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of Missouri

MISSOURI PUBLIC SERVICE COMMISSION

Case No.: ER-2024-0319

Surrebuttal Testimony of Caroline Palmer

**On Behalf of
Consumers Council of Missouri**

February 14, 2025

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1 **I. INTRODUCTION**

2 **Q Please state your name, title, and employer.**

3 A My name is Caroline Palmer. I am a Principal Associate at Synapse Energy Economics,
4 Inc. (“Synapse”), located at 485 Massachusetts Avenue, Suite 3, Cambridge, MA 02139.

5 **Q On whose behalf are you testifying in this case?**

6 A I am testifying on behalf of the Consumers Council of Missouri (Consumers Council).

7 **Q Are you the same Caroline Palmer who filed revenue requirement and cost-of-
8 service study/rate design direct testimony in this docket?**

9 A Yes.

10 **Q Did you file rebuttal testimony in this docket?**

11 A No.

12 **Q What is the purpose of your surrebuttal testimony?**

13 A I respond to the Company’s rebuttal testimony regarding its cost of service study, rate
14 design, and federal funding available under the *Inflation Reduction Act*. If I do not
15 comment on a rebuttal topic, it should not be interpreted as agreement.

16 **II. COST OF SERVICE STUDY**

17 *Transparency and Accessibility of the Company’s CCOSS*

18 **Q How did Ameren Missouri respond to your concerns about its CCOSS?**

19 A The Company walked me through the spreadsheet to demonstrate how to operate the
20 macro that enables modifications to flow through the CCOSS to the results. Thus, I

1 confirm Witness Hickman's rebuttal that Ameren Missouri's CCOSS provided complete
2 results.¹

3 **Q How did the ability to properly modify the model change the impact of your**
4 **recommended distribution classification on the class revenue requirements in the**
5 **CCOSS?**

6 A The impact is dramatic. My recommendation to use the basic customer distribution
7 classification rather than the minimum system method impacts the changes in class
8 revenue requirement that would be necessary to achieve equal rates of return on rate base
9 under the Company's proposed revenue requirement, per the CCOSS. Under the scenario
10 with no minimum system (basic customer method), I had originally found that the
11 required residential (1M) revenue increase falls to 21.6 percent, from 24.1 percent in the
12 Company's CCOSS.² When I properly modified the Company's spreadsheet after
13 discussion with the Company, the required residential revenue increase falls all the way
14 to 17.5 percent, which is dramatically closer to the Company's proposed residential
15 revenue requirement increase (15.77 percent). I continue to support the Company's
16 revenue requirement allocations with my CCOSS recommendation.

¹ Rebuttal Testimony of Thomas Hickman at 18.

² Direct Testimony of Caroline Palmer at 12.

1 *Classification of Distribution System Costs Using a Minimum System Study*

2 **Q Does Ameren Missouri support your recommendation to discontinue its use of the**
3 **minimum system method and instead limit customer-related costs to those directly**
4 **tied to the number of customers, such as metering and billing?**

5 A No. The Company defends its use of a minimum system study for classifying distribution
6 system costs. For example, one of the reasons the Company argues that accounts 364-368
7 should be classified as partly customer-related is that “the utility must continually replace
8 aging infrastructure to continue to serve these customers regardless of their annual kWh
9 usage or their peak demands.”³

10 **Q How do you respond to the assertion that utilities must replace equipment**
11 **regardless of customer energy usage or peak demand?**

12 A Usage absolutely impacts utility equipment’s lifespan; lifespan is not simply a function of
13 equipent’s existence for serving customers. For example, according to the Regulatory
14 Assistance Project, equipment replacement is very clearly impacted by demand:

15 A transformer that is very heavily loaded for a couple of hours a year and
16 lightly loaded in other hours may last 40 years or more until the enclosure
17 rusts away. A similar transformer subjected to the same annual peaks, but also
18 to many smaller overloads in each year, may burn out in 20 years.⁴
19

³ Rebuttal Testimony of Nicholas L. Phillips at 24.

⁴ Lazar, J. et al., *Electric Cost Allocation for a New Era: A Manual*. Montpelier, VT: Regulatory Assistance Project (2020). At 148.

