MISSOURI PUBLIC SERVICE COMMISSION

INDUSTRY ANALYSIS DIVISION

TARIFF/RATE DESIGN DEPARTMENT

DIRECT TESTIMONY

OF

SARAH L.K. LANGE

EVERGY METRO, INC.,
d/b/a Evergy Missouri Metro
CASE NO. EO-2023-0369

EVERGY MISSOURI WEST, INC.,
d/b/a Evergy Missouri West
CASE NO. EO-2023-0370

Jefferson City, Missouri
May 24, 2024

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9		**Case No. EO-2023-0370**	

10   Q.   Please state your name and business address.

11   A.   My name is Sarah L.K. Lange, 200 Madison Street, Jefferson City, MO 65101.

12   Q.   By whom are you employed and in what capacity?

13   A.   I am employed by the Missouri Public Service Commission ("Commission") as

14 an Economist for the Tariff/Rate Design Department, in the Industry Analysis Division. A copy

15 of my case participation and credentials is attached as Schedule SLKL-d1.

EXECUTIVE SUMMARY

17   Q.   What will you address in your testimony?

18   A.   My testimony is provided in support of Staff's overall recommendation that it is

19 not appropriate for the Commission to authorize a fourth Missouri Energy Efficiency

20 Investment Act (MEEIA) Cycle for Evergy[1] at this time.[2] My testimony explains the MEEIA

21 statute and the basic interaction of the components of a MEEIA cycle, and provides Staff's

22 position that changes in circumstances since Evergy's third MEEIA cycle that have rendered

23 the "net throughput disincentive" (NTD) mechanism unlawful.

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[1] Evergy Metro, Inc., d/b/a Evergy Missouri Metro and Evergy Missouri West, Inc., d/b/a Evergy Missouri West.

[2] As Mr. Fortson testifies that Staff's overall position in its direct testimony is that it is not reasonable at this time for the Commission to approve a MEEIA program portfolio and its extraordinary ratemaking authority. Staff's direct testimony in this case outlines concerns with the ability to design a MEEIA portfolio that complies with statutory requirements at this time, and provides recommendations for a process to execute if the Commission directs the parties to proceed with a MEEIA portfolio at this time.

1   In the event the Commission does authorize a fourth MEEIA cycle for either Evergy

2   utility, the second section of my testimony proposes a framework for a mechanism to "[e]nsure

3   that utility financial incentives are aligned with helping customers use energy more efficiently

4   and in a manner that sustains or enhances utility customers' incentives to use energy more

5   efficiently."[3] In the event the Commission does authorize these MEEIA cycles, the potential

6   of an earnings opportunity mechanism is addressed by Mr. Fortson, and the development of

7   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.

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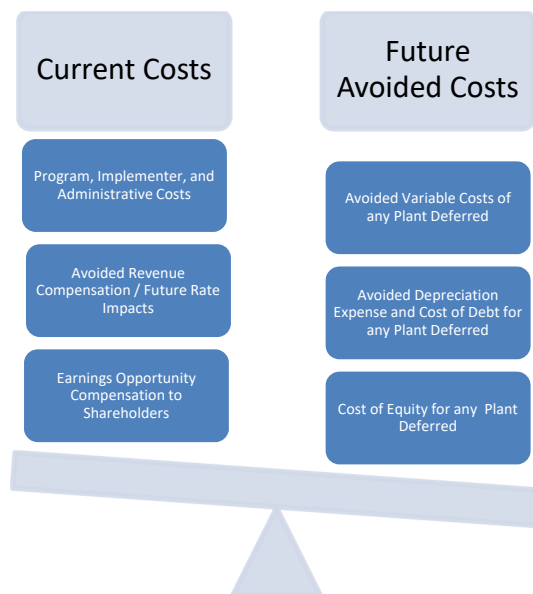
13
14   One of the potential costs to be avoided in the future is the return on equity portion of

15   the capital costs of a potential generation facility. The MEEIA statute allows a utility to be

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[3] 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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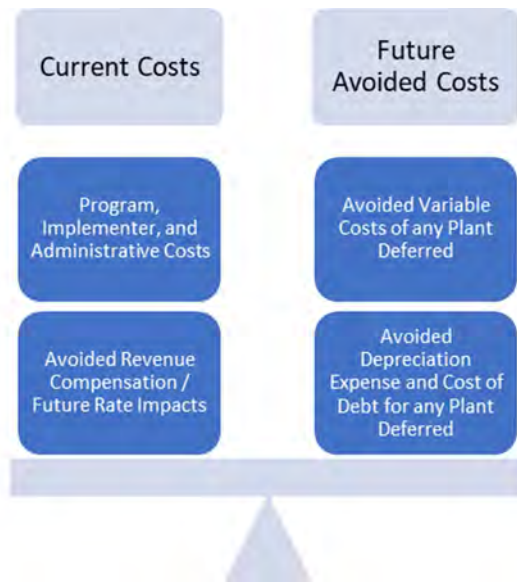
5
6   Renewable energy investments have very low variable costs. If the MEEIA program

7 avoids or delays a renewable investment, few or any costs can be avoided.

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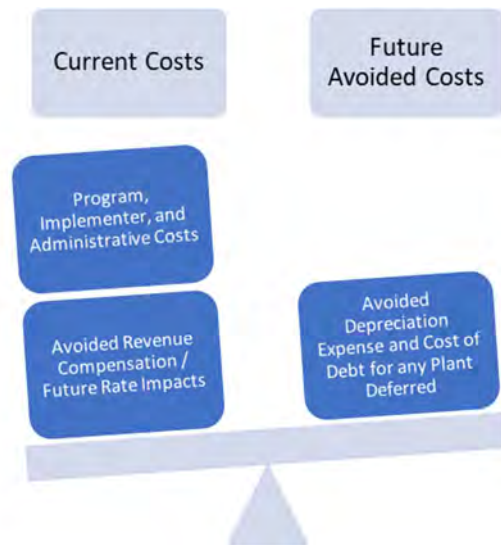
9
10   However, the operation of the FAC is both a complication and an opportunity to this

11 analysis. If a high cost kWh is avoided, all ratepayers benefit without waiting years for an

1 avoided plant. If a demand-side measure reduces a vertically integrated utility's capacity

2 requirements, all ratepayers benefit through additional capacity revenues. However, if a

3 low-cost kWh is avoided, the average cost of fuel and purchased power increases, and

4 ratepayers will bear that cost.

5

6

7 Measure-by-measure analysis is needed to determine if the FAC operation results

8 in current additional costs to a MEEIA cycle to weigh against potential future benefits, or if

9 the result is an additional current benefit to ratepayers of a potential MEEIA cycle.

10 Additionally, the Commission must consider which ratepayers pay the costs of MEEIA, and

11 which ratepayers receive the benefits of MEEIA that are passed through the FAC, to ensure that

12 fairness is expected.
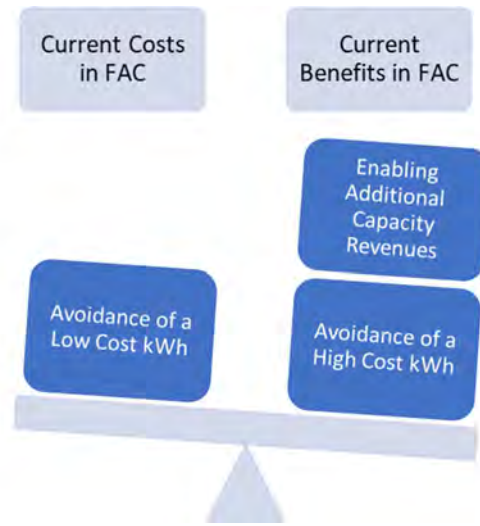
13 **Summary of Recommendations**

14 Q. If the Commission does authorize a fourth MEEIA cycle for Evergy's Missouri

15 utilities, what mechanisms are appropriate for addressing a utility's financial incentive to

16 facilitate ratepayer-funded demand side programs?

17 A. For Residential and Small General Service (SGS) customers, Staff recommends

18 creation of a new avoided revenues mechanism based on the net variable revenues established

1   in File Nos. ER-2022-0129 and ER-2022-0130, to be updated in future general rate cases.

2   Staff's proposed mechanism tracks actual net variable revenue for each of these classes

3   against the rate case level, and reconciles the difference through the MEEIA rate charged to

4   these classes.

5   For other classes, Staff recommends continued use of the Net Throughput Disincentive

6   mechanism, with refinements.

7   **MEEIA ENABLING STATUTE**

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

9   A.   Section 393.1075 RSMo is the "Missouri Energy Efficiency Investment Act,"

10 better known as MEEIA. This statute authorizes MEEIA cycles. It requires the Commission

11 to permit electric corporations to implement programs the Commission has approved, with a

12 goal of achieving all cost-effective demand-side savings.[4] A package of programs is only

13 eligible under MEEIA if the programs are (1) approved by the Commission, (2) result in energy

14 or demand savings and, (3) are beneficial to all customers in the customer class in which the

15 programs are proposed, regardless of whether the programs are utilized by all customers.[5]

16 Additional details are discussed throughout this testimony.

17   Essentially, if a utility presents a package of demand side programs that the

18 Commission determines are good for all ratepayers in the long term, then the utility gets to

19 charge special rates.

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

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[4] 393.1075.4.
[5] 393.1075.4.

1   A.   In practice,

2   1.   It has been difficult to design MEEIA portfolios and mechanisms
3   that are beneficial to all customers in a customer class, regardless of
4   whether the programs are utilized by all customers;[6]

5   2.   It has been difficult to determine whether any costs have actually
6   been avoided, and whether any earnings opportunities have actually been
7   avoided;

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

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

12   Q.   Are utilities required to have MEEIA cycles?

13   A.   No.

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

15   A.   Yes. Commission approval of a MEEIA cycle is necessary only for authorization

16   of extraordinary ratemaking authority related to demand side programs. Demand side programs

17   can be ordered through general rate cases.[7]

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

19   A.   No. While the MEEIA statute states, "[i]t shall be the policy of the state to value

20   demand-side investments equal to traditional investments in supply and delivery infrastructure

21   and allow recovery of all reasonable and prudent costs of delivering cost-effective demand-side

22   programs,"[8] and "[t]he commission shall permit electric corporations to implement

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[6] 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.

[7] 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.

[8] 393.1075.3.

1 commission-approved demand-side programs proposed pursuant to this section with a goal of

2 achieving all cost-effective demand-side savings,"[9] the MEEIA statute specifies:

3   Recovery for such programs shall not be permitted unless the programs
4   are approved by the commission, result in energy or demand savings and
5   are **beneficial to all customers in the customer class in which the**
6   **programs are proposed, regardless of whether the programs are**
7   **utilized by all customers**….[10] [Emphasis added.]

8 While each element of the MEEIA statute has meaning, this language is essentially a

9 threshold for proceeding with a potential MEEIA cycle.

10 **Benefits to all customers**

11 Q.   You state above that it has been difficult to design MEEIA portfolios and

12 mechanisms that are beneficial to all customers in a customer class, regardless of whether the

13 programs are utilized by all customers, and that it has been difficult to fairly apportion the costs

14 and benefits of demand-side programs to each customer class. How can a MEEIA cycle benefit

15 all customers, in general?

16 A.The basic premise of MEEIA is that it can make sense for a utility to facilitate

17 programs where all customers pay the cost to help some customers reduce energy consumption,

18 **if** that reduced energy consumption results in avoiding or delaying a costly supply-side

19 resource,[11] or by enabling additional revenue from existing supply-side resources.

