

Exhibit No.:
 Issue: Cost of Service | Rate Design
 Witness: Maurice Brubaker
 Type of Exhibit: Rebuttal Testimony
 Sponsoring Parties: Missouri Industrial Energy Consumers
 Case Nos.: ER-2018-0145/ER-2018-0146
 Date Testimony Prepared: August 7, 2018

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 October 24, 2018
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 Missouri Public
 Service Commission

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-2018-0145

In the Matter of KCP&L Greater Missouri
 Operations Company's Request for
 Authority to Implement a General Rate
 Increase for Electric Service

Case No. ER-2018-0146

Rebuttal Testimony and Schedules of

Maurice Brubaker

On behalf of

Missouri Industrial Energy Consumers

August 7, 2018



BRUBAKER & ASSOCIATES, INC.

Projects 10551/10552

MIEC Exhibit No. 552
 Date 10/31/18 Reporter JMB
 File No. ER-2018-0145
ER-2018-0146



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

_____))
In the Matter of Kansas City Power &))
Light Company's Request for Authority) Case No. ER-2018-0145
to Implement a General Rate Increase))
for Electric Service))
_____)

_____))
In the Matter of KCP&L Greater Missouri))
Operations Company's Request for) Case No. ER-2018-0146
Authority to Implement a General Rate))
Increase for Electric Service))
_____)

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 the Missouri Industrial Energy Consumers in this proceeding on their behalf.

2. Attached hereto and made a part hereof for all purposes are my rebuttal testimony and schedules which were prepared in written form for introduction into evidence in Missouri Public Service Commission Case No. ER-2018-0145.

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.

/s/ Maurice Brubaker
Maurice E. Brubaker

Subscribed and sworn to before me this 6th day of August, 2018.

/s/ Maria E. Decker
Notary Public

**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**

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**In the Matter of KCP&L Greater Missouri
Operations Company's Request for
Authority to Implement a General Rate
Increase for Electric Service**

)
)
) **Case No. ER-2018-0146**
)
)

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 THESE PROCEEDINGS?**

6 **A Yes. I have previously filed direct testimony on cost of service/rate design issues**
7 **presented in these proceedings.**

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

10 **A Yes. This information is included in Appendix A to my direct testimony.**

**Maurice Brubaker
Page 1**

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

2 A This testimony is presented on behalf of the Missouri Industrial Energy Consumers
3 ("MIEC"), a non-profit company that represents the interests of industrial customers in
4 Missouri utility matters. These companies purchase substantial amounts of electricity
5 from Kansas City Power & Light Company ("KCPL") and KCPL Greater Missouri
6 Operations ("GMO") and the outcome of this proceeding will have an impact on their
7 cost of electricity.

8 **INTRODUCTION AND SUMMARY**

9 Q WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

10 A The purpose of my rebuttal testimony is to address the cost of service
11 recommendations of the Staff of the Missouri Public Service Commission ("Staff").
12 Although there are a number of differences between the KCPL/GMO/MIEC and Staff
13 cost of service studies, the largest difference is with respect to the allocation of
14 production plant investment and related fixed expenses. I will respond to Staff's
15 allocation study that utilizes a Detailed Base, Intermediate and Peak ("BIP") method,
16 and to several other aspects of Staff's allocation study.

17 Q PLEASE SUMMARIZE YOUR PRIMARY FINDINGS AND RECOMMENDATIONS.

18 A They may be summarized as follows:

- 19 1. Staff's BIP allocation method is outside the mainstream, and produces distorted
20 results. The Commission should be guided by the use of a mainstream method,
21 such as average and excess or coincident peak.
- 22 2. Staff's studies use an inappropriate allocation of production system non-fuel O&M
23 expense. That allocation is biased toward energy consumption and does not
24 reflect the fact that these expenses are incurred primarily as a function of the
25 existence of the assets, and that it is conventional and appropriate to allocate
26 these types of costs using a production demand allocation factor.

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1 that are deemed to represent the components of each class's load curve that reflect
2 the intended use of specific plant investments. By choosing to allocate 100% of the
3 investment (fixed costs) associated with base load plants essentially on the basis of
4 class energy, Staff effectively is assuming that investment in base load plants is not
5 driven by total system demands but rather by a component of class load profiles. We
6 all know that this is not the basis for system planning. It appears from Staff's studies
7 that about 80% of total generation fixed costs are allocated on the basis of class energy
8 consumption rather than on the generally accepted basis of a measure of maximum
9 demand or coincident demand.

