (445,086)                    | (107,321)        | (75,338)       | (33,426)   |
| 24   | TOTAL NET ORIGINAL COST RATE BASE       | \$ 6,810,054 | \$ 3,489,579 | \$ 731,044        | \$ 1,734,387                 | \$ 430,294       | \$ 315,285     | \$ 109,463 |
| 25   | RATE OF RETURN                          | 6.059%       | 4.175%       | 7.794%            | 8.714%                       | 7.810%           | 7.420%         | 1.671%     |

AMEREN MISSOURI

ELECTRIC COST OF SERVICE ALLOCATION STUDY WITH MODIFICATIONS BY MIEC  
 TEST YEAR PERIOD: 12 MONTHS ENDED MARCH 2010  
 AVERAGE EXCESS FOUR NONCOINCIDENT PEAKS  
 (\$000's)

TITLE: GROSS PLANT IN SERVICE - PAGE 1

| LINE # | ACCT #  | ITEM                      | ALLOCATION BASIS | MISSOURI TOTAL | RESIDENTIAL  | SMALL GEN SERVICE | LARGE G.S. / SMALL PRIMARY | LARGE PRIMARY | LARGE TRANSMISSION | LIGHTING  |
|--------|---------|---------------------------|------------------|----------------|--------------|-------------------|----------------------------|---------------|--------------------|-----------|
| 1      |         | <u>PRODUCTION</u>         | A.F.1            | \$ 8,333,279   | \$ 3,889,578 | \$ 908,995        | \$ 2,367,325               | \$ 595,066    | \$ 511,029         | \$ 61,285 |
| 2      |         |                           |                  |                |              |                   |                            |               |                    |           |
| 3      |         | <u>TRANSMISSION</u>       |                  |                |              |                   |                            |               |                    |           |
| 4      |         | LINES                     | A.F.2            | \$ 413,857     | \$ 192,494   | \$ 41,186         | \$ 116,047                 | \$ 30,857     | \$ 31,374          | \$ 1,901  |
| 5      |         | SUBSTATION                | A.F.3            | \$ 276,880     | \$ 128,783   | \$ 27,554         | \$ 77,638                  | \$ 20,644     | \$ 20,990          | \$ 1,272  |
| 6      |         |                           |                  |                |              |                   |                            |               |                    |           |
| 7      |         | TOTAL TRANSMISSION        |                  | \$ 690,737     | \$ 321,276   | \$ 68,740         | \$ 193,685                 | \$ 51,500     | \$ 52,363          | \$ 3,172  |
| 8      |         |                           |                  |                |              |                   |                            |               |                    |           |
| 9      |         | <u>DISTRIBUTION PLANT</u> |                  |                |              |                   |                            |               |                    |           |
| 10     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 11     | 360     | SUBSTATION LAND           | A.F.8            | \$ 18,523      | \$ 9,405     | \$ 2,122          | \$ 5,479                   | \$ 1,376      | \$ -               | \$ 141    |
| 12     |         | OTHER LAND                | A.F.5            | \$ 11,645      | \$ 5,913     | \$ 1,334          | \$ 3,444                   | \$ 865        | \$ -               | \$ 89     |
| 13     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 14     | 361-362 | SUBSTATIONS               | A.F.8            | \$ 725,597     | \$ 368,433   | \$ 83,128         | \$ 214,618                 | \$ 53,893     | \$ -               | \$ 5,525  |
| 15     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 16     | 364     | POLES TOWERS FIXTURES     |                  |                |              |                   |                            |               |                    |           |
| 17     |         | CUSTOMER                  | A.F.4            | \$ 188,599     | \$ 156,956   | \$ 21,620         | \$ 1,621                   | \$ 11         | \$ -               | \$ 8,392  |
| 18     |         | HV                        | A.F.5a           | \$ 167,169     | \$ 84,860    | \$ 19,147         | \$ 49,432                  | \$ 12,413     | \$ -               | \$ 1,317  |
| 19     |         | PRIMARY                   | A.F.5b           | \$ 321,139     | \$ 163,063   | \$ 36,791         | \$ 94,987                  | \$ 23,852     | \$ -               | \$ 2,445  |
| 20     |         | SECONDARY                 | A.F.6            | \$ 163,726     | \$ 97,341    | \$ 21,963         | \$ 42,962                  | \$ -          | \$ -               | \$ 1,460  |
| 21     |         | LIGHTING-DIRECT           | DIRECT           | \$ -           | \$ -         | \$ -              | \$ -                       | \$ -          | \$ -               | \$ -      |
| 22     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 23     |         | SUBTOTAL                  |                  | \$ 840,632     | \$ 502,220   | \$ 99,520         | \$ 189,002                 | \$ 36,276     | \$ -               | \$ 13,614 |
| 24     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 25     | 365     | OVERHEAD CONDUCTOR        |                  |                |              |                   |                            |               |                    |           |
| 26     |         | CUSTOMER                  | A.F.4            | \$ 442,515     | \$ 368,270   | \$ 50,727         | \$ 3,803                   | \$ 26         | \$ -               | \$ 19,689 |
| 27     |         | HV                        | A.F.5a           | \$ 140,195     | \$ 71,167    | \$ 16,057         | \$ 41,456                  | \$ 10,410     | \$ -               | \$ 1,104  |
| 28     |         | PRIMARY                   | A.F.5b           | \$ 484,778     | \$ 246,153   | \$ 55,538         | \$ 143,388                 | \$ 36,007     | \$ -               | \$ 3,691  |
| 29     |         | SECONDARY                 | A.F.6            | \$ 25,451      | \$ 15,132    | \$ 3,414          | \$ 6,679                   | \$ -          | \$ -               | \$ 227    |
| 30     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 31     |         | SUBTOTAL                  |                  | \$ 1,092,939   | \$ 700,722   | \$ 125,737        | \$ 195,325                 | \$ 46,442     | \$ -               | \$ 24,712 |
| 32     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 33     | 366     | UNDERGROUND CONDUIT       |                  |                |              |                   |                            |               |                    |           |
| 34     |         | CUSTOMER                  | A.F.4            | \$ 181,175     | \$ 150,777   | \$ 20,769         | \$ 1,557                   | \$ 11         | \$ -               | \$ 8,061  |
| 35     |         | HV                        | A.F.5a           | \$ 7,545       | \$ 3,830     | \$ 864            | \$ 2,231                   | \$ 560        | \$ -               | \$ 59     |
| 36     |         | PRIMARY                   | A.F.5b           | \$ 54,362      | \$ 27,603    | \$ 6,228          | \$ 16,079                  | \$ 4,038      | \$ -               | \$ 414    |
| 37     |         | SECONDARY                 | A.F.6            | \$ 23,978      | \$ 14,256    | \$ 3,216          | \$ 6,292                   | \$ -          | \$ -               | \$ 214    |
| 38     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 39     |         | SUBTOTAL                  |                  | \$ 267,060     | \$ 196,467   | \$ 31,077         | \$ 26,159                  | \$ 4,609      | \$ -               | \$ 8,748  |
| 40     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 41     | 367     | UNDERGROUND CONDUCTORS    |                  |                |              |                   |                            |               |                    |           |
| 42     |         | CUSTOMER                  | A.F.4            | \$ 385,690     | \$ 320,979   | \$ 44,213         | \$ 3,314                   | \$ 22         | \$ -               | \$ 17,161 |
| 43     |         | HV                        | A.F.5a           | \$ 16,063      | \$ 8,154     | \$ 1,840          | \$ 4,750                   | \$ 1,193      | \$ -               | \$ 127    |
| 44     |         | PRIMARY                   | A.F.5b           | \$ 115,727     | \$ 58,762    | \$ 13,258         | \$ 34,230                  | \$ 8,596      | \$ -               | \$ 881    |
| 45     |         | SECONDARY                 | A.F.6            | \$ 51,045      | \$ 30,348    | \$ 6,847          | \$ 13,394                  | \$ -          | \$ -               | \$ 455    |
| 46     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 47     |         | SUBTOTAL                  |                  | \$ 568,524     | \$ 418,243   | \$ 66,158         | \$ 55,688                  | \$ 9,811      | \$ -               | \$ 18,624 |

AMEREN MISSOURI

ELECTRIC COST OF SERVICE ALLOCATION STUDY WITH MODIFICATIONS BY MIEC  
 TEST YEAR PERIOD: 12 MONTHS ENDED MARCH 2010  
 AVERAGE EXCESS FOUR NONCOINCIDENT PEAKS  
 (\$000's)

TITLE: GROSS PLANT IN SERVICE - PAGE 2

| LINE # | ACCT # | ITEM                               | ALLOCATION BASIS | MISSOURI TOTAL | RESIDENTIAL  | SMALL GEN SERVICE | LARGE G.S. / SMALL PRIMARY | LARGE PRIMARY | LARGE TRANSMISSION | LIGHTING   |
|--------|--------|------------------------------------|------------------|----------------|--------------|-------------------|----------------------------|---------------|--------------------|------------|
| 1      |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 2      | 368    | LINE TRANSFORMERS                  |                  |                |              |                   |                            |               |                    |            |
| 3      |        | CUSTOMER                           | A.F.15           | \$ 241,173     | \$ 210,182   | \$ 28,952         | \$ 2,039                   | \$ -          | \$ -               | \$ -       |
| 4      |        | SECONDARY                          | A.F.6            | \$ 181,426     | \$ 107,865   | \$ 24,337         | \$ 47,607                  | \$ -          | \$ -               | \$ 1,618   |
| 5      |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 6      |        | SUBTOTAL                           |                  | \$ 422,599     | \$ 318,047   | \$ 53,288         | \$ 49,646                  | \$ -          | \$ -               | \$ 1,618   |
| 7      |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 8      | 369-1  | OVERHEAD SERVICES                  |                  |                |              |                   |                            |               |                    |            |
| 9      |        | CUSTOMER                           | A.F.15           | \$ 65,318      | \$ 56,925    | \$ 7,841          | \$ 552                     | \$ -          | \$ -               | \$ -       |
| 10     |        | SECONDARY                          | A.F.16           | \$ 94,979      | \$ 65,237    | \$ 14,174         | \$ 15,568                  | \$ -          | \$ -               | \$ -       |
| 11     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 12     |        | SUBTOTAL                           |                  | \$ 160,298     | \$ 122,163   | \$ 22,016         | \$ 16,120                  | \$ -          | \$ -               | \$ -       |
| 13     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 14     | 369-2  | UNDERGROUND SERVICES               |                  |                |              |                   |                            |               |                    |            |
| 15     |        | CUSTOMER                           | A.F.15           | \$ 131,307     | \$ 114,434   | \$ 15,763         | \$ 1,110                   | \$ -          | \$ -               | \$ -       |
| 16     |        | SECONDARY                          | A.F.16           | \$ 7,527       | \$ 5,170     | \$ 1,123          | \$ 1,234                   | \$ -          | \$ -               | \$ -       |
| 17     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 18     |        | SUBTOTAL                           |                  | \$ 138,834     | \$ 119,604   | \$ 16,886         | \$ 2,344                   | \$ -          | \$ -               | \$ -       |
| 19     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 20     | 370    | METERS                             | A.F.7            | \$ 108,173     | \$ 71,698    | \$ 21,031         | \$ 14,171                  | \$ 1,100      | \$ 76              | \$ 96      |
| 21     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 22     | 371    | CUSTOMER INSTALLATIONS             | DIRECT           | \$ 165         | \$ -         | \$ -              | \$ 82                      | \$ 82         | \$ -               | \$ -       |
| 23     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 24     | 373    | STREET LIGHTING                    |                  | 113,064        | 0.000000     | 0.000000          | 0.000000                   | 0.000000      | 0.000000           | 113,064    |
| 25     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 26     |        | SUBTOTAL - CUSTOMER DIST PLANT     |                  | \$ 1,743,949   | \$ 1,450,222 | \$ 210,916        | \$ 28,167                  | \$ 1,169      | \$ 76              | \$ 53,399  |
| 27     |        | - DEMAND DIST PLANT                |                  | \$ 2,724,104   | \$ 1,382,692 | \$ 311,383        | \$ 743,913                 | \$ 153,285    | \$ -               | \$ 132,832 |
| 28     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 29     |        | DISTRIBUTION TOTAL                 |                  | \$ 4,468,053   | \$ 2,832,914 | \$ 522,298        | \$ 772,079                 | \$ 154,454    | \$ 76              | \$ 186,230 |
| 30     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 31     |        | GENERAL PLANT                      | A.F.35           | \$ 577,224     | \$ 293,614   | \$ 61,713         | \$ 147,352                 | \$ 38,199     | \$ 25,652          | \$ 10,695  |
| 32     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 33     |        |                                    |                  | \$ -           | \$ -         | \$ -              | \$ -                       | \$ -          | \$ -               | \$ -       |
| 34     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 35     |        |                                    |                  | \$ -           | \$ -         | \$ -              | \$ -                       | \$ -          | \$ -               | \$ -       |
| 36     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 37     |        | SUBTOTAL PROD,T&D,GEN,COMMON PLANT |                  | \$ 14,069,293  | \$ 7,337,383 | \$ 1,561,747      | \$ 3,480,441               | \$ 839,219    | \$ 589,121         | \$ 261,382 |
| 38     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 39     |        | INTANGIBLE PLANT                   | A.F.35           | \$ 51,460      | \$ 26,176    | \$ 5,502          | \$ 13,137                  | \$ 3,405      | \$ 2,287           | \$ 953     |
| 40     |        | EE REGULATORY ASSET                | DIRECT           | \$ 46,398      | \$ 26,285    | \$ 2,013          | \$ 17,194                  | \$ 905        | \$ -               | \$ -       |
| 41     |        | REGULATORY ACCOUNT (PENSION AND O  | A.F.35           | \$ (43,515)    | \$ (22,134)  | \$ (4,652)        | \$ (11,108)                | \$ (2,880)    | \$ (1,934)         | \$ (806)   |
| 42     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 43     |        | TOTAL GROSS PLANT                  |                  | \$ 14,123,637  | \$ 7,367,710 | \$ 1,564,609      | \$ 3,499,664               | \$ 840,651    | \$ 589,474         | \$ 261,530 |

AMEREN MISSOURI

ELECTRIC COST OF SERVICE ALLOCATION STUDY WITH MODIFICATIONS BY MIEC  
 TEST YEAR PERIOD: 12 MONTHS ENDED MARCH 2010  
 AVERAGE EXCESS FOUR NONCOINCIDENT PEAKS  
 (\$000's)

TITLE: GROSS PLANT IN SERVICE - PAGE 3

| <u>LINE #</u> | <u>ACCT #</u> | <u>ITEM</u>                  | <u>ALLOCATION BASIS</u> | <u>MISSOURI TOTAL</u> | <u>RESIDENTIAL</u> | <u>SMALL GEN SERVICE</u> | <u>LARGE G.S. / SMALL PRIMARY</u> | <u>LARGE PRIMARY</u> | <u>LARGE TRANSMISSION</u> | <u>LIGHTING</u> |
|---------------|---------------|------------------------------|-------------------------|-----------------------|--------------------|--------------------------|-----------------------------------|----------------------|---------------------------|-----------------|
| 1             |               |                              |                         |                       |                    |                          |                                   |                      |                           |                 |
| 2             |               | MATERIALS & SUPPLIES - FUEL  | A.F.11                  | \$ 371,450            | \$ 139,979         | \$ 35,965                | \$ 117,326                        | \$ 37,157            | \$ 39,142                 | \$ 1,881        |
| 3             |               | MATERIALS & SUPPLIES - LOCAL | A.F.18                  | \$ 45,574             | \$ 28,896          | \$ 5,327                 | \$ 7,875                          | \$ 1,575             | \$ 1                      | \$ 1,900        |
| 4             |               | CASH WORKING CAPITAL         | A.F.37                  | \$ 25,804             | \$ 11,639          | \$ 2,650                 | \$ 7,221                          | \$ 2,100             | \$ 1,889                  | \$ 306          |
| 5             |               | CUSTOMER ADVANCES & DEPOSITS | A.F.12                  | \$ (19,537)           | \$ (23)            | \$ (16,017)              | \$ (3,498)                        | \$ -                 | \$ -                      | \$ -            |
| 6             |               | ACCUM DEFERRED INCOME TAXES  | A.F.19                  | \$ (1,799,209)        | \$ (938,319)       | \$ (199,719)             | \$ (445,086)                      | \$ (107,321)         | \$ (75,338)               | \$ (33,426)     |
| 7             |               |                              |                         |                       |                    |                          |                                   |                      |                           |                 |
| 8             |               | TOTAL GROSS RATE BASE        |                         | \$ 12,747,719         | \$ 6,609,882       | \$ 1,392,815             | \$ 3,183,503                      | \$ 774,162           | \$ 555,168                | \$ 232,190      |

