# Exhibit No. 351

MIEC – Exhibit 351
Maurice Brubaker
Rebuttal Testimony
File No. ER-2022-0337

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-2022-0337
Date Testimony Prepared: February 15, 2023

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

| | | |
|---|---|---|
| **In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to Adjust its Revenues for Electric Service** | ) ) ) ) ) | **Case No. ER-2022-0337** |

Rebuttal Testimony and Schedules of

# Maurice Brubaker

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

On behalf of

**Missouri Industrial Energy Consumers**

February 15, 2023

BRUBAKER & ASSOCIATES, INC.

Project 11359

**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 Adjust its Revenues for Electric Service** | ) | **Case No. ER-2022-0337** |

**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 schedules which were prepared in written form for introduction into evidence in Missouri Public Service Commission Case No. ER-2022-0337.

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 15th day of February, 2023.

TAMMY S. KLOSSNER
Notary Public - Notary Seal
STATE OF MISSOURI
St. Charles County
My Commission Expires: Mar. 18, 2023
Commission # 15024862

Tammy S Klossner
Notary Public

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# 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 on class cost of service and rate design issues presented in this proceeding.

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

A Yes. This information is included in Appendix A to my direct testimony filed on January 24, 2023.

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

A This testimony is presented on behalf of the Missouri Industrial Energy Consumers ("MIEC"), a non-profit corporation that represents the interests of large consumers in Missouri rate matters.

## INTRODUCTION AND SUMMARY

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

A The purpose of my rebuttal testimony is to respond to the direct testimony of the Commission Staff ("Staff") concerning the issues of class cost of service, revenue allocation and rate design. I specifically address my response to the direct testimony on Class Cost of Service/Rate Design of Staff witness Sarah L.K. Lange. I also address some of the criticisms that Staff levels at Ameren Missouri's allocations and assignments in the distribution and other functional categories. I also will address Staff's "warning" ("Special Notice") on page 6 of witness Lange's direct testimony concerning rate structure changes that Staff proposes. I then analyze Staff's recommendation for the overall allocation of any change in revenues approved by the Commission in this case, and explain why they are inappropriate and should not be implemented.

**Q PLEASE PROVIDE A HIGH LEVEL SUMMARY OF YOUR FINDINGS AND RECOMMENDATIONS?**

A In general, I find that Staff has proposed allocations of production, distribution and other costs among customer classes that are not based on generally accepted cost allocation principles, and that would seriously over-allocate costs to large, high load factor customers, particularly those who take service under the Large Primary Service ("LPS") rate. Many of Staff's allocation methods are outside of the mainstream and/or use allocation parameters that have no reasonable relationship to cost-causation.

Staff's recommendations on allocation of any revenue change based on Staff's flawed cost allocations are therefore flawed, and should be rejected. Instead, Ameren Missouri's cost of service study (as filed or as modified by me in my direct testimony)

should be used to define class revenue requirements under conventional approaches. These studies also should be used to determine an appropriate allocation of any change in revenues across customer classes.

For reference, my recommendation from Schedule MEB-COS-5 of my direct testimony is included here as Schedule MEB-COS-R-1. The moderated allocation which moves all classes 50% toward cost of service which I recommended in Schedule MEB-COS-6 also is replicated here as Schedule MEB-COS-R-2.

## STAFF'S ALLOCATION OF PRODUCTION FUNCTION COSTS

**Q HOW DOES STAFF FUNCTIONALIZE AND ALLOCATE PRODUCTION COSTS?**

A As explained on page 20 of the previously-referenced direct testimony, Staff designates generation resources as either Type 1 or Type 2. Type 1 resources are defined as those for which there are little or no variable costs incurred when the unit is off line and generally is fully dispatchable, and defines Type 2 as having little or no variable costs with the dispatch often limited by weather conditions or other factors beyond the control of the utility. For Type 1 resources, variable revenue requirement components and stable revenue requirement components were designated.

