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MISSOURI PUBLIC SERVICE COMMISSION

INDUSTRY ANALYSIS DIVISION

TARIFF/RATE DESIGN DEPARTMENT

DIRECT TESTIMONY

OF

SARAH L.K. LANGE

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

CASE NO. EO-2023-0136

Jefferson City, Missouri
March 2024

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3 **SARAH L.K. LANGE**

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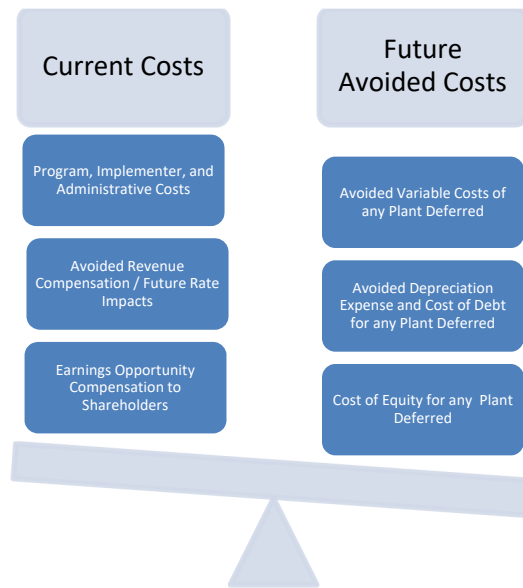
25 **CONCLUSION29**

1 In the event the Commission does authorize a fourth Ameren Missouri MEEIA cycle,
2 the second section of my testimony proposes a framework for a mechanism to “[e]nsure that
3 utility financial incentives are aligned with helping customers use energy more efficiently and
4 in a manner that sustains or enhances utility customers' incentives to use energy more
5 efficiently.”² In the event the Commission does authorize a fourth Ameren Missouri MEEIA
6 cycle, the potential of an earnings opportunity mechanism is addressed by Mr. Fortson, and the
7 development of targeted programs is addressed by Mr. J Luebbert.

8 Overview of MEEIA

9 Q. What is the concept behind MEEIA?

10 A. The concept behind MEEIA is that all customers pay certain amounts today with
11 an expectation that all customers will avoid potential costs in the future.

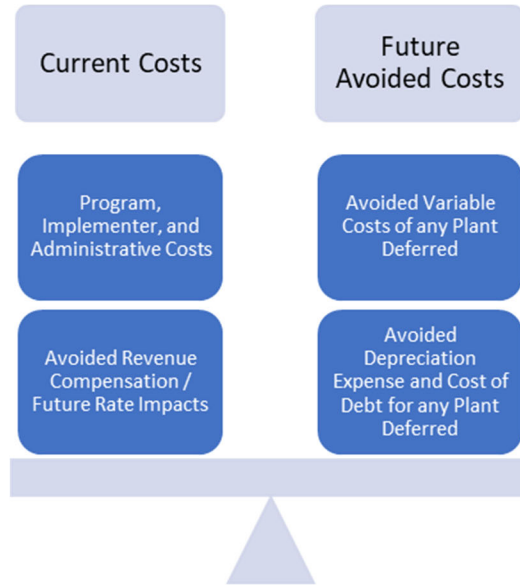


13
14 One of the potential costs to be avoided in the future is the return on equity portion of
15 the capital costs of a potential generation facility. The MEEIA statute allows a utility to be

² 393.1075.3.(3).

1 compensated today for the reduction in opportunity to earn a return on investment in the future.
2 Ratepayer compensation of this “Earnings Opportunity” cancels out this element from each side
3 of the balance.

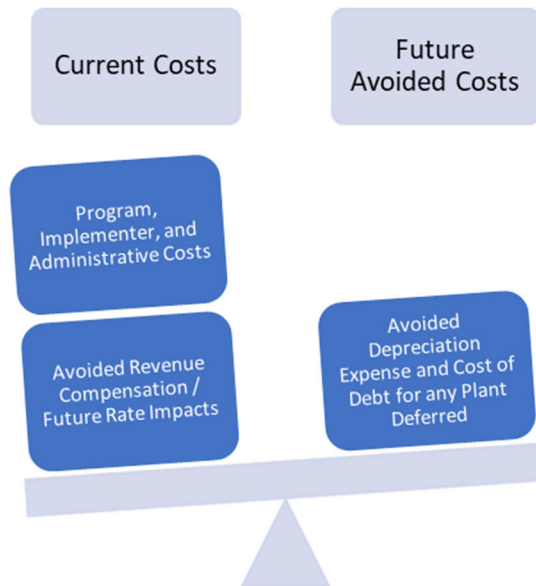
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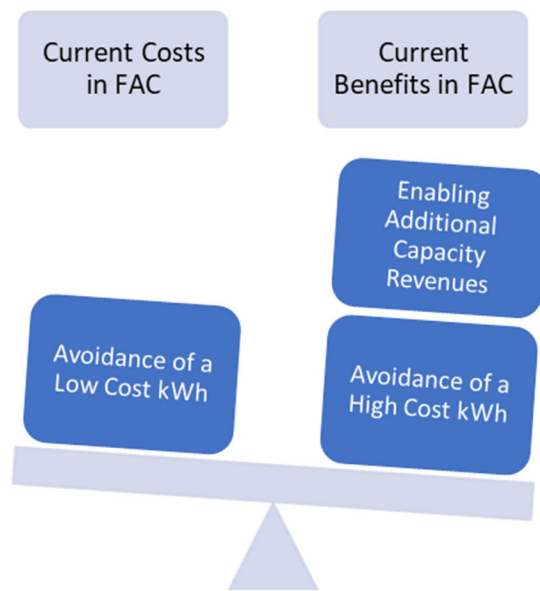
6 Renewable energy investments have very low variable costs. If the MEEIA program
7 avoids or delays a renewable investment, few or any costs can be avoided.

8



9

1 However, the operation of the fuel adjustment clause (FAC) is both a complication and
2 an opportunity to this analysis. If a high cost kWh is avoided, all ratepayers benefit without
3 waiting years for an avoided plant. If a demand-side measure reduces Ameren Missouri's
4 capacity requirements, all ratepayers benefit through additional capacity revenues. However,
5 if a low-cost kWh is avoided, the average cost of fuel and purchased power increases, and
6 ratepayers will bear that cost.



8
9
10 Measure-by-measure analysis is needed to determine if the FAC operation results in
11 current additional costs to a MEEIA cycle to weigh against potential future benefits, or if the
12 result is an additional current benefit to ratepayers of a potential MEEIA cycle. Additionally,
13 the Commission must consider which ratepayers pay the costs of MEEIA, and which
14 ratepayers receive the benefits of MEEIA that are passed through the FAC, to ensure that
15 fairness is expected.

1 **Summary of Recommendations**

2 Q. If the Commission does authorize a fourth MEEIA cycle for Ameren Missouri,
3 what mechanisms are appropriate for addressing utility’s financial incentive to facilitate
4 ratepayer-funded demand side programs?

5 A. For Residential and Small General Service (SGS) customers, Staff recommends
6 creation of a new avoided revenues mechanism based on the net variable revenues established
7 in File No. ER-2022-0237, to be updated in future general rate cases. Staff’s proposed
8 mechanism tracks actual net variable revenue for each of these classes against the rate case
9 level, and reconciles the difference through the MEEIA rate charged to these classes.

10 For other classes, Staff recommends continued use of the Net Throughput Disincentive
11 mechanism, with refinements.

12 **MEEIA ENABLING STATUTE**

13 Q. What is the "Missouri Energy Efficiency Investment Act?"

14 A. Section 393.1075 RSMo is the “Missouri Energy Efficiency Investment Act,”
15 better known as MEEIA. This statute authorizes MEEIA cycles. It requires the Commission
16 to permit electric corporations to implement programs the Commission has approved, with a
17 goal of achieving all cost-effective demand-side savings.³ A package of programs is only
18 eligible under MEEIA if the programs are (1) approved by the Commission, (2) result in energy
19 or demand savings and, (3) are beneficial to all customers in the customer class in which the
20 programs are proposed, regardless of whether the programs are utilized by all customers.⁴
21 Additional details are discussed throughout this testimony.

³ 393.1075.4.

⁴ 393.1075.4.

1 Essentially, if a utility presents a package of demand side programs that the
2 Commission determines are good for all ratepayers in the long term, then the utility gets to
3 charge special rates.

4 Q. In practice, what complications have arisen with this concept?

5 A. In practice,

6 1. It has been difficult to design MEEIA portfolios and mechanisms
7 that are beneficial to all customers in a customer class, regardless of
8 whether the programs are utilized by all customers⁵

9 2. It has been difficult to determine whether any costs have actually
10 been avoided, and whether any earnings opportunities have actually been
11 avoided;

12 3. Utility decisions to recover program costs in real time have left
13 utilities without investment in programs upon which to earn a return; and

14 4. It has been difficult to reasonably align utility financial incentives
15 with helping customers use energy more efficiently.

