

Exhibit No.:  
Issue: Rate Design  
Witness: Maurice Brubaker  
Type of Exhibit: Rebuttal Testimony  
Sponsoring Parties: Industrials  
Case No.: ER-2010-0355  
Date Testimony Prepared: December 10, 2010

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

\_\_\_\_\_)  
In the Matter of the Application of )  
Kansas City Power & Light Company )  
for Approval to Make Certain Changes ) **Case No. ER-2010-0355**  
in its Charges for Electric Service to )  
Continue the Implementation of Its )  
Regulatory Plan )  
\_\_\_\_\_)

Rebuttal Testimony and Schedules of

**Maurice Brubaker**

On behalf of

**Ford Motor Company  
Midwest Energy Users Association  
Missouri Industrial Energy Consumers  
Praxair, Inc.**

December 10, 2010



**BRUBAKER & ASSOCIATES, INC.**  
CHESTERFIELD, MO 63017

Project 9215

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Case No. ER-2010-0355

STATE OF MISSOURI     )  
                                  )  
COUNTY OF ST. LOUIS    )       SS

**Affidavit of Maurice Brubaker**

Maurice Brubaker, being first duly sworn, on his oath states:

1. My name is Maurice Brubaker. I am a consultant with Brubaker & Associates, Inc., having its principal place of business at 16690 Swingley Ridge Road, Suite 140, Chesterfield, Missouri 63017. We have been retained by Ford Motor Company, Midwest Energy Users Association, Missouri Industrial Energy Consumers and Praxair, Inc. in this proceeding on their behalf.

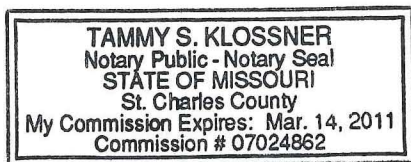
2. Attached hereto and made a part hereof for all purposes is my rebuttal testimony and schedules which were prepared in written form for introduction into evidence in the Missouri Public Service Commission's Case No. ER-2010-0355.

3. I hereby swear and affirm that the testimony and schedules are true and correct and that they show the matters and things that they purport to show.



\_\_\_\_\_  
Maurice Brubaker

Subscribed and sworn to before me this 9<sup>th</sup> day of December, 2010.



  
\_\_\_\_\_  
Notary Public

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**Rebuttal Testimony of Maurice Brubaker**

1   **Q   PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2   A   Maurice Brubaker. My business address is 16690 Swingley Ridge Road, Suite 140,  
3       Chesterfield, MO 63017.

4   **Q   ARE YOU THE SAME MAURICE BRUBAKER WHO HAS PREVIOUSLY FILED**  
5       **TESTIMONY IN THIS PROCEEDING?**

6   A   Yes. I have previously filed direct testimony in this proceeding on November 24,  
7       2010 regarding rate design issues.

8   **Q   ARE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE OUTLINED IN**  
9       **THAT TESTIMONY?**

10  A   Yes. This information is included in Appendix A to my direct testimony on rate design  
11       issues.

12  **Q   ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?**

13  A   I am appearing on behalf of Ford Motor Company, Midwest Energy Users  
14       Association, Missouri Industrial Energy Consumers and Praxair, Inc. (collectively

**Maurice Brubaker  
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1 "Industrials"). These companies purchase substantial amounts of electricity from  
2 Kansas City Power & Light Company ("KCPL") and the outcome of this proceeding  
3 will have an impact on their cost of electricity.

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

5 A In my rebuttal testimony, I will respond to the cost of service allocation proposals  
6 made by KCPL and by the Staff of the Missouri Public Service Commission ("Staff"),  
7 and the revenue allocation proposed by the Office of Public Counsel ("OPC"). In  
8 addition, I respond to the testimony of Dr. Adam Bickford testifying on behalf of the  
9 Missouri Department of Natural Resources ("MDNR").

10 **Q PLEASE SUMMARIZE YOUR PRIMARY FINDINGS AND CONCLUSIONS.**

11 A My rebuttal testimony may be summarized as follows:

- 12 1. The Base-Intermediate-Peaking ("BIP") allocation studies sponsored by KCPL  
13 and Staff are not supported as to theory or shown to be applicable to the KCPL  
14 system. These studies significantly over-allocate costs to large high load factor  
15 customers.
- 16 2. KCPL's BIP cost of service study is internally inconsistent in that it allocates  
17 above-average generation capacity costs to high load factor customers, but  
18 does not give them the benefit of the lower variable costs (mostly fuel) that  
19 correspond to the above-average capital cost allocation.
- 20 3. The Staff also sponsors a version of a BIP study. The methodology differs  
21 slightly, but the end result similarly over-allocates costs to large high load factor  
22 customers.
- 23 4. The Average & Excess ("A&E") approach that I offered in my direct testimony is  
24 the most appropriate allocation method for the KCPL system, and should be  
25 adopted by the Commission and used as a guide to distribute any revenue  
26 increase found appropriate.
- 27 5. The allocation of transmission plant by KCPL (using the composite BIP  
28 allocation factor) and the allocation by Staff (using 12 monthly coincident peaks)  
29 are both inappropriate and fail to recognize the importance of system peaks in  
30 the design of the transmission system.

