

**PRUDENCE REVIEW OF COSTS  
RELATED TO THE FUEL ADJUSTMENT CLAUSE  
FOR THE ELECTRIC OPERATIONS  
OF  
KCP&L GREATER MISSOURI OPERATIONS COMPANY**

**June 1, 2012 through November 30, 2013**

**MISSOURI PUBLIC SERVICE COMMISSION  
STAFF REPORT**

**FILE NO. EO-2014-0242**

*Jefferson City, Missouri  
August 29, 2014*

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

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# Prudence Review of Costs Report

## I. Executive Summary

The Missouri Public Service Commission (“Commission”) first authorized a Fuel Adjustment Clause (“FAC”) for Aquila, Inc. (“Aquila”) 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”).<sup>1</sup> This acquisition became effective July 14, 2007. Since then, 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, and Case No. ER-2012-0175.

Commission Rule 4 CSR 240-20.090(7) and Missouri Revised Statute § 386.266.4(2013) 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 costs for fuel; purchased power; net emissions allowances; transmission costs; off-system sales revenue; and renewable energy credit revenue for the eleventh, twelfth, and thirteenth six-month accumulation periods of GMO’s FAC (“prudence review period”). The eleventh accumulation period started June 1, 2012 and ended November 30, 2012; the twelfth accumulation period started December 1, 2012 and ended May 31, 2013; and the thirteenth accumulation period started June 1, 2013 and ended November 30, 2013. Thus, the 18-month prudence review period that is documented in this Prudence Review Report is from June 1, 2012 through November 30, 2013. This is Staff’s fifth Prudence Review Report for GMO’s FAC.

Staff filed its first Prudence Review Report in File No. EO-2009-0115. That report covered the first two six-month accumulation periods of GMO’s FAC— June 1, 2007 through May 31, 2008. Staff filed its second Prudence Review Report in File No. EO-2010-0167.

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<sup>1</sup> 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.”

That report covered the third and fourth six-month accumulation periods of GMO'S FAC— June 1, 2008 through May 31, 2009. Staff filed its third Prudence Review Report in File No. EO-2011-0390. That report covered the fifth, sixth, and seventh six-month accumulation periods of GMO's FAC— June 1, 2009 through November 30, 2010. Staff filed its fourth Prudence Review Report in File No. EO-2013-0325. That report covered the eighth, ninth, and tenth six-month accumulation periods of GMO's FAC— December 1, 2010 through May 31, 2012.

In evaluating prudence, Staff reviews whether a reasonable person making the same decision would find both the information the decision-maker relied on and the process the decision-maker employed 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 prudently incurred the 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, 2012, through November 30, 2013.

## **II. Introduction**

### **A. General Description of GMO's FAC**

Table 1 identifies GMO's Commission-approved FAC tariff sheets which were applicable for service provided by GMO to its customers during the period June 1, 2012 through November 30, 2013:

**Table 1**

<b>June 1, 2012 through January 25, 2013</b>	<b>January 26, 2013 through November 30, 2013</b>
1st Revised Sheet No. 127.6	2nd Revised Sheet No. 124
1st Revised Sheet No. 127.7	2nd Revised Sheet No. 125
1st Revised Sheet No. 127.8	2nd Revised Sheet No. 126
1st Revised Sheet No. 127.9	Original Sheet No. 126.1
	Original Sheet No. 126.2

For each accumulation period (“AP”),<sup>2</sup> 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.”<sup>3</sup> Actual net energy costs are defined as the prudently incurred variable fuel, purchased power, transmission costs and net emissions costs minus off-system sales revenue and renewable energy credit revenue minus the base energy cost amount. GMO accumulates variable fuel, purchased power, transmission costs and net emissions costs plus off-system sales revenue and renewable energy credit revenue 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)<sup>4</sup> during the previous six-month accumulation period relative to the base factor amount<sup>5</sup> 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 over- or under-recovery for a given AP by the end of the twelve-month recovery period

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<sup>2</sup> Accumulation periods are: June through November and December through May.

<sup>3</sup> “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 2<sup>nd</sup> Revised Sheet No. 125 and 126.

<sup>4</sup> See section IV. Interest of this Prudence Review Report.

