

Exhibit No.:  
Issues: Cost of Service, Revenue Allocation,  
and Rate Design  
Witness: Maurice Brubaker  
Type of Exhibit: Rebuttal Testimony  
Sponsoring Party: Missouri Industrial Energy Consumers  
Case No.: ER-2019-0335  
Date Testimony Prepared: January 21, 2020

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

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**In the Matter of Union Electric Company  
d/b/a Ameren Missouri's Tariffs to  
Decrease Its Revenues for Electric Service**

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**Case No. ER-2019-0335**

Rebuttal Testimony and Schedule of

**Maurice Brubaker**

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

On behalf of

**Missouri Industrial Energy Consumers**

January 21, 2020



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Case No. ER-2019-0335

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

**Affidavit of Maurice Brubaker**

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

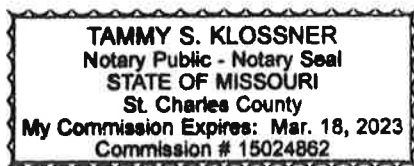
1. My name is Maurice Brubaker. I am a consultant with Brubaker & Associates, Inc., having its principal place of business at 16690 Swingley Ridge Road, Suite 140, Chesterfield, Missouri 63017. We have been retained by the Missouri Industrial Energy Consumers in this proceeding on their behalf.

2. Attached hereto and made a part hereof for all purposes are my rebuttal testimony and schedule which were prepared in written form for introduction into evidence in Missouri Public Service Commission Case No. ER-2019-0335.

3. I hereby swear and affirm that the testimony and schedule 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 20<sup>th</sup> day of January, 2020.



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





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

2 A In this rebuttal testimony, I will address the proposals made by the Staff of the Missouri  
3 Public Service Commission in the Staff Report titled “Class Cost of Service” (“Staff  
4 Report”) concerning cost allocation and rate design.

5 **Q BEFORE PROVIDING A DETAILED RESPONSE, HOW WOULD YOU**  
6 **CHARACTERIZE THE COST OF SERVICE STUDY PROPOSED BY STAFF?**

7 A The Staff Report takes unconventional and radical approaches to class cost of service  
8 issues that are inconsistent with past Staff positions and out of the mainstream of cost  
9 allocation practices in the industry. This is true of the allocation of generation costs<sup>1</sup>  
10 as well as the allocation of many other costs, including the allocation of taxes, the  
11 treatment of investment associated with Senate Bill 564 (“SB 564”) and the decision to  
12 characterize a significant portion of rate base and expenses as “general unassignable  
13 for allocation,” and the allocation of certain distribution costs.

14 **Q WHAT IS YOUR RECOMMENDATION TO THE COMMISSION?**

15 A Given the many unconventional and unsupported features of Staff’s cost of service  
16 study proposals, and the fact that the results are so vastly different from traditional cost  
17 of service studies that have received support in the industry, my recommendation is to  
18 give no weight to Staff’s cost of service studies, or to Staff’s revenue allocation  
19 recommendation.

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<sup>1</sup>Staff presented six different cost of service studies, but the Staff Report focuses on what has been described as “Capacity Assigned B.” For that reason, most of the rebuttal testimony is directed to Capacity Assigned B. However, many of the faults of Capacity Assigned B are shared by the other studies.

1 **Generation Costs**

2 **Q PLEASE DESCRIBE STAFF’S TREATMENT OF GENERATION COSTS.**

3 A With respect to generation costs, cost of service studies typically allocate the actual  
4 fixed and variable costs of the utility’s existing generation system to customer classes  
5 using measures that represent the responsibility of each customer class for the fixed  
6 and variable costs that the utility wants to include in its revenue requirement. (In the  
7 case of Ameren Missouri, that is average and excess (“A&E”) for fixed costs and energy  
8 for variable costs.)

