

Exhibit No.:
Issue(s): Weather Normalization
Witness: Michael L. Stahlman
Sponsoring Party: MoPSC Staff
Type of Exhibit: Direct Testimony
Case No.: ER-2026-0143
Date Testimony Prepared: June 30, 2026

MISSOURI PUBLIC SERVICE COMMISSION

INDUSTRY ANALYSIS DIVISION

ENERGY RESOURCES DEPARTMENT

**DIRECT TESTIMONY
REVENUE REQUIREMENT**

OF

MICHAEL L. STAHLMAN

EVERGY METRO, INC., d/b/a Evergy MISSOURI METRO

CASE NO. ER-2026-0143

*Jefferson City, Missouri
June 2026*

1 weather on the test year and update period, including the changes to which rate block
2 energy was billed. This information was provided to Staff Witness Kim Cox.

3 Further, I estimated the impact of weather on Net System Input, which was
4 provided to Staff Witness Brodrick Niemeier.

5 Q. What is weather normalization?

6 A. Weather normalization is the process of adjusting billing determinants to
7 account for differences in weather from year to year. Electricity consumption is highly
8 responsive to the weather, specifically temperature for many rate classes. As the
9 temperature reaches higher levels, the demand for cooling, air conditioning and fans
10 increases the customers' consumption of electricity. As the weather becomes colder,
11 the demand for additional heating, via electric space heating, also forces an increase in
12 electricity consumption. Electric air conditioning and space heating is prevalent in
13 EMM's service territory; therefore, it follows that EMM's electric load is linked with and
14 responsive to temperature. Therefore, Staff uses the correlation of customer class usage
15 with weather and other variables to estimate usage for a year as if the weather was
16 "normal."

17 Q. What is "normal weather"?

18 A. Normal weather is an estimate of what the average temperatures would be
19 for a typical year at a given location. Staff used the normal weather calculated by
20 EMM witness Albert Bass and provided in response to Staff Data Request 0331.

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1 Q. What is a weather normalization adjustment factor?

2 A. The weather normalization adjustment factor is a percentage value that I
3 provide to Staff witness Kim Cox that is the end result of the weather normalization
4 process. It is a monthly value specific to a particular class of EMM's customers that
5 adjusts actual usage in a given revenue month to an estimate of what usage would have
6 been under normal weather. This factor also considers the mismatch of when a customer
7 uses the energy with when a customer was billed for that energy.

8 Q. Were any of the results of your weather normalization unusual?

9 A. Yes. The small general service primary class had an unusual increase in
10 mid-December 2025 due to customer growth in that class. This resulted in a very large
11 weather normalization adjustment since it was assumed the customer growth would
12 continue in the future. To avoid filing separate pieces of Highly Confidential Testimony,
13 an explanation of the extent to which large customer usage is included in weather
14 normalization factors is addressed in the Highly Confidential Testimony of Staff witness
15 Sarah Lange.

16 Q. Are there any concerns with the load data used for weather normalization?

17 A. Yes. Please see the testimony of Staff witness Randall Jennings concerning
18 EMM's use of estimated billing and the recommendations of Staff Witness Claire
19 Eubanks regarding data provision requirements for EMM to provide regarding large loads.

20 Q. What is the 365-day adjustment?

21 A. The 365-day adjustment accounts for certain bill cycles having greater, or
22 less than, 365 days of consumption. EMM bills its customers in a given revenue month

1 over 21 different bill cycles. A bill cycle is the period between the dates on which a
2 customer's meter(s) is read. These cycles typically have usage in two different calendar
3 months and, due to weekends and/or holidays, will often have more or less than 365 days
4 of usage. Staff developed the 365-day adjustment by calculating how many days each
5 bill cycle was over/under 365 days, then subtracting/adding an average use day for each
6 over/under day for each cycle and then calculating a percentage adjustment factor for
7 each class based on the sum of the adjustments for each bill cycle. This 365-day
8 adjustment factor was provided to Staff witness Kim Cox.

9 Q. What are the rate block adjustments?

10 A. Some of the residential rate schedules have three winter and summer
11 block rates: one rate for usage at or below 600 kWh and another rate for usage between
12 601 kWh and 1000 kWh, and another rate for usage above 1000 kWh. Similarly, some of
13 the SGS rate schedules have rates that vary based on the calculated level of Hours Use
14 rates and season.¹ The rate block adjustments estimate how the overall energy
15 consumption in a given revenue month will be distributed into the different rate blocks.

16 Q. Why is it important to estimate the distribution of usage in the different
17 rate blocks?

18 A. EMM's customers do not have identical usage, so an increase of usage may
19 affect the first block for one customer and the last block for another. Thus, applying the
20 changes incorrectly will have an impact on the revenues.