20 Q.   How does a customer who participates in a MEEIA program benefit from

21 MEEIA, if everything works as intended?

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[9] 393.1075.4.

[10] 393.1075.4.

[11] A supply-side resource refers to a new power plant.

1   A.   For purposes of this example let's consider an exaggerated hypothetical

2 program, where exactly one customer receives one free thermostat, and that free thermostat

3 enables that customer to change its energy consumption in a way that enables a vertically

4 integrated utility to avoid building a new power plant.

5   First, for that MEEIA program participant, that customer has obtained a thermostat,

6 which has a tangible and monetary value. Second, that customer may operate that thermostat

7 in a way that reduces that customer's energy consumption during certain months. That reduced

8 energy consumption will reduce that customer's electric bill for that month, all else being equal.

9 Finally, that customer will benefit from the MEEIA program in the form of future avoided costs

10 associated with the avoidance of building the new power plant.

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

12   A.   Yes. There are three basic ways that the customer benefits are offset. First, for

13 the literal cost of the thermostat, that participating customer will be paying something like

14 one-millionth of the cost of the thermostat through the MEEIA charge, which appears on

15 customer bills as the Energy Efficiency Investment Charge (EEIC).[12] Second, for the bill

16 savings caused by the thermostat, that customer will be paying something like one-millionth of

17 (1) the estimated revenue that the utility didn't collect from that customer through the EEIC,[13]

18 and (2) the FAC impact of the changes in overall fuel and purchased power costs of the energy

19 the customer didn't require through the FAC.[14] Third, for the future avoided costs, that

20 customer will be providing something like one-millionth of the value of the return on equity

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[12] This component is typically referred to as "program costs."

[13] 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."

[14] See also J Luebbert direct testimony section "MEEIA and the FAC."

1   associated with the plant that the utility has avoided building through the EEIC.[15] These second

2   and third factors are discussed in greater detail below.

3   　　　Q.　　　How does a customer who does not participate in a MEEIA program benefit

4   from MEEIA under this example?

5   　　　A.　　　That customer will benefit from the MEEIA program in the form of future

6   avoided costs associated with the avoidance of building the new power plant and the subsequent

7   avoidance of those costs in future rates.

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

9   　　　A.　　　Yes. The offsets to those benefits are the same as for the customer who is a

10   participant in the program. The non-participant customer will be paying something like

11   one-millionth of the cost of the thermostat through the EEIC. The non-participating customer

12   will be paying something like one-millionth of (1) the revenue that each Evergy utility didn't

13   collect from the participating customer through the EEIC, and (2) the FAC impact of the

14   changes in overall fuel and purchased power costs of the energy the participating customer

15   didn't require. Offsetting the future avoided costs, through the EEIC, that non-participating

16   customer will be providing something like one-millionth of the value of the return on equity

17   associated with the plant that a vertically integrated utility has avoided building.

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

20   　　　Q.　　　What factors complicate designing a MEEIA cycle that results in benefits to all

21   customers regardless of whether the programs are utilized by all customers?

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[15] 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   A.   Essentially, the challenge is to optimize programs that create high enough

2 avoided costs and low enough program costs so all customers are better off socializing the

3 program costs to create collective benefits for all rate payers. Complicating this analysis, the

4 upfront program costs are borne immediately by ratepayers, by class, while the benefits are less

5 certain, and are spread over a longer period of time and across classes.

6   In our example above, one participant received one thermostat, so each customer paid

7 one-millionth of the cost of that one thermostat. In practice, thousands of customers could

8 receive thermostats, so about half of customers could get a thermostat for half price, and about

9 half of customers could pay for half of a thermostat that they did not get.

10   In our example above, one MEEIA measure entirely avoided a supply side resource.

11 In practice, a decade's worth of MEEIA cycles may be modeled to defer a supply-side resource

12 by a few years.[16] Further, when Evergy models the interrelationship of supply-side resources

13 and demand-side resources in its IRP, it assumes a package of demand-side measures that may

14 or may not remotely resemble the actual "shape" of measures that are implemented pursuant to

15 a given MEEIA cycle. The Commission does not have the benefit of modeled measure-level

16 avoided capacity costs or supply-side deferrals to consider when considering authorization of a

17 MEEIA cycle.

18   Even if a program can be identified where a great deal of energy sales can be avoided

19 by enabling a relatively inexpensive program, three complications exist. As explained in

20 greater detail by Staff expert J Luebbert, first, through operation of the FAC, unless the avoided

21 energy sales are of above-average wholesale cost per kWh, the avoided energy sales will result

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[16] See J Luebbert direct testimony section "Benefits to all customers in a class regardless of whether the programs are utilized by all customers."

1 in an increase in the FAC rates, which is not a benefit for all customers, and will offset any

2 other benefits received by all customers.[17] Second, through the operation of the FAC, even if

3 the avoided energy sales reduce (rather than increase) the FAC rates, those benefits are

4 socialized across all customers. Because avoided energy benefits largely are distributed to

5 customers through the FAC, to the extent that a MEEIA portfolio or cost recovery mechanism

6 does not distribute program costs across customer classes consistent with avoided benefits, the

7 benefits of avoided energy expenses are disproportionately distributed through the FAC.[18]

8   Finally, through the operation of an avoided revenue mechanism, non-participants bear

9 the costs of reimbursing the utility for revenue not received from energy not sold to participants.

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

11   A.   Pursuant to the MEEIA statute, the Commission may only authorize a MEEIA

12 cycle and the extraordinary rate recovery enabled by the MEEIA statute if the programs are

13 "beneficial to all customers in the customer class in which the programs are proposed,

14 regardless of whether the programs are utilized by all customers,"[19] and "In setting rates the

15 commission shall fairly apportion the costs and benefits of demand-side programs to each

16 customer class."[20] If the benefits of a given MEEIA cycle are primarily avoided energy costs,

17 then the Commission can only authorize recovery of a DSM program under MEEIA to the

18 extent that adequate benefits remain for non-participants in a given class to offset the cost of

19 the programs and other costs of MEEIA.

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[17] See J Luebbert direct testimony "MEEIA and the FAC".

[18] The FAC also distributes certain revenues and costs, see J Luebbert section "Reductions in capacity can create
the potential for new capacity revenues through sales to third-parties, but those revenues are generally socialized
through all customers through the FAC.".

[19] 393.1075.4.

[20] 393.1075.5.

1   Q.   Can Staff provide additional discussion on these issues?

2   A.   Yes. I will provide some additional testimony on the reallocation of revenue

3   requirement, avoided costs, and earnings opportunities. Mr. Luebbert provides more detailed

4   testimony on each of these, and the following points:

5   1. A decade's worth of MEEIA cycles may be modeled to defer a supply-side

6   resource by a few years, and when modeling the interrelationship of

7   supply-side resources and demand-side resources in its IRP, the subject

8   utility assumes a package of demand-side measures that may not match the

9   measures ultimately offered.[21]

10   2. Through operation of the FAC, unless the avoided energy sales are of

11   above-average cost kWh, the avoided energy sales will result in an increase

12   in the FAC rates, which will offset the benefits received by all customers,

13   and through the operation of the FAC, even if the avoided energy sales or

14   enable additional capacity revenues to reduce (rather than increase) the

15   FAC rates, those benefits are socialized across all customers,[22] while

16   through the operation of an avoided revenue mechanism, non-participants

17   bear the cost to reimburse the utility for revenue not received from energy

18   not sold to participants.

19   **Avoided costs and avoided earnings opportunities**

20   Q.   You state above that it has been difficult to determine whether any costs have

21   actually been avoided, and whether any earnings opportunities have actually been avoided.

22   What are avoided costs and what are earnings opportunities?

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[21] See J Luebbert direct testimony section "Benefits to all customers in a class regardless of whether the programs are utilized by all customers.".

[22] See J Luebbert direct testimony section "MEEIA and the FAC".

1   A.   At the simplest level, avoided costs are the revenue requirement of a supply-side

2 resource that will not be built, and avoided earnings opportunities are the portion of avoided

3 revenue requirement that shareholders would have received as their return on their investment.

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

5   A.   Yes. Consider a hypothetical farmer who grows carrots. The farmer may expect

6 to pay $50 in carrot seed, $50 in tractor fuel to prepare the plot, plant the seed, and harvest the

7 carrots, and $100 for a farmhand to perform the labor. In our simple example, the farmer

8 expects to spend $200 in April, and to receive $500 for the carrot harvest in July.

9   Now, for our simple example, consider a hypothetical carrot-market-stabilization

10 program. The farmer is offered some amount of money to be paid in March to allow the field

11 to remain fallow. If the farmer does not plant the carrots, the farmer's avoided costs will be

12 $50 in carrot seed, $50 in tractor fuel to prepare the plot, plant the seed, and harvest the carrots,

13 and $100 for a farmhand to perform the labor. If the farmer does not plant the carrots, the

14 farmer will avoid an opportunity to earn the $300 difference between the cost to plant the carrots

15 and the value of the carrot harvest.

16   Q.   Will the farmer require $300 (or some lesser amount) as payment in March to

17 agree to forgo the carrot crop?

18   A.   In this simple hypothetical, a reasonable farmer would consider that the risk

19 of profiting $300 in July is equivalent to the certainty of a check for some amount less than

20 $300 in March. The factors a reasonable farmer would consider include:

21   1. the risks that the July harvest may not occur, or may not be as valuable as assumed,

22   2. the time-value of money received in March instead of in July.

1   Q.   Is there an important distinction between the perspective of this hypothetical

2 carrot farmer and a utility supply-side resource that is avoided or deferred due to MEEIA?

3   A.   Yes. This simple hypothetical is provided from the perspective of the farmer,

4 and so avoided costs and earnings opportunity are separate. However, from the perspective of

5 a commission reviewing a MEEIA application, the return on investment for a facility avoided

6 IS an avoidable cost. BUT, to the extent that ratepayers reimburse the utility for that avoided

7 return on investment through a MEEIA "earnings opportunity" mechanism, the value of the

8 avoided costs is effectively canceled out from the ratepayers' perspective, as it appears on both

9 sides of the scale.

10   **Avoided Costs**

11   Q.   If a supply side investment is made and a power plant is built, what happens to

12 that utility's revenue requirement?

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

14   Q.   How would the revenue requirement generally increase?

15   A.   When a power plant is built and included in base rates, ratepayers are responsible

16 for (1) the return of the investment through depreciation expense, (2) the cost of debt to support

17 the investment, (3) the fixed operations and maintenance expenses of the plant, including

18 property taxes, (4) the variable operations and maintenance expenses of the plant, (5) the fuel

19 to operate the plant, as offset by the revenue for energy sold from the plant through the

20 integrated marketplace, (6) the value of the plant as capacity in the integrated marketplace, and

21 (7) the payment of an opportunity for a return on equity to shareholders, and an allowance for

22 the shareholders' income tax.

1   Q.   If a supply-side investment is avoided due to MEEIA, what benefits do

2 ratepayers experience?

3   A.   Ratepayers would experience the benefit of avoiding payment over time of

4 (1) depreciation expense, (2) of the cost of debt to support the investment, (3) the fixed

5 operations and maintenance expenses of the plant, including property taxes, (4) the variable

6 operations and maintenance expenses of the plant, (5) and the fuel to operate the plant.