16 Q. Are utilities required to have MEEIA cycles?

17 A. No.

18 Q. Can utilities offer demand side programs outside of MEEIA cycles?

19 A. Yes. Commission approval of a MEEIA cycle is necessary only for authorization
20 of extraordinary ratemaking authority related to demand side programs. Demand side programs
21 can be ordered through general rate cases.⁶

22 Q. Is the Commission required to authorize MEEIA cycles?

⁵ Similarly, it has been difficult to fairly apportion the costs and benefits of demand-side programs to each customer class. These concepts are discussed throughout this testimony and in the Direct Testimony of Staff expert J Luebbert.

⁶ For example, Liberty Utilities offered energy-efficiency programs without MEEIA until 2018, and Low-Income Weatherization programs are offered outside of MEEIA, and through general rate cases, for all four of Missouri's investor owned electric utilities.

1 A. No. While the MEEIA statute states, “[i]t shall be the policy of the state to
2 value demand-side investments equal to traditional investments in supply and delivery
3 infrastructure and allow recovery of all reasonable and prudent costs of delivering cost-effective
4 demand-side programs,”⁷ and “[t]he commission shall permit electric corporations to implement
5 commission-approved demand-side programs proposed pursuant to this section with a goal of
6 achieving all cost-effective demand-side savings,”⁸ the MEEIA statute specifies:

7 Recovery for such programs shall not be permitted unless the programs
8 are approved by the commission, result in energy or demand savings and
9 are **beneficial to all customers in the customer class in which the**
10 **programs are proposed, regardless of whether the programs are**
11 **utilized by all customers....**⁹

12 While each element of the MEEIA statute has meaning, this language is essentially a
13 threshold for proceeding with a potential MEEIA cycle.

14 **Benefits to all customers**

15 Q. You state above that it has been difficult to design MEEIA portfolios and
16 mechanisms that are beneficial to all customers in a customer class, regardless of whether the
17 programs are utilized by all customers, and that it has been difficult to fairly apportion the costs
18 and benefits of demand-side programs to each customer class. How can a MEEIA cycle benefit
19 all customers, in general?

20 A. The basic premise of MEEIA is that it can make sense for a utility to facilitate
21 programs where all customers pay the cost to help some customers reduce energy consumption,
22 **if** that reduced energy consumption results in avoiding or delaying a costly supply-side
23 resource,¹⁰ or by enabling additional revenue from existing supply-side resources.

⁷ 393.1075.3.

⁸ 393.1075.4.

⁹ 393.1075.4.

¹⁰ A supply-side resource refers to a new power plant.

1 Q. How does a customer who participates in a MEEIA program benefit from
2 MEEIA, if everything works as intended?

3 A. For purposes of this example let's consider an exaggerated hypothetical
4 program, where exactly one customer receives one free thermostat, and that free thermostat
5 enables that customer to change its energy consumption in a way that enables Ameren Missouri
6 to avoid building a new power plant.

7 First, for that MEEIA program participant, that customer has obtained a thermostat,
8 which has a tangible and monetary value. Second, that customer may operate that thermostat
9 in a way that reduces that customer's energy consumption during certain months. That reduced
10 energy consumption will reduce that customer's electric bill for that month, all else being equal.
11 Finally, that customer will benefit from the MEEIA program in the form of future avoided costs
12 associated with the avoidance of building the new power plant.

13 Q. Are any of the benefits for a program participant offset in any way?

14 A. Yes. There are three basic ways that the customer benefits are offset. First, for
15 the literal cost of the thermostat, that participating customer will be paying something like
16 one-millionth of the cost of the thermostat through the MEEIA charge, which appears on
17 customer bills as the Energy Efficiency Investment Charge (EEIC).¹¹ Second, for the bill
18 savings caused by the thermostat, that customer will be paying something like one-millionth of
19 (1) the estimated revenue that Ameren Missouri didn't collect from that customer through the
20 EEIC,¹² and (2) the FAC impact of the changes in overall fuel and purchased power costs of
21 the energy the customer didn't require through the FAC.¹³ Third, for the future avoided costs,

¹¹ This component is typically referred to as "program costs."

¹² This component has been referred to as the "net throughput disincentive" or the "throughput disincentive net-shared-benefit," and will be referred to in this testimony as "avoided revenues."

¹³ See also J Luebbert direct testimony section "MEEIA and the FAC."

1 that customer will be providing something like one-millionth of the value of the return on equity
2 associated with the plant that Ameren Missouri has avoided building through the EEIC.¹⁴ These
3 second and third factors are discussed in greater detail below.

4 Q. How does a customer who does not participate in a MEEIA program benefit
5 from MEEIA under this example?

6 A. That customer will benefit from the MEEIA program in the form of future
7 avoided costs associated with the avoidance of building the new power plant and the subsequent
8 avoidance of those costs in future rates.

9 Q. Is the benefit for a non-participant offset in any way?

10 A. Yes. The offsets to those benefits are the same as for the customer who is a
11 participant in the program. The non-participant customer will be paying something like
12 one-millionth of the cost of the thermostat through the EEIC. The non-participating customer
13 will be paying something like one-millionth of (1) the revenue that Ameren Missouri didn't
14 collect from the participating customer through the EEIC, and (2) the FAC impact of the
15 changes in overall fuel and purchased power costs of the energy the participating customer
16 didn't require. Offsetting the future avoided costs, through the EEIC, that non-participating
17 customer will be providing something like one-millionth of the value of the return on equity
18 associated with the plant that Ameren Missouri has avoided building.

¹⁴ This component is typically referred to as the "earnings opportunity." See also J Luebbert testimony section "Earnings Opportunity," and Schedule JL-d2 to Mr. Luebbert's testimony, which provides a walk-through of a supply-side deferral.

1 **Complications of designing a MEEIA cycle that results in benefits to all customers in a**
2 **class regardless of whether the programs are utilized by all customers**

3 Q. What factors complicate designing a MEEIA cycle that results in benefits to all
4 customers regardless of whether the programs are utilized by all customers?

5 A. Essentially, the challenge is to optimize programs that create high enough
6 avoided costs and low enough program costs so all customers are better off socializing the
7 program costs to create collective benefits for all rate payers. Complicating this analysis, the
8 upfront program costs are borne immediately by ratepayers, by class, while the benefits are less
9 certain, and are spread over a longer period of time and across classes.

10 In our example above, one participant received one thermostat, so each customer paid
11 one-millionth of the cost of that one thermostat. In practice, thousands of customers could
12 receive thermostats, so about half of customers could get a thermostat for half price, and about
13 half of customers could pay for half of a thermostat that they did not get.

14 In our example above, one MEEIA measure entirely avoided a supply side resource.
15 In practice, a decade's worth of MEEIA cycles may be modeled to defer a supply-side resource
16 by a few years.¹⁵ Further, when Ameren Missouri models the interrelationship of supply-side
17 resources and demand-side resources in its IRP, it assumes a package of demand-side measures
18 that may or may not remotely resemble the actual "shape" of measures that are implemented
19 pursuant to a given MEEIA cycle. The Commission does not have the benefit of modeled
20 measure-level avoided capacity costs or supply-side deferrals to consider when considering
21 authorization of a MEEIA cycle.

¹⁵ See J Luebbert direct testimony discussion on pages 20-22.

1 Even if a program can be identified where a great deal of energy sales can be avoided
2 by enabling a relatively inexpensive program, three complications exist. As explained in
3 greater detail by Staff expert J Luebbert, first, through operation of the FAC, unless the avoided
4 energy sales are of above-average wholesale cost per kWh, the avoided energy sales will result
5 in an increase in the FAC rates, which is not a benefit for all customers, and will offset any
6 other benefits received by all customers.¹⁶ Second, through the operation of the FAC, even if
7 the avoided energy sales reduce (rather than increase) the FAC rates, those benefits are
8 socialized across all customers. Because avoided energy benefits largely are distributed to
9 customers through the FAC, to the extent that a MEEIA portfolio or cost recovery mechanism
10 does not distribute program costs across customer classes consistent with avoided benefits, the
11 benefits of avoided energy expenses¹⁷ are disproportionately distributed through the FAC.¹⁸

12 Finally, through the operation of an avoided revenue mechanism, non-participants bear
13 the costs of reimbursing the utility for revenue not received from energy not sold to participants.

14 Q. What is significant about the second FAC issue that you mentioned?

15 A. Pursuant to the MEEIA statute, the Commission may only authorize a MEEIA
16 cycle and the extraordinary rate recovery enabled by the MEEIA statute if the programs are
17 “beneficial to all customers in the customer class in which the programs are proposed,
18 regardless of whether the programs are utilized by all customers,”¹⁹ and “In setting rates the
19 commission shall fairly apportion the costs and benefits of demand-side programs to each
20 customer class”.²⁰ If the benefits of a given MEEIA cycle are primarily avoided energy costs,

¹⁶ See J Luebbert direct testimony discussion beginning on page 24.

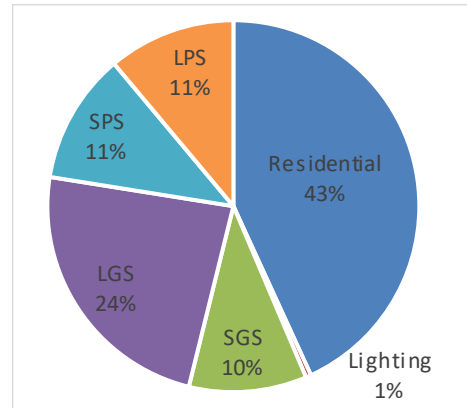
¹⁷ The FAC also distributes enabled MISO capacity revenues.

