# MISSOURI PUBLIC SERVICE COMMISSION

# STAFF REPORT

# SEVENTH PRUDENCE REVIEW OF COSTS RELATED TO THE FUEL ADJUSTMENT CLAUSE FOR THE ELECTRIC OPERATIONS OF KANSAS CITY POWER & LIGHT GREATER MISSOURI OPERATIONS COMPANY

## CASE NO. EO-2017-0232

## June 1, 2015 through November 30, 2016

***Jefferson City, Missouri***
***August 28, 2017***

** Denotes Confidential Information **

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GREATER MISSOURI OPERATIONS COMPANY**

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# I. EXECUTIVE SUMMARY

The Missouri Public Service Commission ("Commission") first authorized a Fuel Adjustment Clause ("FAC") for Aquila, Inc. ("Aquila") effective July 5, 2007,[1] in Case No. ER-2007-0004. The Commission approved the acquisition of Aquila, by Great Plains Energy, Inc. and subsequently Aquila was renamed KCP&L Greater Missouri Operations Company ("GMO" or "Company").[2] This acquisition became effective July 14, 2007. Since its initial approval of GMO's FAC in 2007, the Commission has approved continuation of GMO's FAC with modifications in its *Reports and Orders* in the Company's general rate cases: Case No. ER-2009-0090, Case No. ER-2010-0356, Case No. ER-2012-0175, and ER-2016-0156.

Commission Rule 4 CSR 240-20.090(7) and Missouri Revised Statute § 386.266.4 (2015) require that the Commission's Staff ("Staff") conduct prudence reviews of an electric utility's FAC no less frequently than every 18 months. In this prudence review, Staff analyzed items affecting GMO's fuel costs; purchased power costs; net emission costs; transmission costs; off-system sales revenues; and renewable energy credit revenues for the seventeenth, eighteenth and nineteenth six-month accumulation periods of GMO's FAC. The seventeenth accumulation period started June 1, 2015 and ended November 30, 2015. The eighteenth accumulation period started December 1, 2015 and ended May 31, 2016. The nineteenth accumulation period started June 1, 2016 and ended November 30, 2016.

[1] Item No. 411 in Case No. ER-2007-0004.

[2] In Case No. EN-2009-0164 the Commission recognized, by order dated November 20, 2008 and made effective December 3, 2008, the name change of Aquila, Inc. d/b/a KCP&L Greater Missouri Operations Company to KCP&L Greater Missouri Operations Company. At different points in time the company now named KCP&L Greater Missouri Operation Company was known as, or did business in Missouri as, Aquila, Inc., Aquila Networks-MPS, and Aquila Networks-L&P. Presently, to the public it, jointly with Kansas City Power & Light Company ("KCPL") does business using the service mark "KCP&L". For ease, in this report the KCP&L Greater Missouri Operations Company will be uniformly referred to as "GMO" or "Company."

Thus, the Review Period that is documented in this Prudence Review Report is from June 1, 2015 through November 30, 2016 (“Review Period”). This is Staff’s seventh Prudence Review Report for GMO’s FAC. Table 1 identifies Staff’s previous GMO FAC prudence reviews.

**Table 1: Completed GMO FAC Prudence Reviews**

| Review | File Number | Review Period |
|---|---|---|
| First | EO-2009-0115 | June 1, 2007 through May 31, 2008 |
| Second | EO-2010-0167 | June 1, 2008 through May 31, 2009 |
| Third | EO-2011-0390 | June 1, 2009 through November 30, 2010 |
| Fourth | EO-2013-0325 | December 1, 2010 through May 31, 2012 |
| Fifth | EO-2014-0242 | June 1, 2012 through November 30, 2013 |
| Sixth | EO-2016-0053 | December 1, 2013 through May 31, 2015 |

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 to be 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; instead, the review evaluates 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 GMO was imprudent when managing its fuel and purchased power costs associated with its FAC. Based on its review, Staff found no evidence of imprudence by GMO for the items it examined for the period of June 1, 2015, through November 30, 2016.

# II. INTRODUCTION

## A. General Description of GMO's FAC

Table 2 identifies GMO's Commission-approved FAC tariff sheets which were applicable for service provided by GMO to its customers during the period June 1, 2015, through November 30, 2016:

**Table 2: GMO's Commission-approved FAC tariff sheets**

| June 1, 2015 through November 30, 2016 |
|---|
| 3rd Revised Sheet No. 124 |
| 3rd Revised Sheet No. 125 |
| 3rd Revised Sheet No. 126 |
| 1st Revised Sheet No. 126.1 |
| 1st Revised Sheet No. 126.2 |

For each accumulation period ("AP"),[3] GMO's Commission-approved FAC allows GMO to recover from (if the actual net energy costs exceed) or refund to (if the actual net energy costs are less than) its ratepayers ninety-five percent (95%) of the "actual net energy costs."[4] Actual net energy costs are defined as the prudently incurred variable fuel costs, purchased power costs, transmission costs and net emissions costs minus off-system sales revenues and renewable energy credit revenues. GMO accumulates variable fuel costs, purchased power costs, transmission costs and net emissions costs minus off-system sales revenues and renewable energy credit revenues during six-month accumulation periods. Each six-month accumulation period is followed by a twelve-month recovery period where the over- or under- recovery (including the monthly application of interest)[5] during the previous six-month accumulation period relative to the base energy cost amount[6] is flowed through to ratepayers by an increase or decrease in the FAC Fuel Adjustment Rates ("FAR") for GMO's rate districts named MPS and L&P. An adjustment to a FAR is designed to offset the

[3] Accumulation periods are: June through November and December through May.
[4] "Actual Net Energy Costs" are equal to fuel costs (FC) plus net emission costs (E) plus purchased power costs (PP) plus transmission costs (TC) minus off-system sales revenue (OSSR) and renewable energy credit revenue (R) as defined on GMO's 3rd Revised Sheet No. 125 and 126.
[5] See Section IV. Interest of this Prudence Review Report.
[6] GMO's P.S.C.MO. No. 1, Original Sheet No. 126.1 defines base energy cost as net system input times the base factor per kWh, calculated separately for MPS and L&P, respectively. The base factors per kWh are approved by the Commission in each general rate case in which the Company's FAC is continued with modification.

over- or under-recovery for a given AP by the end of the twelve-month recovery period ("RP").[7] Because the FAR rarely, if ever, will exactly match the required offset, GMO's FAC is designed to true-up the difference between the revenues billed and the revenues authorized (including the monthly application of interest) for collection during recovery periods. Any disallowance the Commission orders as a result of a prudence review shall include interest at the Company's short-term interest rate and will be accounted for as an item of cost[8] in a future filing to adjust the FAR.

## B. Prudence Standard

In *State ex rel. Associated Natural Gas Co. v. Public Service Com'n of State of Mo.*, the Western District Court of Appeals stated the Commission 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.
>
> In the same case, the PSC noted that this test of prudence should not be based upon hindsight, but upon a reasonableness standard: [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.
>
> 954 S.W.2d 520, 528-29 (Mo. App. W.D., 1997) (citations omitted).

In reversing the Commission decision 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

[7] Recovery periods are: March through February and September through August.
[8] See definition of variable I on GMO's P.S.C.MO. No. 1, 1st Revised Sheet No. 127.8.

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. Staff reviewed for prudence the areas identified and discussed below for GMO's seventeenth, eighteenth, and nineteenth six-month accumulation periods.

## III. FUEL COSTS, PURCHASED POWER COSTS, NET EMISSION COSTS

GMO's FAC includes four major components of costs: fuel costs, purchased power costs, transmission costs, and net emission costs. It also includes two components of revenues: off-system sales revenues and renewable energy credit revenues. Table 3 is a breakdown of GMO's fuel costs, purchased power costs, transmission costs, net emission costs, off-system sales revenues, and renewable energy credit revenues for the period of June 1, 2015 through November 30, 2016:

*continued on next page*

**Table 3**

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Table 4 is a breakdown of GMO's fuel costs, purchased power costs, transmission costs, net emission costs, off-system sales revenue, and renewable energy credit revenue for the period of June 1, 2015 through November 30, 2016, separately for its MPS and L&P rate districts:

**Table 4**

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*Staff Experts/Witnesses: Mathew J. Barnes, Dana E. Eaves, J Luebbert and David C. Roos*

## A. Utilization of Generation Capacity

### 1. Description

The purpose of this section is to provide an overview of GMO's available supply-side and demand response resources and review the process by which generating units are selected to satisfy native load requirements during the Review Period. GMO's generating units consists of a mixture of coal, natural gas, diesel, landfill gas, and solar as indicated in Table 5 below titled Supply Side Resources. GMO's voluntary demand response programs are titled MPower and Demand Response Incentive.

*continued on next page*

**Table 5**[9]

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[9] Response to DR No. 0016.

| Table 6 | | |
|---|---|---|
| **Long Term Power Purchase Agreements** | | |
| **Long-Term Agreements** | **Capacity (MW)** | **Contract End Date** |
| ** | | |
| | | |
| | | |
| [10,11] | | ** |

**Table 7**

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### 2. Summary of Cost Implications

During the period from June 1, 2015 through November 30, 2016, GMO utilized two separate demand response programs. Until May 31, 2016 GMO customers could elect to participate in the MPower program. The MPower tariff was frozen on April 1, 2016. It was replaced with a similar demand response program, Demand Response Incentive (DRI), for

[10] ** **

[11] Response to DR No. 0023.