7 However, these costs avoided by ratepayers would also be offset by a reduction in revenue for

8 energy sold from the plant through the integrated marketplace, and the value of the plant as

9 capacity in the integrated marketplace.

10   However, to the extent that the MEEIA mechanism includes an "Earnings Opportunity,"

11 ratepayers would not truly avoid the future payment of an opportunity for a return on equity to

12 shareholders and an allowance for the shareholders' income tax. Instead, ratepayers would

13 prepay a certain amount to compensate shareholders for this avoided earnings opportunity.

14   Q.   Conceptually, MEEIA requires the Commission to decide whether it's better to

15 (A) order all customers to pay to reduce the energy usage and demand of some customers

16 and to prepay investors the return on investment not made, or (B) not order the utility to

17 facilitate ratepayer-funded demand-side programs. Can you illustrate the Commission's

18 required analysis?

19   A.   Yes. To determine whether the programs are "**beneficial to all customers in**

20 **the customer class in which the programs are proposed, regardless of whether the**

21 **programs are utilized by all customers**"[23] the Commission must determine that for a given

22 customer class the avoided costs caused by a MEEIA program are greater than the costs of the

23 MEEIA programs, including the "earnings opportunity."

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[23] 393.1075.4.

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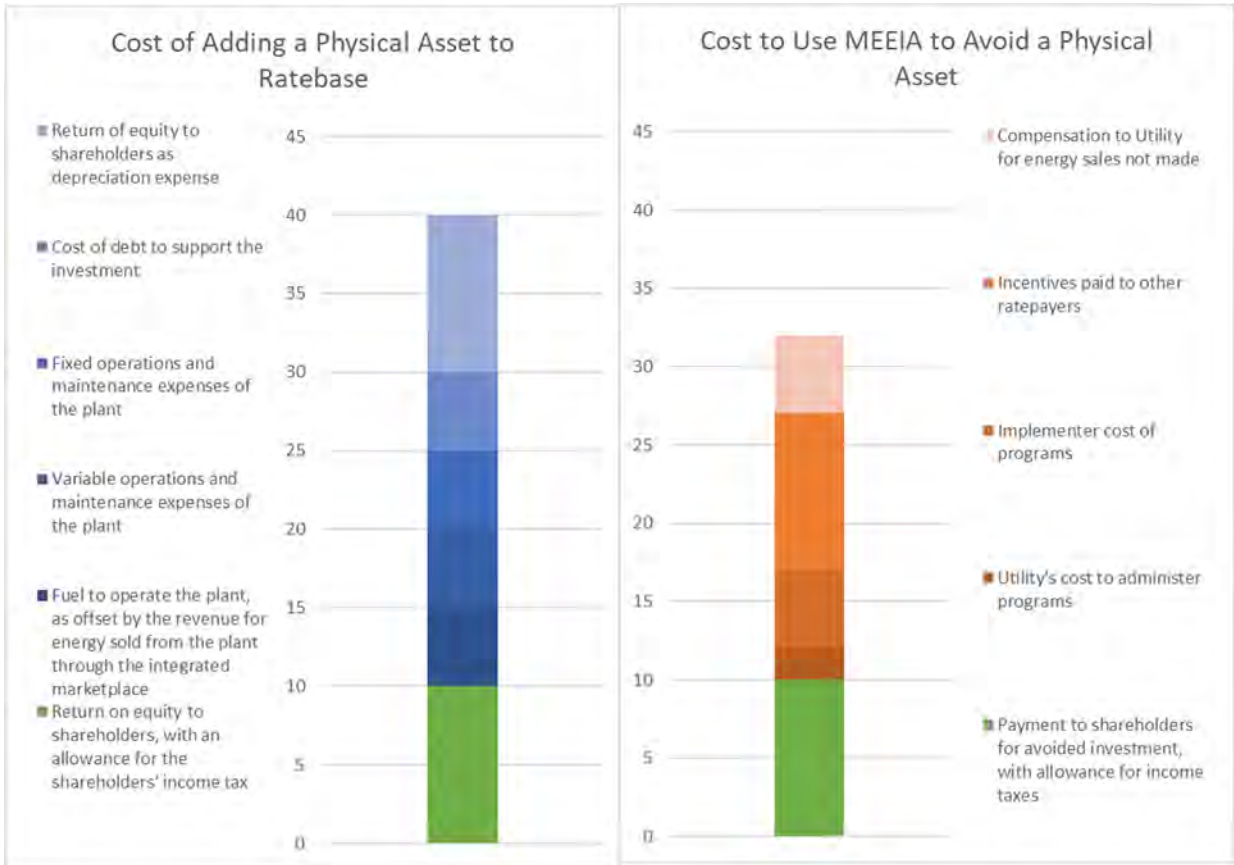
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3   J Luebbert's direct testimony sections "Avoided Costs" and "Earnings Opportunity"

4   provide a detailed discussion of these calculations. Mr. Luebbert' s Schedule JL-d2 provides a

5   walk-through of the revenue requirement implications of a supply-side deferral of a

6   fossil-fueled generation plant, and illustrates the variation in the revenue requirement

7   implications of a supply-side deferral when a low- or no-cost renewable plant is deferred.

8   **Earnings Opportunities**

9   Q.   In designing an earnings opportunity mechanism, how should the payment to

10   shareholders for avoided investment relate to the return on equity of a plant that would

11   physically exist in the future?

1   A.   Under a well-designed earnings opportunity, the payment to shareholders for

2 avoided investment (plus an allowance for income taxes) should be roughly identical on a

3 risk-adjusted present value of the return on equity of a plant that would physically exist in the

4 future (with an allowance for income taxes).

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

6   A.   To size an earnings opportunity, the Commission needs reliable evidence of

7 what investment opportunity, and when it was to be built, is expected to be avoided by a given

8 MEEIA cycle.

9   Q.   Is there explicit statutory guidance on the certainty required for an earnings

10 opportunity mechanism?

11   A.   Yes.   Any earnings opportunity must be associated with "**cost-effective**

12 **measurable and verifiable efficiency savings**."[24]

13   Q.   What factors complicate the calculation of avoided costs and development of an

14 earnings opportunity mechanism?

15   A.   In addition to the same complications discussed above in the section "Benefits

16 to all customers," the calculation of avoided costs and development of an earnings opportunity

17 mechanism are complicated by the following factors, which are discussed in greater detail by

18 Mr. Luebbert:

19   1. Renewable resources have very low avoidable costs.[25]

20   2. Reductions in capacity can create the potential for new capacity revenues through

21   sales to third-parties. These revenues, if realized, are generally socialized through

22   all customers through the FAC, which complicates the Commission's statutory

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[24] 393.1075.3.

[25] See Mr. Luebbert' s Schedule JL-d2.

1   directive to fairly apportion the costs and benefits of MEEIA among classes. These

2   revenues are functionally similar to avoided costs in terms of MEEIA program

3   design, but do not provide any avoided earnings opportunity.[26]

4   3. Evergy's decisions to accelerate the transformation of its generation portfolio have

5   impacted current and future avoidable costs and avoidable earnings opportunities.[27]

6   4. While real investment in steel (or silicone) in the ground is subject to the PISA cap,

7   theoretical earnings opportunities are not. [28]

8   5. As discussed by Staff expert Brad J. Fortson, effective EM&V[29] has been difficult

9   or impossible to realize.[30]

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

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

12   A.   Section 393.1075.3. governs the "three-legged stool" of MEEIA.

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

17   (1) Provide timely cost recovery for utilities;

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

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

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[26] See Mr. Luebbert's sections "Generation Facility Avoidable Costs," and "Reductions in capacity can create the potential for new capacity revenues through sales to third-parties, but those revenues are generally socialized through all customers through the FAC."

[27] See Mr. Luebbert's testimony section "Impact of Evergy's decision to accelerate the transformation of its generation portfolio on Avoidable Costs and Avoidable Earnings Opportunities.".

[28] See Mr. Luebbert's testimony section "Impact of Evergy's decision to accelerate the transformation of its generation portfolio on Avoidable Costs and Avoidable Earnings Opportunities.".

[29] Evaluation, Measurement & Verification (EM&V).

[30] EM&V is further discussed by Staff experts Dr. Poudel and J Luebbert.

1   These provisions are generally understood to refer to (1) program cost recovery,

2   (2) avoided revenue recovery (historically, the net throughput disincentive), and (3) the

3   earnings opportunity.

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

5   A.   No.

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

7   A.   Program costs include literal incentives and products provided to customers to

8   reduce energy consumption overall or at target times, as well as the costs of internal

9   administration, third parties, evaluations of program implementation, and any other costs of

10   facilitating a MEEIA program.

11   Q.   To date, how much have Evergy's shareholders invested pursuant to

12   MEEIA Cycle 1, MEEIA Cycle 2, and MEEIA Cycle 3 for Evergy Missouri Metro and Evergy

13   Missouri West?

14   A.   Evergy shareholders have not invested a single dollar in any MEEIA cycle since

15   MEEIA Cycle 1 was initially authorized in 2012. To date, both Evergy utilities' MEEIA cycles

16   have included real-time recovery of a forecast program cost level, which is subject to true-up,

17   with carrying costs.[31]

18   Q.   Under the statute, could program cost recovery be handled different?

19   A.   Yes. Program costs could be capitalized, but, to date, they have not been treated

20   that way under Evergy MEEIA cycles. Section 393.1075.5 authorizes capitalization of program

21   costs, and accelerated depreciation of the investment in program costs.

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

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[31] Staff expert Justin Tevie discusses the costs to ratepayers of these prior MEEIA cycles.

1   A.   Mr. Luebbert generally addresses program development and design for a

2 potential fourth MEEIA cycle, including the following main points:

3   1. Avoided costs (and earnings opportunities) must be estimated at the program or
4   measure level to be reasonable. [32]

5   2. Targeted program design is an iterative process. [33]

6   3. Ratepayer benefit (or detriment) must be analyzed at the class level. [34]

7   4. The authorizing tariff must be sufficiently detailed to be reasonably operable. [35]

8   5. When developing and designing programs, consideration should be given to the
9   feasibility of effectively evaluating, measuring, and verifying the energy or
10   demand savings associated with the program. EM&V is further discussed by
11   Staff experts Brad J. Fortson, Dr. Hari K. Poudel, and Justin Tevie. Mr. Tevie's
12   testimony also discusses existing measure savings values.

13   **Reallocation of Revenue Requirement and Optimization of Program Design**

14   Q.   What is the reallocation of revenue requirement?

15   A.   A utility makes money by selling energy. When a utility uses ratepayer dollars

16 to facilitate programs to reduce energy consumption, that utility is reducing the energy it sells,

17 and ultimately, the money it makes, all else being equal. In other words, a utility has a financial

18 disincentive to facilitating programs to reduce energy consumption, in general.

19   Collectively, ratepayers also have a financial disincentive to reduce the energy sold by

20 their utility, to the extent that those sales were made above the marginal cost of the energy sold.

21   Decreased sales can reduce affordability, as avoided revenues do not displace the

22 utility's need for retail electric service revenues required of the basic rate classes. Sales of

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[32] See Mr. Luebbert's testimony sections "Designing a MEEIA Compliant Portfolio," and "Finalizing the Portfolio." section.

[33] See Mr. Luebbert's testimony section "Selection and Review of Programs and Measures."

[34] See Mr. Luebbert's testimony section "Finalizing the Portfolio."