AMEREN MISSOURI

ELECTRIC COST OF SERVICE ALLOCATION STUDY WITH MODIFICATIONS BY MIEC  
 TEST YEAR PERIOD: 12 MONTHS ENDED MARCH 2010  
 AVERAGE EXCESS FOUR NONCOINCIDENT PEAKS  
 (\$000's)

TITLE: RESERVES FOR DEPRECIATION - PAGE 1

| LINE # | ACCT #  | ITEM                      | ALLOCATION BASIS | MISSOURI TOTAL | RESIDENTIAL  | SMALL GEN SERVICE | LARGE G.S. / SMALL PRIMARY | LARGE PRIMARY | LARGE TRANSMISSION | LIGHTING  |
|--------|---------|---------------------------|------------------|----------------|--------------|-------------------|----------------------------|---------------|--------------------|-----------|
| 1      |         | <u>PRODUCTION</u>         | A.F.1            | \$ 3,375,720   | \$ 1,575,626 | \$ 368,224        | \$ 958,977                 | \$ 241,055    | \$ 207,012         | \$ 24,826 |
| 2      |         |                           |                  |                |              |                   |                            |               |                    |           |
| 3      |         | <u>TRANSMISSION</u>       |                  |                |              |                   |                            |               |                    |           |
| 4      |         | LINES                     | A.F.2            | \$ 174,514     | \$ 81,170    | \$ 17,367         | \$ 48,934                  | \$ 13,011     | \$ 13,230          | \$ 801    |
| 5      |         | SUBSTATION                | A.F.3            | \$ 73,844      | \$ 34,346    | \$ 7,349          | \$ 20,706                  | \$ 5,506      | \$ 5,598           | \$ 339    |
| 6      |         |                           |                  |                |              |                   |                            |               |                    |           |
| 7      |         | TOTAL TRANSMISSION        |                  | \$ 248,358     | \$ 115,517   | \$ 24,716         | \$ 69,640                  | \$ 18,517     | \$ 18,828          | \$ 1,141  |
| 8      |         |                           |                  |                |              |                   |                            |               |                    |           |
| 9      |         | <u>DISTRIBUTION PLANT</u> |                  |                |              |                   |                            |               |                    |           |
| 10     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 11     | 360     | SUBSTATION LAND           | A.F.8            | \$ 365         | \$ 185       | \$ 42             | \$ 108                     | \$ 27         | \$ -               | \$ 3      |
| 12     | 321     | OTHER LAND                | A.F.5            | \$ -           | \$ -         | \$ -              | \$ -                       | \$ -          | \$ -               | \$ -      |
| 13     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 14     | 361-362 | SUBSTATIONS               | A.F.8            | \$ 217,497     | \$ 110,437   | \$ 24,917         | \$ 64,331                  | \$ 16,154     | \$ -               | \$ 1,656  |
| 15     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 16     | 364     | POLES TOWERS FIXTURES     |                  |                |              |                   |                            |               |                    |           |
| 17     |         | CUSTOMER                  | A.F.4            | \$ 149,740     | \$ 124,616   | \$ 17,165         | \$ 1,287                   | \$ 9          | \$ -               | \$ 6,663  |
| 18     |         | HV                        | A.F.5a           | \$ 132,726     | \$ 67,376    | \$ 15,202         | \$ 39,247                  | \$ 9,856      | \$ -               | \$ 1,046  |
| 19     |         | PRIMARY                   | A.F.5b           | \$ 254,971     | \$ 129,465   | \$ 29,211         | \$ 75,416                  | \$ 18,938     | \$ -               | \$ 1,942  |
| 20     |         | SECONDARY                 | A.F.6            | \$ 129,991     | \$ 77,285    | \$ 17,437         | \$ 34,110                  | \$ -          | \$ -               | \$ 1,159  |
| 21     |         | LIGHTING-DIRECT           | DIRECT           | \$ -           | \$ -         | \$ -              | \$ -                       | \$ -          | \$ -               | \$ -      |
| 22     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 23     |         | SUBTOTAL                  |                  | \$ 667,428     | \$ 398,742   | \$ 79,015         | \$ 150,060                 | \$ 28,802     | \$ -               | \$ 10,809 |
| 24     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 25     | 365     | OVERHEAD CONDUCTOR        |                  |                |              |                   |                            |               |                    |           |
| 26     |         | CUSTOMER                  | A.F.4            | \$ 128,496     | \$ 106,937   | \$ 14,730         | \$ 1,104                   | \$ 7          | \$ -               | \$ 5,717  |
| 27     |         | HV                        | A.F.5a           | \$ 40,709      | \$ 20,665    | \$ 4,663          | \$ 12,038                  | \$ 3,023      | \$ -               | \$ 321    |
| 28     |         | PRIMARY                   | A.F.5b           | \$ 140,768     | \$ 71,477    | \$ 16,127         | \$ 41,636                  | \$ 10,455     | \$ -               | \$ 1,072  |
| 29     |         | SECONDARY                 | A.F.6            | \$ 7,390       | \$ 4,394     | \$ 991            | \$ 1,939                   | \$ -          | \$ -               | \$ 66     |
| 30     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 31     |         | SUBTOTAL                  |                  | \$ 317,363     | \$ 203,472   | \$ 36,511         | \$ 56,718                  | \$ 13,486     | \$ -               | \$ 7,176  |
| 32     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 33     | 366     | UNDERGROUND CONDUIT       |                  |                |              |                   |                            |               |                    |           |
| 34     |         | CUSTOMER                  | A.F.4            | \$ 54,714      | \$ 45,534    | \$ 6,272          | \$ 470                     | \$ 3          | \$ -               | \$ 2,434  |
| 35     |         | HV                        | A.F.5a           | \$ 2,279       | \$ 1,157     | \$ 261            | \$ 674                     | \$ 169        | \$ -               | \$ 18     |
| 36     |         | PRIMARY                   | A.F.5b           | \$ 16,417      | \$ 8,336     | \$ 1,881          | \$ 4,856                   | \$ 1,219      | \$ -               | \$ 125    |
| 37     |         | SECONDARY                 | A.F.6            | \$ 7,241       | \$ 4,305     | \$ 971            | \$ 1,900                   | \$ -          | \$ -               | \$ 65     |
| 38     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 39     |         | SUBTOTAL                  |                  | \$ 80,652      | \$ 59,332    | \$ 9,385          | \$ 7,900                   | \$ 1,392      | \$ -               | \$ 2,642  |
| 40     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 41     | 367     | UNDERGROUND CONDUCTORS    |                  |                |              |                   |                            |               |                    |           |
| 42     |         | CUSTOMER                  | A.F.4            | \$ 120,355     | \$ 100,162   | \$ 13,797         | \$ 1,034                   | \$ 7          | \$ -               | \$ 5,355  |
| 43     |         | HV                        | A.F.5a           | \$ 5,012       | \$ 2,544     | \$ 574            | \$ 1,482                   | \$ 372        | \$ -               | \$ 39     |
| 44     |         | PRIMARY                   | A.F.5b           | \$ 36,113      | \$ 18,337    | \$ 4,137          | \$ 10,682                  | \$ 2,682      | \$ -               | \$ 275    |
| 45     |         | SECONDARY                 | A.F.6            | \$ 15,929      | \$ 9,470     | \$ 2,137          | \$ 4,180                   | \$ -          | \$ -               | \$ 142    |
| 46     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 47     |         | SUBTOTAL                  |                  | \$ 177,409     | \$ 130,514   | \$ 20,645         | \$ 17,378                  | \$ 3,061      | \$ -               | \$ 5,812  |

AMEREN MISSOURI

ELECTRIC COST OF SERVICE ALLOCATION STUDY WITH MODIFICATIONS BY MIEC  
 TEST YEAR PERIOD: 12 MONTHS ENDED MARCH 2010  
 AVERAGE EXCESS FOUR NONCOINCIDENT PEAKS  
 (\$000's)

TITLE: RESERVES FOR DEPRECIATION - PAGE 2

| LINE # | ACCT # | ITEM                               | ALLOCATION BASIS | MISSOURI TOTAL | RESIDENTIAL  | SMALL GEN SERVICE | LARGE G.S. / SMALL PRIMARY | LARGE PRIMARY | LARGE TRANSMISSION | LIGHTING   |
|--------|--------|------------------------------------|------------------|----------------|--------------|-------------------|----------------------------|---------------|--------------------|------------|
| 1      |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 2      | 368    | LINE TRANSFORMERS                  |                  |                |              |                   |                            |               |                    |            |
| 3      |        | CUSTOMER                           | A.F.15           | \$ 79,600      | \$ 69,371    | \$ 9,556          | \$ 673                     | \$ -          | \$ -               | \$ -       |
| 4      |        | SECONDARY                          | A.F.6            | \$ 59,880      | \$ 35,601    | \$ 8,032          | \$ 15,713                  | \$ -          | \$ -               | \$ 534     |
| 5      |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 6      |        | SUBTOTAL                           |                  | \$ 139,480     | \$ 104,972   | \$ 17,588         | \$ 16,386                  | \$ -          | \$ -               | \$ 534     |
| 7      |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 8      | 369-1  | OVERHEAD SERVICES                  |                  |                |              |                   |                            |               |                    |            |
| 9      |        | CUSTOMER                           | A.F.15           | \$ 80,609      | \$ 70,251    | \$ 9,677          | \$ 681                     | \$ -          | \$ -               | \$ -       |
| 10     |        | SECONDARY                          | A.F.16           | \$ 117,213     | \$ 80,508    | \$ 17,493         | \$ 19,212                  | \$ -          | \$ -               | \$ -       |
| 11     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 12     |        | SUBTOTAL                           |                  | \$ 197,821     | \$ 150,759   | \$ 27,169         | \$ 19,893                  | \$ -          | \$ -               | \$ -       |
| 13     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 14     | 369-2  | UNDERGROUND SERVICES               |                  |                |              |                   |                            |               |                    |            |
| 15     |        | CUSTOMER                           | A.F.15           | \$ 90,369      | \$ 78,757    | \$ 10,848         | \$ 764                     | \$ -          | \$ -               | \$ -       |
| 16     |        | SECONDARY                          | A.F.16           | \$ 5,180       | \$ 3,558     | \$ 773            | \$ 849                     | \$ -          | \$ -               | \$ -       |
| 17     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 18     |        | SUBTOTAL                           |                  | \$ 95,549      | \$ 82,315    | \$ 11,621         | \$ 1,613                   | \$ -          | \$ -               | \$ -       |
| 19     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 20     | 370    | METERS                             | A.F.7            | \$ 42,309      | \$ 28,043    | \$ 8,226          | \$ 5,543                   | \$ 430        | \$ 30              | \$ 37      |
| 21     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 22     | 371    | CUSTOMER INSTALLATIONS             | DIRECT           | \$ 153         | \$ -         | \$ -              | \$ 76                      | \$ 76         | \$ -               | \$ -       |
| 23     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 24     | 373    | STREET LIGHTING                    |                  | \$ 62,250      |              |                   |                            |               |                    | \$ 62,250  |
| 25     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 26     |        | SUBTOTAL - CUSTOMER DIST PLANT     |                  | \$ 746,192     | \$ 623,671   | \$ 90,271         | \$ 11,556                  | \$ 457        | \$ 30              | \$ 20,207  |
| 27     |        | - DEMAND DIST PLANT                |                  | \$ 1,252,084   | \$ 645,101   | \$ 144,849        | \$ 328,450                 | \$ 62,973     | \$ -               | \$ 70,712  |
| 28     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 29     |        | DISTRIBUTION TOTAL                 |                  | \$ 1,998,276   | \$ 1,268,772 | \$ 235,120        | \$ 340,006                 | \$ 63,429     | \$ 30              | \$ 90,918  |
| 30     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 31     |        | GENERAL PLANT                      | A.F.35           | \$ 291,601     | \$ 148,327   | \$ 31,176         | \$ 74,439                  | \$ 19,297     | \$ 12,959          | \$ 5,403   |
| 32     |        |                                    |                  | \$ -           | \$ -         | \$ -              | \$ -                       | \$ -          | \$ -               | \$ -       |
| 33     |        |                                    |                  | \$ -           | \$ -         | \$ -              | \$ -                       | \$ -          | \$ -               | \$ -       |
| 34     |        |                                    |                  | \$ -           | \$ -         | \$ -              | \$ -                       | \$ -          | \$ -               | \$ -       |
| 35     |        |                                    |                  | \$ -           | \$ -         | \$ -              | \$ -                       | \$ -          | \$ -               | \$ -       |
| 36     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 37     |        | SUBTOTAL PROD,T&D,GEN,COMMON PLANT |                  | \$ 5,913,955   | \$ 3,108,242 | \$ 659,236        | \$ 1,443,063               | \$ 342,298    | \$ 238,829         | \$ 122,288 |
| 38     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 39     |        | INTANGIBLE PLANT                   | A.F.35           | \$ 23,711      | \$ 12,061    | \$ 2,535          | \$ 6,053                   | \$ 1,569      | \$ 1,054           | \$ 439     |
| 40     |        | EE REGULATORY ASSET                | DIRECT           | \$ -           | \$ -         | \$ -              | \$ -                       | \$ -          | \$ -               | \$ -       |
| 41     |        | REGULATORY ACCOUNT (PENSION AND O  | A.F.35           | \$ -           | \$ -         | \$ -              | \$ -                       | \$ -          | \$ -               | \$ -       |
| 42     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 43     |        | TOTAL RESERVE FOR DEPRECIATION     |                  | \$ 5,937,666   | \$ 3,120,303 | \$ 661,771        | \$ 1,449,116               | \$ 343,867    | \$ 239,882         | \$ 122,727 |

AMEREN MISSOURI

ELECTRIC COST OF SERVICE ALLOCATION STUDY WITH MODIFICATIONS BY MIEC  
 TEST YEAR PERIOD: 12 MONTHS ENDED MARCH 2010  
 AVERAGE EXCESS FOUR NONCOINCIDENT PEAKS  
 (\$000's)