- 1 6. Staff categorizes an excessive amount of production system non-fuel operation  
2 and maintenance (“O&M”) expense as variable instead of fixed.
- 3 7. KCPL allocates margins from off-system sales on demands rather than on  
4 energy. No justification is provided for this treatment.
- 5 8. MDNR’s proposal to shorten the amortization period for DSM-related regulatory  
6 assets is unsupported and should be rejected. The current ten-year  
7 amortization period should remain in effect.
- 8 9. OPC’s revenue shift proposal is based on KCPL’s flawed BIP study and should  
9 be rejected.

10 **CLASS COST OF SERVICE ISSUES**

11 **Q HAVE YOU REVIEWED THE TESTIMONY OF KCPL WITNESS PAUL NORMAND**  
12 **AND COMMISSION STAFF WITNESS MICHAEL SCHEPERLE ON THE SUBJECT**  
13 **OF CLASS COST OF SERVICE?**

14 **A** Yes.

15 **Q DO YOU HAVE REBUTTAL TO THE POSITIONS OF THESE WITNESSES?**

16 **A** Yes, I do. I disagree with the methods which these witnesses have used for the  
17 allocation of generation system fixed costs and with respect to the allocation of  
18 certain other components of the cost of service. The allocation of the generation  
19 fixed costs is the largest and most important of these issues, and I will address it first.

20 **KCPL’s Study**

21 **Q WHAT METHOD HAS KCPL USED FOR THE ALLOCATION OF GENERATION**  
22 **FIXED, OR DEMAND-RELATED, COSTS?**

23 **A** KCPL uses what it describes as the BIP method. With this method, the fixed costs  
24 associated with base load generation essentially are allocated on a measure of class

1 energy consumption. The intermediate plants are allocated on a function of class 12  
2 monthly coincident peaks minus base demands. Facilities identified as peaking  
3 facilities are allocated on class four summer coincident peak demands reduced by the  
4 base and intermediate demands.

5 **Q IS THE BIP STUDY METHODOLOGY ACCEPTED IN THE INDUSTRY?**

6 A No, it is not. The BIP method first surfaced circa 1980 as an approach that some  
7 thought might be useful when trying to develop time-differentiated rates. However,  
8 the BIP method never caught on and is only infrequently seen in regulatory  
9 proceedings. The BIP method is certainly not among the frequently used mainstream  
10 cost allocation methodologies, and lacks precedent for its use.

11 **Q WHAT SEEMS TO BE THE FUNDAMENTAL TENANT OF THE BIP METHOD?**

12 A Mr. Normand does not go into great detail, but on page 6 of his direct testimony he  
13 says that he attempted to determine the intended use of specific plant investments  
14 and then examined the use of these assets in the test period. By choosing to allocate  
15 100% of the investment (fixed costs) associated with base load plants essentially on  
16 the basis of class energy, Mr. Normand is effectively assuming that base load plants  
17 do not provide any capacity value. This is an assumption that we all know is false.  
18 All plants provide capacity value as well as supplying energy. It appears from Mr.  
19 Normand's studies that nearly 80% of total generation fixed costs are allocated on the  
20 basis of energy consumption.

1 Q PLEASE EXPLAIN WHAT YOU MEAN WHEN YOU SAY THAT BASE LOAD  
2 PLANTS ARE ALLOCATED “ESSENTIALLY” ON THE BASIS OF CLASS  
3 ENERGY.

4 A The specific method used is to identify the month that each class (by voltage level)  
5 used the minimum amount of energy. The energy in this month is divided by the  
6 hours in the month to determine the average demand for that month. These average  
7 demands for the minimum month for each class are added together to determine a  
8 total, and the allocation factor for base load plant is the ratio of each class’s minimum  
9 month average demand to the sum of the minimum month average demands of all  
10 classes.

11 In the case of the residential class, this produces a factor for the allocation of  
12 fixed costs associated with base load plant equal to 26% of the total, despite the fact  
13 that the energy allocation factor for the residential class is 30.2%, and its  
14 responsibility for the four summer peak demands is 42%.

15 Q DOES THE CONCEPT OF ALLOCATING BASE LOAD PLANT ON A MEASURE  
16 OF CLASS ENERGY MAKE SENSE IN LIGHT OF SYSTEM PLANNING  
17 CONSIDERATIONS?

18 A No. The BIP approach attempts to assign only one purpose for each class of plant.  
19 In reality, when systems are planned, the utility attempts to install that combination of  
20 generation facilities which, giving consideration to fixed costs and variable costs, is  
21 expected to serve the needs of all customers, collectively, on a least-cost basis. All  
22 plants contribute to meeting peak demands, and the failure to allocate the fixed costs  
23 associated with base load plants on a measure of peak demand produces a biased  
24 result.

