

**PRUDENCE REVIEW OF COSTS
RELATED TO THE FUEL ADJUSTMENT CLAUSE
FOR THE ELECTRIC OPERATIONS
OF
UNION ELECTRIC COMPANY,
d/b/a AMEREN MISSOURI**

June 1, 2011 through September 30, 2012

**MISSOURI PUBLIC SERVICE COMMISSION
STAFF REPORT**

FILE NO. EO-2013-0407

*Jefferson City, Missouri
August 28, 2013*

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

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Prudence Review of Costs Report

I. Executive Summary

The Missouri Public Service Commission (“Commission”) first authorized a Fuel Adjustment Clause (“FAC”) for Union Electric Company d/b/a Ameren Missouri (“Ameren Missouri” or “Company”) in Case No. ER-2008-0318. Since then, the Commission has approved continuation of Ameren Missouri’s FAC with modifications in its orders in the Company’s general rate cases, Case Nos. ER-2010-0036, ER-2011-0028, and ER-2012-0166.

Missouri statute and Commission rule, Section 386.266.4(4) RSMo (Supp. 2009) and 4 CSR 240-20.090(7), respectively, require prudence reviews of an electric utility’s FAC no less frequently than at eighteen-month intervals.

On August 31, 2010, the Commission’s Staff (“Staff”) filed its First Prudence Review Report of Ameren Missouri’s FAC in File No. EO-2010-0255. That report covered the first two four-month accumulation periods of Ameren Missouri’s FAC—the period March 1, 2009 through September 30, 2009. Staff’s second prudence review of Ameren Missouri’s FAC is contained in File No. EO-2012-0074 and covered the third, fourth, fifth, sixth and seventh four-month accumulation periods of Ameren’s FAC—the period October 1, 2009 through May 31, 2011. Staff filed two prudence review reports in File No. EO-2012-0074: 1) Staff’s Prudence Report and Recommendation Regarding Wabash and AEP Contract was filed on October 28, 2011, and 2) Staff’s Second Prudence Review Report of Ameren Missouri’s FAC was filed on February 29, 2012.

In this third prudence review of Ameren Missouri’s FAC, Staff analyzed items affecting Ameren Missouri’s total fuel and purchased power costs net of off-system sales for the eighth, ninth, tenth and eleventh four-month accumulation periods of Ameren Missouri’s FAC. Ameren Missouri’s eighth FAC accumulation period was June 1, 2011 through September 30, 2011. The ninth accumulation period was October 1, 2011 through January 31, 2012. The tenth accumulation period was February 1, 2012 through May 31, 2012. The eleventh accumulation period was June 1, 2012 through September 30, 2012. Thus, the period of this prudence review covers the sixteen (16) months from June 1, 2011 through September 30, 2012.

In evaluating prudence, Staff reviews whether a reasonable person making the same decision would find both the information the decision-maker relied on and the process the

decision-maker employed was reasonable based on the circumstances at the time the decision was made, *i.e.*, without the benefit of hindsight. The decision actually made is disregarded and the review is an evaluation, instead, of the reasonableness of the information the decision-maker relied on and the decision-making process the decision-maker employed. If either the information relied upon or the decision-making process employed was imprudent, then Staff examines whether the imprudent decision caused any harm to ratepayers. Only if an imprudent decision resulted in harm to ratepayers, will Staff recommend a refund.

Staff analyzed a variety of items in examining whether Ameren Missouri prudently incurred the fuel and purchased power costs associated with its FAC tariff sheets. Based on its review, Staff found no evidence of imprudence by Ameren Missouri for the items it examined for the period of June 1, 2011 through September 30, 2012.

Staff did not complete its review of the Company's responses to Staff Data Requests 0056 and 0057 prior to its submitting this Prudence Review Report. Staff is reviewing the Company's responses to Staff Data Request 0056 and 0057 and will submit a supplement to this report following its review.

II. Introduction

A. General Description of Ameren's FAC

Table 1 identifies Ameren Missouri's Commission-approved FAC tariff sheets which were applicable for service provided by Ameren Missouri to its customers during the period June 1, 2011 through September 30, 2012:

Table 1	
June 1, 2011 through July 30, 2011	July 31, 2011 through September 31, 2012
1st Revised Sheet No. 98.8	1st Revised Sheet No. 98.15
1st Revised Sheet No. 98.9	1st Revised Sheet No. 98.16
1st Revised Sheet No. 98.10	1st Revised Sheet No. 98.17
1st Revised Sheet No. 98.11	1st Revised Sheet No. 98.18
1st Revised Sheet No. 98.12	1st Revised Sheet No. 98.19
1st Revised Sheet No. 98.13	1st Revised Sheet No. 98.20

Ameren Missouri's FAC requires that the Company accumulate its "net fuel costs" defined generally as variable fuel, purchased power, transmission costs and net emissions costs less off-system sales revenue during four-month accumulation periods ("AP").¹ Each

¹ Accumulation periods are: February through May, June through September and October through January.

four-month accumulation period is followed by an eight month² recovery period (“RP”)³ during which ninety-five percent (95%) of the over- or under-recovery of “net fuel costs”⁴ during the previous four-month accumulation period relative to the “net base fuel costs” amount⁵ is flowed through to ratepayers as part of an increase or decrease in the FAC Fuel and Purchased Power Adjustment (“FPA”) per kWh rate. Because the total amount charged through the FPA rarely, if ever, will exactly match the required offset, Ameren Missouri’s FAC is designed to true-up⁶ the difference between the revenues billed and the revenues authorized for collection during recovery periods including interest at the Company’s short-term interest rate. Any disallowance the Commission orders as a result of a FAC prudence review shall include interest at the Company’s short-term interest rate and will be accounted for as an adjustment⁷ item when calculating the FPA for a future recovery period.

