FILED
October 24, 2025
Missouri Public
Service Commission

Exhibit No. 145

Staff – Exhibit 145
Testimony of Hari K. Poudel, PhD
Rebuttal
File No. ER-2024-0261

Exhibit No.:
Issue(s): *Class Cost of Service,*
Rate Design,
Energy Efficiency Adjustment
Witness: *Hari K Poudel, PhD*
Sponsoring Party: *MoPSC Staff*
Type of Exhibit: *Rebuttal Testimony*
Case No.: *ER-2024-0261*
Date Testimony Prepared: *August 18, 2025*

MISSOURI PUBLIC SERVICE COMMISSION

INDUSTRY ANALYSIS DIVISION

TARIFF AND RATE DESIGN DEPARTMENT

REBUTTAL TESTIMONY

OF

HARI K. POUDEL, PhD

THE EMPIRE DISTRICT ELECTRIC COMPANY,
d/b/a Liberty

CASE NO. ER-2024-0261

Jefferson City, Missouri
August 2025

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REBUTTAL TESTIMONY

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HARI K. POUDEL, PhD

THE EMPIRE DISTRICT ELECTRIC COMPANY,
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CASE NO. ER-2024-0261

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 who provided direct testimony in this matter, filed July 2, 2025, and Rate Design direct testimony on July 21, 2025?

A. Yes.

EXECUTIVE SUMMARY

Q. What is the purpose of your rebuttal testimony?

A. I will respond to:

1. Midwest Energy Consumers Group ("MECG") witness Kavita Maini, concerning intraclass revenue requirement allocations for the residential customers;
2. Empire[1] witness Timothy S. Lyons, concerning Empire's residential rate design approach; and
3. Empire's energy efficiency ("EE") adjustment calculations.

Revenue Requirement Allocations

Q. Did MECG's witness Ms. Maini provide the revenue requirement allocations among Non-Standard ("NS") Residential, Time Choice ("TC") Residential, and Time Choice Plus ("TP") Residential)?

A. Yes.

[1] The Empire District Electric Company, d/b/a Liberty ("Empire").

Q. Please describe Ms. Maini's revenue requirement allocations among the residential customers.

A. According to Ms. Maini's testimony, the revenue requirement allocation differs among residential codes. Individual rate codes are assigned multipliers to align their rates with Ms. Maini's calculated class cost of service study ("COSS"). In Figure 2.1, reproduced below, Ms. Maini presented a comparative analysis of returns utilizing two different multipliers: MECG COSS Class Multiplier (Column 2) and MECG Recommended Class Multiplier (Column 3). She stated that, "[t]he multipliers are calculated by taking the class increase and dividing it by the system average. The class multiplier would be applied to the final authorized increase."[2] For example, a 1.15x multiplier for TC Residential indicates that the class pays 15% higher than the average increase. A 0.88x multiplier indicates that the class pays 12% less than the average. These multipliers are based on the results of the MECG COSS. Ms. Maini fails to offer any empirical justification for the selection of the recommended multipliers.

Figure 2.1: MECG COSS Based Multiplier and MECG Recommended Class Multiplier

Column	1	2	3
Class	MECG COSS	MECG COSS Class Multiplier	MECG Recommended Class Multiplier
NS Residential	27.7%	0.94	**0.88**
TC Residential	42.5%	1.43	**1.15**
TP Residential	61.7%	2.08	**1.20**
NS General Service	17.7%	0.60	**0.80**
TC General Service	10.1%	0.34	**0.80**
TP General Service	98.7%	3.33	**1.25**
NS Large General	24.3%	0.82	**0.85**
TC Large General	34.1%	1.15	**1.01**
NS Small Primary	-1.0%	-0.03	**0.74**
TC Small Primary	-5.0%	-0.17	**0.74**
Large Power	5.6%	0.19	**0.76**
Transmission	10.4%	0.35	**0.77**
MS-Miscellaneous	-22.7%	-0.77	**0.70**
SPL-Municipal St Lighting	55.1%	1.86	**1.20**
PL-Private Lighting	-30.1%	-1.01	**0.70**
LS-Special Lighting	240.8%	8.13	**1.25**
Total Company	29.64%	1.00	**1.00**

[2] Case No. ER-2024-0261, Maini Direct Testimony, Page 21, Lines 16-19.

Q. Does Staff agree with Ms. Maini's recommended revenue requirement allocations?

A. No.

Q. Please describe Staff's disagreement with Ms. Maini.

A. As is demonstrated in Figure 2.1 from Ms. Maini's direct testimony, the different rate options within the residential class are assigned "class multipliers" that align with MECG's COSS. The proposed class multiplier does not acknowledge the shifting of the revenue allocation within the residential class. Considering multipliers for revenue allocation without thorough empirical analysis may not fulfill the need for revenue shifting within the residential class as discussed by Ms. Maini in her testimony. A clear understanding of the cost basis is needed to reasonably realign revenue recovery within a class. That is not present in this case, as discussed further in Staff witness Sarah L.K. Lange's rebuttal testimony.

