

Exhibit No.:

Issue(s): *Avoided costs,
Assumption flaws,
and Deficient support*

Witness: *J Luebbert*

Sponsoring Party: *MoPSC Staff*

Type of Exhibit: *Rebuttal Testimony*

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MISSOURI PUBLIC SERVICE COMMISSION

INDUSTRY ANALYSIS DIVISION

TARIFF/RATE DESIGN DEPARTMENT

REBUTTAL TESTIMONY

OF

J LUEBBERT

**UNION ELECTRIC COMPANY,
d/b/a Ameren Missouri**

CASE NO. EO-2023-0136

*Jefferson City, Missouri
April 26, 2024*

**** Denotes Confidential Information ****

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d/b/a Ameren Missouri
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1 **REBUTTAL TESTIMONY**

2 **OF**

3 **J LUEBBERT**

4 **UNION ELECTRIC COMPANY,**
5 **d/b/a Ameren Missouri**

6 **CASE NO. EO-2023-0136**

7 Q. Please state your name and business address.

8 A. My name is J Luebbert, and my business address is Missouri Public Service
9 Commission, P. O. Box 360, Jefferson City, Missouri 65102.

10 Q. Are you the same J Luebbert that filed direct testimony in this case?

11 A. Yes.

12 **EXECUTIVE SUMMARY**

13 Q. Please summarize your rebuttal testimony.

14 A. Ameren Missouri's application for approval of its fourth Missouri Energy
15 Efficiency Investment Act ("MEEIA") portfolio is insufficient and should be rejected. The
16 implementation of the programs will not result in the realization of benefits that
17 Ameren Missouri claims in its application, the attached report, and appendices. Ameren
18 Missouri's alleged support for the application, the attached report, and workpapers utilized to
19 "estimate and quantify" benefits are unrealistic and inappropriate estimates that should not be
20 considered reliable. This is especially true considering the lack of specific citations to sources
21 that are prevalent throughout the workpapers that Ameren Missouri has provided Staff.
22 Ameren Missouri requests broad discretion to implement the MEEIA programs in a manner
23 that utility management desires, and will almost certainly do so in a manner that maximizes
24 shareholder earnings to the detriment of customers. Ameren Missouri has little to no financial

1 risk associated with the implementation of the MEEIA programs as proposed, but ratepayers
2 will realize the full breadth of the costs without the return in the form of benefits that
3 Ameren Missouri falsely claims will occur as a result of its proposed MEEIA program
4 implementation. The workpapers underlying Ameren Missouri's application drastically
5 overstate assumed benefits of the entirety of the proposed programs. The realized ratepayer
6 costs of MEEIA programs are far too high to rely on hopes and dreams of potential benefits that
7 might occur some day when, in reality, Ameren Missouri is actively investing billions of dollars
8 (and has plans to invest billions more in the near future) in traditional utility infrastructure, and
9 seeking rate recovery of those investments, regardless of the impacts of the MEEIA programs.

10 **LACK OF SUPPORT FOR AMEREN MISSOURI'S APPLICATION**

11 Q. Starting at page 17 of his direct testimony, Ameren Missouri witness
12 Anthony M. Lozano provides a narrative of discussions, workshops, and efforts that followed
13 Ameren Missouri's initial application for its fourth MEEIA cycle. He begins this discussion
14 by noting that the Office of the Public Counsel and Staff filed in opposition to
15 Ameren Missouri's original proposed procedural schedule on April 6, 2023.¹ What was Staff's
16 rationale for its opposition to the proposed procedural schedule?

17 A. Staff opposed the procedural schedule based on its review of the initial
18 application, report, and workpapers provided by Ameren at the time of its original filing of this
19 case. It quickly became apparent to Staff that the supporting analysis provided by
20 Ameren Missouri included hardcoded numbers and/or data with no information as to where the
21 data originated. In other words, there were just numbers in an excel file with no supporting
22 data on how Ameren Missouri developed those numbers.

¹ Page 17, line 11 through 13 of the direct testimony of Anthony M. Lozano.

1 Q. What do you mean by a hardcoded number?

2 A. A hardcoded number is a number included in a cell in an excel spreadsheet that
3 does not include a formula or other information that indicates the origins of the number. It is
4 just a number typed into a cell, with no way to verify it.

5 Q. How does this lack of formulas or cited information (i.e., hardcoded or uncited
6 numbers) affect Staff's analysis?

7 A. Due to the general complexity of any MEEIA filing, and Ameren Missouri's
8 lack of support included in the initial application, it is impossible for Staff, or any other party,
9 to verify those numbers to ensure that the conclusions arrived at by Ameren Missouri are just
10 and reasonable and designed properly. Without the ability to verify the analysis due to Ameren
11 Missouri's unwillingness to give Staff this basic information, Staff cannot provide the
12 Commission with a positive recommendation for approval of Ameren Missouri's application.

13 Q. Did Staff try to get supporting information from Ameren Missouri to verify
14 Ameren Missouri's analysis?

15 A. Yes. Staff issued a Data Request (DR) No. 0001 on April 6th, 2023 that
16 requested citations for hardcoded numbers and page specific references to supporting
17 documentation for values included in workpapers that did not include such information.² While
18 this information should have been readily available considering the magnitude of
19 Ameren Missouri's request (more than \$600 million to be charged to ratepayers), Ameren was
20 unable to provide the information at that time. The lack of citations for large swaths of data
21 within Ameren Missouri's workpapers were the subject of several discussions between Staff
22 and the company following the initial application. Part of the stipulation and agreement that

² I have attached this DR No. 0001 and Ameren Missouri's response as Schedule JL-r1 of this testimony.

1 extended MEEIA cycle 3 an additional year was to buy time for
2 Ameren Missouri to provide Staff the support and citations for the hardcoded information.

3 On July 10, 2023 parties to this case filed a Joint Status Report³ that discussed the
4 workshop process and included an attachment identifying specific topics that needed to be
5 addressed through that process.⁴ Staff has repeatedly indicated to Ameren Missouri that a
6 primary concern with the workpapers and appendices is the lack of specific citations, hardcoded
7 information, and the lack of underlying support documents.

8 Shortly after Ameren Missouri filed the Amended Application, on February 8, 2024
9 Staff again requested citations and justification for the assumptions included in the workpapers
10 via a data request⁵ very similar to Staff DR No. 0001.

11 Q. Has Ameren Missouri fully responded to Staff DR Nos. 0001 or 0124 to date?

12 A. No. On March 18th, 2024 Ameren Missouri provided a partial response to Staff
13 DR No. 0124⁶ that provided a link to an external file sharing website that included hundreds of
14 source documents without including any page specific citations⁷ for the information that is
15 actually utilized in the various Ameren Missouri workpapers. Ameren Missouri also
16 supplemented the response with two excel files that identified broken links⁸ that were originally
17 included in Appendix H and Appendix I of the Application. Those files provided “potential
18 replacement links” for a handful of the broken links, vaguely referenced evaluation reports for
19 some of the links, and in many instances did not provide any “potential replacement” for the

³ Attached as Schedule JL-r2.

⁴ Attachment A to the Joint Status Report is attached as Schedule JL-r3.

⁵ Staff DR No. 0124.

⁶ Ameren Missouri’s partial response to Staff DR No. 0124 is attached as Schedule JL-r4.

⁷ Or cell specific citations when the source document is an excel file.

⁸ The links no longer referred to current website.

1 source information. One example “potential replacement links” refers to an appliance standard
2 report that is more than 10 years old and may no longer be relevant.⁹

3 **AMEREN MISSOURI’S REQUESTED APPROVAL AND AUTHORITY**

4 Q. Please provide a brief overview of Ameren Missouri’s (“Ameren”) request in its
5 “Amended and Supplemented Application to Approve Demand-side Investment Mechanism
6 (“DSIM”) and Demand-side Management Portfolio and Plan, and Request for Variances”
7 (“Amended Application”).

8 A. Ameren’s Amended Application requests approval of a DSIM and approval of
9 its Demand-Side Management Portfolio and Plan from January 1, 2025 through December 31,
10 2027.¹⁰ According to the Amended Application, “the MEEIA 4 Plan is reflected in a report
11 (including appendices) entitled Ameren Missouri 2025-27 MEEIA Energy Efficiency Plan
12 (“Revised Report”), which explains all aspects of the Company’s amended proposal to operate
13 demand-side programs under MEEIA.”¹¹ I will refer to the “Ameren Missouri 2025-2027
14 MEEIA Plan (Revised)” Report and the 15 appendices (Appendix A through Appendix O)
15 attached to Ameren Missouri’s Amended application collectively as the “MEEIA 4 Plan”
16 throughout the remainder of my rebuttal testimony. The list of the application appendices are
17 provided below:

18 Appendix A – Portfolio and Programs Summary

19 Appendix B – Program Templates

20 Appendix C – Avoided Costs

⁹ https://www1.eere.energy.gov/buildings/appliance_standards/pdfs/refrig_finalrule_tsd.pdf

¹⁰ Page 1 of Ameren Missouri’s Amended and Supplemented Application to Approve DSIM and Demand-side Management Portfolio and Plan, and Request for Variances, filed on January 25, 2024.

¹¹ Page 3 of Ameren Missouri’s Amended and Supplemented Application to Approve DSIM and Demand-side Management Portfolio and Plan, and Request for Variances, filed on January 25, 2024.

- 1 Appendix D – Incentive Ranges
- 2 Appendix E – Sample Evaluation Plans
- 3 Appendix F – Deemed Savings Table
- 4 Appendix G – TRM: Overview and User Guide
- 5 Appendix H – TRM: Business Measures
- 6 Appendix I – TRM: Residential Measures
- 7 Appendix J – Exemplar Tariffs
- 8 Appendix K – Customer DSIM Explanation
- 9 Appendix L – Customer Bill Examples
- 10 Appendix M – MEEIA 2025-27 Accounting
- 11 Appendix N – Earnings Opportunity Calculator
- 12 Appendix O – Urban Heat Island

13 In short, Ameren Missouri is requesting approval of the DSIM and blanket approval of
14 the entire MEEIA 4 Plan including the entirety of the report and appendices attached to the
15 Amended Application. While the MEEIA 4 Plan appears to be somewhat voluminous, the
16 content included lacks detail necessary to fully understand Ameren Missouri’s Amended
17 Application request or to fully evaluate the impact that the plan will have on the ratepayers that
18 will fund the entirety of programs costs, throughput disincentive costs, Ameren Missouri
19 shareholder earnings, and evaluation of the programs.

20 **AMEREN’S REQUEST IS UNREASONABLE**

21 Q. Is the requested approval in Ameren’s Amended Application reasonable?

22 A. No. The MEEIA 4 Plan lacks transparency, will be difficult to audit for
23 purposes of prudence reviews, provides Ameren Missouri shareholders inappropriate earnings

1 opportunities, lacks ratepayer protections, and does not align with the MEEIA statute.
2 The Commission and ratepayers should be especially concerned with the inability of Ameren
3 to allow stakeholders to thoroughly analyze the estimated benefits that Ameren has used to
4 support the proposed programs and prudence of the program implementation. Considering that
5 Ameren Missouri's MEEIA 4 Plan is projected to cost ratepayers more than \$600 million and
6 the statutory requirement of ratepayer benefits,¹² the ability to accurately quantify estimated
7 and realized ratepayer benefits is paramount to future reviews of the portfolio implementation.
8 Ameren's request for approval of "the Plan and all of the appendices" is also vague. In some
9 cases, the appendices and various sections of the Ameren report should not be approved because
10 they misrepresent the likely outcome of the program or are premised on inaccurate assumptions.
11 In other cases, it doesn't make sense for the Commission to expressly approve the appendices
12 nor various sections of the Ameren report.

13 Q. Can you provide any specific examples of Staff's concerns with Ameren
14 Missouri's request for approval of the "plan and all appendices"?

15 A. Yes. The first paragraph of Appendix B to the MEEIA 4 Plan states:

16 The following program templates are a detailed description of the
17 individual programs which compose the MEEIA (Missouri Energy
18 Efficiency Investment Act) 2025-2027 portfolio. The program templates
19 are based on facts and analyses completed at the time of this filing.
20 Program templates are subject to change based on final program designs,
21 as program revisions and modifications may be implemented during
22 MEEIA 2025-2027, and as necessary to align with changes to the
23 exemplar tariffs found in Appendix J - Tariffs.

24 Q. What is the level of detail of the description of each individual program
25 composing the MEEIA 4 Plan?

¹² As described more thoroughly in the direct testimony of Sarah L.K. Lange.

1 A. Beyond the unqualified ability to change the programs nearly at will, the
2 descriptions contained within Appendix B do not actually provide a detailed explanation of how
3 the programs will actually be implemented and managed. Generally, based on the “program
4 templates” Ameren Missouri provides, it appears that the implementation strategy is: (1) to hire
5 a contractor to administer the programs; (2) the programs will offer incentives for measures
6 that are included in Ameren Missouri’s Technical Resource Manual (TRM) and within the
7 ranges found in Appendix D; (3) the programs will run from 1/1/2025 through 12/31/2025; and
8 (4) the programs are marketing programs. While the prior sentence is a summarization, it is
9 generally consistent with the level of information that can be derived from each of the program
10 templates for which Ameren requests approval of ratepayer funded multi-million dollar
11 budgets. An example of which is reproduced and attached as Schedule JL-r5.

12 Q. Is it reasonable to approve the programs included in Appendix B?

13 A. No. As I will discuss in the section of my testimony titled “Designing a MEEIA
14 Compliant Portfolio”, Ameren Missouri has not reasonably designed these programs, provided
15 evidence that the programs will provide benefits consistent with the MEEIA statute, nor provide
16 the level of detail necessary for Staff to verify and recommend that the Commission approve
17 the proposed programs. This is not just isolated to Appendix B; similar concerns arise from
18 nearly all of Ameren Missouri’s appendices.

19 Q. What is Ameren Missouri requesting in its request to approve
20 Appendix C – Avoided Costs?

21 A. Ameren Missouri requests approval of avoided cost values for each year from
22 2024 through 2043 for Transmission (\$/kW-yr), Distribution (\$/kW-yr), Generation (\$/kW-yr),
23 and Energy (\$/MWh). These avoided cost values are applied to calculated energy and demand

1 savings values to form Ameren Missouri's estimation of benefits from the programs.¹³
2 Approval of Appendix C is likely to result in ratepayer harm through implementation of
3 programs that are not cost-effective. I will discuss this further in the section titled "Ameren
4 Missouri overstates avoided cost benefits" of my rebuttal testimony.

5 Q. What is Ameren Missouri requesting in its request to approve
6 Appendix D – Incentive Ranges?

7 A. Ameren Missouri's request for incentive ranges that are referenced in the
8 proposed program tariffs and Ameren Missouri's application is very broad, not only in the loose
9 descriptions of the measures covered but also the range of low and high incentive levels.