9 In contrast to this conventional approach, the Staff Report deviates in the  
10 following material way: Staff calculates generation facility fixed costs equal to the cost  
11 per kW of a combustion turbine times the utility system peak grossed-up for the  
12 planning reserve margin (which it refers to as the Market Production subfunction), and  
13 then essentially allocates the difference between Ameren Missouri’s actual fixed costs  
14 and the fixed costs of the hypothetical combustion turbine to classes on the basis of  
15 energy requirements. Thus, Staff’s approach does not allocate Ameren Missouri’s  
16 existing generation costs. Rather, Staff’s approach allocates a fictional generation fleet  
17 which reflects the current cost of a combustion turbine. Then, to the extent that Ameren  
18 Missouri’s costs are higher than the fixed cost of this fictional generation fleet, Staff  
19 allocates the costs based upon class energy requirements. These and other  
20 allocations have the effect of over-allocating costs to high load factor customers, such  
21 as those served under the Large Primary Service (“LPS”) tariff.

22 **Q WHAT IS STAFF’S BASIS FOR THIS APPROACH?**

23 A Staff indicates that this approach is taken because of Ameren Missouri’s participation  
24 in Midcontinent Independent System Operator (“MISO”), which involves simultaneously

1 selling the output of all of its generation resources into MISO and purchasing back from  
2 MISO the energy required to serve load.

3 **Q IS THIS A VALID REASON?**

4 A No. Membership in MISO does not change Ameren Missouri's responsibility to provide  
5 safe and reliable service to its retail customers, nor does it change how Ameren  
6 Missouri incurs costs. There is nothing about participation in MISO that transforms  
7 Ameren Missouri's fixed costs into variable costs or otherwise changes the nature of  
8 the fixed and variable cost of Ameren Missouri's actual generation resources. MISO  
9 provides a means to efficiently use the energy output of available generation facilities.

10 **Q HOW LONG HAS AMEREN MISSOURI BEEN A PARTICIPANT IN MISO?**

11 A Ameren Missouri has been a participant in MISO since approximately 2004, or over 15  
12 years.

13 **Q HAS STAFF EVER BEFORE PROPOSED A METHOD LIKE IT PROPOSES IN THIS  
14 CASE?**

15 A No. Not only is Staff's current approach radically different from that advanced by  
16 Ameren Missouri and MIEC in this case, Staff's approach in this case is completely  
17 different than the approach it has taken in any previous Ameren Missouri, KCPL, GMO,  
18 or Empire case.

1 Q ARE YOU AWARE OF ANY OTHER UTILITY OR STATE COMMISSION THAT USES  
2 A SIMILAR APPROACH TO CLASS COST ALLOCATION FOR GENERATION  
3 COSTS?

4 A No. In 50 years of experience in 34 jurisdictions, I have never seen an approach similar  
5 to that now advocated by the Staff. According to the response to Data Request  
6 No. 554, Staff hasn't either.

7 **Transmission Costs**

8 Q HOW DOES STAFF ALLOCATE TRANSMISSION INVESTMENT AND EXPENSES?

9 A In another unjustified deviation from normal practices, Staff has lumped transmission  
10 investment and expenses, both of which are entirely demand-related<sup>2</sup>, in with  
11 generation costs and allocates a significant proportion of transmission costs on class  
12 energy.

13 Q HOW ARE TRANSMISSION COSTS NORMALLY ALLOCATED?

14 A Transmission costs are all fixed costs and typically are allocated to customer classes  
15 using customer class demands. Generally accepted allocation practices do not  
16 allocate large parts of the transmission system to customer classes based on class  
17 energy consumption.

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<sup>2</sup>Transmission expenses are demand-related in that the transmission grid primarily is sized to meet peak demand.



1 **General Unassignable Costs**

2 **Q ARE THERE OTHER UNUSUAL FEATURES OF THE STAFF'S CLASS COST OF**  
3 **SERVICE STUDY?**

4 A Yes, there are several. Among others, Staff assigns significant portions of rate base  
5 and expenses to a category called "General Unassignable for Allocation" and then  
6 allocates these items on class sales at generation.

7 **Q WHAT ARE SOME OF THE EXPENSE ITEMS THAT STAFF CLASSIFIES AS**  
8 **GENERAL UNASSIGNABLE FOR ALLOCATION?**

9 A In total, Staff designates about \$258 million of expenses in this category. Some of the  
10 items included are Administrative and General ("A&G") salaries of \$61 million, Office  
11 Supplies and Expenses of \$33 million, Outside Services Employed of \$34 million,  
12 Injuries and Damages of \$14 million, Pension and Benefits of \$15 million and Rents of  
13 \$13 million.