[35] See Mr. Luebbert's testimony section "Tariff Development."

1   energy effectively lost to energy efficiency programs can avoid revenues that cover some of

2   the revenue requirement and contribute to overall affordability of basic electric service.

3   Evergy Metro and Evergy West have proposed and received authorization of economic

4   development and electrification activities which are designed to encourage new loads that

5   provide revenues above the marginal cost of serving them, and therefore contribute to covering

6   fixed costs and ultimately reduce rates for all customers from levels that would otherwise be

7   required to cover those fixed costs.

8   A poorly-designed MEEIA program can do the opposite of that. A poorly-designed

9   MEEIA program may cause other customers to pay more to cover the revenue requirement

10 that remains when a sale of energy is avoided. As discussed in the testimony of Staff expert

11 J Luebbert, the operation of the fuel adjustment clause and the participation of each Evergy

12 utility in a energy market and existence of various capacity transactions can further distort the

13 typically-expected relationships for classes of customers and individual customers, even if a

14 program appears reasonable at a total company level.

15   Q.   Does all energy efficiency result in the reallocation of revenue requirement?

16   A.   No. Some energy is sold by a utility at a loss, in that the wholesale cost of energy

17 is greater than the retail energy revenue for that energy.[36] This is particularly applicable to

18 Evergy West, which purchases capacity to cover its capacity requirements. In this instance,

19 both wholesale energy costs and capacity costs may be avoidable in real time through the

20 avoidance of a sale of energy at retail for which the retail revenue is less than the

21 all-in wholesale cost.

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[36] Changes in class or rate schedule energy and demand determinants and changes in class or rate-schedule level revenues will result in different allocation factor calculations in future rate cases.

1   Q.   Does every avoided energy sale create avoided energy costs for purposes of

2 designing a MEEIA cycle?

3   A.   No. When a retail customer uses one less kWh, the company buys one less kWh

4 at wholesale, and receives revenue for one less kWh at retail. What matters is whether the retail

5 kWh avoided was one with high or low margin – meaning was the kWh purchase avoided at

6 wholesale above or below average cost.

7   Q.   Can you walk through an example?

8   A.   Yes. Consider a vending machine. Leasing the vending machine costs $50 per

9 month. Purchasing soda at Sam's to stock the vending machine costs $0.50 per can. If I sell

10 200 cans of soda per month at $0.75 per can, I will break even.

11

			Quantity	
Lease	$ 50.00	per month	1	$ 50.00
Wholesale Cost	$ 0.50	per can	200	$ 100.00
				$ 150.00
$150.00 divided by 200 cans, required price per can:				$ 0.75

12

13   Now, consider if my sales drop by 50 cans per month. If I only need to purchase

14 150 cans from Sam's, my wholesale cost of soda drops from $100 to $75 – I have avoided

15 $25 in costs!

16

			Quantity	
Lease	$ 50.00	per month	1	$ 50.00
Wholesale Cost	$ 0.50	per can	150	$ 75.00
				$ 125.00
$125.00 divided by 150 cans, required price per can:				$ 0.83

17

18   But my lease cost of $50 hasn't changed, and I am now going to have to raise prices to

19 $0.83 to continue to break even.

1   Obviously, electric pricing is more complicated than a soda vending machine. The cost

2   of every kWh consumed at retail by an Evergy Missouri West or Evergy Missouri Metro

3   customer is obtained through an incomprehensibly complex integrated energy market, and the

4   time at which that energy is purchased and the point on the transmission system at which it is

5   obtained, and market and weather conditions for approximately a third of the continental United

6   States are factored into its pricing. And retail pricing is complex. Residential customers have

7   options for various rate plan under which they pay different rates for energy depending on what

8   time of day the energy is used, what day of the week the energy is used, how much energy

9   they've already used in that billing month, and where that billing month falls in the year.

10   Outside of the residential class, customers are billed on multi-part rates which cannot be

11   succinctly described in this testimony. So we'll consider an example with two soda brands.

12

			Quantity	
Lease	$ 50.00	per month	1	$ 50.00
Wholesale Cost Brand A	$ 0.80	per can	50	$ 40.00
Wholesale Cost Brand B	$ 0.40	per can	150	$ 60.00
				$ 150.00
$150.00 divided by 200 cans, required price per can:				$ 0.75

13

14   Notice we are losing 5 cents on every can we sell of Brand A. And our sales of Brand B

15   have to cover not only our lease cost, but also the cost of our losses on Brand A.

16

			Quantity	
Lease	$ 50.00	per month	1	$ 50.00
Wholesale Cost Brand A	$ 0.80	per can	30	$ 24.00
Wholesale Cost Brand B	$ 0.40	per can	150	$ 60.00
				$ 134.00
$134.00 divided by 180 cans, required price per can:				$ 0.74

17

1   If I sell 20 fewer cans of Brand A, my wholesale costs have dropped by $16. Those

2 20 cans of soda I didn't sell would have cost me 80 cents to buy, but they also would have sold

3 for 75 cents each, which would have increased my revenue by $15. The difference between

4 these two values, $1.00, is what I will reflect when I drop my prices on the 180 cans of soda

5 that are sold. Because I avoided $16 in wholesale costs, and $15 in revenues, I can drop my

6 overall cost by $1.00, resulting in a new price of $0.74 per can.

7   However, if instead of selling fewer sodas of Brand A, I sell fewer sodas of Brand B,

8 the opposite occurs.

9

			Quantity	
Lease	$ 50.00	per month	1	$ 50.00
Wholesale Cost Brand A	$ 0.80	per can	50	$ 40.00
Wholesale Cost Brand B	$ 0.40	per can	130	$ 52.00
				$ 142.00
$138.00 divided by 180 cans, required price per can:				$ 0.79

10

11   Notice my wholesale cost has again dropped. I have, without a doubt, avoided wholesale

12 soda costs of $8 compared to where we started. However, I have also avoided $15 in revenue.

13 The difference between those two values is $7, which is what I must reflect when I RAISE my

14 prices by $0.04 per can to $0.79. Even though I avoided costs, my prices had to go up.

15 The relationship between the wholesale and the retail cost – the margin – is what matters to the

16 other soda purchasers. When analyzing avoided energy costs in MEEIA, avoiding the sale of

17 high cost energy – especially if it is sold with little room for margin - is good for customers.

18 Avoiding the sale of low cost energy, when analyzing avoided energy costs in MEEIA, is not

19 good for customers.

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

1
2

3   Q.   Why does the MEEIA statute authorize alignment of utility financial incentives

4   with helping customers use energy more efficiently?

5   A.   Utility rates are designed to recover more than the variable cost to the utility to

6   acquire the energy required by its customers at wholesale. To the extent that a utility sells more

7   energy at retail, the utility recovers more net revenue. To the extent that a utility sells less

8   energy at retail, the utility recovers less net revenue. Absent some mechanism, utilities are

9   financially disincented from facilitating customer-funded demand-side programs that would

10   reduce the utility's quantity of energy sold at retail, known as its "throughput." In prior

11   MEEIA cycles, the Commission has authorized mechanisms to account for the impact on

12   utility revenues of decreases in usage due to variations caused by supply-side programs.

13   This mechanism has been referred to as the "net throughput disincentive," or the "throughput

14   disincentive net-shared-benefit," and will be referred to in this testimony as "avoided revenues."

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

16   A.   In each rate case, rates are calculated with the most recent billing determinants

17   available. Thus, the utility disincentive to facilitate demand-side programs due to avoided

18   revenues is a short-term problem. However, this issue translates into a longer-term question of

19   the effect on ratepayers of the reallocation of revenue requirement, discussed above.

20   Q.   What other complications have arisen with the design of mechanisms to

21   align utility financial incentives – between rate cases – with helping customers use energy

22   more efficiently?

1   A.   As discussed in greater detail by Staff expert Justin Tevie, robust program

2 evaluation has not occurred to improve the reliability of the Technical Reference Manual

3 (TRM) over time. As discussed in detail by Staff expert Dr. Poudel in the section

4 "Net Throughput Disincentive,", the shape of the energy avoided by each measure must be

5 considered when estimating the amount of revenue avoided by a utility for each kWh of energy

6 not sold. Adoption of time-variant rate structures - even the conservative "Residential Peak

7 Adjustment Service" which is the default residential rate at each Evergy utility, results in an

8 explosion in the quantity of measure-specific net margin rates for use under the mechanism

9 designed in 2014.

10   **Changes in circumstances and statutory authority**

11   Q.   Under the current circumstances, is it lawful for the Commission to authorize a

12 MEEIA mechanism to account for the impact on utility revenues of increases or decreases in

13 residential and commercial customer usage due to variations caused by supply-side programs

14 for either Evergy utility?

15   A.   No. Subsection 386.266.3 RSMo provides

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

1   through a rate adjustment mechanism authorized by this section or any

2   other provisions of law. This subsection shall apply to electrical

3   corporations beginning January 1, 2019, and shall expire for electrical

4   corporations on January 1, 2029. **An electrical corporation may**

5   **make a one-time application to the commission under this**

6   **subsection if such corporation has provided notice to the**

7   **commission under subsection 5 of section 393.1400, provided the**

8   **corporation shall not concurrently utilize electric rate adjustments**

9   **under this subsection and the deferrals set forth in subsection 5 of**

10   **section 393.1400.** [Emphasis added.]

11   Section 393.1400 RSMo authorizes Plant in Service Accounting (PISA) deferrals,

12 which each Evergy Missouri utility has elected.

13   Q.   Because the Evergy Missouri utilities have elected PISA deferrals, may the

14 Commission authorize a MEEIA mechanism to account between rate cases for the impact on

15 utility revenues of increases or decreases in residential and commercial customer usage due to

16 variations caused by supply-side programs?

17   A.   No.

18   Q.   If the Commission decides that a MEEIA mechanism that accounts for the

19 "impact on utility revenues of increases or decreases in residential and commercial customer

20 usage due to variations in either weather, conservation, or both" does not conflict with a utility's

21 election of PISA, does Staff proffer a mechanism to account for avoided revenues?

22   A.   As explained in the following section, Staff has developed a mechanism which

23 is easier to implement and administer, and does not rely on estimates of net margin rates or

24 deemed avoided energy sales. It is also more compatible with time-based rate structures.

25   Q.   Is this proposal consistent with the statutes?

1   A.   If the Commission determines that it would be lawful for it to authorize (under

2   393.1075.3.(2)) a mechanism like the existing NTD for a utility that has elected PISA, then it

3   would also be lawful for the Commission to authorize under 393.1075.3.(2) some other

4   mechanism that accounts "for the impact on utility revenues of increases or decreases in

5   residential and commercial customer usage due to variations in" conservation[37] so long as it

6   also "ensure[s] that utility financial incentives are aligned with helping customers use energy

7   more efficiently and in a manner that sustains or enhances utility customers' incentives to use

8   energy more efficiently"[38]

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

10   Q.   Are you familiar with the avoided revenues calculation in the existing Evergy

11   MEEIA mechanisms?

12   A.   I am. I developed the mechanism working on KCPL MEEIA Cycle 2[39] and

13   Ameren Missouri MEEIA Cycle 2.[40]

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

15   A.   This calculation is significantly easier to implement. The mechanism currently

16   in use requires many margin rate calculations,[41] many TRM load shape calculations,[42]

17   assumptions about the level of avoided energy sales that actually occurs, and reliance on

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[37] 386.266.3.
[38] 393.1075.3.(2).
[39] Case No. EO-2015-0240.
[40] Case No. EO-2015-0055.
[41] See testimony of Dr. Poudel.
[42] See testimony of Justin Tevie.