B. Prudence Standard

In *State ex rel. Associated Natural Gas Co. v. Public Service Com'n of State of Mo.*, 954 S.W.2d 520, 528-29 (Mo. App. W.D., 1997) the Western District Court of Appeals stated the Commission’s prudence standard as follows:

The PSC has defined its prudence standard as follows:

[A] utility's costs are presumed to be prudently incurred.... However, the presumption does not survive “a showing of inefficiency or improvidence.”

... [W]here some other participant in the proceeding creates a serious doubt as to the prudence of expenditure, then the applicant has the burden of dispelling these doubts and proving the questioned expenditure to have been prudent. (Citations omitted).

[Union Electric, 27 Mo. PSC \(N.S.\) 183, 193 \(1985\)](#) (quoting *529 [Anaheim, Riverside, Etc. v. Fed. Energy Reg. Com'n, 669 F.2d 799, 809 \(D.C.Cir.1981\)](#)). In the same case, the PSC noted that this test of prudence should not be based upon hindsight, but upon a reasonableness standard:

² In Ameren Missouri’s initial FAC, recovery periods lasted twelve (12) months. In Case No. ER-2011-0028, recovery periods were changed from a twelve-(12-) month duration to an eight-(8-) month duration. Recovery Period 7, which began on October 1, 2011, was the first recovery period with an eight-(8-) month duration.

³ Recovery periods are: October through May for each immediately preceding February through May accumulation period; February through September for each immediately preceding June through September accumulation period; and June through January for each immediately preceding October through January accumulation period.

⁴ “net fuel costs” are equal to fuel costs (CF) plus costs of purchased power (CPP) minus off-system sales revenue (OSSR) as defined on Ameren Missouri’s 1st Revised Sheet No. 98.16 and 1st Revised Sheet No. 98.17.

⁵ “net base fuel costs” or NBFC as defined on Ameren Missouri’s 1st Revised Sheet No. 98.19.

⁶ True-up of FAC is defined on Ameren Missouri’s 1st Revised Sheet No. 98.20.

⁷ See line item 6 on Ameren Missouri’s 4th Revised Sheet No. 98.21.

[T]he company's conduct should be judged by asking whether the conduct was reasonable at the time, under all the circumstances, considering that the company had to solve its problem prospectively rather than in reliance on hindsight. In effect, our responsibility is to determine how reasonable people would have performed the tasks that confronted the company.

Union Electric, 27 Mo. P.S.C. at 194 (quoting *Consolidated Edison Company of New York, Inc.* 45 P.U.R. 4th 331 (1982)).

In reversing the Commission in that case, the Court did not criticize the Commission's definition of prudence, but held, in part, that to disallow a utility's recovery of costs from its ratepayers based on imprudence; the Commission must determine the detrimental impact of that imprudence on the utility's ratepayers. *Id.* at 529-30

This is the prudence standard Staff has followed in this review.

The Staff reviewed for prudence the areas identified and discussed below for AmerenUE's eighth, ninth, tenth and eleventh four-month accumulation periods.

III. Fuel Costs, Costs of Purchased Power and Off-System Sales Revenue

The Ameren Missouri FAC includes two major components of costs – fuel costs and costs of purchased power and two components of revenue – off-system sales revenues and net emission allowances. Table 2 is a breakdown of Ameren Missouri's fuel costs, costs of purchased power and off-system sales revenues for the period of June 1, 2011 through September 30, 2012:

Table 2

Is Deemed

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In Its Entirety

A. Utilization of Generation Capacity

1. Description

Ameren Missouri's generation consists of a mixture of nuclear, coal, natural and landfill gas, oil and hydro-electric generating units as indicated in the table below.

Table 3

Is Deemed

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In Its Entirety

2. Summary of Cost Implications

Ameren Missouri is a registered market participant in the Midwest Independent System Operator (“MISO”) which results in Ameren Missouri satisfying its native load both efficiently and reliably. Ameren Missouri offers all of its generation and bids its forecasted load into the MISO day-ahead market. When Ameren Missouri’s cleared generation MWh in a given hour exceed its cleared load MWh in that hour, Ameren Missouri has a net off-system energy sale equal to the difference between the cleared generation and load MWh.⁸ If Ameren Missouri is not prudent when it offers its generation or bids its forecasted load into the MISO day-ahead market, such imprudence could result in increased energy costs to ratepayers.

3. Conclusion

Staff did not find any evidence of imprudent decisions by Ameren Missouri during the time period examined in this prudence review.

4. Documents Reviewed

Ameren Missouri’s responses to Staff Data Requests 0005, 0030, 0043, 0053, 0053s1 and 0058.

Staff Expert: Randy S. Gross

B. Risk Management

1. Description

Ameren Missouri’s risk management strategies encompass a wide range of activities. The Company’s *Ameren Missouri Commodity Risk Management Policy (CRMP)*⁹ identifies the following strategies it will pursue to manage commodities’ risks:

- Long-Term Energy Hedging (energy and capacity sales/purchases)
- Short-term energy Hedging
- Fuel, Carbon and Emissions Hedging
- Nuclear Fuel Cycle Hedging
- MISO/PJM¹⁰ Congestion Hedging

⁸ Direct Testimony of James R. Dauphinais, Case No. ER-2012-0166, page 11, lines 16-20.

⁹ Ameren Missouri Commodity Risk Management Policy, Version 12-2012.1, 02/25/2013, Signature Executed Version 12-2012, December 3, 2012.

¹⁰ PJM Interconnection is a regional transmission organization (RTO) that coordinates the movement of wholesale electricity in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia.