GMO's MEEIA Cycle 2.[12] The aggregate curtailable load from the programs as of November 30, 2016 was equal to 20.12 MW. The Company continues to add customers to the DRI program to fulfill targets for MEEIA Cycle 2.[13] For DRI, the curtailment target and anticipated load reduction is 55 MW for MEEIA Cycle 2.[14]

From a transmission system operations standpoint, GMO does not have any must run generators. From GMO's plant operations standpoint, if Sibley Unit 3 is on outage, Sibley Unit 1 or Unit 2 must run to provide auxiliary steam for the plant. The most critical service of auxiliary steam at the plant is to provide gland seal steam for the hydrogen cooling Sibley Unit 3 generator.[15]

GMO participates in the Southwest Power Pool Integrated Marketplace ("SPP IM"). In the Integrated Marketplace (IM), the vast majority of generation dispatch decisions are made by SPP via established market requirements and processes. SPP market rules establish must offer requirements both for the Day Ahead Market (DAM) and the Real Time Balancing Market (RTBM). With respect to the DAM, there is a Day Ahead Must Offer requirement which essentially states that Market Participants (MPs) must offer enough generation to cover that MP's next day projected peak load, ancillary service obligations and any firm sales they have agreed to make. In addition, the SPP Market Monitoring Unit monitors for Physical Withholding of generation, which further incentivizes MPs to offer much of their available generation in the DAM, even if they have already met their Must Offer requirement. With respect to the RTBM, SPP requires that all physically available generation be offered to the market. In accordance with SPP rules and requirements, GMO submits generation offers in the DAM and RTBM. Once these offers have been submitted, they are utilized by SPP in its market co-optimization processes. SPP market applications consider inputs such as system-wide requirements, generator operating parameters, offers from all MPs, and transmission system topology to arrive at the most cost effective and reliable generation solution possible. Some of these applications include the Security Constrained Unit Commitment (SCUC) and Security Constrained Economic Dispatch (SCED) tools. Once the least cost, viable solution is arrived at, SPP issues operating instructions to MPs. Under the SPP market construct, MPs

[12] GMO response to Staff DR No. 0045.
[13] Ibid.
[14] GMO response to Staff DR No. 0044.
[15] GMO response to Staff DR No. 0010.

are given the flexibility to let the SPP market independently decide when to commit a given unit or to self-commit the generator. A common example of the latter is if a unit needs to be online for required testing on a given day. Even if a generator is self-committed, this simply establishes that the unit will be online. SPP will still dispatch the unit via the SCED tool within its dispatchable range as established through the market submissions process.[16]

#### 3. Conclusion

Staff did not observe any evidence of imprudent utilization of generation resources during the time period examined in this prudence review.

#### 4. Documents Reviewed

a. GMO's responses to Staff Data Request (DR) Nos. 0001, 0010, 0011, 0012, 0013, 0015, 0016, 0017, 0018, 0019, 0022, 0041, 0044, 0045, 0055, 0062 and 0065.

*Staff Expert/Witness: J Luebbert*

### B. Heat Rates

#### 1. Description

Heat rates of generating units are an indicator of unit performance. A heat rate is a calculation of total volume of fuel burned for electric generation multiplied by the average heat content of that volume of fuel divided by the total net generation of electricity in kilowatt hours (kWh) for a given time period.

#### 2. Summary of Cost Implications

Heat rates are inversely related to the efficiency of the generating unit. Increasing heat rates of specific units over time may be an indication that a specific unit's efficiency is declining. Heat rates can vary greatly depending on operating conditions including but not limited to load, hours of operation, shut downs and startups, unit outages, derates, and weather conditions. Therefore, a good indication of unit performance for those units that are utilized frequently is an analysis of the trend of heat rates over time. A permanent increase in monthly heat rates is commonly the result of a decrease in a generating unit's efficiency whenever additional emissions reduction equipment is added to the backend of the generating unit. Continued utilization of units with sustained elevated heat rates could result in GMO incurring higher fuel costs per unit of electricity generated than it would otherwise have

[16] GMO response to DR No. 0012.

incurred. If GMO was imprudent in response to the ongoing trend of a unit's heat rate, ratepayer harm could result from an increase in the fuel costs that are collected through GMO's FAC charges.

** ______________________________ **[17]

### 3. Conclusion

In reviewing the monthly heat rates of the GMO's generating units dating back to December 2011, Staff found no indication that GMO acted imprudently during the Review Period.

### 4. Documents Reviewed

a. GMO's responses to Staff DR Nos. 0005, 0006, 0015, 0016, 0041, 0054, 0063, 0064, 0064.1, 0066, 0067; and

b. Monthly Outage data submitted by GMO in compliance with Rule 4 CSR 240-3.190.

*Staff Expert/Witness: J Luebbert*

## C. Plant Outages

### 1. Description

Generating stations' 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 is one that is scheduled well in advance, with a predetermined duration and occurring only once or twice a year. Turbine and boiler overhauls, inspections, testing, and nuclear refueling are typical planned outages. A maintenance outage is one 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.

[17] Response to DR No. 0064.

Outages taken at any of the generating units have an impact on how much GMO will pay for fuel and purchased power and, if planned during peak load demand times, has the potential result of GMO paying more for fuel and purchased power cost than it would have paid if the outage were planned during forecasted low load times. Periodic planned outages are required to maintain each generating unit in peak operating condition to minimize forced or maintenance outages that could occur during peak load demand or periods of high replacement energy costs, typically June through August and January through February.

Staff examined the planned outages and their timing for imprudence. An example of an imprudent outage would be scheduling a planned outage of a large base loaded unit during a time of peak load. GMO has little or no control over the timing of maintenance or forced outages of the generating stations it owns and operates when such outages are the result of unforeseen events causing fuel and/or purchase power costs that are collected from customers through GMO's FAC to increase. The Company has no control over the timing of planned outages for generating stations it does not operate.

** ______ **[18] ** ______ **

### 2. Summary of Cost Implications

An imprudent planned outage could result in increased purchased power by GMO from the SPP IM as well as a decrease in off-system sales through the SPP IM to meet high demand.

### 3. Conclusion

Staff did not find any evidence of imprudent planned outages by GMO during the time period examined in this review.

[18] Response to DR No. 0067.

#### 4. Documents Reviewed

a. GMO responses to Staff DR Nos. 0001, 0004, 0005, 0006, 0013, 0015, 0016, 0017, and 0067

*Staff Expert/Witness: J Luebbert*

## D. Natural Gas Fuel and Cross Hedging

#### 1. Description

For this Review Period Staff reviewed GMO's natural gas fuel and cross hedging activities. During GMO's last general rate case, Case No. ER-2016-00156, GMO agreed in the Stipulation and Agreement[19] ("2016 Stipulation") it would discontinue the practice of purchasing NYMEX futures and other financial instruments that was used to mitigate price risk for fuel and energy (purchase power). GMO also agreed to start unwinding all financial instruments as soon as possible. GMO began its unwinding of these transactions in September 2016 and the last transaction was executed in October, 2016. During the prudence review period no gains or losses were reported other than those associated with the unwinding of transactions as directed by the 2016 Stipulation. GMO recorded a net loss of $** ________ ** associated with this unwinding.

#### 2. Summary of Cost Implication

If GMO was imprudent in its management of its hedging activities ratepayer harm could result in an increase in future rates.

#### 3. Conclusion

Staff has verified that GMO management complied with the 2016 Stipulation and unwound the NYMEX futures contracts and other financial instruments and therefore complied with the 2016 Stipulation during the Review Period.

#### 4. Documents Reviewed

a. GMO's 2016 Stipulation and Agreement;

b. GMO's General Ledger;

c. GMO's Quarterly Surveillance Monitoring Report; and

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[19] In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service, Case No. ER-2016-0156, *NON-UNANIMOUS PARTIAL STIPULATION AND AGREEMENT.*

d. Staff DR Nos. 0003, 0007, 0014, 0026, 0040, 0048, and 0050.

*Staff Expert/Witness: Dana E. Eaves*

## E. Natural Gas Costs

### 1. Description

For the Review Period, $6,834,871 or 2% of GMO's total fuel costs, purchased power costs, transmission costs, and net emission costs was associated with the natural gas used in generating electricity. Not included in this amount is the net loss of $6,421,620 associated with its natural gas hedging activities. The cost of natural gas includes various miscellaneous charges such as firm transportation service charges and other fuel handling expenses. GMO receives natural gas services from 16 natural gas supply companies and 5 natural gas transportation companies. The companies are:

**Table 8**

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**<u>Table 9</u>**

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The following table identifies GMO's peaking generating units that burn natural gas:

| **Table 10: Peak Units Burning Natural Gas** |
|---|
| Crossroads 1, 2, 3, and 4 |
| Greenwood 1, 2, 3, and 4 |
| Lake Road 1, 2, 3, and 5 |
| Nevada 1 |
| Ralph Green 3 |
| South Harper 1, 2, and 3 |

During the Review Period, GMO's natural gas price averaged ** __ ** per MMBtu. Natural gas prices have remained at low levels due to advanced technologies to explore for and produce natural gas. This advanced technology is called "fracking". Fracking is defined as follows:

> Fracking, or hydraulic fracturing, is the process of extracting natural gas from shale rock layers deep within the earth. Fracking makes it possible to produce natural gas extraction in shale plays that were once unreachable with conventional technologies. Recent advancements in drilling technology have led to new man-made hydraulic fractures in shale plays that were once not available for exploration. In fact, three dimensional imaging helps scientists determine the precise locations for drilling.
>
> Horizontal drilling (along with traditional vertical drilling) allows for the injection of highly pressurized fracking fluids into the shale area. This creates new channels within the rock from which natural gas is extracted at higher than traditional rates. This drilling process can take up to a month, while the

> drilling teams delve more than a mile into the Earth's surface. After which, the well is cased with cement to ensure groundwater protection, and the shale is hydraulically fractured with water and other fracking fluids.[20]

#### 2. Summary of Cost Implications

If GMO was imprudent in its purchasing decisions relating to natural gas, rate payer harm could result from increased FAC charges.

#### 3. Conclusion

Staff found no indication GMO's purchases of natural gas were imprudent during the Review Period.

#### 4. Documents Reviewed

a. GMO's responses to Staff DR Nos. 0002, 0003, and 0027; and

b. GMO's General Ledger, FAC calculation, and other work papers from this case to determine the amount that GMO paid for natural gas as compared to the total cost of natural gas that GMO incurred during the Review Period.

*Staff Expert/Witness: Matthew J. Barnes*

### F. Coal and Rail Transportation Costs

#### 1. Description

For the Review Period, $106,034,441 or 36% of GMO's total fuel costs, cost of purchased power, transmission costs, and net emission costs was associated with the coal used in generating electricity. The cost of coal includes various miscellaneous charges such as rail and other ground transportation service charges, and other fuel handling expenses. Staff reviewed 11 short and long-term coal purchase contracts. The counterparties for the contracts are:

**<u>Table 11</u>**

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[20] http://www.what-is-fracking.com.

The contracts provide coal delivery to GMO's Jeffrey Energy Center 1, 2, and 3; Sibley 1, 2, and 3; and Lake Road generating units. The price of coal can either be a fixed price for the entire contract, a fixed price for each year of the contract, a base price plus an escalation as calculated per the contract, a price determined by the Master Purchase & Sales Agreement, or a price which is indexed based.

#### 2. Summary of Cost Implications

If GMO was imprudent in its decisions relating to purchasing and transporting coal, rate payer harm could result from an increase in FAC charges.

#### 3. Conclusion

Staff found no indication GMO's purchases and transportation of coal or its coal-related contracts were imprudent during the Review Period.