1   EM&V.[43]   If I knew then what I know now, I would not have supported the existing

2   mechanism in 2014 and 2015.

3   Q.   Have circumstances changed since 2014 that support modernizing the avoided

4   revenue mechanism?

5   A.   Yes. Evergy has fully deployed its AMI[44] meter infrastructure. Delayed meter

6   read reporting and rebills for faulty reads should essentially be a thing of the past, enabling

7   reliance on reported monthly billing without significant concern for substantial future revisions.

8   More significantly, essentially all of both Evergy utilities' residential customers take

9   service on a time-based rate schedule, and have the ability to switch among time-based rate

10 schedules. The mechanism Staff proposes in this case eliminates the need to create dozens or

11 hundreds of time-and measure-specific margin rates to continue to limp the 2014 mechanism

12 along, and recognizes the difficulty that Evergy has experienced on tracking the quantity of

13 customers on each rate plan, much less tracking the current rate plan of customers who have

14 participated in a MEEIA program.

15   Q.   What does the Cycle 2 and Cycle 3 NTD mechanism capture as a net

16 margin rate?

17   A.   In reality, the net marginal rate **is** the difference between the wholesale cost of

18 the energy for a given kWh sold at retail and the marginal retail rate for that kWh of energy.

19 However, the existing NTD mechanism has relied on a calculation of marginal rates that isolates

20 the revenue impact of deemed avoided marginal sales to the net difference between the marginal

21 retail rate for a kWh of energy and the FAC base. The circumstances of prior MEEIA filings

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[43] See testimony of Justin Tevie and Dr. Poudel.
[44] Advanced Metering Infrastructure (AMI).

1   have been such that Staff has agreed with use of the FAC base for calculation of the net margin

2   rates in prior MEEIA cycles.

3   Q.   Is this prior practice problematic?

4   A.   Yes. The utility has a recognized obligation to its shareholders to maximize

5   shareholder benefit. The current NTD calculation assumes that all customers in a class take

6   service under the same (or essentially the same) rate plan, and that the time of energy

7   consumption in irrelevant to the revenue recovery experienced by the utility. In the interaction

8   of the current NTD with the FAC, each Evergy utility receives the same compensation for

9   avoiding a kWh of energy sold at retail for $0.05 and acquired for a wholesale cost of $1.25 as

10   it does for avoiding a kWh of energy sold at retail for $0.15 and acquired for a wholesale cost

11   of $0.05. This NTD operation is simply not reasonable to the extent that these mismatches may

12   occur if either Evergy utility were to implement its MEEIA programs in a manner to avoid the

13   greatest amount of wholesale energy cost while avoiding the least amount of retail revenues (or

14   at least not avoiding more revenues than energy costs); and this NTD operation is wholly

15   unreasonable where the utility has the ability to implement its MEEIA programs to maximize

16   its retail and NTD revenues and is essentially ambivalent to the level of wholesale energy costs.

17   Between rate cases the FAC functions to ensure that the same amount of revenue is

18   available to the revenue requirement in each kWh sold, whether the kWh sold was at a high,

19   low, or average wholesale energy cost. However, the FAC then collects (or refunds) 95% of

20   the difference between the experienced net energy function costs and revenues. Concurrently,

21   the existing NTD Mechanism would charge ratepayers for the difference between the FAC base

22   and the average revenue per kWh for the applicable month for each kWh sale assumed to have

23   been avoided. The result is that whether a high cost kWh or a low cost kWh is avoided through

1   a MEEIA program, Evergy requests compensation from ratepayers for the same avoided

2   revenue requirement contribution. 95% of the energy cost difference is eventually billed to or

3   refunded to ratepayers through the FAC, such that the FAC actually incents utilities to target

4   low-wholesale cost energy reductions.

5   Q.   Does the foregoing testimony imply negative motivation on the part of utility

6   management?

7   A.   Not at all. It is utility management's fiduciary obligation to shareholders to

8   maximize shareholder value. This incentive to maximize shareholder value is the genesis of

9   MEEIA. The existing NTD, knowing what Staff knows now, is simply another tool for

10   utility management to maximize shareholder value, as opposed to a tool to align ratepayer and

11   utility incentives.

12   Q.   Is there an additional reason to move away from the NTD used in Cycles 2

13   and 3?

14   A.   Yes. The current NTD fails to account for the variations in wholesale energy

15   costs, and market capacity costs, that occur in real time. The current NTD preserves the utility

16   incentives to maximize throughput, and creates a new incentives to minimize actual reductions

17   to throughput while maximizing deemed reductions to throughput, and to be indifferent as to

18   the realization of the avoided wholesale energy and capacity costs that were used to justify a

19   MEEIA cycle. In addition, the current NTD will become unworkably complex if modified to

20   address time-based rates, as is necessary to limp it along.

21   Q.   What is Evergy's current deployment of time-based rates?

22   A.   Based on Evergy's response to Data Request (DR) No. 0002.1 in ET-2024-0061,

23   there is significant variety in current rate plan utilization of time-based rate plans.

1

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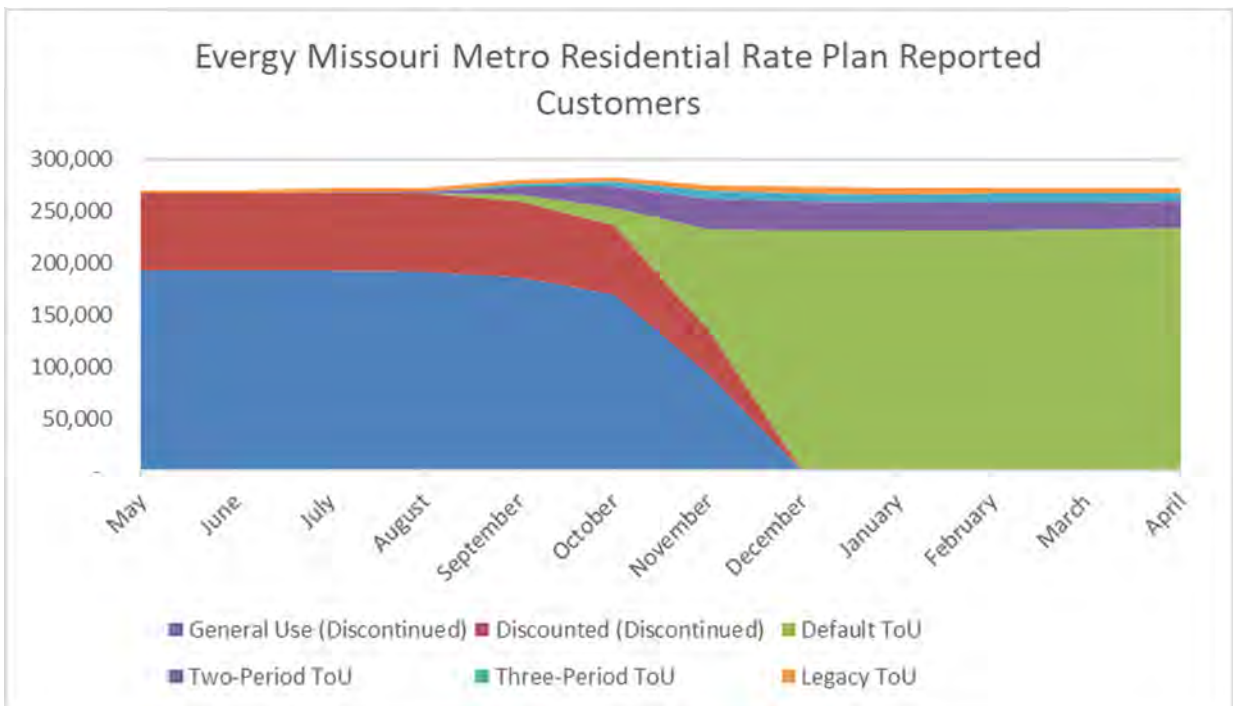
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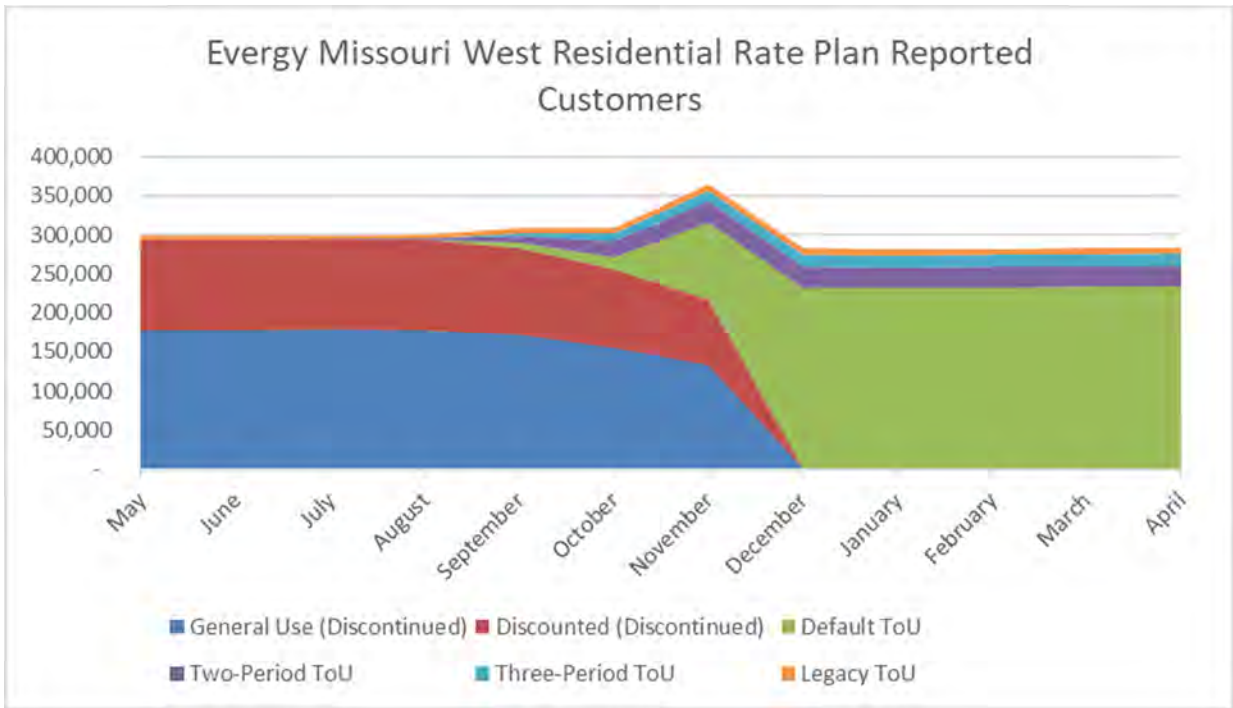
5   Q.   Can you summarize the variety in applicable rates under the various rate plans

6   for each utility?