10 **Q PLEASE DESCRIBE GENERALLY THE DETAILED BIP STUDY.**

11 **A** With this study, generation plants are identified as base, intermediate or peaking.
12 Then, Staff looks at class load curves and attempts to associate class demand levels
13 with different plants, on the assumption that each class uses a different combination of
14 base, intermediate and peaking facilities. The demands for each class for each type
15 of plant assumed in Staff's study appear on page 11 of the Staff Report, and the
16 development of the production system fixed cost allocation factor appears at the top of
17 page 15 of the Staff Report.

18 **Q WITH THIS METHOD, HOW WAS THE COMPONENT OF THE ALLOCATION**
19 **FACTOR REPRESENTING BASE CAPACITY ASSIGNED TO CLASSES?**

20 **A** Although Staff goes through a very data-intensive analysis that entails looking at the
21 load of each customer class in each hour, the end result is that with this method, the
22 fixed costs associated with base load generation essentially are allocated on a
23 measure of class energy consumption as demonstrated below. The intermediate

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

4 Since 100% of the fixed costs associated with plants designated as base load
5 are allocated to customer classes using the customer class energy requirement factor
6 as the basis for the allocation, Staff does not include any consideration of the times that
7 energy is consumed (i.e., when demands occur), and would therefore attribute the
8 same base load capacity cost to a customer that takes all of its load at the system peak
9 hour as it would to a class with the same amount of energy consumption taken steadily
10 at the same amount every hour throughout the year. (Please see the discussion of
11 demand versus energy costs at pages 12-14 of my direct testimony, including Figure 3
12 on page 13 of that testimony.)

13 **Q HAVE YOU DEVELOPED A COMPARISON BETWEEN STAFF'S BASE CAPACITY**
14 **BY CLASS AND CLASS ENERGY CONSUMPTION?**

15 **A** Yes. That comparison appears in Table 1. Note that the relative percentages of base
16 load costs for each class in Staff's detailed BIP allocation factor development is exactly
17 equal to the relative responsibility of each class for energy.

TABLE 1

Comparison of Allocation of Base Load Plant Investment in Staff's Detailed BIP Study to an Allocation Based on Class Energy Usage

Line	Class	Staff's Base Capacity by Class ¹		Energy by Class	
		Costs (1)	Percent (2)	MWh at Generation ² (3)	Percent (4)
1	Residential	\$ 356,215,370	31.04%	2,774,987	31.04%
2	Small General Service	\$ 60,371,825	5.26%	470,308	5.26%
3	Medium General Service	\$ 171,014,118	14.90%	1,332,233	14.90%
4	Large General Service	\$ 287,121,262	25.02%	2,236,730	25.02%
5	Large Power Service	\$ 261,578,662	22.79%	2,037,748	22.79%
6	Lighting	\$ 11,377,185	0.99%	88,630	0.99%
7	Missouri Retail	\$ 1,147,678,422	100.00%	8,940,636	100.00%

¹ Staff's Class Cost-of-Service Report, page 15.

² Workpaper of R Kliethermes - Staff CCOS allocators_KCPL.xlsx

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

4 A No. The BIP approach effectively attempts to assign only one purpose for each class
 5 of plant. In reality, when systems are planned, the utility aims to install that combination
 6 of generation facilities which, giving consideration to fixed costs and variable costs, as
 7 well as to all other relevant factors, is expected to serve the needs of all customers,
 8 collectively, on a least-cost basis. All plants contribute to meeting peak demands, and
 9 the failure to allocate the fixed costs associated with base load plants on a measure of

1 peak demand produces a biased result that over-allocates costs to high load factor
2 customers and under-allocates costs to low load factor customers.

3 **Q IN STAFF'S BIP STUDY, WHAT PERCENTAGE OF GENERATION FIXED COST IS**
4 **EFFECTIVELY ALLOCATED ON ENERGY?**

5 **A 80%.**

6 **Q WHAT IS THE BASIS FOR YOUR STATEMENT THAT THE WEIGHTING OF BASE**
7 **LOAD COST IN THIS CASE IS ABOUT 80%?**

8 **A** This is easily derived from the first table on the top of page 15 of the Staff Report, by
9 dividing \$1,147.7 million of base capacity cost by the total generation capacity cost of
10 \$1,429.9 million.

