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Issues: Fuel Adjustment Clause

History

Witness: Lena M. Mantle Sponsoring Party: MO PSC Staff

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File No.: EO-2012-0074

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MISSOURI PUBLIC SERVICE COMMISSION REGULATORY REVIEW DIVISION

DIRECT/REBUTTAL TESTIMONY

OF

LENA M. MANTLE

UNION ELECTRIC COMPANY d/b/a AMEREN MISSOURI FILE NO. EO-2012-0074

Jefferson City, Missouri May 2012

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of the Second Prudence Review of Costs Subject to the Commission-Approved Fuel Adjustment Clause of Union Electric Company d/b/a Ameren Missouri)) Case No. EO-2012-0074)
AFFIDAVIT OF	LENA M. MANTLE
STATE OF MISSOURI)) ss COUNTY OF COLE)	
preparation of the following Direct/Rebut consisting of <u>5</u> pages of Direct/Rebut case, that the answers in the following Direct	her oath states: that she has participated in the sal Testimony in question and answer form, attal Testimony to be presented in the above ot/Rebuttal Testimony were given by her; that in such answers; and that such matters are true
	Gena M. Mantle Ilena M. Mantle
Subscribed and sworn to before me this 14	day of May, 2012.
SUSAN L. SUNDERMEYER Notary Public - Notary Seal State of Missouri Commissioned for Callaway County My Commission Expires: October 03, 2014 Commission Number: 10942086	Susan Sunderneyer Notary Public

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1 DIRECT/REBUTTAL TESTIMONY 2 3 OF 4 5 LENA M. MANTLE 6 7 UNION ELECTRIC COMPANY d/b/a AMEREN MISSOURI 8 9 FILE NO. EO-2012-0074 10 11 Q. 12 Please state your name and business address. 13 A. Lena M. Mantle, P.O. Box 360, Jefferson City, MO 65102. 14 Q. By whom are you employed and in what capacity? 15 A. I am the Manager of the Energy Unit, Regulatory Review Division, of the 16 Missouri Public Service Commission ("Commission"). 17 Q. Please state your educational background and experience. Α. 18 These are contained in Schedule LMM-1. 19 Q. Have you previously filed testimony before the Commission? A. 20 Yes. Schedule LMM-1 attached to my testimony also contains a list of cases 21 in which I have previously filed testimony or reports, and the Commission rulemakings that I 22 have been involved in. 23 Q. What has been your involvement with fuel adjustment clauses at the Commission? 24 25 A. After Section 386.266 RSMo. (Supp. 2006), also known as SB 179, became 26 law, I was asked to draft rules for the Commission to implement section 1 of the statute. That 27 section allows the Commission to approve periodic rate adjustments outside of general rate 28 proceedings to reflect increases and decreases in prudently incurred fuel and purchased power 29 costs for electric utilities. I drafted rules that were scrutinized, edited, and modified through a

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process that included numerous workshops with other members of Staff, utility companies and ratepayer representatives over a period of many months. The final rules, 4 CSR 240-3.161 Electric Utility Fuel and Purchased Power Cost Recovery Mechanisms Filing and Submission Requirements and 4 CSR 240-20.090 Electric Utility Fuel and Purchased Power Cost Recovery Mechanisms, became effective January 30, 2007.

I have participated in drafting exemplar tariff sheets for the Fuel and Purchased Power Adjustment Clauses ("FAC") of Union Electric Company d/b/a Ameren Missouri ("Ameren Missouri"), The Empire District Electric Company ("Empire"), and KCP&L Greater Missouri Operations Company ("GMO").

- Q. Did the Commission recently address Ameren Missouri's prudency regarding its fuel clause?
- A. Yes, it did in File No. EO-2011-0255, In the Matter of the First Prudence Review of Costs Subject to the Commission-Approved Fuel Adjustment Clause of Union Electric Company d/b/a AmerenUE.
 - Q. Was that case contested?
 - A. Yes.
 - Q. Did you testify in it?
- A. Yes, I filed direct/rebuttal testimony on November 24, 2010, and provided testimony before the Commission January 11, 2011.
 - Q. What was contested in that case?
- Ameren Missouri's exclusion of costs and revenues associated with certain A. sales of energy to American Electric Power Operating Companies ("AEP") and to Wabash Valley Power Association, Inc. ("Wabash") during the period of March 1, 2009 to

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September 30, 2009, in determining the associated FAC charges that are billed to its customers.

- What was the Commission's resolution of that issue in File No. Q. EO-2010-0255?
- A. The Commission summarized its resolution of the issue in its Report and *Order* that it issued April 27, 2011, as follows:

This order determines that Union Electric Company d/b/a Ameren Missouri acted imprudently, improperly, and unlawfully when it excluded revenues from power sales agreements with AEP and Wabash from off-system sales revenue when calculating the rates charged under its fuel adjustment clause.

- What does the contested issue in File No. EO-2010-0255 have to do with this Q. case?
- A. Ameren Missouri also excluded revenues from the power sales agreements with AEP and Wabash during part of this audit period of October 1, 2009, through May 31, 2011. It also excluded the AEP and Wabash revenues for the period October 1, 2009 through June 20, 2010. Therefore, other than the audit time periods, the prudency issues are the same.
- Q. Are potential revenues from this time period the subject of another case before the Commission?
- Yes. In Case No. EU-2012-0027 Ameren Missouri is asking the Commission A. to grant it an accounting authority order (AAO) that would allow it to defer on its books what it contends were "lost fixed cost" during the time that the electricity usage of Noranda Aluminum, Inc. was curtailed after the January 2009 ice storm for rate recovery as a true-up issue in Case No. ER-2012-0166.
 - Is Case No. EU-2012-0027 a contested case? Q.

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- Did you testify in it?
- Yes, I filed rebuttal testimony on March 14, 2012 and provided testimony before the Commission on May 3, 2012.
 - What is the status of Case No. EU-2012-0027?
- Initial briefs are scheduled to be filed on May 30, 2012. Reply briefs are due
- Is the prudence of Ameren Missouri's treatment of the revenue margin from the AEP and Wabash contracts an issue in Case No. EU-2012-0027?
 - No, it is not.
 - How is Case No. EU-2012-0027 related to this case?
- Ameren Missouri described the relationship to this case and its appeal of the Commission's decision in Case No. EO-2010-0255 in a footnote on page 5 of its Verified Application For Accounting Authority Order in Case No. EU-2012-0027 as follows:

The Company has appealed the Commission's decision in Case No. EO-2010-0255. In addition, the Commission has only made a determination that the AEP and Wabash contracts do not reflect long-term partial requirements sales with respect to revenues under those contracts for the period March 1, 2009 through September 30, 2009. Consequently, as a result of a successful appeal or based upon future orders of the Commission for post-September 30, 2009 revenues under those contracts, there is a scenario where the Company could ultimately be permitted to retain some or all of the AEP and Wabash revenues and, under such a scenario, would be able to recover some or all of these fixed costs. This Application seeks only an AAO, and if such a scenario occurs, the Company acknowledges that it would not be entitled to amortization and recovery of fixed costs to the extent they are recovered through AEP and Wabash contract revenues.

- Q. What is the purpose of your direct/rebuttal testimony in this case?
- A. In this testimony:

- 1. I present information to the Commission that Ameren Missouri provided to me when Ameren Missouri filed its request for a FAC in Case No. ER-2008-0318 regarding Ameren Missouri's interpretation of the language in its proposed FAC tariff sheets that the Commission eventually approved in that case;
- 2. I discuss how the AEP and Wabash contracts were treated in Ameren Missouri's next general electric rate case, Case No. ER-2010-0036;
- 3. I respond to Ameren Missouri's witness Gary Weiss's testimony on the W-factor of the FAC; and
- 4. I testify to risks that Ameren Missouri assumed when Noranda Aluminum, Inc. ("Noranda") became its customer and when Ameren Missouri implemented a FAC.

Ameren Missouri's Fuel Adjustment Clause Tariff Language

- Q. Were you involved in the development of Ameren Missouri's FAC tariff language that was in effect for the period October 1, 2009 through June 20, 2010?
- A. Yes, I was. Ameren Missouri first proposed the original tariff language, including the definition of the OSSR (Off-System Sales Revenue) factor, in the exemplar FAC tariff sheets it filed in its direct case in Case No. ER-2008-0318. I was the Utility Operation Division's Case Coordinator and Staff expert on Ameren Missouri's fuel adjustment clause in that case. I was present for most, if not all, of the discussions involving Ameren Missouri's FAC in that case, and in the development of the FAC exemplar tariff sheets that became part of the Stipulation and Agreement regarding the terms of Ameren Missouri's FAC which the Commission approved.
- Q. Did you ask Ameren Missouri to clarify any of the terms of its FAC as it had proposed them in its exemplar FAC tariff sheets it filed in its direct case?

- A. Yes. The FAC exemplar tariff sheets Ameren Missouri included in its direct filing were very different from the GMO FAC tariff sheets that I had previously worked with. There were many phrases and definitions on Ameren Missouri's tariff sheets that I was uncertain about. One of the phrases that I was uncertain about was "Missouri retail sales and long-term full and partial requirements sales, that are associated with (1) AmerenUE Missouri jurisdictional generating units, (2) power purchases made to serve Missouri retail load, and (3) any related transmission" contained in the definition of OSSR. To be sure that I understood what the phrase meant, I asked Ameren Missouri what this phrase meant during a discussion where Ameren Missouri was clarifying the definition and phrases in its proposed FAC tariff sheets. Ameren Missouri told me it was a description of the wholesale contracts that Ameren Missouri had with municipal utilities to provide electricity to them.
 - Q. How was OSSR defined in those tariff sheets?
 - A. It was defined as follows:

OSSR = Revenue from Off-System Sales allocated to Missouri electric operations.

Off-System Sales shall include all sales transactions (including MISO revenues in FERC Account Number 447), excluding Missouri retail sales and long-term full and partial requirements sales, that are associated with (1) AmerenUE Missouri jurisdictional generating units, (2) power purchases made to serve Missouri retail load, and (3) any related transmission.

- Q. Was Ameren Missouri's explanation satisfactory to you?
- A. Yes, it was. Until Ameren Missouri argued otherwise in File No. EO-2010-0255, in my experience working at this Commission for over 26 years, in discussions with investor-owned utilities in which I was involved, their contracts to sell electricity to municipal utilities were typically referred to as wholesale contracts. I was aware that Ameren Missouri had included its wholesale municipal contracts in its resource planning

process. Having weather normalized Ameren Missouri's net system input in many previous cases, I knew that the loads of these municipalities were included in the net system input that Ameren Missouri and Staff used as an input to determine Ameren Missouri's fuel and purchased power expense in rate cases. Further, in the pending rate case, Case No. ER-2008-0318, a portion of Ameren Missouri's costs was allocated through jurisdictional energy and demand allocators to those municipal utilities to which Ameren Missouri sold electricity. Therefore, Staff viewed that it would have been inappropriate to flow Ameren Missouri's revenues from these municipal utilities' contracts through Ameren Missouri's FAC because Ameren Missouri's costs to serve the municipal utilities were not being flowed through Ameren Missouri's FAC. If Ameren Missouri's revenues from the municipal utilities flowed back to its customers through its FAC, but the revenue requirements used to set the rates for its retail customers did not include Ameren Missouri's costs associated with those contracts, then Ameren Missouri would be being treated as paying for all of its costs to sell electricity to the municipal utilities, but only receiving 5% of its revenues from them.

- Q. Did Ameren Missouri ever take any action you found to be inconsistent with its explanation of this FAC exclusion language?
- A. Yes. In its next rate case, File No. ER-2010-0036, Ameren Missouri took the position that this language meant Ameren Missouri's revenues from its contracts with AEP and Wabash were excluded from off-system sales revenue when calculating the rates charged under its FAC.
 - Q. Were you surprised?
- A. Yes. Never during the discussions of this exclusion language in its 2008 rate case, Case No. ER-2008-0318, which was before Ameren Missouri entered into the AEP and

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Wabash contracts, did Ameren Missouri discuss the inclusion of these types of contracts from the exclusionary language of the OSSR component of the FAC.

Staff's Discovery of AEP and the Wabash Contracts

Q. How did Staff become aware of the AEP and Wabash contracts?

A. Staff discovered these contracts during Ameren Missouri's rate case, which it filed on July 24, 2009, File No. ER-2010-0036. On September 24, 2009, I received from the Federal Energy Regulatory Commission ("FERC") hard copies of documents which stated that Ameren Missouri had submitted Wholesale Distribution Service Agreements with the cities of Linneus and Centralia to the FERC for approval. I notified the Energy Department Staff so that they could check with Ameren Missouri to make sure that they had the current list of municipalities served by Ameren Missouri for Staff's work on the rate case. As a result, on September 24, 2009, Staff sent Data Request Nos. 184 and 186 asking Ameren Missouri to identify current and anticipated wholesale customers. The first time that Staff saw any mention of the AEP and Wabash contracts was 21 days later on October 14, 2010, in Ameren Missouri's response to Staff Data Request No. 184 provided by Jaime Haro, Ameren Missouri's Director, Asset Management and Trading. In that response, Mr. Haro stated Ameren Missouri was supplying wholesale power to Wabash and to American Electric Power Service Corp. as agent for the AEP. This was the first time that Staff became aware of the AEP and Wabash contracts.

Q. Why did the Energy Staff need to know about Ameren Missouri's wholesale customers?

¹ The FERC dockets are ER09-518-000 and ER09-520-000

- A. It is important that the requirements of wholesale municipal customers be treated consistently in a rate case. They should be included in (1) the calculation of the jurisdictional allocation factors and (2) the energy requirement that is included in the net system input used to estimate the utility's fuel and purchased power expense. If the energy requirements of wholesale customers is included in the calculation of the jurisdictional allocation factor that is used to allocate costs and expenses, but not in the estimate of fuel and purchased power expense, then the fuel and purchased power expense allocated to the utility's retail customers for setting their rates will be too low. If a wholesale customer's energy requirement is included in the net system input used to estimate fuel and purchased power expense, but not in the jurisdictional allocation factor calculation, then fuel and purchased power expense will be allocated to the utility's retail customers for setting their rates will be too high.
- Q. Did Ameren Missouri include the AEP and Wabash contracts in its calculation of its jurisdictional allocation factors in its next rate case, File No. ER-2010-0036?
- A. Yes. In its direct filing made on July 24, 2009, Ameren Missouri included the AEP and Wabash contracts in the calculation of the jurisdictional allocation factor.
- Q. Did Ameren Missouri include the AEP and Wabash contracts in its net system input provided to Staff for that case?
- A. No, it did not. As the rate case progressed it appeared to Staff that there was some confusion at Ameren Missouri regarding the proper treatment of the AEP and Wabash contracts. It did not become evident to Staff that Ameren Missouri was not including AEP and Wabash contract revenues as off-system sales revenues in Ameren Missouri's FAC until late in that case. Eventually, the parties in that case, File No. ER-2010-0036, signed a *Second*

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Nonunanimous Stipulation and Agreement ("Stipulation") regarding the AEP and Wabash contracts, but only for the specific limited purpose of resolving the issue for purposes of that rate case. This stipulation and agreement did not resolve the differences of the parties regarding the appropriate treatment of these contracts in Ameren Missouri's FAC. As a result, the issue was left to be addressed in prudence reviews of Ameren Missouri's FAC; prudence reviews such as this one.

The W-Factor

- Q. Is this Stipulation the same nonunanimous stipulation and agreement Ameren Missouri witness Gary Weiss refers to in his direct testimony on page 4, line 1?
 - A. Yes, it is.
 - Q. Does it contain a W-factor?
 - A. Yes it does.
 - Q. What is the W-factor?
- A. It is something that was required to get the parties who joined the stipulation and agreement to join in it and was part of a settlement of how the AEP and Wabash contract revenues should be treated in that rate case.
 - Q. Mr. Weiss testifies on page 4, lines 4 6, of his direct testimony as follows:

In particular, the agreement was that starting with the effective date of new rates in Case No. ER-2010-0036 (which was June 21, 2010), all of the revenues from AEP and Wabash would be included as off-system sales in the FAC calculation and that in addition, \$3.6 million of margins under those contracts would also reduce net fuel cost charges to customers through a reduction in net fuel costs of \$300,000 per month for 12 months. The \$300,000 per month reduction started in July 2010 and continued through June 2011, via the "W" factor that was included in the FAC tariff as a result of the *Stipulation*.

Do you agree with this testimony by Mr. Weiss?

- A. No, I do not. I could not find anywhere in the Stipulation where it was stated that the W-factor was part of the margins from the AEP and Wabash contracts, and that is not what Staff agreed to. The stipulation states:
 - 5. The fuel adjustment clause tariff sheets shall also be revised to include an additional reduction in the numerator of the FPA factor in the amount of \$300,000 per month [W-factor] during a twelve-month period commencing with the first full month for which new rates from this case are effective which shall be accomplished in accordance with the following two highlighted changes to AmerenUE's fuel adjustment clause, which are in addition to changes agreed to in the First Nonunanimous Stipulation and Agreement:

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\begin{aligned} FPA_{(RP)} &= \left[\left[\left(CF + CPP - OSSR - TS - S - \textcolor{red}{W}\right) - \left(NBFC \ x \ S_{AP}\right)\right] \ x \ \_\_\% \ + \ I \\ &+ \ R \ - \ N\right] / S_{RP} \end{aligned}
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W = \$300,000 per month for the months, _____, 2010 through, ____, 2011. This factor "W" expires on _____, 2011.

The Stipulation also includes the following:

6. The signatories expressly agree this Stipulation does not, and is not intended to, preclude any party from taking any position in this or in any subsequent Commission case including the position that these AEP and Wabash contracts, for periods prior to the effective date of new rates from this case, should be treated as off-system sales for purposes of AmerenUE's current fuel adjustment clause.

and

GENERAL PROVISIONS

- a. This Stipulation is being entered into for the purpose of disposing of the issues that are specifically addressed in this Stipulation. In presenting this Stipulation, none of the signatories shall be deemed to have approved, accepted, agreed, consented or acquiesced to any ratemaking principle or procedural principle, including, without limitation, any method of cost or revenue determination or cost allocation or revenue related methodology, and none of the signatories shall be prejudiced or bound in any manner by the terms of this Stipulation (whether it is approved or not) in this or any other proceeding, other than a proceeding limited to enforce the terms of this Stipulation, except as otherwise expressly specified herein.
- Q. Did you attend and participate in the AEP and Wabash settlement discussions in Case No. ER-2010-0036?

A. Yes, I did.

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Q. What is Staff's position with respect to the W-factor?

A. The parties, including Ameren Missouri, agreed that Ameren Missouri would reduce fuel cost by \$300,000 a month for twelve months in order to settle the disagreement between the parties regarding how to handle the AEP and Wabash contracts in Case No. ER-2010-0036. If the parties to the stipulation had intended for it to offset the AEP and Wabash margins that had not been passed through the FAC, then the parties would have stated so in their written agreement filed with the Commission. Instead they included language that specifically allowed them to take any position in a subsequent case regarding the AEP and Wabash contracts.

Q. Is this the only FAC tariff to include an amount expressly for settlement purposes?

A. No, it is not. In the previous Ameren Missouri rate case, Case No. ER-2008-0318, the settlement of the FAC tariff included the S-factor which was a black-box settlement that Ameren Missouri would reduce its fuel cost by \$3 million a year.

Impact of Loss of Noranda's Load on Ameren Missouri

Q. Was the impact of a sudden reduction in Noranda's load unforeseen by Staff?

A. No, Staff was aware of the potential, and raised it when Ameren Missouri and Noranda sought for Noranda to become a customer of Ameren Missouri. In Case No. EA-2005-0180², the case in which the Commission approved a certificate of public convenience and necessity for Ameren Missouri so that it could provide service to Noranda,

² Case No. EA-2005-0180 Application of Union Electric Company for a Certificate of Public Convenience and Necessity Authorizing it to Construct, Install, Own, Operate, Control, Manage and Maintain Electric Plant, as Defined in § 386.020(14), RSMo. to Provide Electric Service in a Portion of New Madrid, County, Missouri, as an Extension of its Existing Certificated Area.

Staff stated on page 7 of Staff Suggestions In Support of Unanimous Stipulation and Agreement:

In addition, if Noranda, for example, closed down, without the intervention of the five-year notice provision, the risk of other Missouri retail electricity customers paying more is mitigated by AmerenUE's opportunity to sell the energy represented by the Noranda load into the off-system market for electricity.

- Q. Was this statement made specifically with respect to Noranda closing down due to an ice storm?
- A. No. Staff was aware that there was a risk to Ameren Missouri if Noranda closed down without the intervention of the five-year period, whether the closing be due to an ice storm, earthquake or change in economic conditions, and pointed the possibility out to Ameren Missouri and the Commission.
- Q. Didn't Ameren Missouri do exactly what Staff suggested after the ice storm severely reduced Noranda's load?
- A. Yes it did. Since Ameren Missouri would not be selling as much electricity to Noranda, it had more electricity available to sell in the off-system market. To not seek opportunities to sell this electricity would have been imprudent.
- Q. Why then is Staff saying that Ameren Missouri was imprudent when it sold electricity to AEP and Wabash?
- A. Staff is not saying Ameren Missouri was imprudent for entering into the contracts with AEP and Wabash. Staff is saying Ameren Missouri was imprudent in how it treated the revenues from the contracts under its fuel adjustment clause in this case just as the Commission determined in Case No. EO-2010-0255.
- Q. Why was that not part of the discussion in Staff's Suggestions in Support of the Unanimous Stipulation and Agreement in Case No. EA-2005-0180?

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A. Ameren Missouri did not have a fuel adjustment clause then. When the Commission approved the *Unanimous Stipulation and Agreement* in Case No. EA-2005-0180 effective on March 20, 2005, and until the tariff sheets resulting from the Report and Order to Case No. ER-2008-0318 went into effect March 1, 2009, Ameren Missouri did not have a fuel adjustment clause. Until it had a fuel adjustment clause, Ameren Missouri retained the revenues from additional off system sales.

With Ameren Missouri's FAC the Commission approved in Case No. ER-2008-0318, changes in Ameren Missouri's off-system sales revenues offset changes in Ameren Missouri's fuel purchase costs, subject to a 95/5 sharing mechanism. As Ameren Missouri witness Lynn M. Barnes states on page 6, lines 1-3, of her direct testimony in this case "the vast majority of the language agreed upon in the Stipulation was the same language proposed by the Company when it filed the proposed FAC tariff at the inception of Case No. ER-2008-0318." In fact, the OSSR definition in the agreed to rate design of Ameren Missouri's FAC applicable for the time period of October 1, 2009 through June 20, 2010, is identical to the OSSR definition Ameren Missouri proposed in its direct case.

- Q. Why is that important in this case?
- A. In Case No. EA-2005-0180 Ameren Missouri requested, and received, from the Commission the opportunity and obligation to serve Noranda. In doing so, Ameren Missouri also took on the risks associated with serving a customer that uses so much electricity. When Ameren Missouri requested a FAC in Case No. ER-2008-0318 that included revenues from contract sales in it, Ameren Missouri took on the risk that Noranda might suddenly quit using such large amounts of electricity and that the revenues from selling

through its FAC.

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What is Staff's recommendation in this case?

A. Staff is recommending that all of Ameren Missouri's margins from the AEP and Wabash contracts be refunded to Ameren Missouri's customers, with the appropriate interest, in the next change to Ameren Missouri's fuel adjustment charge that immediately follows an order from the Commission in this case.

that electricity to others instead of Noranda would flow to Ameren Missouri's customers

- Q. Does this conclude your direct/rebuttal testimony?
- A. Yes, it does.

Education and Work Experience Background for Lena M. Mantle, P.E.

Energy Unit Manager
Tariff, Safety, Economic and Engineering Analysis Department
Regulatory Review Division

I received a Bachelor of Science Degree in Industrial Engineering from the University of Missouri, at Columbia, in May, 1983. I joined the Research and Planning Department of the Missouri Public Service Commission in August, 1983. I became the Supervisor of the Engineering Analysis Section of the Energy Department in August, 2001. In July, 2005, I was named the Manager of the Energy Department. The Energy Department was renamed the Energy Unit in August, 2011. I am a registered Professional Engineer in the State of Missouri.

In my work at the Commission from May 1983 through August 2001 I worked in many areas of electric utility regulation. Initially I worked on electric utility class cost-of- service analysis. As a member of the Research and Planning Department, I participated in the development of a leading-edge methodology for weather normalizing hourly class energy for rate design cases. I applied this methodology to weather normalize energy in numerous rate increase cases.

My responsibilities as the Supervisor of the Engineering Analysis section considerably broadened my work scope. This section of the Commission Staff is responsible for a wide variety of engineering analysis including electric utility fuel and purchased power expense estimation for rate cases, generation plant construction audits, review of territorial agreements and resolution of customer complaints. As the Manager of the Energy Unit, I oversee the activities of the Engineering Analysis section, the electric and natural gas utility tariff filings, the Commission's natural gas safety staff, fuel adjustment clause filings, resource planning compliance review and the class cost-of-service and rate design for natural gas and electric utilities.

In my work at the Commission I have participated in the development or revision of the following Commission rules:

4 CSR 240-3.130	Filing Requirements and Schedule of Fees for Applications for Approval of Electric Service Territorial Agreements and Petitions for Designation of Electric Service Areas
4 CSR 240-3.135	Filing Requirements and Schedule of Fees Applicable to Applications for Post-Annexation Assignment of Exclusive Service Territories and Determination of Compensation
4 CSR 240-3.161	Electric Utility Fuel and Purchased Power Cost Recovery Mechanisms Filing and Submission Requirements
4 CSR 240-3.162	Electric Utility Environmental Cost Recovery Mechanisms Filing and Submission Requirements
4 CSR 240-3.190	Reporting Requirements for Electric Utilities and Rural Electric Cooperatives
4 CSR 240-14	Utility Promotional Practices
4 CSR 240-18	Safety Standards
4 CSR 240-20.015	Affiliate Transactions
4 CSR 240-20.090	Electric Utility Fuel and Purchased Power Cost Recovery Mechanisms
4 CSR 240-20.091	Electric Utility Environmental Cost Recovery Mechanisms
4 CSR 240-22	Electric Utility Resource Planning

I have testified before the Commission in the following cases:

CASE NUMBER	TYPE OF FILING	<u>ISSUE</u>
ER-84-105	Direct	Demand-Side Update
ER-85-128, et. al	Direct	Demand-Side Update
EO-90-101	Direct, Rebuttal & Surrebuttal	Weather Normalization of Sales; Normalization of Net System
ER-90-138	Direct	Normalization of Net System
EO-90-251	Rebuttal	Promotional Practice Variance

EO-91-74, et. al.	Direct	Weather Normalization of Class Sales; Normalization of Net System
ER-93-37	Direct	Weather Normalization of Class Sales; Normalization of Net System
ER-94-163	Direct	Normalization of Net System
ER-94-174	Direct	Weather Normalization of Class Sales; Normalization of Net System
EO-94-199	Direct	Normalization of Net System
ET-95-209	Rebuttal & Surrebuttal	New Construction Pilot Program
ER-95-279	Direct	Normalization of Net System
ER-97-81	Direct	Weather Normalization of Class Sales; Normalization of Net System; TES Tariff
EO-97-144	Direct	Weather Normalization of Class Sales; Normalization of Net System;
ER-97-394, et. al.	Direct, Rebuttal & Surrebuttal	Weather Normalization of Class Sales; Normalization of Net System; Energy Audit Tariff
EM-97-575	Direct	Normalization of Net System
EM-2000-292	Direct	Normalization of Net System; Load Research;
ER-2001-299	Direct	Weather Normalization of Class Sales; Normalization of Net System;
EM-2000-369	Direct	Load Research
ER-2001-672	Direct & Rebuttal	Weather Normalization of Class Sales; Normalization of Net System;
ER-2002-1	Direct & Rebuttal	Weather Normalization of Class Sales; Normalization of Net System;
ER-2002-424	Direct	Derivation of Normal Weather
EF-2003-465	Rebuttal	Resource Planning
ER-2004-0570	Direct	Reliability Indices
ER-2004-0570	Rebuttal & Surrebuttal	Energy Efficiency Programs and Wind Research Program

EO-2005-0263	Spontaneous	DSM Programs; Integrated Resource Planning
EO-2005-0329	Spontaneous	DSM Programs; Integrated Resource Planning
ER-2005-0436	Direct	Resource Planning
ER-2005-0436	Rebuttal	Low-Income Weatherization; Energy Efficiency Programs
ER-2005-0436	Surrebuttal	Low-Income Weatherization; Energy Efficiency Programs; Resource Planning
EA-2006-0309	Rebuttal, Surrebuttal	Resource Planning
EA-2006-0314	Rebuttal	Jurisdictional Allocation Factor
ER-2006-0315	Supplemental Direct	Energy Forecast
ER-2006-0315	Rebuttal	DSM; Low-Income Programs
ER-2007-0002	Direct	DSM Cost Recovery
GR-2007-0003	Direct	DSM Cost Recovery
ER-2007-0004	Direct	Resource Planning
ER-2008-0093	Rebuttal	Fuel Adjustment Clause, Low-Income Program
ER-2008-0318	Surrebuttal	Fuel Adjustment Clause
ER-2009-0090	Surrebuttal	Capacity Requirements
ER-2010-0036	Supplemental Direct, Surrebuttal	Fuel Adjustment Clause
EO-2010-0255	Direct/Rebuttal	Fuel Adjustment Clause Prudence
ER-2010-0356	Rebuttal, Surrebuttal	Resource Planning Issues
ER-2011-0028	Rebuttal, Surrebuttal	Fuel Adjustment Clause
EU-2011-0027	Rebuttal	Fuel Adjustment Clause

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ER-2007-0291	DSM Cost recovery
ER-2008-0093	Fuel Adjustment Clause, Experimental Low-Income Program

ER-2008-0318	Fuel Adjustment Clause
ER-2009-0090	Fuel Adjustment Clause, Capacity Requirements
HR-2009-0092	Fuel Adjustment Rider
ER-2010-0036	Environmental Cost Recovery Mechanism
ER-2010-0356	Resource Planning Issues
ER-2011-0028	Fuel Adjustment Clause