1 Q HOW DOES THE RELATIONSHIP BETWEEN FIXED COSTS AND VARIABLE  
2 COSTS GUIDE A UTILITY IN SELECTING THE APPROPRIATE MIX OF  
3 GENERATION RESOURCES?

4 A Base load plants have relatively higher fixed costs, but relatively lower variable costs  
5 (mostly fuel), as compared to other technology choices. The relationship among  
6 technology choices is often described in terms of a “break-even” point, which defines  
7 the number of hours of annual operation (out of 8,760 hours per year) that one facility  
8 would be economical to operate as compared to another facility. For example, please  
9 see Schedule MEB-COS-R-1 attached to this testimony. This schedule illustrates the  
10 concept in terms of a comparison between base load generating facilities and  
11 peaking facilities. The data sources are indicated on the schedule.

12 Q WHAT DOES THIS SHOW?

13 A This shows that a base load generating facility is more economical than the peaking  
14 facility as long as it would be expected to operate more than 4,129 hours per year.  
15 This is an expected capacity factor of 47%. If a facility would operate fewer than this  
16 number of hours, then the peaking facility would be more economical.

17 Q WHAT ARE THE IMPLICATIONS OF THESE RESULTS FOR COST  
18 ALLOCATION?

19 A Even if one wanted to pursue the kind of disaggregation that the BIP method  
20 contemplates, this analysis clearly demonstrates that a base load facility is the least  
21 cost facility up to approximately 47% capacity factor. This means that increasing the  
22 number of hours of operation beyond 4,129 hours would not change the capacity  
23 installation decision. Stated differently, once a customer imposes load that is



1 expected to be present for more than 4,129 hours, the utility would still install the  
2 base load generation facility, and use by a customer, or customers collectively, in  
3 excess of those break-even hours does not cause the incurrence of any additional  
4 capacity costs.

5 Thus, an allocation of these base load facilities that considers essentially all of  
6 the investment to be energy-related is demonstrably wrong. It significantly  
7 over-allocates fixed costs to high load factor customers (i.e., those customers with the  
8 more consistent load through the 8,760 hours of the year), even though under the BIP  
9 conceptual framework much of the kWh used by these customers would not  
10 contribute to the decision to construct a facility that would be more costly to build.

11 **Q DID THIS COMMISSION RECENTLY RULE ON THE USE OF DEMAND**  
12 **ALLOCATION METHODS THAT ARE HEAVILY DEPENDENT UPON THE**  
13 **ENERGY USAGE BY THE VARIOUS CUSTOMER CLASSES?**

14 **A** Yes. In the most recent Ameren Missouri electric rate case, Case No. ER-2010-0036,  
15 Staff and OPC had offered cost of service studies wherein the allocation basis for  
16 fixed generation cost was a weighted average of class energy consumption and class  
17 contribution to peak demands. In ruling on the case, the Commission rejected these  
18 heavily energy-weighted methods.

19 **Q IN THE AMEREN MISSOURI CASE, WHAT PERCENTAGE OF GENERATION**  
20 **FIXED COSTS WAS ALLOCATED ON ENERGY UNDER STAFF'S AND OPC'S**  
21 **PROPOSALS?**

22 **A** About 55%.

1 **Q IS THE ALLOCATION OF GENERATION CAPACITY COSTS MORE HEAVILY**  
2 **DEPENDENT UPON CLASS ENERGY CONSUMPTION UNDER THE BIP METHOD**  
3 **IN THIS CASE THAN WAS TRUE IN THE AMEREN MISSOURI CASE WHERE**  
4 **THE ENERGY BASED ALLOCATION WAS REJECTED?**

5 A Yes, much more. It is 80% with BIP as compared to 55% in the Ameren case.

6 **Q HOW HAS KCPL ALLOCATED TRANSMISSION INVESTMENT?**

7 A KCPL has allocated transmission investment in proportion to the result of its  
8 allocation of generation plant investment. This means that a substantial part of  
9 transmission investment has been allocated on energy.

10 **Q DO YOU AGREE WITH THIS ALLOCATION APPROACH FOR TRANSMISSION?**

11 A No. The BIP approach for allocation of transmission is no more appropriate than it is  
12 for the allocation of generation facilities. Much like generation, transmission capacity  
13 has to be sufficient to serve the maximum demands on the utility system.  
14 Accordingly, it is peak demands, and not energy usage or 12-month average  
15 demands, that drives the need for investment in transmission plant. It is my  
16 recommendation that KCPL's proposed allocation of transmission investment be  
17 rejected.

18 **Q HOW HAS KCPL ALLOCATED THE MARGIN ON OFF-SYSTEM SALES?**

19 A KCPL has allocated the margin on off-system sales using a BIP demand allocation  
20 factor.

1 **Q IS THIS APPROPRIATE?**

2 A No. This Commission has held in a prior KCPL case (ER-2006-0314) and a prior  
3 Ameren Missouri case (ER-2010-0036) that it is appropriate to allocate the margin  
4 earned from off-system sales on an energy basis.