Arbitrage
Speculation
Renewable energy Credits (REC)

Ameren Missouri's risk management strategies are directly controlled by the guidelines contained in its CRMP. A policy overview is given in the CRMP as follows:

1.1 Background, Purpose, and Scope of Policy

Ameren Corporation (Ameren) has charged Asset Management & Trading (AM&T) as a function within Union Electric Company d\ b\ a Ameren Missouri (Ameren Missouri) with the responsibility of engaging in wholesale energy, capacity, electricity, FTR/ARR's, and transmission transactions on its behalf. Ameren Corporation ("Ameren") has charged Ameren Missouri with the responsibility of engaging in the purchase and sale of select fuel and emission commodities on its own behalf. Ameren Missouri has charged Nuclear Fuel Cycle Management (NFCM) with the responsibility of engaging in the purchase and sale of uranium, conversion services, enrichment services, and fabrication services on its behalf.

It is the intent of management that this Risk Management Policy governs all financial risk taking and risk management/mitigation activities associated with the above activities associated with the above activities. In order to fulfill the responsibilities described above in a financially disciplined manner, AM&T, Ameren Missouri, and NFCM may enter into the transactions that are defined in this Risk Management Policy as approved by the Risk Management Steering Committee (RMSC)

During this review period, Ameren Corporation reassigned responsibilities for trading, purchasing and selling of certain commodities away from Ameren Energy Fuels and Services to Ameren Missouri effective August 1, 2011.

Staff reviewed the reasonableness and effectiveness of Ameren Missouri's activities and decisions during the prudence review period related to risk management strategies employed and for compliance with Ameren Missouri's CRMP.

2. Summary of Cost Implications

Ameren Missouri employs risk management strategies in an attempt to mediate the market volatility risk of fuel, energy, capacity, emissions, and transmission congestion prices. A discussion related to hedging strategy employed for various components are discussed in the report under the Natural Gas Costs, Coal and Rail Transportation Costs, Fuel Oil Costs, Nuclear Fuel Costs and Transmission Costs sections of this report. If Ameren Missouri did

not manage its risk management strategies prudently it could result in an increase in fuel costs that are collected from customers through the Ameren Missouri FAC charge.

3. Conclusion

Staff did not find Ameren Missouri acted imprudently in the administration of its risk management strategies.

4. Documents Reviewed

- a. Ameren Missouri's responses to Staff Data Requests 0001, 0002, 0014, 0018, 0019, 0022 and 0023; and
- b. Teleconference conducted on July 16, 2013, related to Ameren Missouri's responses to Staff's hedging related data requests and general hedging discussions. Company personnel present: Bob Neff, Jim Massmann, Jaime Haro and Dana Beane.

Staff Expert: Dana Eaves

C. Purchased Power Agreements

1. Description

During the period June 1, 2011 to September 30, 2012, Ameren Missouri did not issue any request for proposals, nor did it execute any contracts for energy delivery¹¹. However, Ameren Missouri's response to Data Request 0012 in this case referenced a purchased power agreement ("PPA") supplied to Staff in Data Request 0017 in File No. EO-2012-0074. Staff reviewed the Renewable Resource Power Purchase Agreement by and between Pioneer Prairie Wind Farm I, LLC and Union Electric Company d/b/a Ameren Missouri ("Pioneer Prairie PPA"). The Pioneer Prairie PPA is a ** _____ ** that expires ** _____ ** and provides a capacity of ** _____ ** and energy of ** _____ ** MWhs annually at a price of ** _____ ** per MWh.

When Ameren Missouri was asked¹² to please provide a copy of all purchased power contracts that were in effect during the period October 1, 2009 through May 31, 2011, Jaime Haro, Ameren Missouri's Director, Asset and Trade Optimization, responded as follows:

Ameren Missouri is a party to large number of master enabling agreements, including various interconnection agreements and EEI Master Power Purchase and Sale Agreements. These agreements provide for the general terms and conditions under which Ameren Missouri and the counterparty may transact at points in the future. These agreements do not, in and of themselves, obligate

¹¹ Staff's Data Request 0012 in File No. EO-2013-0407.

¹² Staff's Data Request 0017 in File No. EO-2012-0074.

the counterparty to sell power and energy to Ameren Missouri, nor do they specify the pricing, term and any special conditions of specific transactions. Transactions other than hourly transactions are normally confirmed with either a written confirmation or electronically. These confirmations contain the specifics regarding volume, price, delivery location and any special conditions. Ameren Missouri has contracts in conjunction with the operation of its Commission approved tariff providing for Electric Power Purchases from Qualifying Facilities.

2. Summary of Cost Implications

If Ameren Missouri was imprudent by purchasing additional power or capacity to meet its demand, ratepayer harm could result from that imprudence through an increase in Ameren Missouri's FAC charges.

3. Conclusion

Staff found no evidence of imprudence related to Ameren Missouri's long-term purchased power agreements.

4. Documents Reviewed

Ameren Missouri's Responses to Staff Data Requests 0012 and 0017 in File Nos. EO-2013-0407 and EO-2012-0074 respectfully.

Staff Expert: Matthew Barnes

D. Purchased Power Costs

1. Description

For the period June 1, 2011 to September 30, 2012, **_____** was purchased power costs. In addition to the long-term purchased-power contract discussed above, Ameren Missouri also purchases short-term energy in the MISO and PJM day-ahead markets (hourly) and through bilateral agreements. Typically, Ameren Missouri relies on these short-term energy sources to help it meet its load during forced, planned or derating¹³ generation plant outages and when the market price for that short-term energy is both below the marginal cost of providing that energy from Ameren Missouri's generating units and below the cost of longer-term capacity purchases.

¹³ See E. Plant Outages section of the Prudence Review Report for definitions of forced, planned and derating outages.

2. Summary of Cost Implication

If Ameren Missouri was imprudent by purchasing energy to meet its demand at a cost that exceeded Ameren Missouri's cost to generate that energy itself, ratepayer harm could result from that imprudence through an increase in FAC charges.