¹⁸ See J Luebbert direct testimony discussion beginning on page 27.

¹⁹ 393.1075.4.

²⁰ 393.1075.5.

1 then the Commission can only authorize recovery of a DSM program under MEEIA to the
2 extent that adequate benefits remain for non-participants in a given class to offset the cost of
3 the programs and other costs of MEEIA. The relative loss-adjusted energy sales of each
4 Ameren Missouri revenue class are illustrated below.



6
7 Q. Can Staff provide additional discussion on these issues?

8 A. Yes. I will provide some additional testimony on avoided costs and earnings
9 opportunities, and Mr. Luebbert also discusses these concepts in greater detail. Mr. Luebbert
10 provides more detailed testimony on each of these, and related, points:

- 11 1. A decade's worth of MEEIA cycles may be modeled to defer a supply-side
12 resource by a few years, and when modeling the interrelationship of
13 supply-side resources and demand-side resources in its IRP, Ameren Missouri
14 assumes a package of demand-side measures that may not match the measures
15 ultimately offered.²¹
- 16 2. When modeling the Net Present Value of Revenue Requirement in its IRP,
17 avoided capacity costs are assumed to be nearly double expected capacity
18 revenues from supply-side resources and seasonality is not fully addressed,
19 which results in a preference for demand-side resources, all else being equal.²²

²¹ See J Luebbert direct testimony discussion on pages 20-22.

²² See J Luebbert direct testimony discussion on pages 21-22.

1 3. Through operation of the FAC, unless the avoided energy sales are of
2 above-average cost kWh, the avoided energy sales will result in an increase in
3 the FAC rates, which will offset the benefits received by all customers,²³ and
4 through the operation of the FAC, even if the avoided energy sales²⁴ or enable
5 additional capacity revenues²⁵ to reduce (rather than increase) the FAC rates,
6 those benefits are socialized across all customers, while through the operation
7 of an avoided revenue mechanism, non-participants bear the cost to reimburse
8 the utility for revenue not received from energy not sold to participants.

9 **Avoided costs and avoided earnings opportunities**

10 Q. You state above that it has been difficult to determine whether any costs have
11 actually been avoided, and whether any earnings opportunities have actually been avoided.
12 What are avoided costs and what are earnings opportunities?

13 A. At the simplest level, avoided costs are the revenue requirement of a supply-side
14 resource that will not be built, and avoided earnings opportunities are the portion of avoided
15 revenue requirement that shareholders would have received as their return on their investment.

16 Q. Can you provide a non-utility example to illustrate these concepts?

17 A. Yes. Consider a hypothetical farmer who grows carrots. The farmer may expect
18 to pay \$50 in carrot seed, \$50 in tractor fuel to prepare the plot, plant the seed, and harvest the
19 carrots, and \$100 for a farmhand to perform the labor. In our simple example, the farmer
20 expects to spend \$200 in April, and to receive \$500 for the carrot harvest in July.

21 Now, for our simple example, consider a hypothetical carrot-market-stabilization
22 program. The farmer is offered some amount of money to be paid in March to allow the field

²³ See J Luebbert direct testimony discussion beginning on page 24.

²⁴ See J Luebbert direct testimony discussion beginning on page 27.

²⁵ See J Luebbert direct testimony discussion beginning on page 29.

1 to remain fallow. If the farmer does not plant the carrots, the farmer's avoided costs will be
2 \$50 in carrot seed, \$50 in tractor fuel to prepare the plot, plant the seed, and harvest the carrots,
3 and \$100 for a farmhand to perform the labor. If the farmer does not plant the carrots, the
4 farmer will avoid an opportunity to earn the \$300 difference between the cost to plant the carrots
5 and the value of the carrot harvest.

6 Q. Will the farmer require \$300 (or some lesser amount) as payment in March to
7 agree to forgo the carrot crop?

8 A. In this simple hypothetical, a reasonable farmer would consider that the risk of
9 profiting \$300 in July is equivalent to the certainty of a check for some amount less than \$300
10 in March. The factors a reasonable farmer would consider include:

- 11 1. the risks that the July harvest may not occur, or may not be as
12 valuable as assumed,
- 13 2. the time-value of money received in March instead of in July.

14 Q. Is there an important distinction between the perspective of this hypothetical
15 carrot farmer and a utility supply-side resource that is avoided or deferred due to MEEIA?

16 A. Yes. This simple hypothetical is provided from the perspective of the farmer,
17 and so avoided costs and earnings opportunity are separate. However, from the perspective of
18 a commission reviewing a MEEIA application, the return on investment for a facility avoided
19 IS an avoidable cost. BUT, to the extent that ratepayers reimburse the utility for that avoided
20 return on investment through a MEEIA "earnings opportunity" mechanism, the value of the
21 avoided costs is effectively canceled out from the ratepayers' perspective, as it appears on both
22 sides of the scale.

Avoided Costs

1
2 Q. If a supply side investment is made and a power plant is built, what happens to
3 that utility's revenue requirement?

4 A. All else being equal, the revenue requirement would generally increase.

5 Q. How would the revenue requirement generally increase?

6 A. When a power plant is built and included in base rates, ratepayers are responsible
7 for (1) the return of the investment through depreciation expense, (2) the cost of debt to support
8 the investment, (3) the fixed operations and maintenance expenses of the plant, including
9 property taxes, (4) the variable operations and maintenance expenses of the plant, (5) the fuel
10 to operate the plant, as offset by the revenue for energy sold from the plant through the
11 integrated marketplace, and (6) the value of the plant as capacity in the integrated marketplace,
12 and (7) the payment of an opportunity for a return on equity to shareholders, and an allowance
13 for the shareholders' income tax.

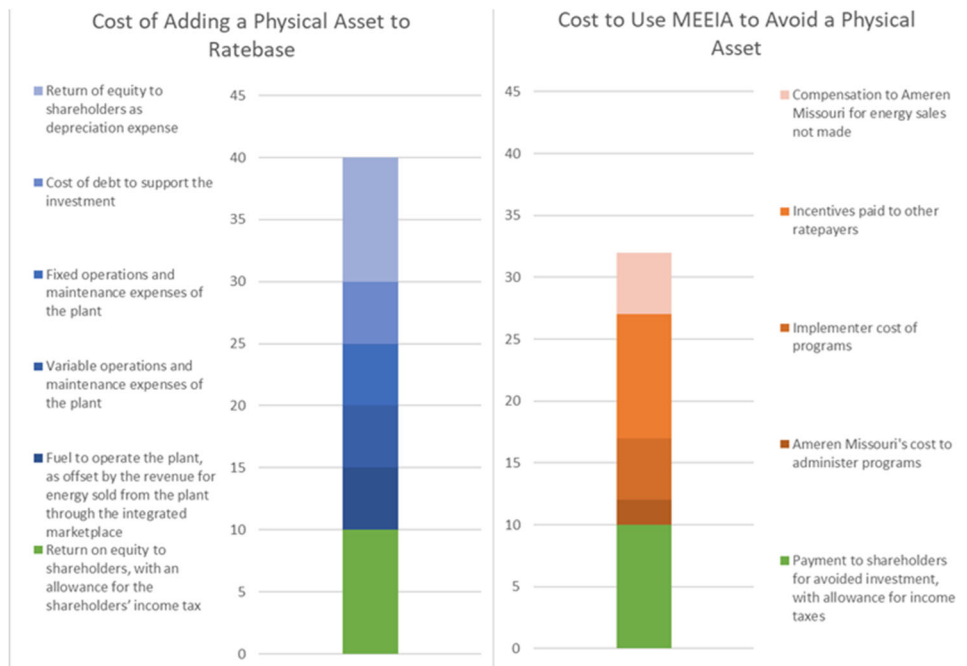
14 Q. If a supply-side investment is avoided due to MEEIA, what benefits do
15 ratepayers experience?

16 A. Ratepayers would experience the benefit of avoiding payment over time of
17 (1) depreciation expense, (2) of the cost of debt to support the investment, (3) the fixed
18 operations and maintenance expenses of the plant, including property taxes, (4) the variable
19 operations and maintenance expenses of the plant, (5) and the fuel to operate the plant.
20 However, these costs avoided by ratepayers would also be offset by a reduction in revenue for
21 energy sold from the plant through the integrated marketplace, and the value of the plant as
22 capacity in the integrated marketplace.

1 However, to the extent that the MEEIA mechanism includes an “Earnings Opportunity,”
2 ratepayers would not truly avoid the future payment of an opportunity for a return on equity to
3 shareholders and an allowance for the shareholders’ income tax. Instead, ratepayers would
4 prepay a certain amount to compensate shareholders for this avoided earnings opportunity.

5 Q. Conceptually, MEEIA requires the Commission to decide whether it’s better
6 to (A) order all customers to pay to reduce the energy usage and demand of some customers
7 and to prepay investors the return on investment not made, or (B) not order the utility to
8 facilitate ratepayer-funded demand-side programs. Can you illustrate the Commission’s
9 required analysis?

10 A. Yes. To determine whether the programs are “**beneficial to all customers in**
11 **the customer class in which the programs are proposed, regardless of whether the**
12 **programs are utilized by all customers**”²⁶ the Commission must determine that for a given
13 customer class the avoided costs caused by a MEEIA program are greater than the costs of the
14 MEEIA programs, including the “earnings opportunity.”