14 **Q HOW ARE COSTS OF THIS NATURE GENERALLY HANDLED IN CLASS COST OF**  
15 **SERVICE ANALYSES?**

16 A Traditionally, these kinds of expenses are allocated across functions (generation,  
17 transmission and distribution) and between demand-related, energy-related and  
18 customer-related costs on the basis of the relationship between these costs and the  
19 costs in the specific functional categories. For example, Pensions and Benefits and  
20 A&G labor would typically be allocated across generation, transmission, distribution  
21 and other functions based on the relative proportion of total salaries and wages  
22 included in each of those functions. Similar approaches would be applied for Outside

1 Services Employed, Injuries and Damages, and most of the other costs that Staff has  
2 placed into this category.

3 **Q WHAT IS STAFF'S EXPLANATION FOR THIS TREATMENT?**

4 A Staff simply states that these costs are not directly assignable, and therefore they  
5 should be treated generally.

6 **Q HOW DO YOU RESPOND TO THAT CLAIM?**

7 A I would acknowledge that some of these investments and expenses do require  
8 allocation among functions because they are incurred on a general enterprise basis  
9 and support the activities being conducted within the different functional areas. The  
10 fact that they may not be "precisely" assignable does not justify a failure to make  
11 reasonable assignments and allocations, and instead lump everything into one bucket  
12 and arbitrarily allocate those costs to customer classes on the basis of class energy  
13 requirements. A reasonable allocation of these costs across the functions, even if not  
14 precisely accurate, is more cost-based and far better than the arbitrary and totally  
15 inaccurate allocation of all of these costs on the basis of class energy requirements.

16 **Q DID STAFF INCLUDE A GENERAL UNASSIGNABLE FOR ALLOCATION**  
17 **CATEGORY FOR RATE BASE?**

18 A Yes. Staff puts \$872 million of costs in this rate base category and, once again,  
19 allocates these costs to classes based on energy sales.

1 **Q IS THAT APPROPRIATE?**

2 A No. For all of the same reasons indicated above in connection with Staff's treatment  
3 of expenses, this treatment also is wrong.

4 **Taxes**

5 **Q WHAT OTHER UNUSUAL FEATURES OF STAFF'S COST OF SERVICE STUDY**  
6 **HAVE YOU NOTED?**

7 A Another significant departure from the norm is the decision to aggregate all taxes  
8 together and then to allocate those taxes to classes on the basis of class energy  
9 consumption.

10 **Q WHAT KINDS OF TAXES ARE INCLUDED?**

11 A All taxes are included: franchise taxes, payroll taxes, property taxes and income taxes.  
12 The amount of tax expense treated this way is \$192 million. These taxes in general  
13 relate to labor and property and typically are apportioned across the functions and to  
14 classes using those bases for allocation.

15 **Q DID STAFF MAKE A SIMILAR DESIGNATION FOR TAXES ASSOCIATED WITH**  
16 **RATE BASE?**

17 A Yes. Staff has almost \$3 billion of tax offsets that it inexplicably allocates to customer  
18 classes based on class energy requirements. These taxes clearly relate to investment,  
19 and not to energy sales.

1 **Senate Bill 564 Costs**

2 **Q WHAT OTHER ALLOCATION CATEGORIES HAS STAFF CREATED?**

3 A Staff creates a separate category called “SB 564.” This category relates to rate base  
4 and expense items associated with a provision of Senate Bill 564 that allows an electing  
5 utility to take advantage of special accounting treatments with respect to certain  
6 investments.

7 **Q WHAT IS STAFF’S PROPOSED ALLOCATION OF THESE COSTS?**

8 A Like the allocation of many other costs, Staff proposes to allocate both the rate base  
9 and the expense portion to customer classes based on energy sales at generation.

10 **Q IS THERE ANY BASIS FOR THIS TREATMENT?**

11 A No. There is no justification for allocating any of these costs to customer classes based  
12 on energy requirements. None of these costs relate to the production of energy. All of  
13 these costs are capital-related costs that are fixed in nature and do not vary with class  
14 kWh requirements or generation.

15 **Q HOW DOES AMEREN MISSOURI TREAT THESE COSTS?**

16 A Ameren Missouri functionalizes these costs to generation, transmission and  
17 distribution. According to Ameren Missouri’s analysis, less than one-third of these  
18 costs relate to the production function, and none of those relate to the energy  
19 component of production, but rather are entirely in the nature of fixed costs and  
20 therefore are demand-related.