3. Conclusion

Staff found no evidence Ameren Missouri acted imprudently with regard to purchases of short-term energy in the MISO and PJM day-ahead markets or by bilateral agreements during the prudence review period. Ameren Missouri's fuel and purchased power costs were slightly higher in the period reviewed than they would have been had the wind power Ameren Missouri purchased been economically dispatched instead of being obtained by the fixed-price, take-or-pay Pioneer Prairie PPA. However, the Pioneer Prairie PPA contract is a long-term contract and must be viewed in light of the long-term needs of Ameren Missouri and its obligation to meet the Renewable Energy Standard¹⁴ ("RES") requirements. Staff does not find Ameren Missouri's decision to enter into the Pioneer Prairie PPA contract to be imprudent.

4. Documents Reviewed

Ameren Missouri's response to Staff Data Request 0001 and work papers in File Nos. ER-2011-0156, ER-2011-0317, ER-2012-0028, ER-2012-0164, ER-2012-0319, ER-2013-0030, and ER-2013-0310.

Staff Expert: Matthew Barnes

E. Plant Outages

1. Description

Ameren Missouri generates much of its energy with its own generating units. Outages occurring at any of the generating units can have an impact on how much Ameren Missouri will pay for fuel and purchased power and could result in Ameren Missouri paying more for fuel and purchased power cost than is necessary.

Generating unit outages generally can be classified as scheduled outages, forced outages or partial outages (derating). Scheduled outages consist of either a planned outage or a maintenance outage. A planned outage for a given generating unit is scheduled well in advance, has a predetermined duration and occurs only once or twice a year. A maintenance

¹⁴ 4 CSR 240-20.100 Electric Utility Renewable Energy Standard Requirements

outage is an outage that can be deferred beyond the end of the next weekend but must be taken before the next planned outage. A forced outage is an outage that cannot be deferred beyond the next weekend and a partial outage or derating is a condition that exists that requires the unit to be limited to an energy output below maximum capacity.

Staff examined the planned outages and the timing of these outages to determine if the planned outages were prudently taken. An example of an imprudent planned outage would be planning an outage of a large coal unit during peak demand times or not performing recommended or required maintenance that results in equipment failure that directly increases the forced outage rate. Staff has issued its Data Request 0056 requesting additional detailed information that includes for each base loaded or “must run” generating unit the forced outage rate and explanations for major deviations between review period, maintenance budget versus actual expenditures, any deferrals of required or recommended maintenance and inspections, key plant performance parameters and goals used to evaluate the performance of plant managers, etc.

During this review period, Ameren Missouri’s Callaway Energy Center (“Callaway”) completed a planned refueling and maintenance outage (Refuel 18) that included performing more than 7,500 maintenance activities, inspections and tests.¹⁵ At the time the outage began on October 15, 2011, Callaway had operated continuously, since its last refueling outage, for a period of 489 days.¹⁶ Refuel 18 ended on November 28, 2011 and Staff notes that Callaway has operated continuously until the start of Refuel 19 on April 8, 2013, for a period of 500 days, completing back to back “breaker to breaker” runs.¹⁷ For 2012, the Nuclear Station average capacity factor was slightly less than 90% while the capacity factor for Callaway was 99.4%.¹⁸

The Callaway Refuel 18 outage “struggled with schedule performance” and was scheduled for 30-days duration but lasted 41.1 days.¹⁹ The industry average duration for pressure water reactors (“PWR”) outages from 2006 to 2012 was 43.1 days.²⁰ Outage duration is dependent upon many factors that include the following; the number of activities

¹⁵ <http://amerenmediaroom.com/index.php?s=43&item=1006>

¹⁶ <http://amerenmediaroom.com/index.php?s=43&item=1006>

¹⁷ <http://www.hermannadvertisercourier.com/?p=4607>

¹⁸ <http://neinuclearnotes.blogspot.com/2013/03/guest-post-callaway-coastdown.html>

¹⁹ Company response to Data Request No. MPSC-0084, Rate Case No. ER-2012-0166

²⁰ http://www.nei.org/filefolder/Nuclear_Performance_September_2012.pdf

planned, available skilled manpower, unforeseen events, unanticipated additional scope or activities, weather, physical condition of equipment and materials, required testing and the results of that testing, quality assurance inspections and testing, installation of the installed equipment and materials, etc. The outage planning process includes utilizing detailed computer programs that contain all the planned activities, scheduled and actual completion dates, manpower required to complete these activities, major and minor completion milestones, contingencies, etc. During these outages, the detailed project schedule is reviewed and updated on a continuous basis to reflect actual conditions and to incorporate “work arounds” to the extent possible (without sacrificing quality or safety, that may include adding additional manpower, overtime hours, or splitting tasks into smaller scope activities that may be performed in parallel) to keep the project as close to the original schedule duration as possible

[illegible]

²¹ Company response to Data Request No. MPSC-0084, Rate Case No. ER-2012-0166

2. Summary of Cost Implications

An imprudent outage could result in Ameren Missouri purchasing expensive spot market energy or running its more expensive gas units to meet demand and could result in ratepayer harm through an increase in customer FAC charges.

3. Conclusion

As of the date this report was filed, Staff did not find any evidence of imprudent outages during the time period examined in this prudence review.

4. Documents Reviewed

- a. Ameren Missouri's responses to Staff Data Requests Nos. 0016, 0033, 0034, 0056 (pending) and 0057(pending);
- b. Monthly Outage data submitted by Ameren Missouri in compliance with 4 CSR 240-3.190;
- c. Company response to Data Request No. MPSC-0084, Rate Case No. ER-2012-0166; and
- d. Direct and Surrebutal testimonies of Mr. Nicholas Phillips and Greg Meyer of Brubaker and Associates on behalf of Missouri Industrial Energy Consumers in Rate Case No. ER-2012-0166.