¹ Every Missouri Metro's 9th Revised Sheet No. 9E states, "Hours Use shall be determined by dividing the total monthly kWh on all meters by the Monthly Maximum Demand in the current month."

1 Q. What is the Net System Input analysis?

2 A. This analysis provides an estimate of the normalized amount of electricity
3 required to meet the energy demands of both the company's customers and its own
4 needs at the generation level. This analysis is used by Staff Witness Brodrick Niemeier.
5 The hourly loads used in the analysis were obtained from EMM's data provided in
6 accordance with 20 CSR 4240-3.190(1)(C).

7 Q. How was this analysis performed?

8 A. The analysis is performed similar to the weather normalization process
9 discussed above. Regression analysis with actual loads and temperatures is performed
10 for both peak and average energy consumption. Staff uses those results with normal
11 weather to estimate a load shape. The load shape is then scaled to equal the final total
12 Missouri Normalized load, calculated by Staff Witness Kim Cox, with a loss factor
13 provided by Staff witness Alan Bax.

14 Q. Does this conclude your testimony?

15 A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Evergy Metro, Inc. d/b/a)
Evergy Missouri Metro's Request for) Case No. ER-2026-0143
Authority to Implement a General Rate)
Increase for Electric Service)

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 *Direct Testimony-Revenue Requirement*; and that the same is true and correct according to his best knowledge and belief.

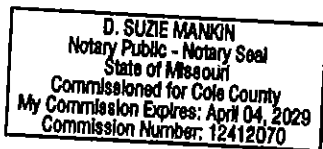
Further the Affiant sayeth not.




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 25th day of June 2026.





Notary Public

Michael Stahlman

Education

- 2009 M. S., Agricultural Economics, University of Missouri, Columbia.
2007 B.A., Economics, Summa Cum Laude, Westminster College, Fulton, MO.

Professional Experience

- 2010 - Regulatory Economist, Missouri Public Service Commission
2007 – 2009 Graduate Research Assistant, University of Missouri
2008 Graduate Teaching Assistant, University of Missouri
2007 American Institute for Economic Research (AIER) Summer Fellowship Program
2006 Price Analysis Intern, Food and Agricultural Policy Research Institute (FAPRI), Columbia, MO
2006 Legislative Intern for State Representative Munzlinger
2005 – 2006 Certified Tutor in Macroeconomics, Westminster College, Fulton, MO
1998 – 2004 Engineering Watch Supervisor, United States Navy

Expert Witness Testimony

- Union Electric Company d/b/a AmerenUE GR-2010-0363
In the Matter of Union Electric Company d/b/a AmerenUE for Authority to File Tariffs Increasing Rates for Natural Gas Service Provided to Customers in the Company's Missouri Service Area
- Union Electric Company d/b/a Ameren Missouri GT-2011-0410
In the Matter of the Union Electric Company's (d/b/a Ameren Missouri) Gas Service Tariffs Removing Certain Provisions for Rebates from Its Missouri Energy Efficient Natural Gas Equipment and Building Shell Measure Rebate Program
- KCP&L Great Missouri Operations Company EO-2012-0009
In the Matter of KCP&L Greater Missouri Operations Company's Notice of Intent to File an Application for Authority to Establish a Demand-Side Programs Investment Mechanism
- Union Electric Company d/b/a Ameren Missouri EO-2012-0142
In the Matter of Union Electric Company d/b/a Ameren Missouri's Filing to Implement Regulatory Changes Furtherance of Energy Efficiency as Allowed by MEEIA
- Kansas City Power & Light Company EO-2012-0323
In the Matter of the Resource Plan of Kansas City Power & Light Company
- KCP&L Great Missouri Operations Company EO-2012-0324
In the Matter of the Resource Plan of KCP&L Greater Missouri Operations Company
- Kansas City Power & Light Company EO-2012-0135
KCP&L Great Missouri Operations Company EO-2012-0136
In the Matter of the Application of Kansas City Power & Light Company [KCP&L Great Missouri Operations Company] for Authority to Extend the Transfer of Functional Control of Certain Transmission Assets to the Southwest Power Pool, Inc.