#### 4. Documents Reviewed

a. GMO's fixed coal contracts in place for the delivery of coal to each of its coal fired generating units;

b. GMO's responses to Staff DR Nos. 0002, 0003, and 0024; and

c. GMO's General Ledger, FAR calculations, and other work papers to determine the amount that GMO paid for coal as compared to the total cost of coal that GMO incurred during the Review Period.

*Staff Expert/Witness: Matthew J. Barnes*

### G. Fuel Oil Costs

#### 1. Description

For the Review Period, $1,089,147 or 0.4% of GMO's total fuel costs, cost of purchased power, transmission costs, and net emission costs was associated with the fuel oil used in generating electricity. The cost of fuel oil includes various miscellaneous charges, such as rail and/or ground transportation service charges and other miscellaneous fuel handling expenses. Staff reviewed GMO's 3 oil contracts that were in place during the Review Period. The contracts provide a primary delivery location and agreement on the price. The price is based on the market price at the time GMO purchases the fuel oil. The counterparties for the fuel oil contracts are listed in the table below:

**Table 12**

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The fuel oil contracts provide delivery of fuel oil to various generating units.

**2. Summary of Cost Implications**

If GMO imprudently purchased fuel oil, rate payer harm could result from increased FAC charges.

**3. Conclusion**

Staff found no indication GMO's costs associated with its fuel oil contracts in place were imprudent during the Review Period.

**4. Documents Reviewed**

a. GMO's General Ledger;

b. GMO's responses to Staff DR Nos. 0002, 0003, and 0028; and

c. FAR and other supporting work papers in this case to determine the amount GMO paid for fuel oil as compared to the total cost of fuel oil GMO incurred during the Review Period.

*Staff Expert/Witness: Matthew J. Barnes*

## H. Transmission Costs

**1. Description**

For the Review Period, $1,455,324 or 1% of GMO's total fuel cost, cost of purchased power, transmission costs and net emission costs, was associated with transmission costs.

<u>Correction for MISO (Crossroads) Transmission Charges in True-Up</u>

During the GMO rate case, Case No. ER-2016-0156, Staff's Data Request No. 0155.5 was submitted on April 29, 2016, asking GMO if it had recovered any Crossroads related transmission expense in the FAC. On May 18, 2016, GMO notified Staff by phone and by email confirming that an error had occurred resulting in some Crossroads related Midcontinent Independent System Operator ("MISO") transmission expenses flowing through the FAC. As a result of this error, the true-up amount in case ER-2017-0002 contained a correction, with interest, of $3,641,196 for over-recovery from customers in the MPS rate district and $950,137 for over-recovery from customers in the L&P rate district. These corrections were applied to the Current Period Fuel Adjustment Rate ("FAR") for Recovery Period 18 ("RP18") as shown on line 13 of GMO's Rider FAC 12th Revised Sheet No. 127.

These corrections represent the MISO transmission expenses for the Crossroads Generating Station that were in the FAC from January 2014 through November 2015, and captures the time period from the start of MISO transmission expenses in the FAC through the end of Accumulation Period 17 ("AP17"). For AP18, December 2015 through May 2016, and AP19, June 2016 through November 2016 work papers for the fuel adjustment rate filing in File No. ER-2017-0001 filed on July 1, 2016, and File No. ER-2017-0188 filed on December 30, 2016, show the removal of Crossroads related transmission expenses from the FAC.

<u>Crossroads Transmission History</u>

In the *Report and Orders* for Rate Case Nos. ER-2010-0356, effective May 14, 2011, and ER-2012-0175, effective January 9, 2013, the Commission ordered Crossroads-related transmission charges to be excluded from both base rates and the FAC. The 1st Revised Sheet No. 127.8, applicable to service provided from July 1, 2011 through January 25, 2013 define transmission costs as:

> "TC = Transmission Costs;
> Transmission costs for Off System Sales included in FERC Account Number 565 except for costs for the Crossroads facility."

And the 2nd Revised Sheet No. 126, applicable to service provided January 26, 2013 and thereafter, defines transmission costs as:

> "TC = Transmission Costs:
> The following Costs reflected in FERC Account Number 565 (excluding Base Plan Funding costs and costs associated with the Crossroads generating station): transmission costs that are necessary to receive purchased power to serve native load and transmission costs that are necessary to make off system sales."

For calculating TC, GMO implemented a process whereby total transmission expenses were tabulated and then costs not allowed in the FAC were removed. Prior to Entergy joining MISO in December 2013, this process was effective in preventing disallowed Crossroads related transmission costs from flowing through the FAC. According to GMO witness

Linda J. Nunn, beginning on page 6 of her direct testimony in the GMO FAC true-up case, File No. ER-2017-0002:

> Prior to the time that Entergy joined the Regional Transmission Organization Midcontinent Independent System Operator ("MISO"), GMO would have monthly MISO charges for transmission related to purchased power that traveled through the MISO territory (completely unrelated to Crossroads). Those costs were allowable in the FAC according to the tariff as they were transmission for purchased power to serve native load. When Entergy joined MISO late in 2013, the transmission costs related to Crossroads began to be billed by MISO (previously billed by Entergy) and the accounting reports used to prepare the FAC calculation included a line item which identified Crossroads charges. There were other line items on the MISO bill that did not indicate a Crossroads connection. It turns out that the line item labeled Crossroads was for Schedule 7 fees only. The Company removed the amount associated with that schedule (Schedule 7 – Demand) from the FAC calculation. However, the Company did not realize that the other MISO charges identified on the reports not labeled Crossroads were actually associated with the Crossroads facility … [the] Accounting procedure has now been changed so that any charge from MISO is to be considered related to Crossroads unless the front office takes action to notify Accounting that a non-Crossroads deal has been made.

**2. Summary of Cost Implications**

Including Crossroads transmission costs in the FAC caused ratepayer harm by increasing the fuel adjustment rate. This error was found and ratepayers were made whole when GMO credited $3,641,196, including interest, for the over-recovery from customers in the MPS rate district and $950,137, including interest, for over-recovery from customers in the L&P rate district for RP18.

**3. Conclusion**

The Crossroads Transmission error has been corrected and these costs are not in the FAC. Staff found no indication GMO's transmission costs were imprudent during the Review Period.

### 4. Documents Reviewed

a. GMO's General Ledger;

b. GMO's responses to Staff DR Nos. 0001 and 0002;

c. FAR and other supporting work papers in this case;

d. True-Up Filing Case No. ER-2017-0002;

e. Far Filing Case No. ER-2017-0001; and

f. Far Filing Case No. ER-2017-0188.

*Staff Experts/Witnesses: Matthew J. Barnes and David C. Roos*

## I. Emission Allowances

### 1. Description

The Cross-State Air Pollution Rule ("CSAPR") is a ruling by the United States Environmental Protection Agency ("EPA") that requires a number of states, including Missouri, to reduce power plant emissions that contribute to ozone and/or fine particle pollution in other states. The CSAPR replaced EPA's 2005 Clean Air Interstate Rule (CAIR), following the direction of a 2008 court decision that required EPA to issue a replacement regulation. CSAPR implementation began on January 1, 2015.

The CSAPR requires Missouri to reduce its annual emissions of sulfur dioxide ($SO_2$) and nitrous oxides ($NO_x$) to help downwind states attain the 24-hour National Ambient Air Quality Standards ("NAAQS"). The CSAPR also requires Missouri to reduce ozone season emissions of $NO_x$ to help downwind states attain the 8-hour NAAQS.

On September 7, 2016, the EPA revised the CSAPR ozone season $NO_X$ program by finalizing an update to CSAPR for the 2008 ozone NAAQS, known as the CSAPR Update. The CSAPR Update ozone season $NO_X$ program will largely replace the original CSAPR ozone season $NO_X$ program starting on May 1, 2017. The intent of the CSAPR Update is to further reduce summertime $NO_X$ emissions from power plants in the eastern U.S.

The requirements of CSAPR were in effect for the entire Review Period. The requirements for the CSAPR Update are outside of the Review Period.

The primary mechanism of CSAPR is a cap-and-trade program that allows a major source of $NO_X$ and/or $SO_2$ to trade excess allowances when its emissions of a specific pollutant fall below its cap for that pollutant. Originally, 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 CAIR. This model, with modifications, had continued under CSAPR.

Since the 1980's, the Sibley and Lake Road plants' generating capacities have more than doubled; Iatan 1 had a slight increase in generating capacity, while the Jeffrey Energy Center had a slight decrease in generating capacity. In addition, GMO had a purchased power contract with the Nebraska Public Power District's Gerald Gentleman power plant that required GMO to provide $SO_2$ allowances to Nebraska Public Power for the energy purchased under contract. This contract was affective from January 1, 2005 through December 31, 2013. Costs for allowances from this contract are not included in the Review Period. The net effect is that GMO does not have enough allowances to cover its $SO_2$ emissions requirements, and must purchase $SO_2$ allowances.

To comply with CSAPR, GMO established an $SO_2$ inventory. GMO currently plans to maintain this SO2 allowance inventory sufficient to offset expected emissions. This inventory is tracked in Company account 158.100 Emissions Allowance Inventory. The GMO SO2 allowance inventories are valued at cost, and the cost for $SO_2$ allowances is tracked in FERC Account Number 509. The Company annually balances account 509 when the EPA yearly awards the additional $SO_2$ allowances.

For the Review Period, GMO's net emission allowance expense was negative $382,081.

**2. Summary of Cost Implications**

If GMO imprudently used, purchased or banked its $SO_2$ allowances, ratepayer harm could result from an increase in GMO's FAC charges.

**3. Conclusion**

Staff found no indication GMO was imprudent in its purchases, banking, or usage of CSAPR $SO_2$ allowances.

#### 4. Documents Reviewed

a. Company response to Staff's DR Nos. 0034, 0036, 0037, 0038, and 0039; and

b. GMO monthly reports for the time period June 1, 2015 through November 30, 2016 required by 4 CSR 240-3.161(7).

*Staff Expert/Witness: David C. Roos*

### J. Tire-Derived Fuel

#### 1. Description

At GMO's Sibley Generating Station, which has cyclone-fired boilers, one type of alternative fuel was burned during the Review Period—tire-derived fuel ("TDF"). Sibley Unit 3 has been burning TDF since 1997, and TDF is considered part of the normal fuel supply. TDF is a higher energy value fuel than the bituminous coal used at Sibley. TDF increases the overall heat input to the boiler. Cyclone-fired units require a certain amount of ash content in the fuel to maintain a slag layer in the cyclone unit. TDF is low in ash, and, therefore, the amount of TDF that can be blended with coal is limited. The cost of TDF includes material, transportation, labor, and equipment for material handling at the plant, including personnel to manage and load TDF during normal weekday hours.

