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|---|---|
| Exhibit No.: | 401 |
| Issues: | Rate Design |
| Witness: | Maurice Brubaker |
| Type of Exhibit: | Rebuttal Testimony |
| Sponsoring Party: | Missouri Industrial Energy Consumers and Midwest Energy Consumers Group |
| Case No.: | ER-2012-0174 |
| Date Testimony Prepared: | September 5, 2012 |



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

| | |
|---|---|
| **In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service** | **Case No. ER-2012-0174**<br>Tracking No. YE-2012-0404 |

Rebuttal Testimony and Schedules of

**Maurice Brubaker**

On behalf of

**Missouri Industrial Energy Consumers**
**and**
**Midwest Energy Consumer's Group**

September 5, 2012

BRUBAKER & ASSOCIATES, INC.

MIEC/MECG Exhibit No. 401
Date 10-29-12 Reporter KF
File No. ER-2012-0174

Project 9593

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

| | | |
|---|---|---|
| **In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service** | ) ) ) ) ) ) | **Case No. ER-2012-0174** Tracking No. YE-2012-0404 |

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

## 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 Missouri Industrial Energy Consumers and Midwest Energy Consumer's Group 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-2012-0174.

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 4th day of September, 2012.

TAMMY S. KLOSSNER
Notary Public - Notary Seal
STATE OF MISSOURI
St. Charles County
My Commission Expires: Mar. 14, 2015
Commission # 11024862

Notary Public

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

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| **In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service** | ) ) ) ) ) ) | **Case No. ER-2012-0174** Tracking No. YE-2012-0404 |

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

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|---|---|
| **In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service** | **Case No. ER-2012-0174** Tracking No. YE-2012-0404 |

## Rebuttal Testimony of Maurice Brubaker

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

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

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

A Yes. I have previously filed direct testimony in this proceeding on August 16, 2012 regarding rate design issues.

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

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

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

A I am appearing on behalf of Missouri Industrial Energy Consumers ("MIEC") and Midwest Energy Consumer's Group ("MECG"). These companies purchase

substantial amounts of electricity from Kansas City Power & Light Company ("KCPL") and the outcome of this proceeding will have an impact on their cost of electricity.

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

A In my rebuttal testimony, I will respond to the cost of service allocation proposals made by KCPL and by the Staff of the Missouri Public Service Commission ("Staff"), and the revenue allocation proposed by the Office of Public Counsel ("OPC").

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

A My rebuttal testimony may be summarized as follows:

1. The Base-Intermediate-Peaking ("BIP") allocation study sponsored by KCPL is not supported as to theory and has not been shown to be applicable to the KCPL system. It significantly over-allocates costs to large high load factor customers.

2. KCPL's BIP cost of service study is internally inconsistent in that it allocates above-average generation capacity costs to high load factor customers, but does not give them the benefit of the lower variable costs (mostly fuel) that correspond to the above-average capital cost allocation.

3. The Staff also sponsors a version of a BIP study. The methodology is substantially different from KCPL's version and produces a generation allocation factor that is generally consistent with traditional approaches such as the Average & Excess ("A&E") method.

4. The A&E approach that I offered in my direct testimony is the most appropriate allocation method for the KCPL system, and should be adopted by the Commission and used as a guide to distribute any revenue increase found appropriate. The 4CP method produces comparable results.

5. KCPL allocates margins from off-system sales on demands rather than on energy. No justification is provided for this treatment.

6. Staff has applied inappropriate allocations to administrative & general ("A&G") expenses. Staff has followed the unprecedented approach of allocating over 90% of A&G expenses on the basis of energy. This is totally at odds with cost causation and a marked departure from normal regulatory practice.

7. OPC's revenue shift proposal is based on KCPL's flawed BIP study and should be rejected.

## CLASS COST OF SERVICE ISSUES

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

A Yes.

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

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

### KCPL's Study

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

A KCPL uses what it describes as the BIP method. With this method, the fixed costs associated with base load generation essentially are allocated on a measure of class energy consumption. The intermediate plants are allocated on a function of class 12 monthly coincident peaks minus base demands. Facilities identified as peaking facilities are allocated on class four summer coincident peak demands reduced by the base and intermediate demands.

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

A No, it is not. The BIP method first surfaced circa 1980 as an approach that some thought might be useful when trying to develop time-differentiated rates. However,

the BIP method never caught on and is only infrequently seen in regulatory proceedings. The BIP method is certainly not among the frequently used mainstream cost allocation methodologies, and lacks precedent for its use.

