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*Witness:* Hari K Poudel  
*Sponsoring Party:* MoPSC Staff  
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*Case No.:* ER-2024-0189  
*Date Testimony Prepared:* August 6, 2024

**MISSOURI PUBLIC SERVICE COMMISSION**

**INDUSTRY ANALYSIS DIVISION**

**TARIFF AND RATE DESIGN DEPARTMENT**

**REBUTTAL TESTIMONY**

**OF**

**HARI K. POUDEL, PhD**

**EVERGY MISSOURI WEST, INC.,**

**d/b/a Evergy Missouri West**

**CASE NO. ER-2024-0189**

*Jefferson City, Missouri*  
*August 6, 2024*

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**TABLE OF CONTENTS OF  
REBUTTAL TESTIMONY OF  
HARI K. POUDEL, PhD  
EVERGY MISSOURI WEST, INC.,  
d/b/a Evergy Missouri West  
CASE NO. ER-2024-0189**

EXECUTIVE SUMMARY .....1  
NET MARGIN RATES.....1  
MEEIA ANNUALIZATION ADJUSTMENT .....2  
CONCLUSION AND RECOMMENDATION .....8

1 **REBUTTAL TESTIMONY**

2 **OF**

3 **HARI K. POUDEL, PhD**

4 **EVERGY MISSOURI WEST, INC.,**

5 **d/b/a Evergy Missouri West**

6 **CASE NO. ER-2024-0189**

7  
8 Q. Please state your name and business address.

9 A. My name is Hari K. Poudel, and my business address is P.O. Box 360,  
10 Jefferson City, Missouri, 65102.

11 Q. Are you the same Hari K. Poudel that provided direct testimony in this case?

12 A. Yes.

13 **EXECUTIVE SUMMARY**

14 Q. What is the purpose of your rebuttal testimony?

15 A. The purpose of this rebuttal testimony is to address Evergy Missouri West's  
16 ("EMW") proposed annualization adjustment attributable to EMW's Missouri Energy  
17 Efficiency Investment Act ("MEEIA") portfolio.

18 **NET MARGIN RATES**

19 Q. Do you have any concerns regarding the net margin rate ("NMR") proposed by  
20 EMW in this rate case?

21 A. Yes. Staff's concern is that EMW did not conduct NMR analyses in its direct  
22 testimony in this rate case. Staff's preference is to review the NMR analyses and provide input

1 to the Commission in the context of any general rate case. Staff would like to review NMR  
2 analyses to make sure that NMR calculation cover the current time-of-use rate structures.

3 Q. Why is it important that Staff have an updated NMR?

4 A. The size of the impact of the reduced energy sales due to the energy efficiency  
5 measures should be quantified for each measure separately because the marginal reduction of  
6 energy sales depends on the timing of loads. A utility recovers its reduced energy sales through  
7 the Net Throughout Disincentive (“NTD”)<sup>1</sup> dollar values. NMR is one of the components of  
8 the NTD calculation mechanism. Therefore, it is important that the NMR calculations are  
9 updated in direct testimony to the degree that a marginal rate calculation is a component of a  
10 throughput disincentive mechanism. The current calculations are made more complex by time  
11 of use rates. During direct testimony, more detail and granularity will be required to provide  
12 Staff enough time to review NMR computations. Given the complexity of the calculation of  
13 NMR, it is not appropriate for the process of reviewing EMW’s methodology to begin between  
14 the timing of the Report and Order being filed and the responses to compliance tariff filings.  
15 Therefore, Staff recommends that the Commission order EMW to file its calculated NMR,  
16 along with all supporting documentation, based upon the proposed rates filed in this case as  
17 soon as possible.

18 **MEEIA ANNUALIZATION ADJUSTMENT**

19 Q. Have you reviewed EMW’s calculation of the MEEIA annualization  
20 adjustment?

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<sup>1</sup> Throughput disincentive means the electric utility’s lost margin revenues that result from decreased retail sales volumes due to its demand-side program.

1 A. Yes.

2 Q. Does Staff disagree with how the MEEIA adjustments were applied to class  
3 billing determinants?

4 A. Yes. Staff did not make the same kW adjustments, which Staff views as  
5 inaccurate, to the demand billing determinants.

6 Q. Why are EMW's MEEIA adjustments to monthly demands inaccurate?

7 A. There are many reasons that the approach is not reasonable and results in  
8 inaccurate demand adjustments that should not be relied upon in this rate case. The primary  
9 reasons that Staff disagrees with the approach EMW utilized to adjust the demand determinants  
10 in this case include, but are not limited to:

- 11 1. The EMW developed factors do not account for the fundamental difference of  
12 the demand savings estimates determined through the Evaluation, Measurement  
13 & Verification ("EM&V") process and the customer demand utilized to  
14 determine demand billing determinants;
- 15 2. The estimated demand adjustments do not reflect realistic reductions in actual  
16 demand billing determinants;
- 17 3. The demand adjustments do not account for differences in demand determinants  
18 of participants,<sup>2</sup> non-participants,<sup>3</sup> and opt-out customers.<sup>4</sup>

19 Q. Why do EMW's factors not account for the fundamental difference of the  
20 demand savings estimates determined through the EM&V process?