At Unit 4/6 of the Lake Road Generating Station, TDF is the only type of alternative fuel that was burned during the Review Period. Lake Road Unit 4/6 has been burning TDF since 2004.

During the Review Period GMO's tire-derived fuel expense used for generation was $157,469.

#### 2. Summary of Cost Implications

If GMO's use of tire-derived fuels was imprudent, ratepayer harm could result from an increase in FAC charges.

#### 3. Conclusion

Staff found no indication GMO's use of tire-derived fuels was imprudent during the Review Period.

#### 4. Documents Reviewed

a. Company response to Staff's DR Nos. 0001 and 0043.

*Staff Expert/Witness: Matthew J. Barnes*

## K. Off-System Sales Revenue

### 1. Description

Off-system sales revenues ("OSSR") is a component in the calculation of GMO's FAR used to charge or refund fuel and purchased power costs to its customers. The tariff language in effect during the Review Period includes:

> GMO's FAC 3rd Revised Sheet No. 126, effective January 26, 2013 Through February 21, 2017, defines the "OSSR" component as:
>
> - OSSR = Revenues from Off-system Sales:
>   - The following revenues or costs reflected in FERC Account Number 447: all revenues from off-system sales but excluding revenues from full and partial requirements sales to Missouri municipalities that are associated with GMO, hedging costs, SPP EIS market charges, and SPP Integrated Market revenues.

Staff reviewed the off-system sales quantities and revenues over the Review Period, and GMO's off-system sales revenue amount is $15,125,296.

### 2. Summary of Cost Implications

GMO's revenues from off-system sales are an offset against total fuel and purchased power costs, transmission costs and net emission costs. This is because GMO's ratepayers pay for the resources used to produce any energy that GMO sells.[21] Since implementing the IM, SPP has controlled the economic dispatch of GMO's generation. During times that GMO's generation exceeds GMO's load, GMO becomes a net seller in the SPP IM market. If GMO did not make available its generating units in the SPP IM market for off-system sales to be made, ratepayers could be harmed by such imprudence by an increase in GMO's FAC charges.[22]

### 3. Conclusion

Staff found no indication that GMO imprudently withheld availability of its generating units in the SPP for off-system sales to be made.

[21] Serving those ratepayers (native load) is a higher priority than making an off-system sale.

[22] Beginning March 1, 2014 the SPP implemented the Integrated Marketplace that changed GMO's practice of making off-system sales. See the Utilization of Generation Capacity section above.

#### 4. Documents Reviewed

a. GMO's responses to Staff DR Nos. 0001 and 0002; and

b. GMO's filings in this case and FAC tariff sheets.

*Staff Experts/Witnesses: Matthew J. Barnes and David C. Roos*

### L. C.W. Mining Cost

#### 1. Description

This issue involves any settlement payments for a breached coal contract between GMO and C.W. Mining, and the effect any settlement payments may have on FAC-related costs. A detailed description of this issue is provided in Staff's prudence review report for GMO in File No. EO-2009-0115. The following is a brief summary of the events related to this issue.

GMO entered into a coal supply contract with C.W. Mining in January 2004 to supply coal for the Sibley and Lake Road generating stations. In the early portion of the contract, C.W. Mining was unable to supply the contracted quantity of coal, ultimately breaching the contract. This resulted in GMO having to burn higher cost coal at these two generating stations. GMO is currently involved in litigation to recover the higher costs that it incurred as a result of the termination of the C.W. Mining coal contract.

The *Stipulation and Agreement as to Certain Issues* the Commission approved by its *Order Approving Stipulation and Agreement as to Certain Issues* in Case No. ER-2007-0004, effective on April 22, 2007, stated that settlement payments, net of certain GMO costs, were to flow back to customers through GMO's FAC if the Commission granted GMO a FAC. Since the Commission approved GMO's FAC with its *Report and Order* in Case No. ER-2007-0004, customers are to receive 95% of the C.W. Mining litigation proceeds, net of applicable legal and collection fees and costs as agreed to in the *Stipulation and Agreement as to Certain Issues*.

No garnishments or settlements from C.W. Mining have flowed through GMO's FAC as of May 31, 2015. Once all legal expenses have been recovered, 95% of any future settlements received will be refunded to customers through GMO's FAC.

**2. Summary of Cost Implications**

There are no cost implications to GMO's FAC from the C.W. Mining litigation during the Review Period. Since the C.W. Mining contract was set up to provide coal to both the Sibley and Lake Road stations, Staff recommended in a previous FAC Prudence Review Report (Case No. EO-2009-0115), and GMO concurred in its response to Staff Data Request No. 0055 in Case No. EO-2009-0115, that any net settlement payments be split: 81% for ratepayers in the MPS rate district and 19% for ratepayers in the L&P rate district.

Section 15 of the *Non-Unanimous Stipulation and Agreement* filed on September 20, 2016 in Case No. ER-2016-0156[23] includes the following:

> The consolidation of the FAC for the consolidation of the L&P and MPS rate districts will be established at the date rates go into effect in this case and the historical cost recovery will be consolidated using weighted energy components for MPS and L&P.

Rates from the GMO general rates case, Case No. ER-2016-0156 went into effect February 22, 2017, which is outside of the Review Period. On February 22, 2017 and thereafter, any C. W. Mining settlement payments, net of certain GMO costs, will flow back to customers through GMO's consolidated FAC.

If GMO were to imprudently flow the C.W. Mining settlements through its FAC, or did not flow them through its FAC, ratepayer harm could result from the ratepayers not receiving any of the benefit from the net settlement payments.

**3. Conclusion**

Staff found no indication that GMO has acted imprudently regarding the C.W. Mining settlements with respect to its FAC. Staff will continue to monitor this issue in future GMO FAC prudence audits. If GMO receives any future settlement proceeds, the settlement proceeds will flow through GMO's FAC per the consolidated rate tariff.

[23] The *Non-Unanimous Stipulation and Agreement* filed on September 20, 2016, was approved by the Commission in its September 28, 2016 *Order Approving Stipulations And Agreements, Rejecting Tariffs, Cancelling True-Up Hearing, And Ordering Filing Of Compliance Tariffs*.

### 4. Documents Reviewed

a. Direct Testimony of Staff witness Cary G. Featherstone in Case No. ER-2007-0004;

b. Stipulation and Agreement as to Certain Issues filed April 4, 2007, in Case No. ER-2007-0004;

c. *Order Approving Stipulation and Agreement as to Certain Issues* entered in Case No. ER-2007-0004, effective April 27, 2007;

d. GMO Monthly and Quarterly Reports submitted in compliance to 4 CSR 240-3.161(5) and (6); and

e. GMO responses to Staff DR No. 0042.

*Staff Expert/Witness: David C. Roos*

## M. Renewable Energy Credit Purchases and Revenues

### 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 their retail electricity sales using renewable energy resources in each calendar year 2011 through 2013, and to increase that percentage over time to at least fifteen percent (15%) by 2021.[26] Commission rule 4 CSR 240-20.100, which first became effective September 30, 2010, contains the definitions, structure, operations, and procedures for implementing the RES.

The RES rule creates two categories of energy-generating resources: non-renewable energy resources (including purchased power from non-renewable energy sources) and renewable energy resources (including purchased power from renewable energy sources).[27] Renewable energy resources produce electrical energy and are wind, solar sources, thermal

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[24]. § 393.1020 RSMo. Supp. 2013 and § 393.1030.1(1), RSMo. Supp. 2013.
[25] § 393.1030 RSMo. Supp. 2013.
[26] However, the annual level of required renewable energy resources may be considered due to 4 CSR 240-20.100(5)(A) 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.
[27] 4 CSR 240-20.100(5)(B).

sources, hydroelectric sources, photovoltaic cells and panels, fuel cells using hydrogen produced by one (1) of the above named electrical energy sources, and other sources of energy that become available after August 28, 2007, and are certified as renewable by the Missouri Department of Economic Development -- Division of Energy ("Division of Energy"). Once an energy resource is certified, it begins producing RECs, with one (1) REC representing one (1) megawatt-hour of electricity that has been generated from the renewable energy resource. These credits can be sold and/or traded in the market place bundled with or without the energy that generated the REC.[28] The cost of a REC (as a RES compliance cost) cannot be recovered through the FAC.[29] Revenues from the sale of RECs are recovered through the FAC as an off-set to fuel costs.

During the Review Period, the RES rule required GMO to serve 10% of its retail load using renewable energy resources. Also, during the Review Period, GMO did not sell or purchase solar RECs outside of those bundled with purchased power from qualified customer generator's operational solar electric systems as a condition of receiving solar rebates.[30] GMO received non-solar RECs bundled with renewable energy from GMO's St. Joseph Landfill Gas Facility, and contractually through purchased power agreements with two renewable energy providers (Gray County Wind and Ensign Wind). Some of the RECs created by generation at Gray County Wind and Ensign Wind farms and the St. Joseph Landfill Gas Facility were used for 2015 and 2016 RES compliance. In the past, REC revenues were used as an offset net emission costs and GMO's work papers did not itemize the REC revenues as a separate line item. As a result of Staff's discussions with GMO, GMO has agreed to report REC revenues as a separate line item in its supporting work papers beginning with the January 2016 monthly report. In Account 509000, no costs for purchasing the solar RECs were recovered through the FAC during the Review Period.

In Staff Data Request Nos. 0056, 0057, 0058, Staff requested "the dollar values assigned to RECs from energy purchases from Ensign Wind, Gray County Wind and Osborn Wind Energy Center accrued for the period June 1, 2015 through November 30, 2016, and included in calculating GMO's Fuel Adjustment Clause charges… ." GMO's responded,

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[28] 4 CSR 240-20.100(6)(B)(5)(J).
[29] 4 CSR 240-20.100(6)(A)(16).
[30] *KCP&L GMO 2015 Annual Renewable Energy Standard Compliance Report* and *KCP&L GMO 2016 Annual Renewable Energy Standard Compliance Report [Corrected].*

** **

#### 2. Summary of Cost Implications

If the Commission found that GMO was imprudent in its management of RECs, by including the cost of purchasing RECs in calculating its FAC charges, or not selling RECs when it had the opportunity to do so, ratepayer harm could result from increased costs or decreased revenues in the calculation of its FAC charges.

#### 3. Conclusion

With regards to FAC prudency, Staff did not find evidence that GMO's management of its RECs during the Review Period was imprudent.

