

*Exhibit No.:*  
*Issue(s):* *Weather Normalization*  
*Witness:* *Michael L. Stahlman*  
*Sponsoring Party:* *MoPSC Staff*  
*Type of Exhibit:* *Rebuttal Testimony*  
*Case No.:* *ER-2024-0319*  
*Date Testimony Prepared:* *January 17, 2025*

**MISSOURI PUBLIC SERVICE COMMISSION**

**INDUSTRY ANALYSIS DIVISION**

**TARIFF/RATE DESIGN DEPARTMENT**

**REBUTTAL TESTIMONY**

**OF**

**MICHAEL L. STAHLMAN**

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

**CASE NO. ER-2024-0319**

*Jefferson City, Missouri*  
*January 2025*

1 **REBUTTAL TESTIMONY**

2 **OF**

3 **MICHAEL L STAHLMAN**

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

6 **CASE NO. ER-2024-0319**

7 Q. Please state your name and business address.

8 A. My name is Michael L. Stahlman, and my business address is Missouri Public  
9 Service Commission, P.O. Box 360, Jefferson City, Missouri, 65102.

10 Q. Are you the same Michael L. Stahlman that filed direct testimony in this docket?

11 A. Yes.

12 Q. What is the purpose of your testimony?

13 A. I will discuss the differences between Staff's and Ameren Missouri's weather,  
14 weather normalization method, and block adjustments as described by Ameren Missouri  
15 Witness Nicholas Bowden, PhD.

16 Q. Please summarize your testimony.

17 A. While Ameren Missouri and Staff largely used the same methods to perform its  
18 weather normalization analysis, Staff's method for using more information for weather  
19 normalizing the Time-of-Use ("TOU") rate codes and for being able to consistently apply  
20 regression results across all months for the block adjustments results in more precise estimates.  
21 Therefore, Staff recommends the Commission use Staff's weather normalization and block  
22 usage estimates in determining normalized revenues.

1 **NORMAL WEATHER AND WEATHER NORMALIZATION**

2 Q. Is the normal weather used by Ameren Missouri and Staff the same?

3 A. Yes, the weather used is virtually identical.

4 Q. Did Staff and Ameren Missouri use the same method to determine a weather  
5 normalization factors?

6 A. With the exception of the Residential and Small General Service TOU classes, yes.  
7 For the TOU classes, Staff developed factors to account for the different impact weather would  
8 have in the different TOU blocks. Ameren Missouri only used the average weather adjustment  
9 factor and applied it equally across peak and off-peak periods. This means that Ameren  
10 Missouri could underestimate the impact of normal weather on its peak periods, which impacts  
11 the estimated normalized revenues. As an example, on August 2, 2023, Ameren Missouri's  
12 weather adjustment would have been an increase applied equally to all hours of the day.  
13 Staff's adjustment, based on the actual load shape of customers, resulted in an increase in the  
14 peak hour usage with a slight decrease in off-peak usage. Since Staff's method accounts for  
15 weather impacting peak periods differently than off peak periods, Staff recommends that the  
16 Commission use Staff's weather adjustments.

17 Q. Are there other differences between Ameren Missouri and Staff's  
18 weather normalization?

19 A. There are differences due to different periods of analysis and differences in the  
20 underlying regression models. The difference in time periods, test year and update period, can  
21 make it difficult to compare the weather normalization; but for the months that overlapped, the  
22 adjustment factors seemed to be similar. Staff does not have large concerns with the method  
23 used in those areas, at this time, with the exception of the TOU noted above.

1 **BLOCK ADJUSTMENTS**

2 Q. Does Staff have concerns with the method Ameren Missouri used to account for  
3 weather normalization with Block 1 and Block 2 usage?

4 A. Yes. Dr. Bowden did not apply the results of his regression analysis across all  
5 months, but limited its application to an additional logic constraint.<sup>1</sup> While Staff agrees that  
6 the estimates with logic constraint are more accurate than applying Ameren Missouri's  
7 regression results without that constraint, Staff would recommend that Ameren Missouri  
8 consider a different function type for its regression analysis in this rate case and for future rate  
9 cases. As discussed in my direct testimony, it seems that this analysis is overly sensitive to  
10 weather. So, while a linear function type will give a reasonably accurate estimate from general  
11 regression statistics, Staff found that changing the function type to a power function improves  
12 the regression results and removes the need for the additional logical constraint.  
13 Because Staff's results are able to be applied consistently across all months, Staff recommends  
14 the Commission use Staff's Block 1 and Block 2 usage estimates.

15 Q. Please summarize your testimony.

16 A. Staff recommends the Commission use Staff's weather normalization and block  
17 usage estimates in determining normalized revenues because (1) it utilized peak and average  
18 regression analysis for its TOU weather normalization adjustments, and (2) it was able to  
19 consistently apply regression results across all months for its block usage estimates.  
20 Thus, Staff's approach results in more precise estimates.

21 Q. Does this conclude your testimony?

22 A. Yes it does.

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<sup>1</sup> Direct Testimony of Nicolas Bowden, p. 13, ll. 6-7.

**BEFORE THE PUBLIC SERVICE COMMISSION**

**OF THE STATE OF MISSOURI**

In the Matter of Union Electric Company                    )  
d/b/a Ameren Missouri's Tariffs to Adjust                )  
Its Revenues for Electric Service                        )                    Case No. ER-2024-0319

**AFFIDAVIT OF MICHAEL L. STAHLMAN**

STATE OF MISSOURI        )  
                                      )        ss.  
COUNTY OF COLE        )

COMES NOW MICHAEL L. STAHLMAN and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Rebuttal Testimony of Michael L. Stahlman*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

  
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MICHAEL L. STAHLMAN

**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 14<sup>th</sup> day of January 2025.

D. SUZIE MANKIN  
Notary Public - Notary Seal  
State of Missouri  
Commissioned for Cole County  
My Commission Expires: April 04, 2025  
Commission Number: 12412070

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

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