TITLE: RESERVES FOR DEPRECIATION - PAGE 3

| <u>LINE #</u> | <u>ACCT #</u> | <u>ITEM</u>                  | <u>ALLOCATION BASIS</u> | <u>MISSOURI TOTAL</u> | <u>RESIDENTIAL</u> | <u>SMALL GEN SERVICE</u> | <u>LARGE G.S. / SMALL PRIMARY</u> | <u>LARGE PRIMARY</u> | <u>LARGE TRANSMISSION</u> | <u>LIGHTING</u> |
|---------------|---------------|------------------------------|-------------------------|-----------------------|--------------------|--------------------------|-----------------------------------|----------------------|---------------------------|-----------------|
| 1             |               |                              |                         |                       |                    |                          |                                   |                      |                           |                 |
| 2             |               | MATERIALS & SUPPLIES - FUEL  | A.F.11                  | \$ -                  | \$ -               | \$ -                     | \$ -                              | \$ -                 | \$ -                      | \$ -            |
| 3             |               | MATERIALS & SUPPLIES - LOCAL | A.F.18                  | \$ -                  | \$ -               | \$ -                     | \$ -                              | \$ -                 | \$ -                      | \$ -            |
| 4             |               | CASH WORKING CAPITAL         | A.F.37                  | \$ -                  | \$ -               | \$ -                     | \$ -                              | \$ -                 | \$ -                      | \$ -            |
| 5             |               | CUSTOMER ADVANCES & DEPOSITS | A.F.12                  | \$ -                  | \$ -               | \$ -                     | \$ -                              | \$ -                 | \$ -                      | \$ -            |
| 6             |               | ACCUM DEFERRED INCOME TAXES  | A.F.19                  | \$ -                  | \$ -               | \$ -                     | \$ -                              | \$ -                 | \$ -                      | \$ -            |
| 7             |               |                              |                         |                       |                    |                          |                                   |                      |                           |                 |
| 8             |               | RESERVES FOR DEPRECIATION    |                         | \$ 5,937,666          | \$ 3,120,303       | \$ 661,771               | \$ 1,449,116                      | \$ 343,867           | \$ 239,882                | \$ 122,727      |



AMEREN MISSOURI

ELECTRIC COST OF SERVICE ALLOCATION STUDY WITH MODIFICATIONS BY MIEC  
 TEST YEAR PERIOD: 12 MONTHS ENDED MARCH 2010  
 AVERAGE EXCESS FOUR NONCOINCIDENT PEAKS  
 (\$000's)

TITLE: NET ORIGINAL COST - PAGE 1

| LINE # | ACCT #  | ITEM                      | ALLOCATION BASIS | MISSOURI TOTAL | RESIDENTIAL  | SMALL GEN SERVICE | LARGE G.S. / SMALL PRIMARY | LARGE PRIMARY | LARGE TRANSMISSION | LIGHTING  |
|--------|---------|---------------------------|------------------|----------------|--------------|-------------------|----------------------------|---------------|--------------------|-----------|
| 1      |         | <u>PRODUCTION</u>         | A.F.1            | \$ 4,957,559   | \$ 2,313,953 | \$ 540,771        | \$ 1,408,348               | \$ 354,011    | \$ 304,017         | \$ 36,459 |
| 2      |         |                           |                  |                |              |                   |                            |               |                    |           |
| 3      |         | <u>TRANSMISSION</u>       |                  |                |              |                   |                            |               |                    |           |
| 4      |         | LINES                     | A.F.2            | \$ 239,343     | \$ 111,324   | \$ 23,819         | \$ 67,112                  | \$ 17,845     | \$ 18,144          | \$ 1,099  |
| 5      |         | SUBSTATION                | A.F.3            | \$ 203,036     | \$ 94,436    | \$ 20,206         | \$ 56,932                  | \$ 15,138     | \$ 15,392          | \$ 932    |
| 6      |         |                           |                  |                |              |                   |                            |               |                    |           |
| 7      |         | TOTAL TRANSMISSION        |                  | \$ 442,379     | \$ 205,760   | \$ 44,024         | \$ 124,044                 | \$ 32,983     | \$ 33,536          | \$ 2,032  |
| 8      |         |                           |                  |                |              |                   |                            |               |                    |           |
| 9      |         | <u>DISTRIBUTION PLANT</u> |                  |                |              |                   |                            |               |                    |           |
| 10     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 11     | 360     | SUBSTATION LAND           | A.F.8            | \$ 18,158      | \$ 9,220     | \$ 2,080          | \$ 5,371                   | \$ 1,349      | \$ -               | \$ 138    |
| 12     | 321     | OTHER LAND                | A.F.5            | \$ 11,645      | \$ 5,913     | \$ 1,334          | \$ 3,444                   | \$ 865        | \$ -               | \$ 89     |
| 13     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 14     | 361-362 | SUBSTATIONS               | A.F.8            | \$ 508,100     | \$ 257,995   | \$ 58,210         | \$ 150,287                 | \$ 37,739     | \$ -               | \$ 3,869  |
| 15     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 16     | 364     | POLES TOWERS FIXTURES     |                  |                |              |                   |                            |               |                    |           |
| 17     |         | CUSTOMER                  | A.F.4            | \$ 38,859      | \$ 32,339    | \$ 4,455          | \$ 334                     | \$ 2          | \$ -               | \$ 1,729  |
| 18     |         | HV                        | A.F.5a           | \$ 34,444      | \$ 17,485    | \$ 3,945          | \$ 10,185                  | \$ 2,558      | \$ -               | \$ 271    |
| 19     |         | PRIMARY                   | A.F.5b           | \$ 66,168      | \$ 33,598    | \$ 7,580          | \$ 19,571                  | \$ 4,915      | \$ -               | \$ 504    |
| 20     |         | SECONDARY                 | A.F.6            | \$ 33,734      | \$ 20,056    | \$ 4,525          | \$ 8,852                   | \$ -          | \$ -               | \$ 301    |
| 21     |         | LIGHTING-DIRECT           | DIRECT           | \$ -           | \$ -         | \$ -              | \$ -                       | \$ -          | \$ -               | \$ -      |
| 22     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 23     |         | SUBTOTAL                  |                  | \$ 173,205     | \$ 103,478   | \$ 20,505         | \$ 38,942                  | \$ 7,474      | \$ -               | \$ 2,805  |
| 24     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 25     | 365     | OVERHEAD CONDUCTOR        |                  |                |              |                   |                            |               |                    |           |
| 26     |         | CUSTOMER                  | A.F.4            | \$ 314,020     | \$ 261,334   | \$ 35,997         | \$ 2,698                   | \$ 18         | \$ -               | \$ 13,972 |
| 27     |         | HV                        | A.F.5a           | \$ 99,486      | \$ 50,502    | \$ 11,395         | \$ 29,418                  | \$ 7,387      | \$ -               | \$ 784    |
| 28     |         | PRIMARY                   | A.F.5b           | \$ 344,010     | \$ 174,676   | \$ 39,411         | \$ 101,752                 | \$ 25,551     | \$ -               | \$ 2,620  |
| 29     |         | SECONDARY                 | A.F.6            | \$ 18,061      | \$ 10,738    | \$ 2,423          | \$ 4,739                   | \$ -          | \$ -               | \$ 161    |
| 30     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 31     |         | SUBTOTAL                  |                  | \$ 775,576     | \$ 497,250   | \$ 89,226         | \$ 138,608                 | \$ 32,957     | \$ -               | \$ 17,536 |
| 32     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 33     | 366     | UNDERGROUND CONDUIT       |                  |                |              |                   |                            |               |                    |           |
| 34     |         | CUSTOMER                  | A.F.4            | \$ 126,460     | \$ 105,243   | \$ 14,497         | \$ 1,087                   | \$ 7          | \$ -               | \$ 5,627  |
| 35     |         | HV                        | A.F.5a           | \$ 5,267       | \$ 2,674     | \$ 603            | \$ 1,557                   | \$ 391        | \$ -               | \$ 41     |
| 36     |         | PRIMARY                   | A.F.5b           | \$ 37,945      | \$ 19,267    | \$ 4,347          | \$ 11,223                  | \$ 2,818      | \$ -               | \$ 289    |
| 37     |         | SECONDARY                 | A.F.6            | \$ 16,737      | \$ 9,951     | \$ 2,245          | \$ 4,392                   | \$ -          | \$ -               | \$ 149    |
| 38     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 39     |         | SUBTOTAL                  |                  | \$ 186,409     | \$ 137,134   | \$ 21,692         | \$ 18,259                  | \$ 3,217      | \$ -               | \$ 6,106  |
| 40     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 41     | 367     | UNDERGROUND CONDUCTORS    |                  |                |              |                   |                            |               |                    |           |
| 42     |         | CUSTOMER                  | A.F.4            | \$ 265,334     | \$ 220,817   | \$ 30,416         | \$ 2,280                   | \$ 15         | \$ -               | \$ 11,806 |
| 43     |         | HV                        | A.F.5a           | \$ 11,050      | \$ 5,610     | \$ 1,266          | \$ 3,268                   | \$ 821        | \$ -               | \$ 87     |
| 44     |         | PRIMARY                   | A.F.5b           | \$ 79,614      | \$ 40,425    | \$ 9,121          | \$ 23,548                  | \$ 5,913      | \$ -               | \$ 606    |
| 45     |         | SECONDARY                 | A.F.6            | \$ 35,116      | \$ 20,878    | \$ 4,711          | \$ 9,215                   | \$ -          | \$ -               | \$ 313    |
| 46     |         |                           |                  |                |              |                   |                            |               |                    |           |
| 47     |         | SUBTOTAL                  |                  | \$ 391,115     | \$ 287,729   | \$ 45,513         | \$ 38,311                  | \$ 6,749      | \$ -               | \$ 12,812 |

AMEREN MISSOURI

ELECTRIC COST OF SERVICE ALLOCATION STUDY WITH MODIFICATIONS BY MIEC  
 TEST YEAR PERIOD: 12 MONTHS ENDED MARCH 2010  
 AVERAGE EXCESS FOUR NONCOINCIDENT PEAKS  
 (\$000's)

TITLE: NET ORIGINAL COST - PAGE 2

| LINE # | ACCT # | ITEM                               | ALLOCATION BASIS | MISSOURI TOTAL | RESIDENTIAL  | SMALL GEN SERVICE | LARGE G.S. / SMALL PRIMARY | LARGE PRIMARY | LARGE TRANSMISSION | LIGHTING   |
|--------|--------|------------------------------------|------------------|----------------|--------------|-------------------|----------------------------|---------------|--------------------|------------|
| 1      |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 2      | 368    | LINE TRANSFORMERS                  |                  |                |              |                   |                            |               |                    |            |
| 3      |        | CUSTOMER                           | A.F.15           | \$ 161,573     | \$ 140,811   | \$ 19,396         | \$ 1,366                   | \$ -          | \$ -               | \$ -       |
| 4      |        | SECONDARY                          | A.F.6            | \$ 121,546     | \$ 72,264    | \$ 16,305         | \$ 31,894                  | \$ -          | \$ -               | \$ 1,084   |
| 5      |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 6      |        | SUBTOTAL                           |                  | \$ 283,119     | \$ 213,075   | \$ 35,701         | \$ 33,260                  | \$ -          | \$ -               | \$ 1,084   |
| 7      |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 8      | 369-1  | OVERHEAD SERVICES                  |                  |                |              |                   |                            |               |                    |            |
| 9      |        | CUSTOMER                           | A.F.15           | \$ (15,290)    | \$ (13,325)  | \$ (1,835)        | \$ (129)                   | \$ -          | \$ -               | \$ -       |
| 10     |        | SECONDARY                          | A.F.16           | \$ (22,233)    | \$ (15,271)  | \$ (3,318)        | \$ (3,644)                 | \$ -          | \$ -               | \$ -       |
| 11     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 12     |        | SUBTOTAL                           |                  | \$ (37,523)    | \$ (28,596)  | \$ (5,154)        | \$ (3,773)                 | \$ -          | \$ -               | \$ -       |
| 13     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 14     | 369-2  | UNDERGROUND SERVICES               |                  |                |              |                   |                            |               |                    |            |
| 15     |        | CUSTOMER                           | A.F.15           | \$ 40,938      | \$ 35,677    | \$ 4,914          | \$ 346                     | \$ -          | \$ -               | \$ -       |
| 16     |        | SECONDARY                          | A.F.16           | \$ 2,347       | \$ 1,612     | \$ 350            | \$ 385                     | \$ -          | \$ -               | \$ -       |
| 17     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 18     |        | SUBTOTAL                           |                  | \$ 43,285      | \$ 37,289    | \$ 5,265          | \$ 731                     | \$ -          | \$ -               | \$ -       |
| 19     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 20     | 370    | METERS                             | A.F.7            | \$ 65,863      | \$ 43,655    | \$ 12,805         | \$ 8,629                   | \$ 670        | \$ 47              | \$ 58      |
| 21     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 22     | 371    | CUSTOMER INSTALLATIONS             | DIRECT           | \$ 12          | \$ -         | \$ -              | \$ 6                       | \$ 6          | \$ -               | \$ -       |
| 23     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 24     | 373    | STREET LIGHTING                    | A.F.29           | \$ 50,814      | \$ -         | \$ -              | \$ -                       | \$ -          | \$ -               | \$ 50,814  |
| 25     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 26     |        | SUBTOTAL - CUSTOMER DIST PLANT     |                  | \$ 997,757     | \$ 826,551   | \$ 120,645        | \$ 16,610                  | \$ 713        | \$ 47              | \$ 33,192  |
| 27     |        | - DEMAND DIST PLANT                |                  | \$ 1,472,020   | \$ 737,591   | \$ 166,533        | \$ 415,463                 | \$ 90,312     | \$ -               | \$ 62,120  |
| 28     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 29     |        | DISTRIBUTION TOTAL                 |                  | \$ 2,469,777   | \$ 1,564,142 | \$ 287,178        | \$ 432,073                 | \$ 91,025     | \$ 47              | \$ 95,312  |
| 30     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 31     |        | GENERAL PLANT                      | A.F.35           | \$ 285,623     | \$ 145,287   | \$ 30,537         | \$ 72,913                  | \$ 18,901     | \$ 12,693          | \$ 5,292   |
| 32     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 33     |        |                                    |                  | \$ -           | \$ -         | \$ -              | \$ -                       | \$ -          | \$ -               | \$ -       |
| 34     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 35     |        |                                    |                  | \$ -           | \$ -         | \$ -              | \$ -                       | \$ -          | \$ -               | \$ -       |
| 36     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 37     |        | SUBTOTAL PROD,T&D,GEN,COMMON PLANT |                  | \$ 8,155,339   | \$ 4,229,141 | \$ 902,511        | \$ 2,037,378               | \$ 496,921    | \$ 350,293         | \$ 139,095 |
| 38     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 39     |        | INTANGIBLE PLANT                   |                  | \$ 27,749      | \$ 14,115    | \$ 2,967          | \$ 7,084                   | \$ 1,836      | \$ 1,233           | \$ 514     |
| 40     |        | EE REGULATORY ASSET                | DIRECT           | \$ 46,398      | \$ 26,285    | \$ 2,013          | \$ 17,194                  | \$ 905        | \$ -               | \$ -       |
| 41     |        | REGULATORY ACCOUNT (PENSION AND O  | A.F.35           | \$ (43,515)    | \$ (22,134)  | \$ (4,652)        | \$ (11,108)                | \$ (2,880)    | \$ (1,934)         | \$ (806)   |
| 42     |        |                                    |                  |                |              |                   |                            |               |                    |            |
| 43     |        | TOTAL NET PLANT                    |                  | \$ 8,185,971   | \$ 4,247,407 | \$ 902,838        | \$ 2,050,548               | \$ 496,783    | \$ 349,592         | \$ 138,803 |

AMEREN MISSOURI

ELECTRIC COST OF SERVICE ALLOCATION STUDY WITH MODIFICATIONS BY MIEC  
 TEST YEAR PERIOD: 12 MONTHS ENDED MARCH 2010  
 AVERAGE EXCESS FOUR NONCOINCIDENT PEAKS  
 (\$000's)