1 **Q Does the Company misconstrue your secondary recommendation, that the**
2 **Commission approve a hybrid classification method if it chooses not to approve the**
3 **basic customer method?**

4 A Yes. I recommended that if the Commission does not approve the basic customer method,
5 it should better align the minimum system study with system costs by applying the
6 minimum system methodology only to secondary distribution costs. The Company
7 misinterprets this recommendation as “implicitly validat[ing] the reasonableness of some
8 level of customer component for the distribution system above just the BCM.”⁵ However,
9 my recommendation does not suggest that any minimum system study is reasonable.
10 Rather, my recommendation defers to the Commission’s authority in this case and in
11 doing so, indicates that a hybrid minimum system approach would be more reasonable
12 than the full minimum system study, but not reasonable per my direct testimony analysis.

13 **Q Does the Company acknowledge that the minimum size equipment is large enough**
14 **to accommodate certain customer classes’ peak demands?**

15 A Yes. The Company agrees that the minimum size of utility equipment is not a function of
16 the size of the smallest customers. The Company endeavors to justify why the minimum
17 size of utility equipment should exceed the demand of the smallest possible size
18 customer.⁶

⁵ Rebuttal Testimony of Nicholas L. Phillips at 22.

⁶ Rebuttal Testimony of Nicholas L. Phillips at 24-25.

1 **Q Should any adjustments be made to recognize that the minimum system also meets**
2 **all or a portion of customers’ maximum demands, if the Commission approves any**
3 **form of minimum system study (whether for only secondary plant, or for all**
4 **distribution plant)?**

5 A Yes. As recognized by the Staff of the Ontario Energy Board, “A Minimum System has a
6 certain load carrying capability which can be viewed as being demand-related. As a
7 result, the customer-related costs will have a demand component in them. If no
8 adjustment is made, some customers (e.g. small users) may be allocated a
9 disproportionate share of demand-related costs. If the Minimum System Method is
10 preferred for categorization, Staff would recommend that distributors be required to also
11 adjust for the [Peak Load Carrying Capacity] of the assumed Minimum System.”⁷

12 Likewise, I recommend that, for any FERC accounts classified using a minimum
13 system study, the Company allocate no demand-related costs to the customer classes
14 whose peak demands can generally be met through the identified “customer-related”
15 portion of the system. This includes the residential class, as I noted in my direct
16 testimony and as the Company acknowledged in rebuttal. The “customer-related” portion
17 of the system can already meet those customers’ peak demands without requiring any
18 further equipment cost. Thus, the minimum load-carrying capacity classified as customer-
19 related and allocated on customer count should be credited to the class.

20 National Grid recently proposed this approach in New York, allocating residential
21 and small commercial customer classes \$0 of the demand-related portion of the

⁷ Ontario Energy Board. Cost Allocation Review: Staff Discussion Paper. September 2005. At 21-22. Available at https://www.oeb.ca/documents/cases/EB-2005-0317/staffdiscussionpaper_160905.pdf.

1 minimum-system distribution infrastructure, reasoning that “the minimum system would
2 be able to meet the peak load for all or almost all customers in [the relevant classes]; that
3 is, no further investment in higher capacity conductors would be required. Therefore, no
4 demand-related costs for Overhead Assets or Underground Assets were allocated” to
5 Residential, Residential Time of Use, and Small General Non-Demand classes.⁸

6 **III. RATE DESIGN: RESIDENTIAL FIXED CHARGE**

7 **Q Why did you recommend rejecting the Company’s proposal to increase the**
8 **residential fixed charge?**

9 A I recommended rejecting the proposed residential customer charge increase because it
10 reduces customers’ ability to control their own bills, particularly for low-income
11 customers who have less ability to pay higher bills and who are more likely to be low-
12 usage and therefore more influenced by the customer charge; it may also discourage
13 conservation and render energy efficiency and load management investments less cost-
14 effective.

15 **Q How did the Company respond to your recommendations regarding the proposed**
16 **fixed charge increase?**

17 A The Company disputes that low-income customers tend to be low usage customers.
18 Based on the limited data available to the Company on customer usage and income, the
19 Company argues that the average low-income customer uses more than the average
20 residential customer.⁹ The Company argues that its data shows that its customer charge

⁸ Testimony of the Electric Rate Design Panel for Niagara Mohawk Power Corporation d/b/a National Grid in 24-E-0322. May 2024. At 33-34.

⁹ Rebuttal Testimony of Nicholas Bowden at 72.

1 increase raises the total low-income customer group's annual bill payment by just \$9,000,
2 or 0.014%.¹⁰ The Company also contends that there are two kinds of low income
3 customer: one that is low-usage and another that consumes a lot of energy, especially in
4 the winter, presumably because they are electric space heat customers or have inefficient
5 homes and appliances.¹¹ The latter type of customer, says Ameren Missouri, are hurt by
6 the Consumers Council policy position.