<sup>5</sup> 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.

(“RP”).<sup>6</sup> 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<sup>7</sup> 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 in that case, the Court did not criticize the Commission’s definition of prudence, but held, in part, that to disallow a utility's recovery of costs from its ratepayers based on imprudence, the Commission must determine the detrimental impact of that imprudence on the utility’s ratepayers. *Id.* at 529-30. This is the prudence standard Staff has followed in this review. Staff reviewed for prudence the areas identified and discussed below for GMO’s eleventh, twelfth, and thirteenth six-month accumulation periods.

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<sup>6</sup> Recovery periods are: March through February and September through August.

<sup>7</sup> See definition of variable C on GMO’s P.S.C.MO. No. 1, 1<sup>st</sup> Revised Sheet No. 127.8.

### III. Fuel, Purchased Power Costs, Emission Allowances and Revenues

GMO's FAC includes three major components of costs: fuel costs, purchased power costs, and net emission allowances costs. It also includes two components of revenue: off-system sales revenue and renewable energy credit revenue. Table 2 is a breakdown of GMO's fuel costs, purchased power costs, net emission allowance costs, off-system sales revenue, and renewable energy credit revenue for the period of June 1, 2012 through November 30, 2013:

<b>Table 2</b> <b>Highly Confidential</b>			
	<b>GMO</b>	<b>Percentage of</b>	<b>Percentage of</b>
	<b>Costs or Revenues</b>	<b>Component</b>	<b>Total</b>
			<b>FC, CPP &amp; E</b>
<b>Cost (FC)</b>			
Coal	**	93%	49%
Oil	**	1%	0%
Biofuels	**	0%	0%
Natural Gas	**	10%	5%
Gas Hedges	**	3%	2%
Steam Allocation	**	-6%	-3%
<b>Total FC</b>	**	100%	53%
<b>Cost of Purchased Power (CPP)</b>			
Firm Long Term Contracts	**	31%	14%
Non Firm Short Term Energy	**	68%	32%
Short Term Demand	**	1%	1%
<b>Total CPP</b>	**	100%	47%
<b>Net Emission Allowances (E)</b>	**	100%	0.43%
<b>Total FC, CPP &amp; E</b>	**		100%
<i>less</i> Off-System Sales Revenue	**	100%	3%
<i>less</i> Renewable Energy Credit Revenue	**	0%	0%
<b>Net Fuel Cost</b>	**		

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Table 3 is a breakdown of GMO's fuel costs, net emission allowance costs, purchased power costs, off-system sales revenue, and renewable energy credit revenue for the period of June 1, 2012 through November 30, 2013, separately for its MPS and L&P rate districts:

<b>Table 3</b> <b>Highly Confidential</b>							
	<b>MPS</b>		<b>Percentage</b>	<b>Percentage</b>	<b>L&amp;P</b>		<b>Percentage</b>
	<b>Cost or Revenues</b>		<b>of</b>	<b>of Total</b>	<b>Cost or Revenues</b>		<b>of</b>
			<b>Component</b>	<b>FC, CPP</b>			<b>Component</b>
				<b>&amp; E</b>			<b>of Total</b>
							<b>FC , CPP &amp; E</b>
<b>Fuel Cost (FC)</b>							
Coal	**	**	88%	53%	**	**	109%
Oil	**	**	0%	0%	**	**	2%
Biofuels	**	**	0%	0%	**	**	0%
Natural Gas	**	**	7%	4%	**	**	17%
Gas Hedges	**	**	4%	3%	**	**	0%
Steam Allocation	**	**	0%	0%	**	**	-28%
<b>Total FC</b>	**	**	100%	60%	**	**	100%
<b>Cost of Purchased Power (CPP)</b>							
Firm Long Term Contracts	**	**	29%	12%	**	**	32%
Non Firm Short Term Energy	**	**	70%	28%	**	**	65%
Short Term Demand	**	**	1%	0%	**	**	2%
<b>Total CPP</b>	**	**	100%	39%	**	**	100%
<b>Net Emission Allowances (E)</b>	**	**	100%	0.33%	**	**	100%
<b>Total FC, CPP &amp; E</b>	**	**		100%	**	**	100%
<b>less Off-System Sales Revenue</b>	**	**	100%	3%	**	**	100%
<b>less Renewable Energy Credit Revenue</b>	**	**	0%	0%	**	**	0%
<b>Net Fuel Cost</b>	**	**			**	**	