7   A.   Yes.

1

		Evergy Missouri West		Evergy Missouri Metro	
Default ToU					
	Customer Charge	$	12.00	$	12.00
	First 1000 kWh/month (summer)	$	0.11829	$	0.14094
	kWh over 1000/month (summer)	$	0.12829	$	0.15094
	First 600 kWh (non summer)	$	0.09784	$	0.12233
	Next 400/month (non summer)	$	0.07718	$	0.07532
	kWh over 1,000 / month (non summer)	$	0.07718	$	0.06681
	Additional Charge for each kWh used from 4 pm - 8 pm (Summer)	$	0.01	$	0.01
	Additional Charge for each kWh used from 4 pm - 8 pm (non-Summer)	$	0.0025	$	0.0025
	Discount applied to each kWh consumed 12 am - 6 am (year-round)	$	0.01	$	0.01
On-Peak: 4pm-8pm, Monday through Friday, excluding holidays; Super Off-Peak: 12am-6am every day; Off-Peak: All other hours					
Two Period ToU					
	Customer Charge	$	12.00	$	12.00
	Peak (Summer)	$	0.32412	$	0.38328
	Off-Peak (Summer)	$	0.08103	$	0.09582
	Off-Peak (Non-Summer)	$	0.09466	$	0.11311
	Super Off-Peak (Non-Summer)	$	0.04733	$	0.05656
Summer: On-Peak: 4pm-8pm, Monday through Friday, excluding holidays; Off-Peak: All other hours					
Winter: Super off-peak: Midnight-6am, every day; Off-peak: All other hours					
Three Period ToU					
	Customer Charge	$	12.00	$	12.00
	Peak (Summer)	$	0.26541	$	0.35879
	Off-Peak (Summer)	$	0.10616	$	0.11960
	Super Off-Peak (Summer)	$	0.02654	$	0.02990
	Peak (Non-Summer)	$	0.20299	$	0.27305
	Off-Peak (Non-Summer)	$	0.08119	$	0.09102
	Super Off-Peak (Non-Summer)	$	0.02300	$	0.02275
On-Peak: 4pm-8pm, Monday through Friday, excluding holidays; Super Off-Peak: 12am-6am every day; Off-Peak: All other hours					
Legacy ToU					
	Customer Charge	$	12.00	$	12.00
	Peak (Summer)	$	0.28129	$	0.33803
	Off-Peak (Summer)	$	0.09376	$	0.11268
	Super Off-Peak (Summer)	$	0.04688	$	0.05633
	Peak (Non-Summer)	$	0.22892	$	0.27642
	Off-Peak (Non-Summer)	$	0.09237	$	0.10840
	Super Off-Peak (Non-Summer)	$	0.03881	$	0.04675
On-Peak: 4pm-8pm, Monday through Friday, excluding holidays; Super Off-Peak: 12am-6am every day; Off-Peak: All other hours					

2

1   Q.   Using Evergy West rates as an example, and ignoring the relationship between

2   wholesale and retail rates, if a measure avoided exactly 1 kWh in each hour for a summer month,

3   what would the avoided revenue net of FAC base factor be under each rate plan?

4   A.   The rates under each rate plan, net of the FAC base factor adjusted to secondary

5   voltage are attached as Schedule SLKL-d2.

6   The avoided revenue for 756 kWh (one kWh in each hour) minus the FAC Base Factor

7   at Secondary for 756 kWh is provided below at summer rates:

8
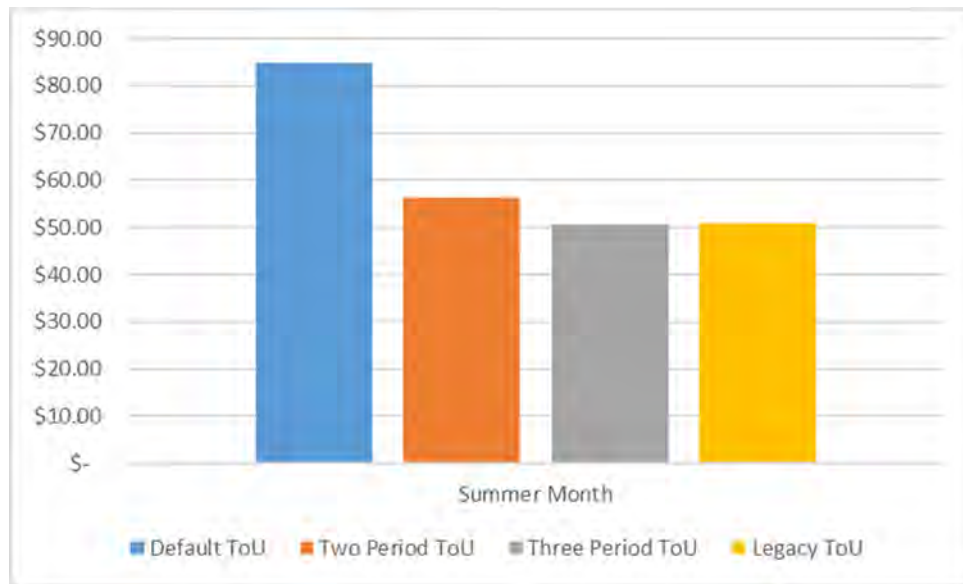
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10   Q.   Can you provide the same information for a non-summer month?

11   A.   Yes.

1

2

3   Q.   Can you provide this information for a whole year?

4   A.   Yes.

5

6

7   Q.   What is notable about this?

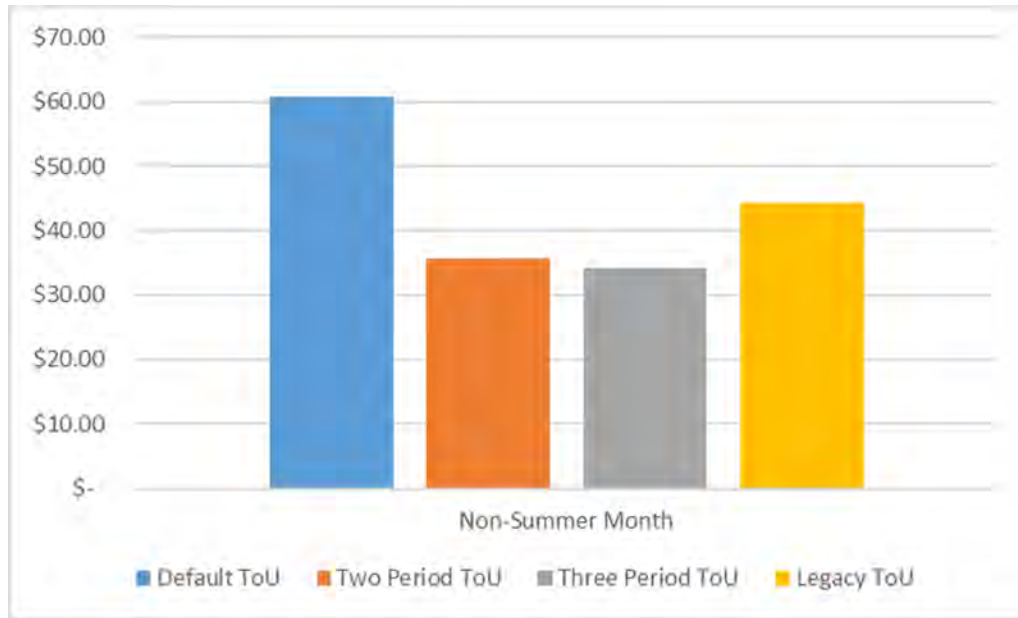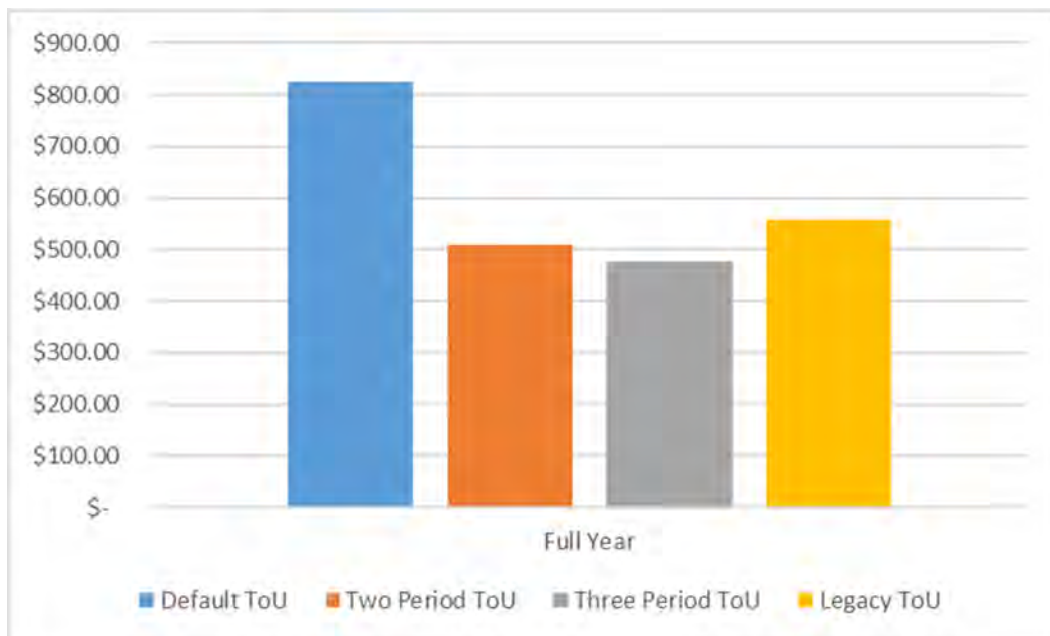Direct Testimony of
Sarah L.K. Lange

1   A.   If a single kWh were avoided in each hour of a year for one year, the

2   avoided revenue for customers on the Two Period and Legacy Time of Use ("ToU") rate plans

3   is about 1/3 less than the avoided revenue for customers on the Default ToU rate plan.[45] For the

4   customers on the Three Period ToU rate plan, the avoided revenue is over 40% less than on the

5   Default ToU rate plan.

6

	Default ToU	Two Period ToU	Three Period ToU	Legacy ToU
Summer Month	$ 84.76	$ 56.39	$ 50.63	$ 51.00
Non-Summer Month	$ 60.70	$ 35.61	$ 34.08	$ 44.28
Full Year	$ 824.60	$ 510.42	$ 475.15	$ 558.23
Relationship to Default	100%	62%	58%	68%

7

8   Q.   Do all MEEIA programs avoid the same amount of kWh in each hour?

9   A.   No. In fact, most do not. Use of the existing NTD mechanism would necessitate

10   calculation of each applicable avoided energy rate for each month for each measure shape.

11   Q.   If that information were calculated, would the existing NTD mechanism work?

12   A.   No. It would need to be known and accounted for which rate plan each customer

13   who has utilized a MEEIA measure is on in each month until a MEEIA NTD rebasing occurs.

14   Q.   Based on your experience with Evergy's ability to obtain customer information

15   from its billing system in a reportable manner, is it your understanding that this is possible?

16   A.   No.

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[45] For purposes of this analysis, a monthly consumption of 1,200 kWh is assumed in calculating the Default ToU rates. To the extent that customer usage is lower than 1,200 kWh in a summer month, or more than 1,200 kWh in a non-summer month, the avoided revenue rate would be lower, and vice versa.

1   **Residential and SGS avoided revenue mechanism**

2   Q.   How does Staff recommend the Commission "ensure that utility financial

3 incentives are aligned with helping customers use energy more efficiently and in a manner that

4 sustains or enhances utility customers' incentives to use energy more efficiently,"[46] to the extent

5 that such a mechanism may be approved under this authority established in the MEEIA statute?