TITLE: NET ORIGINAL COST - PAGE 3

| <u>LINE #</u> | <u>ACCT #</u> | <u>ITEM</u>                       | <u>ALLOCATION BASIS</u> | <u>MISSOURI TOTAL</u> | <u>RESIDENTIAL</u> | <u>SMALL GEN SERVICE</u> | <u>LARGE G.S. / SMALL PRIMARY</u> | <u>LARGE PRIMARY</u> | <u>LARGE TRANSMISSION</u> | <u>LIGHTING</u> |
|---------------|---------------|-----------------------------------|-------------------------|-----------------------|--------------------|--------------------------|-----------------------------------|----------------------|---------------------------|-----------------|
| 1             |               | MATERIALS & SUPPLIES - FUEL       | A.F.11                  | \$ 371,450            | \$ 139,979         | \$ 35,965                | \$ 117,326                        | \$ 37,157            | \$ 39,142                 | \$ 1,881        |
| 2             |               | MATERIALS & SUPPLIES - LOCAL      | A.F.18                  | \$ 45,574             | \$ 28,896          | \$ 5,327                 | \$ 7,875                          | \$ 1,575             | \$ 1                      | \$ 1,900        |
| 3             |               | CASH WORKING CAPITAL              | A.F.37                  | \$ 25,804             | \$ 11,639          | \$ 2,650                 | \$ 7,221                          | \$ 2,100             | \$ 1,889                  | \$ 306          |
| 4             |               | CUSTOMER ADVANCES & DEPOSITS      | A.F.12                  | \$ (19,537)           | \$ (23)            | \$ (16,017)              | \$ (3,498)                        | \$ -                 | \$ -                      | \$ -            |
| 5             |               | ACCUM DEFERRED INCOME TAXES       | A.F.19                  | \$ (1,799,209)        | \$ (938,319)       | \$ (199,719)             | \$ (445,086)                      | \$ (107,321)         | \$ (75,338)               | \$ (33,426)     |
|               |               | TOTAL NET ORIGINAL COST RATE BASE |                         | \$ 6,810,054          | \$ 3,489,579       | \$ 731,044               | \$ 1,734,387                      | \$ 430,294           | \$ 315,285                | \$ 109,463      |

AMEREN MISSOURI

ELECTRIC COST OF SERVICE ALLOCATION STUDY WITH MODIFICATION BY MIEC  
 TEST YEAR PERIOD: 12 MONTHS ENDED MARCH 2010  
 AVERAGE & EXCESS - FOUR NONCOINCIDENT PEAKS  
 (\$000's)

TITLE: OPERATING EXPENSES - PAGE 1

| LINE # | ACCT # | ITEM                                   | ALLOCATION BASIS | TOTAL MISSOURI |              |              | RESIDENTIAL |            | SMALL G. S. |            |
|--------|--------|--|------------------|----------------|--------------|--------------|-------------|------------|-------------|------------|
|        |        |  |                  | LABOR          | OTHER        | TOTAL        | LABOR       | OTHER      | LABOR       | OTHER      |
| 1      |        | <u>OPERATING EXPENSES</u>              |                  |                |              |              |             |            |             |            |
| 2      |        |  |                  |                |              |              |             |            |             |            |
| 3      |        |  |                  |                |              |              |             |            |             |            |
| 4      |        | <u>PRODUCTION</u>                      |                  |                |              |              |             |            |             |            |
| 5      |        | OTHER                                  | A.F.1            | \$ 201,182     | \$ 170,239   | \$ 371,421   | \$ 93,902   | \$ 79,460  | \$ 21,945   | \$ 18,570  |
| 6      |        | VARIABLE                               | A.F.11           | \$ 7,519       | \$ 889,626   | \$ 897,146   | \$ 2,834    | \$ 335,252 | \$ 728      | \$ 86,136  |
| 7      |        |  |                  |                |              |              |             |            |             |            |
| 8      |        | SUBTOTAL                               |                  | \$ 208,702     | \$ 1,059,866 | \$ 1,268,567 | \$ 96,736   | \$ 414,712 | \$ 22,673   | \$ 104,706 |
| 9      |        |  |                  |                |              |              |             |            |             |            |
| 10     |        | <u>SYSTEM REVENUE CREDITS</u>          |                  |                |              |              |             |            |             |            |
| 11     |        | INTERCHANGE SALES                      | A.F.11           | \$ -           | \$ -         | \$ -         | \$ -        | \$ -       | \$ -        | \$ -       |
| 12     |        | RENTALS                                | A.F.2            | \$ -           | \$ -         | \$ -         | \$ -        | \$ -       | \$ -        | \$ -       |
| 13     |        |  |                  |                |              |              |             |            |             |            |
| 14     |        | SUBTOTAL                               |                  | \$ -           | \$ -         | \$ -         | \$ -        | \$ -       | \$ -        | \$ -       |
| 15     |        |  |                  |                |              |              |             |            |             |            |
| 16     |        | <u>TRANSMISSION</u>                    |                  |                |              |              |             |            |             |            |
| 17     |        | LINES                                  | A.F.2            | \$ 370         | \$ 4,869     | \$ 5,240     | \$ 172      | \$ 2,265   | \$ 37       | \$ 485     |
| 18     |        | SUBSTATIONS                            | A.F.3            | \$ 6,302       | \$ 39,331    | \$ 45,633    | \$ 2,931    | \$ 18,294  | \$ 627      | \$ 3,914   |
| 19     |        |  |                  |                |              |              |             |            |             |            |
| 20     |        | TOTAL TRANSMISSION EXPENSES            |                  | \$ 6,672       | \$ 44,200    | \$ 50,872    | \$ 3,103    | \$ 20,558  | \$ 664      | \$ 4,399   |
| 21     |        |  |                  |                |              |              |             |            |             |            |
| 22     |        |  |                  |                |              |              |             |            |             |            |
| 23     |        | <u>DISTRIBUTION OPERATING EXPENSES</u> |                  |                |              |              |             |            |             |            |
| 24     |        |  |                  |                |              |              |             |            |             |            |
| 25     |        |  |                  |                |              |              |             |            |             |            |
| 26     | 582    | SUBSTATIONS                            | A.F.8            | \$ 2,847       | \$ 1,407     | \$ 4,254     | \$ 1,446    | \$ 714     | \$ 326      | \$ 161     |
| 27     |        |  |                  |                |              |              |             |            |             |            |
| 28     | 583-1  | OVERHEAD LINES                         |                  |                |              |              |             |            |             |            |
| 29     |        | CUSTOMER                               | A.F.22           | \$ 1,177       | \$ 349       | \$ 1,526     | \$ 978      | \$ 290     | \$ 135      | \$ 40      |
| 30     |        | HV                                     | A.F.23a          | \$ 467         | \$ 138       | \$ 605       | \$ 237      | \$ 70      | \$ 54       | \$ 16      |
| 31     |        | PRIMARY                                | A.F.23b          | \$ 1,431       | \$ 424       | \$ 1,854     | \$ 726      | \$ 215     | \$ 164      | \$ 49      |
| 32     |        | SECONDARY                              | A.F.24           | \$ 103         | \$ 31        | \$ 134       | \$ 54       | \$ 16      | \$ 13       | \$ 4       |
| 33     |        | LIGHTING-DIRECT                        | A.F.25           | \$ -           | \$ -         | \$ -         | \$ -        | \$ -       | \$ -        | \$ -       |
| 34     |        |  |                  |                |              |              |             |            |             |            |
| 35     |        | SUBTOTAL                               |                  | \$ 3,178       | \$ 941       | \$ 4,120     | \$ 1,996    | \$ 591     | \$ 365      | \$ 108     |
| 36     |        |  |                  |                |              |              |             |            |             |            |
| 37     | 583-2  | OVERHEAD TRANSFORMERS                  |                  |                |              |              |             |            |             |            |
| 38     |        | CUSTOMER                               | A.F.20           | \$ 1,045       | \$ (789)     | \$ 255       | \$ 910      | \$ (688)   | \$ 125      | \$ (95)    |
| 39     |        | SECONDARY                              | A.F.21           | \$ 786         | \$ (594)     | \$ 192       | \$ 467      | \$ (353)   | \$ 105      | \$ (80)    |
| 40     |        |  |                  |                |              |              |             |            |             |            |
| 41     |        | SUBTOTAL                               |                  | \$ 1,830       | \$ (1,383)   | \$ 447       | \$ 1,377    | \$ (1,041) | \$ 231      | \$ (174)   |

AMEREN MISSOURI

ELECTRIC COST OF SERVICE ALLOCATION STUDY WITH MODIFICATION BY MIEC  
 TEST YEAR PERIOD: 12 MONTHS ENDED MARCH 2010  
 AVERAGE & EXCESS - FOUR NONCOINCIDENT PEAKS  
 (\$000's)

TITLE: OPERATING EXPENSES - PAGE 1

| LINE # | ACCT # | ITEM                                   | ALLOCATION BASIS | LARGE G. S. / SM PRI |            | L. PRIMARY |            | L. TRANSMISSION |            | LIGHTING |          |
|--------|--------|--|------------------|----------------------|------------|------------|------------|-----------------|------------|----------|----------|
|        |        |  |                  | LABOR                | OTHER      | LABOR      | OTHER      | LABOR           | OTHER      | LABOR    | OTHER    |
| 1      |        | <u>OPERATING EXPENSES</u>              |                  |                      |            |            |            |                 |            |          |          |
| 2      |        |  |                  |                      |            |            |            |                 |            |          |          |
| 3      |        |  |                  |                      |            |            |            |                 |            |          |          |
| 4      |        | <u>PRODUCTION</u>                      |                  |                      |            |            |            |                 |            |          |          |
| 5      |        | OTHER                                  | A.F.1            | \$ 57,152            | \$ 48,362  | \$ 14,366  | \$ 12,157  | \$ 12,337       | \$ 10,440  | \$ 1,480 | \$ 1,252 |
| 6      |        | VARIABLE                               | A.F.11           | \$ 2,375             | \$ 280,998 | \$ 752     | \$ 88,991  | \$ 792          | \$ 93,745  | \$ 38    | \$ 4,505 |
| 7      |        |  |                  |                      |            |            |            |                 |            |          |          |
| 8      |        | SUBTOTAL                               |                  | \$ 59,527            | \$ 329,359 | \$ 15,118  | \$ 101,147 | \$ 13,130       | \$ 104,185 | \$ 1,518 | \$ 5,757 |
| 9      |        |  |                  |                      |            |            |            |                 |            |          |          |
| 10     |        | <u>SYSTEM REVENUE CREDITS</u>          |                  |                      |            |            |            |                 |            |          |          |
| 11     |        | INTERCHANGE SALES                      | A.F.11           | \$ -                 | \$ -       | \$ -       | \$ -       | \$ -            | \$ -       | \$ -     | \$ -     |
| 12     |        | RENTALS                                | A.F.2            | \$ -                 | \$ -       | \$ -       | \$ -       | \$ -            | \$ -       | \$ -     | \$ -     |
| 13     |        |  |                  |                      |            |            |            |                 |            |          |          |
| 14     |        | SUBTOTAL                               |                  | \$ -                 | \$ -       | \$ -       | \$ -       | \$ -            | \$ -       | \$ -     | \$ -     |
| 15     |        |  |                  |                      |            |            |            |                 |            |          |          |
| 16     |        | <u>TRANSMISSION</u>                    |                  |                      |            |            |            |                 |            |          |          |
| 17     |        | LINES                                  | A.F.2            | \$ 104               | \$ 1,365   | \$ 28      | \$ 363     | \$ 28           | \$ 369     | \$ 2     | \$ 22    |
| 18     |        | SUBSTATIONS                            | A.F.3            | \$ 1,767             | \$ 11,028  | \$ 470     | \$ 2,932   | \$ 478          | \$ 2,982   | \$ 29    | \$ 181   |
| 19     |        |  |                  |                      |            |            |            |                 |            |          |          |
| 20     |        | TOTAL TRANSMISSION EXPENSES            |                  | \$ 1,871             | \$ 12,394  | \$ 497     | \$ 3,295   | \$ 506          | \$ 3,351   | \$ 31    | \$ 203   |
| 21     |        |  |                  |                      |            |            |            |                 |            |          |          |
| 22     |        |  |                  |                      |            |            |            |                 |            |          |          |
| 23     |        | <u>DISTRIBUTION OPERATING EXPENSES</u> |                  |                      |            |            |            |                 |            |          |          |
| 24     |        |  |                  |                      |            |            |            |                 |            |          |          |
| 25     |        |  |                  |                      |            |            |            |                 |            |          |          |
| 26     | 582    | SUBSTATIONS                            | A.F.8            | \$ 842               | \$ 416     | \$ 211     | \$ 105     | \$ -            | \$ -       | \$ 22    | \$ 11    |
| 27     |        |  |                  |                      |            |            |            |                 |            |          |          |
| 28     | 583-1  | OVERHEAD LINES                         |                  |                      |            |            |            |                 |            |          |          |
| 29     |        | CUSTOMER                               | A.F.22           | \$ 10                | \$ 3       | \$ 0       | \$ 0       | \$ -            | \$ -       | \$ 55    | \$ 16    |
| 30     |        | HV                                     | A.F.23a          | \$ 138               | \$ 41      | \$ 35      | \$ 10      | \$ -            | \$ -       | \$ 4     | \$ 1     |
| 31     |        | PRIMARY                                | A.F.23b          | \$ 423               | \$ 125     | \$ 106     | \$ 31      | \$ -            | \$ -       | \$ 11    | \$ 3     |
| 32     |        | SECONDARY                              | A.F.24           | \$ 35                | \$ 10      | \$ -       | \$ -       | \$ -            | \$ -       | \$ 2     | \$ 0     |
| 33     |        | LIGHTING-DIRECT                        | A.F.25           | \$ -                 | \$ -       | \$ -       | \$ -       | \$ -            | \$ -       | \$ -     | \$ -     |
| 34     |        |  |                  |                      |            |            |            |                 |            |          |          |
| 35     |        | SUBTOTAL                               |                  | \$ 606               | \$ 179     | \$ 141     | \$ 42      | \$ -            | \$ -       | \$ 71    | \$ 21    |
| 36     |        |  |                  |                      |            |            |            |                 |            |          |          |
| 37     | 583-2  | OVERHEAD TRANSFORMERS                  |                  |                      |            |            |            |                 |            |          |          |
| 38     |        | CUSTOMER                               | A.F.20           | \$ 9                 | \$ (7)     | \$ -       | \$ -       | \$ -            | \$ -       | \$ -     | \$ -     |
| 39     |        | SECONDARY                              | A.F.21           | \$ 206               | \$ (156)   | \$ -       | \$ -       | \$ -            | \$ -       | \$ 7     | \$ (5)   |
| 40     |        |  |                  |                      |            |            |            |                 |            |          |          |
| 41     |        | SUBTOTAL                               |                  | \$ 215               | \$ (163)   | \$ -       | \$ -       | \$ -            | \$ -       | \$ 7     | \$ (5)   |

AMEREN MISSOURI

ELECTRIC COST OF SERVICE ALLOCATION STUDY WITH MODIFICATION BY MIEC  
 TEST YEAR PERIOD: 12 MONTHS ENDED MARCH 2010  
 AVERAGE & EXCESS - FOUR NONCOINCIDENT PEAKS  
 (\$000's)