5 The only costs assigned to non-firm off-system sales is the fuel and  
6 purchased power costs – the variable costs – hence the  
7 appropriateness of using the energy allocator. This is consistent with  
8 the way KCPL itself allocates the costs relating to the energy portion of  
9 firm capacity contracts – using the energy allocator. The reason is  
10 simple – the energy allocator is used to allocate variable costs of fuel  
11 and purchased power costs relating to retail sales. Using the same  
12 rationale, the energy allocator is equally appropriate to use as the  
13 allocation factor for both energy of firm (as KCPL does) and non-firm  
14 off-system sales. (Report and Order, Case No. ER-2006-0314,  
15 December 31, 2006)

16 This is also the most commonly used approach in the industry, and should be used in  
17 this case.

## 18 **Staff's Study**

19 **Q HOW HAS STAFF ALLOCATED THE FIXED COSTS ASSOCIATED WITH**  
20 **GENERATION INVESTMENT?**

21 A Staff has essentially followed a BIP approach. The Staff's approach is slightly  
22 different mechanically, but the end result is not much different. For example, instead  
23 of using minimum month average demand as a basis for allocating base load plant,  
24 Staff uses annual average energy, which is identical to an allocation based on the  
25 annual kWh of each class.

26 **Q HOW HAS STAFF ALLOCATED FUEL COSTS?**

27 A Staff's allocation factor development is very complex, and consists of developing sets  
28 of percentages and then weighting them by other sets of percentages. As a result, it

1 is not entirely clear what Staff's assumptions are with respect to the allocation of  
2 variable cost. It does appear, however, that Staff may have attempted to allocate the  
3 variable cost of each classification of plant on something other than annual  
4 kilowatthours by class. If so, Staff has at least attempted to recognize some  
5 association of variable cost with the different types of plants that it allocates in various  
6 ways. However, the basic premise, including the allocation of 100% of base load  
7 plant on class energy, is so fundamentally flawed that the study is unreliable and  
8 should be rejected.

9 **Q HOW HAS STAFF ALLOCATED TRANSMISSION INVESTMENT?**

10 A Staff has allocated transmission investment using the 12 monthly coincident peaks.

11 **Q DO YOU AGREE WITH THIS ALLOCATION APPROACH FOR TRANSMISSION?**

12 A No, I do not. I believe that it is appropriate to allocate the transmission investment on  
13 an average and excess or summer coincident peak method, much like generation  
14 plant would be allocated. After all, the transmission facilities need to meet the  
15 maximum demands on the utility system, and not the average of the 12 monthly  
16 demands. Peaks drive the need for investment in transmission plant, and it is my  
17 recommendation that Staff's proposed allocation of transmission investment be  
18 rejected.

1 **Q HOW HAS STAFF ALLOCATED GENERATION O&M EXPENSE OTHER THAN**  
2 **FUEL AND VARIABLE PURCHASED POWER?**

3 A Staff has divided these costs into fixed and variable cost categories. Approximately  
4 41% of these dollars are categorized as variable and allocated on class energy  
5 consumption.

6 **Q IS THIS APPROPRIATE?**

7 A No. I believe it is more appropriate to allocate all of the generation O&M expense,  
8 other than fuel and variable purchased power, on the basis of the fixed cost allocation  
9 factor, namely, on a demand basis. This is consistent with the concept that  
10 “expenses should follow plant” and also recognizes that the operation of and the  
11 maintenance on generation facilities is a function of the existence of the plant and the  
12 passage of time, more so than the hours of operation of the facilities.

13 I would also note that KCPL (and Staff) in allocating costs between Missouri  
14 and Kansas (the jurisdictional allocation) used this approach of “expenses follow  
15 plant,” which results in a smaller amount of costs being allocated to Missouri than  
16 would be the case if the approach that Staff used for class cost of service allocation  
17 purposes had been used for jurisdictional allocations.

18 **Q DOES THE SAME CONCLUSION APPLY TO THE ALLOCATION OF**  
19 **GENERATION PLANT INVESTMENT?**

20 A Yes. Staff’s allocation of generation plant investment is much more heavily skewed  
21 toward an energy factor than a demand factor, and if applied at the jurisdictional level  
22 would allocate more costs to Missouri than the four coincident peak allocation method

1 this Commission has previously approved, and that both KCPL and Staff have used  
2 in this case.

3 **Symmetry of Fuel and Capital Cost Allocation**

4 **Q ARE VARIABLE COSTS USUALLY ALLOCATED ON THE BASIS OF CLASS**  
5 **ENERGY REQUIREMENTS, ADJUSTED FOR LOSSES?**

6 A Yes, in the context of traditional studies like coincident peak and A&E, average  
7 variable costs are allocated to customers, and average capital costs are allocated to  
8 customers. However, in the context of the non-traditional studies that KCPL and Staff  
9 have offered, all of which heavily weight energy in the allocation of fixed or demand-  
10 related generation costs, thereby de-averaging the fixed costs, it is not appropriate to  
11 average the variable costs.