1 **Distribution Costs**

2 **Q DO YOU HAVE ANY COMMENTS ON STAFF’S TREATMENT OF DISTRIBUTION**  
3 **SYSTEM COSTS?**

4 A Yes. Staff has made major adjustments to Ameren Missouri’s classification of  
5 Account 364 (Poles, Towers & Fixtures) and Account 365 (Overhead Conductors &  
6 Devices) between the customer-related component and the demand-related  
7 component. For Account 364, Staff has reduced the portion that Ameren Missouri has  
8 classified as a customer component by a factor of over 10, reducing it from \$715 million  
9 to only \$64 million. The result is to materially increase the demand component of these  
10 accounts, including the cost associated with high voltage primary circuits, which are  
11 allocated by Ameren Missouri only on a demand basis. Overall, Staff proposes to  
12 reduce the customer component of Account 364 from approximately 62% in Ameren  
13 Missouri’s study to about 6%. These changes shift a significant amount of costs from  
14 small customers, whose loads are distributed throughout the service territory and who  
15 therefore require an extensive network to provide service to larger customers who  
16 require less of a network.

17 **Q WHAT ACCOUNTS FOR THIS RADICAL DIFFERENCE?**

18 A Unlike Ameren Missouri’s study, which deals with the actual facilities installed and their  
19 cost, the Staff’s approach creates a totally fictitious system known as a “Zero-Intercept”  
20 method. The Staff describes this approach on lines 4-7 on page 12 of the Staff Report  
21 as follows:

22 “In other words, the Zero-Intercept cost would be the cost that would be  
23 recorded in the studied account if, for example, the entire distribution  
24 system were operated at zero volts and linemen had been installing 0” tall  
25 poles for the last hundred and twenty years. Those are the costs that  
26 strictly relate to the number of customers served.”

1                   While this may be an interesting academic exercise, it does not provide any  
2 information that is useful for determining the area coverage component of the  
3 distribution system or its related cost.

4 **Q       WHAT CHANGES DID THE STAFF MAKE TO ACCOUNT 365 (OVERHEAD**  
5 **CONDUCTORS & DEVICES)?**

6 A       For Account 365, Staff priced out the cost of the conductors based on the average cost  
7 per foot, whereas Ameren Missouri used the more traditional approach of applying the  
8 cost associated with the minimum size that actually would be installed. The result of  
9 Staff's approach is, again, an understatement of the customer component and an  
10 overstatement of the demand component. The end result was to cut the customer  
11 component by about 50%, from 72% in the case of Ameren Missouri to 36% in the case  
12 of Staff.

13 **Q       IN YOUR OPINION, ARE THE ADJUSTMENTS WHICH STAFF MADE TO**  
14 **ACCOUNTS 364 AND 365 JUSTIFIED?**

15 A       No. During previous cases, my staff and I have extensively reviewed Ameren  
16 Missouri's methodologies for developing the customer/demand splits for its distribution  
17 system and found them to be reasonable. The resulting percentages of  
18 customer-related and demand-related costs in Ameren Missouri's studies are also  
19 more consistent with the results we see for other utilities.

1 **COS Summary**

2 **Q HAVE YOU SUMMARIZED THE RESULTS FROM THE VARIOUS CLASS COST OF**  
3 **SERVICE STUDIES AND FROM THE STUDIES PRESENTED BY YOU AND BY**  
4 **AMEREN MISSOURI?**

5 A Yes. The bar graph on Schedule MEB-COS-R-1 shows the increases or decreases  
6 from current rates necessary to move each major class to cost of service. For simplicity  
7 of presentation, the bar graph focuses only on Staff's "Capacity Assigned B" study and  
8 the Ameren Missouri and MIEC cost of service studies for the major customer classes.

9 For the residential class, note that while Staff's study suggests a 6.34%  
10 decrease to move to cost of service, the Ameren Missouri and MIEC studies, using  
11 conventional methodologies, indicate a required increase of more than 8%. At the other  
12 end of the spectrum, Staff suggests that the LPS class would require an increase of  
13 over 16%, whereas the more traditional Ameren Missouri and MIEC studies indicate  
14 that decreases in the 8%-10% range would be appropriate.