Staff Expert: Randy Gross

F. Natural Gas Costs

1. Description

For the period June 1, 2011 to September 30, 2012, ** _____ ** of Ameren Missouri's fuel costs were associated with natural gas used in the generation of electricity. This amount includes Ameren Missouri's natural gas fuel costs for all Ameren Missouri generating units producing electrical energy for retail sales and off-system sales, and various miscellaneous charges such as firm transportation service charges and other miscellaneous fuel handling expenses.

The Company's procurement strategy for natural gas used for the generation of electricity is described in the Ameren Missouri's response to Staff's Data Request 0022, which contained the Ameren Missouri Hedging and Fair Value Reporting Accounting Policy, March 1, 2010. Page 25 of this document describes Ameren Missouri's procurement strategy:

** _____

2. Summary of Cost Implications

If Staff found that Ameren Missouri was imprudent in its purchasing decisions relating to natural gas, ratepayer harm could result from that imprudence by an increase in FAC charges.

3. Conclusion

Staff found no indication of imprudence associated with Ameren Missouri's natural gas purchases for the period June 1, 2011 to September 30, 2012.

4. Documents Reviewed

- a. Ameren Missouri's response to Data Request 0022.

Staff Expert: Matthew J. Barnes

G. Coal and Rail Transportation Costs

1. Description

For the period June 1, 2011 to September 30, 2009, ** _____ ** of Ameren Missouri's net fuel costs was associated with coal burned to generate electricity. This amount includes the cost of coal used for all Ameren Missouri generating units producing electrical energy for retail sales and off-system sales plus various miscellaneous costs such as charges for rail and other ground transportation service, and other miscellaneous coal handling expenses.

Staff reviewed the Ameren Missouri 2012 Commodity Risk Management Policy. Ameren Missouri's coal procurement strategy is summarized in the Commodity Risk Management Policy, page 14;

** _____

_____ **

** _____

_____ **

** _____

_____ **

Staff has reviewed the various components of Ameren Missouri's coal supply strategy, and Ameren Missouri has complied with these stated parameters.

Ameren Missouri also utilizes a rail fuel surcharge hedge program in an effort to minimize price volatility associated with rail transportation of coal. Ameren Missouri's rail fuel surcharge hedge program is summarized in the Commodity Risk Management Policy, page 14;

** _____

_____ **

Staff has reviewed the various components of Ameren Missouri's rail fuel surcharge strategy, and Ameren Missouri has complied with these stated parameters.

2. Summary of Cost Implications

If Ameren Missouri was imprudent in its purchasing decisions relating to the purchase of coal and the handling of the rail fuel surcharge hedging policy, ratepayer harm could result from such imprudence through an increase in Ameren Missouri customer FAC charges.

3. Conclusion

Staff found no imprudence by Ameren Missouri for its purchase of coal and its rail fuel surcharge hedging practices for the period June 1, 2011 to September 30, 2012.

4. Documents Reviewed

- a. Ameren Missouri's response to Staff Data Request 0022.

Staff Expert: Matthew J. Barnes

H. Fuel Oil Costs

1. Description

For the period June 1, 2011 to September 30, 2012, **_____** of Ameren Missouri's cost of fuel was for fuel oil used in the generation of electricity. This amount includes the cost of fuel oil used for all Ameren Missouri generating units producing electrical energy for retail sales and off-system sales plus various miscellaneous costs, such as ground transportation service charges and other miscellaneous fuel handling expenses.

Ameren Missouri's response to Staff Data Request 0022 describes in detail Ameren Missouri's policies for the procurement of fuel oil. Staff reviewed the document titled; Ameren Missouri Commodity Risk management Policy, which describes on page 14 Ameren Missouri's fuel oil procurement strategy:

** _____

_____ **

Staff has reviewed the various components of Ameren Missouri's fuel oil procurement strategy, and Ameren Missouri has complied with these stated parameters.

2. Summary of Cost Implications

If Ameren Missouri was imprudent in its purchasing decisions relating to fuel oil, ratepayer harm could result from the imprudence by an increase in FAC charges.

3. Conclusion

Staff found no indication of imprudence by Ameren Missouri related to the purchase of fuel oil for the period June 1, 2011 to September 30, 2012.

4. Documents Reviewed

- a. Ameren Missouri's response to Staff Date Request 22.

Staff Expert: Matthew J. Barnes

I. Nuclear Fuel

1. Description

For the period June 1, 2011 to September 30, 2012, ** _____ ** of Ameren Missouri's cost of fuel was associated with nuclear fuel used in the generation of electricity at Ameren Missouri's Callaway facility. This amount includes the amount associated with the cost of nuclear fuel used to produce electrical energy for retail sales and off-system sales. The cost of nuclear fuel includes various miscellaneous costs, such as Westinghouse credits, ground transportation service charges and other miscellaneous nuclear fuel handling expenses.

Ameren Missouri's Commodity Risk Management Policy is the controlling document for the acquisition and control of nuclear fuel for the Callaway facility. Staff has reviewed the various components of Ameren Missouri's nuclear fuel purchasing practices, and Ameren Missouri has complied with these stated parameters.

2. Summary of Cost Implications

If Ameren Missouri was imprudent in purchasing nuclear fuel, ratepayer harm could result from that imprudence by an increase in customer FAC charges.

3. Conclusion

Staff found no indication of imprudence related to the purchase of nuclear fuel for the review period June 1, 2011 to September 30, 2012.

4. Documents Reviewed

Ameren Missouri's response to Staff Data Request 0022.