**Q HOW DID STAFF ALLOCATE COSTS ASSOCIATED WITH TYPE 1 RESOURCES?**

A At page 21 of the aforementioned direct testimony, the Staff basically allocates the cost based on customer class loads during certain identified hours. Staff refers to the "All Peak Hours Approach" described in the 1992 NARUC Electric Utility Cost Allocation Manual ("Manual") and uses class loads during what the Midcontinent Independent System Operator ("MISO") calls "Resource Adequacy hours, offset by the class' allocation of hourly generation of production Type 2 resources."

**Q WHAT ARE RESOURCE ADEQUACY ("RA") HOURS?**

A RA hours are those that MISO reviews to determine the likely availability of generation resources. Section III of Schedule 53 of the MISO tariff defines RA hours as "…the periods of highest risk and greatest need during a Season and throughout the year. They include hours during Maximum Generation Emergency declarations and the hours when the operating margin, a measure of available supply capacity above demand and reserve requirements, is at its lowest." Generation resource performance during those hours is evaluated by MISO to determine the capability rating of a generation resource.

**Q ARE LOADS DURING RA HOURS USED FOR ANY COST ALLOCATION OR CAPACITY RESPONSIBILITY ALLOCATION PURPOSE?**

A No, they are not. They are used solely to define the availability of generation resources owned by or available to MISO members.

**Q HOW IS CAPACITY RESPONSIBILITY DETERMINED?**

A The capacity responsibility of each load serving entity ("LSE") equals its expected load at the time of the MISO peak demand plus a reserve margin percentage that is established by MISO based on reliability considerations.

**Q DOES MISO NOW LOOK AT LOADS AND RESOURCES DURING SPRING, SUMMER, FALL AND WINTER PERIODS?**

A Yes.

**Q DOES THAT CHANGE HOW COSTS SHOULD BE ALLOCATED AMONG RETAIL CUSTOMERS?**

A No. As shown on Schedules MEB-COS-1 and MEB-COS-2 that are attached to my direct testimony, summer season demands on Ameren Missouri's system are substantially higher than demands in other time frames. Generally speaking, having capacity sufficient to meet the summer peak loads has been sufficient to meet loads in other seasons.

**Q IN YOUR OPINION, IS THE AVERAGE AND EXCESS, FOUR NON-COINCIDENT PEAK METHOD ("A&E-4NCP") STILL A REASONABLE ALLOCATION TO USE FOR AMEREN MISSOURI?**

A Yes.[1] Evaluating conditions in four seasons does not justify allocating any costs to classes based on hourly loads in those seasons.

**Q HOW DOES STAFF ALLOCATE THE REVENUE REQUIREMENTS ASSOCIATED WITH TYPE 2 FACILITIES?**

A On page 21, Staff states that a "Partial Energy Weighting" method was used. The details are not further explained but the allocation is more heavily energy weighted than the allocation used for Type 1 resources.

**Q IS THIS APPROPRIATE?**

A No, there is no justification for this particular allocation.

[1]Winter season capacity is beginning to be challenged, and if this continues, then consideration could be given to including winter loads in the cost allocation, or making some other adjustments to recognize the incremental non-summer requirements.

**Q STAFF HAS APPLIED DIFFERENT ALLOCATION METHODS AND ASSUMPTIONS TO DIFFERENT KINDS OF PRODUCTION RESOURCES – IS THAT AN ACCURATE STATEMENT?**

A Yes. Staff has applied different allocations to Type 1 resources, Type 2 resources and to purchases and sales.

**Q IS THIS CONSISTENT WITH GENERALLY ACCEPTED COST ALLOCATION APPROACHES FOR ELECTRIC UTILITIES?**

A No. Trying to allocate different resources using different allocation approaches is not consistent with generally accepted practices. Typically, generation and purchased power resources are categorized into fixed costs and variable costs. The variable costs are allocated based on class energy consumption, and the fixed costs are allocated on some measure of demand responsibility, such as A&E-4NCP. Staff's approach, which attempts to allocate different resources in different ways, is not only complicated, but unnecessary. It also ignores the fact that particular resources are not built for particular customer classes or segments of load, but rather that each utility constructs a portfolio consisting of various kinds of resources that have been acquired with the objective of meeting customer requirements reliably and in a reasonable least cost manner.