15 **Q WHAT IS YOUR RECOMMENDATION TO THE COMMISSION?**

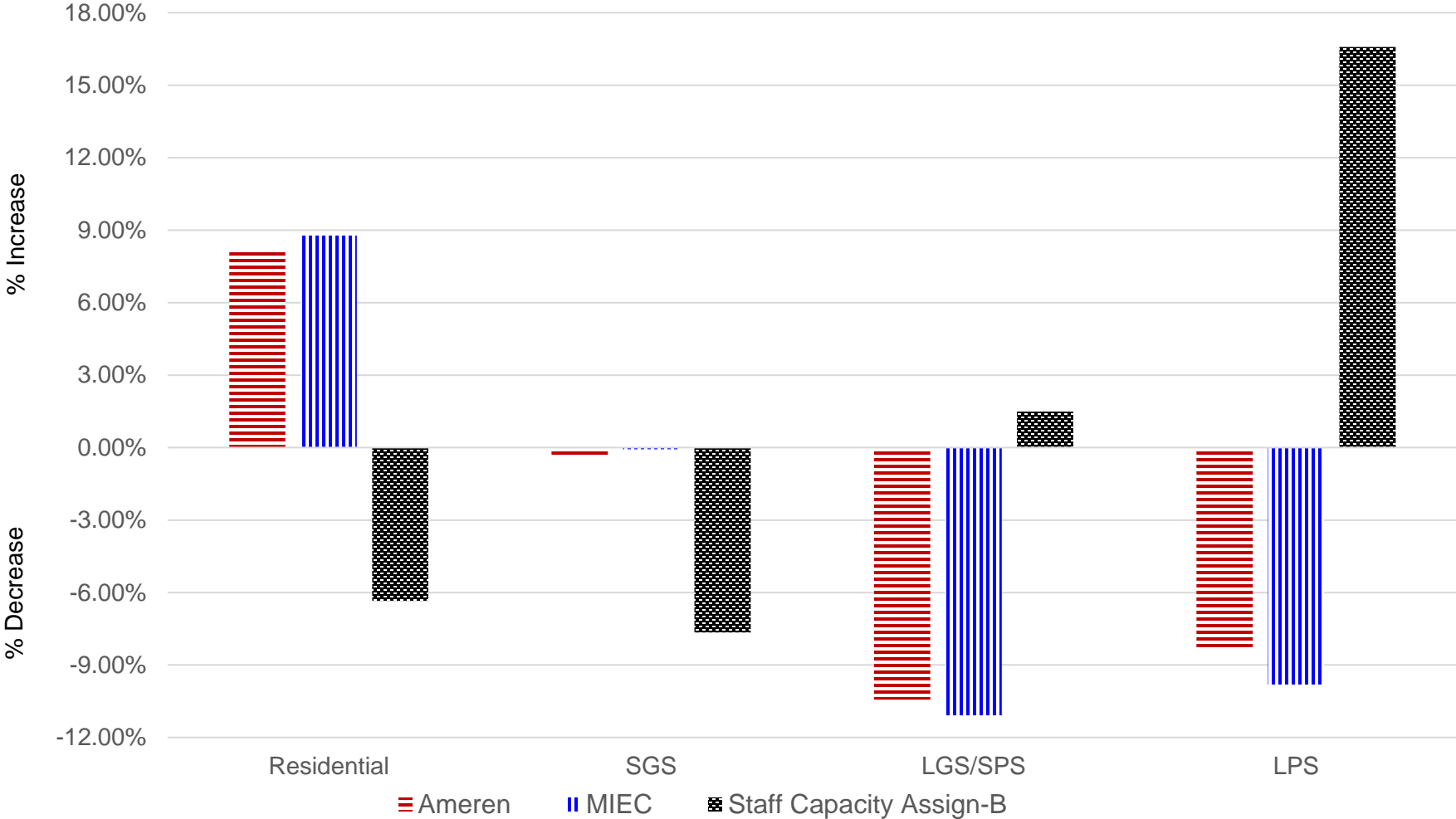
16 A Given the many unconventional and unsupported features of Staff's cost of service  
17 study proposals, and the fact that the results are so vastly different from traditional cost  
18 of service studies that have received support in the industry, my recommendation is to  
19 give no weight to Staff's cost of service studies, or to Staff's revenue allocation  
20 proposals.

