

Exhibit No. 159

Exhibit No.:
Issue(s): Customer Blocks
Witness: Michael L. Stahlman
Sponsoring Party: MoPSC Staff
Type of Exhibit: Direct Testimony
Case No.: ER-2022-0337
Date Testimony Prepared: January 10, 2023

MISSOURI PUBLIC SERVICE COMMISSION

INDUSTRY ANALYSIS DIVISION

TARIFF AND RATE DESIGN DEPARTMENT

**DIRECT TESTIMONY
Revenue Requirement**

OF

MICHAEL L. STAHLMAN

**UNION ELECTRIC COMPANY,
d/b/a AMEREN MISSOURI**

CASE NO. ER-2022-0337

*Jefferson City, Missouri
January 2023*

1 A. Staff used the data provided by Ameren Missouri in the Response to Staff
2 Data Request 0147 to determine how much usage would have occurred in the first block for
3 all months, including the summer months as if the summer months also had a block one for
4 all usage 750 kWh or less. Staff then performed a regression analysis of the percentage of usage
5 that would have occurred in the first block to the actual total usage per customer. Staff then
6 used these regression results to estimate the block one percentages for each month by using the
7 normal usage per customer which was provided by Staff witness Kim Cox. I provided the
8 results to Staff witness Kim Cox.

9 Q. What factors were used in Staff's regression analysis?

10 A. Staff used the actual usage per customer determined by the data in the Response
11 to Staff Data Request 0147 and two dummy variables, one for summer and another for a
12 shoulder period.

13 Q. What do the summer and shoulder dummy variables account for?

14 A. These variables likely account for a larger percentage of customers using
15 electric air conditioning in the summer than electric resistance heating in the winter.

16 Q. Do the summer and shoulder dummy variables match Ameren Missouri's tariffed
17 summer months?

18 A. No. The two shoulder periods are June and October and the summer months are
19 in-between. However, much of June's usage would have occurred in May (and October's usage
20 in September) due to the meter reading cycles.

21 Q. How did Staff develop the normalized usage by rate block adjustment for the
22 SGS class?

1 A. Staff performed a regression analysis using the actual block one percentage
2 and the winter usage per customer. Staff then used these regression results to estimate the
3 block one percentages for each month by using the normal usage per customer from
4 Staff witness Kim Cox.

5 Q. Did Staff consider using the Response to Staff Data Request 0147 for the
6 SGS class?

7 A. Yes. However, the SGS class subject to block rates is a smaller subset of the entire
8 SGS tariffed rates and the data included in the Response to Staff Data Request 0147 was for all
9 SGS customers and not separated by tariffed rates. Analysis of the data in the Response to
10 Staff Data Request 0147 indicated that the customers making up the various SGS tariffed rate
11 classes were not homogeneous, including a large divergence in block one usage percentages,
12 making the data unsuitable to use for estimating normalized block one usage.

13 Q. Did you provide the estimated block one percentages for SGS and Residential
14 customers to other Staff witnesses?

15 A. Yes. I provided the estimates to Staff witness Kim Cox.

16 Q. Does this conclude your direct testimony?

17 A. Yes it does.

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-2022-0337

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 of Michael L. Stahlman*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

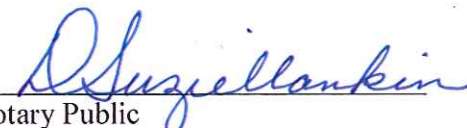


MICHAEL L. STAHLMAN

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 5th day of January 2023.

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

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 GR-2019-0077
In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to
Increase its Revenues for Natural Gas Service
- Union Electric Company d/b/a Ameren Missouri ER-2019-0335
In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to
Decrease Its Revenues for Electric Service
- Empire District Electric Company ER-2019-0374
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
- Union Electric Company d/b/a Ameren Missouri EA-2020-0371
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
- Spire Missouri, Inc. GR-2021-0108
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
- Union Electric Company d/b/a Ameren Missouri ER-2021-0240
In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to
Adjust Its Revenues for Electric Service
- Union Electric Company d/b/a Ameren Missouri GR-2021-0241
In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to
Adjust Its Revenues for Natural Gas Service
- The Empire District Electric Company ER-2021-0312
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
- The Empire District Gas Company GR-2021-0320
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
- Ameren Transmission Company of Illinois EA-2022-0099
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
- Evergy Metro, Inc d/b/a Evergy Missouri Metro ER-2022-0129
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
- Evergy Missouri West, Inc. d/b/a Evergy Missouri West ER-2022-0130
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
- Spire Missouri, Inc. GR-2022-0179
In the Matter of Spire Missouri, Inc. d/b/a Spire's Request for Authority to

cont'd Michael L. Stahlman

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

Selected Manuscripts

Stahlman, Michael and Laura M.J. McCann. "Technology Characteristics, Choice Architecture and Farmer Knowledge: The Case of Phytase." *Agriculture and Human Values* (2012) 29: 371-379.

Stahlman, Michael. "The Amorality of Signals." Awarded in top 50 authors for SEVEN Fund essay competition, "The Morality of Profit."

Selected Posters

Stahlman, Michael, Laura M.J. McCann, and Haluk Gedikoglou. "Adoption of Phytase by Livestock Farmers." Selected poster at the American Agricultural Economics Association Annual Meeting, Orlando, FL, July 27-29, 2008. Also presented at the USDA/CSREES Annual Meeting in St. Louis, MO in February 2009.

McCann, Laura, Haluk Gedikoglu, Bob Broz, John Lory, Ray Massey, and Michael Stahlman. "Farm Size and Adoption of BMPs by AFOs." Selected poster at the 5th National Small Farm Conference in Springfield, IL in September 2009.