## **A. Utilization of Generation Capacity**

### **1. Description**

GMO has enough base and peaking generation to meet its native load and reserve margin requirements, but it will purchase power based upon reliability and economic considerations. The following generating station units provided base load energy during the prudence review period: Sibley 1, 2, and 3; Lake Road 2 and 4; Jeffrey Energy Center 1, 2, and 3; Iatan 1 and 2; and St. Joseph Light & Power Landfill Gas. GMO's remaining units provided intermediate and peak energy and include Crossroads 1, 2, 3 and 4; Greenwood 1, 2, 3 and 4; KCI 1 and 2; Lake Road 1, 3, 5, 6 and 7; Nevada 1; Ralph Green 3; and South Harper 1, 2, and 3. Table 4 summarizes GMO's Generation Capacity.

Table 4  
A Summary GMO's Generation Capacity

Unit	Commercial	Retirement	Ownership	Partner	Type	Generating
	Date of	Expected	Percent	Operating	Unit Type, PM *,	Net
Name	Operation	Date			PM Fuel Type**	Capacity, MW
Sibley #1	1960	2020	100	N/A	Base, ST, Bituminous, PRB Coal	47.7
Sibley #2	1962	2020	100	N/A	Base, ST, Bituminous, PRB Coal	50.6
Sibley #3	1969	2030	100	N/A	Base, ST, Bituminous, PRB Coal and TDF	363.8
Jeffrey #1	1978	2040	8	Westar	Base, ST, PRB Coal	57.44
Jeffrey #2	1980	2040	8	Westar	Base, ST, PRB Coal	57.2
Jeffrey #3	1983	2040	8	Westar	Base, ST, PRB Coal	57.76
Lake Road #4	1967	2030	100	N/A	Base, ST, Bituminous, PRB Coal and TDF	93.0
Iatan #1	1980	2040	18	KCPL	Base, ST, PRB Coal	127.0
Iatan #2	2010	2070	18	KCPL	Base, ST, PRB Coal	158.6
SJLP Landfill Gas	03/09/2012	2032	100	N/A	Base, RGE, Methane Gas	1.6
Ralph Green #3	1981	2030	100	N/A	Peaking, CT, Natural Gas	70.5
Greenwood #1	1975	2030	100	N/A	Peaking, CT, Natural Gas	63.6
Greenwood #2	1975	2030	100	N/A	Peaking, CT, Natural Gas	63.4
Greenwood #3	1977	2030	100	N/A	Peaking, CT, Natural Gas	63.7
Greenwood #4	1979	2030	100	N/A	Peaking, CT, Natural Gas	62.2
Crossroad #1	2002	2037	100	N/A	Peaking, CT, Natural Gas	75.4
Crossroad #2	2002	2037	100	N/A	Peaking, CT, Natural Gas	77.9
Crossroad #3	2002	2037	100	N/A	Peaking, CT, Natural Gas	75.9
Crossroad #4	2002	2037	100	N/A	Peaking, CT, Natural Gas	77.8
Nevada #1	1974	2030	100	N/A	Peaking, CT, Fuel Oil	19.4
KCI #1	1971	2030	100	N/A	Peaking, CT, Natural Gas	0.0
KCI #2	1971	2030	100	N/A	Peaking, CT, Natural Gas	0.0
South Harper #1	2005	2040	100	N/A	Peaking, CT, Natural Gas	106.1
South Harper #2	2005	2040	100	N/A	Peaking, CT, Natural Gas	106.1
South Harper #3	2005	2040	100	N/A	Peaking, CT, Natural Gas	105.0
Lake Road #1	1951	2020	100	N/A	Peaking, ST, Bituminous Coal	21.7
Lake Road #2	1957	2020	100	N/A	Base, ST, Bituminous Coal, Natural Gas	26.4
Lake Road #3	1962	2011	100	N/A	Peaking, ST, Bituminous Coal	11.0
Lake Road #5	1974	2018	100	N/A	Peaking, CT, Natural Gas	67.0
Lake Road #6	1989	2025	100	N/A	Peaking, CT, fuel oil	21.
Lake Road #7	1990	2025	100	N/A	Peaking, CT, fuel oil	21
Total Base Gen						1041.1
Total Peaking						1108.7
Total Generation						2149.8

\* Prime Mover (PM); Steam Turbine (ST), Combustion Turbine (CT), (RGE) Reciprocating Gas Engine

\*\* Powder River Basin (PRB), Tire Derived Fuel (TDF) for NOx compliance

The normal economic dispatch (loading order) of each generating unit for the review period is as follows.