7 **Q What data does the Company use to draw conclusions about its low-income**
8 **customers?**

9 A The Company's analysis defines low-income customers as those who have qualified for
10 the Company's Rider EEIC low-income exemption.¹² Customers qualify for this
11 exemption if they have received energy assistance from Low Income Home Energy
12 Assistance Program (LIHEAP), Winter Energy Crisis Intervention Program, Summer
13 Energy Crisis Intervention Program, Keeping Current Low Income Pilot Program, or the
14 Keeping Cool Low Income Pilot Program.¹³

15 **Q Is it likely that all of the Company's low-income customers take energy assistance?**

16 A No. While customers who receive energy assistance are indeed low-income, low-income
17 customers are not all enrolled in energy assistance. Thus, this customer population is
18 usually only a portion of the total low-income customers in the territory. For example, in
19 2021, more than 34 million households across the nation were eligible for LIHEAP
20 assistance, but only 5.4 million, or almost 16 percent, of income-eligible

¹⁰ Rebuttal Testimony of Nicholas Bowden at 70.

¹¹ Rebuttal Testimony of Nicholas Bowden at 70-71.

¹² Rebuttal Testimony of Nicholas Bowden at 69.

¹³ <https://www.ameren.com/missouri/residential/energy-assistance/energy-efficiency-investment-credit>.

1 households received basic help to pay their energy bills.¹⁴ The Company has not
2 demonstrated that the customer population it analyzed is reflective of the entire low-
3 income population in its service territory.

4 **Q Is the usage of customers on energy assistance likely to be representative of a typical**
5 **low-income customer’s usage?**

6 A Not necessarily. This is a skewed sample, as eligible customers pursuing enrollment in
7 energy assistance are likely to have higher energy usage, and therefore a greater financial
8 need for energy assistance.¹⁵ Using LIHEAP recipients to draw conclusions about low-
9 income customers as a whole is a common but misleading tactic to attempt to argue
10 against the clear relationship between income and usage. Since only a fraction of eligible
11 customers in Missouri receive energy assistance, I caution the Commission against
12 focusing on that unrepresentative subset of customers to justify a proposal that would
13 disproportionately harm the vast majority of low-income customers, who do not receive
14 energy assistance.

15 **Q Does other data demonstrate a relationship between energy usage and income?**

16 A Yes. EIA’s 2020 Residential Energy Consumption Survey shows a clear and consistent
17 relationship between household income and energy usage. This relationship is apparent in
18 every region of the country, including the Midwest, (which includes Missouri), as
19 indicated in Table 1 below.

¹⁴ “LIHEAP Funding.” Edison Electric Institute. <https://www.eei.org/en/issues-and-policy/liheap>.

¹⁵ The Company notes that high usage customers have the highest energy burden of any customers, all else equal. Their high energy burden is more likely to drive them to seek energy assistance. *See* Rebuttal Testimony of Nicholas Bowden at 71.

1 **Table 1. Household Income and Electricity Consumption, Midwest Region, 2020¹⁶**

Income	Per household electricity consumption (million Btu)¹⁷
\$5,000-\$9,999	25.2
\$10,000-\$19,999	25.1
\$20,000-\$39,000	29
\$40,000-\$59,000	29.7
\$60,000-\$99,000	34.3
\$100,000-\$149,000	38.9
\$150,000 or more	46.7

2

3 **Q Is it reasonable to conclude, based on the Company’s data, that low-income**
4 **customers are not likely to be low-usage, and thus unlikely to be harmed by a**
5 **customer charge increase?**

6 **A** No. Given the data available, the Commission should err on the side of assuming that the
7 relationship between income and energy consumption that holds in the Midwest, and in
8 every other region of the country, also applies to Ameren Missouri’s customers. If the
9 Company wishes to argue that its customers are an exception to this widespread national
10 trend, it would need to provide more representative data on its low income customers.
11 However, the Company has provided data only on customers receiving energy assistance.

¹⁶ <https://www.eia.gov/consumption/residential/data/2020/c&e/pdf/ce2.3.pdf>

¹⁷ Energy consumption is expressed in Btu in the RECS tables and analyses to allow for consumption comparisons between fuels that are measured in different units. <https://www.eia.gov/consumption/residential/terminology.php>.

1 **Q How do you respond to the Company’s contention that there are low- and high-**
2 **usage customers and that your opposition to the customer charge increase harms**
3 **the latter?**

4 A As I noted in direct testimony, customers have no control over the fixed customer charge,
5 even if they can reduce their electricity consumption. For high-usage, low-income
6 customers with inefficient homes and appliances, tools like weatherization can help
7 alleviate the energy burden. For low-usage, low-income customers, they have no tools to
8 mitigate the rate impacts of an increased customer charge.