TITLE: OPERATING EXPENSES - PAGE 2

| LINE # | ACCT # | ITEM                            | ALLOCATION BASIS | TOTAL MISSOURI |           |           | RESIDENTIAL |           | SMALL G. S. |          |
|--------|--------|---------------------------------|------------------|----------------|-----------|-----------|-------------|-----------|-------------|----------|
|        |        |                                 |                  | LABOR          | OTHER     | TOTAL     | LABOR       | OTHER     | LABOR       | OTHER    |
| 1      |        |                                 |                  |                |           |           |             |           |             |          |
| 2      | 584-1  | UNDERGROUND LINES               |                  |                |           |           |             |           |             |          |
| 3      |        | CUSTOMER                        | A.F.26           | \$ 569         | \$ 1,347  | \$ 1,916  | \$ 476      | \$ 1,126  | \$ 66       | \$ 155   |
|        |        | HV                              | A.F.27a          | \$ 21          | \$ 51     | \$ 72     | \$ 11       | \$ 26     | \$ 2        | \$ 6     |
| 4      |        | PRIMARY                         | A.F.27b          | \$ 155         | \$ 366    | \$ 520    | \$ 78       | \$ 186    | \$ 18       | \$ 42    |
| 5      |        | SECONDARY                       | A.F.28           | \$ 71          | \$ 169    | \$ 240    | \$ 43       | \$ 101    | \$ 10       | \$ 23    |
| 6      |        |                                 |                  |                |           |           |             |           |             |          |
| 7      |        | SUBTOTAL                        |                  | \$ 816         | \$ 1,932  | \$ 2,748  | \$ 608      | \$ 1,438  | \$ 95       | \$ 226   |
| 8      |        |                                 |                  |                |           |           |             |           |             |          |
| 9      | 584-2  | UNDERGROUND TRANSFORMERS        |                  |                |           |           |             |           |             |          |
| 10     |        | CUSTOMER                        | A.F.20           | \$ 416         | \$ (376)  | \$ 40     | \$ 363      | \$ (327)  | \$ 50       | \$ (45)  |
| 11     |        | SECONDARY                       | A.F.21           | \$ 313         | \$ (283)  | \$ 30     | \$ 186      | \$ (168)  | \$ 42       | \$ (38)  |
| 12     |        |                                 |                  |                |           |           |             |           |             |          |
| 13     |        | SUBTOTAL                        |                  | \$ 729         | \$ (658)  | \$ 71     | \$ 549      | \$ (495)  | \$ 92       | \$ (83)  |
| 14     |        |                                 |                  |                |           |           |             |           |             |          |
| 15     | 585    | LIGHTING                        |                  | \$ 455         | \$ 206    | \$ 661    | \$ -        | \$ -      | \$ -        | \$ -     |
| 16     |        |                                 |                  |                |           |           |             |           |             |          |
| 17     | 586    | METERS                          | A.F.7            | \$ 4,032       | \$ 1,174  | \$ 5,206  | \$ 2,672    | \$ 778    | \$ 784      | \$ 228   |
| 18     |        |                                 |                  |                |           |           |             |           |             |          |
| 19     | 587    | CUSTOMER INSTALLATION           | DIRECT           | \$ 1,450       | \$ 182    | \$ 1,632  | \$ (501)    | \$ (63)   | \$ -        | \$ -     |
| 20     |        |                                 |                  |                |           |           |             |           |             |          |
| 21     |        | DIST OPERATING EXPENSE SUBTOTAL |                  |                |           |           |             |           |             |          |
| 22     |        | CUSTOMER A582-A587              |                  | \$ 7,239       | \$ 1,704  | \$ 8,943  | \$ 5,399    | \$ 1,178  | \$ 1,159    | \$ 283   |
| 23     |        | DEMAND A582-A587                |                  | \$ 8,099       | \$ 2,096  | \$ 10,195 | \$ 2,747    | \$ 744    | \$ 733      | \$ 182   |
| 24     |        |                                 |                  |                |           |           |             |           |             |          |
| 25     | 580    | SUPERVISION & ENGR              |                  |                |           |           |             |           |             |          |
| 26     |        | CUSTOMER                        | A.F.30           | \$ 1,988       | \$ 211    | \$ 2,199  | \$ 1,483    | \$ 146    | \$ 318      | \$ 35    |
| 27     |        | DEMAND                          | A.F.31           | \$ 2,225       | \$ 259    | \$ 2,484  | \$ 755      | \$ 92     | \$ 201      | \$ 23    |
| 28     |        |                                 |                  |                |           |           |             |           |             |          |
| 29     |        | SUBTOTAL                        |                  | \$ 4,213       | \$ 470    | \$ 4,683  | \$ 2,238    | \$ 238    | \$ 520      | \$ 58    |
| 30     |        |                                 |                  |                |           |           |             |           |             |          |
| 31     | 581    | DISPATCHING                     |                  |                |           |           |             |           |             |          |
| 32     |        | CUSTOMER                        | A.F.30           | \$ 1,945       | \$ 23     | \$ 1,968  | \$ 1,450    | \$ 16     | \$ 311      | \$ 4     |
| 33     |        | DEMAND                          | A.F.31           | \$ 2,176       | \$ 29     | \$ 2,205  | \$ 738      | \$ 10     | \$ 197      | \$ 2     |
| 34     |        |                                 |                  |                |           |           |             |           |             |          |
| 35     |        | SUBTOTAL                        |                  | \$ 4,121       | \$ 52     | \$ 4,173  | \$ 2,188    | \$ 26     | \$ 509      | \$ 6     |
| 36     |        |                                 |                  |                |           |           |             |           |             |          |
| 37     | 588    | MISCELLANEOUS                   |                  |                |           |           |             |           |             |          |
| 38     |        | CUSTOMER                        | A.F.30           | \$ 3,834       | \$ 12,138 | \$ 15,972 | \$ 2,859    | \$ 8,390  | \$ 614      | \$ 2,018 |
| 39     |        | DEMAND                          | A.F.31           | \$ 4,289       | \$ 14,931 | \$ 19,220 | \$ 1,455    | \$ 5,302  | \$ 388      | \$ 1,298 |
| 40     |        |                                 |                  |                |           |           |             |           |             |          |
| 41     |        | SUBTOTAL                        |                  | \$ 8,123       | \$ 27,069 | \$ 35,192 | \$ 4,314    | \$ 13,692 | \$ 1,002    | \$ 3,316 |

AMEREN MISSOURI

ELECTRIC COST OF SERVICE ALLOCATION STUDY WITH MODIFICATION BY MIEC  
 TEST YEAR PERIOD: 12 MONTHS ENDED MARCH 2010  
 AVERAGE & EXCESS - FOUR NONCOINCIDENT PEAKS  
 (\$000's)

TITLE: OPERATING EXPENSES - PAGE 2

| LINE # | ACCT # | ITEM                            | ALLOCATION BASIS | LARGE G. S. / SM PRI |          | L. PRIMARY |          | L. TRANSMISSION |       | LIGHTING |          |
|--------|--------|---------------------------------|------------------|----------------------|----------|------------|----------|-----------------|-------|----------|----------|
|        |        |                                 |                  | LABOR                | OTHER    | LABOR      | OTHER    | LABOR           | OTHER | LABOR    | OTHER    |
| 1      |        |                                 |                  |                      |          |            |          |                 |       |          |          |
| 2      | 584-1  | UNDERGROUND LINES               |                  |                      |          |            |          |                 |       |          |          |
| 3      |        | CUSTOMER                        | A.F.26           | \$ 5                 | \$ 12    | \$ 0       | \$ 0     | \$ -            | \$ -  | \$ 23    | \$ 54    |
|        |        | HV                              | A.F.27a          | \$ 6                 | \$ 15    | \$ 2       | \$ 4     | \$ -            | \$ -  | \$ 0     | \$ 0     |
| 4      |        | PRIMARY                         | A.F.27b          | \$ 46                | \$ 108   | \$ 11      | \$ 27    | \$ -            | \$ -  | \$ 1     | \$ 3     |
| 5      |        | SECONDARY                       | A.F.28           | \$ 18                | \$ 44    | \$ -       | \$ -     | \$ -            | \$ -  | \$ 1     | \$ 1     |
| 6      |        |                                 |                  |                      |          |            |          |                 |       |          |          |
| 7      |        | SUBTOTAL                        |                  | \$ 75                | \$ 178   | \$ 13      | \$ 31    | \$ -            | \$ -  | \$ 25    | \$ 59    |
| 8      |        |                                 |                  |                      |          |            |          |                 |       |          |          |
| 9      | 584-2  | UNDERGROUND TRANSFORMERS        |                  |                      |          |            |          |                 |       |          |          |
| 10     |        | CUSTOMER                        | A.F.20           | \$ 4                 | \$ (3)   | \$ -       | \$ -     | \$ -            | \$ -  | \$ -     | \$ -     |
| 11     |        | SECONDARY                       | A.F.21           | \$ 82                | \$ (74)  | \$ -       | \$ -     | \$ -            | \$ -  | \$ 3     | \$ (3)   |
| 12     |        |                                 |                  |                      |          |            |          |                 |       |          |          |
| 13     |        | SUBTOTAL                        |                  | \$ 86                | \$ (77)  | \$ -       | \$ -     | \$ -            | \$ -  | \$ 3     | \$ (3)   |
| 14     |        |                                 |                  |                      |          |            |          |                 |       |          |          |
| 15     | 585    | LIGHTING                        |                  | \$ -                 | \$ -     | \$ -       | \$ -     | \$ -            | \$ -  | \$ 455   | \$ 206   |
| 16     |        |                                 |                  |                      |          |            |          |                 |       |          |          |
| 17     | 586    | METERS                          | A.F.7            | \$ 528               | \$ 154   | \$ 41      | \$ 12    | \$ 3            | \$ 1  | \$ 4     | \$ 1     |
| 18     |        |                                 |                  |                      |          |            |          |                 |       |          |          |
| 19     | 587    | CUSTOMER INSTALLATION           | DIRECT           | \$ 976               | \$ 122   | \$ 976     | \$ 122   | \$ -            | \$ -  | \$ -     | \$ -     |
| 20     |        |                                 |                  |                      |          |            |          |                 |       |          |          |
| 21     |        | DIST OPERATING EXPENSE SUBTOTAL |                  |                      |          |            |          |                 |       |          |          |
| 22     |        | CUSTOMER A582-A587              |                  | \$ 556               | \$ 158   | \$ 41      | \$ 12    | \$ 3            | \$ 1  | \$ 81    | \$ 72    |
| 23     |        | DEMAND A582-A587                |                  | \$ 2,773             | \$ 652   | \$ 1,341   | \$ 300   | \$ -            | \$ -  | \$ 504   | \$ 218   |
| 24     |        |                                 |                  |                      |          |            |          |                 |       |          |          |
| 25     | 580    | SUPERVISION & ENGR              |                  |                      |          |            |          |                 |       |          |          |
| 26     |        | CUSTOMER                        | A.F.30           | \$ 153               | \$ 20    | \$ 11      | \$ 1     | \$ 1            | \$ 0  | \$ 22    | \$ 9     |
| 27     |        | DEMAND                          | A.F.31           | \$ 762               | \$ 81    | \$ 368     | \$ 37    | \$ -            | \$ -  | \$ 139   | \$ 27    |
| 28     |        |                                 |                  |                      |          |            |          |                 |       |          |          |
| 29     |        | SUBTOTAL                        |                  | \$ 914               | \$ 100   | \$ 380     | \$ 39    | \$ 1            | \$ 0  | \$ 161   | \$ 36    |
| 30     |        |                                 |                  |                      |          |            |          |                 |       |          |          |
| 31     | 581    | DISPATCHING                     |                  |                      |          |            |          |                 |       |          |          |
| 32     |        | CUSTOMER                        | A.F.30           | \$ 149               | \$ 2     | \$ 11      | \$ 0     | \$ 1            | \$ 0  | \$ 22    | \$ 1     |
| 33     |        | DEMAND                          | A.F.31           | \$ 745               | \$ 9     | \$ 360     | \$ 4     | \$ -            | \$ -  | \$ 135   | \$ 3     |
| 34     |        |                                 |                  |                      |          |            |          |                 |       |          |          |
| 35     |        | SUBTOTAL                        |                  | \$ 894               | \$ 11    | \$ 371     | \$ 4     | \$ 1            | \$ 0  | \$ 157   | \$ 4     |
| 36     |        |                                 |                  |                      |          |            |          |                 |       |          |          |
| 37     | 588    | MISCELLANEOUS                   |                  |                      |          |            |          |                 |       |          |          |
| 38     |        | CUSTOMER                        | A.F.30           | \$ 294               | \$ 1,129 | \$ 22      | \$ 86    | \$ 2            | \$ 6  | \$ 43    | \$ 509   |
| 39     |        | DEMAND                          | A.F.31           | \$ 1,468             | \$ 4,643 | \$ 710     | \$ 2,134 | \$ -            | \$ -  | \$ 267   | \$ 1,554 |
| 40     |        |                                 |                  |                      |          |            |          |                 |       |          |          |
| 41     |        | SUBTOTAL                        |                  | \$ 1,763             | \$ 5,772 | \$ 732     | \$ 2,220 | \$ 2            | \$ 6  | \$ 310   | \$ 2,063 |

AMEREN MISSOURI

ELECTRIC COST OF SERVICE ALLOCATION STUDY WITH MODIFICATION BY MIEC  
 TEST YEAR PERIOD: 12 MONTHS ENDED MARCH 2010  
 AVERAGE & EXCESS - FOUR NONCOINCIDENT PEAKS  
 (\$000's)