²⁶ 393.1075.4.

1 J Luebbert’s direct testimony sections “Avoided Costs” and “Earnings Opportunity”
2 provide a detailed discussion of these calculations. Mr. Luebbert’s Schedule JL-d2 provides
3 a walk-through of the revenue requirement implications of a supply-side deferral of a
4 fossil-fueled generation plant, and illustrates the variation in the revenue requirement
5 implications of a supply-side deferral when a low- or no-cost renewable plant is deferred.

6 Earnings Opportunities

7 Q. In designing an earnings opportunity mechanism, how should the payment to
8 shareholders for avoided investment relate to the return on equity of a plant that would
9 physically exist in the future?

10 A. Under a well-designed earnings opportunity, the payment to shareholders for
11 avoided investment (plus an allowance for income taxes) should be roughly identical on a
12 risk-adjusted present value of the return on equity of a plant that would physically exist in the
13 future (with an allowance for income taxes).

14 Q. What information is necessary to size a well-designed earnings opportunity?

15 A. To size an earnings opportunity, the Commission needs reliable evidence of
16 what investment opportunity, and when it was to be built, is expected to be avoided by a given
17 MEEIA cycle.

18 Q. Is there explicit statutory guidance on the certainty required for an earnings
19 opportunity mechanism?

20 A. Yes. Any earnings opportunity must be associated with “**cost-effective**
21 **measurable and verifiable efficiency savings.**”²⁷

²⁷ 393.1075.3.

1 Q. What factors complicate the calculation of avoided costs and development of an
2 earnings opportunity mechanism?

3 A. In addition to the same complications discussed above in the section “Benefits
4 to all customers, the calculation of avoided costs and development of an earnings opportunity
5 mechanism are complicated by the following factors, which are discussed in greater detail by
6 Mr. Luebbert:

- 7 1. Renewable resources have very low avoidable costs.²⁸
- 8 2. Reductions in capacity can cause new capacity revenues through the integrated
9 marketplace.²⁹ These revenues are generally socialized through all customers
10 through the FAC, which complicates the Commission’s statutory directive to
11 fairly apportion the costs and benefits of MEEIA among classes. These
12 revenues are functionally similar to avoided costs in terms of MEEIA program
13 design, but do not provide any avoided earnings opportunity.³⁰
- 14 3. Ameren Missouri’s management decisions related to supply-side resources
15 have been driven by factors other than capacity- planning.³¹
- 16 4. Ameren Missouri’s management decisions related to transmission and
17 distribution have been driven by factors other than capacity-planning, and while
18 real investment in steel (or silicone) in the ground is subject to the PISA cap,
19 theoretical earnings opportunities are not.³²
- 20 5. After 12 years of MEEIA, Ameren Missouri has a higher \$/kW supply-side
21 return producing investments now than it did before it began MEEIA.³³

²⁸ See Mr. Luebbert’s Schedule JL-d2.

²⁹ The newly-seasonal nature of MISO capacity requirements is discussed by Staff expert Jordan T. Hull.

³⁰ See Mr. Luebbert’s testimony at pages 12-13, and pages 30 – 31.

³¹ See Mr. Luebbert’s testimony section “Impact of Ameren Missouri’s decision to accelerate the transformation of its generation portfolio on Avoidable Costs and Avoidable Earnings Opportunities”.

³² See Mr. Luebbert’s testimony at page 18-19.

³³ See Mr. Luebbert’s testimony section “Lessons Learned Regarding Ameren Missouri Generation Ratebase.”.

1 6. As discussed by Staff expert Brad J. Fortson, effective EM&V has been difficult
2 or impossible to realize.³⁴

3 **Opportunities for Utility Investment in Program Costs**

4 Q. What are the components of a MEEIA portfolio?

5 A. Section 393.1075.3. governs the “three-legged stool” of MEEIA.

6 It shall be the policy of the state to value demand-side investments equal
7 to traditional investments in supply and delivery infrastructure and allow
8 recovery of all reasonable and prudent costs of delivering cost-effective
9 demand-side programs. In support of this policy, the commission shall:

10 (1) Provide timely cost recovery for utilities;

11 (2) Ensure that utility financial incentives are aligned with helping
12 customers use energy more efficiently and in a manner that sustains or
13 enhances utility customers' incentives to use energy more efficiently; and

14 (3) Provide timely earnings opportunities associated with cost-effective
15 measurable and verifiable efficiency savings.

16 These provisions are generally understood to refer to (1) program cost recovery,
17 (2) avoided revenue recovery (historically, the net throughput disincentive), and (3) the
18 earnings opportunity.

19 Q. Has this language changed since the statute was first promulgated in 2009?

20 A. No.

21 Q. What are the program costs, and how are program costs funded?

22 A. Program costs include literal incentives and products provided to customers to
23 reduce energy consumption overall or at target times, as well as the costs of internal
24 administration, third parties, evaluations of program implementation, and any other costs of
25 facilitating a MEEIA program.

³⁴ EM&V is further discussed by Staff expert Hari K. Poudel, PhD. See also Mr. Luebbert’s testimony at pages 33-34.

1 Q. To date, how much have Ameren Missouri shareholders invested pursuant to
2 MEEIA Cycle 1,³⁵ MEEIA Cycle 2,³⁶ and MEEIA Cycle 3?³⁷

3 A. Ameren Missouri has not invested a single dollar in any MEEIA cycle since
4 MEEIA Cycle 1 was initially authorized in 2012. To date, Ameren Missouri's MEEIA cycles
5 have included real-time recovery of a forecast program cost level, which is subject to true-up,
6 with carrying costs.³⁸

7 Q. Under the statute, could program cost recovery be handled differently?

8 A. Yes. Program costs could be capitalized, but, to date, they have not been treated
9 that way under Ameren Missouri's MEEIA cycles. Section 393.1075.5 authorizes capitalization
10 of program costs, and accelerated depreciation of the investment in program costs.

11 Q. What details must be addressed for reasonable program design?

12 A. Mr. Luebbert generally addresses program development and design for a
13 potential fourth Ameren Missouri MEEIA cycle, including the following main points:

- 14 1. Avoided costs (and earnings opportunities) must be estimated at the program or
15 measure level to be reasonable,³⁹
- 16 2. Targeted program design is an iterative process.⁴⁰
- 17 3. Ratepayer benefit (or detriment) must be analyzed at the class level.⁴¹
- 18 4. The authorizing tariff must be sufficiently detailed to be reasonably operable.⁴²
- 19 5. When developing and designing programs, consideration should be given to the
20 feasibility of effectively evaluating, measuring, and verifying the energy or
21 demand savings associated with the program. EM&V is further discussed by

³⁵ EO-2012-0142.

³⁶ EO-2015-0055.

³⁷ EO-2018-0211.

³⁸ Staff expert Marina Stever discusses the costs to ratepayers of these prior MEEIA cycles.

³⁹ See Mr. Luebbert's testimony at pages 9 – 11 and 34 – 38.

⁴⁰ See Mr. Luebbert's testimony at pages 5-6 and 34 – 38.

⁴¹ See Mr. Luebbert's testimony section "Finalizing the Portfolio."

⁴² See Mr. Luebbert's testimony section "Tariff Development."

1 Staff expert Hari K. Poudel, PhD, and existing measure savings values are
2 discussed by Staff expert Justin Tevie.

3 **Aligning utility financial incentives with helping customers use energy more efficiently**

4 Q. You state above that it has been difficult to reasonably align utility financial
5 incentives with helping customers use energy more efficiently. Why does the MEEIA statute
6 authorize alignment of utility financial incentives with helping customers use energy more
7 efficiently?

8 A. Utility rates are designed to recover more than the variable cost to the utility to
9 acquire the energy required by its customers at wholesale. To the extent that a utility sells more
10 energy at retail, the utility recovers more net revenue. To the extent that a utility sells less
11 energy at retail, the utility recovers less net revenue. Absent some mechanism, utilities are
12 financially disincented from facilitating customer-funded demand-side programs that would
13 reduce the utility's quantity of energy sold at retail, known as its "throughput". In prior MEEIA
14 cycles, the Commission has authorized mechanisms to account for the impact on utility
15 revenues of decreases in usage due to variations caused by supply-side programs. This
16 mechanism has been referred to as the "net throughput disincentive," or the "throughput
17 disincentive net-shared-benefit," and will be referred to in this testimony as "avoided revenues."

18 Q. Is this a long-term problem or a short-term problem?

19 A. In each rate case, rates are calculated with the most recent billing determinants
20 available. Thus, the utility disincentive to facilitate demand-side programs due to avoided
21 revenues is a short-term problem.

1 Q. What other complications have arisen with the design of mechanisms to align
2 utility financial incentives – between rate cases – with helping customers use energy more
3 efficiently?

4 A. As discussed in greater detail by Staff expert Justin Tevie, robust program
5 evaluation has not occurred to improve the reliability of the TRM over time. As discussed in
6 detail by Staff expert Hari K. Poudel, PhD, the shape of the energy avoided by each measure
7 must be considered when estimating the amount of revenue avoided by a utility for each kWh
8 of energy not sold. Adoption of time-variant rate structures - even the conservative
9 “Evening/Morning Saver Service,” results in an explosion in the quantity of measure-specific
10 net margin rates for use under the mechanism designed in 2014.