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

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

**Q PLEASE EXPLAIN WHAT YOU MEAN WHEN YOU SAY THAT BASE LOAD PLANTS ARE ALLOCATED "ESSENTIALLY" ON THE BASIS OF CLASS ENERGY.**

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

In the case of the residential class, this produces a factor for the allocation of fixed costs associated with base load plant equal to only 25.6% of the total, which is even smaller than the 30.3% energy allocation factor for the residential class. The demand allocation factor for a low load factor class like the residential class should be larger than its energy allocation factor. For example, its responsibility for the four summer peak demands is 41%.

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

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

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

A Yes. In a recent Ameren Missouri electric rate case, Case No. ER-2010-0036, cost of service studies were offered wherein the allocation basis for fixed generation cost was a weighted average of class energy consumption and class contribution to peak

demands. In ruling on the case, the Commission rejected these heavily energy-weighted methods.

**Q IN THE AMEREN MISSOURI CASE, WHAT PERCENTAGE OF GENERATION FIXED COSTS WAS ALLOCATED ON ENERGY UNDER THESE PROPOSALS?**

A About 55%.

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

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

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

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

**Q IS THIS APPROPRIATE?**

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

> The only costs assigned to non-firm off-system sales is the fuel and purchased power costs – the variable costs – hence the appropriateness of using the energy allocator. This is consistent with the way KCPL itself allocates the costs relating to the energy portion of firm capacity contracts – using the energy allocator. The reason is simple – the energy allocator is used to allocate variable costs of fuel and purchased power costs relating to retail sales. Using the same rationale, the energy allocator is equally appropriate to use as the

allocation factor for both energy of firm (as KCPL does) and non-firm off-system sales. (Report and Order, Case No. ER-2006-0314, December 31, 2006)

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

## Staff's Study

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

A Mr. Scheperle states that he has used something which he also calls the BIP method. In fact, however, Mr. Scheperle has applied what I think is best described as an alternative version of the BIP method. The BIP method described in the National Association of Regulatory Utility Commissioners ("NARUC") *Electric Utility Cost Allocation Manual* ("Manual"), and as presented in this case by KCPL, develops separate allocation factors for different categories of plant. The BIP method is not an accepted method in the industry and rarely has been used or even proposed.

**Q HOW DOES MR. SCHEPERLE'S MODIFIED BIP DIFFER FROM THE BIP METHOD DESCRIBED IN THE NARUC MANUAL AND AS PROPOSED FOR IMPLEMENTATION IN THE KCPL CASE?**

A In Mr. Scheperle's alternate BIP application, he devises a composite allocation factor using a combination of class average demands, class 12 monthly non-coincident peak demands and class three summer month non-coincident peak demands. At each stage of the development of the allocation factor components, he subtracts the demands associated with the previously determined component(s) from the total so

as to avoid double counting. The resulting factor is applied to all generation fixed costs.

Because of the way that the BIP allocation was constructed in this case, the end result is class allocation factors for generation fixed costs comparable to traditional allocation methods such as the A&E method. Accordingly, while I disagree with the fundamental premise of BIP methods, Mr. Scheperle has implemented it in this case in a way that produces results consistent with generally accepted allocation methods.

**Q HOW HAS STAFF CLASSIFIED GENERATION SYSTEM NON-FUEL O&M EXPENSES?**

A With minor exceptions, Mr. Scheperle has essentially used the "expenses follow plant" approach that I have used.

**Q WHAT OTHER ISSUES DO YOU HAVE WITH STAFF'S ALLOCATIONS?**

A Staff's allocation of A&G expenses bears absolutely no relationship to cost causation.

**Q PLEASE EXPLAIN.**

A Staff has applied an unconventional and unprecedented approach to the allocation of A&G expenses. A&G expenses consist of costs for supervision of employees and property, employee pensions and benefits, general plant expenses, and selected other items. Hardly any of these costs vary with energy, but instead are a function of operating, maintaining and supervising the generation, transmission and distribution system, and the related pensions, benefits and other employee-related costs.

For a comparison between Staff's allocation and my allocation, please refer to Schedule MEB-COS-R-1. The top section shows how Staff has allocated each component of A&G expenses and the bottom section shows how I have allocated them. My allocation methodology follows the methodology used by KCPL, but of course the specific values allocated are slightly different because of a difference in the allocation of generation plant.