#### 4. Documents Reviewed

a. Staff DR Nos. 0056 through 0061; and

b. GMO 2015 and 2016 Annual Renewable Energy Standard Compliance Reports.

*Staff Expert/Witness: David C. Roos*

### N. St Joseph Landfill Gas Facility

#### 1. Description

GMO constructed a landfill gas generating plant at the St. Joseph city landfill. The St. Joseph Landfill Gas Facility consists of one (1) reciprocating internal combustion engine and associated generator, rated at a nominal one and six-tenths (1.6) MW. Landfill gas is extracted from wells in the landfill and supplied to the engine. This gas contains approximately fifty percent (50%) methane. The generator connects to the GMO distribution system through an on-site step-up transformer. Division of Energy certified the St. Joseph Landfill Gas Facility as a renewable energy resource on August 3, 2012. The plant satisfies the relevant Missouri statutes and regulations to qualify as a renewable energy resource located within the State of Missouri and, therefore, GMO receives one and twenty-five hundredths (1.25) credit for each MWh generated by this in-state renewable energy facility.

Based on Staff's on-site observation of the facility, supplemented by review of test records and operating logs, Staff concluded that the generating unit has successfully met all of the in-service criteria and was fully operational and used for service by March 30, 2012.

The St. Joseph Landfill Gas Facility was deemed in-service March 30, 2012, by the Commission, at which time landfill gas fuel costs for it began to flow through GMO's FAC. Landfill gas costs that were included in the Review Period are $105,952.

On December 21, 2012, GMO filed in Case Nos. ER-2012-0175 and ER-2013-0341 an *Application for Waiver or Variance of 4 CSR 240-20.100(6)(A)(16) for St. Joseph Landfill Gas Facility and Motion for Expedited Treatment*. Rule 4 CSR 240-20.100(6)(A)(16) provides that RES compliance costs may only be recovered through a Renewable Energy Standard Rate Adjustment Mechanism ("RESRAM") or as part of a general rate proceeding, but not through a fuel adjustment clause. On December 28, 2012, Staff filed *Staff's Response to KCP&L Greater Missouri Operations Company's Application for Waiver or Variance of 4 CSR 240-20.100(6)(A)16 for St. Joseph Landfill Gas Facility*. In its response, Staff expressed that it did not oppose GMO's application for waiver because of GMO's commitment to work with the parties to resolve these issues before GMO files its next general electric rate case.

On January 3, 2013, the Commission issued an *Order Granting Waiver* with an effective date of January 4, 2013, granting GMO relief from Commission Rule 4 CSR 240-20.100(6)(A)(16) for purposes of Case Nos. ER-2012-0175 and ER-2013-0341, allowing GMO to temporarily flow its St. Joseph Landfill Gas Facility's gas fuel costs through its FAC rather than through a RESRAM or as part of a general rate proceeding. This allows GMO to recover RES compliance costs from the *St. Joseph Landfill Gas Facility* through its FAC. Paragraph 5, on Page 3, of GMO's application for the waiver requests that the words "landfill gas" be included in its tariff sheet implementing the relief. The tariff the Commission approved in GMO's rate case where it granted the relief includes the words "landfill gas."

The relief the Commission granted from Commission Rule 4 CSR 240-20.100(6)(A)(16), was a temporary fix that allowed time for all interested parties to come to agreement on a solution that complies with the Commission Rules. As part of the ER-2016-0156 general rate case, GMO agreed to exclude the landfill gas costs from the FAC when rates from the general rate case ER-2017-0156 went into effect. On November 8, 2016, GMO filed compliance tariff sheets intended to implement GMO's new rates established by the Commission-approved stipulation and agreement that resolved GMO's general rate case, Case No. ER-2016-0156. In an order issued on November 30, 2016, the Commission approved those compliance tariff sheets to become effective on December 22, 2016. Thereafter, GMO encountered technical problems and was unable to generate bills that accurately reflected the new rates. At the request of GMO, the Commission extended the effective date of the compliance tariff sheets until February 22, 2017, to allow GMO time to fix the technical problems. The substitute tariff sheets, effective February 22, 2017, that included the new rates are beyond the Review Period. Therefore, landfill gas costs were included in the FAC during the Review Period; however, from February 22, 2017 and thereafter, landfill gas costs have been excluded from the FAC.

**2. Summary of Cost Implications**

If GMO's use of the FAC to recover RES compliance costs was imprudent, ratepayer harm could result from an increase in FAC charges.

**3. Conclusion**

The Commission granted a waiver to GMO that provides relief from Commission Rule 4 CSR 240-20.100(6)(A)(16) that included the Review Period so that GMO can recover RES compliance costs from the *St. Joseph Landfill Gas Facility* through its FAC for this Review Period. Staff has found no indication that GMO has acted imprudently regarding the St. Joseph Landfill Gas Facility with respect to its FAC. Staff will continue to monitor this issue in future GMO FAC prudence audits.

**4. Documents Reviewed**

a. Staff DR No. 0051;

b. Staff Recommendation in File No. ER-2012-0175;

c. Waiver filings in File No. ER-2012-0175;

d. Compliance tariff sheets from ER-2017-0156; and

e. Workpapers from GMO FAC FAR Filing ER-2017-0357.

*Staff Expert/Witness: David C. Roos*

## O. Gray County Wind Purchased Power Agreement

### 1. Description

GMO has a long-term (15-year) Purchased Power Agreement ("PPA") with NextEra Energy Resources for energy and RECs generated by the Gray County Wind Farm located in Kansas. The contract is based on ** _____ ** of capacity that GMO (then known as Aquila, Inc.) began receiving in 2001. The Division of Energy certified the Gray County Wind farm as a renewable energy resource on November 23, 2011. During the Review Period, GMO retired some Gray County wind farm RECs to comply with RES requirements. The contract is a "take-or pay" contract (i.e., GMO has to receive and pay for the energy whether it needs the energy or not), which is a standard feature of many wind PPAs. The contract is for the energy and RECs generated by the wind farm. In its response to Staff Data Request No. 0057 GMO stated, ** ________________________________________ ________________________________________ ________________________________________ ** Costs for purchasing the electricity under the Gray County Wind PPA are ** ________ ** for June 1, 2015 through November 30, 2016.

### 2. Summary of Cost Implications Summary of Cost Implications

If GMO imprudently included RES compliance costs in its FAC calculations, resulting in increases to the Company's FARs, ratepayer harm could result from an increase in FAC charges.

### 3. Conclusions

Rule 4 CSR 240-20.090(1)(B) and (C), and GMO's FAC tariff allows for purchased power costs and revenues in FERC Account Number 555 to be recovered through the FAC. Staff found no indication that GMO imprudently included the Gray County Wind Farm PPA costs in the FAC.

### 4. Documents Reviewed

a. Staff DR Nos. 0002, 0057, 0060, 0061;

b. GMO 2015 Annual Renewable Energy Standard Compliance Plan;

c. GMO 2016 Annual Renewable Energy Standard Compliance Plan;

d. Staff Report in Case No. EO-2016-0281; and

e. Staff Report in Case No. EO-2017-0270.

*Staff Expert/Witness: David C. Roos*

## P. Ensign Wind Purchased Power Agreement

### 1. Description

The Division of Energy certified Ensign Wind Energy Center located in Kansas as a renewable energy resource on December 6, 2012. GMO has a long-term (20-year) PPA with NextEra Energy Resources for energy and RECs generated by the Ensign Wind Center beginning in November 2012. The contract is also a "take-or pay" contract for renewable wind energy and RECs and is based on a capacity of ** ________. ** During the Review Period, GMO retired some Ensign Wind Energy Center RECs to comply with RES requirements. In its response to Staff Data Request No. 0056 GMO stated, ** __________

________________________________________________________________________________

________________________________________________________________________________

_______________________ ** Costs for purchasing the electricity under the Ensign Wind Center PPA are ** __________ ** for June 1, 2015 through November 30, 2016.

### 2. Summary of Cost Implications

If GMO imprudently included RES compliance costs in its FAC calculations, ratepayer harm could result from an increase in FAC charges.

### 3. Conclusions

Rule 4 CSR 240-20.090(1)(B) and (C) and GMO's FAC tariff allows for purchase power costs and revenues in FERC Account Number 555 to be recovered through the FAC. Staff found no indication that GMO imprudently included the Ensign Wind Center PPA costs in its FAC calculations.

**4. Documents Reviewed**

a. Staff DR Nos. 0002, 0056, 0060, 0061;

b. GMO 2015 Annual Renewable Energy Standard Compliance Plan;

c. GMO 2016 Annual Renewable Energy Standard Compliance Plan;

d. Staff Report in Case No. EO-2016-0281; and

e. Staff Report in Case No. EO-2017-0270.

*Staff Expert/Witness: David C. Roos*

## Q. Osborn Wind Energy Purchased Power Agreement

**1. Description**

GMO has a long-term (20-year) PPA with NextEra Energy Resources for energy and RECs generated by the Osborn Wind Energy Center located in Missouri. The contract is based on ** _____ ** of capacity that GMO began receiving in December 2016, which is outside of the Review Period. The contract is a "take-or pay" contract (i.e., GMO has to receive and pay for the energy whether it needs the energy or not), which is a standard feature of many wind PPAs. The contract is for the energy and RECs generated by the wind farm. Since GMO began receiving energy in December 2016, there are no costs for purchasing the electricity under the Osborn Wind Energy PPA for June 1, 2015 through November 30, 2016.

**2. Summary of Cost Implications Summary of Cost Implications**

If GMO imprudently included costs from the Osborn Wind Energy PPA in its FAC calculations for the Review Period, resulting in increases to the Company's FARs, ratepayer harm could result from an increase in FAC charges.

**3. Conclusions**

Rule 4 CSR 240-20.090(1)(B) and (C), and GMO's FAC tariff allows for purchased power costs and revenues in FERC Account Number 555 to be recovered through the FAC. Staff found no indication that GMO imprudently included the Osborn Wind Energy PPA costs in the FAC.

### 4. Documents Reviewed

a. Staff DR Nos. 0002, 0057, 0058, 0060, 0061;

b. GMO 2015 Annual Renewable Energy Standard Compliance Plan;

c. GMO 2016 Annual Renewable Energy Standard Compliance Plan;

d. Staff Report in Case No. EO-2016-0281; and

e. Staff Report in Case No. EO-2017-0270.

