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Issues:	Tariff sheets
Witness:	Lena M. Mantle
Sponsoring Party:	MO PSC Staff
Type of Exhibit:	Rebuttal Testimony
File No.:	EO-2011-0390
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MISSOURI PUBLIC SERVICE COMMISSION

REGULATORY REVIEW DIVISION

REBUTTAL TESTIMONY

OF

LENA M. MANTLE

KCP&L GREATER MISSOURI OPERATIONS COMPANY

FILE NO. EO-2011-0390

Jefferson City, Missouri
March 2012

** **Denotes Highly Confidential Information** **

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BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of the Third Prudence Review of Costs Subject to the Commission-Approved Fuel Adjustment Clause of KCP&L Greater Missouri Operations Company	)))))	Case No. EO-2011-0390

AFFIDAVIT OF LENA M. MANTLE

STATE OF MISSOURI)
) **ss**
COUNTY OF COLE)

Lena M. Mantle, of lawful age, on her oath states: that she has participated in the preparation of the following Rebuttal Testimony in question and answer form, consisting of 11 pages of Rebuttal Testimony to be presented in the above case, that the answers in the following Rebuttal Testimony were given by her; that she has knowledge of the matters set forth in such answers; and that such matters are true to the best of her knowledge and belief.

Lena M. Mantle

Lena M. Mantle

Subscribed and sworn to before me this 21st day of March, 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 L. Sundermeyer

Notary Public

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LENA M. MANTLE

KCP&L GREATER MISSOURI OPERATIONS COMPANY

CASE NO. EO-2011-0390

Q. Please state your name and business address.

A. My name is Lena M. Mantle and my business address is P.O. Box 360, Jefferson City, Missouri 65102.

Q. What is your current position with the Missouri Public Service Commission ("Commission")?

A. I am the manager of the Energy Unit of the Tariff, Safety, Economic and Engineering Analysis Department of the Regulatory Review Division.

Q. What is your educational background and experience?

A. My educational background and experience are contained in Schedule LMM-1.

Q. What is the purpose of your rebuttal testimony?

A. On pages 5, 7 and 11 of his direct testimony, KCP&L Greater Missouri Operations Company ("GMO" or "Company") witness Dr. C.K. Woo states that procurement cost risks may be mitigated via generation ownership. Staff agrees with Dr. Woo that generation ownership mitigates procurement cost risks. Staff has consistently urged all the Missouri investor-owned utilities, including GMO formerly Aquila, Inc. ("Aquila"), to acquire more generation rather than purchasing energy either through purchased power contracts or the spot market for electricity. While fuel prices may fluctuate, owning efficient

generation reduces the volatility and uncertainty of energy costs to consumers. My testimony explains why GMO relies so heavily on spot market electricity.

I provide Staff's response to the section in GMO witness Wm. Edward Blunk's direct testimony titled, "THE COMMISSION'S HEDGING GUIDANCE" regarding the *Joint Report on Natural Gas Market Conditions, PGA Rates, Customer Bills & Hedging Efforts of Missouri's Natural Gas Local Distribution Companies* filed on February 24, 2006, in Case No. GW-2006-0110.

I also provide Staff's response to GMO witness Tim M. Rush's assertion on page 10 of his direct testimony that "this is not the first time that Staff has tried to change the rules after the fact" based on Staff's initial assertion in GMO's first true-up of its fuel adjustment clause charges (Case No. EO-2009-0431) that GMO had erroneously omitted off-system sales revenues in calculating those charges. Staff revised its recommendation twenty-one days later to remove its adjustment based on that assertion when, after further review, Staff realized that, unlike the revenue requirement used to set general rates, off-system sales revenues were not included in the calculation of the base fuel and purchased power costs for GMO's fuel adjustment clause established in Case No. ER-2007-0004.

GMO Generation

Q. Did GMO have sufficient capacity during the prudence review period of June 1, 2009 through November 30, 2010?

A. Yes, it did.

Q. Then why did GMO use so much spot market electricity to meet its needs during that period?

A. The short answer is that the cost to generate electricity with GMO's non-base load generation fleet was higher than the price of electricity on the spot market. Schedule LMM-2 shows a summary of GMO's fuel run included in its current rate case, Case No. ER-2012-0175. It gives the MWh generated, total cost, and cost per MWh of each of GMO's units that its fuel model chose to run to meet its normalized load in its case. If a generation unit was too expensive to run it is shown in this table as generating zero MWh and having zero cost. It also includes estimated purchased power contract purchases ("Wind" and "NPPD Cooper"), purchases to serve border customers and electricity spot market purchases. The schedule does not contain actual numbers from the prudence review period. Natural gas prices were higher and coal costs were lower in the prudence review period, so the cost per MWh differential between the baseload and non-baseload generation was greater. However, it is illustrative of why GMO bought so much electricity in the spot market in the prudence review period and continues to buy so much spot market electricity.