Staff's approach is highly unusual and should be rejected.

**Q HOW DOES STAFF ALLOCATE PRODUCTION SALES AND PURCHASES?**

A This is explained on page 22. Essentially, this is an hourly analysis in which Staff attempts to define the "…value of energy generated by the assets allocated to each class," in each hour of the year.

The result is that while most classes are allocated a cost associated with revenues and purchases, some classes get a credit. For example, under Staff's allocation the Residential class receives a credit of almost $200 million, out of a total credit of about $55 million!

**Q WHERE DOES THIS SHOW IN STAFF'S EXHIBIT?**

A It does not. It is buried along with other allocations. On page 23, the second unlabeled table, contains a line titled "Functionalized Net Revenue Requirement" for the production function. Numbers are shown for each class, but unfortunately not for the total.

**Q WHAT IS IN THIS LINE?**

A This line consists of three components: (1) the revenue requirement for Type 1 generation facilities; (2) the revenue requirement for Type 2 generation facilities; and (3) the revenue requirement for "Production Revenues & Purchases." I have extracted the information for Production Revenue & Purchases and it is shown in the following table.

**Staff Allocation of Production Function (Revenues) and Purchases ($/Millions)**

| Class | Amount |
|---|---|
| Residential | ($194) |
| SGS | ( 39) |
| LGS | 18 |
| SPS | 68 |
| LPS | 81 |
| Lighting | 11 |
| TOTAL | ($ 55) |

Source: Staff's workpaper

In the table, a negative number represents a credit, or a reduction, in revenue requirement for the class. Overall, the system's total revenues are about $55 million, but, as indicated above, the Residential class receives about $194 million of that credit. Staff's approach effectively treats some classes as "sales for resale" entities because Staff's approach effectively creates sale from some customers to others.

**Q WHY DO YOU CHARACTERIZE THIS AS A "SALES FOR RESALE" PHENOMENON?**

A Since none of the customer classes are producing electricity for export from their own facilities, the only possible source would be from a resale of Ameren Missouri's generation resources that have been allocated to the class in some other step of Staff's cost of service study. Also, since so much of Staff's allocation of generation cost responsibility is based on hourly class loads rather than on the basis of peak loads, it is hard to see where the generation capacity required to implement Staff's "sales for resale" would come from.

Staff's treatment of sales and purchases is both unprecedented and illogical, and should be rejected, along with its allocation of Type 1 and Type 2 generation facilities.

## STAFF'S ALLOCATION OF DISTRIBUTION SYSTEM COSTS

**Q STAFF SPENDS A CONSIDERABLE AMOUNT OF TIME IN THE STAFF REPORT COMMENTING ON AMEREN MISSOURI'S RECORDKEEPING AND ASSIGNMENTS WITHIN THE DISTRIBUTION FUNCTION. DO YOU HAVE ANY COMMENTS ON STAFF'S ISSUES WITH RESPECT TO DISTRIBUTION SYSTEM ALLOCATION?**

A Yes. Staff levels significant criticisms against Ameren Missouri for its recordkeeping and inability to specifically identify costs associated with specific facilities. Staff seems to think that the inability to identify the costs associated with specific distribution lines and other delivery equipment makes Ameren Missouri's studies imprecise and unreliable.