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

22 A Yes.

**AMEREN MISSOURI  
Case No. ER-2019-0335**

**Increases and (Decreases) in Rates to Move Classes to Cost of Service**





**AMEREN MISSOURI**  
Case No. ER-2019-0335

**Comparison of Staff, Ameren and MIEC CCOS Results**

<u>Description</u>	<u>Total</u>	<u>Residential</u>	<u>SGS</u>	<u>LGS</u>	<u>SPS</u>	<u>LPS</u>	<u>Combined Lighting</u>
<b><u>Staff - Capacity Assign B</u></b>							
Total Rate Base	\$ 7,920,321,132	\$ 4,156,839,847	\$ 883,013,497	\$ 1,600,160,969	\$ 618,671,776	\$ 514,632,763	\$ 147,002,280
Total Expense Net of Non-Rate Revenue	\$ 1,977,123,431	\$ 898,940,866	\$ 211,110,903	\$ 450,112,960	\$ 196,596,900	\$ 198,864,485	\$ 21,497,316
Rate Revenue	\$ 2,590,340,265	\$ 1,266,985,066	\$ 294,771,201	\$ 557,524,661	\$ 230,999,514	\$ 201,128,512	\$ 38,931,311
Current Rate Of Return	7.74%	8.85%	9.47%	6.71%	5.56%	0.44%	11.86%
Index	1.00	1.14	1.22	0.87	0.72	0.06	1.53
Class Cost of Service	\$ 2,525,288,857	\$ 1,186,635,752	\$ 272,224,267	\$ 560,860,101	\$ 239,415,174	\$ 234,482,219	\$ 31,671,344
Class Total Revenue Above Or Below Total Cost Of Service	\$ 65,051,408	\$ 80,349,314	\$ 22,546,934	\$ (3,335,440)	\$ (8,415,660)	\$ (33,353,707)	\$ 7,259,967
% Change Needed To Bring Class Rate Revenue Equal To Class Cost Of Service		-6.34%	-7.65%	0.60%	3.64%	16.58%	-18.65%
<b><u>Staff - Capacity Assign A</u></b>							
Total Rate Base	\$ 7,920,321,131	\$ 3,815,331,781	\$ 856,482,844	\$ 1,751,123,039	\$ 744,464,856	\$ 641,678,894	\$ 111,239,718
Total Expense Net of Non-Rate Revenue	\$ 1,977,123,431	\$ 909,422,692	\$ 212,224,175	\$ 445,524,543	\$ 192,928,100	\$ 194,374,304	\$ 22,649,616
Rate Revenue	\$ 2,590,340,265	\$ 1,266,985,066	\$ 294,771,201	\$ 557,524,661	\$ 230,999,514	\$ 201,128,512	\$ 38,931,311
Current Rate Of Return	7.74%	9.37%	9.64%	6.40%	5.11%	1.05%	14.64%
Index	1.00	1.21	1.24	0.83	0.66	0.14	1.89
Class Cost of Service	\$ 2,525,288,857	\$ 1,173,481,805	\$ 271,501,353	\$ 566,719,769	\$ 244,452,512	\$ 238,784,900	\$ 30,348,517