Schedule LMM-2 shows that on a normalized basis for the test year ended September 30, 2011, GMO would purchase ** _____ ** MWh of spot market electricity. This is more than ** ___ _ ** times the non-baseload generation of ** _____ ** MWh. This is because the average price for spot market electricity of ** _____ ** is considerably less than the average cost of GMO generating power using its non-baseload generation of ** _____ **.

Q. Why does it so often cost GMO more to generate electricity with its non-baseload generating units than to buy electricity on the spot market?

A. There are a variety of reasons that the spot market price of electricity may be lower than the cost for a utility to generate electricity. The typical reason is that others have

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more efficient generating units that allow them to sell electricity in the spot market at a profit and at a price that is lower than GMO's cost to generate electricity. GMO buys electricity on the spot market all year, so this average spot market electricity price of ** _____ ** most likely includes the cost of electricity from some marginal coal units and combined cycle units from different electric utilities and wholesale generators in non-peak times. Schedule LMM-2 shows that GMO does run some of its units that have a higher cost than the average electricity spot market price, so there are times when the least-cost alternative for GMO is its own non-baseload generation instead of relying on spot market purchases of electricity. However, what Schedule LMM-2 shows for the test year in the rate case, and what was true during the prudence review period, is that it is less expensive for GMO to meet a large portion of its energy needs with spot market electricity instead of running its own generating units.

Q. Why does GMO have generating units that make it more economical for it to purchase so much electricity on the spot market?

A. GMO made decisions in the past that have contributed to it purchasing so much electricity on the spot market as this Commission noted in the Statement of Facts in its Report and Order in GMO's last general electric rate case, Case No. ER-2010-0356:

> 226. Although every other investor-owned electric utility in Missouri built generation, Aquila, Inc. had a corporate policy not to build regulated generating units that it followed until it built South Harper in 2005. Instead, Aquila, Inc. relied exclusively on purchased power to meet its retail customers' increasing demands for electricity.

Q. Would you give some background on Aquila, Inc.'s ("Aquila") resource decisions up until it built South Harper in 2005?

A. Between 1981 and 2000 Aquila relied on its own generation and long-term, cost-plus purchased power agreements from its neighboring utilities' excess generation to provide low-cost power to its customers. These long-term purchased power contracts were

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dependable, and usually low cost, so they were a hedge against fluctuating energy prices. However, they were not as good of a hedge as owning generation, because when the contract ended GMO had to either build its own generation or buy power.

In the 1990's, the Federal Electric Regulatory Commission began restructuring the national wholesale electricity market. Not too long afterwards the price of energy became volatile and increased. This gave electric utilities with excess capacity an opportunity to sell energy at much higher prices than the prices in their prior long-term contracts. Long-term, low-cost purchased power contracts became rare.

Instead of building generation to meet its needs in 2000, and in anticipation of electric utility restructuring in Missouri, Aquila entered into a five-year purchased power agreement for 500 MW of capacity and energy from the exempt wholesale generator combined-cycle Aries Plant owned by Aquila Merchant and Calpine ("Aries PPA").

During the Aries PPA, Aquila began purchasing utilities in other states where the electric utility industry was restructuring and in other countries, spreading itself thin financially. Then the Enron scandal unfurled, and interest in the Missouri legislature to restructure the electric industry in this state, and elsewhere in the U.S., waned. The collapse of Enron and uncertainty in the electric industry also had a significant impact on Aquila's financial condition. When Aquila needed power to replace the Aries 500 MW PPA of capacity and energy from PPA, Aquila Merchant was selling much of its merchant fleet, including its share of the Aries plant.

Q. Was the Aries plant a good fit for GMO's generation portfolio in 2000?

A. Yes. It is located in GMO's service area and is an intermediate generation unit, i.e, it is not a base-load plant and it is not a peaking plant. I don't have Aries plant

specific numbers, but, in general, combined cycle plants are more efficient than combustion turbines. If GMO had acquired a combined cycle plant in 2000, its fleet would be more efficient and it now would be buying less spot market electricity. In effect, a combined cycle plant would be a "hedge" against fluctuating natural gas prices because GMO would have a highly efficient, natural gas plant to generate electricity instead of depending on the efficiency of the marginal units used to generate the electricity sold in the spot market for electricity.