11 **Changes in circumstances and statutory authority**

12 Q. Under the current circumstances, is it lawful for the Commission to authorize a
13 MEEIA mechanism to account for the impact on utility revenues of increases or decreases in
14 residential and commercial customer usage due to variations caused by supply-side programs
15 for Ameren Missouri?

16 A. No. Subsection 386.266.3 RSMo provides

17 Subject to the requirements of this section, any gas or electrical
18 corporation may make an application to the commission to approve **rate**
19 **schedules authorizing periodic rate adjustments outside of general**
20 **rate proceedings to adjust rates of customers in eligible customer**
21 **classes to account for the impact on utility revenues of increases or**
22 **decreases in residential and commercial customer usage due to**
23 **variations in either weather, conservation, or both.** For purposes of
24 this section: for electrical corporations, "eligible customer classes"
25 means the residential class and classes that are not demand metered; and
26 for gas corporations, "eligible customer classes" means the residential
27 class and the smallest general service class. As used in this subsection,
28 "revenues" means the revenues recovered through base rates, and does
29 not include revenues collected through a rate adjustment mechanism
30 authorized by this section or any other provisions of law. This

1 subsection shall apply to electrical corporations beginning January 1,
2 2019, and shall expire for electrical corporations on January 1, 2029. **An**
3 **electrical corporation may make a one-time application to the**
4 **commission under this subsection if such corporation has provided**
5 **notice to the commission under subsection 5 of section 393.1400,**
6 **provided the corporation shall not concurrently utilize electric rate**
7 **adjustments under this subsection and the deferrals set forth in**
8 **subsection 5 of section 393.1400.**
9 **[Emphasis added.]**

10 Section 393.1400 RSMo authorizes Plant In Service Accounting (PISA) deferrals,
11 which Ameren Missouri has elected.

12 Q. Because Ameren Missouri has elected PISA deferrals, may the Commission
13 authorize a MEEIA mechanism to account between rate cases for the impact on utility revenues
14 of increases or decreases in residential and commercial customer usage due to variations in
15 caused by supply-side programs?

16 A. No.

17 Q. If the Commission decides that a MEEIA mechanism that accounts for the
18 “impact on utility revenues of increases or decreases in residential and commercial customer
19 usage due to variations in either weather, conservation, or both” does not conflict with a utility’s
20 election of PISA, does Staff proffer a mechanism to account for avoided revenues?

21 A. As explained in the following section, Staff has developed a mechanism which
22 is easier to implement and administer, and does not rely on estimates of net margin rates or
23 deemed avoided energy sales. It is also more compatible with time-based rate structures.

24 Q. Is this proposal consistent with the statutes?

25 A. If the Commission determines that it would be lawful for it to authorize (under
26 393.1075.3.(2)) a mechanism like the existing NTD for a utility that has elected PISA, then it
27 would also be lawful for the Commission to authorize under 393.1075.3.(2) some other

1 mechanism that accounts “for the impact on utility revenues of increases or decreases in
2 residential and commercial customer usage due to variations in” conservation⁴³ so long as it
3 also “ensure[s] that utility financial incentives are aligned with helping customers use energy
4 more efficiently and in a manner that sustains or enhances utility customers' incentives to use
5 energy more efficiently”⁴⁴

6 **AVOIDED REVENUE MECHANISMS IF A FOURTH MEEIA CYCLE IS AUTHORIZED**

7 **Residential and SGS avoided revenue mechanism**

8 Q. How does Staff recommend the Commission “ensure that utility financial
9 incentives are aligned with helping customers use energy more efficiently and in a manner that
10 sustains or enhances utility customers' incentives to use energy more efficiently,”⁴⁵ to the extent
11 that such a mechanism may be approved under this authority established in the MEEIA statute?

12 A. A utility makes money by selling energy. When a utility uses ratepayer dollars
13 to facilitate programs to reduce energy consumption, that utility is reducing the energy it sells,
14 and ultimately, the money it makes, all else being equal. In other words, a utility has a financial
15 disincentive to facilitating programs to reduce energy consumption, in general.⁴⁶ In order to
16 align Ameren Missouri’s financial incentives with customers' incentives to use energy more
17 efficiently, Staff recommends removing Ameren Missouri’s financial disincentive to
18 facilitating programs to reduce energy consumption.

19 Q. Can you provide a summary of Staff’s proposed mechanism?

⁴³ 386.266.3.

⁴⁴ 393.1075.3.(2).

⁴⁵ 393.1075.3.(2).

⁴⁶ As discussed in the testimony of J Luebbert, the operation of the fuel adjustment clause and Ameren Missouri’s participation in an integrated energy and capacity market can distort the typically-expected relationships.

1 A. Yes. Based on the revenues established and rates set in File No. ER-2022-0237,
2 Ameren Missouri’s residential class provides \$1,142,102,620 in net variable revenue on an
3 annual basis, and Ameren Missouri’s SGS class provides \$249,249,409 in net variable revenue
4 on an annual basis. Staff’s proposed mechanism tracks actual net variable revenue for each of
5 these classes against the rate case level, and reconciles the difference through the MEEIA rate
6 charged to these classes.

7 Q. What do you mean by the phrase “net variable revenue?”

8 A. Ameren Missouri’s most recent rate case was ER-2022-0337. In that rate case
9 Ameren Missouri’s compliance rates for the Residential Class were designed based on a
10 revenue requirement for the Residential Class of \$1,452,753,908, and Ameren Missouri’s
11 compliance rates for the SGS Class were designed based on a revenue requirement for the
12 SGS Class of \$320,307,473. However, Ameren Missouri’s financial disincentive to facilitating
13 programs to reduce energy consumption does not apply to these entire revenue requirements.
14 Rather, the revenue from each class associated with customer charges, the customer-based
15 low-income charge, and the revenue associated with class participation in the Community Solar
16 program is not at risk of erosion due to reduced energy consumption. Also, because of
17 Ameren Missouri’s FAC, a portion of the revenue for each kWh sold is effectively “backed”
18 by the FAC’s seasonal base factor. The Net Variable Revenues from ER-2022-0337 for the
19 Residential and SGS classes are \$142,102,620, and \$249,249,409, respectively.

20

	Total Revenue	Count- Dependant Revenue	Community Solar Revenue	FAC-Backed Revenue	Net Variable Revenue
Residential	\$ 1,452,753,908	\$ 118,929,095	\$ 318,887	\$ 191,403,307	\$ 1,142,102,620
SGS	\$ 320,307,473	\$ 25,847,058	\$ 7,234	\$ 45,203,773	\$ 249,249,409

21

22 These calculations and amounts are set out below:

1

	Customer Counts	Customer Charge Revenue	Low Income Charge Revenue	Count-Dependant Revenue
Residential	13,011,936	\$ 117,107,424	\$ 1,821,671	\$ 118,929,095
SGS	1,724,778	\$ 25,502,102	\$ 344,956	\$ 25,847,058
	Summer Energy Sales	Summer FAC Base Factor	Summer FAC BF @ Secondary Voltage	Summer FAC-Backed Revenue
Residential	4,719,205,709	\$ 0.01439	\$ 0.01517	\$ 71,569,685
SGS	1,104,078,026	\$ 0.01439	\$ 0.01517	\$ 16,744,029
	Non-Summer Energy Sales	Non-Summer FAC Base Factor	Non-Summer FAC BF @ Secondary Voltage	Non-Summer FAC-Backed Revenue
Residential	8,562,117,920	\$ 0.01328	\$ 0.01400	\$ 119,833,621
SGS	2,033,450,056	\$ 0.01328	\$ 0.01400	\$ 28,459,744

2

3

Q. How would the Staff mechanism work?

4

A. The EEIC tariff would set out the Rate Case Net Variable Revenue (RCNVR) for the Residential Class and the SGS class by month. Each month, Ameren Missouri will prepare a report of its actual billings, and calculate the Actual NVR (ANVR) for that month for each of the two classes. At the time of an EEIC rate change, Ameren Missouri will provide as its workpapers the running difference between RCNVR and ANVR for all months for which billing is complete at that time. The difference for each class will be incorporated into the new EEIC rate for the Residential Class and the SGS Class, respectively.⁴⁷

10

11

Q. Are you familiar with the avoided revenues calculation in the existing Ameren Missouri MEEIA mechanism?

12

13

A. I am. I developed the mechanism working on KCPL MEEIA Cycle 2⁴⁸ and Ameren Missouri MEEIA Cycle 2.⁴⁹

14

⁴⁷ The subsequent EEIC rate calculation will include any months for which billing was not complete at the time of the EEIC rate calculation.

⁴⁸ Case No. EO-2015-0240.

⁴⁹ Case No. EO-2015-0055.

1 Q. Is the calculation you propose in this case easier or more difficult to implement?

2 A. This calculation is significantly easier to implement. The mechanism currently
3 in use requires dozens of margin rate calculations,⁵⁰ hundreds of TRM load shape calculations,⁵¹
4 assumptions about the level of avoided energy sales that actually occurs, and reliance on
5 EM&V.⁵² If I knew then what I know now, I would not have supported the existing mechanism
6 in 2014 and 2015.