*Staff Expert/Witness: David C. Roos*

## R. Purchased Power Costs

### 1. Description

GMO's FAC 3rd Revised Sheet No. 125 through 3rd Revised Sheet No. 126, effective January 26, 2013 Through February 21, 2017, defines the Purchased Power Costs ("PP") components as:

> PP = Purchased Power Costs:
>
> The following costs or revenues reflected in FERC Account Number 555: purchased power costs, capacity charges for capacity purchases less than 12 months in duration, energy charges from capacity purchases of any duration, settlements, insurance recoveries, and subrogation recoveries for purchased power expenses, virtual energy charges, generating unit price adjustments, load/export charges, energy position charges, ancillary services including penalty and distribution charges, hedging costs, broker commissions, fees, and margins, SPP EIS market charges, and SPP Integrated Market charges.

Staff has determined that GMO's total purchased power expense for the Review Period is $169,118,263, as shown previously in Table 3. More detail for the cost of Purchased Power is shown in Table 13 below.

**Table 13**

**

**

GMO had three long term purchase power agreements in affect at the start of the Review Period: Intercompany Purchases, WPE/ Gray County and Ensign Wind. Staff reviews the prudency of long term purchased power contracts during a general rate case as part of the determination of what generation plants and purchased power contracts should be input into Staff's fuel model. If a determination of imprudence is found, Staff determines the appropriate resource (e.g. generation plant and/or purchased power contract) to be used in the fuel model. Therefore, the prudency of entering into long-term purchased power contracts is a general rate case issue and not an FAC prudence review issue.

<u>Intercompany Purchases</u>

At certain times MPS will sell excess energy to L&P and at other certain times L&P will sell excess energy to MPS. The cost to purchase this energy is booked to Account 555. The revenue from the sale of energy is booked to Account 555.

<u>WPE/Gray County and Ensign Wind</u>

GMO had long term purchased power contracts with two wind farms during the Review Period. A further description of these contracts can be found in Section III.O. and P.

Non-firm Short Term Energy

Since SPP implemented the Integrated Market ("IM") on March 1, 2014, SPP has controlled the economic dispatch of GMO's generation. During times that GMO's load exceeds GMO's generation, GMO becomes a net purchaser in the SPP market. These SPP market purchases are from other electric suppliers to help meet GMO's load during times of forced or planned plant outages and during times when the market price is below both the marginal cost of providing that energy from GMO's generating units. Costs for the IM purchases are included as "Non-Firm Short Term Energy" in Tables 3 and 13. Further discussion of GMO's participation in these markets can be found in Section III.A. of this report.

Short Term Demand

Capacity charges for capacity purchases less than 12 months in duration are listed as Short Term Demand on Tables 3 and 13.

**2. Summary of Cost Implication**

IF GMO erred in booked costs from purchased power contracts or if GMO imprudently participated in the IM, ratepayer harm could result from an increase in costs collected through the FAC.

**3. Conclusion**

Staff found no indication of imprudence by GMO for purchasing short term capacity, booking long-term purchased power contracts**,** or purchasing energy in the SPP IM market.

Section III.A. of this report provides further discussion of how GMO met its load requirement during the Review Period.

**4. Documents Reviewed**

a. GMO's responses to Staff DR Nos. 0002, 0003, 0020, 0021, and 0023 issued in this case; and

b. Section III.A. of this report.

*Staff Experts/Witnesses: Matthew J. Barnes and David C. Roos*

## IV. INTEREST

### 1. Description

During each accumulation period, GMO is required to calculate a monthly interest amount based on GMO's short-term debt borrowing rate that is applied to the under-recovered or over-recovered fuel and purchased power costs. GMO's short-term debt rate is calculated using the daily one-month United States Dollar London Interbank Offered Rate ("LIBOR"), using the last previous actual rate for weekends and holidays or dates without an available LIBOR, and the Applicable Margin for Eurodollar Advances. A simple mathematical average of all the daily rates for the month is then computed. For the Review Period, GMO's interest amount applied to the under-recovered or over-recovered fuel and purchased power costs were negative $43,123 and negative 54,540 for MPS and L&P, respectively. The interest amount is component "I" of GMO's FAC.

### 2. Summary of Interest Implications

If GMO imprudently calculated the monthly interest amounts or used short-term debt borrowing rates that did not fairly represent the actual cost of GMO's short-term debt, ratepayers could be harmed by FAC charges that are too high.

### 3. Conclusion

Staff found no evidence GMO imprudently determined the monthly interest amount that was applied to the under-recovered or over-recovered fuel and purchased power costs.

### 4. Documents Reviewed

GMO's monthly interest calculation work papers in support of the interest calculation amount on the under-recovered or over-recovered balance.

*Staff Expert/Witness: Matthew J. Barnes*

**Appendix 1 -** Staff Credentials

**BEFORE THE PUBLIC SERVICE COMMISSION**

**OF THE STATE OF MISSOURI**

| | | |
|---|---|---|
| In the Matter of the Seventh Prudence Review of Costs Subject to the Commission-Approved Fuel Adjustment Clause of KCP&L Greater Missouri Operations Company | ) ) ) ) ) | Case No. EO-2017-0232 |

**AFFIDAVIT OF MATTHEW J. BARNES**

STATE OF MISSOURI )
) ss.
COUNTY OF COLE )

**COMES NOW MATTHEW J. BARNES** and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *PRUDENCE REVIEW OF COSTS RELATED TO THE FUEL ADJUSTMENT CLAUSE FOR THE ELECTRIC OPERATIONS OF KANSAS CITY POWER & LIGHT COMPANY GREATER MISSOURI OPERATIONS COMPANY*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

Matthew J. Barnes

**MATTHEW J. BARNES**

**JURAT**

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 25th day of August, 2017.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 12, 2020
Commission Number: 12412070

D Suzie Mankin

Notary Public

**BEFORE THE PUBLIC SERVICE COMMISSION**

**OF THE STATE OF MISSOURI**

| | | |
|---|---|---|
| In the Matter of the Seventh Prudence<br>Review of Costs Subject to the<br>Commission-Approved Fuel Adjustment<br>Clause of KCP&L Greater Missouri<br>Operations Company | )<br>)<br>)<br>)<br>) | Case No. EO-2017-0232 |

**AFFIDAVIT OF DANA E. EAVES**

| | | |
|---|---|---|
| STATE OF MISSOURI | ) | |
| | ) | ss. |
| COUNTY OF COLE | ) | |

**COMES NOW DANA E. EAVES** and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *PRUDENCE REVIEW OF COSTS RELATED TO THE FUEL ADJUSTMENT CLAUSE FOR THE ELECTRIC OPERATIONS OF KANSAS CITY POWER & LIGHT COMPANY GREATER MISSOURI OPERATIONS COMPANY*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

Dana E. Eaves

**DANA E. EAVES**

**JURAT**

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 25th day of August, 2017.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 12, 2020
Commission Number: 12412070

D Suzie Mankin

Notary Public

**BEFORE THE PUBLIC SERVICE COMMISSION**

**OF THE STATE OF MISSOURI**

| | | |
|---|---|---|
| In the Matter of the Seventh Prudence Review of Costs Subject to the Commission-Approved Fuel Adjustment Clause of KCP&L Greater Missouri Operations Company | ) ) ) ) ) | Case No. EO-2017-0232 |

**AFFIDAVIT OF J LUEBBERT**

STATE OF MISSOURI )
) ss.
COUNTY OF COLE )

**COMES NOW J LUEBBERT** and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *PRUDENCE REVIEW OF COSTS RELATED TO THE FUEL ADJUSTMENT CLAUSE FOR THE ELECTRIC OPERATIONS OF KANSAS CITY POWER & LIGHT COMPANY GREATER MISSOURI OPERATIONS COMPANY*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

J Luebbert

**J LUEBBERT**

**JURAT**

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 25th day of August, 2017.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 12, 2020
Commission Number: 12412070

D Suzie Mankin

Notary Public

**BEFORE THE PUBLIC SERVICE COMMISSION**

**OF THE STATE OF MISSOURI**

| | | |
|---|---|---|
| In the Matter of the Seventh Prudence Review of Costs Subject to the Commission-Approved Fuel Adjustment Clause of KCP&L Greater Missouri Operations Company | ) ) ) ) ) | Case No. EO-2017-0232 |

**AFFIDAVIT OF DAVID C. ROOS**

STATE OF MISSOURI )
) ss.
COUNTY OF COLE )

**COMES NOW DAVID C. ROOS** and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *PRUDENCE REVIEW OF COSTS RELATED TO THE FUEL ADJUSTMENT CLAUSE FOR THE ELECTRIC OPERATIONS OF KANSAS CITY POWER & LIGHT COMPANY GREATER MISSOURI OPERATIONS COMPANY*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

**DAVID C. ROOS**

**JURAT**

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 25th day of August, 2017.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 12, 2020
Commission Number: 12412070

Notary Public

# MATTHEW J. BARNES

## Educational and Employment Background and Credentials

I am a Utility Regulatory Auditor IV in the Water and Sewer Department, Commission Staff Division for the Missouri Public Service Commission. I was promoted to Utility Regulatory Auditor IV in the Energy Resources Department, Commission Staff Division for the Missouri Public Service Commission in June 2008. I accepted the position of Utility Regulatory Auditor I/II/III in June 2003. I transferred to the position of Utility Regulatory Auditor IV in the Water and Sewer Department in June 2016.

In December 2002, I earned a Bachelor of Science Degree in Business Administration with an Emphasis in Accounting from Columbia College. In May 2005, I earned a Masters in Business Administration with an Emphasis in Accounting from William Woods University.