Q. Did GMO acquire more generation after 2000?

A. Yes, it did. Aquila purchased a 151 MW share of the Iatan 2 plant. It is shown on LMM-2 as GMO's least expensive supply of energy. It also installed three large combustion turbines (105 MW) at its South Harper Facility. Schedule LMM-2 shows these combustion turbines to be GMO's lowest cost gas generation. In the last GMO rate case, Case No. ER-2010-0356, the Crossroads Facility which consists of four 75 MW combustion turbines was included as GMO generation.

Q. If owning generation acts as a hedge, then should GMO have met its power needs by using the generating plants it owned instead of buying so much spot market electricity?

A. No, it should not have. Absent some offsetting consideration, GMO should use the least cost electricity to serve its customers. If it had not, it is very likely that Staff would have alleged that GMO was imprudent. GMO's generation is a hedge against fuel cost, but as long as spot market prices for electricity are lower than GMO's cost to generating energy with its own generation, GMO should be buying electricity on the spot market.

Rebuttal of GMO Witness Wm. Edward Blunk

Q. Mr. Blunk includes in his direct testimony a section titled, "THE COMMISSION'S HEDGING GUIDANCE," that begins on page 19. There he includes several references to the *Joint Report on Natural Gas Market Conditions, PGA Rates, Customer Bills & Hedging Efforts of Missouri's Natural Gas Local Distribution Companies* filed on February 24, 2006, in Case No. GW-2006-0110. Do you know if this investigation included a review of hedging natural gas prices for electric utilities?

A. While I haven't completed a detailed review of this report, it seems centered on natural gas hedging for natural gas local distribution companies. Any references to electric utilities was in regards to the impact of the increase in natural gas generation would have on the natural gas market.

Q. Is natural gas hedging by natural gas local distribution companies similar to natural gas hedging by electric utilities?

A. Yes, but there is a distinct difference between how natural gas is used by gas utilities and electric utilities that is important. For the natural gas utility, natural gas as a commodity is delivered to the ultimate customer. An electric utility takes the natural gas and converts it to electricity upon the demand of the customer.

Q. Why is that difference important?

A. The electric utility makes a choice on the efficiency of the conversion of natural gas to electricity which affects the ultimate cost to the consumer. Combined cycle plants are more efficient than combustion turbines. Typically new combustion turbines are more efficient than old turbines and big combustion turbines are more efficient than smaller combustion turbines.

Q. Do the same principles apply for hedging natural gas for gas utilities and electric utilities?

A. Most of the same principles apply. However, with electric utilities, the efficiency of the conversion to electricity must also be considered.

Rebuttal of GMO Witness Tim M. Rush

Q. GMO witness Tim M. Rush states in his direct testimony on page 10 that Staff made a recommendation in the first GMO FAC true-up case, Case No. EO-2009-0431, that the Commission should require GMO to refund an amount equivalent to all off-system sales revenues that had been earned during the true-up period. Did Staff make such a recommendation?

A. Yes, Staff did.

Q. Was Staff trying to "change the rules after the fact" as Mr. Rush alleges?

A. No, it was not.

Q. Why did Staff recommend the Commission should require GMO to refund an amount equivalent to all off-system sales revenues that had been earned during the true-up period?

A. The Commission had granted GMO the first FAC it had ever granted under Section 386.266 RSMo Supp. 2005 in Case No. ER-2007-0004. In that case Staff had recommended that the Commission not authorize GMO to use a FAC. There were no exemplar tariff sheets that the parties agreed to prior to the Commission's orders. The parties did agree to a "black box" fuel base for the FAC, if the Commission authorized GMO to use a FAC. While the Commission provided some clarification of its order authorizing GMO to use a FAC, there were details about the FAC that were worked out as GMO and Staff proceeded