7 Q. Have circumstances changed since 2014 that support modernizing the avoided
8 revenue mechanism?

9 A. Yes. As Ameren Missouri nears completion of its AMI deployment, delayed
10 meter read reporting and rebills for faulty reads should essentially be a thing of the past,
11 enabling reliance on reported monthly billing without significant concern for substantial future
12 revisions. Further, with a substantial portion of Ameren Missouri's residential customers taking
13 service on a time-based rate, the mechanism Staff proposes in this case eliminates the need to
14 create dozens or hundreds of time-and measure-specific margin rates to continue to limp the
15 2014 mechanism along.

16 Q. As a latency, does Staff's proposed MEEIA avoided revenue mechanism
17 increase or decrease Ameren Missouri's revenue risk?

18 A. Staff's proposed MEEIA avoided revenue mechanism essentially eliminates
19 Ameren Missouri's volumetric revenue risk from the Residential and SGS classes.

⁵⁰ See testimony of Hari K. Poudel, PhD.

⁵¹ See testimony of Justin Tevie.

⁵² See testimony of Justin Tevie and Hari K. Poudel, PhD.

SGS Rate Switching Component

1
2 Q. Is it appropriate to include an adjustment within the SGS calculation to account
3 for rate switching among customer classes?

4 A. Yes. From time to time an SGS customer becomes an LGS customer. This can
5 occur automatically if the customer's metered demand exceeds 100 kW, or it can occur if a
6 customer elects to change schedules so long as the customer pays the LGS minimum demand
7 charge. Ameren Missouri should prepare a monthly report of such rate switching between the
8 LGS and SGS classes, and calculate the NVR by month associated with these customers for the
9 preceding 12 months.⁵³ The cumulative "RSNVR" for a given calendar month would be
10 excluded from the RCNVR for purposes of the calculation of the running difference between
11 the RCNVR and ANVR in calculating the amount to incorporate into the EEIC rate.

12 **Continuation of existing mechanism for LP, SP, and LGS customers**

13 Q. Is it reasonable to design a similar mechanism for the classes which serve larger
14 customers?

15 A. Not at this time. The revenue risk associated with these classes is immense, and
16 driven far more by economic conditions than demand side measures.

17 Q. Do the drawbacks of the existing NTD mechanism necessitate care in
18 program design?

19 A. Yes. EM&V is important for all measures, and the ability of conducting
20 reasonably reliable EM&V should be considered in designing all programs. For reasonable
21 operation of the TD mechanism designed in MEEIA Cycle 2, EM&V design and planning is

⁵³ To the extent that the customer is metered at primary voltage or treated as metered at primary voltage, the same calculations should be made for switching between SGS and SPS.

1 indispensable. If the energy sales avoided due to a program cannot be measured and verified,
2 then the energy savings assumed from that program should not be included in an NTD
3 calculation. Further, additional granularity in net margin rates is necessary, as discussed by
4 Staff expert Hari K. Poudel, PhD.

5 **CONCLUSION**

6 Q. Does this conclude your direct testimony?

7 A. Yes.

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 of Energy) Case No. EO-2023-0136
Efficiency as Allowed by MEEIA)
)

AFFIDAVIT OF SARAH L.K. LANGE

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW SARAH L.K. LANGE and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Direct Testimony of Sarah L.K. Lange*; and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.

Sarah L.K. Lange
SARAH L.K. LANGE

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 27th day of February 2024.

DIANNA L. VAUGHT
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: July 18, 2027
Commission Number: 15207377

Dianna L. Vaught
Notary Public

Sarah L.K. Lange

I received my J.D. from the University of Missouri, Columbia, in 2007, and am licensed to practice law in the State of Missouri. I received my B.S. in Historic Preservation from Southeast Missouri State University, and took courses in architecture and literature at Drury University. Since beginning my employment with the MoPSC I have taken courses in economics through Columbia College and courses in energy transmission through Bismarck State College, and have attended various trainings and seminars, indicated below.

I began my employment with the Commission in May 2006 as an intern in what was then known as the General Counsel's Office. I was hired as a Legal Counsel in September 2007, and was promoted to Associate Counsel in 2009, and Senior Counsel in 2011. During that time my duties consisted of leading major rate case litigation and settlement, and presenting Staff's position to the Commission, and providing legal advice and assistance primarily in the areas of depreciation, cost of service, class cost of service, rate design, tariff issues, resource planning, accounting authority orders, construction audits, rulemakings and workshops, fuel adjustment clauses, document management and retention, and customer complaints.

In July 2013 I was hired as a Regulatory Economist III in what is now known as the Tariff/ Rate Design Department. In this position my duties include providing analysis and recommendations in the areas of RTO and ISO transmission, rate design, class cost of service, tariff compliance and design, and regulatory adjustment mechanisms and tariff design. I also continue to provide legal advice and assistance regarding generating station and environmental control construction audits and electric utility regulatory depreciation. I have also participated before the Commission under the name Sarah L. Kliethermes.

Presentations

Midwest Energy Policy Series – Impact of ToU Rates on Energy Efficiency (August 14, 2020)

Billing Determinants Lunch and Learn (March 27, 2019)

Support for Low Income and Income Eligible Customers, Cost-Reflective Tariff Training, in cooperation with U.S.A.I.D. and NARUC, Addis Ababa, Ethiopia (February 23-26, 2016)

Fundamentals of Ratemaking at the MoPSC (October 8, 2014)

Ratemaking Basics (Sept. 14, 2012)

Participant in Missouri's Comprehensive Statewide Energy Plan working group on Energy Pricing and Rate Setting Processes.

Relevant Trainings and Seminars

Regional Training on Integrated Distribution System Planning for Midwest/MISO Region
(October 13-15, 2020)

“Fundamentals of Utility Law” Scott Hempling lecture series (January – April, 2019)

Today's U.S. Electric Power Industry, the Smart Grid, ISO Markets & Wholesale Power Transactions (July 29-30, 2014)

MISO Markets & Settlements training for OMS and ERSC Commissioners & Staff (January 27–28, 2014)

Validating Settlement Charges in New SPP Integrated Marketplace (July 22, 2013)

PSC Transmission Training (May 14 – 16, 2013)

Grid School (March 4–7, 2013)

Specialized Technical Training - Electric Transmission (April 18–19, 2012)

The New Energy Markets: Technologies, Differentials and Dependencies (June 16, 2011)

Mid-American Regulatory Conference Annual Meeting (June 5–8, 2011)

Renewable Energy Finance Forum (Sept. 29–Oct 3, 2010)

Utility Basics (Oct. 14–19, 2007)

Testimony and Staff Memoranda

<u>Company</u>	<u>Case No.</u>
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West In the Matter of Evergy Metro, Inc. d/b/a Evergy Missouri Metro's and Evergy Missouri West, Inc. d/b/a Evergy Missouri West's Solar Subscription Rider Tariff Filings	ET-2024-0182
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West The Staff of the Missouri Public Service Commission, Complainant, v Evergy Metro, Inc. d/b/a Evergy Missouri Metro's and Evergy Missouri West, Inc. d/b/a Evergy Missouri West	EC-2024-0092
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West In the Matter of the Joint Application of Evergy Metro, Inc. d/b/a Evergy Missouri Metro and Evergy Missouri West, Inc. d/b/a Evergy Missouri West for Approval of Tariff Revisions to TOU Program	ET-2024-0061
Union Electric Company d/b/a Ameren Missouri In the Matter of the Petition of Union Electric Company d/b/a Ameren Missouri for a Financing Order Authorizing the Issue of Securitized Utility Tariff Bonds for Energy Transition Costs related to Rush Island Energy Center	EF-2024-0021
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West In the Matter of Requests for Customer Account Data Production from Evergy Metro, Inc. d/b/a Evergy Missouri Metro and Evergy Missouri West, Inc. d/b/a Evergy Missouri West	E0-2024-0002
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West In the Matter of Evergy Metro, Inc. d/b/a Evergy Missouri Metro's Request to Revise Its Solar Subscription Rider	EO-2023-0423 EO-2023-0424
Union Electric Company d/b/a Ameren Missouri In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to Adjust its Revenues for Electric Service	ER-2022-0337
Union Electric Company d/b/a Ameren Missouri In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri for Certificates of Convenience and Necessity for Solar Facilities	EA-2023-0286
NextEra Energy Transmission Southwest, LLC In the Matter of the Application of NextEra Energy Transmission Southwest, LLC for a Certificate of Public Convenience and Necessity to Construct, Install, Own, Operate, Maintain, and Otherwise Control and Manage a 345 kV Transmission Line and associated facilities in Barton and Jasper Counties, Missouri	EA-2022-0234

<u>Company</u>	<u>Case No.</u>
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West In the Matter of Evergy Metro, Inc. d/b/a Evergy Missouri Metro's and Evergy Missouri West, Inc. d/b/a Evergy Missouri West's Solar Subscription Rider Tariff Filings	ET-2024-0182
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West The Staff of the Missouri Public Service Commission, Complainant, v Evergy Metro, Inc. d/b/a Evergy Missouri Metro's and Evergy Missouri West, Inc. d/b/a Evergy Missouri West	EC-2024-0092
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West In the Matter of the Joint Application of Evergy Metro, Inc. d/b/a Evergy Missouri Metro and Evergy Missouri West, Inc. d/b/a Evergy Missouri West for Approval of Tariff Revisions to TOU Program	ET-2024-0061
Union Electric Company d/b/a Ameren Missouri In the Matter of the Petition of Union Electric Company d/b/a Ameren Missouri for a Financing Order Authorizing the Issue of Securitized Utility Tariff Bonds for Energy Transition Costs related to Rush Island Energy Center	EF-2024-0021
Spire Missouri, Inc. In the Matter of Spire Missouri Inc.'s d/b/a Spire Request for Authority to Implement a General Rate Increase for Natural Gas Service Provided in the Company's Missouri Service Areas	GR-2022-0179
Evergy Missouri West, Inc. dba Evergy Missouri West In the Matter of Evergy Missouri West, Inc. dba Evergy Missouri West for a Financing Order Authorizing the Financing of Extraordinary Storm Costs Through an Issuance of Securitized Utility Tariff Bonds	EF-2022-0155
Evergy Metro, Inc. dba Evergy Missouri Metro Evergy Missouri West, Inc. dba Evergy Missouri West In the Matter of Evergy Metro, Inc. dba Evergy Missouri Metro's Request for Authority to Implement a General Rate Increase for Electric Service. In the Matter of Evergy Missouri West, Inc. dba Evergy Missouri West's Request for Authority to Implement a General Rate Increase for Electric Service.	ER-2022-0129 ER-2022-0130
The Empire District Electric Company d/b/a Liberty In the Matter of the Petition of The Empire District Electric Company d/b/a Liberty to Obtain a Financing Order that Authorizes the Issuance of Securitized Utility Tariff Bonds for Energy Transition Costs Related to the Asbury Plant	EO-2022-0193
The Empire District Electric Company d/b/a Liberty In the Matter of the Petition of The Empire District Electric Company d/b/a Liberty to Obtain a Financing Order that Authorizes the Issuance of Securitized Utility Tariff Bonds for Qualified Extraordinary Costs	EO-2022-0040
Ameren Transmission Company of Illinois In the Matter of the Application of Ameren Transmission Company of Illinois for a Certificate of Convenience and Necessity Under Section 393.170 RSMo Relating to Transmission Investments in Southeast Missouri	EA-2022-0099

<u>Company</u>	<u>Case No.</u>
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West In the Matter of Evergy Metro, Inc. d/b/a Evergy Missouri Metro's and Evergy Missouri West, Inc. d/b/a Evergy Missouri West's Solar Subscription Rider Tariff Filings	ET-2024-0182
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West The Staff of the Missouri Public Service Commission, Complainant, v Evergy Metro, Inc. d/b/a Evergy Missouri Metro's and Evergy Missouri West, Inc. d/b/a Evergy Missouri West	EC-2024-0092
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West In the Matter of the Joint Application of Evergy Metro, Inc. d/b/a Evergy Missouri Metro and Evergy Missouri West, Inc. d/b/a Evergy Missouri West for Approval of Tariff Revisions to TOU Program	ET-2024-0061
Union Electric Company d/b/a Ameren Missouri In the Matter of the Petition of Union Electric Company d/b/a Ameren Missouri for a Financing Order Authorizing the Issue of Securitized Utility Tariff Bonds for Energy Transition Costs related to Rush Island Energy Center	EF-2024-0021
The Empire District Electric Company d/b/a Liberty In the Matter of the Request of The Empire District Electric Company d/b/a Liberty for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in its Missouri Service Area	ER-2021-0312
Union Electric Company d/b/a Ameren Missouri In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to Adjust its Revenues for Electric Service	ER-2021-0240
Ameren Transmission Company of Illinois In the Matter of the Application of Ameren Transmission Company of Illinois for a Certificate of Public Convenience and Necessity to Construct, Install, Own, Operate, Maintain, and Otherwise Control and Manage a 138 kV Transmission Line and associated facilities in Perry and Cape Girardeau Counties, Missouri	EA-2021-0087
Evergy Affiliates In the Matter of the Application of Evergy Metro, Inc. d/b/a Evergy Missouri Metro and Evergy Missouri West, Inc. d/b/a Evergy Missouri West for Approval of a Transportation Electrification Portfolio	ET-2021-0151
Spire Missouri, Inc. In the Matter of Spire Missouri Inc.'s d/b/a Spire Request for Authority to Implement a General Rate Increase for Natural Gas Service Provided in the Company's Missouri Service Areas	GR-2021-0108
Union Electric Company d/b/a Ameren Missouri In the Matter of the Request of Union Electric Company d/b/a Ameren for Approval of its Surge Protection Program	ET-2021-0082

<u>Company</u>	<u>Case No.</u>
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West In the Matter of Evergy Metro, Inc. d/b/a Evergy Missouri Metro's and Evergy Missouri West, Inc. d/b/a Evergy Missouri West's Solar Subscription Rider Tariff Filings	ET-2024-0182
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West The Staff of the Missouri Public Service Commission, Complainant, v Evergy Metro, Inc. d/b/a Evergy Missouri Metro's and Evergy Missouri West, Inc. d/b/a Evergy Missouri West	EC-2024-0092
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West In the Matter of the Joint Application of Evergy Metro, Inc. d/b/a Evergy Missouri Metro and Evergy Missouri West, Inc. d/b/a Evergy Missouri West for Approval of Tariff Revisions to TOU Program	ET-2024-0061
Union Electric Company d/b/a Ameren Missouri In the Matter of the Petition of Union Electric Company d/b/a Ameren Missouri for a Financing Order Authorizing the Issue of Securitized Utility Tariff Bonds for Energy Transition Costs related to Rush Island Energy Center	EF-2024-0021
Union Electric Company d/b/a Ameren Missouri In the Matter of the Request of Union Electric Company d/b/a Ameren Missouri to Implement the Delivery Charge Adjustment for the 1st Accumulation Period beginning September 1, 2019 and ending August 31, 2020	GT-2021-0055
The Empire District Electric Company In the Matter of The Empire District Electric Company's Tariffs Approval of a Transportation Electrification Portfolio for Electric Customers in its Missouri Service Area	ET-2020-0390
The Empire District Electric Company In the Matter of The Empire District Electric Company's Tariffs to Increase Its Revenues for Electric Service	ER-2019-0374
Union Electric Company d/b/a Ameren Missouri In the Matter of of Union Electric Company d/b/a Ameren Missouri's Tariffs to Decrease Its Revenues for Electric Service	ER-2019-0335
KCP&L Greater Missouri Operations Company In the Matter of KCP&L Greater Missouri Operations Company Request for Authority to Implement Rate Adjustments Required by 4 CSR 240-20.090(8) And the Company's Approved Fuel and Purchased Power Cost Recovery Mechanism	ER-2019-0413
Union Electric Company d/b/a Ameren Missouri In the Matter of of Union Electric Company d/b/a Ameren Missouri's Tariffs to Increase Its Revenues for Natural Gas Service	GR-2019-0077
Union Electric Company d/b/a Ameren Missouri In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri Revised Tariff Sheets	ET-2019-0149

<u>Company</u>	<u>Case No.</u>
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West In the Matter of Evergy Metro, Inc. d/b/a Evergy Missouri Metro's and Evergy Missouri West, Inc. d/b/a Evergy Missouri West's Solar Subscription Rider Tariff Filings	ET-2024-0182
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West The Staff of the Missouri Public Service Commission, Complainant, v Evergy Metro, Inc. d/b/a Evergy Missouri Metro's and Evergy Missouri West, Inc. d/b/a Evergy Missouri West	EC-2024-0092
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West In the Matter of the Joint Application of Evergy Metro, Inc. d/b/a Evergy Missouri Metro and Evergy Missouri West, Inc. d/b/a Evergy Missouri West for Approval of Tariff Revisions to TOU Program	ET-2024-0061
Union Electric Company d/b/a Ameren Missouri In the Matter of the Petition of Union Electric Company d/b/a Ameren Missouri for a Financing Order Authorizing the Issue of Securitized Utility Tariff Bonds for Energy Transition Costs related to Rush Island Energy Center	EF-2024-0021
The Empire District Electric Company In the Matter of The Empire District Electric Company's Revised Economic Development Rider Tariff Sheets	ET-2019-0029
The Empire District Electric Company In the Matter of a Proceeding Under Section 393.137 (SB 564) to Adjust the Electric Rates of The Empire District Electric Company	ER-2018-0366
Union Electric Company d/b/a Ameren Missouri In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri for Permission and Approval and a Certificate of Public Convenience and Necessity Authorizing it to Construct a Wind Generation Facility	EA-2018-0202
Kansas City Power & Light Company KCP&L Greater Missouri Operations Company In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service	ER-2018-0145 ER-2018-0146
Union Electric Company d/b/a Ameren Missouri In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri for Approval of Efficient Electrification Program	ET-2018-0132
Union Electric Company d/b/a Ameren Missouri In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri for Approval of 2017 Green Tariff	ET-2018-0063
Laclede Gas Company Laclede Gas Company d/b/a Missouri Gas Energy In the Matter of Laclede Gas Company's Request to Increase Its Revenue for Gas Service, In the Matter of Laclede Gas Company d/b/a Missouri Gas Energy's Request to Increase Its Revenue for Gas Service.	GR-2017-0215 GR-2017-0216