11 **Q WHAT WAS THE COMPARABLE PERCENTAGE IN THE PREVIOUS KCPL CASE?**

12 **A** It was 53%. This is a startlingly large change and further casts doubt on the analysis.

13 **Q AT PAGE 9 OF THE REPORT, STAFF INDICATES THAT THE BIP METHOD IS**
14 **DISCUSSED IN THE NARUC MANUAL. DOES THE FACT THAT A GENERATION**
15 **ALLOCATION METHOD IS MENTIONED IN THE NARUC MANUAL GIVE IT**
16 **CREDIBILITY OR SUGGEST THAT IT IS ACCEPTED IN THE INDUSTRY?**

17 **A** No. The NARUC Manual presents various production system allocation methods that
18 were being used or considered in 1992. A number of those methods, like BIP, never
19 achieved general acceptance by utilities, commissions or other practitioners.

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

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

7 Q HAS STAFF PROVIDED ANY INFORMATION ABOUT THE USE OF BIP IN THE
8 INDUSTRY?

9 A Yes. In data requests, Staff was asked to provide a citation to Commission orders in
10 regulatory proceedings of which it was aware in which one or more parties filed a BIP
11 study. I have attached as Schedule MEB-COS-R-1 Staff's response to Data Request
12 No. 458 in the KCPL case and to Data Request No. 430 in the GMO case. As indicated
13 therein, Staff was only able to identify cases in Missouri. Staff did not provide any
14 information to suggest that BIP is used or even offered in any other jurisdiction.

15 Q YOU HAVE NOTED THAT THE STAFF'S BIP METHOD PROPOSED IN THIS
16 PROCEEDING IS NOT USED IN OTHER JURISDICTIONS AND IS NOT
17 SUPPORTED BY PRECEDENT OR ACCEPTED IN THE INDUSTRY. WHAT IS THE
18 SIGNIFICANCE OF THIS?

19 A Cost of service studies for electric systems have been performed for well over 50 years.
20 This means that a significant amount of analysis has gone into the question of
21 determining how best to ascertain cost-causation on electric systems, across a broad
22 spectrum of utility circumstances. Methods that have not had the benefit of that
23 analysis and have not withstood the test of time must be viewed with skepticism.

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1 Proponents of such methods should bear a special burden of proving that they do a
2 more accurate job of identifying cost-causation than do recognized mainstream
3 methods. Here, it should be clear that the BIP method does a less accurate job of
4 identifying cost-causation than the recognized methods that I support.

5 **Q HOW DOES THE STAFF'S DBIP ALLOCATION RESULT COMPARE TO**
6 **CONVENTIONAL METHODS?**

7 A A comparison to conventional allocation methods clearly shows DBIP to be an outlier.
8 Schedule MEB-COS-R-2 compares the DBIP allocator to Average and Excess-4NCP,
9 Average and Excess-4CP and 4CP allocators.

10 Note that for all major customer classes the Average and Excess-4NCP,
11 Average and Excess-4CP and 4CP allocation factors are very similar. This is not an
12 unusual outcome. It generally is the case that mainstream methods that appropriately
13 recognize seasonality of the utility's load pattern will produce similar results.

14 In this case, the Average and Excess-4NCP, Average and Excess-4CP and
15 4CP methods would support similar cost-based allocations of any rate increase or
16 decrease.

17 **Q WHY DID YOU SUPPORT THE AVERAGE AND EXCESS-4CP METHOD FILED BY**
18 **KCPL AND GMO IN THIS CASE, WHEN YOU OFTEN SUPPORT AVERAGE AND**
19 **EXCESS-4NCP?**

20 A My general approach is to review the cost allocation method proposed by the utility;
21 and I generally will endorse it if I think it is reasonable. For example, Ameren Missouri
22 uses an Average and Excess-4NCP method which I have found reasonable, and
23 supported it. In recent KCPL cases where an unacceptable method like the Average

1 and Peak or BIP method was filed, I supported an alternative using Average and
2 Excess-4NCP, since that method is mainstream and has found acceptance within
3 Missouri. I sometimes file additional studies using different mainstream methods. For
4 example, in the previous KCPL rate case (ER-2016-0285) I provided information using
5 an Average and Excess-2NCP method, and also a 4CP method, in addition to the
6 Average and Excess-4NCP method.

7 Q THE AVERAGE AND EXCESS-4CP ALLOCATION FACTORS IN THIS TABLE ARE
8 CONSIDERABLY DIFFERENT FROM WHAT STAFF SHOWS ON PAGE 17 OF ITS
9 REPORT. CAN YOU EXPLAIN WHY?