10 Q. Has Ameren Missouri provided support for the incentive ranges provided in
11 Appendix D?

12 A. No, Ameren Missouri's analysis utilized to support the figures and values
13 included in the MEEIA 4 Plan report assume a single value per incentive for each measure.
14 Appendix D includes a range of incentives for approval at "low incentive level" and "high
15 incentive level" that in many instances is very broad and in some cases includes the "Full Cost"
16 of the measure. However, that analysis does not include sensitivities for the impacts that are
17 likely to result from incentive levels beyond those included in Ameren Missouri's
18 workpapers.¹⁴ Changes to the incentive amounts will affect, at minimum, the achievable energy
19 and demand savings, estimated and realized benefits, revenue requirement impacts, rate
20 impacts, and the cost-effectiveness of the programs. Furthermore, as I will discuss in more

¹³ For example, Ameren Missouri's calculation of benefits from an energy efficiency measure that is expected to cause demand savings for 12 years would multiply the demand savings amount by the avoided generation cost, avoided transmission costs, and avoided distribution cost in each of the 12 years. Any energy savings estimates would similarly apply avoided energy costs to these savings over the 12 year period.

¹⁴ Ameren Missouri's response to Staff DR No. 0145 part c) regarding DSMore files states: "We have not evaluated whether the incentives fall within the high end, low end, or midpoint of the incentive ranges."

1 detail in section titled “Tariffs” of my testimony, the analyses utilized to support
2 Ameren Missouri’s MEEIA 4 Plan do not include all of the potential measures that are included
3 in the TRM and that Ameren Missouri would have the flexibility to implement if the Amended
4 Application is granted by the Commission.

5 Q. If the MEEIA 4 Plan is approved as requested, will Ameren Missouri need
6 Commission approval to alter the incentives offered for measures?

7 A. No. Ameren Missouri would be allowed to alter the incentive amounts within
8 the range without further approval from the Commission.

9 Q. Is it reasonable to approve Appendix D?

10 A. No. Ameren Missouri’s analysis in this case does not support the broad
11 incentive ranges and minimally descriptive measure types included in Appendix D.

12 Q. What is Ameren Missouri requesting in its request to approve
13 Appendix E– Sample Evaluation Plans?

14 A. It is not entirely clear. The Appendix is titled “Sample Evaluation Plans” and
15 contains largely vague “plans” that consist of less than one page of general discussion of the
16 “plan” to evaluate some of the proposed programs. As discussed in more detail in Staff witness
17 Justin Tevie’s direct and rebuttal testimonies in this case, evaluation plans should be developed,
18 well described, and documented prior to approval of the programs. Some of the programs
19 included in Ameren Missouri’s MEEIA 4 Plan are more susceptible to free-ridership that will
20 need to be appropriately planned for in evaluation of those programs.

21 Q. Is it appropriate to approve Appendix E?

22 A. No.

1 Q. What is Ameren Missouri requesting in its request to approve
2 Appendix F – Deemed Savings Table?

3 A. Appendix F is a PDF document of an excel file for Ameren Missouri’s – Deemed
4 Savings Table. The document is not useful in PDF format. As I will discuss in the Section
5 titled “Reliability of Ameren’s TRM and Deemed Savings Tables” of my testimony, the excel
6 file version of Ameren Missouri’s – Deemed Savings Table is a file that Ameren Missouri
7 proposes to use for calculating energy savings for a wide variety of installed measures and is
8 constructed of thousands of assumptions. Many of these assumptions are either unreasonable
9 or hardcoded values without support. What citations exist are not narrow enough to allow a
10 reasonable review of the accuracy of the assumptions. Without support for the assumptions
11 utilized, the results should not be relied upon for energy and demand savings estimates.

12 Q. Is it appropriate to approve Appendix F?

13 A. No. The excel version should not be approved either.

14 Q. Is it appropriate to approve Appendices G, H, and I, collectively
15 the TRM documents?

16 A. No. The transparency of the documentation and assumptions included in
17 the TRM and the aforementioned Deemed Savings Tables have been at issue since
18 Ameren Missouri initially filed an Application for MEEIA Cycle 4 in March of 2023. Staff has
19 made numerous requests and participated in multiple technical conferences to attain support
20 and direct citations for the TRM and the Deemed Savings Tables. I will discuss this issue in
21 greater detail in the Section titled “Reliability of Ameren’s TRM and Deemed Savings Tables”
22 of my testimony.

1 Q. What is Ameren Missouri requesting in its request to approve
2 Appendix J – Tariff Sheets?

3 A. Ameren Missouri is requesting approval of exemplar tariff sheets for each of the
4 proposed programs. As I will discuss more thoroughly in the section titled “Tariffs” of my
5 testimony, the tariff sheets lack specificity that is necessary to reasonably audit or determine
6 whether the programs are prudently implemented. The tariff sheets rely heavily on the
7 Ameren Missouri website which is not a reasonable replacement for the information that should
8 be included within the tariff sheets. The tariff sheets do not include reasonable restrictions of
9 the measures, incentives, or program budgets that will be allowed during program
10 implementation.

11 Q. Is it appropriate to approve Appendix J?

12 A. No. The ratepayers, the Commission, and subsequently Staff, need descriptive
13 tariff sheets to effectively regulate the implementation of these programs.

14 Q. What is Ameren Missouri requesting within Appendices A, K, L, M, and O?

15 A. It is not entirely clear. Ameren Missouri requests the ability to shift funds among
16 programs and potentially between implementation years, and Appendix A appears to be
17 program specific budget summary tables that will be subject to changes. Sarah L. K. Lange’s
18 rebuttal testimony explains that the values of costs included in workpapers and throughout the
19 MEEIA 4 Plan are inconsistent. The Commission should not approve, and cannot evaluate at
20 this time, the total program costs, contractor administrative costs, incentive costs, incremental
21 energy and demand savings, cost-effectiveness of individual programs, nor Net-to-Gross ratios
22 for each program for each of the individual years because the inputs are either unknown at this
23 time or the calculation of the values relied upon assumptions that are not reasonable.

1 Appendix K – Customer DSIM Explanation appears to be a proposed press release
2 regarding Ameren Missouri’s MEEIA 4 Plan. Appendix L – Customer Bill Examples appears
3 to simply include a copy of an example bill that includes Ameren Missouri’s proposed Energy
4 Efficiency Investment Charge and a link to Ameren Missouri’s MEEIA specific website.

5 Q. Is it appropriate to approve Appendices A, K, and L.?

6 A. No. The information included in Appendix K is inaccurate and misleading based
7 upon Ameren Missouri’s faulty assumptions in calculating ratepayer benefits and the treatment
8 of those benefits in calculating rate impacts. Consistent with Staff’s recommendation on
9 Ameren Missouri’s application as a whole, Appendices A and L should also be rejected.
10 However, if the Commission approves a portfolio, with or without modification in this case,
11 Staff does not have major concern with the content of Appendix L.

12 Q. What is Ameren Missouri requesting in its request to approve
13 Appendix N – Earnings Opportunity Calculator?

14 A. Ameren Missouri is requesting Commission approval of a calculation method
15 for shareholder earnings.

16 Q. Is it appropriate to approve Appendix N?

17 A. No. Based on Staff’s review, shareholder earnings from the MEEIA 4 Plan are
18 unwarranted and are likely to result in double compensation to the detriment of ratepayers. This
19 is discussed more thoroughly in the rebuttal testimony of Staff witness Brad J. Fortson.

20 **REASONABLE PATH FORWARD FOR THE COMMISSION**

21 Q. What is Staff’s recommendation regarding Ameren’s Request?

22 A. Staff recommends rejection of Ameren Missouri’s application. If the
23 Commission decides to approve the application with modifications, Staff recommends that the

1 Commission reject Ameren Missouri's proposed DSIM and order a mechanism as explained in
2 the direct testimony of Staff witness Sarah L.K. Lange. Staff's rebuttal testimony describes
3 some of the issues with Ameren Missouri's request and the workpapers that were provided
4 in support.

5 Q. Does Commission rejection of Ameren Missouri's MEEIA 4 Plan hinder future
6 demand-side programs in Missouri?

7 A. No. MEEIA is not necessary for demand-side programs in Missouri. The
8 MEEIA statute allows a utility to be compensated today for the reduction in opportunity to earn
9 a return on investment in the future.¹⁵ The rejection of a given application is not an attack on
10 the benefits of ratepayers utilizing electricity more efficiently, but rather an indication that the
11 programs offered by a utility in a given application are not reasonable, are not well supported,
12 and/or did not meet the various requirements that must be achieved prior to approval and cost
13 recovery from all ratepayers. In this case, Ameren's Amended Application fails to address any
14 of these three concerns.

15 Q. What has been the combined effect of Ameren's MEEIA programs?

16 A. In the short time that it has had approved MEEIA programs, Ameren Missouri's
17 ratepayers have paid over one billion dollars to Ameren (on average, almost \$100,000,000 per
18 year) through the Demand-side Investment Mechanisms. To date, Ameren Missouri
19 shareholders have not invested a single dollar through MEEIA programs, but have received
20 roughly \$100 million in shareholder profit.¹⁶ In this case, Ameren Missouri is proposing the
21 authority to collect more than \$600 million ratepayer dollars. Since the utility profits without

¹⁵ See the direct testimony of Sarah L.K. Lange in this case.

¹⁶ See the direct testimony of Staff witness Marina Stever. To put in perspective, Ameren has to actually spend shareholder dollars in order to earn profits through the normal rate case process.

1 spending shareholder dollars in MEEIA programs, it is imperative that the estimated benefits
2 to ratepayers identified in a MEEIA application are reasonable and well supported. In this
3 application, there is insufficient support for the Commission to make the conclusion that
4 ratepayers are better off paying for the MEEIA 4 Plan, regardless of their participation. For
5 that reason, in combination with all of the other issues that have been identified by Staff in
6 direct and rebuttal testimony, the Commission should reject the application.

7 Q. Would it be appropriate for Ameren Missouri to provide information that
8 addresses Staff concerns regarding support and citation in Surrebuttal testimony?

9 A. No. After reading Staff's rebuttal, Ameren may try to include more supporting
10 information in surrebuttal. That approach is inappropriate for several reasons, but the sheer
11 volume of information that is necessary to address Staff's concerns cannot be reviewed in the
12 time between surrebuttal and the hearing in this case. If that is the case, the Commission should
13 require Ameren to re-file its application with the new information in order to provide all
14 stakeholders an opportunity to properly review and vet any new supporting documentation.
15 This approach would also require a new procedural schedule given the volume and complexity
16 of data necessary to support a reasonable MEEIA application.

17 **AMEREN MISSOURI OVERSTATES AVOIDED COST BENEFITS**

18 Q. Does the Commission's MEEIA rule define avoided costs?

19 A. Yes. 20 CSR 4240-20.092 (1)(C) provides:

20 (C) Avoided costs or avoided utility costs means the **cost savings**
21 **obtained by substituting demand-side programs for existing and**
22 **new supply-side resources.** Avoided costs include avoided utility costs
23 resulting from demand side programs' **energy savings and demand**
24 **savings associated with generation, transmission, and distribution**
25 **facilities including avoided probable environmental compliance**
26 **costs.** The utility shall use the integrated resource plan and risk analysis

1 used in its most recently adopted preferred resource plan to calculate its
2 avoided costs; [**Emphasis added.**]

3 Q. What avoided costs does Ameren Missouri claim as a benefit to ratepayers for
4 reductions in energy and demand that result from the MEEIA 4 Plan?

5 A. Ameren Missouri attached Appendix C – Avoided Costs to the Ameren Request
6 which provides a single avoided cost value per category per year.

7 Q. Are the values included in Ameren Missouri’s Appendix C reasonable estimates
8 of avoided costs in the calculation of benefits from the MEEIA cycle 4 program?

9 A. No. Ameren Missouri’s avoided costs for energy, capacity, transmission, and
10 distribution are unreasonable. The assumed avoided capacity, transmission, and distribution
11 benefits are unlikely to ever be realized by ratepayers. Ameren Missouri’s calculation of
12 benefits for MEEIA Cycle 4 grossly overstate the magnitude of the benefits.

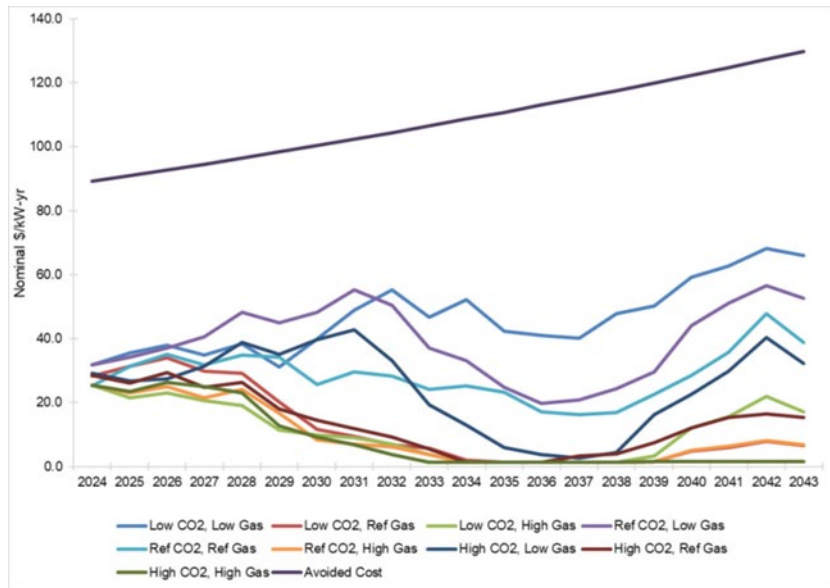
13 **Avoided capacity costs**

14 Q. Are the avoided capacity costs included in Appendix C of Ameren Missouri’s
15 application consistent with the Commission’s MEEIA rule?

16 A. No. The avoided capacity cost utilized by Ameren Missouri in this case are
17 inconsistent with the assumed capacity costs for serving Ameren Missouri load in the most
18 recent Integrated Resource Plan (“IRP”). The graphic below is an excerpt from
19 Ameren Missouri’s 2023 IRP which represents Ameren Missouri’s “Capacity Price
20 Assumptions”.

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Figure 1: Ameren Missouri’s 2023 IRP Capacity Price Assumptions



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As seen in the graphic above, the straight top line represents the value that Ameren Missouri assumes as an “avoided generation cost” or “avoided capacity cost” for demand-side measures in the MEEIA 4 Plan,¹⁷ while the remainder of the lines below represent the capacity price assumptions for serving load and sales of generation capacity from supply-side resources.

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In its IRP, Ameren ran various scenarios of capacity cost forecasts over the next 20 years. As shown in the chart, those costs range from slightly above zero to a max of approximately \$60/MW-yr. However, Ameren has assumed an avoided cost that starts at around \$90/MW-yr up to approximately \$130/MW-yr. At first glance, this disparity in costs makes no sense because the avoided cost values are not based on the IRP analyses and do not align with the other cost scenarios. Further, in almost every assumed scenario, capacity costs all take a dip starting around the 2032-2034 through 2038 timeframe, but in Ameren Missouri’s

¹⁷ According to pages 20-21 of Chapter 2 of Ameren Missouri’s 2023 IRP Filing, “a separate capacity price curve was also developed to be used in future demand-side resource cost effectiveness analyses. This curve reflects the cost of new entry (CONE) value published by MISO.”

1 avoided cost assumption, the value of avoided capacity costs consistently increases in a linear
2 manner. This is unsupported and unreasonable. The avoided capacity cost values utilized in
3 support of Ameren’s MEEIA 4 Plan are unreasonable given the various market forecasts
4 included in the IRP. The avoided capacity costs utilized by Ameren Missouri for demand-side
5 resources do not account for the seasonal nature of Midcontinent Independent System
6 Operator’s (“MISO”) Planning Resource Auction (“PRA”) and is clearly an outlier in terms of
7 assumed value even when comparing to Ameren Missouri’s highest cost alternative pricing
8 assumptions. The result of this overestimated avoided cost in the screening of Demand Side
9 Mechanism (“DSM”) results in flawed assumptions of ratepayer benefits and
10 cost-effectiveness. Furthermore, simply reproducing the values of avoided capacity cost in the
11 IRP is not equivalent to the requirement that “[t]he utility shall use the integrated resource plan
12 and risk analysis used in its most recently adopted preferred resource plan to calculate its
13 avoided costs.” The avoided generation cost values are not a result of the IRP analyses by mere
14 inclusion in a table within the IRP report.

15 Q. Will peak demand reductions that arise from Ameren Missouri’s MEEIA 4 Plan
16 result in immediate ratepayer savings equivalent to the MISO published CONE?¹⁸

17 A. No. At best, demand reductions during MISO’s PRA seasonal peak hours that
18 result from implementation of a MEEIA program could produce benefits equal to the cleared
19 MISO PRA price. However, instead of treating the assumed MEEIA 4 Plan demand reductions
20 on an equivalent basis as the accredited capacity of Ameren Missouri’s generation resources,
21 the MEEIA 4 Plan inflates the assumed benefit of DSM by 300 to 500% to an escalated MISO

¹⁸ “Cost of New Entry (“CONE”) is an industry-wide term, used to indicate the current, annualised, capital cost of constructing a power plant. The plant used to estimate CONE is an advanced combustion turbine.”
<https://cdn.misoenergy.org/20221012%20RASC%20Item%2004c%20CONE%20Update626542.pdf>

1 CONE value in each year. While the PRA has cleared at the MISO value for CONE in the past,
2 the occurrence has been infrequent and was prior to MISO's adoption of a seasonal construct
3 within the PRA. Most of the cleared PRA results for the Ameren Missouri MISO zone are well
4 below the MISO value for CONE. The demand reduction of energy efficiency measures
5 typically varies by time period and season, which in turn means that that the "peak reduction"
6 resulting from any energy efficiency program is likely variable by time period and season based
7 on the actual mix of measures installed.

8 Q. Has Ameren Missouri provided any analyses that support the MEEIA 4 Plan
9 utilizing more realistic values for avoided capacity costs?

10 A. This is another area that is unclear to Staff based on discussions with Ameren
11 Missouri staff and data request responses. Some of the workpapers that Ameren Missouri
12 provided in support of its application includes data for "Market-Based Avoided Costs." Staff
13 requested the meaning of the information contained within the section of the workpapers, but
14 Ameren objected to the data request and did not provide an explanation for the difference
15 between those values and the overstated values included in its analyses.¹⁹

16 **Ameren Missouri's Preferred Plan capacity position**

17 Q. Since Ameren Missouri modeled the MEEIA 4 Plan assuming avoided
18 generation costs equal to the MISO CONE value, will ratepayers be able to realize benefits of
19 that magnitude for demand reductions in each year related to MEEIA programs?

20 A. Absolutely not.

¹⁹ Ameren Missouri's response to Staff DR No. 0143 states, in part, "Ameren Missouri has not used nor verified the Market Based results from DSMore as an indicator for cost effectiveness in current or past MEEIA filings therefore these results are irrelevant to the current MEEIA Application." The response to this data request is attached to my testimony as Schedule JL-r6.

1 Q. What does the term “capacity position” mean as you will use it in your
2 testimony?

3 A. A utility capacity position is a comparison of the utility’s accredited generation
4 capacity²⁰ compared to the resource adequacy requirements of the relevant Regional
5 Transmission Organization (“RTO”) or Independent System Operator, in Ameren Missouri’s
6 case, MISO.²¹ The resource adequacy requirements are based upon peak demands of customers
7 plus a reserve margin (or buffer), and for planning purposes will be based on forecasted peak
8 demands.

9 In short, a positive capacity balance, sometimes referenced as being “long on capacity,”
10 indicates that the utility has generation capacity that is adequate to cover, or exceed, the resource
11 adequacy requirements of the RTO. In Figures 2 through 7 below, if the line is above 0, the
12 company is long on capacity in that season for that scenario. A negative capacity position,
13 sometimes referenced as being “short on capacity,” indicates that the utility will need to acquire
14 capacity through the MISO PRA, i.e., be a price taker based on the cleared price, or enter a
15 contract with another entity for additional capacity during the relevant time period. In Figures 2
16 through 7 below, if the line is below 0, the company is short on capacity in that season for
17 that scenario.

18 Q. What does Ameren Missouri’s projected capacity position from the Preferred
19 Resource Plan (“PRP”) in the 2023 IRP indicate?

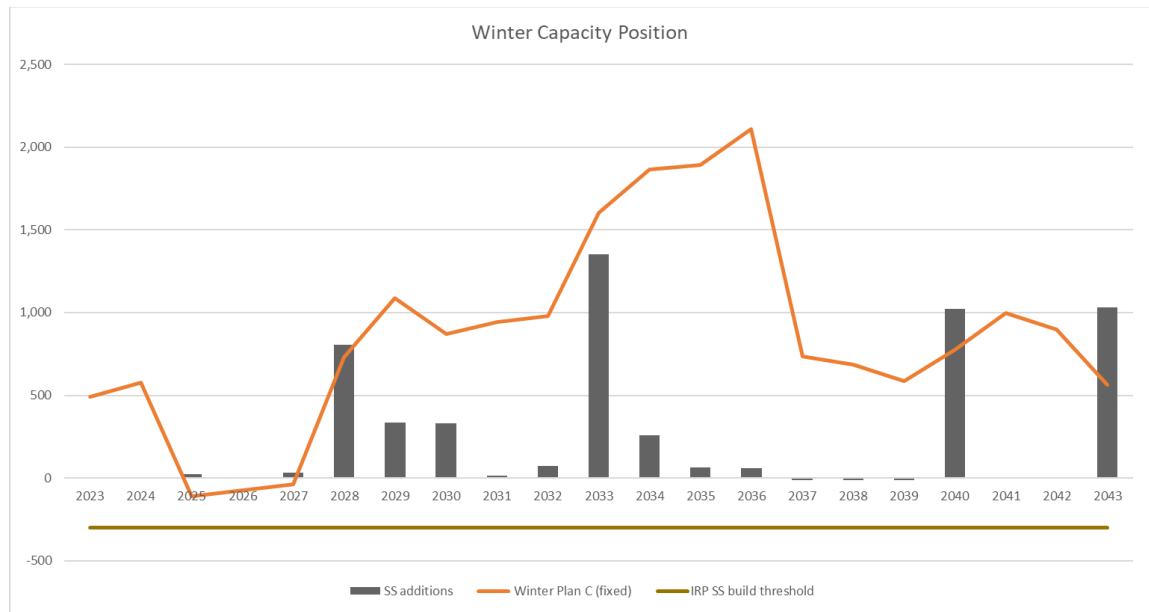
20 A. Over the next several years, ratepayers will continue to pay for existing
21 generation facilities through rates and should expect Ameren Missouri to request rate recovery

²⁰ Capacity accreditation accounts for the ability of a given resource to provide energy during the hour(s) of peak demand.

²¹ Accredited capacity minus the resource adequacy requirement equals capacity position value (MW) in a given year.

1 for billions of dollars in new generation facilities. Figure 2 below is a graphic that depicts
2 Ameren Missouri’s projected winter capacity position from the PRP described in its 2023 IRP.²²
3 Figure 3 depicts the summer position for the PRP.²³ The current PRP also includes “RAP”²⁴
4 level DSM throughout the entire planning horizon, i.e. assuming approval and implementation
5 of consecutive MEEIA cycles over the next 20 years.

6 Figure 2: PRP Winter Capacity Position



7

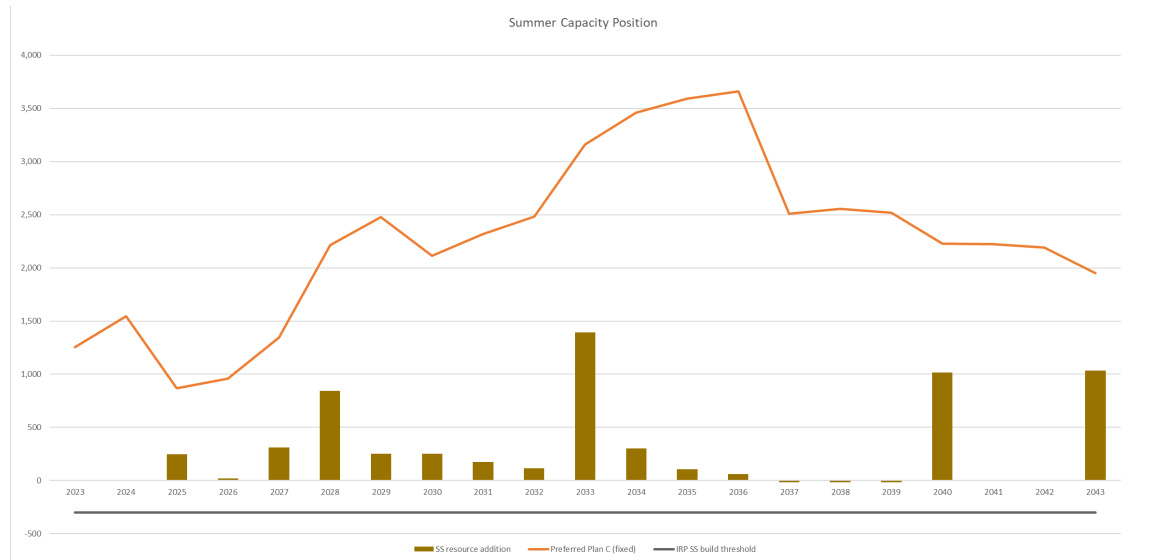
²² As I will describe in the Section titled “Ameren Missouri’s Seasonal Capacity position”, Ameren Missouri’s TRM does not provide demand impacts for the winter, spring, or fall seasons. Therefore, the figures below that depict winter capacity positions relies on the ratio of demand reductions for energy efficiency and demand response between summer and winter as provided in the capacity balance sheets provided with Ameren Missouri’s preferred plan.

²³ Figures 2 through 7 assumes that the demand savings estimates of Ameren Missouri are accurate. Staff has concerns with the assumptions that are relied upon by Ameren Missouri and the support provided for those assumptions. The aforementioned figures are illustrative based upon those assumptions.

²⁴ RAP stands for realistic achievable potential as defined in the market potential study.

1

Figure 3: PRP Summer capacity position



2

3 The orange lines are the capacity position of Ameren in the respective seasons for
4 its PRP. The gray (winter) and brown (summer) bars are the respective accredited capacity
5 additions in the relevant year based upon Ameren Missouri’s planned generation additions. The
6 figures that follow in this section will follow the same color scheme, with some additional
7 information included for context.

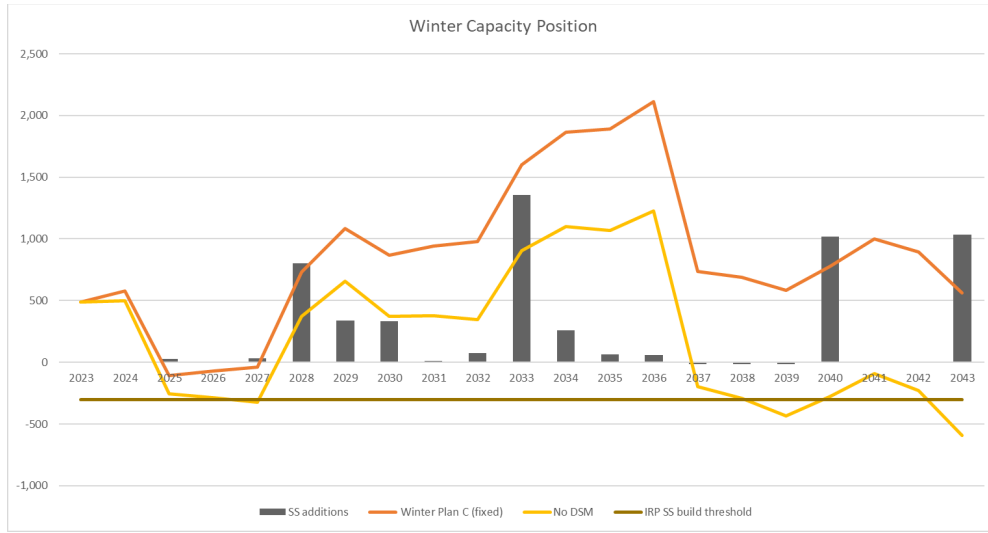
8 The negative winter capacity position in years 2025 through 2027 in Figures 2
9 through 7 are primarily driven by the retirement of Rush Island Energy Center, followed by a
10 substantial supply-side resource addition in 2028. Ameren Missouri is always long on capacity
11 for summer in the PRP as shown in Figure 3.

12 Q. What effect does removing the assumed DSM reductions have on
13 Ameren Missouri’s capacity position?

14 A. Figure 4 below shows the winter capacity position if DSM is removed
15 (yellow line). Figure 5 provides the same information for summer.

1

Figure 4: Winter Capacity Position – No DSM



2

3

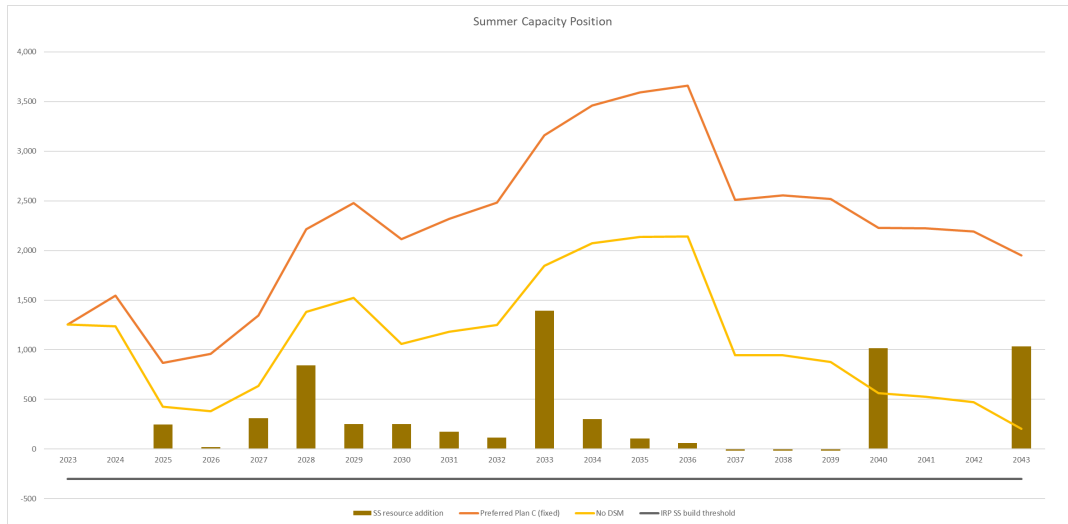
If DSM is removed entirely, Ameren Missouri’s short capacity position deepens slightly

4

between 2025 and 2027 and then reappears in 2037.

5

Figure 5: Summer Capacity Position – No DSM



6

7

If Ameren follows the generation additions included in its PRP and does not implement

8

any DSM, the company is long on summer capacity for the entire planning horizon. The

9

remaining figures will focus on winter capacity position considering the lack of impact on the

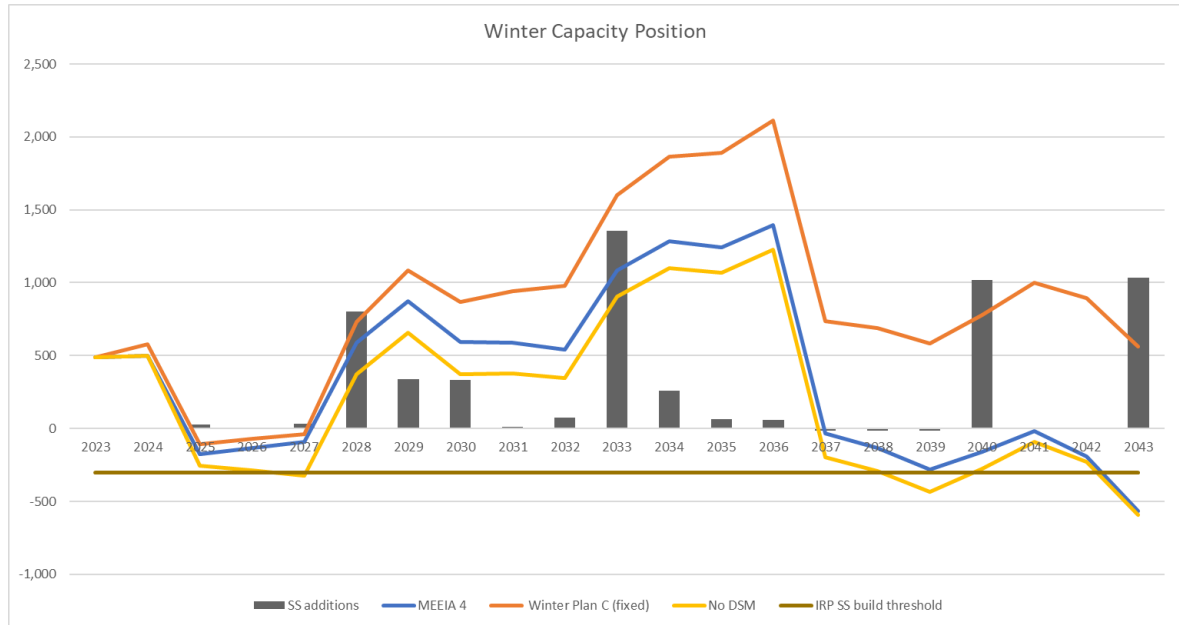
10

years that Ameren Missouri is short or long on summer capacity.

1 Q. Does Ameren Missouri's MEEIA 4 Plan on its own have a substantial impact
2 on the 2037 winter capacity position?

3 A. No. Figure 6 below shows the effects of the MEEIA 4 Plan on the winter
4 capacity position (blue line).

5 Figure 6: Winter Capacity Position-Include MEEIA 4

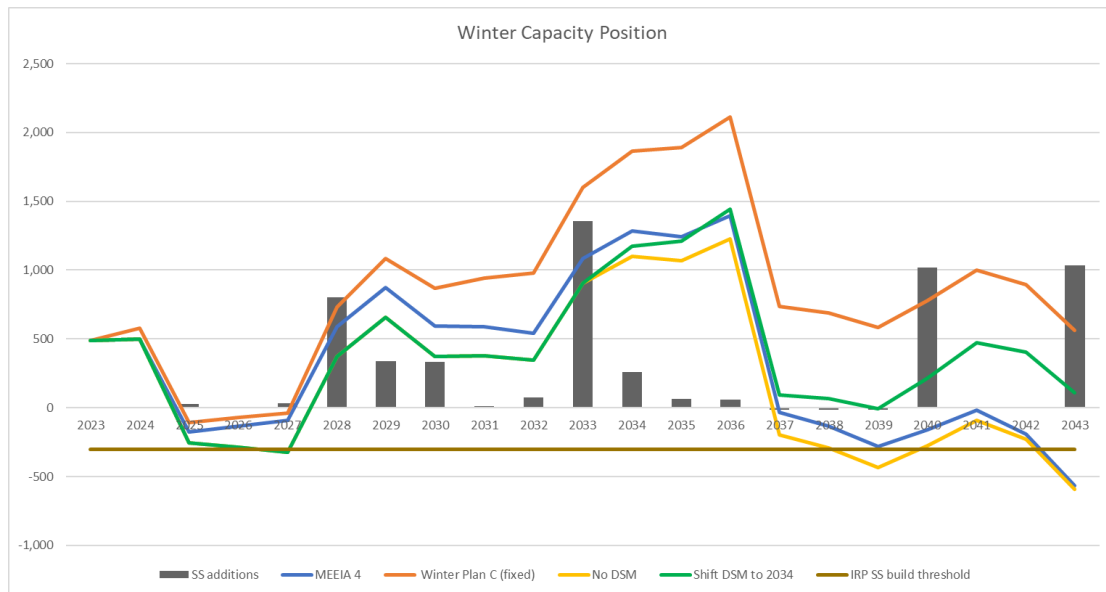


6
7 The short capacity position remains in years 2025 through 2027 and the years beyond
8 2037. Figure 6 provides a visual representation that the MEEIA 4 Plan has little, if any, effects
9 on the capacity position of Ameren Missouri. Keep in mind that the supply-side additions have
10 been maintained among all three of these scenarios, i.e. the generation resources that Ameren
11 Missouri plans to install even if MEEIA cycles are continuously implemented over the next
12 20 years.

13 However, Figure 6 does indicate that future MEEIA cycles could impact the need for
14 additional supply-side resources in year 2037 and beyond. Based on Ameren Missouri's ramp
15 rates for savings, I analyzed several scenarios of delayed DSM implementation, and found that

1 delaying the implementation until 2034 could eliminate the short capacity position in year 2037
2 beyond and, based on historical trends, potentially eliminate billions of ratepayer dollars
3 flowing through the DSIM. Figure 7 provides a visual representation of the winter capacity
4 position with DSM delayed until 2034 (green line).

5 Figure 7: Winter Capacity Position DSM delayed until 2034



6
7 The delayed implementation results in a positive winter capacity position in all years
8 beyond 2028, notably the exact same years as the positive winter capacity position of Ameren
9 Missouri's PRP. Earlier implementation closes the gap between the green line (Shift DSM to
10 2034) and the orange line (PRP), but does not alter the years that Ameren Missouri would be
11 long or short on winter capacity.

12 Ameren Missouri's Seasonal Capacity position

13 Q. Is Ameren Missouri's MEEIA 4 Plan focused on limiting the short capacity
14 position depicted in Figures 2, 4, 6, and 7?

15 A. Based on review of Figures 2, 4, 6, and 7, it might make sense that
16 Ameren Missouri's plan for MEEIA might be based upon reducing the short position in

1 years 2025 through 2027 until the new supply-side resources are added. However, the figures
2 that I showed above depicting MEEIA 4 winter demand impacts are not based upon Ameren
3 Missouri's workpapers in this case.²⁵ Specifically, Ameren Missouri's proposed Demand
4 Response programs are not designed to impact winter peak demands.²⁶

5 Q. Did Ameren Missouri provided capacity balance sheets for the Fall or Spring
6 seasons to align with the seasonal construct of MISO's PRA?

7 A. No.

8 Q. Do Ameren Missouri's workpapers provided in support of the MEEIA 4 Plan
9 account for the seasonal construct of MISO's PRA?

10 A. No. Ameren Missouri's TRM, Deemed Savings Tables, Submittal Tool, and the
11 DSMore²⁷ files that have been provided to Staff do not account for the seasonal construct of
12 MISO's PRA. This oversight by Ameren Missouri severely limits the reliability of
13 Ameren Missouri's quantification of benefits from demand reductions associated with the
14 MEEIA 4 Plan because the PRA cleared price and demand reductions associated with energy
15 efficiency plans will vary by season and time of day.

16 Q. Figures 6 and 7 appear to indicate that the implementation of Ameren Missouri's
17 MEEIA 4 Plan could reduce the short winter capacity position compared to the PRP. Is there
18 additional context that should be considered?

²⁵ As I will describe in the Section titled "Ameren Missouri's Seasonal Capacity position", Ameren Missouri's TRM does not provide demand impacts for the winter, spring, or fall seasons. Therefore, the figures above that depict winter capacity positions relies on the ratio of demand reductions for energy efficiency and demand response between summer and winter as provided in the capacity balance sheets provided with Ameren Missouri's preferred plan.

²⁶ Minimal winter impacts are included in the IRP capacity balance sheets but they are less than 1/25th of the summer demand impacts.

²⁷ DSMore is a modeling software.

1 A. Yes. First, the implementation of the MEEIA 4 Plan will not avoid, defer, or
2 reduce Ameren Missouri's plan to install any supply side resource included in the PRP. Second,
3 the capacity balance sheet indicates that Ameren Missouri will be a price taker in the MISO
4 PRA winter season over the next few years unless it contracts for additional capacity with
5 another entity. Third, the magnitude of the capacity that must be procured through the PRA is
6 uncertain. Fourth, the capacity balance sheets are based on Ameren Missouri's peak demand
7 projections including some additional assumptions of the winter demand impacts of the
8 MEEIA 4 Plan. Ameren Missouri has not designed the MEEIA 4 Plan with winter peak demand
9 reductions as a primarily targeted outcome. Program design can drive the seasonal impact of
10 peak demand reductions.²⁸ Finally, Ameren Missouri's 2024 DSM impacts have been
11 conservatively excluded from all scenarios other than the PRP for Figures 4 through 7, despite
12 the extension of MEEIA Cycle 3 and lingering effects on peak demand that may occur.

13 Q. With those caveats and based on Ameren Missouri's projections of MISO's PRA
14 prices for 2025, 2026, and 2027 what is the cost of procuring the difference in winter capacity
15 positions of a MEEIA 4 Plan versus no MEEIA 4 Plan?

16 A. Roughly \$25 million. In comparison, the MEEIA 4 Plan projects over
17 \$65 million for demand response programs alone, and Ameren's MEEIA 4 Plan programs are
18 not designed to impact peak demands during the winter MISO PRA season that
19 Ameren Missouri is projected to be short on capacity. For example, Ameren's IRP assumes
20 winter demand response impacts that are less than 5% of the peak demand reductions assumed
21 for the summer season. Furthermore, air-source heat-pumps are included as an energy

²⁸ When temperatures get below 5°F, heat pumps may not be able to fully meet heating loads, and supplemental heating may be needed. If this supplemental heat is from electric resistance coils, it can contribute substantially to winter peak electric demand.

1 efficiency measure in Ameren Missouri's TRM,²⁹ but the efficiency of heat pumps diminishes
2 during extremely cold weather³⁰ which is likely to coincide with winter peak demand periods.

3 **Avoided transmission and distribution costs**

4 Q. Are the avoided transmission and distribution costs provided in Appendix C
5 reasonable?

6 A. No. Ratepayers are not going to realize benefits anywhere near the magnitude
7 provided in Appendix C and included in Ameren Missouri's values and figures that rely on
8 benefit assumptions.

9 Q. How does Ameren Missouri estimate program benefits associated with avoided
10 transmission and distribution costs?

11 A. Ameren Missouri's calculation of benefits from an energy efficiency measure
12 that is expected to cause summer peak demand savings for 12 years would multiply the
13 estimated summer peak demand savings amount by the avoided transmission costs and avoided
14 distribution cost included in Appendix C, in each of the 12 years.

15 Q. Are there flaws in Ameren's assumed benefits associated with avoided
16 transmission and distribution costs?

17 A. Yes. The calculation is based on existing transmission plant and existing
18 distribution plant investments and weather normalized peak load. This calculation assumes that
19 all summer demand reductions will reduce transmission and distribution costs. This assumption
20 is categorically false.³¹ Once the investment in a distribution system or transmission system

²⁹ Ameren assumes millions of incentive dollars will be spent on these measure types in its workpapers in support of the MEEIA 4 Plan.

³⁰ <http://www.aceee.org/research-report/b2404>.

³¹ Page 7-9 of my direct testimony discusses distribution facility costs including the improbability of system-wide energy efficiency causing avoided distribution costs.

1 asset occurs and is included in rates, there are no transmission system or distribution system
2 costs savings obtainable through demand-side resources. Unless a demand reduction allows a
3 specific asset's useful life to be extended, it is unlikely that demand-side programs substitute
4 existing or new transmission or distribution system resources. Except for targeted, location
5 specific programs designed to address existing distribution constraints, there are no avoided
6 distribution costs to consider for a fourth MEEIA cycle.

7 Q. Do Ameren Missouri's management decisions further erode the accuracy of the
8 assumed benefits associated with avoided transmission and avoided distribution costs?

9 A. Yes. According to Ameren Missouri's response to Staff DR No. 0030 in this
10 case:

11 Based on the analysis outlined above, no projects shown in "exh 1
12 2023-27 capital investment plan confidential.pdf" are expected to be
13 eliminated or reduced in budget if MEEIA 4 occurs at this time.³²

14 Based on this, rates will increase based on the increased costs from transmission and
15 distribution investments over the planning horizon and the MEEIA 4 Plan will not reduce those
16 investments. Please review my direct testimony for further explanation.

17 **Avoided energy costs**

18 Q. Does Ameren Missouri appropriately account for avoided energy costs
19 associated with the MEEIA 4 Plan?

20 A. No. Sarah L.K. Lange addresses this issue in her rebuttal testimony.

³² A copy of Ameren Missouri's response to Staff DR No. 0030 is attached as Confidential Schedule JL-r7 of this testimony.

1 **AMEREN MISSOURI'S WORKPAPERS ARE VOLUMINOUS BUT DEFICIENT**

2 **Hardcoded values**

3 Q. Is there a common thread among the workpapers that Ameren Missouri has
4 provided in this case?

5 A. Yes. Most of the workpapers provided in support of the MEEIA 4 Plan include
6 large amounts of data that are hardcoded and nearly impossible to verify as reasonable. The
7 workpapers continue to build on those assumptions to inform the estimates included within the
8 Ameren Missouri MEEIA 4 Plan. To the extent that any of the assumptions are unreasonable,
9 the next step in the process exacerbates that issue by stacking additional assumptions before
10 arriving at the final modeled results. A model can only be as accurate as the assumptions that
11 are provided, and as Staff will describe in rebuttal testimony, many of the assumptions utilized
12 by Ameren Missouri are not reasonable, rendering results that are provided in support of the
13 MEEIA 4 Plan unreasonable and unreliable.

14 Q. Has Staff identified and addressed all of the issues included within Ameren
15 Missouri's workpapers in this case?

16 A. Unfortunately, no. The workpapers provided are voluminous and interwoven.
17 Staff has attempted to address issues that are fundamental to the overall savings estimates that
18 Ameren Missouri uses to support the MEEIA 4 Plan, but there are likely more issues that Staff
19 has yet to identify.

20 **Submittal Tool**

21 Q. What issues has Staff identified within the Submittal Tool?

22 A. The Submittal Tool aligns with other Ameren Missouri workpapers by including
23 a vast amount of hardcoded information that complicates the review and limits transparency for

1 Staff and other stakeholders. The Submittal Tool is heavily reliant on the assumed quantity and
2 timing of energy efficiency measure installations, the Effective Useful Life of each measure,³³
3 the Net-to-Gross Factor³⁴ for each measure type, incremental cost of each measure,³⁵ estimated
4 energy and demand savings per measure,³⁶ and the incentive per measure. I will highlight a
5 few of the issues that Staff has identified to date.

6 Q. What is the source of the assumed quantity and timing of measure installations
7 included in the Submittal Tool?

8 A. The assumed quantity and timing of measure installations are hardcoded and
9 apparently based upon discussions with program implementers. Staff has not received
10 additional support for these assumptions to date. These assumptions are nearly certain to differ
11 from the actual implementation of each program included within the workpaper.

12 Q. What is the source of the assumed incremental cost of measures included in the
13 Submittal Tool?

14 A. The incremental cost of each measure is apparently sourced from
15 Ameren Missouri's Deemed Savings Tables. Many of these values do not include specific
16 citations, either within the Submittal Tool or the Deemed Savings Tables, so Staff has not been
17 able to verify the values or determine if they are reasonable for all of the measures included.

18 Q. Are the avoided cost values included within the Submittal Tool a transparent
19 representation of benefits that may occur from measure installations?

³³ Discussed in the rebuttal testimony of Francisco Del Pozo.

³⁴ Discussed in the rebuttal testimony of Dr. Hari Poudel.

³⁵ Incremental costs are assumed to be the costs above the baseline replacement measure.

³⁶ Discussed in the rebuttal testimony of Francisco Del Pozo and Justin Tevie regarding TRM assumptions and my testimony regarding TRM and Deemed Savings Table assumptions.

1 A. No. One tab of the Submittal Tool is titled “Avoided Cost Benefits” that
2 includes 20 years of hardcoded data out to 15 decimal places for more than 850 measure types.
3 The “Avoided Cost Benefits” tab is utilized by each program tab within the Submittal Tool to
4 calculate benefits. Based on discussions with Ameren Missouri witnesses, the values within
5 this tab are the result of applying Ameren Missouri’s avoided cost values in another software
6 called DSMore.

7 Q. Are the demand savings estimates included within the Submittal Tool a
8 transparent representation of reductions that may occur from measure installations?

9 A. No. Another tab of the Submittal Tool is titled “CP Factors” which
10 Ameren Missouri uses to calculate demand impacts of various programs. These factors are
11 hardcoded values provided out to ten decimal places with no citation to the source. The values
12 are broken into 25 measure categories for Residential measures and 12 measure types for
13 Business measures. The factors do not account for seasonality of peak demand reductions, and
14 are apparently based on a study from 2014. MISO’s shift to a seasonal PRA construct
15 necessitates a more granular view of demand reductions by season and time period to accurately
16 quantify benefits that may accrue through potential capacity sales.

17 **Reliability of Ameren’s TRM and Deemed Savings Table**

18 Q. Should the Commission approve the TRM and Deemed Savings Table
19 (Appendices F, G, H, and I of Ameren’s Request)?

20 A. No. The TRM and the Deemed Savings Table are voluminous and give the
21 appearance of providing very accurate estimates of energy and demand savings, but the sources
22 utilized for thousands of assumptions included in the four collective documents are opaque.
23 Many of the assumptions within the Deemed Savings Table are hardcoded without citations.

1 Many of the citations that do exist within the TRM and Deemed Savings Tables are no longer
2 valid.³⁷ Citations that are still valid within the TRM and Deemed Savings Tables are largely
3 vague references to entire documents that are often hundreds of pages.³⁸ In this case, Staff
4 performed a limited review of the TRM and Deemed Savings Tables and identified assumed
5 values that do not appear reasonable, are reliant on studies that are likely outdated, and many
6 of which did not provide clear citation to justification for the assumptions.

7 Q. If approved, will all of the measures that are included within the TRM be
8 implemented?

9 A. Probably not, but Ameren Missouri has requested approval of the entire TRM
10 along with incentive ranges and the flexibility to implement nearly all measures within the TRM
11 without additional Commission approval.³⁹ The fact that Ameren Missouri's workpapers in
12 this case do not consider the effects of implementing all of the measures does not limit the need
13 to verify the accuracy of the assumptions included within the TRM and Deemed Savings
14 Tables.

15 Q. Is Ameren Missouri incentivized to ensure the accuracy of the values included
16 within the TRM or the Deemed Savings Tables?

17 A. No. In fact, based on Ameren Missouri's existing Energy Efficiency Investment
18 Charge ("EEIC") mechanism,⁴⁰ Ameren Missouri benefits from overestimating energy and
19 demand savings. Absent some mechanism, utilities are financially disincentivized from
20 facilitating customer-funded

³⁷ See Ameren Missouri's response to Staff DR No. 0124, attached as Schedule JL-r4.

³⁸ Ibid.

³⁹ Part of Ameren Missouri's response to Staff DR No. 0124 states, "It is important to note that some measures in the Ameren Missouri TRM are not used in our programs, and many have very minimal impacts on the total portfolio savings."

⁴⁰ And Ameren Missouri's proposed EEIC mechanism.

1 demand-side programs that would reduce the utility’s quantity of energy sold at retail, known
2 as its “throughput.”⁴¹ However, Ameren Missouri’s EEIC mechanism bases the Net
3 Throughput Disincentive (“NTD”) amount and the Earnings Opportunity amount on the savings
4 included in the TRM and Deemed Savings Table. In addition to the misaligned interests of the
5 utility and ratepayers described by Mr. Tevie’s rebuttal testimony, overstated energy savings
6 estimates benefit Ameren Missouri on additional fronts. During a general rate case, when the
7 NTD is rebased, the billing determinants utilized to design rates have been adjusted (decreased)
8 to account for savings that occur during the test year, resulting in higher rates than would
9 otherwise be justified, all else being equal. The savings estimates are likely to be utilized to
10 justify future MEEIA cycles. Finally,⁴² Ameren Missouri shareholders are incentivized to
11 invest in additional generation resources through a rate of return in traditional ratemaking.
12 Designing energy efficiency programs that are ineffective in deferring, reducing, or avoiding
13 those investments benefits shareholders to the detriment of ratepayers.

14 Q. Are Evaluation, Measurement, and Verification (“EM&V”) contractors
15 inherently incentivized to ensure the accuracy of the values included within the TRM or the
16 Deemed Savings Tables?

17 A. No. The EM&V budget is capped by the utility’s total budget for all approved
18 demand-side program costs.⁴³ The contractor, or its successor, potentially benefits from future
19 MEEIA cycles with larger budgets. Additionally, the utility is allowed to provide oversight and
20 guidance to the contractor. If an EM&V contractor determines that savings are overstated, the
21 utility may be less inclined to work with that contractor for future cycles. Alternatively, the

⁴¹ Page 21 of the direct testimony of Sarah L.K. Lange.

⁴² Staff recognizes that IOUs may have additional incentives to overstate energy and demand savings estimates.

⁴³ 20 CSR 4240-20.093(8)(A).

1 utility is more likely to award future contracts to a contractor that presents results that are
2 favorable to the utility.

3 Q. Should the Commission assume that the EM&V process is perfecting the TRM
4 and Deemed Savings Table on an annual basis?

5 A. No. Recent evaluations of Ameren Missouri's existing residential demand
6 response programs indicate that the actual energy savings occurring as a result of the program
7 have tended to be less than 20% of the stated goal. The TRM and Deemed Savings tables have
8 not reflected this substantial difference in assumed energy savings from thermostat
9 installations. For context, Ameren Missouri's workpapers in this case assumes more than \$10
10 million in incentive costs for thermostats in MEEIA Cycle 4, including the seemingly overstated
11 energy savings assumptions.

12 Q. Staff witness Justin Tevie's rebuttal testimony discusses issues with baseline
13 assumptions included in the Ameren Missouri TRM. How does that affect the resulting energy
14 and demand savings estimates that are included in the Deemed Savings Tables?

15 A. In the example that Mr. Tevie highlights,⁴⁴ the estimated energy and demand
16 savings that result are overstated. Those overstated savings are carried forward into
17 Ameren Missouri's Submittal Tool and ultimately its energy and demand savings estimates,
18 benefits estimates, and all related figures that utilize that information rendering each value
19 inaccurate. The specific example is especially concerning given Ameren Missouri's assumed
20 incentive amounts related to the measures that are impacted by the flawed assumption.

21 Q. Is the issue of inaccurate baseline assumptions limited to that example?

⁴⁴ Baseline Seasonal Energy Efficiency Ratio ("SEER") assumptions for cooling equipment.

Rebuttal Testimony of
J Luebbert

1 A. The issue is unlikely to be limited to those measure types. As Mr. Tevie states
2 in his rebuttal testimony, the assumptions in Ameren Missouri's TRM and Deemed Savings
3 Tables lacks the documentation and support necessary to verify the estimates.

4 Q. Will energy consumption for measure types change over time?

5 A. Yes. Manufacturing processes tend to get more efficient over time and the
6 prevalence of efficient equipment follows that same trend. Ameren Missouri's TRM and
7 Deemed Savings tables do not account for improved efficiency in baseline measures over time.
8 The effects is that actual energy savings will tend to be less than those assumed with a stagnant
9 baseline assumption.

10 Q. Do the Coincident Peak Factors ("CP Factor") utilized in the Deemed Savings
11 Tables account for the seasonality of MISO's PRA?

12 A. No. The Deemed Savings Tables rely on a single CP Factor for each measure
13 type. The demand savings that will occur from different energy efficiency measures is variable
14 by season and the time of day that the coincident peak occurs in each season. The failure to
15 account for that seasonality renders the resulting demand reduction estimates meaningless for
16 at least three seasons based on the MISO PRA.

17 Q. Are the Ameren Missouri TRM and Deemed Savings reasonable?

18 A. No. Any one of the aforementioned issues is cause for concern for the validity
19 of the results of the TRM and the Deemed Savings Tables. Each issue identified exacerbates
20 the overall issue and makes the resources unreliable, or at least, unverifiable. The lack of
21 reasonable citations for thousands of assumptions that have such a large impact on the estimates
22 included in support of Ameren Missouri's MEEIA 4 Plan, but also on the future costs to
23 ratepayers through the EEIC is unacceptable. Staff recommends that the Commission reject

1 both the TRM and Deemed Savings Tables and require that any future use of these documents
2 be accompanied by full documentation of all assumptions including page specific and cell
3 specific citations as applicable.

4 **25 Year Revenue Requirement Impact**

5 Q. Is the 25 Year Revenue Requirement analysis⁴⁵ an accurate reflection of the bill
6 impacts that are likely to result from the MEEIA 4 Plan?

7 A. No. The analysis includes several assumption flaws.

8 Q. What assumption flaws have you identified within the workpaper that supports
9 Ameren Missouri's bill impact analysis?

10 A. First, the workpaper assumes that avoided costs associated with
11 Ameren Missouri's overstated estimates are realized by ratepayers beginning in year one.⁴⁶
12 Even if the MEEIA 4 Plan results in avoided costs, they will not occur anywhere near
13 Ameren Missouri's assumed magnitude and are even less likely to occur in those magnitudes
14 in early years. All of the "Avoided Cost Benefits" also include the assumption flaws discussed
15 in my testimony regarding the TRM and Deemed Savings Tables. Next, the workpapers
16 assumed program costs and earnings opportunity do not account for the likelihood that Ameren
17 Missouri exceeds the requested budget for the MEEIA 4 Plan, nor that Ameren Missouri
18 achieves the maximum earnings opportunity envisioned by Ameren's request. As discussed
19 more thoroughly in Ms. Lange's rebuttal testimony, Ameren Missouri's workpapers and
20 appendices inconsistently apply program costs and earnings opportunities. Finally, the analysis

⁴⁵ See Figure 41 – 25 Year Revenue Requirement Impact of MEEIA 2025-2027 on Page 82 of the Ameren Missouri 2025-27 MEEIA Plan (Revised).

⁴⁶ See the sections of my direct and rebuttal testimonies regarding Avoided Cost and the rebuttal testimony of Sarah L.K. Lange regarding avoided energy costs.

1 assumes the accuracy of the estimated energy and demand savings values. Staff has concerns
2 with the accuracy of the Deemed Savings Tables utilized for those calculations as described in
3 the prior section of my testimony. The measure quantities and the timing of installation of those
4 measures is almost certain to differ from the assumptions utilized in the workpaper.

5 Q. Are there additional issues with the analysis?

6 A. Probably.

7 **Rate impact analysis**

8 Q. Is the rate impact analysis⁴⁷ an accurate reflection of the rate impacts that are
9 likely to result from the MEEIA 4 Plan?

10 A. No. The analysis includes several assumption flaws, mischaracterizations, and
11 ignores the reality of the flow of potential benefits.

12 Q. Do the assumption flaws that you mentioned in the 25 Year Revenue
13 Requirement Impact analysis section exist in Ameren Missouri's Rate impact analysis?

14 A. Yes, but the Rate impact analysis compounds those issues with additional flaws
15 and mischaracterizations. The results are understated and inaccurate representations of the rate
16 impacts that are likely to result from the MEEIA 4 Plan.

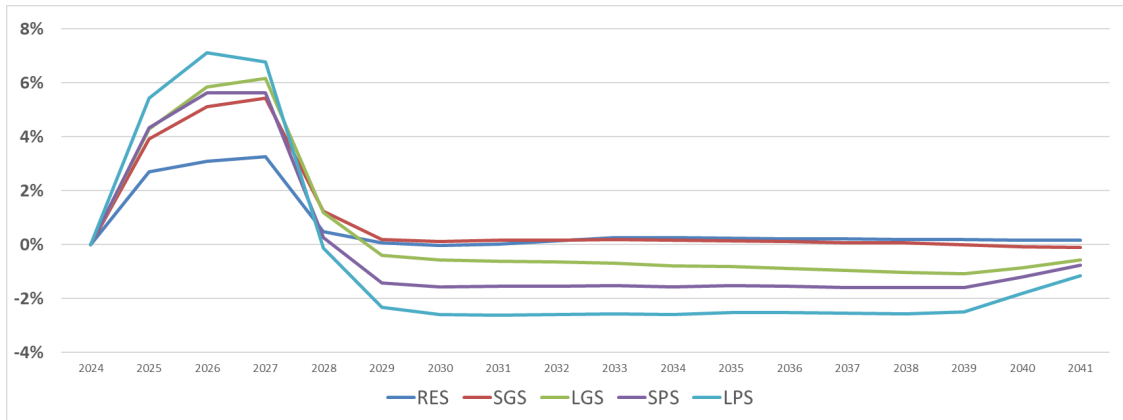
17 Q. How does Ameren Missouri's mischaracterization of avoided cost benefits
18 impact the rate impact analysis.?

19 A. The rate impacts are drastically understated. Figure 8 below is a reproduction
20 of Ameren Missouri's rate impact analysis. Figure 9 below replaces Ameren Missouri's
21 overstated avoided cost benefits with the values included in the Ameren Missouri DSMore files

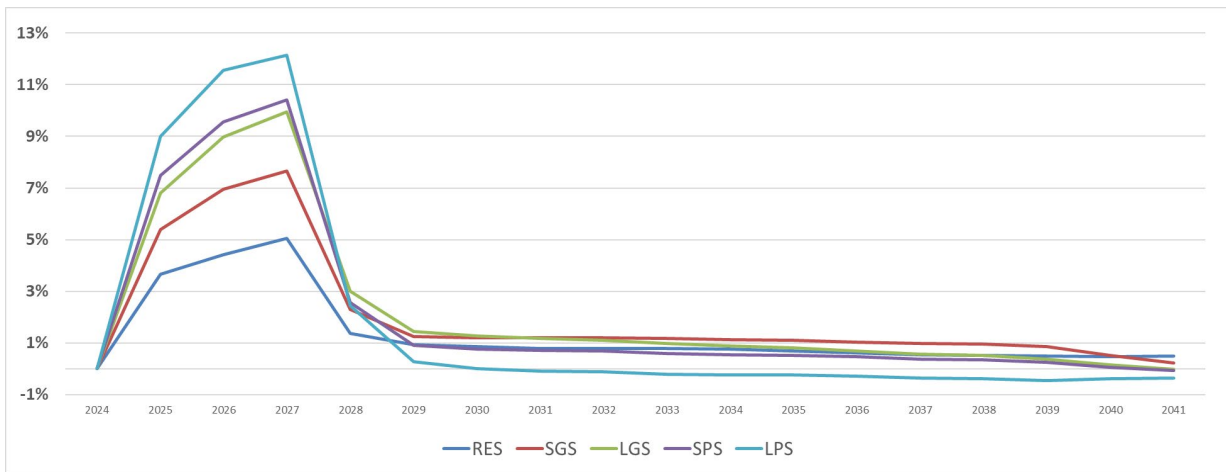
⁴⁷ See Figure 43 – Customer Rate Impacts on Page 84 of the Ameren Missouri 2025-27 MEEIA Plan (Revised).

1 labeled as “Market-Based Avoided Costs” and removing avoided transmission and distribution
2 cost benefits.

3 Figure 8: Ameren Rate Impact Analysis



4
5 Figure 9: Ameren Rate impact analysis (adjusted for Market Based Capacity Costs)



6
7 Q. Please highlight some of the main distinctions between Figure 8 (Ameren) and
8 Figure 9 (Ameren modified for Market Capacity costs)?

9 A. First, the initial rate impact from the MEEIA 4 Plan is drastically higher in
10 Figure 9 for all classes. The rate impacts included in Figure 8 indicate that rates will return to

1 pre-MEEIA 4 levels for nearly all classes by 2029. However, in Figure 9, the rate impact for
2 nearly all customer classes⁴⁸ do not return to pre-MEEIA 4 levels until 2040.

3 Q. Are the results shown in Figure 9 reliable representations of the expected rate
4 impacts of the MEEIA 4 Plan?

5 A. Unfortunately, no. Figure 9 still includes several unreasonable assumptions.
6 However, Figure 9 does provide an important piece of context for the Commission to consider.
7 Overstating benefits has a dramatic impact on ratepayers. Implementing programs that are
8 justified by “benefits” that are unverifiable and will never accrue will result in
9 ratepayer detriment.

10 Q. What are some of the additional mischaracterizations or assumptions flaws
11 included in the rate impact analysis?

12 A. Ameren Missouri’s Rate Impact analysis assumes that avoided cost benefits will
13 directly offset the EEIC rate impacts on a per kWh basis. Only costs, not benefits, will flow
14 through Ameren Missouri’s proposed EEIC. Furthermore, since Ameren Missouri’s assumed
15 avoided cost benefits are drastically overstated, the rate impact analysis understates the rate
16 impacts that are likely to occur as a result of its MEEIA 4 Plan.

17 The analysis assumes the same avoided cost benefits per kWh for all rate classes. This
18 assumption ignores the Fuel Adjustment Clause (“FAC”) interaction that I discussed in my
19 direct testimony in the Section of my rebuttal titled “Failure to account for FAC interaction.”

20 The analysis does not account for the costs of any throughput disincentive costs. These
21 costs will be realized by all ratepayers, except those that successfully opt-out, through the EEIC.

⁴⁸ Large Primary Service (“LPS”) is an outlier in this example.

1 The analysis utilizes IRP assumptions instead of MEEIA 4 Plan specific benefits by
2 class. This assumption is likely due to the inability to differentiate the non-residential measure
3 installations that will occur through implementation of the MEEIA 4 Plan.⁴⁹

4 Q. Does the information in Ameren Missouri's rate impact analysis provide any
5 useful information for the Commission's consideration?

6 A. Yes. As described in the rebuttal testimony of Sarah L.K. Lange, the analysis
7 indicates that even under Ameren Missouri's unrealistic and best-case modeling, ratepayers are
8 worse off with the MEEIA 4 Plan.

9 **AMEREN MISSOURI'S PROPOSED PROGRAMS ARE NOT REASONABLE**

10 **Tariffs**

11 Q. Are the exemplar tariff sheets included in Appendix J of Ameren Missouri's
12 Application reasonable, and should they be approved in this case?

13 A. No. The tariff sheets included in Appendix J should be rejected along with the
14 remainder of the application. However, if the Commission does approve the application, I will
15 provide brief explanations of some of the issues contained within those tariff sheets and why
16 the lack of specificity is problematic and would need to be modified by Ameren prior to being
17 allowed to go into effect.

18 Q. What is the primary concern regarding the proposed tariff sheets?

19 A. The tariff sheets lack the specificity that is necessary to reasonably audit or
20 determine whether the programs are prudently implemented. If approved, at some point in the
21 future Staff will be tasked with conducting a prudence review of the programs. Including

⁴⁹ Ameren Missouri's programs are segmented into Residential and Business Programs. Business Programs are available to multiple non-residential rate classes.

1 detailed requirements within the tariff provides a clear and legally binding framework for
2 reviewing compliance with the approved portfolio. If information is included within the tariff,
3 the review for imprudent actions and expenditures within the context of a prudence review can
4 be more efficiently administered and leaves less room for interpretation of appropriateness after
5 the fact. That is not the case for the Appendix J tariff sheets. Broad language that provides the
6 utility nearly unfettered discretion is inappropriate because the utility is disincentivized from
7 implementing programs in a manner that aligns with ratepayer benefits.

8 Q. Are there simple solutions that would improve the exemplar tariff sheets in
9 Appendix J?

10 A. Yes. Currently the tariff sheets do not include program specific budgets, either
11 in total or by year. Ameren Missouri's MEEIA 4 Plan is premised a series of assumptions,
12 including, but not limited to, the budgets that will be included for each program and how those
13 budgets will be utilized. However, as has been the case for all previous MEEIA cycles, how
14 the budget is actually expended will differ from those used in support of the application. Adding
15 program specific budgets, either by program or by program by year would potentially limit
16 some of this variance while providing a level of flexibility to the utility.

17 Q. Should the tariff sheets include the specific measures that are eligible for each
18 program?

19 A. Yes. Currently most of the program tariff sheets make references to the TRM
20 (Appendices G, H, and I) and the list of incentive ranges (Appendix D) for measures that may
21 be offered at some point during the MEEIA 4 Plan. However, the TRM includes hundreds of
22 measures and many of the assumptions that feed into the calculations of energy and demand
23 savings are either poorly cited, or lack citation. Allowing this level of flexibility for each

1 program is unnecessary, and more importantly, unclear to the ratepayer, the Commission, and
2 Staff. All measures included in the TRM are not appropriate for all of the proposed programs.

3 Q. The tariff sheets included in Appendix J frequently references the Ameren
4 website for details that should be included in the tariff sheets. Are website references a
5 reasonable replacement for the specificity that should be included within the tariff sheets?

6 A. No. Including detailed requirements within the tariff provides a clear and legally
7 binding framework for reviewing compliance with the approved portfolio. Doing so provides
8 clear expectations for ratepayers, Ameren Missouri, implementers, the Commission, and Staff.
9 Furthermore, tariff sheets provide a clear timeframe when conditions should be applied. For
10 example, Appendix J includes the following language:⁵⁰

11 CHANGES IN MEASURES OR INCENTIVES

12 Company may offer the Measures contained in the TRM. The offering
13 of Measures that are not contained in or that do not meet the custom
14 measure definition within Company's TRM must be approved by the
15 Commission. Changes to Measures and inputs contained in the Deemed
16 Savings Table will be completed by following steps 3,4,5,6, 10 & 11 of
17 the 11-step change process. Not all Measures listed in the TRM will be
18 offered at all times. The actual Measures being offered, and Incentives
19 available to customers, will be listed on Company's website,
20 AmerenMissouri.com/EnergyEfficiency. The Measures and Incentives
21 being offered are subject to change. Customers must reference
22 AmerenMissouri.com/EnergyEfficiency or call 800-552-7583 for the list
23 of currently available Measures. The website will expressly state in
24 conspicuous language that the Measures and Incentives are subject to
25 change. Should a Measure or Incentive offering shown on Company's
26 website differ from the corresponding Measure or Incentive offering
27 shown in the currently effective notice filed in File No. EO-2023-0136,
28 the stated Measure or Incentive offering as shown in the currently
29 effective notice shall govern.

30 The language above requires a customer to reference the website to identify currently
31 available measures and does not provide the Commission or Staff transparency on the frequency

⁵⁰ Page 32 of Appendix J to Ameren Missouri's application in this case.

1 of measure availability or incentive level changes, nor the time period that measures are
2 available at each incentive level for future audits. The language included in the excerpt above
3 explicitly recognizes that the incentive and measure offering on the website does not govern.
4 However, Staff is unclear exactly what the term “currently effective notice” means in this
5 context.

6 Staff recommends that if the Commission approves any program associated with
7 the MEEIA 4 Plan, that the Commission, at minimum, order Ameren Missouri to file tariff
8 sheets that include the level of detail included on pages 40 and 41 of my direct testimony.

9 Q. Are there specific tariff sheets that the Commission should review to understand
10 vagueness of Ameren Missouri’s requested approval?

11 A. Yes. I have attached the program tariff sheet from Appendix J for the “Research
12 and Innovation Program” as Schedule JL-r8. The purpose of the program is vague, the program
13 is available to all customer classes apparently at Ameren Missouri’s discretion, it will be
14 implemented by a Program Administrator, and measures filed in this case will be offered at
15 some point during the program period. Additional details will apparently be located on the
16 Ameren website. This is an unreasonable program tariff sheet that does not provide much
17 information to ratepayers or the Commission.

18 Q. Do other program tariff sheets include similar vague language that does little to
19 guide or regulate the implementation of programs?

20 A. Yes. While some of the program sheets provide slightly more information, a
21 common thread among them is vague language. The level of utility discretion offered by the
22 proposed tariff sheets is unreasonable, especially considering the magnitude of costs related to

1 the MEEIA 4 Plan and Ameren Missouri's disincentive to implement programs that
2 meaningfully benefit ratepayers.

3 **DESIGNING A MEEIA COMPLIANT PORTFOLIO**

4 Q. The final section of your direct testimony described the steps that should be
5 taken to design a MEEIA compliant portfolio. Does Ameren Missouri's MEEIA 4 Plan achieve
6 the steps included in your testimony?

7 A. For the most part, no. The result is the request for approval of a plan that is not
8 reasonably expected to meet the requirements of a MEEIA portfolio. Staff recommends that
9 the Commission reject Ameren Missouri's application.

- 10 • Ameren Missouri has not identified specific investments that can be reduced,
11 deferred, or avoided as a result of MEEIA program implementation.⁵¹
12 Reduction, deferral, or avoidance of these investments are the ultimate end-goals
13 of the MEEIA process.
 - 14 ○ Ameren Missouri has not identified the time periods of energy and
15 demand savings that are most likely to coincide with those reductions,
16 deferrals, or avoided investments.
 - 17 ○ The identified time periods that are likely to result in reduced or deferred
18 investments were not utilized to design programs.
 - 19 ○ Ameren Missouri appears to have designed many of the programs around
20 summer demand reductions despite the fact that winter peak demand has
21 been identified as a near term need by the company.

⁵¹ As I discussed in the Section of my rebuttal testimony titled "Avoided capacity Costs", the MEEIA 4 Plan will not defer any supply-side resource.

- 1 • Because specific investments will not be reduced through implementation of the
2 MEEIA 4 Plan, foregone earnings opportunities do not exist for Ameren
3 Missouri's shareholders.
- 4 ○ Ameren Missouri's proposed earnings opportunities are not tied to
5 achievement of reduced shareholder investment opportunities.
- 6 • Ameren Missouri has not demonstrated that the MEEIA 4 Plan will be beneficial
7 to all customers in the customer class in which the programs are proposed,
8 regardless of whether the programs are utilized by all customers. This is a
9 fundamental requirement for any MEEIA portfolio. Furthermore, Ameren
10 Missouri's analyses provided in support of the MEEIA 4 Plan are flawed and do
11 not account for the interaction with the FAC.
- 12 • Ameren Missouri has not provided evidence that indicates that the programs
13 have been designed to maximize ratepayer benefits and minimize free-ridership.
14 In fact, it appears that the programs have been designed in a manner that
15 maintains potential shareholder investment opportunities by not deferring any
16 supply-side investments.
- 17 • Ameren Missouri has not fully developed plans for measurement and
18 verification of demand savings for each program. Free-ridership will likely
19 increase with the availability of millions of federal dollars to Missourians for
20 energy efficiency measures that overlap with the proposed programs. Programs
21 should either be redesigned to minimize the overlap, or evaluation plans should
22 be fully developed and documented prior to Commission approval.

- 1 • The proposed programs are not fully described nor has Ameren Missouri
2 explained how the programs will maximize ratepayer benefits, including those
3 ratepayers that do not participate.
- 4 • The estimation of energy and demand savings estimates are not reasonable, well
5 supported, nor well cited.
- 6 • Ameren Missouri has not designed the programs, nor explained how the end
7 goal of supply-side deferral will be achieved through implementation of the
8 MEEIA 4 Plan.
- 9 • Most importantly, the MEEIA 4 Plan does not comply with all statutory
10 requirements.

11 **CONCLUSION**

12 Q. Please briefly summarize your testimony.

13 A. Identification of specific costs that can be avoided or deferred through energy
14 and demand savings should be the starting point for any MEEIA portfolio. More specifically,
15 investments that can be avoided or deferred are the starting point for determining an earnings
16 opportunity for utility shareholders in return for facilitating ratepayer-funded demand side
17 programs. Analysis of whether a demand-side program is cost-beneficial must include
18 consideration of the extent to which avoided costs (or facilitated capacity revenues) flow
19 through the Ameren Missouri FAC, which complicates the Commission's statutory directive to
20 fairly apportion the costs and benefits of MEEIA among classes. Ameren Missouri's MEEIA 4
21 Plan is unlikely to defer any investment and the company has not provided reasonable evidence
22 that the plan will be beneficial for all rate payers, regardless of participation.

1 It is bad public policy and against the spirit of the MEEIA statute to assume benefits
2 associated with avoided generation, transmission, and distribution investments, and award
3 Ameren Missouri millions of dollars in earnings opportunities for MEEIA programs while the
4 Company is simultaneously seeking a return on investments in generation, transmission, and
5 distribution plant that will not be reduced or avoided as a result of the MEEIA 4 Plan. There is
6 no way that the result of this double compensation could lead to just or reasonable rates and
7 Staff recommends that the Commission prevent this exact scenario from happening by rejecting
8 the application.

9 The objectives of MEEIA are not met by the programs included in Ameren Missouri's
10 MEEIA 4 Plan, the portfolio should be rejected, redesigned, and reassessed with a new
11 application. Staff recommends that the Commission reject both the TRM and Deemed Savings
12 Tables and require that any future use of these documents be accompanied by full
13 documentation of all assumptions including page specific and cell specific citations as
14 applicable.

15 If any program is approved, Staff recommends that the Commission:

- 16 • Reject Ameren Missouri's proposed DSIM and order a mechanism as explained
17 by in the direct testimony of Staff witness Sarah L.K. Lange.
- 18 • Order requires detailed compliance tariff sheets as discussed in the section
19 "Tariff Development" of my direct testimony.⁵²

20 Q. Does this conclude your rebuttal testimony?

21 A. Yes, it does.

⁵² See pages 40-41 of my direct testimony in this case.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a)
Ameren Missouri's 4th Filing to Implement) Case No. EO-2023-0136
Regulatory Changes in Furtherance of Energy)
Efficiency as Allowed by MEEIA)

AFFIDAVIT OF J LUEBBERT

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW J LUEBBERT and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Rebuttal Testimony of J Luebbert*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.




J LUEBBERT

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 23rd day of April 2024.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2025
Commission Number: 12412070



Notary Public

Ameren Missouri's
Response to MPSC Data Request - MPSC
EO-2023-0136
Ameren Missouri's 3rd Filing to Implement Regulatory Changes in Energy Efficiency by
MEEIA

No.: MPSC 0001

Refer to the confidential “Ameren Missouri 2024-26 MEEIA Energy Efficiency Plan” (“Report”) and the associated appendices provided in support of Ameren Missouri’s Application:

1. Provide all workpapers utilized by Ameren Missouri to support the claims, data, figures, tables, and graphics included in the Report and appendices in excel format with links and formulas intact.
2. Provide justification for any assumptions made within the workpapers and citations for any hardcoded numbers.
3. Provide specific citations to the underlying file, tab, and cell for the specific data referenced in each page of the Report and the appendices.
4. Provide the entire document, as well as specific citations to the page and line number, for all references to work products of Ameren Missouri, other Ameren affiliates, or outside entities relied upon for the Report, appendices, and the underlying workpapers. For example, Appendix I refers to numerous sources of information, but does not provide those source documents nor the page numbers where the information relied upon may be found. Data Request submitted by J Luebbert (j.luebbert@psc.mo.gov <<mailto:j.luebbert@psc.mo.gov>>).

RESPONSE

Prepared By: Timothy Via
Title: Manager Energy Efficiency Strategy
Date: 4/14/2023

Ameren Missouri provided the following workpapers to address 1-4 of data request by email with links on April 3, 2023 and April 12, 2023.

- MEEIA 4 Charts and Graphs – 2024-2026 MEEIA Plan Directory v.02 (w/ supporting files)
- DSMore Analysis 2023_3
- MEEIA 4 2024-2026_AMOSubmittalTool_v5_1_Filed_03_27_2023
- MEEIA 2024-26_TD Calc_forecast_2023-02-22_trueup rebasing_Dec EOM final
- Appendix N - Earnings Opportunity Calculator
- MEEIA 4 Foregone Earnings 3-yr

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

In the Matter of Union Electric Company)
d/b/a Ameren Missouri’s 4th Filing to)
Implement Regulatory Changes in Furtherance) File No. EO-2023-0136
of Energy Efficiency as Allowed by MEEIA.)

JOINT STATUS REPORT

COMES NOW Union Electric Company d/b/a Ameren Missouri (“Ameren Missouri”), Staff of the Missouri Public Service Commission (“Staff” and “Commission,” respectively), the Office of Public Counsel (“OPC”), Renew Missouri Advocates d/b/a Renew Missouri (“Renew Missouri”), Natural Resources Defense Council (“NRDC”), and Midwest Energy Consumers Group (“MECG”),¹ collectively, the “Parties,” and jointly propose an extension to file a procedural schedule and requirements for approval by the Commission.

1. On May 2, 2023, Ameren Missouri, on behalf of itself and the parties to this proceeding, filed a request for extra time to propose a schedule in this docket and requested leave to file a status report if more time was needed to develop a schedule.

2. The Parties are close to reaching a Stipulation and Settlement to extend Ameren Missouri's current MEEIA 3 Plan for 2024 and will file the Stipulation and Settlement in EO-2018-0211.

3. The Parties are still discussing a schedule and have reached an agreement on the proposed workshop process. The Parties agree on the following workshop process:

- Ameren Missouri and Staff along with interested stakeholders shall conduct a workshop to walk through the Company workpapers and a selected list of data request responses, listed in Attachment A, and Staff and stakeholders will have an opportunity to work through an index and citing method for Ameren Missouri to

¹ The Joint Filing was sent to all parties to allow for the opportunity to sign the Joint Status report. At the time of this filing, Ameren Missouri did not hear back from Consumers Council of Missouri (“Consumers Council”).

reasonably index and cite workpapers. If feasible, Ameren Missouri shall have 30 days to index and cite workpapers and provide relevant information or clarification as necessary to the Attachment A data requests. To the extent possible, workpapers cells and data requests figures and information shall cite to a linked or otherwise provided workpaper or primary source, or as applicable, Ameren Missouri shall indicate that there is no supporting workpaper or source for a figure. The same process shall apply to data received by Ameren Missouri from contractors, consultants, and other partners whose data is used to directly support or is underlying Ameren Missouri's application. Illustrative examples are provided in Attachment A. Within a week of providing indexed and cited work papers and updating any Attachment A data requests as necessary, Staff, OPC, and interested stakeholders shall meet to discuss workpapers, primary sources, assumptions, and other supporting data.

- Additional workshops will be conducted to discuss: (1) Questions regarding MEEIA 4 Plan documents and analysis; (2) Ameren Missouri's upcoming IRP filing; (3) new IRA guidance and impact to MEEIA; and (4) other topics including but not limited to MISO Planning Reserve Auction, Time of Use Rates.
- Ameren Missouri and Staff along with interested stakeholders will conduct workshops to allow parties to follow-up on data request responses and discuss any supporting documentation. The workshops shall continue until all discovery concerns are exhausted or the filing of testimony, whichever is earliest.
- After the workshops are concluded Ameren Missouri shall file an amended MEEIA 4 Application and address whether the original filing was impacted by the issues raised at the workshops. If there are any material changes to the original application, Ameren Missouri shall highlight in its application any material changes from its original application and the reason behind any material changes, as well as provide updated supporting workpapers, in excel format with links and formulas intact, and updated responses to data requests incorporating such changes.

4. The Parties continue to discuss an agreed upon procedural schedule. If Parties have reached an agreed upon schedule, it will be filed with the Commission. If an agreed upon schedule is not reached and filed by August 16, 2023, the Parties will file another status report.

WHEREFORE, the Signatories to this pleading request the Commission allow an extension to file a proposed schedule or status report on August 16, 2023.

Respectfully submitted,

/s/ Jennifer S. Moore

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**ATTORNEYS FOR NATURAL
RESOURCES DEFENSE COUNCIL**

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the foregoing was served on the Staff of the Commission and the Office of the Public Counsel via electronic mail (e-mail) on this 10th of July 2023.

/s/ Jennifer S. Moore
Jennifer S. Moore

Attachment A

List of Initial Workpapers Data Requests to Review, Update, and Discuss

1. DSMORE files
2. MEEIA 4 2024-2026 _AMOSubmittalTool_v5_1_Filed_03_27_2023.xlsx
3. 3-YR MPS Data 2.27.23.xls
4. IRP Preferred Plan: Appendix F - Deliverable and IRP Document.xls
5. Data Request 1
6. Data Request 2.1
7. Data Request 13
8. Data Request 64
9. Data Request 66
10. Data Request 67
11. Data Request 68
12. Data Request 70
13. Data Request 71
14. Data Request 80
15. Data Request 81

Source Tracing Examples

As much of data supporting an application is interconnected, and analysis of final results such as cost effectiveness are based on the resulting individual analyses of incremental costs, incentive payments, avoided cost, and energy and demand savings, all figures, numbers, and data should have a clearly traceable route to a originating source, if one exists. To illustrate how this would work practically, the following examples are provided, but can be applied to any workpaper or data request.

Data Request Example

Data Request 67 stated:

In reference to Figure 42 in the MEEIA 2024-26 plan, please provide the supporting workpaper used to create the figure. If the workpaper has already been provided, please provide the workpaper name, tab(s), row(s), column(s), and cell(s) that contain the information.

Ameren Missouri's Response stated:

Figure 42 supporting workpaper is provided in file: MEEIA 4 2024-26-net-bill-graph_2023_01_20.xls; see Rider Calculation tab.

In the Rider Calculation tab, the kWh per rate class is from summary tab, when one follows that formula to IRP tab, that calculation has hardcoded numbers and references the 2020 IRP. The hardcoded numbers will need to be supported by a workpaper, with formulas intact and further workpapers or primary sources for any hardcoded values until the lineage of all figures and data can be noted as supported by workpaper, primary source, or no underlying analysis or source. To the extent practicable, information within workbooks should be linked, and when not, citations shall be cell specific.

This will then need to be repeated for the program costs per rate class from PPC tab, when one follows the formula to PC input tab that has hardcoded numbers.

Finally, it will need to be repeated for the earning opportunity from EO tab, when one follows that formula within tab leads to hardcoded numbers.

Workpaper Example

For example, starting with MEEIA 4 2024-2026_AMOSubmittalTool_v5_1_Filed_03_27_2023.xlsx, Tab “Efficient Products”

The expected gross kWh is calculated based on assumed measure count, kWh savings/measure/year, and realization rate and the expected gross kW calculated based on assumed measure count, kW savings/measure/year, and realization rate.

When trying to find the underlying support for the kWh savings/measure/year:

- Cell F20:F28 refers to a chart on tab “Measure INDEX PY2024”.
 - Column I on “Measure INDEX PY2024” is hardcoded.

For Column I, the hardcoded numbers will need to be supported by a workpaper, with formulas intact and further workpapers or primary sources for any hardcoded values until the lineage of all figures and data can be noted as supported by workpaper, primary source, or no underlying analysis or source. To the extent practicable, information within workbooks should be linked, and when not, citations shall be cell specific.

When trying to find the underlying support for the kW savings/measure/year

- Cell G20:F28 refers to a chart on tab “Measure INDEX PY2024”.
 - Column O on “Measure INDEX PY2024” is hardcoded.

The process outlined above will need to be done for all figures in Column O.

When trying to find the underlying support for Measure life

- Cell J20:J28 refers to a chart on tab “Measure INDEX PY2024”.
 - Column Z on “Measure INDEX PY2024” is hardcoded.

The process outlined above will need to be done for all figures in Column Z.

When trying to find the underlying support for the incremental cost per unit:

- Cell K20:K28 refers to a chart on tab “Measure INDEX PY2024”.
 - Column AB on “Measure INDEX PY2024” is hardcoded.

The process outlined above will need to be done for all figures in Column AB.

When trying to find the underlying support for Coincident Peak factor (used to determine demand saving):

- Cell AI20:AI28 refers to a chart on tab “CP Factors”.
 - Column B on “CP Factors” is hardcoded

The process outlined above will need to be done for all figures in Column B.

Ameren Missouri's
Response to MPSC Data Request - MPSC
EO-2023-0136
Ameren Missouri's 3rd Filing to Implement Regulatory Changes in Energy Efficiency by
MEEIA

No.: MPSC 0124

1. Refer to the confidential “Ameren Missouri 2025-27 MEEIA Energy Efficiency Plan (Revised)” and the associated appendices provided in support of Ameren Missouri’s Application 1. Provide justification for any assumptions made within the workpapers and citations for any hardcoded numbers 2. Provide the entire document, as well as specific citations to the page and line number, for all references to work products of Ameren Missouri, other Ameren affiliates, or outside entities relied upon for the Report, appendices, and the underlying workpapers. For example, Appendix I refers to numerous sources of information, but does not provide those source documents nor the page numbers where the information relied upon may be found. Data Request submitted by J Luebbert (J.Luebbert@psc.mo.gov <<mailto:J.Luebbert@psc.mo.gov>>).

RESPONSE

Prepared By: Timothy Via
Title: Manager Energy Efficiency Strategy
Date: March 8, 2024

Ameren Missouri has worked to update and include links and specific citations with workpapers focusing on newly created documents specific to the MEEIA 4 2025-27 application. We have held workshops/discussions (October 18, 2023, January 10, 2024 and February 29, 2024) with stakeholders to walk through items such as the Submittal Tool and DSMore to answer questions around the documents and help stakeholders become more familiar with how they operate, the inputs and outputs, and improving citations in many instances, along with providing a new directory of all the tables and figures in the MEEIA 4 2025-27 Application with citations throughout.

The Technical Resource Manual (TRM) itself mentioned specifically in this data request evolved significantly since its inception in 2018 shifting from a single word document (see attached example: TRM Appendix Changes 11_01_2017_Clean V2.docx) that simply provided tables of measures & attributes with little or no cited source documentation. The Ameren Missouri 2019 MEEIA filing utilized the proposed statewide collaborative TRM (MO Statewide TRM ~ 2017) effort, led by Missouri Department of Natural Resources (MO DNR) who engaged Vermont Energy Investment Corporation (VEIC) to lead the technical effort. Ameren Missouri made use of that collaborative work led by MO DNR and VEIC because it incorporated Missouri specific data

that was created by a well-known vendor across the industry to support Appendices G, H, and I. Ameren Missouri added an Excel-based document (Appendix F, initiated in the Ameren Missouri 2019-21 MEEIA application) with a more transparent view into the savings calculations by providing executable energy savings calculations and formulas rather than just a written and pictorial form of those values in a Microsoft Word document. Appendices F, G, H, and I was all included in Ameren Missouri's MEEIA 2025-2027 Plan ([File No. EO-2023-0136](#)). Ameren Missouri believed this added transparency with Stakeholders and Evaluators in providing a TRM that originated from a reputable vendor in the industry along with an executable excel format to show live calculations of savings and logs of the historical inputs updated by the third-party evaluator based on each subsequent evaluation effort, which is more detailed than in other TRM's.