9 **IV. AMEREN MISSOURI’S USE OF EIR FUNDS**

10 **Q Please summarize your direct testimony on Ameren Missouri’s use of EIR funds.**

11 A I outlined the benefits available to Missouri ratepayers and communities if Ameren
12 Missouri takes advantage of federal funding available under the *Inflation Reduction Act*
13 (IRA), specifically the Energy Infrastructure Reinvestment (EIR) program. I
14 recommended that Ameren follow up with the U.S. Department of Energy to determine
15 and disclose the status of its EIR application, and to submit a Part II EIR application as
16 soon as possible and maximize the ratepayer benefits of any approved funding.

17 **Q Does the Company agree that EIR financing can provide a more cost-effective way**
18 **to meet Ameren Missouri’s customers’ energy needs over time?**

19 A Yes. The Company “believe[s] that the savings associated with simply displacing
20 corporate debt could be quite meaningful for Ameren Missouri over time, particularly
21 given the size of potential debt funding need associated with Ameren Missouri's

1 identified future renewable energy project portfolio that may be eligible under the EIR
2 Program.”¹⁸

3 **Q Was the Company receptive to your recommendations about reporting?**

4 A Yes. The Company secured written consent to provide the status of its EIR application in
5 this proceeding.¹⁹ Thus, Ameren Missouri was able to disclose that it filed Part I of an
6 EIR application in January 2024, received approval for Part 1 of the application in April
7 2024, and was invited to submit a Part II application.²⁰

8 **Q Is Ameren Missouri preparing a Part II EIR application?**

9 A The Company is “hopeful to be in a position to submit Part II...over the next several
10 months,”²¹ pending the ability to determine which project could best meet the federal
11 compliance requirements and serve as the initial ("anchor") project. Evidently, neither of
12 the renewable energy projects that recently achieved commercial operation can meet the
13 federal requirements to qualify as eligible projects, but several, yet-to-be-publicly-
14 identified renewable energy and battery storage projects might qualify subject to eventual
15 Commission approval. The Company also acknowledges the risk that the new
16 Presidential administration could rescind the EIR.

17 **Q Have your EIR recommendations evolved given the Company’s rebuttal testimony?**

18 A My recommendations have evolved somewhat in light of the Company’s rebuttal and
19 current events. While I continue to advocate the use of federal funding and the
20 importance of maximizing the resulting ratepayer benefits, I acknowledge the obstacles
21 Ameren faces in compiling a qualified EIR application. I appreciate Ameren’s efforts at

¹⁸ Rebuttal Testimony of Darryl Sagel at 51.

¹⁹ Rebuttal Testimony of Darryl Sagel at 51.

²⁰ Rebuttal Testimony of Darryl Sagel at 49.

²¹ Rebuttal Testimony of Darryl Sagel at 49.

1 transparency regarding its EIR application and I recommend building on this
2 transparency moving forward. Given the many components involved in an EIR
3 application, I recommend that the Commission order Ameren Missouri to continue to
4 prioritize identifying and qualifying projects to “anchor” an EIR Part II application, and
5 to file quarterly status reports on all steps taken to advance this effort and any obstacles
6 that have delayed the effort. I recommend that the Commission order Ameren Missouri,
7 in the same compliance filing, to report on all federal programs it has applied for, the
8 status of those applications and amount of funding requested, and to report any programs
9 it considered applying for and explain why it decided not to apply. Finally, I recommend
10 that the Commission order Ameren Missouri, in the same compliance filing, to report on
11 how it is maximizing the benefit to ratepayers of any federal funding that it secures.

12 **V. CONCLUSION**

13 **Q Does this conclude your testimony?**

14 **A** Yes, it does.

**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.) **No. ER-2024-0319**

AFFIDAVIT OF CAROLINE PALMER

I, the undersigned, being duly sworn, states that my name is Caroline Palmer, and that the foregoing Surrebuttal Testimony of Caroline Palmer, including attachments, was prepared by me on behalf of the Consumers Council of Missouri. This testimony was prepared in written form for the purpose of its introduction into evidence in the above utility case at the Missouri Public Service Commission.

I hereby swear and affirm that the attached testimony is true and correct to my best knowledge, information, and belief, and I adopt said testimony as if it were given under oath in a formal hearing.



Caroline Palmer

Subscribed before me on this 12th day of February, 2025:



