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Witness: *Michael L. Stahlman*
Sponsoring Party: *MO PSC Staff*
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MISSOURI PUBLIC SERVICE COMMISSION
INDUSTRY ANALYSIS DIVISION
ENERGY RESOURCES DEPARTMENT

REBUTTAL TESTIMONY

OF

MICHAEL L. STAHLMAN

GRAIN BELT EXPRESS, LLC

CASE NO. EA-2023-0017

Jefferson City, Missouri
April 2023

1 **REBUTTAL TESTIMONY**

2 **OF**

3 **MICHAEL L. STAHLMAN**

4 **GRAIN BELT EXPRESS, LLC**

5 **CASE NO. EA-2023-0017**

6 Q. Please state your name and business address.

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

9 Q. Please provide you credentials.

10 A. Please see Schedule MLS-r1.

11 Q. What is the purpose of your testimony?

12 A. I will provide rebuttal testimony of the Direct Testimony of David Loomis and
13 Mark Repsher.

14 Q. Please summarize your testimony.

15 A. My testimony recommends the rejection of Invenergy's proposal to construct
16 the Grain Belt Express Project in two phases. I also review the testimonies of Mr. Repsher and
17 Dr. Loomis and recommend that their analysis not be used in the Commission's analysis
18 because it is irrelevant to any determination under the Tartan criteria. I am also sponsoring
19 Staff's Report in this matter.

20 Q. Invenergy proposes to construct the project in two phases instead of one phase.
21 Does Staff support this proposal?

22 A. No. The Commission previously found that the economic feasibility of the
23 project is dependent on the project's ability to sell to PJM as the revenues from the Missouri

1 converter station, based on the MJMEUC contract, were insufficient to cover the project's costs.
2 This issue of economic feasibility is heightened by the proposed amendments, which increases
3 the project's cost, reduces sales in PJM, and leaves the terms of the MJMEUC contract
4 unaltered to reflect the changes in the proposed project. By constructing the project in two
5 phases, it creates additional uncertainty about the feasibility of the project.

6 As it relates to the economic feasibility, in the Report and Order on Remand the
7 Commission found:

8 [I]t is the 3500 MW portion of the project to be sold in PJM that demonstrates
9 the financial viability of the project overall, since power prices for PJM are
10 generally \$10/MWh higher than prices paid for the energy sold into the MISO
11 market in Missouri.¹

12 In EA-2016-0358, GBE Witness David A. Berry admitted that the first-mover rate offered to
13 MJMEUC was a "sweetheart deal" that was not sufficient for GBE to recover its investment,
14 but that GBE was relying on the additional sales in the PJM market to make up the losses for
15 sales in Missouri.² The expected cost for the project has approximately doubled, and in
16 response to Staff Data Request No. 0032, the contract from MJMEUC remains without
17 amendment,³ which would question the economic feasibility of the project going forward since
18 the proposed amendment will make the project rely on more sales in MISO and less in PJM.

19 Staff Witness Claire M. Eubanks, PE also discusses the modifications to certain
20 conditions that GBE proposes to enable phasing.

¹ Report and Order on Remand, Case No. EA-2016-0358, issued on March 20, 2019, p. 44.

² Transcript, Case No. EA-2016-0358, Volume XIV, 3/22/2017, p. 944 l. 2 – p. 945 l. 12.

³ Staff has concern that the current contract specifies a point of interconnect at the Maywood substation, which will change should the amended project be approved. It is unclear whether the contract with MJMEUC would remain in effect with the same proposed terms of service.

1 Q. In addition to the doubling of the cost of the proposed project, has there been an
2 additional change that impacts the findings of the Commission in the prior case?

3 A. Yes. In the Report and Order on Remand, the Commission found: “Grain Belt
4 assumes the financial risk of building and operating the transmission line. Moreover, the cost
5 of the project will not be recovered from Missouri ratepayers through either SPP or MISO
6 regional cost allocation tariffs.”⁴

7 In response to Staff Data Request No. 0045, Invenergy provided information
8 about a loan requested through the Department of Energy. According to Invenergy, up to
9 eighty percent (80%) of total project costs could be obtained from the Department of Energy,
10 though the precise number is unknown. The only reason Staff mentions this information is
11 because the presence of this loan would limit the financial risk on Invenergy.

12 Q. In EA-2016-0358, you expressed concern that the RTO interconnection studies
13 were incomplete. Were those studies completed?

14 A. No, as noted in Staff’s Revised Supplemental Rebuttal Report, Invenergy
15 withdrew from those studies.⁵ The lack of studies and an Interconnection Agreement remains
16 a large concern. Without an agreement between the RTOs and Grain Belt Express, it is unclear
17 what will be ultimately constructed, how it will operate, and how much the interconnection
18 costs will affect the feasibility of the project.

19 For example, in paragraph II.A.9. of the Commission’s Report and Order on Remand,
20 the Commission stated, “The Missouri converter station will have bi-directional functionality,
21 allowing Missouri utilities an additional means to earn revenue from off-system sales of up to

⁴ Report and Order on Remand, Case No. EA-2016-0358, issued on March 20, 2019, pp. 43 -44.

⁵ Staff’s Revised Supplemental Rebuttal Report, Case No. EA-2016-0358, p. 12 l. 32 – p. 13 l. 2.

1 500 MW of excess power into the PJM energy markets.” However, the Midcontinent
2 Independent System Operator (“MISO”) on September 7, 2022, in response to a Grain Belt
3 Express complaint before the Federal Energy Regulatory Commission (“FERC”), stated:

4 Based on the applications Invenergy submitted to date, the TCA will be
5 for unidirectional flow. Specifically, Invenergy did not seek the ability to
6 withdraw power from the MISO system in any of its MHVDC Connection
7 Requests (i.e., H104, H105 and H107). If Invenergy seeks to have bidirectional
8 flow on its proposed MHVDC Transmission Line, it would need to submit a new
9 application as that would be a “substantial modification to the operating
10 characteristics on an existing MHVDC Transmission Line.”

11 It is also possible that Invenergy would not seek full injection rights, thus placing the burden
12 of any interconnection costs on either the generators injecting into MISO or the customers
13 using the project. Staff witness Shawn E. Lange, PE addresses the current state of RTO
14 interconnection studies.

15 Q. Why do you consider the analysis provided by Mr. Repsher, notably Schedule
16 MR-2, irrelevant for a Commission decision in this case?

17 A. Mr. Repsher assumes a blend of generation that is not part of this proposed
18 project and that does not exist. The analysis includes hypothetical benefits with unrealistic
19 assumptions, which is discussed below, and the expenditures necessary to construct the new
20 generation is not included in his analysis. Additionally he incorrectly assumes that a reduction
21 in energy and capacity price will automatically result in lower rates for Missouri ratepayers.
22 Finally, Mr. Repsher assumes that the project is economically feasible by crediting all benefits,
23 even those to non-Invenergy parties, to Invenergy.

1 Q. Did Mr. Repsher assume the project be built in one phase or two?

2 A. One. While Staff recommends the Commission not use Mr. Repsher's study,
3 the benefits cited were for the construction of the full 5,000 MW line rather than the project in
4 two discrete phases.

5 Q. Will this project lower capacity and energy prices?

6 A. Not by itself. This project is just a proposed generation interconnection with no
7 current generation. There would need to be generation constructed in Kansas and
8 interconnected to MISO in order to lower energy and capacity prices. At each stage of this
9 process, from the construction of generation, to transmission over the project, to injection in
10 MISO, there are expenditures that will need to be recovered. Currently the proposal expenses
11 are identified for the project itself and some interconnection costs.

12 Q. Will this project lead to the construction that will lower energy and
13 capacity prices?

14 A. That is unclear. Invenenergy has yet to complete the RTO studies which would
15 help indicate whether it would be more cost effective for generation to be constructed in Kansas
16 and interconnected via this proposed project or if it could be more cost effective to interconnect
17 directly to SPP or at a location within Missouri. If it is assumed that the project and additional
18 generation is constructed, and that the energy/capacity will be injected into MISO, then using
19 basic supply curve shifts, it is obviously true that energy and capacity prices will go down. Any
20 extra generation, all else remaining the same, will reduce energy and capacity prices. But
21 Invenenergy has not demonstrated that the final price is a viable alternative to connecting directly
22 to SPP or MISO.

1 Q. Will the interconnection studies performed by Invenergy in MISO mean that
2 generators will not be responsible for interconnection costs?