10 A Yes. Staff's calculation of the Average and Excess-4CP factor is in error. Staff has
11 stated an intent to correct its error in rebuttal testimony.

12 **Other Problems With Staff's Cost of Service Study**

13 Q ARE THERE ANY ADDITIONAL ISSUES WITH STAFF'S COST OF SERVICE
14 STUDY THAT SHOULD BE NOTED?

15 A Yes. There are some problems with other allocations that impact Staff's cost of service
16 study. They are the allocation of production non-fuel O&M expense and the allocation
17 of A&G expense.

18 Q WHAT IS THE ISSUE WITH RESPECT TO THE ALLOCATION OF PRODUCTION
19 SYSTEM NON-FUEL O&M EXPENSE?

20 A Staff develops something that it calls BIP O&M Allocator, which is based on energy.

1 Q HOW ARE THESE COSTS TYPICALLY ALLOCATED?

2 A They typically are treated as demand-related costs because they "follow plant,"
3 meaning that expenses are closely related to the existence of the plant facilities. KCPL
4 used the demand allocator, as I advocate, for these costs, and, in fact, the Staff's
5 accounting witnesses used a demand allocation factor when allocating these costs
6 between Kansas and Missouri.

7 Q WHAT IS THE ISSUE WITH RESPECT TO THE ALLOCATION OF A&G EXPENSE?

8 A A significant portion of A&G expense is allocated to classes on the basis of other O&M
9 expenses, which include significant amounts of fuel and purchased power expense.
10 Fuel and purchased power expense do not give rise to the incurrence of A&G expense
11 in proportion to the level of fuel and purchased power expense because these costs
12 are largely generated externally, as opposed to the labor and other costs of maintaining
13 the generation, transmission, distribution and other functions of the utility, which are
14 internally incurred and do give rise to the occurrence of A&G expense.

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

18 A Yes. Pages 105-107 of the January 1992 NARUC Manual discusses A&G expenses.
19 I have attached these pages as Schedule MEB-COS-R-3. Note that the majority of
20 A&G expenses are allocated on labor. Wherever the Manual refers to a more general
21 category of expenses, note that the phrase "less fuel and purchased power" appears.
22 This means that fuel and purchased power should be excluded from the allocations.

1 From a cost causation point of view, most expenses do not vary with energy
2 consumption. This is why it is traditional to exclude fuel and purchased power from
3 any allocation of A&G expenses and focus on the cost-causative nature for these
4 expenses. That is what I have done; it clearly is not what Staff has done.

5 **Q HAVE YOU DETERMINED HOW CHANGING THE ALLOCATION OF**
6 **PRODUCTION NON-FUEL O&M EXPENSE AND A&G EXPENSE WOULD IMPACT**
7 **THE CLASS REVENUE REQUIREMENTS?**

8 A Yes. I have set this forth on Schedule MEB-COS-R-4. Page 1 shows the impact of
9 changing the allocation of production non-fuel O&M expense coupled with changing
10 the allocation of A&G expense, where the O&M expenses less A&G expenses allocator
11 is replaced with the Payroll factor. Page 2 shows the combined effect of changing the
12 allocation of production non-fuel O&M expense and A&G expense, where the O&M
13 Expenses less A&G expenses allocator is replaced with the Net Plant factor. Either
14 change reduces the costs allocated to LPS by about \$1.2 million and increases the
15 costs allocated to the residential class by about \$2.8 million.

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

17 A Yes, it does.

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Missouri Public Service Commission