Ameren Missouri retained a large group of source files (~250 files) that were identified at the time of the original VEIC effort that could be shared if desired. These files support Appendices H & I ([File No. EO-2023-0136](#)) for a large portion of the weblinks and supporting files but do not identify the specific page number or paragraph to every file as requested.

Stemming from this data request, Ameren Missouri conducted an initial review of the web links in Appendices H & I, where we identified many source links that may have been moved to a different website location or in some cases have been removed from the web. For example, the Energy Star® website has energy calculators that are not at the same web address as they were in 2017, and this alone makes up approximately 25% of the broken web links in Appendix I. We have created a document for Appendices H and I to summarize the weblinks included in each and identified a new location or alternate one for a majority of them. In other cases, we found similar sources in different locations to support a specific input. See attached files: MPSC 0124_ Links in Appendix H _ BUSINESS TRM.xlsx & MPSC 0124_ Links in Appendix I _ RESIDENTIAL TRM.xlsx

It is also important to note that some measures in the Ameren Missouri TRM are not used in our programs, and many have very minimal impacts on the total portfolio savings. Also, many of the measures, especially those on the Business programs, allow for use of actual data inputs such as the actual base and efficient wattages of bulbs in place of an assumed average TRM input to improve precision of results based on customer specific data. Our third-party evaluators focus on the most impactful programs and measures within our portfolio both during evaluation efforts to validate the savings values and data inputs behind them and through their work updating values within the annual TRM update process.

Since 2019 the annual TRM updates have been led by Ameren Missouri's third-party independent Evaluators based on the prior-year program evaluation workpapers in addition to approving new measures suggested by implementors or adding adjustments to existing measures based on changing codes, standards, and/or new/better information. The Evaluators make updates to measures most impactful to the program savings and use their professional judgement to update actual inputs from field data they obtain through the programs being evaluated along with their experience in updating other TRM's across the country.

Additionally, if Ameren Missouri adds a new standard measure to its programs, we use the 11-step process that is reviewed by the third-party Evaluators before a notification is provided to

stakeholders. The TRM as a whole is updated annually and some combination of those documents (Appendices F, G, H & I) are filed, reviewed by Staff, and approved by the Missouri Public Service Commission at least once per year since 2018.

Therefore, prior to this data request, Ameren Missouri has had no reason to believe that the TRM documentation was a concern of our stakeholders. Ameren Missouri filed within its MEEIA 2025-27 application the same TRM document as approved by stakeholders as recently as October 25, 2023. We were making use of the independent third-party evaluator with experience working with TRM's in Illinois and across the country to lead this effort and efficiently identify areas of focus for potential updates. The TRM structure and third-party intervention in the process was understood to be working well, absent the web links noted above that we intend to review further and will plan address in our next TRM update in 2024.

PROGRAM	Residential Efficient Products Program
Objective	The objective of the Residential Efficient Products (“REP”) Program is to encourage customers to purchase EE products simultaneously increasing the market availability of EE products while helping customers conserve energy and decrease energy costs.
Target Market	All residential customers within the Ameren Missouri service territory.
Program Schedule	The program will launch January 1, 2025, and run through December 31, 2027.
Program Description	The REP Program is meant to be an umbrella program, incorporating various program partners, products, and program delivery strategies. Some aspects of the program will be encouraged through an on-line marketplace and mail-in and instant rebates, while others may be packaged together and delivered through program partners and contractors or through a midstream rebate approach. To the extent possible, Ameren Missouri will attempt to leverage opportunities with both federal and state programs.
Eligible Measures & Services	<p>Measures may consist of qualified ENERGY STAR® appliances, power management, dehumidifiers, bathroom vent fans, freezers, water heaters, window air conditioning units, connected home products and smart thermostats. As the REP Program evolves and ongoing EM&V activities track program performance, the Company may revise eligible measures, incentive amounts or qualification criteria for appliances as the market dictates.</p> <p>A complete list of eligible program measures is included in Appendix D – Incentive Ranges.</p>
Implementation Strategy	<p>The Company will hire a Contractor to administer this program. Customers will purchase some program-qualified products at participating retailers, or online through Ameren Missouri’s marketplace or other retail websites. Once the rebate request has been received by the program, it is processed, and a rebate check will be sent to the customer or participating partner as appropriate.</p> <p>The implementation team will use free ridership and spillover data determined annually by an independent evaluator to make program improvements to minimize free ridership and maximize spillover. Program improvements could include things such as adjusting incentives, improving marketing, and adding or removing measures.</p>
Market Transformation Elements	<p>The program will include education elements designed to educate customers on the benefits of energy efficiency and will provide incentives to reduce the upfront cost of energy efficient products which can be a barrier to the adoption of energy efficiency absent the program.</p> <p>The plan for estimating, measuring, and verifying energy and demand savings the market transformation efforts is included in Appendix E – EM&V Plan.</p>
Program Response to Evolving Markets	Due to the unpredictable and changing nature of the marketplace, the Company and its contractors will maintain flexibility within the program. Various market factors, including new codes and standards, energy legislation, and consumer attitudinal shifts, will affect the measure mix, and program delivery strategy. The Company will alter incentive levels and qualification criteria as necessary to ensure program achieves its energy savings goals. If, through changing market conditions, it is determined the program will no longer provide energy savings or drive value to the customer, the Company will take the necessary steps to withdraw the program from the portfolio and reallocate funds and energy savings into the other programs.

<p>Promotional/ Marketing Strategy</p>	<p>The Company and its implementation contractors will follow a multi-faceted approach to marketing highly efficient appliances, electronics, and products with an emphasis on ENERGY STAR®. In addition to direct advertising targeted at residential customers, the Company expects to leverage national ENERGY STAR® marketing campaigns and to work collaboratively with industry partners and trade allies at all levels of the retail supply chain.</p> <p>Marketing activities include but are not limited to:</p> <ul style="list-style-type: none"> • Retail marketing and POP displays; • TV, radio, print. Billboard advertising; • The Ameren Missouri website; • Leveraging marketing budgets through cooperative promotions with retailers, distributors, contractors, and manufacturers including special events at retail stores and in communities; • Training and supporting retail sales staffs so they are able to tell customers about the benefits of ENERGY STAR® appliances and products and to help customers choose the best products to meet their needs; and • Utilizing the knowledge and experience of the contractor trade ally network to promote the installation of high-efficiency products and educate the customer on energy efficiency. <p>Additional strategies may be deployed to maximize spillover.</p>																																													
<p>EM&V Requirements</p>	<p>Detailed plans to analyze program performance through EM&V can be found in Appendix E - Sample Evaluation Plans.</p>																																													
<p>Program Design Flexibility</p>	<p>At their core, energy efficiency programs are marketing programs that must respond to a changing marketplace and keep up with new technology offerings, delivery channels, and customer preferences. The Change Process will allow stakeholder input on program changes and facilitate successful implementation of necessary changes. This level of flexibility at the implementation team level is important to make appropriate modifications to respond to program and market condition changes.</p>																																													
<p>Estimated Participation</p>	<table border="1" data-bbox="586 1024 1372 1470"> <thead> <tr> <th colspan="5">Residential Efficient Products – Estimated Annual Net MWh</th> </tr> <tr> <th>End-Use</th> <th>2025</th> <th>2026</th> <th>2027</th> <th>3 Year Total</th> </tr> </thead> <tbody> <tr> <td>Cooling RES</td> <td>3,434</td> <td>3,580</td> <td>3,687</td> <td>10,701</td> </tr> <tr> <td>Freezer RES</td> <td>3</td> <td>3</td> <td>3</td> <td>10</td> </tr> <tr> <td>Heating RES</td> <td>2,871</td> <td>3,012</td> <td>3,103</td> <td>8,985</td> </tr> <tr> <td>HVAC RES</td> <td>1,168</td> <td>1,225</td> <td>1,262</td> <td>3,655</td> </tr> <tr> <td>Misc RES</td> <td>1,036</td> <td>1,067</td> <td>1,099</td> <td>3,201</td> </tr> <tr> <td>Water Heating RES</td> <td>1,230</td> <td>1,322</td> <td>1,423</td> <td>3,975</td> </tr> <tr> <td>Total</td> <td>9,742</td> <td>10,209</td> <td>10,576</td> <td>30,527</td> </tr> </tbody> </table>	Residential Efficient Products – Estimated Annual Net MWh					End-Use	2025	2026	2027	3 Year Total	Cooling RES	3,434	3,580	3,687	10,701	Freezer RES	3	3	3	10	Heating RES	2,871	3,012	3,103	8,985	HVAC RES	1,168	1,225	1,262	3,655	Misc RES	1,036	1,067	1,099	3,201	Water Heating RES	1,230	1,322	1,423	3,975	Total	9,742	10,209	10,576	30,527
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Ameren Missouri's
Response to MPSC Data Request - MPSC
EO-2023-0136

Ameren Missouri's 3rd Filing to Implement Regulatory Changes in Energy Efficiency by
MEEIA

No.: MPSC 0143

Please refer to workpaper “DSMore 2018 Aggregation Results - ALL - ALL - ALL - ALLwEO,” at tab “Financial Reports.” (a) Please explain the difference between the “Market-Based Avoided Costs (Net Free Riders/Drop-Out, Losses Included) for Today Scenario,” and the “Market-Based Avoided Costs (Net Free Riders/Drop-Out, Losses Included) for Option Value,” and the “Cost-Based Avoided Costs (Net Free Riders/Drop-Out, Losses Included)” with regard to “Adders/Capacity” by indicated year. (b) Please provide the interest rate used to present-value the “Avoided Electric Capacity” presented on the “Test Results,” tab. (c) Please explain whether the “cost based” “Avoided Adders/Capacity” values presented on the “Test Results,” tab include or exclude each of the following: variable O&M, fixed O&M, property taxes, fuel costs, emissions allowances, fuel adders, interchange value of gross energy generated, interchange value of net energy generated, depreciation expense, cost of debt, cost of equity, income tax expense, offset for ADIT, PISA carrying costs. Please explain any other component not listed. . (d) Please identify which “market-based” “Avoided Adders/Capacity” values are presented on the “Test Results,” tab. (e) For each “market-based” “Avoided Adders/Capacity”, please identify whether the values presented on the “Financial Reports tab include or exclude each of the following: variable O&M, fixed O&M, property taxes, fuel costs, emissions allowances, fuel adders, interchange value of gross energy generated, interchange value of net energy generated depreciation expense, cost of debt, cost of equity, income tax expense, offset for ADIT, PISA carrying costs. Please explain any other component not listed. (e) Please fully explain whether either the “market-based” or “cost-based” capacity values presented are intended to reflect the current MISO seasonal construct and if so, explain how. (f) Please explain what type of generation is represented by the “cost-based” capacity values, for example, a Combustion Turbine, a Combined Cycle, a Solar farm, or some other generation source or combination of generation sources. (g) Please explain whether the answers provided above are applicable to other “DSMore 2018 Aggregation Results” files provided as workpapers in this case, and if not, please explain any differences

RESPONSE

Prepared By: Jeff Brueggemann
Title: Senior Analyst
Date: 04/08/2024

Subject to the Company's objection provided on March 29, 2024, the Company states the following:

- A. Ameren Missouri has not used nor verified the Market Based results from DSMORE as an indicator for cost effectiveness in current or past MEEIA filings therefore these results are irrelevant to the current MEEIA Application. The Cost based avoided cost approach uses the energy, capacity, and transmission and distribution (T&D) cost that are provided within the DSMORE templates within rows 132-144 of the Utility Input Sheet, which are the avoided costs from the 2023 IRP. Avoided capacity cost is the cost of new entry (CONE) value published by MISO.
- B. The interest rate used to present value the results in DSMORE is a Weighted Average Cost of Capital (WACC) Rate as used in the 2023 IRP (6.86%) which can be found in any of the DSMORE templates - See "Utility Input" tab (cells N3:R14).
- C. Avoided capacity costs referred to in part C are the CONE prices published by MISO as provided to stakeholders during the Market Potential Study. MISO includes capital requirements (cost of debt, return on equity, book/tax depreciation, income tax, property taxes) and O&M costs in determining the CONE by local zone.
- D. Ameren Missouri has not used nor verified the Market Based results from DSMORE in current or past MEEIA filings therefore these results are irrelevant to the current MEEIA Application.
- E. (1) In regards to Market Based Cost Ameren Missouri has not used these results for our MEEIA application therefore we don't have any applicable assumptions around those results.

(2) The "Cost Based" capacity value is the only DSMORE output used in our MEEIA application and it does not reflect the current MISO seasonal construct.
- F. MISO uses a combustion turbine for determining CONE values.
- G. Yes, the answers above apply to the other "DSMORE 2018 Results."

Case No. EO-2023-0136

SCHEDULE JL-r7

HAS BEEN DEEMED

CONFIDENTIAL

IN ITS ENTIRETY

UNION ELECTRIC COMPANY

ELECTRIC SERVICE

MO.P.S.C. SCHEDULE NO. 6

1st Revised

SHEET NO. 179

CANCELLING MO.P.S.C. SCHEDULE NO. 6

Original

SHEET NO. 179

APPLYING TO _____

MISSOURI SERVICE AREA

ENERGY EFFICIENCY MEEIA 2025-27

*

Research and Innovation Program

PURPOSE

The Research and Testing Program (Program) is designed to focus on research and innovation of new concepts and improving current programs to drive better results. The Program will provide Company with a screening and evaluation mechanism to accomplish this and allow Company flexibility to explore and research various ideas and concepts outside of the traditional DSM model structure.

AVAILABILITY

This Program is available to customers receiving service under any generally available residential Service Classification 1(M) and is voluntary and available to all customers receiving electric service under Service Classifications Small General Service Rate 2 (M), Large General Service Rate 3(M), Small Primary Service Rate 4 (M), or Large Primary Service Rate 11(M) that also meet the Standard Incentive Program Provisions below.

There will be a variation of customer which is dependent on a particular concept's scope and customer segment applicability.

PROGRAM PROVISIONS

The Program Administrator will implement this Program and provide the necessary services to effectively manage the Program and to strive to attain the energy and demand savings targets.

ELIGIBLE MEASURES AND INCENTIVES

Measures filed in File No. EO-2023-0136 are eligible for Program benefits and Incentives and may be offered during the Program Period. Eligible Incentives paid directly to customers can be found at www.amerenmissourisavings.com for residential customers and www.ameren.com/missouri/business/energy-efficiency for nonresidential customers.

*Indicates Addition.

DATE OF ISSUE _____

DATE EFFECTIVE _____

ISSUED BY _____

Mark C. Birk

Chairman & President

St. Louis, Missouri

NAME OF OFFICER

TITLE

ADDRESS