TITLE: OPERATING EXPENSES - PAGE 3

| LINE # | ACCT #  | ITEM                                     | ALLOCATION BASIS | TOTAL MISSOURI |           |           | RESIDENTIAL |           | SMALL G. S. |          |
|--------|---------|--|------------------|----------------|-----------|-----------|-------------|-----------|-------------|----------|
|        |         |  |                  | LABOR          | OTHER     | TOTAL     | LABOR       | OTHER     | LABOR       | OTHER    |
| 1      |         |  |                  |                |           |           |             |           |             |          |
| 2      | 589     | RENTS                                    |                  |                |           |           |             |           |             |          |
| 3      |         | CUSTOMER                                 | A.F.30           | \$ -           | \$ 107    | \$ 107    | \$ -        | \$ 74     | \$ -        | \$ 18    |
| 4      |         | DEMAND                                   | A.F.31           | \$ -           | \$ 132    | \$ 132    | \$ -        | \$ 47     | \$ -        | \$ 11    |
| 5      |         |  |                  |                |           |           |             |           |             |          |
| 6      |         | SUBTOTAL                                 |                  | \$ -           | \$ 239    | \$ 239    | \$ -        | \$ 121    | \$ -        | \$ 29    |
| 7      |         |  |                  |                |           |           |             |           |             |          |
| 8      |         | DIST OPERATING EXPENSE SUBTOTAL          |                  |                |           |           |             |           |             |          |
| 9      |         | CUSTOMER A580-589                        |                  | \$ 15,006      | \$ 14,183 | \$ 29,189 | \$ 11,191   | \$ 9,804  | \$ 2,403    | \$ 2,358 |
| 10     |         | DEMAND A580-589                          |                  | \$ 16,789      | \$ 17,446 | \$ 34,235 | \$ 5,695    | \$ 6,195  | \$ 1,520    | \$ 1,517 |
| 11     |         |  |                  |                |           |           |             |           |             |          |
| 12     |         | TOTAL DIST OPERATING EXPENSES            |                  | \$ 31,794      | \$ 31,630 | \$ 63,424 | \$ 16,886   | \$ 15,999 | \$ 3,924    | \$ 3,875 |
| 13     |         |  |                  |                |           |           |             |           |             |          |
| 14     |         |  |                  |                |           |           |             |           |             |          |
| 15     |         | <u>DISTRIBUTION MAINTENANCE EXPENSES</u> |                  |                |           |           |             |           |             |          |
| 16     |         |  |                  |                |           |           |             |           |             |          |
| 17     |         |  |                  |                |           |           |             |           |             |          |
| 18     | 591-592 | SUBSTATIONS                              | A.F.8            | \$ 10,349      | \$ 8,317  | \$ 18,666 | \$ 5,255    | \$ 4,223  | \$ 1,186    | \$ 953   |
| 19     |         |  |                  |                |           |           |             |           |             |          |
| 20     | 593     | OVERHEAD LINES                           |                  |                |           |           |             |           |             |          |
| 21     |         | CUSTOMER                                 | A.F.22           | \$ 6,696       | \$ 24,241 | \$ 30,937 | \$ 5,561    | \$ 20,131 | \$ 766      | \$ 2,773 |
|        |         | HV                                       | A.F.23a          | \$ 2,656       | \$ 9,617  | \$ 12,273 | \$ 1,348    | \$ 4,882  | \$ 304      | \$ 1,101 |
| 22     |         | PRIMARY                                  | A.F.23b          | \$ 8,136       | \$ 29,453 | \$ 37,589 | \$ 4,131    | \$ 14,955 | \$ 932      | \$ 3,374 |
| 23     |         | SECONDARY                                | A.F.24           | \$ 586         | \$ 2,123  | \$ 2,709  | \$ 308      | \$ 1,115  | \$ 72       | \$ 261   |
| 24     |         | LIGHTING-DIRECT                          | A.F.25           | \$ -           | \$ -      | \$ -      | \$ -        | \$ -      | \$ -        | \$ -     |
| 25     |         |  |                  |                |           |           |             |           |             |          |
| 26     |         | SUBTOTAL                                 |                  | \$ 18,074      | \$ 65,434 | \$ 83,508 | \$ 11,348   | \$ 41,082 | \$ 2,074    | \$ 7,509 |
| 27     |         |  |                  |                |           |           |             |           |             |          |
| 28     | 594     | UNDERGROUND LINES                        |                  |                |           |           |             |           |             |          |
| 29     |         | CUSTOMER                                 | A.F.26           | \$ 3,154       | \$ 5,370  | \$ 8,524  | \$ 2,636    | \$ 4,489  | \$ 363      | \$ 618   |
|        |         | HV                                       | A.F.27a          | \$ 119         | \$ 203    | \$ 321    | \$ 60       | \$ 103    | \$ 14       | \$ 23    |
| 30     |         | PRIMARY                                  | A.F.27b          | \$ 857         | \$ 1,459  | \$ 2,316  | \$ 435      | \$ 741    | \$ 98       | \$ 167   |
| 31     |         | SECONDARY                                | A.F.28           | \$ 395         | \$ 673    | \$ 1,068  | \$ 236      | \$ 403    | \$ 53       | \$ 91    |
| 32     |         |  |                  |                |           |           |             |           |             |          |
| 33     |         | SUBTOTAL                                 |                  | \$ 4,525       | \$ 7,705  | \$ 12,229 | \$ 3,368    | \$ 5,736  | \$ 528      | \$ 899   |
| 34     |         |  |                  |                |           |           |             |           |             |          |
| 35     | 595     | LINE TRANSFORMERS                        |                  |                |           |           |             |           |             |          |
| 36     |         | CUSTOMER                                 | A.F.20           | \$ 684         | \$ 359    | \$ 1,043  | \$ 596      | \$ 313    | \$ 82       | \$ 43    |
| 37     |         | SECONDARY                                | A.F.21           | \$ 515         | \$ 270    | \$ 785    | \$ 306      | \$ 161    | \$ 69       | \$ 36    |
| 38     |         |  |                  |                |           |           |             |           |             |          |
| 39     |         | SUBTOTAL                                 |                  | \$ 1,199       | \$ 629    | \$ 1,828  | \$ 902      | \$ 474    | \$ 151      | \$ 79    |
| 40     |         |  |                  |                |           |           |             |           |             |          |
| 41     | 596     | LIGHTING                                 |                  | \$ 1,871       | \$ 1,246  | \$ 3,117  | \$ -        | \$ -      | \$ -        | \$ -     |
| 42     |         |  |                  |                |           |           |             |           |             |          |
| 43     | 597     | METERS                                   | A.F.7            | \$ 650         | \$ 99     | \$ 749    | \$ 431      | \$ 66     | \$ 126      | \$ 19    |
| 44     |         |  |                  |                |           |           |             |           |             |          |
| 45     |         | DIST MAINTENANCE EXPENSE SUBTOTAL        |                  |                |           |           |             |           |             |          |
| 46     |         | CUSTOMER A593-A597                       |                  | \$ 11,184      | \$ 30,069 | \$ 41,253 | \$ 9,224    | \$ 24,998 | \$ 1,338    | \$ 3,454 |
| 47     |         | DEMAND A593-A597                         |                  | \$ 25,484      | \$ 53,360 | \$ 78,844 | \$ 12,080   | \$ 26,582 | \$ 2,728    | \$ 6,006 |



AMEREN MISSOURI

ELECTRIC COST OF SERVICE ALLOCATION STUDY WITH MODIFICATION BY MIEC  
 TEST YEAR PERIOD: 12 MONTHS ENDED MARCH 2010  
 AVERAGE & EXCESS - FOUR NONCOINCIDENT PEAKS  
 (\$000's)

TITLE: OPERATING EXPENSES - PAGE 3

| LINE # | ACCT #  | ITEM                                     | ALLOCATION BASIS | LARGE G. S. / SM PRI |           | L. PRIMARY |          | L. TRANSMISSION |       | LIGHTING |          |
|--------|---------|--|------------------|----------------------|-----------|------------|----------|-----------------|-------|----------|----------|
|        |         |  |                  | LABOR                | OTHER     | LABOR      | OTHER    | LABOR           | OTHER | LABOR    | OTHER    |
| 1      |         |  |                  |                      |           |            |          |                 |       |          |          |
| 2      | 589     | RENTS                                    |                  |                      |           |            |          |                 |       |          |          |
| 3      |         | CUSTOMER                                 | A.F.30           | \$ -                 | \$ 10     | \$ -       | \$ 1     | \$ -            | \$ 0  | \$ -     | \$ 4     |
| 4      |         | DEMAND                                   | A.F.31           | \$ -                 | \$ 41     | \$ -       | \$ 19    | \$ -            | \$ -  | \$ -     | \$ 14    |
| 5      |         |  |                  |                      |           |            |          |                 |       |          |          |
| 6      |         | SUBTOTAL                                 |                  | \$ -                 | \$ 51     | \$ -       | \$ 20    | \$ -            | \$ 0  | \$ -     | \$ 18    |
| 7      |         |  |                  |                      |           |            |          |                 |       |          |          |
| 8      |         | DIST OPERATING EXPENSE SUBTOTAL          |                  |                      |           |            |          |                 |       |          |          |
| 9      |         | CUSTOMER A580-589                        |                  | \$ 1,152             | \$ 1,319  | \$ 85      | \$ 100   | \$ 6            | \$ 7  | \$ 168   | \$ 595   |
| 10     |         | DEMAND A580-589                          |                  | \$ 5,747             | \$ 5,425  | \$ 2,780   | \$ 2,494 | \$ -            | \$ -  | \$ 1,045 | \$ 1,816 |
| 11     |         |  |                  |                      |           |            |          |                 |       |          |          |
| 12     |         | TOTAL DIST OPERATING EXPENSES            |                  | \$ 6,899             | \$ 6,744  | \$ 2,865   | \$ 2,594 | \$ 6            | \$ 7  | \$ 1,214 | \$ 2,411 |
| 13     |         |  |                  |                      |           |            |          |                 |       |          |          |
| 14     |         |  |                  |                      |           |            |          |                 |       |          |          |
| 15     |         | <u>DISTRIBUTION MAINTENANCE EXPENSES</u> |                  |                      |           |            |          |                 |       |          |          |
| 16     |         |  |                  |                      |           |            |          |                 |       |          |          |
| 17     |         |  |                  |                      |           |            |          |                 |       |          |          |
| 18     | 591-592 | SUBSTATIONS                              | A.F.8            | \$ 3,061             | \$ 2,460  | \$ 769     | \$ 618   | \$ -            | \$ -  | \$ 79    | \$ 63    |
| 19     |         |  |                  |                      |           |            |          |                 |       |          |          |
| 20     | 593     | OVERHEAD LINES                           |                  |                      |           |            |          |                 |       |          |          |
| 21     |         | CUSTOMER                                 | A.F.22           | \$ 58                | \$ 208    | \$ 0       | \$ 1     | \$ -            | \$ -  | \$ 311   | \$ 1,127 |
|        |         | HV                                       | A.F.23a          | \$ 786               | \$ 2,844  | \$ 197     | \$ 714   | \$ -            | \$ -  | \$ 21    | \$ 76    |
| 22     |         | PRIMARY                                  | A.F.23b          | \$ 2,406             | \$ 8,712  | \$ 604     | \$ 2,188 | \$ -            | \$ -  | \$ 62    | \$ 224   |
| 23     |         | SECONDARY                                | A.F.24           | \$ 197               | \$ 714    | \$ -       | \$ -     | \$ -            | \$ -  | \$ 9     | \$ 33    |
| 24     |         | LIGHTING-DIRECT                          | A.F.25           | \$ -                 | \$ -      | \$ -       | \$ -     | \$ -            | \$ -  | \$ -     | \$ -     |
| 25     |         |  |                  |                      |           |            |          |                 |       |          |          |
| 26     |         | SUBTOTAL                                 |                  | \$ 3,447             | \$ 12,478 | \$ 802     | \$ 2,903 | \$ -            | \$ -  | \$ 403   | \$ 1,461 |
| 27     |         |  |                  |                      |           |            |          |                 |       |          |          |
| 28     | 594     | UNDERGROUND LINES                        |                  |                      |           |            |          |                 |       |          |          |
| 29     |         | CUSTOMER                                 | A.F.26           | \$ 27                | \$ 46     | \$ 0       | \$ 0     | \$ -            | \$ -  | \$ 127   | \$ 216   |
|        |         | HV                                       | A.F.27a          | \$ 35                | \$ 60     | \$ 9       | \$ 15    | \$ -            | \$ -  | \$ 1     | \$ 2     |
| 30     |         | PRIMARY                                  | A.F.27b          | \$ 253               | \$ 432    | \$ 64      | \$ 108   | \$ -            | \$ -  | \$ 7     | \$ 11    |
| 31     |         | SECONDARY                                | A.F.28           | \$ 102               | \$ 174    | \$ -       | \$ -     | \$ -            | \$ -  | \$ 3     | \$ 6     |
| 32     |         |  |                  |                      |           |            |          |                 |       |          |          |
| 33     |         | SUBTOTAL                                 |                  | \$ 418               | \$ 711    | \$ 73      | \$ 124   | \$ -            | \$ -  | \$ 138   | \$ 235   |
| 34     |         |  |                  |                      |           |            |          |                 |       |          |          |
| 35     | 595     | LINE TRANSFORMERS                        |                  |                      |           |            |          |                 |       |          |          |
| 36     |         | CUSTOMER                                 | A.F.20           | \$ 6                 | \$ 3      | \$ -       | \$ -     | \$ -            | \$ -  | \$ -     | \$ -     |
| 37     |         | SECONDARY                                | A.F.21           | \$ 135               | \$ 71     | \$ -       | \$ -     | \$ -            | \$ -  | \$ 5     | \$ 2     |
| 38     |         |  |                  |                      |           |            |          |                 |       |          |          |
| 39     |         | SUBTOTAL                                 |                  | \$ 141               | \$ 74     | \$ -       | \$ -     | \$ -            | \$ -  | \$ 5     | \$ 2     |
| 40     |         |  |                  |                      |           |            |          |                 |       |          |          |
| 41     | 596     | LIGHTING                                 |                  | \$ -                 | \$ -      | \$ -       | \$ -     | \$ -            | \$ -  | \$ 1,871 | \$ 1,246 |
| 42     |         |  |                  |                      |           |            |          |                 |       |          |          |
| 43     | 597     | METERS                                   | A.F.7            | \$ 85                | \$ 13     | \$ 7       | \$ 1     | \$ 0            | \$ 0  | \$ 1     | \$ 0     |
| 44     |         |  |                  |                      |           |            |          |                 |       |          |          |
| 45     |         | DIST MAINTENANCE EXPENSE SUBTOTAL        |                  |                      |           |            |          |                 |       |          |          |
| 46     |         | CUSTOMER A593-A597                       |                  | \$ 176               | \$ 271    | \$ 7       | \$ 3     | \$ 0            | \$ 0  | \$ 439   | \$ 1,344 |
| 47     |         | DEMAND A593-A597                         |                  | \$ 6,976             | \$ 15,466 | \$ 1,643   | \$ 3,643 | \$ -            | \$ -  | \$ 2,057 | \$ 1,663 |

AMEREN MISSOURI

ELECTRIC COST OF SERVICE ALLOCATION STUDY WITH MODIFICATION BY MIEC  
 TEST YEAR PERIOD: 12 MONTHS ENDED MARCH 2010  
 AVERAGE & EXCESS - FOUR NONCOINCIDENT PEAKS  
 (\$000's)

TITLE: OPERATING EXPENSES - PAGE 4

| LINE # | ACCT # | ITEM                                | ALLOCATION BASIS | TOTAL MISSOURI |            |            | RESIDENTIAL |           | SMALL G. S. |           |
|--------|--------|-------------------------------------|------------------|----------------|------------|------------|-------------|-----------|-------------|-----------|
|        |        |                                     |                  | LABOR          | OTHER      | TOTAL      | LABOR       | OTHER     | LABOR       | OTHER     |
| 1      |        |                                     |                  |                |            |            |             |           |             |           |
| 2      | 590    | SUPERVISION & ENGR                  |                  |                |            |            |             |           |             |           |
| 3      |        | CUSTOMER                            | A.F.32           | \$ 884         | \$ 138     | \$ 1,022   | \$ 729      | \$ 115    | \$ 106      | \$ 16     |
| 4      |        | DEMAND                              | A.F.33           | \$ 2,014       | \$ 246     | \$ 2,260   | \$ 955      | \$ 122    | \$ 216      | \$ 28     |
| 5      |        |                                     |                  |                |            |            |             |           |             |           |
| 6      |        | SUBTOTAL                            |                  | \$ 2,898       | \$ 384     | \$ 3,282   | \$ 1,684    | \$ 237    | \$ 321      | \$ 44     |
| 7      |        |                                     |                  |                |            |            |             |           |             |           |
| 8      | 598    | MISCELLANEOUS                       |                  |                |            |            |             |           |             |           |
| 9      |        | CUSTOMER                            | A.F.32           | \$ 272         | \$ 670     | \$ 942     | \$ 224      | \$ 557    | \$ 32       | \$ 77     |
| 10     |        | DEMAND                              | A.F.33           | \$ 619         | \$ 1,190   | \$ 1,808   | \$ 293      | \$ 593    | \$ 66       | \$ 134    |
| 11     |        |                                     |                  |                |            |            |             |           |             |           |
| 12     |        | SUBTOTAL                            |                  | \$ 891         | \$ 1,860   | \$ 2,750   | \$ 517      | \$ 1,150  | \$ 99       | \$ 211    |
| 13     |        | DIST MAINTENANCE EXPENSE SUBTOTAL   |                  |                |            |            |             |           |             |           |
| 14     |        | CUSTOMER A590-A598                  |                  | \$ 12,339      | \$ 30,878  | \$ 43,217  | \$ 10,177   | \$ 25,671 | \$ 1,476    | \$ 3,546  |
| 15     |        | DEMAND A590-A598                    |                  | \$ 28,117      | \$ 54,795  | \$ 82,912  | \$ 13,328   | \$ 27,297 | \$ 3,010    | \$ 6,168  |
| 16     |        |                                     |                  |                |            |            |             |           |             |           |
| 17     |        | TOTAL MAINTENANCE OPERATING EXPENSE |                  | \$ 40,456      | \$ 85,673  | \$ 126,129 | \$ 23,505   | \$ 52,967 | \$ 4,486    | \$ 9,715  |
| 18     |        |                                     |                  |                |            |            |             |           |             |           |
| 19     |        | TOTAL DISTRIBUTION EXPENSES         |                  | \$ 72,251      | \$ 117,303 | \$ 189,554 | \$ 40,392   | \$ 68,966 | \$ 8,409    | \$ 13,589 |