Respond Data Request

Data Request No.	0458
Company Name	MO PSC Staff-(All)
Case/Tracking No.	ER-2018-0145
Date Requested	7/13/2018
Issue	Other - Other
Requested From	Nicole Mers
Requested By	Lewis Mills
Brief Description	BIP Method
Description	With regard to the use of a Base-Intermediate-Peak ("BIP") method to allocate electric utility generation costs, please provide: a. A citation to Commission Orders in regulatory proceedings of which Staff is aware in which one or more parties filed a BIP study. b. For proceedings identified in a., a statement of how that BIP allocation approach differs from what Staff has filed in these cases.
Response	1. With regard to the use of a Base-Intermediate-Peak ("BIP") method to allocate electric utility generation costs, please provide: a. A citation to Commission Orders in regulatory proceedings of which Staff is aware in which one or more parties filed a BIP study. This information is publicly available to MCEG. For convenience, a list not intended to be exhaustive is provided below: Kansas City Power & Light Company ER-2012-0174 (BIP, not D-BIP) Kansas City Power & Light Company ER-2014-0370 Kansas City Power & Light Company ER-2018-0145 KCP&L Greater Missouri Operations Company ER-2018-0146 Kansas City Power & Light Company ER-2016-0285 Union Electric Company d/b/a Ameren Missouri ER-2016-0179 Empire District Electric Company ER-2016-0023 Empire District Electric Company ER-2014-0351 Union Electric Company d/b/a Ameren Missouri ER-2014-0258 b. For proceedings identified in a., a statement of how that BIP allocation approach differs from what Staff has filed in these cases. Generation characteristics and load characteristics vary case to case and utility to utility. For example, the Ameren Missouri generation units are not considered in a KCPL case and vice versa. ER-2012-0174 was a simple BIP, not the detailed BIP Other cases the numbers of CP used to establish peak demand may vary from 2-4 based on whether additional CP are reasonably close to maximum CP. DR response submitted by Sarah Lange (sarah.lange@psc.mo.gov).
Objections	NA

The attached information provided to **Missouri Public Service Commission** Staff in response to the above data information request is accurate and complete, and contains no material misrepresentations or omissions, based upon present facts of which the undersigned has knowledge, information or belief. The undersigned agrees to immediately inform the **Missouri Public Service Commission** if, during the pendency of Case No. **ER-2018-0145** before the Commission, any matters are discovered which would materially affect the accuracy or completeness of the attached information. If

these data are voluminous, please (1) identify the relevant documents and their location (2) make arrangements with requestor to have documents available for inspection in the **MO PSC Staff-(All)** office, or other location mutually agreeable. Where identification of a document is requested, briefly describe the document (e.g. book, letter, memorandum, report) and state the following information as applicable for the particular document: name, title number, author, date of publication and publisher, addresses, date written, and the name and address of the person(s) having possession of the document. As used in this data request the term "document(s)" includes publication of any format, workpapers, letters, memoranda, notes, reports, analyses, computer analyses, test results, studies or data, recordings, transcriptions and printed, typed or written materials of every kind in your possession, custody or control or within your knowledge. The pronoun "you" or "your" refers to **MO PSC Staff-(All)** and its employees, contractors, agents or others employed by or acting in its behalf.

Security : Public
Rationale : NA

Missouri Public Service Commission

Respond Data Request

Data Request No.	0430
Company Name	MO PSC Staff-(All)
Case/Tracking No.	ER-2018-0146
Date Requested	7/13/2018
Issue	Other - Other
Requested From	Mark Johnson
Requested By	Lewis Mills
Brief Description	BIP Method
Description	With regard to the use of a Base-Intermediate-Peak ("BIP") method to allocate electric utility generation costs, please provide: a. A citation to Commission Orders in regulatory proceedings of which Staff is aware in which one or more parties filed a BIP study. b. For proceedings identified in a., a statement of how that BIP allocation approach differs from what Staff has filed in these cases.
Response	1. With regard to the use of a Base-Intermediate-Peak ("BIP") method to allocate electric utility generation costs, please provide: a. A citation to Commission Orders in regulatory proceedings of which Staff is aware in which one or more parties filed a BIP study. This information is publicly available to MCEG. For convenience, a list not intended to be exhaustive is provided below: Kansas City Power & Light Company ER-2012-0174 (BIP, not D-BIP) Kansas City Power & Light Company ER-2014-0370 Kansas City Power & Light Company ER-2018-0145 KCP&L Greater Missouri Operations Company ER-2018-0146 Kansas City Power & Light Company ER-2016-0285 Union Electric Company d/b/a Ameren Missouri ER-2016-0179 Empire District Electric Company ER-2016-0023 Empire District Electric Company ER-2014-0351 Union Electric Company d/b/a Ameren Missouri ER-2014-0258 b. For proceedings identified in a., a statement of how that BIP allocation approach differs from what Staff has filed in these cases. Generation characteristics and load characteristics vary case to case and utility to utility. For example, the Ameren Missouri generation units are not considered in a KCPL case and vice versa. ER-2012-0174 was a simple BIP, not the detailed BIP Other cases the numbers of CP used to establish peak demand may vary from 2-4 based on whether additional CP are reasonably close to maximum CP. DR response submitted by Sarah Lange (sarah.lange@psc.mo.gov).
Objections	NA