12 **Q USING THE KCPL STUDY AS A POINT OF REFERENCE, PLEASE EXPLAIN**  
13 **WHY IT IS NOT APPROPRIATE TO ALLOCATE AVERAGE VARIABLE COSTS**  
14 **TO ALL CLASSES IN THIS FASHION WHEN USING STUDIES SUCH AS BIP?**

15 A The KCPL study allocates significantly more generation fixed costs to high load factor  
16 customers than do the traditional studies. In other words, the higher the load factor of  
17 a class, the larger the share of the generation fixed costs that gets allocated to the  
18 class. If the costs allocated to classes under this method are divided by the  
19 contribution of these classes to the system peak demand, or by the A&E demand, the  
20 result is a higher capital cost per kW for the higher load factor classes, and a lower  
21 capital cost per kW for the low load factor classes. Effectively, this means that the  
22 high load factor classes have been allocated an above-average share of capital cost

1 for generation, and the low load factor customer classes have been allocated a below  
2 average share of capital costs.

3 Given the de-averaged allocations of capital cost, it would not be appropriate  
4 to charge average variable costs to all classes. Rather, the variable cost allocation  
5 should assign to the higher load factor customer classes below average variable cost  
6 to correspond to the above-average capital cost (similar to base load units) allocated  
7 to them, and the lower load factor classes should get an allocation of these costs that  
8 is above the average, corresponding to the lower than average capital cost (i.e.,  
9 peaking units) allocated to them.

10 **Q WHY WOULD IT BE APPROPRIATE TO RECOGNIZE A LOWER VARIABLE**  
11 **COST ALLOCATION TO THOSE CLASSES THAT ARE ALLOCATED A HIGHER**  
12 **CAPITAL COST?**

13 **A** It is not only appropriate, but it is essential if the heavily energy-weighted KCPL  
14 allocation of generation costs is employed. Failure to make this kind of distinction  
15 would give high load factor customers the worst of both worlds – above-average  
16 capital costs and average variable energy costs; and the low load factor customers  
17 the best of both worlds – below average capital costs and average variable costs.

18 **Q HAVE YOU PERFORMED ANY CALCULATIONS AND DEVELOPED A**  
19 **SCHEDULE TO ILLUSTRATE THIS?**

20 **A** Yes, I have. Please refer to Schedule MEB-COS-R-2 attached to this testimony.  
21 This schedule compares the generation investment per kW and the variable costs per  
22 kWh across classes for the traditional A&E allocation method, the traditional 4CP  
23 method and the KCPL allocation.

1 **Q PLEASE EXPLAIN WHAT THIS SCHEDULE SHOWS.**

2 A The first three sections of the schedule show that under traditional allocation methods  
3 (A&E-4NCP, A&E-2NCP and 4CP), the capacity costs per kW allocated to each class  
4 are the same and the variable costs per kWh allocated to each class are the same.

5 The fourth section shows the allocation results under KCPL's BIP allocation  
6 method. Note that the impact of BIP is to allocate significantly more capital costs, in  
7 fact, 20% more to the Large Power class than under the traditional approaches,  
8 which allocate average capacity costs to all classes. Note also that variable costs per  
9 kWh are the same for all classes.

10 Schedule MEB-COS-R-3 shows the skewing graphically on page 1. In  
11 contrast, note from page 2 that under the traditional A&E-4NCP method all classes  
12 are allocated average fixed costs and average variable costs.

13 **Q YOU INDICATED THAT THE VARIABLE COSTS PER KWH ARE THE SAME**  
14 **UNDER KCPL'S BIP ALLOCATION. HOW DIFFERENT ARE THE ENERGY**  
15 **COSTS OF THE DIFFERENT GENERATING FACILITIES?**

16 A They are quite diverse. For example, the fuel cost for the Wolf Creek nuclear unit is  
17 about 0.5¢ per kWh, the base load coal plants have fuel costs in the range of 1.1¢ to  
18 1.4¢ per kWh, the more efficient peaking units have fuel costs of about 5¢ per kWh,  
19 and other peakers have costs that are 8¢ and higher. (Note: These fuel costs are  
20 taken from KCPL's 2009 FERC Form 1 report.) Obviously, if some classes are  
21 allocated higher capacity costs than others, they should be entitled to at least an  
22 above-average share of the energy output from the higher capital cost, more fuel  
23 efficient, base load type generating units, which would make their variable cost per  
24 kWh lower than average. The allocation method advanced by KCPL does not

**Maurice Brubaker**  
**Page 14**



1 recognize this relationship, and as a result over-allocates costs to high load factor  
2 customers.

3 **Q WHAT SHOULD BE CONCLUDED FROM SCHEDULES MEB-COS-R-2 AND**  
4 **MEB-COS-R-3?**

5 A These schedules clearly demonstrates that the BIP study that KCPL has sponsored is  
6 highly non-symmetrical. It burdens high load factor classes with above-average  
7 capacity costs, but does not allow them to benefit from the lower variable cost that  
8 goes with the higher capacity costs. No theory supports this result and this flawed  
9 study should be given no weight.