**Q WHAT IS YOUR REACTION TO STAFF'S CRITICISMS?**

A While any set of records probably could be made more precise, the question is whether or not the added degree of precision would add useful or meaningful information and improve the accuracy of cost allocation studies. Knowing the exact cost (and depreciated value) of a specific 34 kV line running from Point A to Point B as compared to the average cost per mile of all 34 kV lines is not particularly meaningful when rates are set on the basis of general categories of customers and voltage level. Customers taking service at 34 kV are allocated a share of the costs of 34 kV and higher voltage equipment. Rates are designed to serve all 34 kV customers as a class, without regard to their specific geographic location, or the age of the facilities specifically providing service. In other words, unless rates were to be set separately for each individual customer, the added information would be of no value.

**Q AT PAGE 12 STAFF SEEMS TO ARGUE AGAINST THE RECOGNITION OF DISTRIBUTION FACILITIES BY VOLTAGE LEVEL, CLAIMING, AMONG OTHER THINGS, THAT THE BOUNDARIES ARE NOT FINITE. FOR EXAMPLE, STAFF ARGUES THAT SOMETIMES REROUTING POWER OVER A PRIMARY CIRCUIT IN ORDER TO AVOID TRIPPING A TRANSMISSION CIRCUIT MEANS THAT TRANSMISSION CUSTOMERS SHOULD BE ALLOCATED SOME AMOUNT OF PRIMARY DISTRIBUTION COST. DOES THIS EXAMPLE SUPPORT STAFF'S CONTENTION?**

A No. The fact that there are times when short-term alterations in system configuration make sense in order to maintain service to more customers, is just that, a "short-term" deviation that happens to work because there was spare capacity available at some point and it was useful in preventing the trip of another line. This does not mean that the cost of lower voltage lines should be assigned to customers who take service at higher voltage levels. The event in question would not have been possible had there not been adequate spare capacity in the system. The system is not built for that eventuality, and such short-term and infrequent occurrences should not drive cost allocation.

**Q DOES STAFF INDICATE THAT IT ALLOCATED SOME OF THE DISTRIBUTION SYSTEM COSTS TO CUSTOMER HOURLY LOADS?**

A Yes. Staff so states at lines 17-19 on page 14 of its report, and again on page 16 of its report on lines 3-5.

**Q IS THIS APPROPRIATE?**

A No. Distribution systems have to be in place in order to satisfy the maximum demand placed on them. That requires an allocation based on customer class demands. An allocation based on class energy consumption is completely out of bounds with any acceptable cost allocation principle.

**Q WHAT IS YOUR OVERALL ASSESSMENT OF THE LEVEL OF DETAIL BEHIND AMEREN MISSOURI'S CLASS COST OF SERVICE STUDY?**

A I believe it is generally consistent with the level of detail and the practices of other electric utilities.

**Q WHAT IS THE BASIS FOR THAT STATEMENT?**

A It is based on 50 years of experience in reviewing class cost of service studies performed by numerous electric utilities in 34 different regulatory jurisdictions.

**Q DO YOU HAVE ANY SPECIFIC OBSERVATIONS ABOUT THE RESULTS OF STAFF'S ALLOCATION OF DISTRIBUTION COSTS?**

A Yes. Looking at Staff's numbers for the allocation of distribution costs to the LPS class, it struck that me that it was disproportionately large. So I compared the allocation of these costs as between Ameren Missouri and Staff. I found that whereas Ameren Missouri allocated approximately 2.5% of such costs to the LPS class, Staff allocated over 9% of such costs to the LPS class. This suggests to me that either Staff has double-counted costs or has simply over-allocated or assigned the amount of costs associated with the distribution system to the LPS class, which uses hardly any of the

distribution system. This is clearly a "red flag" and serves as a kind of "sanity check" on Staff's allocations.

## ALLOCATION OF ANY CHANGE IN REVENUE REQUIREMENTS

**Q DO YOU AGREE WITH STAFF'S RECOMMENDED ALLOCATION OF ANY CHANGE IN REVENUE REQUIREMENTS?**

A No, Staff's allocation among customer classes is based on Staff's seriously flawed class cost of service study and should be rejected in its entirety. Instead, any change in class revenue requirements should be allocated in accordance with Schedules MEB-COS-R-1 or MEB-COS-R-2. Specifically, the changes shown on these schedules would be made to accomplish movement toward cost of service, and then any change in revenue requirements would be applied as an equal percent.