<u>Company</u>	<u>Case No.</u>
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West In the Matter of Evergy Metro, Inc. d/b/a Evergy Missouri Metro's and Evergy Missouri West, Inc. d/b/a Evergy Missouri West's Solar Subscription Rider Tariff Filings	ET-2024-0182
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West The Staff of the Missouri Public Service Commission, Complainant, v Evergy Metro, Inc. d/b/a Evergy Missouri Metro's and Evergy Missouri West, Inc. d/b/a Evergy Missouri West	EC-2024-0092
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West In the Matter of the Joint Application of Evergy Metro, Inc. d/b/a Evergy Missouri Metro and Evergy Missouri West, Inc. d/b/a Evergy Missouri West for Approval of Tariff Revisions to TOU Program	ET-2024-0061
Union Electric Company d/b/a Ameren Missouri In the Matter of the Petition of Union Electric Company d/b/a Ameren Missouri for a Financing Order Authorizing the Issue of Securitized Utility Tariff Bonds for Energy Transition Costs related to Rush Island Energy Center	EF-2024-0021
Kansas City Power & Light Company In the Matter of Kansas City Power & Light Company's Demand Side Investment Rider Rate Adjustment And True-Up Required by 4 CSR 240-3.163(8)	ER-2017-0316
Kansas City Power & Light Company In the Matter of Kansas City Power & Light Company's Demand Side Investment Rider Rate Adjustment And True-Up Required by 4 CSR 240-3.163(8)	ER-2017-0167
KCP&L Great Missouri Operations Company In the Matter of KCP&L Greater Missouri Operations Company's Annual RESRAM Tariff Filing	ET-2017-0097
Grain Belt Express Clean Line, LLC In the Matter of the Application of Grain Belt Express Clean Line LLC for a Certificate of Convenience and Necessity Authorizing It to Construct, Own, Operate, Control, Manage, and Maintain a High Voltage, Direct Current Transmission Line and an Associated Converter Station Providing an Interconnection on the Maywood - Montgomery 345 kV Transmission Line	EA-2016-0358
Kansas City Power & Light Company In the Matter of Kansas City Power & Light Company's Demand Side Investment Rider Rate Adjustment And True-Up Required by 4 CSR 240-3.163(8)	ER-2016-0325
Kansas City Power & Light Company In the Matter of Kansas City Power & Light Company's Request for Authority to Implement A General Rate Increase for Electric Service	ER-2016-0285
Union Electric Company d/b/a Ameren Missouri In the Matter of Union Electric Company d/b/a Ameren Missouri for Permission and Approval and a Certificate of Public Convenience and Necessity Authorizing it to Offer a Pilot Subscriber Solar Program and File Associated Tariff	EA-2016-0207

<u>Company</u>	<u>Case No.</u>
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West In the Matter of Evergy Metro, Inc. d/b/a Evergy Missouri Metro's and Evergy Missouri West, Inc. d/b/a Evergy Missouri West's Solar Subscription Rider Tariff Filings	ET-2024-0182
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West The Staff of the Missouri Public Service Commission, Complainant, v Evergy Metro, Inc. d/b/a Evergy Missouri Metro's and Evergy Missouri West, Inc. d/b/a Evergy Missouri West	EC-2024-0092
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West In the Matter of the Joint Application of Evergy Metro, Inc. d/b/a Evergy Missouri Metro and Evergy Missouri West, Inc. d/b/a Evergy Missouri West for Approval of Tariff Revisions to TOU Program	ET-2024-0061
Union Electric Company d/b/a Ameren Missouri In the Matter of the Petition of Union Electric Company d/b/a Ameren Missouri for a Financing Order Authorizing the Issue of Securitized Utility Tariff Bonds for Energy Transition Costs related to Rush Island Energy Center	EF-2024-0021
Union Electric Company d/b/a Ameren Missouri In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariff to Increase Its Revenues for Electric Service	ER-2016-0179
KCP&L Great Missouri Operations Company In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service	ER-2016-0156
Empire District Electric Company In the Matter of The Empire District Electric Company's Request for Authority to Implement a General Rate Increase for Electric Service	ER-2016-0023
Ameren Transmission Company of Illinois In the Matter of the Application of Ameren Transmission Company of Illinois for Other Relief or, in the Alternative, a Certificate of Public Convenience and Necessity Authorizing it to Construct, Install, Own, Operate, Maintain and Otherwise Control and Manage a 345,000-volt Electric Transmission Line from Palmyra, Missouri to the Iowa Border and an Associated Substation Near Kirksville, Missouri	EA-2015-0146
Ameren Transmission Company of Illinois In the Matter of the Application of Ameren Transmission Company of Illinois for Other Relief or, in the Alternative, a Certificate of Public Convenience and Necessity Authorizing it to Construct, Install, Own, Operate, Maintain and Otherwise Control and Manage a 345,000-volt Electric Transmission Line in Marion County, Missouri and an Associated Switching Station Near Palmyra, Missouri	EA-2015-0145
Union Electric Company d/b/a Ameren Missouri In the Matter of Union Electric Company d/b/a Ameren Missouri's 2nd Filing to Implement Regulatory Changes in Furtherance of Energy Efficiency as Allowed by MEEIA	EO-2015-0055

<u>Company</u>	<u>Case No.</u>
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West In the Matter of Evergy Metro, Inc. d/b/a Evergy Missouri Metro's and Evergy Missouri West, Inc. d/b/a Evergy Missouri West's Solar Subscription Rider Tariff Filings	ET-2024-0182
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West The Staff of the Missouri Public Service Commission, Complainant, v Evergy Metro, Inc. d/b/a Evergy Missouri Metro's and Evergy Missouri West, Inc. d/b/a Evergy Missouri West	EC-2024-0092
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West In the Matter of the Joint Application of Evergy Metro, Inc. d/b/a Evergy Missouri Metro and Evergy Missouri West, Inc. d/b/a Evergy Missouri West for Approval of Tariff Revisions to TOU Program	ET-2024-0061
Union Electric Company d/b/a Ameren Missouri In the Matter of the Petition of Union Electric Company d/b/a Ameren Missouri for a Financing Order Authorizing the Issue of Securitized Utility Tariff Bonds for Energy Transition Costs related to Rush Island Energy Center	EF-2024-0021
Kansas City Power & Light Company In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service	ER-2014-0370
Empire District Electric Company In the Matter of The Empire District Electric Company for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in the Company's Missouri Service Area	ER-2014-0351
Union Electric Company d/b/a Ameren Missouri City of O'Fallon, Missouri, and City of Ballwin, Missouri, Complainants v. Union Electric Company d/b/a Ameren Missouri, Respondent	EC-2014-0316
Union Electric Company d/b/a Ameren Missouri In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariff to Increase Its Revenues for Electric Service	ER-2014-0258
Union Electric Company d/b/a Ameren Missouri Noranda Aluminum, Inc., et al., Complainants, v. Union Electric Company d/b/a Ameren Missouri, Respondent	EC-2014-0224
Grain Belt Express Clean Line, LLC In the Matter of the Application of Grain Belt Express Clean Line LLC for a Certificate of Convenience and Necessity Authorizing It to Construct, Own, Operate, Control, Manage, and Maintain a High Voltage, Direct Current Transmission Line and an Associated Converter Station Providing an Interconnection on the Maywood - Montgomery 345 kV Transmission Line	EA-2014-0207
KCP&L Great Missouri Operations Company In the Matter of KCP&L Greater Missouri Operations Company's Application for Authority to Establish a Renewable Energy Standard Rate Adjustment Mechanism	EO-2014-0151

<u>Company</u>	<u>Case No.</u>
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West In the Matter of Evergy Metro, Inc. d/b/a Evergy Missouri Metro's and Evergy Missouri West, Inc. d/b/a Evergy Missouri West's Solar Subscription Rider Tariff Filings	ET-2024-0182
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West The Staff of the Missouri Public Service Commission, Complainant, v Evergy Metro, Inc. d/b/a Evergy Missouri Metro's and Evergy Missouri West, Inc. d/b/a Evergy Missouri West	EC-2024-0092
Evergy Metro, Inc. d/b/a Evergy Missouri Metro Evergy Missouri West, Inc. d/b/a Evergy Missouri West In the Matter of the Joint Application of Evergy Metro, Inc. d/b/a Evergy Missouri Metro and Evergy Missouri West, Inc. d/b/a Evergy Missouri West for Approval of Tariff Revisions to TOU Program	ET-2024-0061
Union Electric Company d/b/a Ameren Missouri In the Matter of the Petition of Union Electric Company d/b/a Ameren Missouri for a Financing Order Authorizing the Issue of Securitized Utility Tariff Bonds for Energy Transition Costs related to Rush Island Energy Center	EF-2024-0021
Kansas City Power & Light Company In the Matter of Kansas City Power & Light Company's Filing for Approval of Demand-Side Programs and for Authority to Establish A Demand-Side Programs Investment Mechanism	EO-2014-0095
Veolia Energy Kansas City, Inc. In the Matter of Veolia Energy Kansas City, Inc. for Authority to File Tariffs to Increase Rates	HR-2014-0066