**Q I NOTICE THAT YOU HAVE ALLOCATED MOST OF THE A&G EXPENSES ON AN ALLOCATION FACTOR CALLED "SALWAGES". PLEASE EXPLAIN THIS ALLOCATOR.**

A This allocator is the salaries and wages allocator. The first step in developing this allocator is to determine the labor component of the generation, transmission, distribution, etc. functions allocated to each customer class in the cost of service study. The second step is to add together those labor components allocated to each class and determine what percentage each class's allocated labor is of the total. This produces the "SALWAGES" allocator shown at the bottom of this schedule.

**Q HOW DOES THIS CONTRAST TO STAFF'S ALLOCATION?**

A As noted above, Staff's allocation is portrayed in the top section of this schedule. (Note that the total dollar amounts of A&G expense are different because my allocation uses the dollar amounts claimed by KCPL; however, the principal is the same.)

**Q STAFF HAS REFERRED TO THE NARUC MANUAL FOR CERTAIN ALLOCATIONS. DOES THE NARUC MANUAL CONTAIN A DISCUSSION OF THE ALLOCATION OF GENERAL PLANT AND A&G EXPENSES?**

A Yes. Pages 105-107 of the January 1992 NARUC Manual discusses A&G expenses. I have attached these pages as Schedule MEB-COS-R-2. Note that the majority of A&G expenses are allocated on labor. Wherever the Manual refers to a more general category of expenses, note that the phrase "less fuel and purchased power" appears. This means that fuel and purchased power should be excluded from the allocations.

From a cost causation point of view, none of the salary expense, pensions and benefits, plant-related or other costs vary with energy consumption. This is why it is traditional to exclude fuel and purchased power from any allocation of A&G expenses and focus on the cost-causative nature for these expenses. That is what I have done; it clearly is not what Staff has done.

**Q IN THE ALLOCATION BETWEEN MISSOURI AND KANSAS, DID THE STAFF ALLOCATE THESE A&G EXPENSES USING AN ENERGY ALLOCATION FACTOR?**

A No; and had they done so, more costs would have been allocated to Missouri.

**Q SHOULD THE COMMISSION RELY UPON THE RESULTS OF STAFF'S COST OF SERVICE STUDY?**

A In terms of the particular details, it should not because Staff's A&G allocation substantially over-allocates costs to MGS, LGS and LPS customers. However, despite this over-allocation of A&G expenses, Staff's overall cost of service result

continues to be that residential customers are paying rates below cost while all other customer classes are paying rates above cost.

## Symmetry of Fuel and Capital Cost Allocation

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

A Yes, in the context of traditional studies like coincident peak and A&E, average variable costs are allocated to customers, and average capital costs are allocated to customers. However, in the context of the non-traditional study that KCPL has offered, which heavily weights energy in the allocation of fixed or demand-related generation costs, thereby de-averaging the fixed costs, it is not appropriate to average the variable costs.

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

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

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

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

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

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

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

A Yes, I have. Please refer to Schedule MEB-COS-R-3 attached to this testimony. This schedule compares the generation investment per kW and the variable costs per kWh across classes for the traditional A&E allocation method, the traditional 4CP method and the KCPL allocation.

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

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

The fourth section shows the allocation results under KCPL's BIP allocation method. Note that the impact of BIP is to allocate significantly more capital costs, in fact, 37% more to the Large Power class than under the traditional approaches, which allocate average capacity costs to all classes. Note also that variable costs per kWh are the same for all classes.

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

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

A They are quite diverse. For example, the fuel cost for the Wolf Creek nuclear unit is about 0.7¢ per kWh, the base load coal plants have fuel costs in the range of 1.2¢ to 2.2¢ per kWh, the more efficient gas units have fuel costs of about 5¢ per kWh, and other gas peakers have costs that are 7¢ and higher. (Note: These fuel costs are taken from KCPL's 2011 FERC Form 1 report.) Obviously, if some classes are allocated higher capacity costs than others, they should be entitled to at least an above-average share of the energy output from the higher capital cost, more fuel efficient, base load type generating units, which would make their variable cost per kWh lower than average. The allocation method advanced by KCPL does not

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

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

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

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

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

## OPC's Recommendation

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

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

## Importance of Precedent

**Q IN EARLIER TESTIMONY, YOU POINTED OUT THAT THE METHODOLOGIES BEING SUPPORTED BY KCPL AND OPC IN THIS PROCEEDING ARE NOT USED IN OTHER JURISDICTIONS AND ARE NOT SUPPORTED BY PRECEDENT OR ACCEPTED IN THE INDUSTRY. WHAT IS THE SIGNIFICANCE OF THE FACT THAT A METHODOLOGY IS NOT USED IN OTHER JURISDICTIONS?**

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

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

A Yes, it does.