Staff Expert: Matthew J. Barnes

J. SO₂ Allowances

1. Description

The EPA's Clean Air Interstate Rule (CAIR), issued in 2005, was developed to address the transport of pollutants from upwind to downwind states. States in the eastern half of the country are required, over a six-year compliance period (2009-2015), to participate in a federal program intended to reduce emissions of sulfur dioxide (SO₂) by 57 percent (57%) from 2003 levels and Nitrogen Oxides (NO_x) by 61 percent (61%) from 2003 levels.

The primary mechanism of the rule is a cap-and-trade program that allows major sources of NO_x and/or SO₂ to trade excess allowances when its emissions of a specific pollutant fall below its cap for that pollutant. Ameren Missouri receives its NO_x and SO₂

allowances from the EPA on a yearly basis. The EPA issued a model cap-and-trade program for power plants, which could have been used by states as the primary control mechanism under the CAIR. Under the CAIR, starting in 2010, the power plants are required to submit two SO₂ allowances for each ton of SO₂ emitted. This ratio is further tightened in 2015 to 2.86 allowances for each ton of SO₂ emitted.

Ameren Missouri received permission to manage and trade all CAIR SO₂ allowances on December 15, 1998, under case EO-98-401, and, under the same case number, on October 28, 2011, the MO PSC Commission granted authority for Ameren Missouri to sell excess vintage 2011 and earlier CAIR NO_x allowances with proceeds from the sale of NO_x emissions allowances to flow through Ameren Missouri's FAC. On January 4, 2012, the MO PSC Commission conditionally granted (1) a one-time exchange of 1,050 surplus sulfur dioxide ("SO₂") emission allowances for 500 annual nitrogen oxide ("NO_x") emission allowances.

Beginning on January 1, 2007, the Company was required to account for all SO₂ premiums, net of any SO₂ discounts, in a regulatory liability account. The Commission also ordered that all gains from SO₂ allowance sales, in excess of \$5,000,000, be recorded in this same regulatory liability account. This regulatory liability account, referred to as the SO₂ Tracker, also accumulates interest at Ameren Missouri's short-term borrowing rate. This SO₂ tracker was continued as part of Case No. ER-2008-0318; however, as a result of the rate proceeding File No. ER-2010-0036, the SO₂ tracker was discontinued. The cost associated with the SO₂ premiums, net of discounts, and the revenues from gains on the sale of SO₂ emission allowances are now included in Ameren Missouri's Fuel Adjustment Clause.

Ameren Missouri did not purchase the inventory of emission allowances consumed during the review period of June 1, 2011 through September 30, 2012. However, ** _____ ** of revenues were generated from the sale of allowances during the review period.

The management of emission allowances is described in Ameren Missouri's response to Staff's Data Request No. 0037, 0038, 0039 and 0040. Staff reviewed the document titled *Ameren Missouri 2012 Emission Hedging Strategy* and an Ameren Missouri Risk Management Steering Committee Report concerning emission allowances.

2. Summary of Cost Implications

If Ameren Missouri imprudently used, purchased, sold or banked its SO₂ and NO_x allowances, ratepayer harm could result from an increase in Ameren Missouri's FAC charges.

3. Conclusion

Staff found no indication of imprudence associated with Ameren Missouri's management of its emission allowances.

4. Documents Reviewed

- a. AmerenUE response to Staff Data Request 0037, 0038, 0039, 0040;
- b. File No. ER-2011-0028; and
- c. File No. EO-0098-0401.

Staff Expert: David Roos

K. Off-System Sales Revenue

1. Description

Off-system sales revenues are described as "Revenues from Off-System Sales allocated to Missouri electric operations," or "OSSR," in 1st Revised Sheet No. 98.31.

For the prudence review period of June 1, 2011 to September 30, 2012, Ameren Missouri's off-system sales revenue was ** _____ **.

Staff reviewed the off-system sales quantities, revenues and costs over the prudence review period.

2. Summary of Cost Implications

Ameren Missouri's revenues from off-system sales are offset against total fuel and purchased power costs. This is because Ameren Missouri's ratepayers pay for the fuel and other resources used to produce the electrical energy that Ameren Missouri sells off system, although serving the "native load" of retail customers or ratepayers is a higher priority than making an off-system sale. If Ameren Missouri was imprudent either because it made or did not make off-system sales, ratepayers could be harmed by that imprudence through an increase in FAC charges.

3. Conclusion

Staff found no imprudence related to off-system sales for the review period June 1, 2011 to September 30, 2012.

NP

4. Documents Reviewed

- a. Ameren Missouri's response to Staff Data Request 0001.

Staff Expert: Matthew Barnes

L. Transmission Costs

1. Description

For the period June 1, 2011 to September 30, 2012, ** _____ ** of Ameren Missouri's fuel costs were for transmission costs associated with purchased power costs for the generation of electricity.

Ameren Missouri's response to Staff Data Request 0022 describes in detail Ameren Missouri's policies for hedging transmission costs. Staff reviewed the document titled, *Ameren Missouri Commodity Risk management Policy*, page 13; this document describes Ameren Missouri's hedging strategy to mitigate transmission costs:

** _____

_____ **

** _____

_____ **

** _____ **

2. Summary of Cost Implications

If Ameren Missouri was imprudent in hedging transmission expense, ratepayer harm could result from that imprudence through an increase in customer FAC charges.

3. Conclusion

Staff found no indication of imprudence related to transmission costs and hedging transmission costs for the review period June 1, 2011 to September 30, 2012.

4. Documents Reviewed

- a. Ameren Missouri's response to Staff Data Request 0022.