10 **Q HAS THIS ISSUE OF ALLOCATING A BELOW AVERAGE SHARE OF VARIABLE**  
11 **COSTS TO HIGHER LOAD FACTOR USERS RECENTLY BEEN ADDRESSED IN**  
12 **A KCPL RATE PROCEEDING?**

13 A Yes. Staff witness Lena Mantle addressed this topic in her September 8, 2006  
14 rebuttal testimony in a recent KCPL rate case, Case No. ER-2006-0314. Her  
15 testimony discussed planning principles and the relationship between load factors  
16 and generation mix. Her testimony clearly demonstrates that as capital cost  
17 increases (with higher load factor), energy cost decreases. While her testimony was  
18 in the context of jurisdictional allocations, the principle is the same at the class level.  
19 In fact, the recognition of the principles at the class level is even more critical since  
20 the differences among class load factors are much greater than the differences  
21 between jurisdictional load factors.

1 **OPC's Recommendation**

2 **Q DID OPC OFFER A CLASS COST OF SERVICE STUDY?**

3 A No. OPC witness Meisenheimer relied on KCPL's BIP study to develop a class  
4 revenue shift recommendation. Since her recommendation is based on the flawed  
5 BIP study, it should not be accepted.

6 **Importance of Precedent**

7 **Q IN EARLIER TESTIMONY, YOU POINTED OUT THAT STUDIES BEING**  
8 **PROPOSED BY KCPL AND STAFF IN THIS PROCEEDING ARE NOT USED IN**  
9 **OTHER JURISDICTIONS AND ARE NOT SUPPORTED BY PRECEDENT OR**  
10 **ACCEPTANCE IN THE INDUSTRY. WHAT IS THE SIGNIFICANCE OF THE FACT**  
11 **THAT A METHODOLOGY IS NOT USED IN OTHER JURISDICTIONS?**

12 A Cost of service studies for electric systems has been performed for well over 50  
13 years. This means that there has been a significant amount of analysis that has gone  
14 into the question of determining how best to ascertain cost-causation on electric  
15 systems, across a broad spectrum of utility circumstances. Methods that have not  
16 had the benefit of that analysis and withstood the test of time must be viewed with  
17 skepticism. Proponents of such methods bear a special burden of proving that they  
18 do a more accurate job of identifying cost-causation than do recognized methods,  
19 and are not merely ad hoc creations designed simply to support a particular result  
20 desired by the analyst.

1 **DEMAND-SIDE MANAGEMENT INVESTMENTS**

2 **Q WHAT HAS MDNR PROPOSED WITH RESPECT TO THE REGULATORY**  
3 **TREATMENT OF DEMAND-SIDE MANAGEMENT (“DSM”) INVESTMENTS?**

4 A At page 11 of his testimony, MDNR witness Bickford recommends that KCPL's DSM  
5 expenses incurred between the end of its regulatory plan and the filing of a DSM plan  
6 and accompanying cost recovery proposals be booked into a regulatory asset and  
7 amortized to rates over a period of six years.

8 **Q DOES DR. BICKFORD PROVIDE A BASIS FOR THIS RECOMMENDATION?**

9 A No. He does not provide a basis for the recommendation. He only alludes to the fact  
10 that in a settlement involving an Ameren Missouri case the parties, as a part of an  
11 agreement that collectively settled a number of issues, used a six-year amortization  
12 period.

13 **Q SHOULD THE SIX-YEAR AMORTIZATION PERIOD FROM A SETTLEMENT IN AN**  
14 **AMEREN MISSOURI CASE BE APPLIED TO KCPL?**

15 A No. Settlements are for the purpose of the case which is being settled, or the case in  
16 which the settled issues are being settled, and have no precedent outside of that  
17 case. Since there is no precedent to support this shortened term for KCPL, and since  
18 Dr. Bickford has not offered any justification other than that, this proposal is  
19 unsupported and should be rejected.

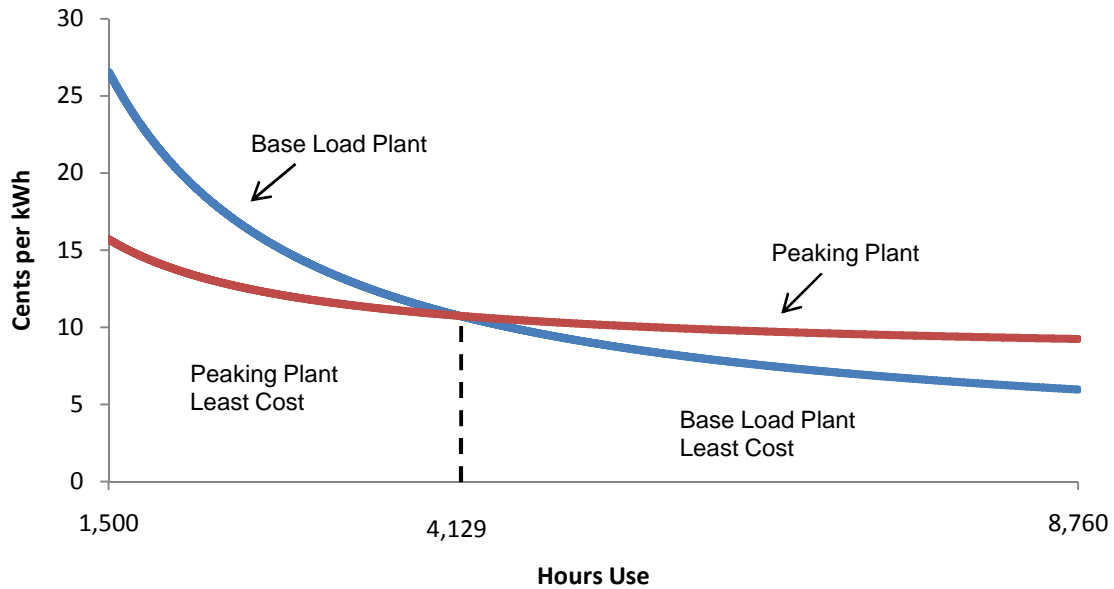
20 **Q DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