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Security : Public
Rationale : NA

KANSAS CITY POWER & LIGHT COMPANY
Case No. ER-2018-0145

Comparison of Production Allocation Factors

<u>Line</u>	<u>Class</u>	<u>Staff DBIP¹ (1)</u>	<u>Mainstream Methods</u>					
			<u>Based on KCPL Load Data</u>			<u>Based on Staff Load Data</u>		
			<u>A&E 4CP² (2)</u>	<u>A&E 4NCP³ (3)</u>	<u>4CP³ (4)</u>	<u>A&E 4CP⁴ (5)</u>	<u>A&E 4NCP¹ (6)</u>	<u>4CP⁴ (7)</u>
1	Residential	35.07%	42.29%	41.50%	41.96%	40.91%	41.15%	40.50%
2	Small General Service	5.43%	5.27%	5.29%	5.29%	5.68%	5.58%	5.68%
3	Medium General Service	14.95%	14.88%	14.60%	14.96%	15.16%	14.88%	15.22%
4	Large General Service	24.06%	21.13%	21.29%	21.45%	22.21%	22.01%	22.51%
5	Large Power Service	19.69%	15.87%	16.15%	16.34%	15.52%	15.29%	16.08%
6	Lighting	<u>0.80%</u>	<u>0.56%</u>	<u>1.18%</u>	<u>0.00%</u>	<u>0.51%</u>	<u>1.09%</u>	<u>0.00%</u>
7	Missouri Retail	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

¹ Staff's Class Cost-of-Service Report, page 17.

² WN KCPL Allocators MO Rev 11-30-17 Avg & Excess 4CP.xls

³ Calculated using data from WN KCPL Allocators MO Rev 11-30-17 Avg & Excess 4CP.xls

⁴ Calculated using data from (CONF) Staff Workpapers of Sarah Lange, Confidential gen unit info KCPL BIP direct.xlsx

ELECTRIC UTILITY COST ALLOCATION MANUAL

January, 1992



**NATIONAL ASSOCIATION OF
REGULATORY UTILITY COMMISSIONERS
1102 Interstate Commerce Commission Building
Constitution Avenue and Twelfth Street, NW
Post Office Box 684
Washington, DC 20044-0684
Telephone No. (202) 898-2200
Facsimile No. (202) 898-2213**

Price: \$25.00

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

¹A 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.

²A 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

³A 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
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**Change in Class Revenue Requirement
in Staff's Preferred Study from
Revising Staff's Allocation of Production
Non-Fuel O&M Expense and A&G Expense***

<u>Line</u>	<u>Class</u>	Change from Non-Fuel Production O&M Expense Allocation <u>(\$000)</u> (1)	Change from A&G Expense Allocation <u>(\$000)</u> (2)	Total <u>(\$000)</u> (3)
1	Residential	\$ 3,077	\$ (266)	\$ 2,811
2	Small General Service	\$ 171	\$ (39)	\$ 132
3	Medium General Service	\$ (97)	\$ 36	\$ (61)
4	Large General Service	\$ (1,036)	\$ 115	\$ (922)
5	Large Power Service	\$ (1,374)	\$ 164	\$ (1,210)
6	Lighting	<u>\$ (741)</u>	<u>\$ (9)</u>	<u>\$ (750)</u>
7	Total	\$ (0)	\$ 0	\$ (0)

* O&M Expenses less A&G Expenses allocator replaced with Payroll allocator.

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<u>Line</u>	<u>Class</u>	Change from Non-Fuel Production O&M Expense Allocation <u>(\$000)</u> (1)	Change from A&G Expense Allocation <u>(\$000)</u> (2)	Total <u>(\$000)</u> (3)
1	Residential	\$ 3,077	\$ (141)	\$ 2,936
2	Small General Service	\$ 171	\$ (12)	\$ 159
3	Medium General Service	\$ (97)	\$ (35)	\$ (132)
4	Large General Service	\$ (1,036)	\$ 13	\$ (1,024)
5	Large Power Service	\$ (1,374)	\$ 174	\$ (1,199)
6	Lighting	<u>\$ (741)</u>	<u>\$ 0</u>	<u>\$ (741)</u>
7	Total	\$ (0)	\$ 0	\$ (0)

* O&M Expenses less A&G Expenses allocator replaced with Net Plant allocator.