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## KANSAS CITY POWER & LIGHT COMPANY

### Allocation of Administration and General Expenses

| Line | Description | Allocator | Missouri Retail | Residential | Small General Service | Medium General Service | Large General Service | Large Power Service | Total Lighting |
|---|---|---|---|---|---|---|---|---|---|
| | | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | **Staff's COS** | | | | | | | | |
| 1 | #920 A & G Salaries | Energy | $ 17,599,614 | $ 5,335,215 | $ 853,191 | $ 2,246,636 | $ 4,597,681 | $ 4,390,867 | $ 176,023 |
| 2 | #921 Office Supplies & Expense | Energy | (337,024) | (102,167) | (16,338) | (43,022) | (88,043) | (84,083) | (3,371) |
| 3 | #922 Admin. Expense Transferred | Energy | (2,915,198) | (883,724) | (141,322) | (372,133) | (761,559) | (727,303) | (29,156) |
| 4 | #923 Outside Services Employed | Energy | 5,640,193 | 1,709,790 | 273,424 | 719,985 | 1,473,431 | 1,407,152 | 56,411 |
| 5 | #924 Property Insurance | Gross Plant | 1,345,767 | 613,028 | 70,794 | 165,518 | 278,837 | 199,597 | 17,993 |
| 6 | #925 Injuries & Damages | Energy | 3,474,681 | 1,053,328 | 168,445 | 443,552 | 907,717 | 866,886 | 34,752 |
| 7 | #926 Employee Pensions & Benefits | Energy | 41,222,574 | 12,496,370 | 1,998,380 | 5,262,169 | 10,768,888 | 10,284,479 | 412,289 |
| 8 | #927 Franchise requirements | Revenue Related | - | - | - | - | - | - | - |
| 9 | #928 Regulatory Commission Expense | Revenue Related | 5,057,892 | 1,878,219 | 346,892 | 682,341 | 1,180,802 | 905,798 | 63,840 |
| 10 | #929 Duplicate Charges | Revenue Related | (32,684) | (12,137) | (2,242) | (4,409) | (7,630) | (5,853) | (413) |
| 11 | #930 Miscellaneous | Energy | 1,853,952 | 562,014 | 89,876 | 236,662 | 484,322 | 462,536 | 18,542 |
| 12 | #931 & #933 Rents & Transportation | Energy | 4,714,093 | 1,429,048 | 228,529 | 601,766 | 1,231,498 | 1,176,103 | 47,148 |
| 13 | #935 Maintenance of General Plant | Energy | 2,581,004 | 782,415 | 125,121 | 329,472 | 674,255 | 643,926 | 25,814 |
| 14 | #933 Transportation Expense | Energy | (1,509,703) | (457,657) | (73,187) | (192,718) | (394,391) | (376,651) | (15,099) |
| 15 | TOTAL A & G EXPENSES | | $ 78,695,161 | $ 24,403,742 | $ 3,921,562 | $ 10,075,821 | $ 20,345,807 | $ 19,143,454 | $ 804,774 |
| 16 | | | 100.000% | 31.010% | 4.983% | 12.804% | 25.854% | 24.326% | 1.023% |
| 17 | Total Allocated on Sales @ Generation (Energy) | | $ 72,324,186 | | | | | | |
| 18 | | | 92% | | | | | | |
| 19 | Sales @ Generation Allocator (Energy) | | 100.000% | 30.314% | 4.848% | 12.765% | 26.124% | 24.949% | 1.000% |
| | **A&E-4NCP COS** | | | | | | | | |
| 20 | ADMINISTRATIVE & GENERAL EXPENSES | | | | | | | | |
| 21 | 920-SALARIES | SALWAGES | $ 20,211,972 | $ 9,508,322 | $ 1,204,041 | $ 2,366,552 | $ 3,943,249 | $ 2,969,799 | $ 220,009 |