Staff Expert: Matthew J. Barnes

M. Demand Response Program

1. Description

The only current Ameren Missouri electric tariff sheet which contains any "interruptible" provision is Rider M-Option Based Curtailment Rider; however, no customers are currently under contract for this program. The Company did have a Rider L Peak Power Rebate program, but it expired at the end of 2011, and the Company has no plans to re-establish this program in 2013.²³

2. Summary of Cost Implications

Although Staff understands the current economic conditions, excess capacity and reduced load have generally depressed capacity prices and utilizing demand response may not be the least cost option for every peak load situation, these conditions can change.

Staff believes that Ameren Missouri should have demand response ("DR") programs. Without the DR option, the Company could be required to either purchase power or run its more expensive generating units resulting in increased energy costs to its customers compared to exercising a voluntary load curtailment and/or a direct load control option to satisfy peak load demands.

The Commission has previously expressed its concern that the Company did not evaluate and allow demand-side resources to compete on an equal basis with supply side resources. In its March 28, 2012 *Report and Order* in Case No. EO-2011-0271 regarding the Company's 2011 Chapter 22 Electric Utility Resource Planning filing, the Commission stated:

"In its analysis, Ameren Missouri considered the use of demand-side efficiency and energy management measures only in the circumstances where it had identified a capacity shortfall. When it determined that it would need additional capacity, it treated demand-side and supply-side resources equivalently. However, Ameren Missouri did not evaluate whether existing supply-side resources could be replaced with less costly demand-side resources. In other words, demand-side resources were not allowed to compete on the basis of PVRP with existing supply-side resources."

²³ Company response to Staff Data Request 0027 in Ameren MEEIA Filing Case No. 2012-0142

That is an important distinction, because Ameren Missouri is considering the possible retirement of part of its coal-fired generation fleet and is considering very expensive environmental upgrades to the portion of its fleet that is not being retired. If it would be more effective to retire those plants and replace them with cheaper demand-side resources, that possibility should be considered in Ameren Missouri's Chapter 22 Electric Utility Resource Planning.

3. Conclusion

Staff did not find any evidence of imprudence during the time period of this prudence review.

4. Documents Reviewed

- a. Company response to Staff Data Request 0042; and
- b. Company response to Data Request 0027 in Ameren MEEIA Filing Case No. EO-2012-0142.

Staff Expert: Randy Gross

N. Renewable Energy

1. Description

The Missouri Renewable Energy Standard ("RES")²⁴ was adopted through a voters' ballot initiative (Proposition C) on November 4, 2008,²⁵ and requires all investor-owned electric utilities in Missouri to provide at least two percent (2%) of its retail electricity sales using renewable energy resources annually in each calendar year 2011 through 2013, and to increase that percentage over time to at least fifteen percent (15%) by 2021.²⁶ The Commission's administrative rule that sets the definitions, structure, operations and procedures for RES compliance is contained in Rule 4 CSR 240-20.100, which first became effective September 30, 2010.

²⁴ 111 Mo. Rev. Stat. § 393.1020 (2010) and 116 Mo. Rev. Stat. § 393.1030 .1(1) (2010)

²⁵ Section 393.1030, RSMo.

²⁶ However, the annual level of required renewable energy resources may be constrained due to 4 CSR 240-20.100(5) Retail Rate Impact. (A) The retail rate impact, as calculated in subsection (5)(B), may not exceed one percent (1%) for prudent costs of renewable energy resources directly attributable to RES compliance. The retail rate impact shall be calculated on an incremental basis for each planning year that includes the addition of renewable generation directly attributable to RES compliance through procurement or development of renewable energy resources, averaged over the succeeding ten (10)-year period, and shall exclude renewable energy resources owned or under contract prior to the effective date of this rule.

In May 2009, Ameren Missouri entered into an agreement with Fred Weber, Inc., to install three (3) combustion turbines capable of generating electricity by burning methane gas captured from Fred Weber, Inc.'s solid waste landfill at Maryland Heights, Missouri. The generation facility is known as the Maryland Heights Energy Center ("Maryland Heights"). In December 2010, IESI MO Champ Landfill, LLC., acquired the Fred Weber Sanitary Landfill. According to Ameren Missouri, this project is expected to boost the Company's renewable energy capabilities as well as meet state and federal regulatory requirements to generate or procure a specified percentage of retail electric sales through renewable sources.²⁷ Based on Staff's on-site observation of the facility supplemented by review of test records, operating logs, computer data, and other documentation, the Maryland Heights generating units successfully met all of the in-service criteria and were fully operational and used for service on June 16, 2012. During a part of this review period – June 1, 2012 through September 30, 2012 – the cost of the landfill gas for Maryland Heights totaled

** _____ **

On December 12, 2012, the Commission issued its *Report and Order* in Case No. ER-2012-0166. Beginning on page 118 of its *Report and Order* the Commission's discussion and approval of Ameren Missouri's request for a variance from Commission Rule 4 CSR 240-20.100(6)(A)16, which provides that "RES compliance costs" are not to be considered for cost recovery through a fuel adjustment clause (FAC) or interim energy charge. "RES compliance costs" are "prudently incurred costs, both capital and expense, directly related to compliance with the Renewable Energy Standard." 4 CSR 240-20.100(1)(N). In its variance request, Ameren Missouri has committed:

"... to working with the Staff and other interested parties to resolve the issue of whether and to what extent some or all of the fuel costs for Maryland Heights and other potential renewable generation energy costs⁴ are RES compliance costs, and committing to have that work completed before another Company general electric rate case would be filed. The Company hereby makes that commitment. In that way, the parties can ensure that a similar issue does not come up in a future rate case. If it is determined that any of the cost of Maryland Heights fuel is a cost directly related to RES compliance, then it (or the appropriate portion of it) would not be included in net base fuel costs in a future rate proceeding. On the other hand, if it is determined that the fuel cost, or some portion of it, is not directly related to RES compliance, it could be considered for inclusion.