3 A. No. Invenergy would need to sign an interconnection agreement with all
4 potential interconnection costs at its full capacity. It is possible that Invenergy would only
5 request interconnection of a smaller portion, thus putting the burden of the interconnecting costs
6 on the generators and ultimately to those who purchase generation with delivery by the project.

7 Q. Mr. Repsher's study uses capacity factors provided by Invenergy. Are these
8 capacity factors reasonable?

9 A. No. Invenergy is assuming a mix of generation and storage that does not exist
10 and is not part of this proposed project. Invenergy's estimation of a 74 percent capacity factor⁶
11 also unreasonably assumed normalized wind and solar generation curves where the peak solar
12 was equal to the peak wind capacity for a single day, and assumes that generation would operate
13 on this normalized basis every day. Additionally, the proposed capacity factor of 74 percent
14 is much higher than what MISO or SPP accredit for a renewable resource, which is shown in
15 the rebuttal testimony of Claire M. Eubanks, PE. Finally, for any customers who use the project,
16 they will contract with a generation source and the energy purchased will match the capacity
17 factor of that source and not some hypothetical blend of generation.

18 Q. Will lower energy and capacity prices mean that ratepayer rates will also
19 go down?

20 A. Not necessarily. Ratepayers will still be responsible for any company-owned
21 assets. Lower energy prices, especially negative electricity prices, doesn't necessarily mean
22 that electricity is cheaper, but that the generator has costs that are either not being recovered or

⁶ Direct Testimony of Mark Repsher, p. 11, l. 14.

1 being recovered at lower margins. The “fixed” costs will have to be recovered at some time or
2 they will go out of business.

3 Additionally, the impact of generation that fluctuates hour to hour may ultimately
4 increase prices. The injection of wind or other intermittent energy in a given area can result in
5 the energy markets needing more expensive generation that can handle the ramping up and
6 down of energy supply. Such generation is often more inefficient, which can paradoxically
7 result in higher emissions, not less. A comparable example is the fuel efficiency of a vehicle at
8 highway speeds compared to the same vehicle in stop-and-go traffic.

9 Q. On page 18 lines 2 through 4, Mr. Repsher states that the project is economically
10 feasible because, “the Project creates immense economic benefits compared to the Project
11 costs.” Do you agree?

12 A. No. Mr. Repsher incorrectly applies economic feasibility by counting benefits
13 to non-Invenergy parties as their own. In fact, none of the benefits cited in Mr. Repsher’s
14 Schedule MR-2 actually provide monetary compensation to Invenergy. In the values given,
15 Mr. Repsher did not include all costs in his calculations, such as the costs to construct new
16 generation and to interconnect that generation. However, those costs are not relevant to
17 Invenergy and are thus properly excluded. However, by including estimated benefits that do
18 not offset the project costs, there is a mismatch in Mr. Repsher’s economic feasibility analysis.

19 Staff witness Krishna L. Poudel, PhD further discusses the values used by Mr. Repsher
20 to estimate the benefits, and Staff’s concerns with those values.

21 Q. Why does Staff recommend the Commission not rely on the study provided by
22 Dr. Loomis attached as Schedule DL-2 to his testimony?

1 A. The study performed by Dr. Loomis represents additional costs on the Grain Belt
2 Express project that work against the economic feasibility of the project. Taxes and
3 expenditures on the project need to be recovered by Invenenergy in order to be feasible.
4 Additionally, all of these “benefits” ignore opportunity costs; how the workers, land, and
5 investment would otherwise be employed if the project is not constructed. If the Commission
6 decides to consider this information, the Commission should also consider the impact of
7 potentially offsetting employment in Missouri due to generation in Missouri not being
8 constructed and that the profits of this project will flow to a non-Missouri based corporation.
9 Staff instead recommends that the Commission give no weight to this study as a basis to approve
10 or reject the project.