| 22 | 921-OFFICE EXPENSE | ENERGY1 | (268,523) | (81,401) | (13,017) | (34,278) | (70,148) | (66,993) | (2,686) |
| 23 | 922-ADMIN EXP TRANS - CR | ENERGY1 | (2,909,321) | (881,943) | (141,037) | (371,382) | (760,024) | (725,837) | (29,098) |
| 24 | 923-OUTSIDE SERVICES | | | | | | | | |
| 25 | OUTSIDE SERVICE | SALWAGES | 4,958,801 | 2,332,770 | 295,399 | 580,609 | 967,436 | 728,610 | 53,977 |
| 26 | ENERGY RELATED | ENERGY1 | 3,091,671 | 937,221 | 149,877 | 394,660 | 807,661 | 771,330 | 30,921 |
| 27 | TOTAL ACCOUNT 923 | | 8,050,472 | 3,269,991 | 445,277 | 975,269 | 1,775,097 | 1,499,940 | 84,899 |
| 28 | 924-PROPERTY INSURANCE | TOTPLANT | 1,895,506 | 871,614 | 100,538 | 232,240 | 390,581 | 282,324 | 18,209 |
| 29 | 925-INJURIES & DAMAGES | SALWAGES | 3,544,831 | 1,667,595 | 211,168 | 415,052 | 691,578 | 520,851 | 38,586 |
| 30 | 926-EMPLOYEE BENEFITS | | | | | | | | |
| 31 | PENSIONS | SALWAGES | 24,458,261 | 11,505,904 | 1,456,995 | 2,863,735 | 4,771,678 | 3,593,718 | 266,231 |
| 32 | OPEB | SALWAGES | 3,991,719 | 1,877,825 | 237,789 | 467,377 | 778,763 | 586,514 | 43,450 |
| 33 | OTHR MISCELLANEOUS EMPLOYEE BENEFITS | SALWAGES | 14,154,458 | 6,658,684 | 843,191 | 1,657,298 | 2,761,460 | 2,079,753 | 154,073 |
| 34 | TOTAL ACCOUNT 926 | | 42,604,438 | 20,042,413 | 2,537,975 | 4,988,410 | 8,311,901 | 6,259,985 | 463,754 |
| 35 | 928-REGULATORY EXPENSE | | | | | | | | |
| 36 | REGULATORY EXPENSE | CLAIMEDREV | 4,276,559 | 1,899,064 | 230,752 | 518,099 | 896,222 | 691,548 | 40,873 |
| 37 | REGULATORY EXPENSE-FERC | ENERGY1 | 1,075,063 | 325,899 | 52,117 | 137,235 | 280,847 | 268,214 | 10,752 |
| 38 | LOAD RESEARCH PROGRAM | DEM12CP | 20,026 | 7,292 | 1,044 | 2,521 | 5,003 | 3,890 | 276 |
| 39 | TOTAL ACCOUNT 928 | | 5,371,647 | 2,232,255 | 283,913 | 657,854 | 1,182,072 | 963,651 | 51,902 |
| 40 | 929-LESS DUPLICATE CHARGES (CR) | TOTPLANT | (33,093) | (15,217) | (1,755) | (4,055) | (6,819) | (4,929) | (318) |
| 41 | 930.1-GENERAL ADVERTISING | CUST17 | 96,765 | 85,285 | 9,174 | 1,908 | 370 | 27 | - |
| 42 | 930.2-MISCELLANEOUS EXPENSE | SALWAGES | 3,339,361 | 1,570,936 | 198,928 | 390,995 | 651,492 | 490,661 | 36,349 |
| 43 | 931-RENTS | SALWAGES | 3,382,628 | 1,591,290 | 201,505 | 396,061 | 659,933 | 497,019 | 36,820 |
| 44 | 933-TRANSPORTATION EXPENSE | GENPLANT | 157,468 | 71,853 | 8,289 | 19,459 | 32,726 | 23,612 | 1,529 |
| 45 | 935-MAINTENANCE OF GENERAL PLANT | GENPLANT | 2,613,474 | 1,192,531 | 137,568 | 322,963 | 543,156 | 391,878 | 25,379 |
| 46 | TOTAL ADMINISTRATIVE & GENERAL EXPENSES | | $ 88,057,626 | $ 41,125,524 | $ 5,182,565 | $ 10,357,048 | $ 17,345,163 | $ 13,101,989 | $ 945,336 |
| 47 | | | 100.000% | 46.703% | 5.885% | 11.762% | 19.698% | 14.879% | 1.074% |
| 48 | Total Allocated on SALWAGES | | $ 78,042,030 | | | | | | |
| 49 | | | 89% | | | | | | |
| 50 | SALWAGES Allocator | | 100.000% | 47.043% | 5.957% | 11.709% | 19.509% | 14.693% | 1.089% |