### RATE CASE PARTICIPATION

| Date Filed | Issue | Case Number | Exhibit | Case Name |
|---|---|---|---|---|
| 09/08/2004 | Merger with TXU Gas | GM20040607 | Staff Recommendation | Atmos Energy Corporation |
| 10/15/2004 | Rate of Return | TC20021076 | Supplemental Direct | BPS Telephone Company |
| 06/28/2005 | Finance Recommendation | EF20050387 | Staff Recommendation | Kansas City Power and Light Company |
| 06/28/2005 | Finance Recommendation | EF20050388 | Staff Recommendation | Kansas City Power and Light Company |
| 08/31/2005 | Finance Recommendation | EF20050498 | Staff Recommendation | Kansas City Power and Light Company |
| 11/15/2005 | Spin-off of landline operations | IO20060086 | Rebuttal | Sprint Nextel Corporation |
| 03/08/2006 | Spin-off of landline operations | TM20060272 | Rebuttal | Alltel Missouri, Inc. |

| Date Filed | Issue | Case Number | Exhibit | Case Name |
|---|---|---|---|---|
| 08/08/2006 | Rate of Return | ER20060314 | Direct | Kansas City Power & Light Company |
| 09/08/2006 | Rate of Return | ER20060314 | Rebuttal | Kansas City Power & Light Company |
| 09/13/2006 | Rate of Return | GR20060387 | Direct | Atmos Energy Corporation |
| 10/06/2006 | Rate of Return | ER20060314 | Surrebuttal | Kansas City Power & Light Company |
| 11/07/2006 | Rate of Return | ER20060314 | True-Up Direct | Kansas City Power & Light Company |
| 11/13/2006 | Rate of Return | GR20060387 | Rebuttal | Atmos Energy Corporation |
| 11/23/2006 | Rate of Return | GR20060387 | Surrebuttal | Atmos Energy Corporation |
| 12/01/2006 | Rate of Return | WR20060425 | Direct | Algonquin Water Resources of Missouri LLC |
| 12/28/2006 | Rate of Return | WR20060425 | Rebuttal | Algonquin Water Resources of Missouri LLC |
| 01/12/2007 | Rate of Return | WR20060425 | Surrebuttal | Algonquin Water Resources of Missouri LLC |
| 02/07/2007 | Finance Recommendation | GF20070220 | Staff Recommendation | Laclede Gas Company |
| 05/04/2007 | Rate of Return | GR20070208 | Direct | Laclede Gas Company |

# MATTHEW J. BARNES

RATE CASE PARTICIPATION cont'd

| Date Filed | Issue | Case Number | Exhibit | Case Name |
|---|---|---|---|---|
| 07/24/2007 | Rate of Return | ER20070291 | Direct | Kansas City Power and Light Company |
| 08/30/2007 | Rate of Return | ER20070291 | Rebuttal | Kansas City Power and Light Company |
| 09/20/2007 | Rate of Return | ER20070291 | Surrebuttal | Kansas City Power and Light Company |
| 11/02/2007 | Rate of Return | ER20070291 | True-up Direct | Kansas City Power and Light Company |
| 02/01/2008 | Finance Recommendation | EF20080214 | Staff Recommendation | Kansas City Power and Light Company |
| 02/22/2008 | Rate of Return | ER20080093 | Cost of Service Report | The Empire District Electric Company |
| 04/04/2008 | Rate of Return | ER20080093 | Rebuttal Testimony | The Empire District Electric Company |
| 04/25/2008 | Rate of Return | ER20080093 | Surrebuttal Testimony | The Empire District Electric Company |
| 08/18/2008 | Rate of Return | WR20080311 | Cost of Service Report | Missouri-American Water Company |
| 09/30/2008 | Rate of Return | WR20080311 | Rebuttal Testimony | Missouri-American Water Company |
| 10/16/2008 | Rate of Return | WR2008031 | Surrebuttal Testimony | Missouri-American Water Company |
| 02/26/2010 | Fuel Adjustment Clause | ER20100130 | Cost of Service Report | The Empire District Electric Company |

## MATTHEW J. BARNES

RATE CASE PARTICIPATION cont'd

| Date Filed | Issue | Case Number | Exhibit | Case Name |
|---|---|---|---|---|
| 04/02/2010 | Fuel Adjustment Clause | ER20100130 | Rebuttal Testimony | The Empire District Electric Company |
| 04/23/2010 | Fuel Adjustment Clause | ER20100130 | Surrebuttal Testimony | The Empire District Electric Company |
| 02/23/11 | Fuel Adjustment Clause | ER20110004 | Cost of Service Report | The Empire District Electric Company |
| 04/22/11 | Fuel Adjustment Clause | ER20110004 | Rebuttal Testimony | The Empire District Electric Company |
| 04/28/11 | Fuel Adjustment Clause | ER20110004 | Surrebuttal Testimony | The Empire District Electric Company |
| 05/06/11 | Fuel Adjustment Clause | ER20110004 | True-up Direct Testimony | The Empire District Electric Company |
| 10/21/11 | Costs for the Phase-In Tariffs | ER20120024 | Direct Testimony | KCP&L Greater Missouri Operations Company |
| 11/17/11 | Rate of Return | WR20110337 | Cost of Service Report | Missouri-American Water Company |
| 08/09/12 | Fuel Adjustment Clause | ER20120175 | Staff Report | KCP&L Greater Missouri Operations Company |
| 09/12/12 | Fuel Adjustment Clause | ER20120175 | Rebuttal Testimony | KCP&L Greater Missouri Operations Company |
| 10/10/12 | Fuel Adjustment Clause | ER20120175 | Surrebuttal Testimony | KCP&L Greater Missouri Operations Company |
| 11/30/12 | Fuel Adjustment Clause | ER20120345 | Cost of Service Report | The Empire District Electric Company |

# MATTHEW J. BARNES

RATE CASE PARTICIPATION cont'd

| Date Filed | Issue | Case Number | Exhibit | Case Name |
|---|---|---|---|---|
| 12/13/14 | Fuel Adjustment Clause | ER20120345 | Class Cost of Service Report | The Empire District Electric Company |
| 01/16/13 | Fuel Adjustment Clause | ER20120345 | Rebuttal Testimony | The Empire District Electric Company |
| 02/14/13 | Fuel Adjustment Clause | ER20120345 | Surrebuttal Testimony | The Empire District Electric Company |
| 12/05/14 | Fuel Adjustment Clause | ER20140258 | Cost of Service Report | Ameren Missouri |
| 12/19/14 | Fuel Adjustment Clause | ER20140258 | Class Cost of Service Report | Ameren Missouri |
| 01/16/15 | Fuel Adjustment Clause | ER20140258 | Rebuttal Testimony | Ameren Missouri |
| 02/06/15 | Fuel Adjustment Clause | ER20140258 | Surrebuttal Testimony | Ameren Missouri |
| 03/17/15 | Fuel Adjustment Clause | ER20140258 | True-up Direct Testimony | Ameren Missouri |

# DANA E. EAVES
## CAREER EXPERIENCE

### Missouri Public Service Commission, Jefferson City, Missouri

**Utility Regulatory Auditor V -** May 16, 2017 – Present

**Utility Regulatory Auditor IV -** January 1, 2013 – May 15, 2017

**Utility Regulatory Auditor III -** April 23, 2003– December 31, 2012

**Utility Regulatory Auditor II -** April, 2002 – April, 2003

**Utility Regulatory Auditor I -** April, 2001 – April, 2002

Perform rate audits and prepare miscellaneous filings as ordered by the Commission. Review all exhibits and testimony on assigned issues from the most recent previous case and the current case. Develop accounting adjustments and issue positions which are supported by workpapers and written testimony. Prepare Staff Recommendation Memorandum for filings that do not require prepared testimony. As a Utility Regulatory Auditor V, in the Energy Resource Department, Commission Staff Division, I am the lead Auditor for Fuel Adjustment Clause Prudence Reviews and Missouri Energy Efficiency Investment Act Prudence Reviews and perform other tasks as assigned by management. I have testified under cross-examination as an expert witness for litigated rate cases.

### Midwest Block and Brick, Jefferson City, Missouri

| | |
|---|---|
| **Accountant** | December 2000 – March 2001 |
| **CIS/Accounting Assistant** | July 2000 – December 2000 |

### Practice Management Plus, Inc., Jefferson City, Missouri

| | |
|---|---|
| **Vice President Operations** | October 1998 – May 2000 |

### Capital City Medical Associates (CCMA), Jefferson City, Missouri

| | |
|---|---|
| **Director of Finance** | March, 1995-October, 1998 |

## ADDITIONAL EXPERIENCE

| | |
|---|---|
| Wright Camera Shop/Sales | 1987-1995 |
| Movies To Go, Inc./Store Manager | 1984-1987 |
| Butler Shoe Corp./Store Manager | 1982-1984 |
| Southeastern Illinois College/Student | 1979-1982 |
| Kassabaum's Bicycle Shop/Store Manager | 1977-1979 |

## EDUCATION

**Bachelor of Science, Business Administration; Emphasis Accounting** (1995)

COLUMBIA COLLEGE, JEFFERSON CITY, MO

## CASE PROCEEDING PARTICIPATION

### DANA E. EAVES

| PARTICIPATION | | TESTIMONY |
|---|---|---|
| **COMPANY** | **CASE NO.** | **ISSUES** |
| Empire District Electric Company | EO-2017-0065 | Risk Management |
| Ameren Missouri | ER-2016-0179 | Fuel Adjustment Clause |
| KCP&L GMO | ER-2016-0156 | Fuel Adjustment Clause |
| KCP&L | EO-2016-0183 | MEEIA Prudence Review |
| KCPL GMO | EO-2015-0180 | MEEIA Prudence Review<br>Program costs and TD-NSB Share, Software system costs, Contractors, Interest Costs |
| Ameren Missouri | EO-2015-0029 | MEEIA Prudence Review<br>Program costs and TD-NSB Share, Software system costs, Contractors, Interest Costs |
| Empire District Electric Company | EO-2014-0057 | FAC Prudence Review<br>Risk Management |
| AmerenUE | EO-2013-0407 | FAC Prudence Review<br>Risk Management |
| KCP&L Greater Missouri Operations (GMO) | EO-2013-0325 | FAC Prudence Review<br>Purchased Power Agreements & Costs, Hourly weighted Transfer Pricing, Off-system sales revenue |
| Empire District Electric Company | EO-2013-0114 | FAC Prudence Review<br>Financial Hedges, Off-system sales revenue |
| Ameren Missouri | EO-2012-0074 | FAC Prudence Review<br>Direct/Rebuttal Requirements Contracts |
| KCP&L Greater Missouri Operations (GMO) | EO-2011-0390 | FAC Prudence Review<br>Direct/Rebuttal Hedging Purchased Power |

| PARTICIPATION | | TESTIMONY |
|---|---|---|
| **COMPANY** | **CASE NO.** | **ISSUES** |
| Empire District Electric Company | EO-2011-0285 | FAC Prudence Review<br>FAC Components |
| AmerenUE | EO-2010-0255 | FAC Prudence Review<br>Direct/Rebuttal Requirements Contracts |
| Empire District Electric Company | EO-2010-0084 | FAC Prudence Review<br>Fuel Cost, Off-System Sales, Interest Cost |
| Missouri American Water Company | WR-2008-0311 | Surrebuttal; Pension and Other Post-Retirement Employee Benefits Costs, Annual Incentive Plan Pay-out Based Upon Meeting Financial Goals and Customer Satisfaction Survey, Labor and Labor-Related Expenses, Rate Case Expenses, Insurance Other than Group, and Waste Disposal Expense |
| Empire District Electric Company | ER-2008-0093 | Fuel and Purchased Power, Fuel Inventories, FAS 87 (pension), FAS 106 (OPEBS), Expenses and Regulatory Assets, Off System Sales, Transmission Revenue, SO2 Allowances, Maintenance Expense |
| Laclede Gas Company | GR-2007-0208 | Accounting Schedules Reconciliation |
| Aquila, Inc d/b/a Aquila Networks-MPS & L&P | ER-2007-0004 | Payroll Expense, Payroll Taxes and Employee Benefits |
| Empire District Electric Company | ER-2006-0315 | Direct - Jurisdictional Allocations Factors, Revenue, Uncollectible Expense, Pensions, Prepaid Pension Asset, Other Post-Employment Benefits<br>Rebuttal - Updated: Pension Expense, Updated Prepaid Pension Asset, OPEB’s Tracker, Minimum Pension Liability |