1. Iatan 2(Joint Owner)
2. Iatan 1(Joint Owner)
3. Jeffrey Energy Center Units 1, 2 & 3 (Joint Owner)
4. Sibley 3
5. Lake Road 4 (100% PRB coal)
6. Sibley 1 & 2
7. South Harper 1, 2 & 3\*
8. Greenwood Energy Center 1, 2, 3 & 4(Based on run times)\*
9. Ralph Green 3\*
10. Crossroads 1, 2, 3 & 4\*
11. Lake Road 5
12. Lake Road 1, 2 & 3
13. Lake Road 6 & 7
14. Nevada

\* The marginal operating costs of these generating facilities are all close in cost and, therefore, the dispatch order among them may vary from day-to-day based upon operating and market conditions.

There are no “forced” or “must run” generating units on the system; however, there are “must take” Unit Participation power agreements with Nebraska Public Power District (“NPPD”) for its Cooper Nuclear Station and with NextEra Energy Resources for the Gray County and Ensign Wind facilities. Operating reserve for the GMO system typically ranges from 25 to 50 MW, at least half of which is spinning reserve as maintained by the Southwest Power Pool (“SPP”), the Reliability Coordinator<sup>8</sup> for GMO. GMO is a member of SPP and is required to maintain a capacity margin of at least 12% of the projected summer peak load. GMO meets this requirement with its generation assets, capacity purchases, and Demand-Side Management (“DSM”) programs. SPP is the regional entity (“RE”) for the SPP region that has the primary responsibility for enforcing the North American Electric Reliability

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<sup>8</sup> The Reliability Coordinator is responsible for the bulk transmission and power supply reliability within in its designated area.

Corporation (“NERC”) approved reliability standards. SPP performs Network Integration Transmission Services<sup>9</sup> for GMO.

GMO is registered at SPP with NERC ID NCR01058 for the following functions:

- Purchasing Selling Entity<sup>10</sup>
- Load Serving Entity<sup>11</sup>

There are several factors that go into SPP’s decision-making process to arrive at a satisfactory mix of supply-side resources to satisfy safety, reliability, and economic criteria. These criteria include, but are not limited to, transmission and distribution congestion, contingency scenarios that include the unexpected loss of generation and/or transmission and distribution, fuel supply interruptions, labor disputes, forecasted weather, fuel supply choices and tradeoffs of cost and performance vs. meeting environmental regulations, etc.

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

Staff reviewed how GMO met its required load and reserve margin with its generation assets during the prudence review period. If GMO had been imprudently managing its generation capacity, *e.g.*, using its peaking units to serve base load demand, satisfying peak demand requirements with other than the least cost supply side or demand side resource available at the time, ratepayers could be harmed by increased fuel costs recovered through GMO’s FAC charges.

## **3. Conclusion**

Staff found no indication that GMO imprudently dispatched its units or failed to select the lowest cost resource available at the time of their peak load demand requirements during the review period.

## **4. Documents Reviewed**

- a. Testimony filed in rate case File No. ER-2012-0175;
- b. SPP Ninth Revised Service Agreement No. 1765 for Network Integration Transmission Service between SPP and GMO;

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<sup>9</sup> Network Integration Transmission Services include the coordination of transmission and energy capacity to the transmission network loads.

<sup>10</sup> A Load Serving Entity provides electric service to end-users and wholesale customers within its service territory.

<sup>11</sup> A Purchasing Selling Entity purchases or sells and takes title to energy, capacity and interconnected operations services.