**Schedule MEB-COS-R-1**

# CHAPTER 8

## CLASSIFICATION AND ALLOCATION OF COMMON AND GENERAL PLANT INVESTMENTS AND ADMINISTRATIVE AND GENERAL EXPENSES

This chapter describes how general plant investments and administrative and general expenses are treated in a cost of service study. These accounts are listed in the general plant Accounts 389 through 399, and in the administrative and general Accounts 920 through 935.

### I. GENERAL PLANT

General plant expenses include Accounts 389 through 399 and are that portion of the plant that are not included in production, transmission, or distribution accounts, but which are, nonetheless, necessary to provide electric service.

One approach to the functionalization, classification, and allocation of general plant is to assign the total dollar investment on the same basis as the sum of the allocated investments in production, transmission and distribution plant. This type of allocation rests on the theory that general plant supports the other plant functions.

Another method is more detailed. Each item of general plant or groups of general and common plant items is functionalized, classified, and allocated. For example, the investment in a general office building can be functionalized by estimating the space used in the building by the primary functions (production, transmission, distribution, customer accounting and customer information). This approach is more time-consuming and presents additional allocation questions such as how to allocate the common facilities such as the general corporate computer space, the Shareholder Relation Office space, etc.

Another suggested basis is the use of operating labor ratios. In performing the cost of service study, operation and maintenance expenses for production, transmission, distribution, customer accounting and customer information have already been functionalized, classified, and allocated. Consequently, the amount of labor, wages, and salaries assigned to each function is known, and a set of labor expense ratios is thus available for use in allocating accounts such as transportation equipment, communication equipment, investments or general office space.

## II. ADMINISTRATIVE AND GENERAL EXPENSES

Administrative and general expenses include Accounts 920 through 935 and are allocated with an approach similar to that utilized for general plant. One methodology, the two-factor approach, allocates the administrative and general expense accounts on the basis of the sum of the other operating and maintenance expenses (excluding fuel and purchased power).

A more detailed methodology classifies the administrative and general expense accounts into three major components: those which are labor related; those which are plant related; and those which require special analysis for assignment or the application of the beneficiality criteria for assignment.

The following tabulation presents an example of the cost functionalization and allocation of administrative and general expenses using the three-factor approach and the two-factor approach.

| Account Operation | | Three-Factor Allocation Basis | Two-Factor Allocation Basis |
|---|---|---|---|
| 920 | A & G Salaries | Labor - Salary and Wages | Labor - Salary and Wages |
| 921 | Office Supplies | Labor - Salary and Wage | Labor - Salary and Wages |
| 922 | Administration Expenses Transferred-Credit | Other - Subtotal of Operating Expenses Less Fuel and Purchased Power | Labor - Salary and Wages |
| 923 | Outside Services Employed | Other - Subtotal of Operating Expenses Less Fuel and Purchased Power | Labor - Salary and Wages |
| 924 | Property Insurance | Plant - Total Plant [1] | Plant - Total Plant |
| 925 | Injuries and Damages | Labor - Salary and Wages[2] | Labor - Salary and Wages |
| 926 | Pensions and Benefits | Labor - Salary and Wages | Labor - Salary and Wages |
| 927 | Franchise Requirements | Revenues or specific assignment | Revenues or specific assignment |

[1] A utility that self-insures certain parts of its utility plant may require the adjustment of this allocator to only include that portion for which the expense is incurred.