²⁷ Staff COS ER-2012-0166

6. The Company also commits to keep track of the RES compliance cost of the Maryland Heights landfill gas facility so that it can and will properly be taken into account for purposes of applying the one percent rate cap provided for in the RES statute and the Commission's RES rules. Consequently, granting the requested waiver or variance will have no impact on the application of that rate cap.

⁴ This may be another renewable energy generating unit or the energy charges for renewable energy through purchased power agreements."

Based on Ameren Missouri response to Staff Data Request 0058, potential renewable energy costs that are imbedded in FAC calculations include costs of landfill gas, purchased power agreements for wind energy and solar net metering purchases. For the review period of June 1 2011 through September 30, 2012, the total cost for these components is

** _____ **

2. Summary of Cost Implications

If Ameren Missouri imprudently flowed RES compliance costs through its FAC resulting in increases to the Company's FPA per kWh rates, ratepayer harm could result from an increase in FAC charges.

3. Conclusion

Prior to the Company's filing its next general rate increase case, Staff will work with the Company and interested parties to reach a resolution of whether and to what extent some or all of the fuel costs for Maryland Heights and other potential renewable generation energy costs are RES compliance costs which are allowed to flow through the Company's FAC.²⁸

4. Documents Reviewed

- a. Staff COS Report, Rate Case File ER-2013-0166; and
- b. Staff Data Request 0058.

Staff Expert: David Roos

IV. Interest

1. Description

For each month of the FAC accumulation and recovery periods Ameren Missouri is required to calculate the interest associated with the over- or under-recovered balance of fuel and purchased power costs less off-system sales revenues. Ameren Missouri applies its short-

²⁸ On August 22, 2013, Staff contacted Ameren Missouri and initiated a process necessary to accomplish the objective of this sentence.

term interest rate to the over- or under-recovered balance and the interest is compounded on a monthly basis. This interest amount is component “I” of the FPA calculation described on 1st Revised Sheet No. 98.18. Ameren Missouri’s short-term debt rate is based on Ameren Corporation’s short-term debt credit rating. Ameren Missouri’s short-term debt credit rating is A-2.

For the review period June 1, 2011 to September 30, 2012, Ameren Missouri applied an interest amount of **_____** to the over- or under recovered balance of fuel and purchased power costs less off-system sales revenues.

2. Summary of Cost Implications

If Ameren Missouri was imprudent in its calculation of the interest amount or used an interest rate that was higher than Ameren Missouri’s short-term interest rate, ratepayers could be harmed through increased FAC charges.

3. Conclusion

Staff found no imprudence with regard to the Company’s interest rates and the calculation of interest amounts applied to the over- or under-recovered balance.

4. Documents Reviewed

- a) Ameren Missouri’s interest calculation work papers in support of the calculation of interest amounts on the over- under-recovered balance; and
- b) Ratings Direct, Ameren Missouri dated June 21, 2013.

Staff Expert: Matthew J. Barnes

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

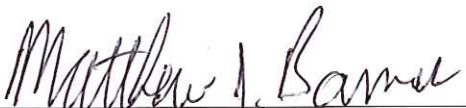
In the Matter of the Third Prudence)
Review of Costs Subject to the)
Commission-Approved Fuel Adjustment)
Clause of Union Electric Company d/b/a)
Ameren Missouri)

Case No. EO-2013-0407

AFFIDAVIT OF MATTHEW J. BARNES

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

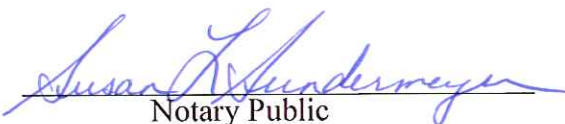
Matthew J. Barnes, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report in pages 5, 9-11, 14-19, 21-23 + 26-27; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.



Matthew J. Barnes

Subscribed and sworn to before me this 28th day of August, 2013.





Notary Public

**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 Union Electric Company d/b/a
Ameren Missouri

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Case No. EO-2013-0407

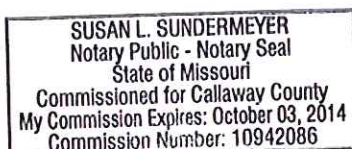
AFFIDAVIT OF DANA E. EAVES

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Dana E. Eaves, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report in pages 7-9; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.


Dana E. Eaves

Subscribed and sworn to before me this 28th day of August, 2013.




Notary Public

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 Union Electric Company d/b/a
Ameren Missouri

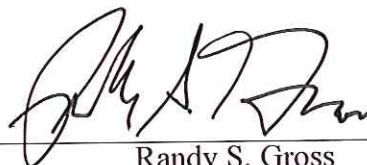
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Case No. EO-2013-0407

AFFIDAVIT OF RANDY S. GROSS

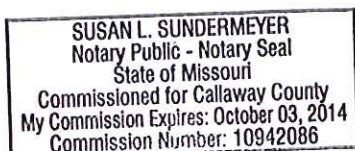
STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Randy S. Gross, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report in pages 5-7, 11-14 + 23-24; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.



Randy S. Gross

Subscribed and sworn to before me this 28th day of August, 2013.





Notary Public

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 Union Electric Company d/b/a)
Ameren Missouri)

Case No. EO-2013-0407

AFFIDAVIT OF DAVID C. ROOS

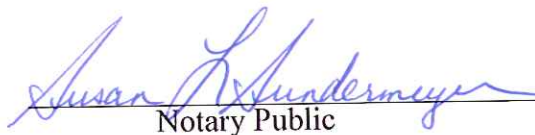
STATE OF MISSOURI)
) ss
COUNTY OF COLE)

David C. Roos, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report in pages 1-4, 19-21, & 24-26; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.



David C. Roos

Subscribed and sworn to before me this 28th day of August, 2013.



Notary Public