21 A Yes, it does.

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# KANSAS CITY POWER & LIGHT COMPANY

## Generation Technology Break-Even Point



Line	Technology	Installed Cost per kW (1)	Times 15% (2)	Fixed O&M (3)	Total Fixed (4)	Variable ¢/kWh		
						Fuel (5)	O&M (6)	Total (7)
1	Coal	\$2,300	\$345	\$28	\$373	1.2*	0.5	1.7
2	Combustion Turbine	\$700	\$105	\$12	\$117	7.5**	0.4	7.9

Break-Even Point:

$$\frac{\$373 - \$117}{\$0.079 - \$0.017} = 4,129 \text{ hours}$$

Source: 2010 EIA Annual Energy Outlook  
Energy Market Module unless otherwise noted

\* latin

\*\* 10,800 Btu/kWh at \$7.00/MMBtu

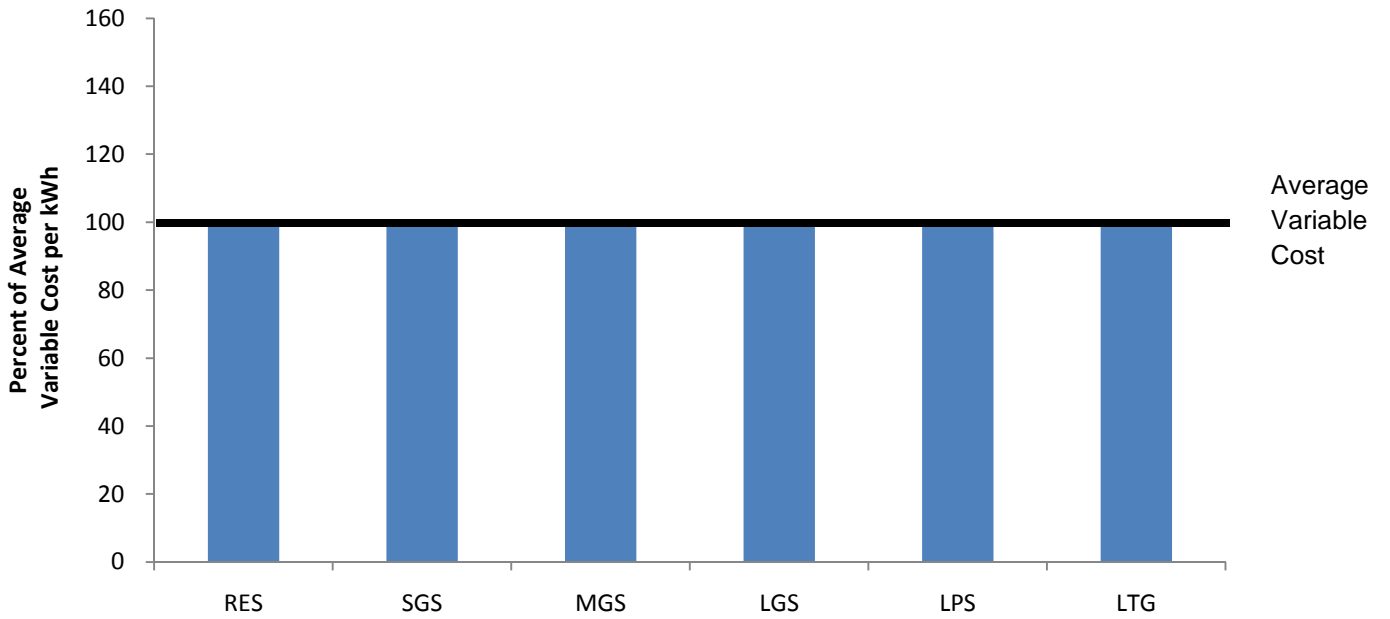
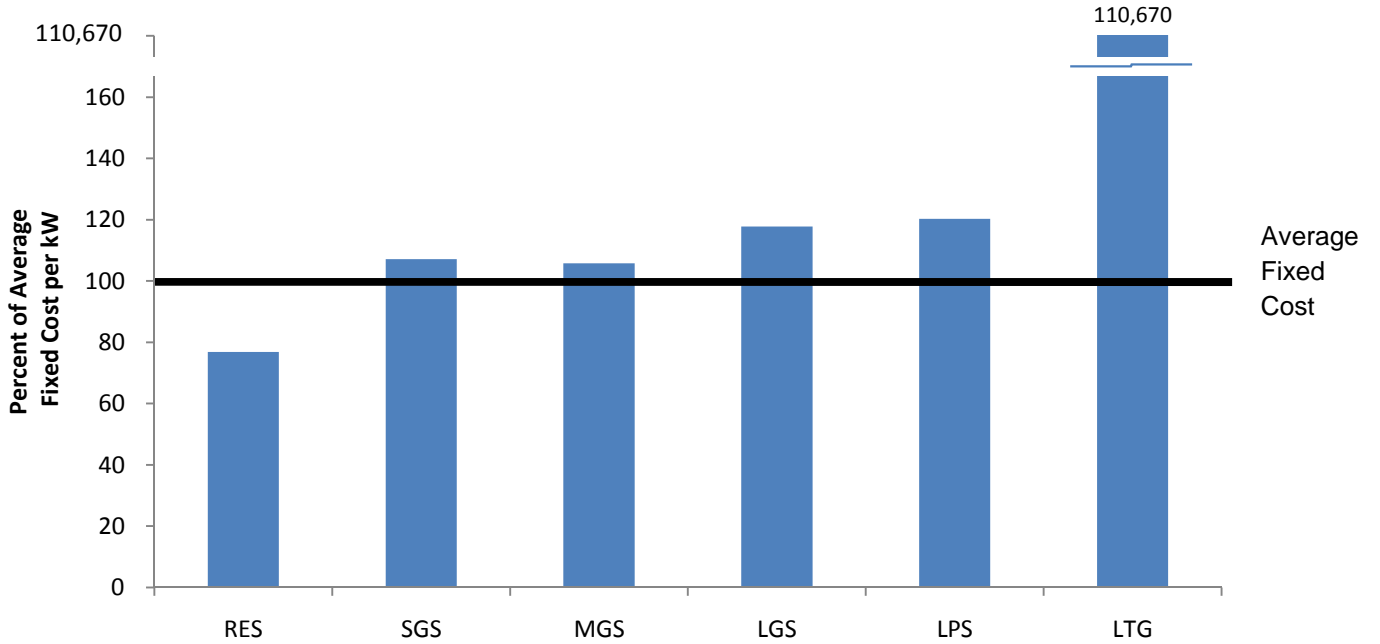
# KANSAS CITY POWER & LIGHT COMPANY