Class Total Revenue Above Or Below Total Cost Of Service	\$ 65,051,408	\$ 93,503,261	\$ 23,269,848	\$ (9,195,108)	\$ (13,452,998)	\$ (37,656,388)	\$ 8,582,794
% Change Needed To Bring Class Rate Revenue Equal To Class Cost Of Service		-7.38%	-7.89%	1.65%	5.82%	18.72%	-22.05%
<b><u>Staff - A&amp;E A</u></b>							
Total Rate Base	\$ 7,920,321,132	\$ 4,197,949,495	\$ 897,355,813	\$ 1,606,035,788	\$ 603,426,155	\$ 489,314,914	\$ 126,238,966
Total Expense Net of Non-Rate Revenue	\$ 1,977,123,431	\$ 989,841,871	\$ 220,046,951	\$ 413,118,918	\$ 164,205,741	\$ 162,813,838	\$ 27,096,111
Rate Revenue	\$ 2,590,340,265	\$ 1,266,985,066	\$ 294,771,201	\$ 557,524,661	\$ 230,999,514	\$ 201,128,512	\$ 38,931,311
Current Rate Of Return	7.74%	6.60%	8.33%	8.99%	11.07%	7.83%	9.38%
Index	1.00	0.85	1.08	1.16	1.43	1.01	1.21
Class Cost of Service	\$ 2,525,288,857	\$ 1,280,381,955	\$ 282,152,947	\$ 524,272,655	\$ 205,968,866	\$ 196,679,324	\$ 35,833,110
Class Total Revenue Above Or Below Total Cost Of Service	\$ 65,051,408	\$ (13,396,889)	\$ 12,618,254	\$ 33,252,006	\$ 25,030,648	\$ 4,449,188	\$ 3,098,201
% Change Needed To Bring Class Rate Revenue Equal To Class Cost Of Service		1.06%	-4.28%	-5.96%	-10.84%	-2.21%	-7.96%
<b><u>Staff - A&amp;E B</u></b>							
Total Rate Base	\$ 7,920,321,132	\$ 4,433,658,151	\$ 915,620,299	\$ 1,501,729,823	\$ 516,649,475	\$ 401,751,814	\$ 150,911,571
Total Expense Net of Non-Rate Revenue	\$ 1,977,123,431	\$ 949,434,525	\$ 216,611,422	\$ 430,941,882	\$ 178,894,996	\$ 178,429,999	\$ 22,810,608
Rate Revenue	\$ 2,590,340,265	\$ 1,266,985,066	\$ 294,771,201	\$ 557,524,661	\$ 230,999,514	\$ 201,128,512	\$ 38,931,311
Current Rate Of Return	7.74%	7.16%	8.54%	8.43%	10.09%	5.65%	10.68%
Index	1.00	0.93	1.10	1.09	1.30	0.73	1.38
Class Cost of Service	\$ 2,525,288,857	\$ 1,256,288,006	\$ 279,981,503	\$ 534,876,603	\$ 214,652,306	\$ 206,235,242	\$ 33,255,198
Class Total Revenue Above Or Below Total Cost Of Service	\$ 65,051,408	\$ 10,697,060	\$ 14,789,698	\$ 22,648,058	\$ 16,347,208	\$ (5,106,730)	\$ 5,676,113
% Change Needed To Bring Class Rate Revenue Equal To Class Cost Of Service		-0.84%	-5.02%	-4.06%	-7.08%	2.54%	-14.58%