[2] A detailed analysis of this account may be necessary to learn the nature and amount of the expenses being booked to it. Certain charges may be more closely related to certain plant accounts than to labor wages.

| Account Operation | | Three Factor Allocation Basis | Labor-Ratio Allocation Basis |
|---|---|---|---|
| 928 | Regulatory Commission Expenses | Other - Subtotal of Operating Expenses Less Fuel and Purchased Power | Labor - Salary and Wages |
| 928 | Duplicate Charge-Cr. | Other - Subtotal of Operating Expenses Less Fuel and Purchased Power | Labor - Salary and Wages |
| 930.1 | General Advertising Expenses | Other - Subtotal of Operating Expenses Less Fuel and Purchased Power | Labor - Salary and Wages |
| 930.2 | Miscellaneous General Expenses | Other - Subtotal of Operating Expenses Less Fuel and Purchased Power | Labor - Salary and Wages |
| 931 | Rents | Plant - Total Plant[3] | Plant - Total Plant |
| Maintenance | | Three Factor Allocation Basis | Labor-Ratio Allocation Basis |
| 935 | General Plant | Plant - Gross Plant | Labor - Salary and Wages |

[3]A detailed analysis of rental payments may be necessary to determine the correct allocation bias. If the expenses booked are predominantly for the rental of office space, the use of labor, wage and salary allocators would be more appropriate.