6   A.   A utility makes money by selling energy. When a utility uses ratepayer dollars

7 to facilitate programs to reduce energy consumption, that utility is reducing the energy it sells,

8 and ultimately, the money it makes, all else being equal. In general, a utility has a financial

9 disincentive to facilitating programs to reduce energy consumption.[47] In order to align Evergy

10 Missouri West's and Evergy Missouri Metro's financial incentives with customers' incentives

11 to use energy more efficiently, Staff recommends removing Evergy's financial disincentive to

12 facilitating programs to reduce energy consumption.

13   Q.   Can you provide a summary of Staff's proposed mechanism?

14   A.   Yes. Using the Evergy Missouri Metro residential class as an example, based

15 on the revenues established and rates set in File No. ER-2022-0129, Evergy Missouri Metro's

16 residential class provides $240,320,329 in net variable revenue on an annual basis. Staff's

17 proposed mechanism tracks actual net variable revenue for each applicable class at each utility

18 against the rate case level, and reconciles the difference through the MEEIA rate charged to

19 these customers.

20   Q.   What do you mean by the phrase "net variable revenue?"

---

[46] 393.1075.3.(2).

[47] As discussed in the testimony of J Luebbert, the operation of the fuel adjustment clause and Evergy's participation in energy markets and capacity transactions can distort the typically-expected relationships.

1   A.   Evergy Missouri Metro's most recent rate case was ER-2022-0129. In that rate

2 case Evergy Missouri Metro's compliance rates for the Residential Class were designed based

3 on a revenue requirement for the Residential Class of $326,626,855.   However, Evergy's

4 financial disincentive to facilitating programs to reduce energy consumption does not apply to

5 these entire revenue requirements.   Rather, the revenue from each class associated with

6 customer charges is not at risk of erosion due to reduced energy consumption. Also, because

7 of Evergy Missouri Metro's FAC, a portion of the revenue for each kWh sold is effectively

8 "backed" by the FAC's seasonal base factor.

9
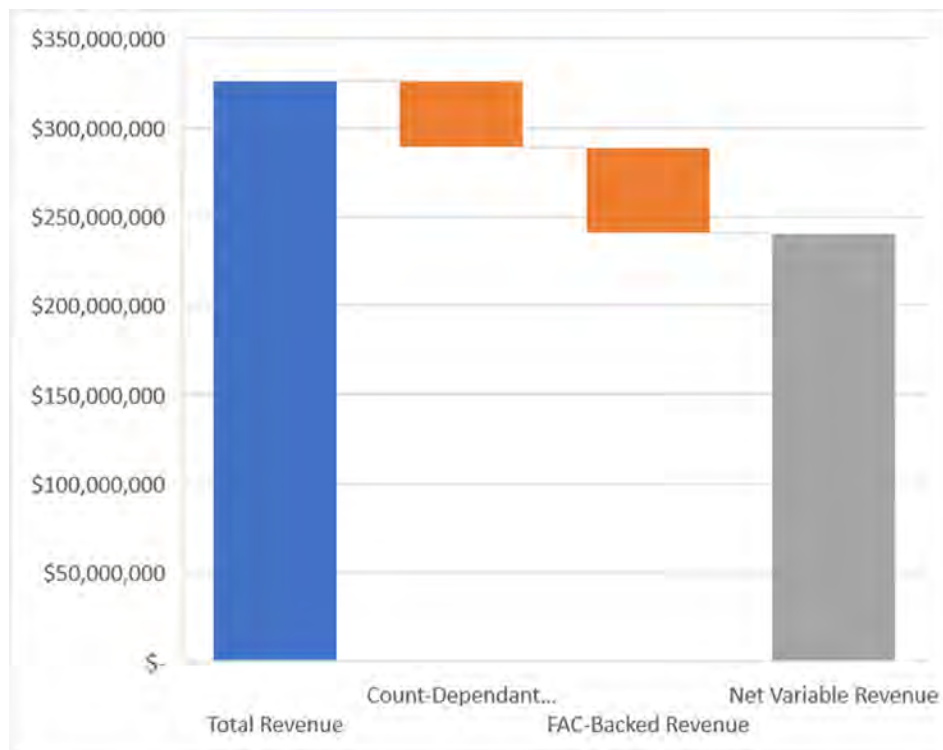
10

11   The calculation of Net Variable Revenues for Evergy Missouri Metro's residential class

12 is set out below.[48]

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[48] Evergy Missouri West is currently undergoing a general rate case, ER-2024-0189. The NVR for Evergy Missouri West Residential and SGS classes (based on ER-2024-0189) and the Evergy Missouri Metro SGS class (based on ER-2022-0129) will be calculated in the same manner.

1

	Customer Counts	Count-Dependant Revenue		
Residential	3,144,804	$ 37,737,648		
	Summer Energy Sales	Summer FAC Base Factor	Summer FAC BF @ Secondary Voltage	Summer FAC-Backed Revenue
Residential	1,013,765,576	$ 0.01829	$ 0.01898	$ 19,242,651
	Non-Summer Energy Sales	Non-Summer FAC Base Factor	Non-Summer FAC BF @ Secondary Voltage	Non-Summer FAC-Backed Revenue
Residential	1,545,001,173	$ 0.01829	$ 0.01898	$ 29,326,227
	Total Revenue	Count-Dependant Revenue	FAC-Backed Revenue	Net Variable Revenue
Residential	$ 326,626,855	$ 37,737,648	$ 48,568,878	$ 240,320,329

3   Q.   How would the Staff mechanism work?

4   A.   The EEIC tariff would set out the Rate Case Net Variable Revenue (RCNVR)

5 for the Residential Class and the SGS class by month. Each month, each Evergy utility will

6 prepare a report of its actual billings, and calculate the Actual NVR (ANVR) for that month for

7 each of the two classes. At the time of an EEIC rate change, each Evergy utility will provide

8 as its workpapers the running difference between RCNVR and ANVR for all months for which

9 billing is complete at that time. The difference for each class will be incorporated into the new

10 EEIC rate for the Residential Class and the SGS Class, respectively.[49]

11   Q.   Is continued use of the NTD inconsistent with relief sought by Evergy West?

12   A.   Yes. While Staff will address its concerns with Evergy's requested ToU tracker

13 in appropriate filings in ER-2024-0189, it notes here that if the existing NTD mechanism is

14 ordered and the ToU tracker is granted, significant double-recovery is likely.

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

1   Q.   As a latency, does Staff's proposed MEEIA avoided revenue mechanism

2   increase or decrease the revenue risk of each Evergy utility?

3   A.   Staff's proposed MEEIA avoided revenue mechanism essentially eliminates

4   shareholder volumetric revenue risk from the Residential and SGS classes.

5   **SGS Rate Switching Component**

6   Q.   Is it appropriate to include an adjustment within the SGS calculation to account

7   for rate switching among customer classes?

8   A.   Yes. From time to time an SGS customer becomes an LGS[50] customer (or

9   MGS[51] customer at Evergy Metro). This can occur automatically if the customer's metered

10 demand exceeds 100 kW, or it can occur if a customer elects to change schedules so long as the

11 customer pays the LGS minimum demand charge. Evergy should prepare a monthly report of

12 such rate switching between the LGS, MGS, and SGS classes at each utility (as applicable, with

13 regard to the MGS class), and calculate the NVR by month associated with these customers for

14 the preceding 12 months.[52] The cumulative "RSNVR"[53] for a given calendar month would be

15 excluded from the RCNVR for purposes of the calculation of the running difference between

16 the RCNVR and ANVR in calculating the amount to incorporate into the EEIC rate.

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

18   Q.   Is it reasonable to design a similar mechanism for the classes which serve larger

19 customers?

---

[50] Large General Service (LGS).

[51] Medium General Service (MGS).

[52] 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 Small General Service (SGS) and Small Primary Service (SPS).

[53] Rate Switching Net Variable Revenue (RSNVR).

1   A.   Not at this time. The revenue risk associated with these classes is immense, and

2   driven far more by economic conditions than demand side measures.

3   Q.   Do the drawbacks of the existing NTD mechanism necessitate care in program

4   design?

5   A.   Yes. EM&V is important for all measures, and the ability of conducting

6   reasonably reliable EM&V should be considered in designing all programs. For reasonable

7   operation of the TD mechanism designed in MEEIA Cycle 2, EM&V design and planning is

8   indispensable. If the energy sales avoided due to a program cannot be measured and verified,

9   then the energy savings assumed from that program should not be included in an NTD

10   calculation. Further, additional granularity in net margin rates is necessary, as discussed above

11   and by Staff expert Dr. Poudel.

CONCLUSION

13   Q.   Does this conclude your direct testimony?

14   A.   Yes.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Evergy Metro, Inc. d/b/a Evergy Missouri Metro's Notice of Intent to File an Application for Authority to Establish a Demand-Side Programs Investment Mechanism	)))))))	Case No. EO-2023-0369
n the Matter of Evergy Missouri West, Inc. d/b/a Evergy Missouri West's Notice of Intent to File an Application for Authority to Establish a Demand-Side Programs Investment Mechanism	))))))	Case No. EO-2023-0370

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 __21st__ day of May 2024.

D. Suzie Mankin
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

Company	Case No.
Evergy Metro, Inc. d/b/a Evergy Missouri Metro	EO-2023-0369
Evergy Missouri West, Inc. d/b/a Evergy Missouri West	EO-2023-0370
In the Matter of Evergy Metro, Inc. d/b/a Evergy Missouri Metro's Notice of Intent to File an Application for Authority to Establish a Demand-Side Programs Investment Mechanism	
Evergy Metro, Inc. d/b/a Evergy Missouri Metro	ET-2024-0182
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	
Evergy Metro, Inc. d/b/a Evergy Missouri Metro	EC-2024-0092
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	
Evergy Metro, Inc. d/b/a Evergy Missouri Metro	ET-2024-0061
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	
Union Electric Company d/b/a Ameren Missouri	EF-2024-0021
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	
Evergy Metro, Inc. d/b/a Evergy Missouri Metro	E0-2024-0002
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	
Evergy Metro, Inc. d/b/a Evergy Missouri Metro	EO-2023-0423
Evergy Missouri West, Inc. d/b/a Evergy Missouri West	EO-2023-0424
In the Matter of Evergy Metro, Inc. d/b/a Evergy Missouri Metro's Request to Revise Its Solar Subscription Rider	
Union Electric Company d/b/a Ameren Missouri	ER-2023-0136
In the Matter of Union Electric Company d/b/a Ameren Missouri's 4th Filing to Implement Regulatory Changes in Furtherance of Energy Efficiency as Allowed by MEEIA	
Union Electric Company d/b/a Ameren Missouri	EA-2023-0286
In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri for Certificates of Convenience and Necessity for Solar Facilities	
Union Electric Company d/b/a Ameren Missouri	ER-2022-0337
In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to Adjust its Revenues for Electric Service	

Company	**Case No.**
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
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
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