AMEREN MISSOURI

ELECTRIC COST OF SERVICE ALLOCATION STUDY WITH MODIFICATION BY MIEC  
 TEST YEAR PERIOD: 12 MONTHS ENDED MARCH 2010  
 AVERAGE & EXCESS - FOUR NONCOINCIDENT PEAKS  
 (\$000's)

TITLE: OPERATING EXPENSES - PAGE 4

| LINE # | ACCT # | ITEM                                | ALLOCATION BASIS | LARGE G. S. / SM PRI |           | L. PRIMARY |          | L. TRANSMISSION |       | LIGHTING |          |
|--------|--------|-------------------------------------|------------------|----------------------|-----------|------------|----------|-----------------|-------|----------|----------|
|        |        |                                     |                  | LABOR                | OTHER     | LABOR      | OTHER    | LABOR           | OTHER | LABOR    | OTHER    |
| 1      |        |                                     |                  |                      |           |            |          |                 |       |          |          |
| 2      | 590    | SUPERVISION & ENGR                  |                  | \$ 14                | \$ 1      | \$ 1       | \$ 0     | \$ 0            | \$ 0  | \$ 35    | \$ 6     |
| 3      |        | CUSTOMER                            | A.F.32           |                      |           |            |          |                 |       |          |          |
| 4      |        | DEMAND                              | A.F.33           | \$ 551               | \$ 71     | \$ 130     | \$ 17    | \$ -            | \$ -  | \$ 163   | \$ 8     |
| 5      |        |                                     |                  |                      |           |            |          |                 |       |          |          |
| 6      |        | SUBTOTAL                            |                  | \$ 565               | \$ 72     | \$ 130     | \$ 17    | \$ 0            | \$ 0  | \$ 197   | \$ 14    |
| 7      |        |                                     |                  |                      |           |            |          |                 |       |          |          |
| 8      | 598    | MISCELLANEOUS                       |                  |                      |           |            |          |                 |       |          |          |
| 9      |        | CUSTOMER                            | A.F.32           | \$ 4                 | \$ 6      | \$ 0       | \$ 0     | \$ 0            | \$ 0  | \$ 11    | \$ 30    |
| 10     |        | DEMAND                              | A.F.33           | \$ 169               | \$ 345    | \$ 40      | \$ 81    | \$ -            | \$ -  | \$ 50    | \$ 37    |
| 11     |        |                                     |                  |                      |           |            |          |                 |       |          |          |
| 12     |        | SUBTOTAL                            |                  | \$ 174               | \$ 351    | \$ 40      | \$ 81    | \$ 0            | \$ 0  | \$ 61    | \$ 67    |
| 13     |        | DIST MAINTENANCE EXPENSE SUBTOTAL   |                  |                      |           |            |          |                 |       |          |          |
| 14     |        | CUSTOMER A590-A598                  |                  | \$ 194               | \$ 278    | \$ 8       | \$ 3     | \$ 1            | \$ 0  | \$ 484   | \$ 1,380 |
| 15     |        | DEMAND A590-A598                    |                  | \$ 7,697             | \$ 15,882 | \$ 1,812   | \$ 3,741 | \$ -            | \$ -  | \$ 2,270 | \$ 1,708 |
| 16     |        |                                     |                  |                      |           |            |          |                 |       |          |          |
| 17     |        | TOTAL MAINTENANCE OPERATING EXPENSE |                  | \$ 7,890             | \$ 16,159 | \$ 1,820   | \$ 3,744 | \$ 1            | \$ 0  | \$ 2,754 | \$ 3,088 |
| 18     |        |                                     |                  |                      |           |            |          |                 |       |          |          |
| 19     |        | TOTAL DISTRIBUTION EXPENSES         |                  | \$ 14,789            | \$ 22,904 | \$ 4,686   | \$ 6,337 | \$ 6            | \$ 7  | \$ 3,968 | \$ 5,499 |

**AMEREN MISSOURI**

**ELECTRIC COST OF SERVICE ALLOCATION STUDY WITH MODIFICATIONS BY MIEC  
TEST YEAR PERIOD: 12 MONTHS ENDED MARCH 2010  
(\$000's)**

ADDITIONAL O&M EXPENSES - CONT.

| LINE # | ACCT #    | ITEM   | ALLOCATION | TOTAL MISSOURI |              |              | RESIDENTIAL |            | SMALL G. S. |           |
|--------|-----------|--|------------|----------------|--------------|--------------|-------------|------------|-------------|-----------|
|        |           |  | BASIS      | LABOR          | OTHER        | TOTAL        | LABOR       | OTHER      | LABOR       | OTHER     |
| 1      |           |  |            |                |              |              |             |            |             |           |
| 2      |           |  |            |                |              |              |             |            |             |           |
| 3      |           | <u>CUSTOMER ACCOUNT EXPENSES</u>             |            |                |              |              |             |            |             |           |
| 4      |           |  |            |                |              |              |             |            |             |           |
| 5      | 902       | METER READING                                | A.F.7A     | \$88           | \$17,669     | \$17,757     | \$ 77       | \$ 15,375  | \$ 10       | \$ 2,019  |
| 6      | 905       | MISCELLANEOUS                                | A.F.7A     | \$12           | \$186        | \$199        | \$ 11       | \$ 162     | \$ 1        | \$ 21     |
| 7      | 903       | CUSTOMER RECORDS                             | A.F.40     | \$9,623        | \$6,484      | \$16,107     | \$ 7,619    | \$ 4,858   | \$ 547      | \$ 804    |
| 8      | 904       | UNCOLLECTIBLE ACCOUNTS                       | A.F.13     | \$0            | \$5,912      | \$5,912      | \$ -        | \$ 5,438   | \$ -        | \$ 289    |
| 9      | 903       | CREDIT AND COLLECTION                        | A.F.13     | \$2,987        | \$2,013      | \$5,000      | \$ 2,748    | \$ 1,852   | \$ 146      | \$ 98     |
| 10     |           | INTEREST ON SURETY DEPOSITS                  | A.F.12     | \$ -           | \$ 687       | \$ 687       | \$ -        | \$ 1       | \$ -        | \$ 563    |
| 11     |           |  |            |                |              |              |             |            |             |           |
| 12     |           | SUBTOTAL                                     |            | \$12,710       | \$32,952     | \$45,663     | \$ 10,455   | \$ 27,687  | \$ 705      | \$ 3,795  |
| 13     |           |  |            |                |              |              |             |            |             |           |
| 14     | 901       | SUPERVISION                                  | A.F.34     | \$ 1,889       | \$ 10        | \$ 1,899     | \$ 1,554    | \$ 8       | \$ 105      | \$ 1      |
| 15     |           |  |            |                |              |              |             |            |             |           |
| 16     |           | TOTAL CUSTOMER ACCOUNT EXPENSES              |            | \$14,599       | \$32,962     | \$47,562     | \$ 12,008   | \$ 27,695  | \$ 810      | \$ 3,796  |
| 17     |           |  |            |                |              |              |             |            |             |           |
| 18     |           |  |            |                |              |              |             |            |             |           |
| 19     |           |  |            |                |              |              |             |            |             |           |
| 20     |           |  |            |                |              |              |             |            |             |           |
| 21     |           | <u>CUSTOMER SERVICE &amp; SALES EXPENSES</u> |            |                |              |              |             |            |             |           |
| 22     |           |  |            |                |              |              |             |            |             |           |
| 23     | 908-1&908 | RCS  | DIRECT     | \$ -           | \$ -         | \$0          | \$ -        | \$ -       | \$ -        | \$ -      |
| 24     | 908-916   | CUSTOMER SERVICES & SALES                    | A.F.34     | \$ 4,655       | \$ 9,335     | \$13,990     | \$ 3,829    | \$ 7,843   | \$ 258      | \$ 1,075  |
| 25     |           |  |            |                |              |              |             |            |             |           |
| 26     |           | SUBTOTAL                                     |            | 4,655          | 9,335        | \$13,990     | 3,829       | 7,843      | 258         | 1,075     |
| 27     |           |  |            |                |              |              |             |            |             |           |
| 28     | 907       | SUPERVISION                                  | A.F.38     | \$ 96          | \$ 9         | \$105        | \$ 79       | \$ 7       | \$ 5        | \$ 1      |
| 29     |           |  |            |                |              |              |             |            |             |           |
| 30     |           | TOTAL CUSTOMER SERVICE & SALES EXPENSES      |            | 4,751          | 9,343        | \$14,094     | 3,908       | 7,850      | 264         | 1,076     |
| 31     |           |  |            |                |              |              |             |            |             |           |
| 32     |           | TOTAL PROD, T&D,CUST EXPENSES                |            | 306,975        | 1,263,674    | \$1,570,649  | 156,148     | 539,781    | 32,820      | 127,566   |
| 33     |           |  |            |                |              |              |             |            |             |           |
| 34     |           |  |            |                |              |              |             |            |             |           |
| 35     |           | <u>A &amp; G EXPENSES</u>                    |            |                |              |              |             |            |             |           |
| 36     |           |  |            |                |              |              |             |            |             |           |
| 37     |           | EPRI   | A.F.14     | \$ -           | \$ 3,759     | \$ 3,759     | \$ -        | \$ 1,647   | \$ -        | \$ 391    |
| 38     |           | OTHER  | A.F.35     | \$ 44,270      | \$ 173,019   | \$ 217,290   | \$ 22,519   | \$ 88,009  | \$ 4,733    | \$ 18,498 |
| 39     |           |  |            |                |              |              |             |            |             |           |
| 39     |           | SUBTOTAL                                     |            | \$ 44,270      | \$ 176,779   | \$ 221,049   | \$ 22,519   | \$ 89,656  | \$ 4,733    | \$ 18,889 |
| 40     |           |  |            |                |              |              |             |            |             |           |
| 41     |           | TOTAL PROD,T&D,CUST,A&G EXPENSES             |            | \$ 351,245     | \$ 1,440,453 | \$ 1,791,698 | \$178,666   | \$ 629,437 | \$ 37,553   | \$146,455 |
| 42     |           |  |            |                |              |              |             |            |             |           |

AMEREN MISSOURI

ELECTRIC COST OF SERVICE ALLOCATION STUDY WITH MODIFICATIONS BY MIEC  
 TEST YEAR PERIOD: 12 MONTHS ENDED MARCH 2010  
 (\$000's)

ADDITIONAL O&M EXPENSES - CONT.

| LINE # | ACCT #    | ITEM   | ALLOCATION BASIS | LARGE G. S. |           | L. PRIMARY |           | L. TRANSMISSION |           | LIGHTING |          |
|--------|-----------|--|------------------|-------------|-----------|------------|-----------|-----------------|-----------|----------|----------|
|        |           |  |                  | LABOR       | OTHER     | LABOR      | OTHER     | LABOR           | OTHER     | LABOR    | OTHER    |
| 1      |           |  |                  |             |           |            |           |                 |           |          |          |
| 2      |           |  |                  |             |           |            |           |                 |           |          |          |
| 3      |           | <u>CUSTOMER ACCOUNT EXPENSES</u>             |                  |             |           |            |           |                 |           |          |          |
| 4      |           |  |                  |             |           |            |           |                 |           |          |          |
| 5      | 902       | METER READING                                | A.F.7A           | \$ 1        | \$250     | \$ 0       | \$ 4      | \$ 0            | \$ 0      | \$ 0     | \$ 21    |
| 6      | 905       | MISCELLANEOUS                                | A.F.7A           | \$ 0        | \$3       | \$ 0       | \$ 0      | \$ 0            | \$ 0      | \$ 0     | \$ 0     |
| 7      | 903       | CUSTOMER RECORDS                             | A.F.40           | \$ 1,335    | \$786     | \$ 9       | \$ 5      | \$ 0            | \$ 0      | \$ 112   | \$ 30    |
| 8      | 904       | UNCOLLECTIBLE ACCOUNTS                       | A.F.13           | \$ -        | \$185     | \$ -       | \$ -      | \$ -            | \$ -      | \$ -     | \$ -     |
| 9      | 903       | CREDIT AND COLLECTION                        | A.F.13           | \$ 93       | \$63      | \$ -       | \$ -      | \$ -            | \$ -      | \$ -     | \$ -     |
| 10     |           | INTEREST ON SURETY DEPOSITS                  | A.F.12           | \$ -        | \$123     | \$ -       | \$ -      | \$ -            | \$ -      | \$ -     | \$ -     |
| 11     |           |  |                  |             |           |            |           |                 |           |          |          |
| 12     |           | SUBTOTAL                                     |                  | \$ 1,429    | \$1,410   | \$ 9       | \$ 9      | \$ 0            | \$ 0      | \$ 112   | \$ 51    |
| 13     |           |  |                  |             |           |            |           |                 |           |          |          |
| 14     | 901       | SUPERVISION                                  | A.F.34           | \$ 212      | \$0       | \$ 1       | \$ 0      | \$ 0            | \$ 0      | \$ 17    | \$ 0     |
| 15     |           |  |                  |             |           |            |           |                 |           |          |          |
| 16     |           | TOTAL CUSTOMER ACCOUNT EXPENSES              |                  | \$ 1,642    | \$1,411   | \$ 10      | \$ 9      | \$ 0            | \$ 0      | \$ 129   | \$ 51    |
| 17     |           |  |                  |             |           |            |           |                 |           |          |          |
| 18     |           |  |                  |             |           |            |           |                 |           |          |          |
| 19     |           |  |                  |             |           |            |           |                 |           |          |          |
| 20     |           |  |                  |             |           |            |           |                 |           |          |          |
| 21     |           | <u>CUSTOMER SERVICE &amp; SALES EXPENSES</u> |                  |             |           |            |           |                 |           |          |          |
| 22     |           |  |                  |             |           |            |           |                 |           |          |          |
| 23     | 908-1&908 | RCS  | DIRECT           | \$ -        | \$0       | \$ -       | \$ -      | \$ -            | \$ -      | \$ -     | \$ -     |
| 24     | 908-916   | CUSTOMER SERVICES & SALES                    | A.F.34           | \$ 524      | \$400     | \$ 3       | \$ 3      | \$ 0            | \$ 0      | \$ 41    | \$ 14    |
| 25     |           |  |                  |             |           |            |           |                 |           |          |          |
| 26     |           | SUBTOTAL                                     |                  | 524         | \$400     | 3          | 3         | 0               | 0         | 41       | 14       |
| 27     |           |  |                  |             |           |            |           |                 |           |          |          |
| 28     | 907       | SUPERVISION                                  | A.F.38           | \$ 11       | \$0       | \$ 0       | \$ 0      | \$ 0            | \$ 0      | \$ 1     | \$ 0     |
| 29     |           |  |                  |             |           |            |           |                 |           |          |          |
| 30     |           | TOTAL CUSTOMER SERVICE & SALES EXPENSES      |                  | 534         | \$400     | 3          | 3         | 0               | 0         | 42       | 14       |
| 31     |           |  |                  |             |           |            |           |                 |           |          |          |
| 32     |           | TOTAL PROD, T&D,CUST EXPENSES                |                  | 78,364      | \$366,468 | 20,314     | 110,792   | 13,642          | 107,543   | 5,687    | 11,524   |
| 33     |           |  |                  |             |           |            |           |                 |           |          |          |
| 34     |           |  |                  |             |           |            |           |                 |           |          |          |
| 35     |           | <u>A &amp; G EXPENSES</u>                    |                  |             |           |            |           |                 |           |          |          |
| 36     |           |  |                  |             |           |            |           |                 |           |          |          |
| 37     |           | EPRI   | A.F.14           | \$ -        | \$1,046   | \$ -       | \$ 330    | \$ -            | \$ 310    | \$ -     | \$ 36    |
| 38     |           | OTHER  | A.F.35           | \$ 11,301   | \$44,168  | \$ 2,930   | \$ 11,450 | \$ 1,967        | \$ 7,689  | \$ 820   | \$ 3,206 |
| 39     |           |  |                  |             |           |            |           |                 |           |          |          |
| 39     |           | SUBTOTAL                                     |                  | \$ 11,301   | \$45,213  | \$ 2,930   | \$ 11,779 | \$ 1,967        | \$ 7,999  | \$ 820   | \$ 3,242 |
| 40     |           |  |                  |             |           |            |           |                 |           |          |          |
| 41     |           | TOTAL PROD,T&D,CUST,A&G EXPENSES             |                  | \$ 89,665   | \$411,681 | \$ 23,244  | \$122,571 | \$15,610        | \$115,542 | \$6,508  | \$14,766 |
| 42     |           |  |                  |             |           |            |           |                 |           |          |          |