Second, on page 21 (Lines 20-21) of her direct testimony, Ms. Maini recommended the necessity of the moderation for certain rate classes, including residential. A data request (DR) was sent on July 24, 2025, requesting an explanation behind the reasoning and methodology that was used to calculate the MECG Recommended Class Multipliers, but unfortunately, the response received on August 13, 2025, declined to provide this additional information, instead primarily providing citation to Ms. Maini's existing testimony. Due to the lack of the information, Staff is unable to verify whether the applied multipliers are valid or not. Therefore, there might be a possible arbitrary moderation. For example, the moderation of TC residential's multiplier from 1.43x to 1.15x seems arbitrarily. Additionally, it seems an inconsistent treatment of TC residential vs. TP residential. The TC residential (1.15x) is only slightly lower than TP residential (1.20x), but Ms. Maini's testimony does not explain why.

Third, Ms. Maini's proposal may drive intraclass rate code switching as customers self-select the rate that yields the best bill outcome, not necessarily matching cost causation.

Finally, the COSS utilized to inform the class multipliers are flawed as discussed in the rebuttal testimony of Staff witnesses, Sarah L.K. Lange and Marina Gonzales.

Q. What would be needed to reasonably adjust rates within a rate class?

A. A clear understanding of the cost basis is needed to reasonably realign revenue recovery within a class. That is not present in this case, as is discussed further in Staff witness Sarah L.K. Lange's rebuttal testimony.

Residential Rate Design Approach

Q. Is Empire proposing changes to the residential rate design?

A. Yes.

Q. What specific changes are being introduced?

A. Empire is recommending a new[3] declining block rate design among residential customers. According to this new rate plan for the NS Residential, the first 600-kWh of usage in a given billing month will be $0.19330/kWh during the summer and winter seasons. Additional usage will be $0.16393/kWh during a given billing month in the summer season and $0.13202/kWh during the winter season.[4]

Q. Did Empire provide justification for these changes?

A. No. Staff's review found no supporting testimonies or workpapers documenting the rationale for this residential rate design modification.

Q. How does this proposal compare to historical residential rate design?

[3] JE-2025-0127.
[4] The Summer Season consists of the first four monthly billing periods on and after June 16, and the Winter Season consists of the remaining eight monthly billing periods of the calendar year.

A. This proposal represents a substantial departure from longstanding practice. Staff analysis confirms:

- Empire's Residential Service Schedule has not implemented a summer declining block rate design since August 15, 1994.
- Even the most recent residential tariff[5] maintained this absence.

Q. Does Staff consider this proposed change reasonable?

A. No. Staff has significant concerns regarding reasonableness. The introduction of a summer declining block rate design is a significant matter and goes against the principle of cost causation. A declining block rate design in electric utility means that the price per unit of electricity decreases as the quantity consumed increases. For example, Empire's first block of usage of the 600 kWh will charge a $0.19774/kWh, and the additional usage of kWh will charge a $0.16837/kWh in the summer season. However, the cost of serving energy to a residential household does not suddenly decrease in the middle of the month. The cost of serving load through Southwest Power Pool ("SPP") is dependent on the time of day and not the amount of energy purchased in a given month.

Energy Efficiency Adjustment

Q. Did Empire perform an analysis of the energy efficiency adjustment[6] using kWh savings like other utilities?

A. No. Empire did not perform these calculations using kWh savings, which contrasts with standard utility practice in Missouri.

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[5] YE-2021-0041.

[6] As detailed on page 2, lines 8-14 of my direct testimony filed on July 2, 2025, the energy efficiency adjustment normalizes the billing units used to calculate the revenue requirement for Empire. The goal of the energy efficiency adjustment is to account for the annualized impact of energy efficiency measures installed during the update period. This modification adjusts for the decrease in billing units and related revenue that Empire encountered due to its implementation of energy efficiency measures approved by the Commission pursuant to the Missouri Energy Efficiency Investment Act ("MEEIA").

Q. Has Staff reviewed Empire's methodology of revenue requirement calculations?

A. Yes. Staff found Empire used dollar-based adjustments rather than proper kWh savings calculations. On January 13, 2025, Staff communicated with Empire about Empire's Witness workpaper (Schedule REV ADJ 8) related to Missouri Energy Efficiency Investment Act ("MEEIA") adjustment. Empire calculated the EE adjustment using dollars and not by kWh savings.[7]

Q. Does Staff provide a detailed EE adjustment analysis in its direct filing?

A. Yes. Staff's direct filing includes complete kWh-based calculations with supporting workpapers. Staff's methodology is consistent with the approach used by other Missouri utilities in general rate cases before the Commission.

Q. Has Empire indicated that it opposes Staff's methodology?

A. No. Staff anticipates that Empire will adopt Staff's methodology as it is advantageous for Empire to do so.

CONCLUSION AND RECOMMENDATION

Q. What is your recommendation concerning the topics on which you provide Rebuttal Testimony in this case?

A. Staff recommends that the Commission reject the proposed residential intraclass revenue shifts proposed by Ms. Maini. Staff recommends that the billing determinants used in this case reflect Staff's EE adjustment, which is consistent with the treatment for kWh savings for Ameren Missouri, Evergy Missouri West, and Evergy Missouri Metro.

Q. Does this conclude your rebuttal testimony?

A. Yes. It does.

[7] DR No. 0227.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

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	)))))	Case No. ER-2024-0261

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 11th day of August 2025.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2029
Commission Number: 12412070

Notary Public