11 Q. What is the potential harm to Missouri ratepayers if the project is ultimately not
12 economically feasible?

13 A. To some extent, it depends on the stage of the project and on what other entities
14 support the project. Currently, Staff is aware of one proposal before the Commission that
15 includes upgrades to support interconnection of this project.⁷ Because there is no signed
16 interconnection agreement between MISO and Invenenergy on this project, it is unclear what
17 entities would be responsible for any upgrade expenditures. As mentioned by Staff witness
18 Alan Bax, any improvements made by Ameren Missouri would become part of Ameren
19 Missouri’s load zone revenue requirement for FERC formula rates. Additionally, because there
20 is no signed interconnection agreement, it is unclear how the proposed project will operate or
21 its ultimate design. While the current conditions⁸ help mitigate those concerns, there has been

⁷ Case No. EA-2023-0226

⁸ (1) To provide Staff with completed RTO Interconnection Agreements and any associated studies and to provide its plan to address any issues arising from those studies, and (2) if there are any material changes in the design and

1 some dispute over the definition of a “material change.”⁹ Staff recommends adding further
2 clarification on what constitutes a material change, including changing the converter station
3 location or point(s) of interconnection, a modification of 100 MW in converter design size, a
4 change of a half billion dollars in estimated cost, or a change of 100 MW of obtaining the
5 injection rights of the full 1,500 MW into MISO and 1,000 MW into AECI, or a change in 100
6 MW of obtaining the rights to withdraw from MISO a currently proposed 0 MW. Staff is
7 willing to negotiate on the precise specificity of these terms, but proposes these as a starting
8 point with the issues in Case No. EC-2021-0059 in mind.

9 An additional potential harm to Missourians is of any stranded equipment and the
10 general uncertainty of the easement status. These concerns are also mitigated by current
11 conditions and neither Staff nor Invenergy are proposing any changes to those conditions.
12 However, Staff does have concerns that construction in two phases will complicate this issue,
13 such as how long an easement will remain in effect for the second phase, especially if the second
14 phase is delayed or never constructed.

15 Q. Are there concerns with the Commission’s ability to enforce conditions
16 concerning the Project once it is constructed?

17 A. Yes. While an entity not subject to the Commission’s jurisdiction can consent
18 to the Commission’s jurisdiction, it can also revoke that consent, and if the entity is
19 federally regulated, the Commission cannot regain jurisdiction. This situation has occurred.
20 A gas pipeline asked for a CCN from the Commission,¹⁰ although it was connected to
21 facilities in Illinois under the Mississippi river (exempting it from FERC jurisdiction under the

engineering of the Project from what is contained in the application, Grain Belt will file an updated application subject to further review and determination by the Commission,.

⁹ Case No. EC-2021-0059

¹⁰ Case No. GA-89-126

1 Hinshaw exemption¹¹). The Commission granted the CCN, with the condition that the pipeline
2 not connect to the Illinois facilities (voiding the Hinshaw exemption) without first seeking
3 Commission permission to void the exemption. The pipeline opened the gate, voided the
4 exemption, applied to FERC for regulation, and argued the Commission could not do anything
5 about it. The courts said until FERC approved the pipeline for regulation, the pipeline stayed
6 under Missouri Public Service Commission jurisdiction.¹² But, after FERC granted jurisdiction
7 and the pipelines merged facilities, the Commission filed a complaint on the basis that the
8 pipelines needed Commission authorization to merge. The courts said the Commission's ability
9 to enforce its statutes ended the second FERC accepted jurisdiction over the pipelines.¹³

10 Q. Does this conclude your rebuttal testimony?

11 A. Yes it does.

¹¹ The Hinshaw exemption abrogates FERC jurisdiction over any company engaged in either the transportation of natural gas in interstate commerce or its sale in interstate commerce for resale, provided that (1) all the gas is received by the company within or at the boundary of the state in which it is ultimately consumed, and (2) the rates and service of the company are subject to state regulation.

¹² State of Missouri, ex rel. Missouri Public Service Commission v. Missouri Gas Company LLC, et al., 311 S.W.3d 368, 369..

¹³ *Id.*, at 371.

Michael L. 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, 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 EO-2012-0135

cont'd Expert Witness Testimony
Michael L. Stahlman

- 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 EU-2014-0077
KCP&L Great Missouri Operations Company
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

cont'd Expert Witness Testimony
Michael L. Stahlman

- 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

cont'd Expert Witness Testimony
Michael L. Stahlman

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

cont'd Expert Witness Testimony
Michael L. Stahlman

Spire Missouri, Inc. GR-2022-0179
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

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

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.