- c. Great Plains Energy 2012 and 2013 Annual Reports;
- d. SPP Independent Auditors Report NCR01058 for 2013;
- e. SEC Form 10-K for the fiscal years ended December 31, 2012 and 2013;
- f. GMO responses to Staff Data Request Nos. 0009.1, 0010, 0011, 0012, 0016, 0019, 0020, 0021, 0022, 0023, and 0032, issued in this case; and
- g. Monthly generation data GMO submitted in compliance with 4 CSR 240-3.190.

*Staff Expert: Randy S. Gross*

## **B. Risk Management**

### **1. Description**

GMO's risk management strategies encompass a wide range of activities. For the purpose of this prudence review, the Staff has reviewed GMO's commodity, energy, and credit risk policies and procedures as they relate to GMO's acquisition of fuel and purchased power. GMO's risk management strategies are directly controlled by the guidelines contained in its risk management policies.<sup>12</sup>

### **2. Background, Purpose, and Objectives of Policies to Manage Commodity Risk**

GMO is exposed to risk associated with the acquisition of physical-based commodities, such as fuel, wholesale power, regulated assets, and transmission activities. Risk associated with these activities can threaten GMO's earnings, competitive position in the market, and expose GMO's customers to higher energy prices. GMO relies on *Great Plains Energy Incorporated Commodity Risk Controls Policy* ("Policy") as the controlling authority for managing its commodity risk. This document describes GMO's risk controls philosophy and objectives as:

#### **Philosophy**

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Risk management documents; General Coal Purchasing Strategy; Natural Gas Price Hedge Plan, December 2010; Great Plains Energy Incorporated Commodity Credit Policy, Effective: December 18, 2012; Great Plains Energy Incorporated Commodity Credit Policy, Effective: August 26, 2013; Great Plains Energy Incorporated Commodity Risk Controls Policy, Effective: October 22, 2012; Great Plains Energy Incorporated Commodity Risk Controls Policy, Effective: December 15, 2010; Great Plains Energy Incorporated Corporate Credit Policy For Wholesale Activity, Revised Date: December 15, 2010.

GMO also recognizes subordinate extensions of this *Policy* that implements control process and limits. Staff has reviewed these other controlling policies and provides the following discussion.

### **Commodity and Wholesale Credit Risk**

What is credit risk? A definition of credit risk is provided for GMO in *Great Plains Energy Incorporated Commodity Credit Policy* as follows:

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GMO attempts to control credit risk by its adherence to the following policy statement:

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### **Energy Risk**

Energy risk is the risk the utility experiences with the operation with its regulated assets, obligations and wholesale power, fuel and transmission transaction activities.

*Energy Risk Policy* is a subordinate extension policy of GMO's *Commodity Risk Policy* and adheres to the same philosophy and objectives as stated in its *Policy*. However, it goes further by assigning a detailed set of responsibilities and authorities for those persons chosen to carry out the administration of such risk management activities. The Board of Directors has the ultimate oversight responsibility for the actions of RMD employees while they are conducting the day-to-day administration of these policies. This *Policy* also sets specific guidelines related to the use of approved products, instruments, trade types, hedging strategies, and maximum contract terms.

### **3. Summary of Cost Implications**

GMO employs risk management strategies in an attempt to mediate the market volatility risk of fuel and energy. A discussion related to hedging strategy employed and costs for the various applicable components are discussed in the report under the Natural Gas Costs and Purchased Power Costs sections of this report. If GMO did not manage its risk management strategies prudently, it could result in an increase in fuel costs and/or energy costs that are collected from customers through GMO's FAC charges.

### **4. Conclusion**

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

### **5. Documents Reviewed**

- a. GMO's responses to Staff Data Requests 0002, 0002.1, 0048, and 0055;
- b. Attended formal meetings, reports filed and other information distributed in conjunction with File No. EW-2013-0101; and
- c. GMO's filings in this case and FAC tariff sheets.

*Staff Expert: Dana Eaves*

## **C. Plant Outages**

### **1. Description**

Generating station 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. 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.

