Exhibit No. 242

Staff – Exhibit 242
Hari Poudel, PhD
Rebuttal
File No. ER-2024-0189

Exhibit No.:	
Issue(s):	*NMR,MEEI annualization*
Witness:	*Hari K Poudel*
Sponsoring Party:	*MoPSC Staff*
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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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d/b/a Evergy Missouri West

CASE NO. ER-2024-0189

Q. Please state your name and business address.

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

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

A. Yes.

EXECUTIVE SUMMARY

Q. What is the purpose of your rebuttal testimony?

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

NET MARGIN RATES

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

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

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

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

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

MEEIA ANNUALIZATION ADJUSTMENT

Q. Have you reviewed EMW's calculation of the MEEIA annualization adjustment?

[1] Throughput disincentive means the electric utility's lost margin revenues that result from decreased retail sales volumes due to its demand-side program.

A. Yes.

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

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

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

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

1. The EMW developed factors do not account for the fundamental difference of the demand savings estimates determined through the Evaluation, Measurement & Verification ("EM&V") process and the customer demand utilized to determine demand billing determinants;
2. The estimated demand adjustments do not reflect realistic reductions in actual demand billing determinants;
3. The demand adjustments do not account for differences in demand determinants of participants,[2] non-participants,[3] and opt-out customers.[4]

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

[2] Customers that participated in EMW MEEIA programs during the test period.
[3] Customers that have not opted-out of participation of EMW's MEEIA programs but did not participate in the respective companies' MEEIA programs.
[4] 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.

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

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

A. System coincident peak demand ("CP") refers to load in the hour in a given month (or year) when the system has the highest energy usage. Each class within the system also has a CP, defined as when that class has the highest energy usage. Non-Coincident Peak ("NCP") refers to a given classes' load or a given customer's load in the hour it is the highest in a given month (or year).[6] So, a class's NCP may not occur at the same time as when the system peak occurs, and a customer's NCP may not occur when the class's CP occurs.

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

A. Billing demand is set by a customer's NCP. 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 rate class minimum, the customer pays as though the customer met the minimum demand. Within a class, each customer's NCP could occur on different days and at different times of the

[5] 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.

[6] 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 paus as though the customer met the minimum demand.

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

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

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

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

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

[7] Assumption flaws and failure to account for key variables in the EMW makes this an unlikely outcome.

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

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

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

[8] This is not an exhaustive list of variables that affect the demand impact of a given energy efficiency measure.
[9] Additional flaws exist with the approach utilized to estimate the demand savings even within the context being discussed.

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

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

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

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

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

[10] With the exception of Large Power.
[11] Case No. ER-2022-0130.
[12] Case No. EO-2019-0132.
[13] Staff rebuttal report in Case No. EO-2019-0132.

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

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

CONCLUSION AND RECOMMENDATION

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

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

The MEEIA demand adjustments proposed by EMW are flawed and result in inappropriate and unrealistic adjustments to demand bulling determinants and the EMW calculated revenues. Staff recommends utilization of the Staff billing determinants[14] in setting rates in this case.

Q. Does this conclude your rebuttal testimony?

A. Yes it does.

[14] 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 Authority to Implement A General Rate Increase for Electric Service	))))	Case No. ER-2024-0189

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 25th day of July 2024.

Notary Public

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