| PARTICIPATION | | TESTIMONY |
|---|---|---|
| **COMPANY** | **CASE NO.** | **ISSUES** |
| Missouri Gas Energy (Gas) | GR-2004-0209 | Direct – Cash Working Capital, Payroll, Payroll Taxes, Incentive Compensation, Bonuses, Materials and Supplies, Customer Deposits and Interest, Customer Advances and Employee Benefits<br>Surrebuttal – Incentive Compensation |
| Aquila, Inc. d/b/a Aquila Networks-MPS & L&P (Natural Gas) | GR-2004-0072 | Direct - Payroll Expense, Employee Benefits, Payroll Taxes<br>Rebuttal – Payroll Expense, Incentive Compensation, Employer Health, Dental and Vision Expense |
| Aquila, Inc. d/b/a Aquila Networks-MPS (Electric) | ER-2004-0034 | Direct - Payroll Expense, Employee Benefits, Payroll Taxes<br>Rebuttal – Payroll Expense, Incentive Compensation, Employer Health, Dental and Vision Expense |
| Aquila, Inc. d/b/a Aquila Networks-L&P (Electric & Steam) | HR-2004-0024 | Direct - Payroll Expense, Employee Benefits, Payroll Taxes |
| Osage Water Company | ST-2003-0562<br>WT-2003-0563 | Direct - Plant Adjustment, Operating & Maintenance Expense Adjustments |
| Empire District Electric Company | ER-2002-0424 | Direct - Cash Working Capital, Property Tax, Tree Trimming, Injuries and Damages, Outside Services, Misc. Adjustments |
| Citizens Electric Corporation | ER-2002-0297 | Direct - Depreciation Expense, Accumulated Depreciation, Customer Deposits, Material & Supplies, Prepayments, Property Tax, Plant in Service, Customer Advances in Aid of Construction |
| UtiliCorp United Inc, d/b/a Missouri Public Service | ER-2001-672 | Direct - Advertising, Customer Advances, Customer Deposits, Customer Deposit Interest Expense, Dues and Donations, Material and Supply, Prepayments, PSC Assessment, Rate Case Expense |

## PROCEEDING PARTICIPATION

## DANA E. EAVES

| PARTICIPATION – No direct testimony filed or NON-Case (Informal) proceeding | | |
|---|---|---|
| **COMPANY** | **CASE or Tracking No.** | **ISSUES** |
| Osage Water Company<br>Camden County Circuit Court | APCV102627CC | Legal Fees |
| RDG Sanitation | SA-2010-0096 | Certificate Case |
| Mid Mo Sanitation | SR-2009-0153 | Informal General Rate Case |
| Highway H Utilities, Inc. | SR-2009-0392<br>and<br>WR-2009-0393 | Informal General Rate Case<br>Lead Auditor |
| Osage Water Company | SR-2009-0149<br>WR-2009-0152 | General Rate Case<br>Lead Auditor |
| Hickory Hills | SR-2009-0151<br>WR-2009-0154 | General Rate Case<br>Lead Auditor |
| Missouri Utilities | SR-2009-0153<br>WR-2009-0150 | General Rate Case<br>Lead Auditor |
| Roy L. Utilities | QS-2008-0001<br>and<br>QW-2008-0002 | General Informal Rate Case<br>Lead Auditor |
| IH Utilities, Inc. | QW-2007-0003 | General Rate Case<br>Lead Auditor |
| W.P.C. Sewer Company | QS-2007-0005 | Rate Case<br>Lead Auditor |
| West 16$^{th}$ Street Sewer Company, Inc. | QS-2007-0004 | Rate Case<br>Lead Auditor |

| PARTICIPATION – No direct testimony filed or NON-Case (Informal) proceeding | | |
|---|---|---|
| **COMPANY** | **CASE or Tracking No.** | **ISSUES** |
| Gladlo Water & Sewer Company, Inc. | QS-2007-0001 and QW-2007-0002 | Rate Case<br>Lead Auditor<br>Supervised: Kofi Boateng |
| Taneycomo Highlands, Inc. | QS-2006-0004 | Rate Case<br>Lead Auditor |
| Empire District Electric | QW-2005-0013 | Informal General Rate Case |
| Cass County Telephone Company | TO-2005-0237 | Cash Flow Analysis, LEC Invoices, Bank Reconciliations, Expense Analysis |
| LTA Water Company | WM-2005-0058 | Merger Case with Missouri American<br>Main Issue: Plant Valuation<br>Lead Auditor |
| Noel Water Company, Inc. | QW-2005-0002 | Rate Case<br>Lead Auditor<br>Supervised: Kofi Boateng |
| Suburban Water and Sewer Company, Inc. | QW-2005-0001 | Rate Case<br>Lead Auditor<br>Supervised: Kofi Boateng |
| Osage Water Company | WC-2003-0134 | Customer Refund Review |
| Noel Water Company, Inc. | QW-2003-0022 | Rate Case<br>Lead Auditor<br>Supervised: Trisha Miller |
| AquaSource | WR-2003-0001 and SR-2003-0002 | Plant in Service, Construction Work in Progress, Payroll, Depreciation Expense |
| Warren County Water and Sewer Company | WC-2002-155 | Pump Repair/replacement, Revenue, Salary |
| Environmental Utilities, LLC | WA-2002-65 | Certificate Case |
| Meadows Water Company | WR-2001-966 and SR-2001-967 | Expense Items |

## Credentials and Background of

## J Luebbert

I have a Bachelor of Science degree in Biological Engineering from the University of Missouri. My work experience includes three years of regulatory work as an Environmental Engineer II for the Air Pollution Control Program of the Missouri Department of Natural Resources.

I am currently employed as a Utility Engineering Specialist III in the Energy Resources Department of the Commission Staff Division of the Missouri Public Service Commission. I have been employed at the Missouri Public Service Commission since March 2016 and am responsible for preparing staff recommendations regarding electric utility resource planning, demand-side management programs, and fuel adjustment clauses.

| **Case Number** | **Company** | **Issues** |
|---|---|---|
| EO-2016-0228 | Ameren Missouri | Utilization of Generation Capacity, Plant Outages, and Demand Response Program |
| ER-2016-0179 | Ameren Missouri | Heat Rate Testing |
| ER-2016-0285 | Kansas City Power & Light Company | Heat Rate Testing |
| EO-2017-0065 | Empire District Electric | Utilization of Generation Capacity and Station Outages |

# David C. Roos

**Present Position:** I am a Regulatory Economist III in the Energy Resource Department, Commission Staff Division of the Missouri Public Service Commission.

**Educational Background and Work Experience:**

In May 1983, I graduated from the University of Notre Dame, Notre Dame, Indiana, with a Bachelor of Science Degree in Chemical Engineering. I also graduated from the University of Missouri in December 2005, with a Master of Arts in Economics. I have been employed at the Missouri Public Service Commission as a Regulatory Economist III since March 2006. I began my employment with the Commission in the Economics Analysis section where my responsibilities included class cost of service and rate design. In 2008, I moved to the Energy Resource Analysis section where my testimony and responsibility topics include energy efficiency, resource analysis, and fuel adjustment clauses. Prior to joining the Public Service Commission I taught introductory economics and conducted research as a graduate teaching assistant and graduate research assistant at the University of Missouri. Prior to the University of Missouri, I was employed by several private firms where I provided consulting, design, and construction oversight of environmental projects for private and public sector clients.

## Previous Cases

| Company | Case No. |
|---|---|
| Empire District Electric Company | ER-2006-0315 |
| AmerenUE | ER-2007-0002 |
| Aquila Inc. | ER-2007-0004 |
| Kansas City Power and Light Company | ER-2007-0291 |
| AmerenUE | EO-2007-0409 |
| Empire District Electric Company | ER-2008-0093 |
| Kansas City Power and Light Company | ER-2008-0034 |
| Greater Missouri Operations | HR-2008-0340 |

## Previous Cases

| Company | Case No. |
|---|---|
| Greater Missouri Operations | ER-2009-0091 |
| Greater Missouri Operations | EO-2009-0115 |
| Greater Missouri Operations | EE-2009-0237 |
| Greater Missouri Operations | EO-2009-0431 |
| Empire District Electric Company | ER-2010-0105 |
| Greater Missouri Operations | EO-2010-0002 |
| AmerenUE | ER-2010-0036 |
| AmerenUE | ER-2010-0044 |
| Empire District Electric Company | EO-2010-0084 |
| Empire District Electric Company | ER-2010-0105 |
| AmerenUE | ER-2010-0165 |
| Greater Missouri Operations | EO-2010-0167 |
| AmerenUE | EO-2010-0255 |
| Greater Missouri Operations (Aquila) | EO-2008-0216 |
| Ameren Missouri | ER-2011-0028 |
| Empire District Electric Company | EO-2011-0066 |
| Empire District Electric Company | EO-2011-0285 |
| Ameren Missouri | EO-2012-0074 |
| Greater Missouri Operations | EO-2012-0009 |
| Ameren Missouri | EO-2012-0142 |
| Ameren Missouri | ER-2012-0166 |
| Greater Missouri Operations | EO-2013-0325 |
| Ameren Missouri | EO-2013-0407 |
| Empire District Electric Company | EO-2014-0057 |
| Greater Missouri Operations | EO-2014-0256 |
| Empire District Electric Company | ER-2014-0351 |
| Greater Missouri Operations | EO-2015-0252 |
| Kansas City Power and Light Company | EO-2015-0254 |
| Empire District Electric Company | ER-2015-0214 |
| Greater Missouri Operations | EO-2016-0053 |
| Empire District Electric Company | ER-2016-0023 |
| KCP&L Greater Missouri Operations Company | ER-2016-0156 |
| KCPL | ER-2016-0285 |
| Empire District Electric Company | EO-2017-0065 |