**AMEREN MISSOURI**

**ELECTRIC COST OF SERVICE ALLOCATION STUDY WITH MODIFICATIONS BY MIEC  
TEST YEAR PERIOD: 12 MONTHS ENDED MARCH 2010  
(\$000's)**

ADDITIONAL O&M EXPENSES - CONT.

| LINE # | ACCT # | ITEM                                      | ALLOCATION | TOTAL MISSOURI |              |              | RESIDENTIAL |             | SMALL G. S. |           |
|--------|--------|---|------------|----------------|--------------|--------------|-------------|-------------|-------------|-----------|
|        |        |   | BASIS      | LABOR          | OTHER        | TOTAL        | LABOR       | OTHER       | LABOR       | OTHER     |
| 1      |        | <u>DEPREC &amp; AMORTIZATION EXPENSES</u> |            |                |              |              |             |             |             |           |
| 2      |        |   |            |                |              |              |             |             |             |           |
| 3      |        |   |            |                |              |              |             |             |             |           |
| 4      |        | DEPR-PRODUCTION PLANT                     | A.F.1      | \$ -           | \$ 210,990   | \$ 210,990   | \$ -        | \$ 98,480   | \$ -        | \$ 23,015 |
| 5      |        | DEPR-COMMON PLANT                         | A.F.1      | \$ -           | \$ -         | \$ -         | \$ -        | \$ -        | \$ -        | \$ -      |
| 6      |        | DEPR-TRANSMISSION PLANT                   | A.F.17     | \$ -           | \$ 15,603    | \$ 15,603    | \$ -        | \$ 7,257    | \$ -        | \$ 1,553  |
| 7      |        | DEPR-DISTRIBUTION PLANT                   | A.F.18     | \$ -           | \$ 179,999   | \$ 179,999   | \$ -        | \$ 113,176  | \$ -        | \$ 20,007 |
| 8      |        | DEPR-GENERAL PLANT                        | A.F.35     | \$ -           | \$ 20,339    | \$ 20,339    | \$ -        | \$ 10,346   | \$ -        | \$ 2,175  |
| 9      |        |   |            |                |              |              |             |             |             |           |
| 10     |        | SUBTOTAL                                  |            | \$ -           | \$ 426,931   | \$ 426,931   | \$ -        | \$ 229,259  | \$ -        | \$ 46,749 |
| 11     |        |   |            |                |              |              |             |             |             |           |
| 12     |        |   |            | \$ -           | \$ -         | \$ -         | \$ -        | \$ -        | \$ -        | \$ -      |
| 13     |        |   |            |                |              |              |             |             |             |           |
| 14     |        | TOTAL DEPREC & AMORTIZ EXPENSES           |            | \$ -           | \$ 426,931   | \$ 426,931   | \$ -        | \$ 229,259  | \$ -        | \$ 46,749 |
| 15     |        |   |            |                |              |              |             |             |             |           |
| 16     |        |   |            |                |              |              |             |             |             |           |
| 17     |        | <u>OTHER</u>                              |            |                |              |              |             |             |             |           |
| 18     |        |   |            |                |              |              |             |             |             |           |
| 19     |        |   |            |                |              |              |             |             |             |           |
| 20     |        | REAL ESTATE & PROPERTY TAXES              | A.F.19     | \$ -           | \$ 135,868   | \$ 135,868   | \$ -        | \$ 70,858   | \$ -        | \$ 15,082 |
| 21     |        | INCOME/CITY EARNINGS TAXES                | A.F.29     | \$ -           | \$ 108,322   | \$ 108,322   | \$ -        | \$ 55,506   | \$ -        | \$ 11,628 |
| 22     |        | RETURN                                    | A.F.29     | \$ -           | \$ 312,545   | \$ 312,545   | \$ -        | \$ 160,153  | \$ -        | \$ 33,551 |
| 23     |        | PAYROLL TAXES                             | A.F.35     | \$ -           | \$ 23,610    | \$ 23,610    | \$ -        | \$ 12,010   | \$ -        | \$ 2,524  |
| 24     |        | ENVIRONMENTAL TAX                         | A.F. 1     | \$ -           | \$ -         | \$ -         | \$ -        | \$ -        | \$ -        | \$ -      |
| 25     |        |   |            |                |              |              |             |             |             |           |
| 26     |        | SUBTOTAL                                  |            | \$ -           | \$ 580,346   | \$ 580,346   | \$ -        | \$ 298,527  | \$ -        | \$ 62,785 |
| 27     |        |   |            |                |              |              |             |             |             |           |
| 28     |        | TOTAL OPERATING & OTHER EXPENSES          |            | \$ 351,245     | \$ 2,447,730 | \$ 2,798,975 | \$178,666   | \$1,157,223 | \$ 37,553   | \$255,989 |
| 29     |        |   |            |                |              |              |             |             |             |           |
| 30     |        |   |            |                |              |              |             |             |             |           |
| 31     |        |   |            |                |              |              |             |             |             |           |
| 32     |        |   |            |                |              |              |             |             |             |           |
| 33     |        | TOTAL COST OF SERVICE                     |            | \$ 351,245     | \$ 2,447,730 | \$ 2,798,975 | \$178,666   | \$1,157,223 | \$ 37,553   | \$255,989 |

**AMEREN MISSOURI**

**ELECTRIC COST OF SERVICE ALLOCATION STUDY WITH MODIFICATIONS BY MIEC  
TEST YEAR PERIOD: 12 MONTHS ENDED MARCH 2010  
(\$000's)**

ADDITIONAL O&M EXPENSES - CONT.

| LINE # | ACCT # | ITEM                                      | ALLOCATION BASIS | LARGE G. S. |           | L. PRIMARY |           | L. TRANSMISSION |           | LIGHTING |          |
|--------|--------|---|------------------|-------------|-----------|------------|-----------|-----------------|-----------|----------|----------|
|        |        |   |                  | LABOR       | OTHER     | LABOR      | OTHER     | LABOR           | OTHER     | LABOR    | OTHER    |
| 1      |        | <u>DEPREC &amp; AMORTIZATION EXPENSES</u> |                  |             |           |            |           |                 |           |          |          |
| 2      |        |   |                  |             |           |            |           |                 |           |          |          |
| 3      |        |   |                  |             |           |            |           |                 |           |          |          |
| 4      |        | DEPR-PRODUCTION PLANT                     | A.F.1            | \$ -        | \$59,938  | \$ -       | \$ 15,066 | \$ -            | \$ 12,939 | \$ -     | \$ 1,552 |
| 5      |        | DEPR-COMMON PLANT                         | A.F.1            | \$ -        | \$0       | \$ -       | \$ -      | \$ -            | \$ -      | \$ -     | \$ -     |
| 6      |        | DEPR-TRANSMISSION PLANT                   | A.F.17           | \$ -        | \$4,375   | \$ -       | \$ 1,163  | \$ -            | \$ 1,183  | \$ -     | \$ 72    |
| 7      |        | DEPR-DISTRIBUTION PLANT                   | A.F.18           | \$ -        | \$33,887  | \$ -       | \$ 6,010  | \$ -            | \$ 3      | \$ -     | \$ 6,916 |
| 8      |        | DEPR-GENERAL PLANT                        | A.F.35           | \$ -        | \$5,192   | \$ -       | \$ 1,346  | \$ -            | \$ 904    | \$ -     | \$ 377   |
| 9      |        |   |                  |             |           |            |           |                 |           |          |          |
| 10     |        | SUBTOTAL                                  |                  | \$ -        | \$103,393 | \$ -       | \$ 23,586 | \$ -            | \$ 15,028 | \$ -     | \$ 8,916 |
| 11     |        |   |                  |             |           |            |           |                 |           |          |          |
| 12     |        |   |                  | \$ -        | \$0       | \$ -       | \$ -      | \$ -            | \$ -      | \$ -     | \$ -     |
| 13     |        |   |                  |             |           |            |           |                 |           |          |          |
| 14     |        | TOTAL DEPREC & AMORTIZ EXPENSES           |                  | \$ -        | \$103,393 | \$ -       | \$ 23,586 | \$ -            | \$ 15,028 | \$ -     | \$ 8,916 |
| 15     |        |   |                  |             |           |            |           |                 |           |          |          |
| 16     |        |   |                  |             |           |            |           |                 |           |          |          |
| 17     |        | <u>OTHER</u>                              |                  |             |           |            |           |                 |           |          |          |
| 18     |        |   |                  |             |           |            |           |                 |           |          |          |
| 19     |        |   |                  |             |           |            |           |                 |           |          |          |
| 20     |        | REAL ESTATE & PROPERTY TAXES              | A.F.19           | \$ -        | \$33,611  | \$ -       | \$ 8,104  | \$ -            | \$ 5,689  | \$ -     | \$ 2,524 |
| 21     |        | INCOME/CITY EARNINGS TAXES                | A.F.29           | \$ -        | \$27,588  | \$ -       | \$ 6,844  | \$ -            | \$ 5,015  | \$ -     | \$ 1,741 |
| 22     |        | RETURN                                    | A.F.29           | \$ -        | \$79,599  | \$ -       | \$ 19,748 | \$ -            | \$ 14,470 | \$ -     | \$ 5,024 |
| 23     |        | PAYROLL TAXES                             | A.F.35           | \$ -        | \$6,027   | \$ -       | \$ 1,562  | \$ -            | \$ 1,049  | \$ -     | \$ 437   |
| 24     |        | ENVIRONMENTAL TAX                         | A.F. 1           | \$ -        | \$0       | \$ -       | \$ -      | \$ -            | \$ -      | \$ -     | \$ -     |
| 25     |        |   |                  |             |           |            |           |                 |           |          |          |
| 26     |        | SUBTOTAL                                  |                  | \$ -        | \$146,825 | \$ -       | \$ 36,259 | \$ -            | \$ 26,223 | \$ -     | \$ 9,727 |
| 27     |        |   |                  |             |           |            |           |                 |           |          |          |
| 28     |        | TOTAL OPERATING & OTHER EXPENSES          |                  | \$ 89,665   | \$661,898 | \$ 23,244  | \$182,417 | \$15,610        | \$156,794 | \$6,508  | \$33,409 |
| 29     |        |   |                  |             |           |            |           |                 |           |          |          |
| 30     |        |   |                  |             |           |            |           |                 |           |          |          |
| 31     |        |   |                  |             |           |            |           |                 |           |          |          |
| 32     |        |   |                  |             |           |            |           |                 |           |          |          |
| 33     |        | TOTAL COST OF SERVICE                     |                  | \$ 89,665   | \$661,898 | \$ 23,244  | \$182,417 | \$15,610        | \$156,794 | \$6,508  | \$33,409 |

## Ameren Missouri

**Class Cost of Service Study Results  
and Revenue Adjustments to Move Each Class to Cost of Service  
Using MIEC's Modified ECOS at Present Rates  
(\$/Thousands)**

| Line | Rate Class             | Current<br>Revenues<br>(1) | Current<br>Rate Base<br>(2) | Adjusted<br>Operating<br>Income<br>(3) | Earned<br>ROR<br>(4) | Indexed<br>ROR<br>(5) | Income @<br>Equal ROR<br>(6) | Difference<br>in Income<br>(7) | Revenue<br>Increase<br>(8) | Percentage<br>Increase<br>(9) |
|------|------------------------|----------------------------|-----------------------------|--|----------------------|-----------------------|------------------------------|--------------------------------|----------------------------|-------------------------------|
| 1    | Residential            | \$ 1,094,131               | \$ 3,489,579                | \$ 145,700                             | 4.175%               | 69                    | \$ 211,444                   | \$ 65,744                      | \$ 106,064                 | 9.7%                          |
| 2    | Small GS               | 280,137                    | 731,044                     | 56,977                                 | 7.794%               | 129                   | 44,296                       | (12,681)                       | (20,458)                   | -7.3%                         |
| 3    | Large GS/Small Primary | 711,918                    | 1,734,387                   | 151,136                                | 8.714%               | 144                   | 105,092                      | (46,044)                       | (74,281)                   | -10.4%                        |
| 4    | Large Primary          | 181,019                    | 430,294                     | 33,605                                 | 7.810%               | 129                   | 26,073                       | (7,532)                        | (12,151)                   | -6.7%                         |
| 5    | Large Transmission     | 139,375                    | 315,285                     | 23,395                                 | 7.420%               | 122                   | 19,104                       | (4,291)                        | (6,922)                    | -5.0%                         |
| 6    | Lighting               | <u>31,160</u>              | <u>109,463</u>              | <u>1,830</u>                           | 1.671%               | 28                    | <u>6,633</u>                 | <u>4,803</u>                   | <u>7,749</u>               | 24.9%                         |
| 7    | Total                  | \$ 2,437,740               | \$ 6,810,054                | \$ 412,642                             | 6.059%               | 100                   | \$ 412,642                   | \$ -                           | \$ -                       | 0.0%                          |



**AMEREN MISSOURI**  
**Recommended Revenue Neutral**  
**Adjustments to Class Revenue\***  
**(\$/Million)**

---

| <u>Line</u> | <u>Rate Class</u>  | <u>Dollar Adjustment Range</u> |              | <u>Percent Adjustment Range</u> |            |       |
|-------------|--------------------|--------------------------------|--------------|---------------------------------|------------|-------|
|             |                    | <u>(1)</u>                     | <u>(2)</u>   | <u>(3)</u>                      | <u>(4)</u> |       |
| 1           | Residential        | \$ 26.5                        | - \$ 53.0    | 2.4%                            | -          | 4.8%  |
| 2           | Small GS           | (5.1)                          | - (10.2)     | -1.8%                           | -          | -3.7% |
| 3           | Large GS/Primary   | (18.6)                         | - (37.1)     | -2.6%                           | -          | -5.2% |
| 4           | Large Primary      | (3.0)                          | - (6.1)      | -1.7%                           | -          | -3.4% |
| 5           | Large Transmission | (1.7)                          | - (3.5)      | -1.2%                           | -          | -2.5% |
| 6           | Lighting           | <u>1.9</u>                     | - <u>3.9</u> | 6.2%                            | -          | 12.4% |
| 7           | Total              | \$ -                           | \$ -         |                                 |            |       |

---

**Note:**

\*Any rate increase granted will be applied as an equal percent to class revenues, and combined with these revenue-neutral adjustments to determine the total increase relative to current rates.