Kansas City Power & Light Company, KCP&L Great Missouri Operations Company, and Transource Missouri	EA-2013-0098 EO-2012-0367
In the Matter of the Application of Transource Missouri, LLC for a Certificate of Convenience and Necessity Authorizing it to Construct, Finance, Own, Operate, and Maintain the Iatan-Nashua and Sibley-Nebraska City Electric Transmission Projects	
Kansas City Power & Light Company KCP&L Great Missouri Operations Company	EU-2014-0077
In the Matter of the Application of Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company for the Issuance of an Accounting Authority Order relating to their Electrical Operations and for a Contingent Waiver of the Notice Requirement of 4 CSR 240-4.020(2)	
Kansas City Power & Light Company	EO-2014-0095
In the Matter of Kansas City Power & Light Company's Notice of Intent to File an Application for Authority To Establish a Demand-Side Programs Investment Mechanism	
Veolia Energy Kansas City, Inc	HR-2014-0066
In the Matter of Veolia Energy Kansas City, Inc for Authority to File Tariffs to Increase Rates	
Grain Belt Express Clean Line, LLC	EA-2014-0207
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	
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	
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	
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	
Kansas City Power & Light Company	EO-2014-0240
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	
KCP&L Great Missouri Operations Company	EO-2014-0241
In the Matter of KCP&L Greater Missouri Operations Company's Filing for Approval of Demand-Side Programs and for Authority to Establish a Demand-Side Programs Investment Mechanism	

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	
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	
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	
Kansas City Power & Light Company	ER-2016-0285
In the Matter of Kansas City Power & Light Company's Request for Authority to Implement A General Rate Increase for Electric Service	
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	
Grain Belt Express Clean Line, LLC	EA-2016-0358
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 345kV transmission line.	
Spire Missouri, Inc.	GR-2017-0215 and GR-2017-0216
In the Matter of Spire Missouri, Inc.'s Request to Increase Its Revenues for Gas Service	
Liberty Utilities	GR-2018-0013
In the Matter of Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities' Tariff Revisions Designed to Implement a General Rate Increase for Natural Gas Service in the Missouri Service Areas of the Company	
Spire Missouri, Inc.	GO-2019-0058 and GO-2019-0059
In the Matter of Spire Missouri, Inc. d/b/a Spire's Request to Decrease [Increase] WNAR	
Grain Belt Express Clean Line LLC	EM-2019-0150
Invenergy Transmission LLC	
Invenergy Investment Company LLC	
In the Matter of the Joint Application of Invenergy Transmission LLC, Invenergy Investment Company LLC, Grain Belt Express Clean Line LLC and Grain Belt Express Holding LLC for an Order Approving the Acquisition by Invenergy Transmission LLC of Grain Belt Express Clean Line LLC	

Union Electric Company d/b/a Ameren Missouri In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to Increase its Revenues for Natural Gas Service	GR-2019-0077
Union Electric Company d/b/a Ameren Missouri In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to Decrease Its Revenues for Electric Service	ER-2019-0335
Empire District Electric Company In the Matter of The Empire District Electric Company's Request for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in its Missouri Service Area	ER-2019-0374
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 Under 20 CSR 4240-3.105	EA-2020-0371
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-2021-0108
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
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 Natural Gas Service	GR-2021-0241
The Empire District Electric Company 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
The Empire District Gas Company In the Matter of The Empire District Gas Company's d/b/a Liberty Request to File Tariffs to Change its Rates for Natural Gas Service	GR-2021-0320
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 393.170.1, RSMo. Relating to Transmission Investments in Southeast Missouri	EA-2022-0099
Evergy Metro, Inc d/b/a Evergy Missouri Metro In the Matter of Evergy Metro, Inc. d/b/a Evergy Missouri Metro's Request for Authority to Implement A General Rate Increase for Electric Service	ER-2022-0129
Evergy Missouri West, Inc. d/b/a Evergy Missouri West 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	ER-2022-0130
Spire Missouri, Inc. In the Matter of Spire Missouri, Inc. d/b/a Spire's Request for Authority to	GR-2022-0179

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 EA-2022-0245
 In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri for Approval of a Subscription-Based Renewable Energy Program

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

Grain Belt Express Clean Line LLC EA-2023-0017
 In the Matter of the Application of Grain Belt Express LLC for an Amendment to its Certificate of Convenience and Necessity Authorizing it to Construct, Own, Operate, Control, Manage, and Maintain a High Voltage, Direct Current Transmission Line and Associated Converter Station

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 Permission and Approval and Certificates of Public Convenience and Necessity Authorizing it to Construct Renewable Generation Facilities

Evergy Metro, Inc d/b/a Evergy Missouri Metro EO-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

Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty GR-2024-0106
 In the Matter of the Request of Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty to Implement a General Rate Increase for Natural Gas Service in the Missouri Service Areas of the Company

Evergy Missouri West, Inc. d/b/a Evergy Missouri West ER-2024-0189
 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

Union Electric Company d/b/a Ameren Missouri ER-2024-0319
 In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to Adjust Its Revenues for Electric Service

Spire Missouri, Inc. GR-2025-0107
 In the Matter of Spire Missouri Inc. d/b/a Spire's Request for Authority to Implement a General Rate Increase for Natural Gas Service Provided in the Company's Missouri Service Areas

The Empire District Electric Company d/b/a Liberty ER-2024-0261
 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