with implementing this very first FAC. The FAC the Commission approved was and still is complex. By the time of the first GMO true-up, the Commission had authorized both The Empire District Electric Company and Union Electric d/b/a Ameren Missouri ("Ameren Missouri") to use FACs that explicitly included off-system sales revenues. The Staff recommendation in GMO's first FAC true-up case was based on the following: 1) no party, including GMO, argued that 100% of off-system sales revenue should not be netted against fuel and purchased power costs, and 2) the Commission stated in its Report and Order in Case No. ER-2007-0004, the fuel adjustment clause Aquila proposed to the Commission included 100% of off-system sales revenues being netted against fuel and purchased power costs. Staff discussed its recommendation with GMO, reviewed GMO's filed response to Staff's recommendation, reviewed documents GMO referred to in its response and reviewed GMO's FAC tariff sheets. Since the tariff sheets did not explicitly include off-system sales as those of Empire and Ameren Missouri did, and the amount of off-system sales margins included in setting GMO's general rates was unknown, Staff revised its recommendation 21 days later to agree that off-system sales revenues were not included in GMO's original FAC.

Q. On page 10, line 17, of his direct testimony, Mr. Rush states that Staff has never recommended refunds to customers in its prior FAC prudence reviews. Is that true?

A. It is for GMO, but Staff has recommended refunds to the customers of Ameren Missouri in both of its prudence reviews of Ameren Missouri's FAC-Case Nos. EO-2010-0255 and EO-2012-0074. The Commission found Ameren Missouri to be imprudent in Case No. EO-2010-0255. Case No. EO-2012-0074 is pending before the Commission.

Q. Have FAC charges been increased due to true-up filings?

A. Yes, they have in two different true-up filings. The first is in the true-up case Mr. Rush refers to in his testimony, Case No. EO-2009-0431. In that case, Staff found that GMO had calculated interest incorrectly, and recommended that the Commission reduce what Staff believed was an over-collection by a small amount for this miscalculation.

The second is Case No. ER-2010-0274, where the Commission found that the base fuel amount in Ameren Missouri's first FAC had been incorrectly calculated. In this case the Commission ordered an increase in the true-up amount to be recovered through Ameren Missouri's FAC rates and that the erroneous calculation be corrected in future FAC true-ups, as appropriate.

Q. How does Staff interact with the utilities regarding these types of FAC issues?

A. Staff works diligently with each electric utility that is requesting a FAC or modifying its FAC to agree to the parameters and tariff sheets for the FAC, regardless of whether Staff is recommending the Commission grant the electric utility its request or not. In addition, Staff has learned to be as explicit as possible in the FAC tariff sheets regarding which costs and revenues are included in the FAC to avoid disputes in the future.

Q. Is Staff's focus on the FAC tariff sheets being explicit important in this prudence audit?

A. Yes, because GMO's FAC tariff sheets do not include purchased power hedging losses. The FAC tariff sheets applicable for service provided for the period June 2009 through September 2009 do not mention the inclusion of hedging cost, but they do include FERC account 547, which is supposed to include only natural gas hedging cost for fuel burned to generate electricity.

The tariff sheets applicable for service provided for September 2009 through June 2011 include "costs associated with the Company's fuel hedging program" on tariff sheet 127.1; "fuel hedging cost (hedging is defined as realized losses and cost minus realized gains associated with mitigating volatility in the Company's cost of fuel …" on tariff sheet 127.2; and "The following costs reflected in FERC Account Number 547: natural gas generation costs related to commodity, oil, transportation, storage, fuel losses, hedging costs, … in Account 547." on tariff sheet 127.3. The definition of Purchased Power Costs on tariff sheet 127.3 does not include any hedging costs.

The references to hedging on tariff sheets 127.6 through 127.8 are consistent with the references on tariff sheets 127.1 through 127.3. Again purchased power hedging is not included in the definition of purchased power costs on tariff sheet 127.8.

Q. GMO witness Tim M. Rush, on page 8, lines 5-7 of his direct testimony, states that Staff did not see the need to explicitly include the word hedging in the description of Account 555. Is this correct?

A. Yes, it is.

Q. Why?

A. Staff did not see the need to explicitly include the word hedging in the description of Account 555 because Staff did not intend for hedging for purchased power to be included in purchased power costs.

Q. Does this conclude your rebuttal testimony?

A. Yes, it does.

Education and Work Experience Background for
Lena M. Mantle, P.E.
Energy Department Manager
Utility Operations 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. 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. I was actively involved in the writing of the Commission's Chapter 22, Electric Resource Planning rules in the early 1990's and am actively involved in updating the rules.

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 Department, 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**	**ISSUE**
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

<u>Contributed to Staff Direct Testimony Report</u>

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

Schedule LMM-2

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