Company	Case No.
Evergy Affiliates	ET-2021-0151
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	
Spire Missouri, Inc.	GR-2021-0108
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	
Union Electric Company d/b/a Ameren Missouri	ET-2021-0082
In the Matter of the Request of Union Electric Company d/b/a Ameren for Approval of its Surge Protection Program	
Union Electric Company d/b/a Ameren Missouri	GT-2021-0055
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	
The Empire District Electric Company	ET-2020-0390
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	
The Empire District Electric Company	ER-2019-0374
In the Matter of The Empire District Electric Company's Tariffs to Increase Its Revenues for Electric Service	
Union Electric Company d/b/a Ameren Missouri	ER-2019-0335
In the Matter of of Union Electric Company d/b/a Ameren Missouri's Tariffs to Decrease Its Revenues for Electric Service	
KCP&L Greater Missouri Operations Company	ER-2019-0413
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	
Union Electric Company d/b/a Ameren Missouri	GR-2019-0077
In the Matter of of Union Electric Company d/b/a Ameren Missouri's Tariffs to Increase Its Revenues for Natural Gas Service	
Union Electric Company d/b/a Ameren Missouri	ET-2019-0149
In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri Revised Tariff Sheets	
The Empire District Electric Company	ET-2019-0029
In the Matter of The Empire District Electric Company's Revised Economic Development Rider Tariff Sheets	
The Empire District Electric Company	ER-2018-0366
In the Matter of a Proceeding Under Section 393.137 (SB 564) to Adjust the Electric Rates of The Empire District Electric Company	

Company	**Case No.**
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
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

Company	**Case No.**
Union Electric Company d/b/a Ameren Missouri	ER-2016-0179
In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariff to Increase Its Revenues for Electric Service	
KCP&L Great Missouri Operations Company	ER-2016-0156
In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service	
Empire District Electric Company	ER-2016-0023
In the Matter of The Empire District Electric Company's Request for Authority to Implement a General Rate Increase for Electric Service	
Ameren Transmission Company of Illinois	EA-2015-0146
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	
Ameren Transmission Company of Illinois	EA-2015-0145
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	
Union Electric Company d/b/a Ameren Missouri	EO-2015-0055
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	
Kansas City Power & Light Company	ER-2014-0370
In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service	
Empire District Electric Company	ER-2014-0351
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	
Union Electric Company d/b/a Ameren Missouri	EC-2014-0316
City of O'Fallon, Missouri, and City of Ballwin, Missouri, Complainants v. Union Electric Company d/b/a Ameren Missouri, Respondent	
Union Electric Company d/b/a Ameren Missouri	ER-2014-0258
In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariff to Increase Its Revenues for Electric Service	
Union Electric Company d/b/a Ameren Missouri	EC-2014-0224
Noranda Aluminum, Inc., et al., Complainants, v. Union Electric Company d/b/a Ameren Missouri, Respondent	

Company	Case No.
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
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

	Summer Weekday	Summer Weekday	Summer Weekday	Summer Weekday	Summer Weekend	Summer Weekend	Summer Weekend	Summer Weekend
	Default ToU	Two Period ToU	Three Period ToU	Legacy ToU	Default ToU	Two Period ToU	Three Period ToU	Legacy ToU
12:00 AM	$ 0.1100	$ 0.0500	$ (0.0044)	$ 0.0159	$ 0.1100	$ 0.0500	$ (0.0044)	$ 0.0159
1:00 AM	$ 0.1100	$ 0.0500	$ (0.0044)	$ 0.0159	$ 0.1100	$ 0.0500	$ (0.0044)	$ 0.0159
2:00 AM	$ 0.1100	$ 0.0500	$ (0.0044)	$ 0.0159	$ 0.1100	$ 0.0500	$ (0.0044)	$ 0.0159
3:00 AM	$ 0.1100	$ 0.0500	$ (0.0044)	$ 0.0159	$ 0.1100	$ 0.0500	$ (0.0044)	$ 0.0159
4:00 AM	$ 0.1100	$ 0.0500	$ (0.0044)	$ 0.0159	$ 0.1100	$ 0.0500	$ (0.0044)	$ 0.0159
5:00 AM	$ 0.1100	$ 0.0500	$ (0.0044)	$ 0.0159	$ 0.1100	$ 0.0500	$ (0.0044)	$ 0.0159
6:00 AM	$ 0.1100	$ 0.0500	$ (0.0044)	$ 0.0159	$ 0.1100	$ 0.0500	$ (0.0044)	$ 0.0159
7:00 AM	$ 0.1200	$ 0.0500	$ 0.0752	$ 0.0628	$ 0.1200	$ 0.0500	$ 0.0752	$ 0.0628
8:00 AM	$ 0.1200	$ 0.0500	$ 0.0752	$ 0.0628	$ 0.1200	$ 0.0500	$ 0.0752	$ 0.0628
9:00 AM	$ 0.1200	$ 0.0500	$ 0.0752	$ 0.0628	$ 0.1200	$ 0.0500	$ 0.0752	$ 0.0628
10:00 AM	$ 0.1200	$ 0.0500	$ 0.0752	$ 0.0628	$ 0.1200	$ 0.0500	$ 0.0752	$ 0.0628
11:00 AM	$ 0.1200	$ 0.0500	$ 0.0752	$ 0.0628	$ 0.1200	$ 0.0500	$ 0.0752	$ 0.0628
12:00 PM	$ 0.1200	$ 0.0500	$ 0.0752	$ 0.0628	$ 0.1200	$ 0.0500	$ 0.0752	$ 0.0628
1:00 PM	$ 0.1200	$ 0.0500	$ 0.0752	$ 0.0628	$ 0.1200	$ 0.0500	$ 0.0752	$ 0.0628
2:00 PM	$ 0.1200	$ 0.0500	$ 0.0752	$ 0.0628	$ 0.1200	$ 0.0500	$ 0.0752	$ 0.0628
3:00 PM	$ 0.1200	$ 0.0500	$ 0.0752	$ 0.0628	$ 0.1200	$ 0.0500	$ 0.0752	$ 0.0628
4:00 PM	$ 0.1300	$ 0.2931	$ 0.2344	$ 0.2503	$ 0.1300	$ 0.0500	$ 0.0752	$ 0.0628
5:00 PM	$ 0.1300	$ 0.2931	$ 0.2344	$ 0.2503	$ 0.1300	$ 0.0500	$ 0.0752	$ 0.0628
6:00 PM	$ 0.1300	$ 0.2931	$ 0.2344	$ 0.2503	$ 0.1300	$ 0.0500	$ 0.0752	$ 0.0628
7:00 PM	$ 0.1300	$ 0.2931	$ 0.2344	$ 0.2503	$ 0.1300	$ 0.0500	$ 0.0752	$ 0.0628
8:00 PM	$ 0.1200	$ 0.0500	$ 0.0752	$ 0.0628	$ 0.1200	$ 0.0500	$ 0.0752	$ 0.0628
9:00 PM	$ 0.1200	$ 0.0500	$ 0.0752	$ 0.0628	$ 0.1200	$ 0.0500	$ 0.0752	$ 0.0628
10:00 PM	$ 0.1200	$ 0.0500	$ 0.0752	$ 0.0628	$ 0.1200	$ 0.0500	$ 0.0752	$ 0.0628
11:00 PM	$ 0.1200	$ 0.0500	$ 0.0752	$ 0.0628	$ 0.1200	$ 0.0500	$ 0.0752	$ 0.0628

	Non-Summer Weekday				Non-Summer Weekend			
	Default ToU	Two Period ToU	Three Period ToU	Legacy ToU	Default ToU	Two Period ToU	Three Period ToU	Legacy ToU
12:00 AM	$ 0.0775	$ 0.0163	$ (0.0080)	$ 0.0078	$ 0.0775	$ 0.0163	$ (0.0080)	$ 0.0078
1:00 AM	$ 0.0775	$ 0.0163	$ (0.0080)	$ 0.0078	$ 0.0775	$ 0.0163	$ (0.0080)	$ 0.0078
2:00 AM	$ 0.0775	$ 0.0163	$ (0.0080)	$ 0.0078	$ 0.0775	$ 0.0163	$ (0.0080)	$ 0.0078
3:00 AM	$ 0.0775	$ 0.0163	$ (0.0080)	$ 0.0078	$ 0.0775	$ 0.0163	$ (0.0080)	$ 0.0078
4:00 AM	$ 0.0775	$ 0.0163	$ (0.0080)	$ 0.0078	$ 0.0775	$ 0.0163	$ (0.0080)	$ 0.0078
5:00 AM	$ 0.0775	$ 0.0163	$ (0.0080)	$ 0.0078	$ 0.0775	$ 0.0163	$ (0.0080)	$ 0.0078
6:00 AM	$ 0.0775	$ 0.0163	$ (0.0080)	$ 0.0078	$ 0.0775	$ 0.0163	$ (0.0080)	$ 0.0078
7:00 AM	$ 0.0875	$ 0.0637	$ 0.0502	$ 0.0614	$ 0.0875	$ 0.0637	$ 0.0502	$ 0.0614
8:00 AM	$ 0.0875	$ 0.0637	$ 0.0502	$ 0.0614	$ 0.0875	$ 0.0637	$ 0.0502	$ 0.0614
9:00 AM	$ 0.0875	$ 0.0637	$ 0.0502	$ 0.0614	$ 0.0875	$ 0.0637	$ 0.0502	$ 0.0614
10:00 AM	$ 0.0875	$ 0.0637	$ 0.0502	$ 0.0614	$ 0.0875	$ 0.0637	$ 0.0502	$ 0.0614
11:00 AM	$ 0.0875	$ 0.0637	$ 0.0502	$ 0.0614	$ 0.0875	$ 0.0637	$ 0.0502	$ 0.0614
12:00 PM	$ 0.0875	$ 0.0637	$ 0.0502	$ 0.0614	$ 0.0875	$ 0.0637	$ 0.0502	$ 0.0614
1:00 PM	$ 0.0875	$ 0.0637	$ 0.0502	$ 0.0614	$ 0.0875	$ 0.0637	$ 0.0502	$ 0.0614
2:00 PM	$ 0.0875	$ 0.0637	$ 0.0502	$ 0.0614	$ 0.0875	$ 0.0637	$ 0.0502	$ 0.0614
3:00 PM	$ 0.0875	$ 0.0637	$ 0.0502	$ 0.0614	$ 0.0875	$ 0.0637	$ 0.0502	$ 0.0614
4:00 PM	$ 0.0900	$ 0.0637	$ 0.1720	$ 0.1979	$ 0.0900	$ 0.0637	$ 0.0502	$ 0.0614
5:00 PM	$ 0.0900	$ 0.0637	$ 0.1720	$ 0.1979	$ 0.0900	$ 0.0637	$ 0.0502	$ 0.0614
6:00 PM	$ 0.0900	$ 0.0637	$ 0.1720	$ 0.1979	$ 0.0900	$ 0.0637	$ 0.0502	$ 0.0614
7:00 PM	$ 0.0900	$ 0.0637	$ 0.1720	$ 0.1979	$ 0.0900	$ 0.0637	$ 0.0502	$ 0.0614
8:00 PM	$ 0.0875	$ 0.0637	$ 0.0502	$ 0.0614	$ 0.0875	$ 0.0637	$ 0.0502	$ 0.0614
9:00 PM	$ 0.0875	$ 0.0637	$ 0.0502	$ 0.0614	$ 0.0875	$ 0.0637	$ 0.0502	$ 0.0614
10:00 PM	$ 0.0875	$ 0.0637	$ 0.0502	$ 0.0614	$ 0.0875	$ 0.0637	$ 0.0502	$ 0.0614
11:00 PM	$ 0.0875	$ 0.0637	$ 0.0502	$ 0.0614	$ 0.0875	$ 0.0637	$ 0.0502	$ 0.0614