## Allocation of Fixed Costs and Variable Costs

Line	Description	Missouri Retail (1)	Residential (2)	Small General Service (3)	Medium General Service (4)	Large General Service (5)	Large Power Service (6)	Total Lighting (7)
<b><u>Traditional Methods</u></b>								
<b><u>4 NCP A&amp;E</u></b>								
1	Fixed Cost per kW	\$900	\$900	\$900	\$900	\$900	\$900	\$900
2	Index	100	100	100	100	100	100	100
3	Variable Cost per kWh	2.0¢	2.0¢	2.0¢	2.0¢	2.0¢	2.0¢	2.0¢
4	Index	100	100	100	100	100	100	100
<b><u>2 NCP A&amp;E</u></b>								
5	Fixed Cost per kW	\$900	\$900	\$900	\$900	\$900	\$900	\$900
6	Index	100	100	100	100	100	100	100
7	Variable Cost per kWh	2.0¢	2.0¢	2.0¢	2.0¢	2.0¢	2.0¢	2.0¢
8	Index	100	100	100	100	100	100	100
<b><u>4 CP</u></b>								
9	Fixed Cost per kW	\$900	\$900	\$900	\$900	\$900	\$900	\$900
10	Index	100	100	100	100	100	100	100
11	Variable Cost per kWh	2.0¢	2.0¢	2.0¢	2.0¢	2.0¢	2.0¢	2.0¢
12	Index	100	100	100	100	100	100	100
<b><u>KCPL's BIP Method</u></b>								
13	Fixed Cost per kW	<b>\$900</b>	<b>\$692</b>	<b>\$965</b>	<b>\$952</b>	<b>\$1,061</b>	<b>\$1,083</b>	<b>\$996,487</b>
14	Index	<b>100</b>	<b>77</b>	<b>107</b>	<b>106</b>	<b>118</b>	<b>120</b>	<b>110,670</b>
15	Variable Cost per kWh	2.0¢	2.0¢	2.0¢	2.0¢	2.0¢	2.0¢	2.0¢
16	Index	100	100	100	100	100	100	100

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## Illustration of Skewed Allocation of Fixed Costs and Variable Costs Under KCPL's Base-Intermediate-Peaking COS



# KANSAS CITY POWER & LIGHT COMPANY

## Allocation of Fixed Costs and Variable Costs Under 4 NCP Average & Excess COS