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<sup>2</sup> Customers that participated in EMW MEEIA programs during the test period.

<sup>3</sup> Customers that have not opted-out of participation of EMW's MEEIA programs but did not participate in the respective companies' MEEIA programs.

<sup>4</sup> Customers that have opted out of participation of EMW's MEEIA programs. Opt-out customers are not subject to the respective Demand-Side Investment Mechanism recovery charges.

1           A.     EMW’s application of the MEEIA demand factors results in inappropriate  
2 adjustments to demand billing determinants and revenues during the test year. These  
3 adjustments result in unrealistic decreases in demand billing units and billed revenue for the  
4 test period. All else being equal, relying on these artificially depressed revenues<sup>5</sup> and demand  
5 billing determinant assumptions will lead to increased rates that are not reflective of a  
6 reasonable estimate of demand determinants going forward.

7           Q.     What is the difference between coincident peak demand and non-coincident  
8 peak demand?

9           A.     System coincident peak demand (“CP”) refers to load in the hour in a given  
10 month (or year) when the system has the highest energy usage. Each class within the system  
11 also has a CP, defined as when that class has the highest energy usage. Non-Coincident Peak  
12 (“NCP”) refers to a given classes’ load or a given customer’s load in the hour it is the highest  
13 in a given month (or year).<sup>6</sup> So, a class’s NCP may not occur at the same time as when the  
14 system peak occurs, and a customer’s NCP may not occur when the class’s CP occurs.

15          Q.     How is billing demand determined for a given customer?

16          A.     Billing demand is set by a customer’s NCP. A customer’s NCP is that customer’s  
17 maximum 15 minutes of demand at any point during a month. If a customer’s NCP is below  
18 the rate class minimum, the customer pays as though the customer met the minimum demand.  
19 Within a class, each customer’s NCP could occur on different days and at different times of the

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<sup>5</sup> Because these determinants are also used to calculate current revenues, if artificially reduced determinants are used to calculate test year revenues and if a revenue requirement increase is ordered in terms of the gross revenue requirement minus current revenues, then the improper application of the demand determinant adjustments will actually result in a doubling of the over-recovery.

<sup>6</sup> NCP can vary depending on the test subject (i.e. customer, rate code, rate class, etc.) and the time period reviewed (i.e. month or year). An individual customer’s monthly NCP will likely differ from the monthly NCP of the rate class. A customer’s NCP is that customer’s maximum 15 minutes of demand at any point during a month. If a customer’s NCP is below the class minimum, the customer pays as though the customer met the minimum demand.

1 day. A cement kiln, a hospital, and a factory should not be expected to have a monthly peak at  
2 the same time of day.

3 Q. Does the EM&V process conducted for EMW's MEEIA programs attempt to  
4 determine the non-coincident demand savings attributable to a given MEEIA program?

5 A. No. The EM&V process for the EMW's MEEIA programs attempts to quantify  
6 the CP demand savings of a given program in a given year, meaning the estimates seek to  
7 quantify the demand impacts of the MEEIA portfolio on a single point in time, coincident with  
8 the system peak, over the course of the year being evaluated. The demand savings determined  
9 through the EM&V process are then utilized to determine the annual  
10 Earnings Opportunity amount for the EMW MEEIA portfolio. I am unaware of any savings  
11 estimates being verified through the EM&V process on a monthly customer NCP basis for the  
12 EMW MEEIA programs.

13 Q. What are some factors that lead you to believe that EMW's proposed application  
14 of demand shapes to the annual CP savings estimates of a given program, to determine a  
15 monthly impact on demand billing determinants, is flawed?

16 A. First, and most importantly, the application of the factors does not result in an  
17 estimation of the NCP demand impact that will be realized through a reduction in demand  
18 billing determinants for the class as a whole. Even if the demand factors utilized by EMW  
19 resulted in accurate estimations of demand reductions coincident with the monthly class peak,<sup>7</sup>  
20 it is not reasonable to assume that the participating customer NCPs coincided with the class CP  
21 in that month. The hour in which the NCP of a specific customer is determined for demand

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<sup>7</sup> Assumption flaws and failure to account for key variables in the EMW makes this an unlikely outcome.

1 billing components is likely to occur on different days, and in different hours of the day,  
2 when compared to other customers within the same rate class.

3         Second, installation of energy efficiency measures result in varying degrees of demand  
4 savings depending on the specific measure installed, the efficiency of the equipment being  
5 replaced, weather, the time of day, customer load, and the end-use.<sup>8</sup> At best, EMW's application  
6 of the demand shapes to the estimated demand savings from the MEEIA programs could be  
7 described as a poorly estimated demand reduction for a single point in time during each month.<sup>9</sup>  
8 Demand reductions for a single point in time in a given month is not an appropriate proxy for  
9 estimating the bill impacts of the demand components because the demand billing determinants  
10 are based upon individual customers' monthly NCP. These estimates are then utilized by EMW  
11 to determine a demand factor, or percentage reduction, which is inappropriately applied by  
12 EMW to the demand components of the entire class.