## RATE STRUCTURES FOR LPS CUSTOMERS

**Q WHERE DOES STAFF ADDRESS RATE DESIGN FOR SCHEDULE LPS?**

A Staff has a paragraph on page 6. In this paragraph it admonishes Ameren Missouri as well as retail customers to expect certain changes in rate design to be implemented in this case.

While MIEC is not unappreciative of this note of caution from Staff, MIEC would note that the amount of time allowed for customers to consider potential impact and offer counterproposals is completely inadequate. If Staff wishes to explore further refinements to rates applicable to large customers, then such changes should be considered in a separate proceeding, or there should be a collaboration among Staff, Ameren Missouri and interested parties that would take place between now and the next rate case filing. Only by this approach (which is followed by Evergy) will all parties

have a fair and reasonable opportunity to consider impacts and be heard on their concerns and solutions.

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

A Yes, it does.

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**AMEREN MISSOURI**
**Case No. ER-2022-0337**

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

| Line | Rate Class | Base Revenues | Current Rate Base | Adjusted Operating Income | Earned ROR | Indexed ROR | Income @ Equal ROR | Difference in Income | Revenue Change | Percent Change |
|---|---|---|---|---|---|---|---|---|---|---|
| | | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| 1 | Residential | $ 1,373,010 | $ 6,347,277 | $ 259,899 | 4.095% | 80 | $ 326,853 | $ 66,954 | $ 89,272 | 6.5% |
| 2 | Small GS | 305,323 | 1,364,967 | 66,679 | 4.885% | 95 | 70,289 | 3,610 | 4,814 | 1.6% |
| 3 | Large GS/Primary | 791,487 | 3,022,209 | 203,091 | 6.720% | 130 | 155,629 | (47,462) | (63,283) | -8.0% |
| 4 | Large Primary | 205,821 | 668,517 | 56,276 | 8.418% | 163 | 34,425 | (21,851) | (29,134) | -14.2% |
| 5 | Company Owned Lighting | 39,011 | 185,999 | 11,631 | 6.253% | 121 | 9,578 | (2,053) | (2,737) | -7.0% |
| 6 | Customer Owned Lighting | 2,933 | 16,810 | 65 | 0.385% | 7 | 866 | 801 | 1,068 | 36.4% |
| 7 | Total | $ 2,717,585 | $ 11,605,779 | $ 597,640 | 5.150% | 100 | $ 597,640 | $ - | $ - | 0.0% |

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

**AMEREN MISSOURI**
**Case No. ER-2022-0337**

**Cost of Service Adjustments for**
**50% Movement Toward Cost of Service**
**Using Modified ECOS at Present Rates**
**($ in Millions)**

| Line | Rate Class | Current Revenues | Move 50% Toward Cost Of Service[1] | Adjusted Current Revenue | Revenue-neutral Percent Change in Current Revenue |
|---|---|---|---|---|---|
| | | (1) | (2) | (3) | (4) |
| 1 | Residential | $ 1,373.0 | $ 44.6 | $ 1,417.6 | 3.3 % |
| 2 | Small GS | 305.3 | 2.4 | 307.7 | 0.8 % |
| 3 | Large GS/Primary | 791.5 | (31.6) | 759.8 | (4.0)% |
| 4 | Large Primary | 205.8 | (14.6) | 191.3 | (7.1)% |
| 5 | Company Owned Lighting | 39.0 | (1.4) | 37.6 | (3.5)% |
| 6 | Customer Owned Lighting | 2.9 | 0.5 | 3.5 | 18.2 % |
| 7 | Total | $ 2,717.6 | $ - | $ 2,717.6 | 0.0 % |

(1) Increase to equal cost of service from column 8 of Schedule MEB-COS-5, times 50%.