**AMEREN MISSOURI**  
Case No. ER-2019-0335

**Comparison of Staff, Ameren and MIEC CCOS Results**

<u>Description</u>	<u>Total</u>	<u>Residential</u>	<u>SGS</u>	<u>LGS</u>	<u>SPS</u>	<u>LPS</u>	<u>Combined Lighting</u>
<b><u>Staff - Plug Cap Assign A</u></b>							
Total Rate Base	\$ 10,109,498,132	\$ 5,059,864,583	\$ 1,111,117,347	\$ 2,143,250,495	\$ 871,755,459	\$ 763,833,488	\$ 159,676,761
Total Expense Net of Non-Rate Revenue	\$ 1,977,123,431	\$ 898,940,866	\$ 211,110,903	\$ 450,112,960	\$ 196,596,900	\$ 198,864,485	\$ 21,497,316
Rate Revenue	\$ 2,590,340,265	\$ 1,266,985,066	\$ 294,771,201	\$ 557,524,661	\$ 230,999,514	\$ 201,128,512	\$ 38,931,311
Current Rate Of Return	6.07%	7.27%	7.53%	5.01%	3.95%	0.30%	10.92%
Index	1.00	1.20	1.24	0.83	0.65	0.05	1.80
Class Cost of Service	\$ 2,676,801,797	\$ 1,249,134,094	\$ 288,011,335	\$ 598,447,327	\$ 256,931,095	\$ 251,729,401	\$ 32,548,545
Class Total Revenue Above Or Below Total Cost Of Service	\$ (86,461,532)	\$ 17,850,972	\$ 6,759,866	\$ (40,922,666)	\$ (25,931,581)	\$ (50,600,889)	\$ 6,382,766
% Change Needed To Bring Class Rate Revenue Equal To Class Cost Of Service		-1.41%	-2.29%	7.34%	11.23%	25.16%	-16.39%
<b><u>Staff - Plug Cap Assign B</u></b>							
Total Rate Base	\$ 10,109,498,132	\$ 5,282,484,899	\$ 1,150,689,090	\$ 2,061,991,847	\$ 784,305,403	\$ 664,393,688	\$ 165,633,205
Total Expense Net of Non-Rate Revenue	\$ 1,977,123,431	\$ 898,940,866	\$ 211,110,903	\$ 450,112,960	\$ 196,596,900	\$ 198,864,485	\$ 21,497,316
Rate Revenue	\$ 2,590,340,265	\$ 1,266,985,066	\$ 294,771,201	\$ 557,524,661	\$ 230,999,514	\$ 201,128,512	\$ 38,931,311
Current Rate Of Return	6.07%	6.97%	7.27%	5.21%	4.39%	0.34%	10.53%
Index	1.00	1.15	1.20	0.86	0.72	0.06	1.74
Class Cost of Service	\$ 2,676,801,797	\$ 1,264,541,646	\$ 290,750,095	\$ 592,823,416	\$ 250,878,677	\$ 244,847,172	\$ 32,960,790
Class Total Revenue Above Or Below Total Cost Of Service	\$ (86,461,532)	\$ 2,443,420	\$ 4,021,106	\$ (35,298,755)	\$ (19,879,163)	\$ (43,718,660)	\$ 5,970,521
% Change Needed To Bring Class Rate Revenue Equal To Class Cost Of Service		-0.19%	-1.36%	6.33%	8.61%	21.74%	-15.34%
<hr/>							
	<u>Total</u>	<u>Residential</u>	<u>SGS</u>	<u>LGS/SPS</u>		<u>LPS</u>	<u>Combined Lighting</u>
<b><u>Ameren - A&amp;E 4NCP (Dollars in Thousands)</u></b>							
Total Rate Base	\$ 7,977,973	\$ 4,322,982	\$ 909,690	\$ 2,114,388		\$ 508,201	\$ 122,712
Total Expense Net of Non-Rate Revenue	\$ 2,033,172	\$ 1,064,574	\$ 226,849	\$ 565,880		\$ 148,628	\$ 27,242
Rate Revenue	\$ 2,621,240	\$ 1,278,256	\$ 295,197	\$ 805,846		\$ 202,942	\$ 38,999
Current Rate Of Return	7.37%	4.94%	7.51%	11.35%		10.69%	9.58%
Index	1.00	0.67	1.02	1.54		1.45	1.30
Class Cost of Service	\$ 2,621,240	\$ 1,383,220	\$ 293,903	\$ 721,739		\$ 186,091	\$ 36,287
Class Total Revenue Above Or Below Total Cost Of Service	\$ (0)	\$ (104,964)	\$ 1,294	\$ 84,107		\$ 16,852	\$ 2,711
% Change Needed To Bring Class Rate Revenue Equal To Class Cost Of Service		8.21%	-0.44%	-10.44%		-8.30%	-6.95%
<b><u>MIEC - A&amp;E 4NCP (Dollars in Thousands)</u></b>							
Total Rate Base	\$ 7,977,973	\$ 4,322,904	\$ 909,679	\$ 2,114,444		\$ 508,234	\$ 122,713
Total Expense Net of Non-Rate Revenue	\$ 2,033,172	\$ 1,045,266	\$ 227,974	\$ 581,797		\$ 150,289	\$ 27,847
Rate Revenue	\$ 2,621,240	\$ 1,278,256	\$ 295,197	\$ 805,846		\$ 202,942	\$ 38,999
Current Rate Of Return	7.37%	5.39%	7.39%	10.60%		10.36%	9.09%
Index	1.00	0.73	1.00	1.44		1.41	1.23
Class Cost of Service	\$ 2,621,240	\$ 1,390,463	\$ 294,975	\$ 716,521		\$ 183,043	\$ 36,239
Class Total Revenue Above Or Below Total Cost Of Service	\$ (0)	\$ (112,206)	\$ 222	\$ 89,325		\$ 19,899	\$ 2,760
% Change Needed To Bring Class Rate Revenue Equal To Class Cost Of Service		8.78%	-0.08%	-11.08%		-9.81%	-7.08%