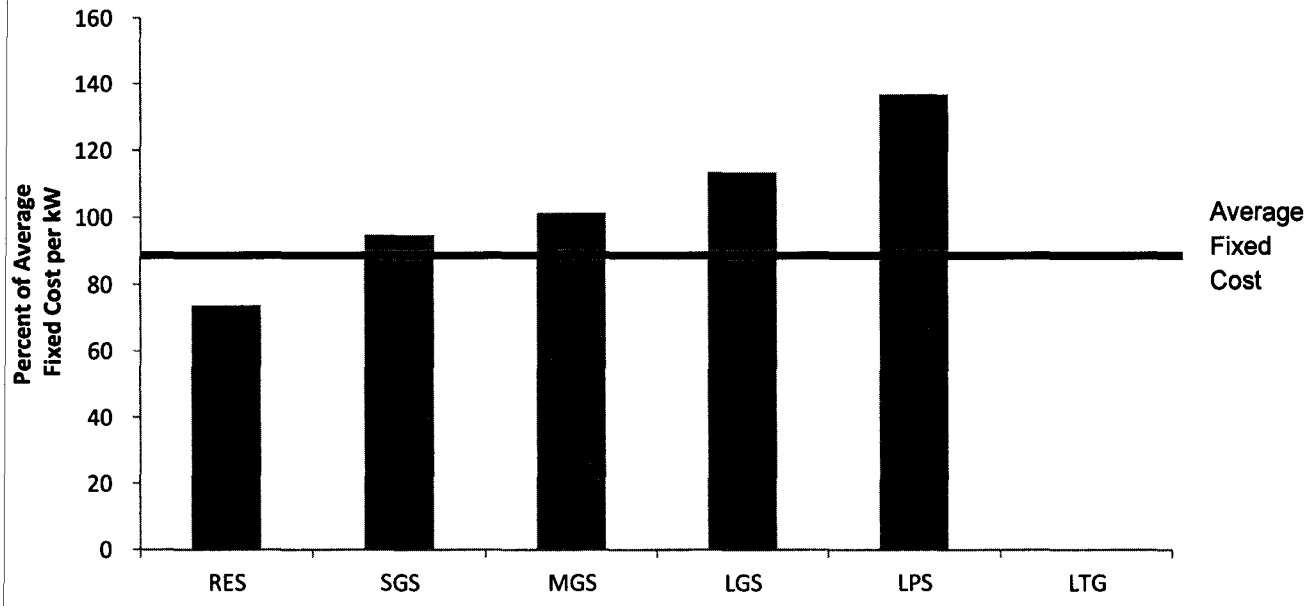
## KANSAS CITY POWER & LIGHT COMPANY

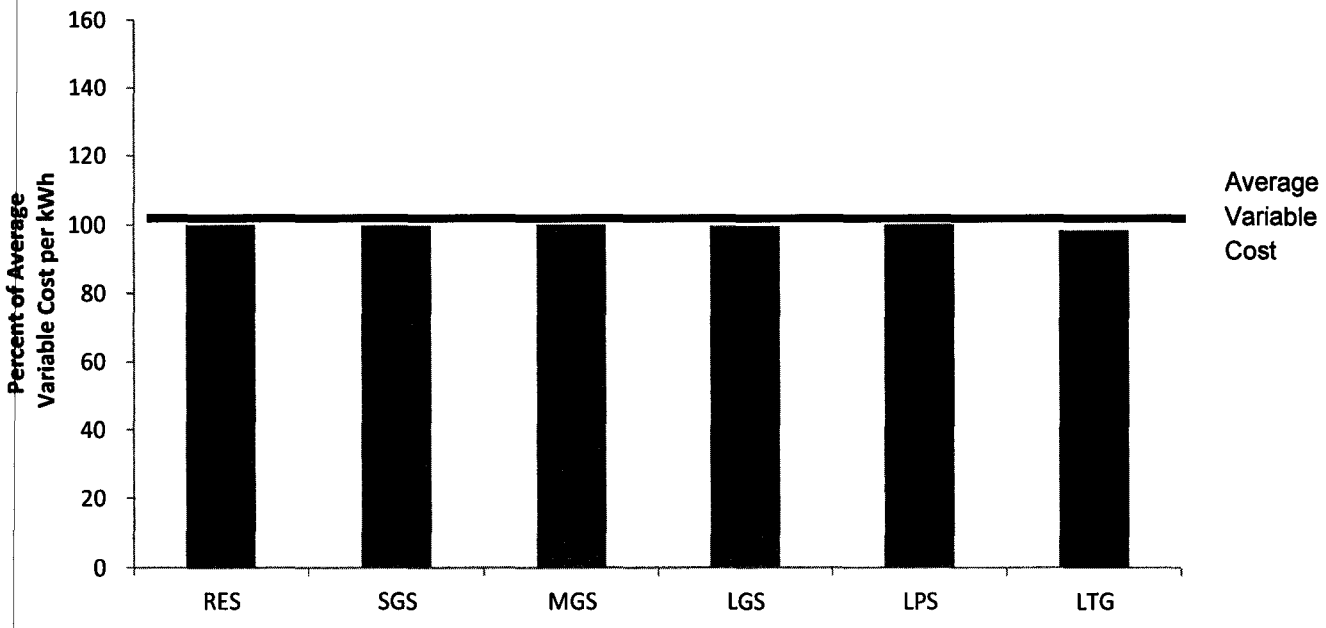
### Allocation of Fixed Costs and Variable Costs

| Line | Description | Missouri Retail | Residential | Small General Service | Medium General Service | Large General Service | Large Power Service | Total Lighting |
|---|---|---|---|---|---|---|---|---|
| | | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| | | | | **Traditional Methods** | | | | |
| | **4 NCP A&E** | | | | | | | |
| 1 | Fixed Cost per kW | $807 | $807 | $807 | $807 | $807 | $807 | $807 |
| 2 | Index | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 3 | Variable Cost per kWh | 1.6¢ | 1.6¢ | 1.6¢ | 1.6¢ | 1.6¢ | 1.6¢ | 1.6¢ |
| 4 | Index | 100 | 100 | 100 | 100 | 100 | 100 | 99 |
| | **2 NCP A&E** | | | | | | | |
| 5 | Fixed Cost per kW | $807 | $807 | $807 | $807 | $807 | $807 | $807 |
| 6 | Index | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 7 | Variable Cost per kWh | 1.6¢ | 1.6¢ | 1.6¢ | 1.6¢ | 1.6¢ | 1.6¢ | 1.6¢ |
| 8 | Index | 100 | 100 | 100 | 100 | 100 | 100 | 99 |
| | **4 CP** | | | | | | | |
| 9 | Fixed Cost per kW | $807 | $807 | $807 | $807 | $807 | $807 | $0 |
| 10 | Index | 100 | 100 | 100 | 100 | 100 | 100 | 0 |
| 11 | Variable Cost per kWh | 1.6¢ | 1.6¢ | 1.6¢ | 1.6¢ | 1.6¢ | 1.6¢ | 1.6¢ |
| 12 | Index | 100 | 100 | 100 | 100 | 100 | 100 | 99 |
| | | | | **KCPL's BIP Method** | | | | |
| 13 | Fixed Cost per kW | **$807** | **$595** | **$765** | **$818** | **$916** | **$1,104** | **$0** |
| 14 | Index | **100** | **74** | **95** | **101** | **113** | **137** | **0** |
| 15 | Variable Cost per kWh | 1.6¢ | 1.6¢ | 1.6¢ | 1.6¢ | 1.6¢ | 1.6¢ | 1.6¢ |
| 16 | Index | 100 | 100 | 100 | 100 | 100 | 100 | 99 |

# KANSAS CITY POWER & LIGHT COMPANY

**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