13         Each MEEIA program includes a variety of different types of energy efficiency  
14 measures that have unique load characteristics. Unless an installed energy efficiency measure  
15 impacts the demand of a given customer during that customer's peak-usage hour in a given  
16 month, the demand portion of the customer's bill would not be impacted by the installation of  
17 the measure. The demand factors utilized by EMW over-simplify the estimation of the demand  
18 impact on a given class for each MEEIA program, and then the calculated demand savings are  
19 inappropriately applied to each demand billing component regardless of the actual impact on  
20 those billing determinants within the test period. The result of the MEEIA demand adjustments  
21 proposed by EMW is an overestimation of the impact on demand billing determinants of each

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<sup>8</sup> This is not an exhaustive list of variables that affect the demand impact of a given energy efficiency measure.

<sup>9</sup> Additional flaws exist with the approach utilized to estimate the demand savings even within the context being discussed.



1 rate class. Given the highly variable and customer specific nature of the hour determining the  
2 demand components of those customers' bills and the varying degrees of energy savings also  
3 dependent on a variety of factors, applying a monthly factor to the assumed annual CP demand  
4 savings is unlikely to result in a reliable estimate of the impact on demand billing determinants.

5 Q. Did EMW's MEEIA demand adjustment take into consideration the difference  
6 in usage characteristics of participants, non-participants, and opt-out customers within  
7 each class?

8 A. No. EMW developed a class level demand factor<sup>10</sup> that was applied to the  
9 demand billing determinants of the entire class. Customers that have opted-out of participation  
10 within the MEEIA programs and the corresponding Demand-Side Investment Mechanism  
11 ("DSIM") charge will not have any reductions in its demand billing determinants. Those  
12 customers that have opted-out of the programs may also have differing usage characteristics  
13 from the proportion of the class that has not opted-out.

14 Q. Has Staff previously raised concerns with the MEEIA demand annualization  
15 approach that EMW proposed in this case?

16 A. Yes. Staff has consistently opposed the approach proposed by EMW in this case.  
17 Staff raised concerns in the most recent general rate cases for EMW<sup>11</sup> as well as the MEEIA  
18 Cycle 3 case.<sup>12</sup> Staff has never accepted any MEEIA adjustments of kW demand billing  
19 determinants in a general rate case because of the unpredictability of aggregate usage behavior  
20 changes.<sup>13</sup> Therefore, Staff recommends that no adjustment to kW demand billing determinants  
21 based on MEEIA energy savings be made for this general rate case.

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<sup>10</sup> With the exception of Large Power.

<sup>11</sup> Case No. ER-2022-0130.

<sup>12</sup> Case No. EO-2019-0132.

<sup>13</sup> Staff rebuttal report in Case No. EO-2019-0132.

1 Q. What is a reasonable remedy to avoid that outcome?

2 A. Staff recommends that the Commission rely on Staff's calculated revenues and  
3 billing determinants for purposes of setting rates in this case.

4 **CONCLUSION AND RECOMMENDATION**

5 Q. Please provide a brief summary of your rebuttal testimony and restate the  
6 optional resolution of the issues discussed.

7 A. Staff recommends that the NMR calculation mechanism require separate NMRs  
8 by rate codes and by time periods because EMW residential customers are on a rate plan where  
9 their usage is dependent on the time of the day. The applicability of the issue with EMW  
10 regarding NMR analysis can also be experienced with Evergy Missouri Metro in future cases.  
11 Staff recommends that the Commission order EMW to include NMR analyses in its direct  
12 testimony for future rate cases.

13 The MEEIA demand adjustments proposed by EMW are flawed and result in  
14 inappropriate and unrealistic adjustments to demand billing determinants and the EMW  
15 calculated revenues. Staff recommends utilization of the Staff billing determinants<sup>14</sup> in setting  
16 rates in this case.

17 Q. Does this conclude your rebuttal testimony?

18 A. Yes it does.

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<sup>14</sup> Staff did not make MEEIA demand annualization adjustments due to the impossibility of accurately determining the impact of the EMM and EMW MEEIA programs on the demand billing determinants as presently defined by the EMM and EMW tariffs.

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

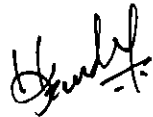
In the Matter of Evergy Missouri West, Inc.         )  
d/b/a Evergy Missouri West's Request for         )             Case No. ER-2024-0189  
Authority to Implement A General Rate         )  
Increase for Electric Service                         )

**AFFIDAVIT OF HARI K. POUDEL, PhD**

STATE OF MISSOURI         )  
   )             ss.  
COUNTY OF COLE         )

**COMES NOW HARI K. POUDEL, PhD** and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Rebuttal Testimony of Hari K. Poudel, PhD*; and that the same is true and correct according to his best knowledge and belief.

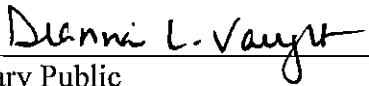
Further the Affiant sayeth not.



\_\_\_\_\_  
**HARI K. POUDEL, PhD**

**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 25<sup>th</sup> day of July 2024.



\_\_\_\_\_  
Notary Public

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