Outages taken at any of the generating units have an impact on how much GMO will pay for fuel and purchased power and have the potential result of GMO incurring more fuel and purchased power cost than is necessary. Periodic planned outages are required to maintain generation units in peak condition in order to avoid forced or maintenance outages



that could occur during periods of peak load demand and high replacement energy costs, typically in the summer months of June through August. The Company has little or no control over maintenance or forced outages of the generating stations it owns or operates as a result of unforeseen events. The Company has no control over the timing of outages for generating stations that it does not operate, and, therefore, these units are excluded from Staff's review for planned outages.

As an example, planned outage intervals typically occur every 12 to 24 months for boiler work and every 6 to 10 years for turbine work. When a base load unit is taken out of service, the Company typically experiences increased purchased power and fuel expenditures associated with the replacement power that are recovered through the FAC. Staff examined GMO's planned outages and the timing of these outages to determine if these outages were prudently taken. Staff determined that the planned outages that did occur during the review period were prudently planned to occur during the spring or the fall. An example of an imprudent outage would be scheduling a planned outage of a large base loaded coal unit during what are normally peak load demand times.

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

An imprudent outage could result in GMO purchasing expensive spot market power or running its more expensive gas units to meet demand, thereby causing the Company to incur higher fuel costs than it would otherwise have incurred. If GMO was imprudent when it incurred its plant outages, ratepayer harm could result from an increase in the fuel costs that are collected through GMO's FAC charges.

## **3. Conclusion**

Staff found no indication that GMO's plant outages were imprudent during the review period.

## **4. Documents Reviewed**

- a. GMO responses to Staff Data Requests Nos. 0004 and 0005; and
- b. Monthly Outage data submitted by GMO in compliance with 4 CSR 240-3.190.

*Staff Expert: Randy Gross*

## **D. Natural Gas Costs**

### **1. Description**

For the prudence review period, \*\* \_\_\_\_\_ \*\* or 10% of GMO's total fuel cost was associated with the natural gas used in generating electricity. Included in this amount are the net gains/losses of \*\* \_\_\_\_\_ \*\* 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. The following list identifies GMO's peaking generating units that burn natural gas:

Ralph Green 3;  
Greenwood 1, 2, 3, and 4;  
Crossroads 1, 2, 3, and 4;  
Nevada 1;  
KCI 1 and 2;  
South Harper 1, 2, and 3; and  
Lake Road 1, 2, 3, and 5.

During the prudence review period, GMO's natural gas price averaged \*\* \_\_\_\_\_ \*\* per MMBtu. Natural gas prices have remained at low levels due to advanced technologies to retrieve 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.<sup>13</sup>

## **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 Data Request Nos. 0001, 0002, 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: Matthew J. Barnes*

## **E. Coal and Rail Transportation Costs**

### **1. Description**

For the prudency review period, \*\* \_\_\_\_\_ \*\* or \*\* \_\_\_\_ \*\* of GMO's total fuel cost, cost of purchased power, and net emission allowances 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 \*\* \_\_ \*\* short and long-term coal contracts and \*\* \_ \*\* transportation contracts and discovered that \*\* \_\_\_\_\_ \*\* coal contracts expired during the review period. The counterparties for the coal contracts are:

\*\* \_\_\_\_\_ \*\*

\*\* \_\_\_\_\_ \*\*

\*\* \_\_\_\_\_ \*\*

\*\* \_\_\_\_\_ \*\*

\*\* \_\_\_\_\_ \*\*

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<sup>13</sup> <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; Lake Road 4; Iatan 1; and Iatan 2 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 generating units;
- b. GMO's responses to Staff Data Request Nos. 0002, 0003, 0008, 0009, 0024, 0029, 0031; 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 its eleventh, twelfth, and thirteenth accumulation periods.

*Staff Expert: Matthew J. Barnes*

## **F. Fuel Oil Costs**

### **1. Description**

For the prudency review period, \*\* \_\_\_\_\_ \*\* of GMO's total fuel cost 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 \*\* \_ \*\* 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:

\*\* \_\_\_\_\_ \*\*  
\*\* \_\_\_\_\_ \*\* and  
\*\* \_\_\_\_\_ \*\*

The fuel oil contracts provide delivery of fuel oil to the Lake Road 6 and 7 and Nevada 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 Data Request 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: Matthew J. Barnes*

## **G. SO<sub>2</sub> Allowances**

### **1. Description**

The U.S. Sulfur Dioxide ("SO<sub>2</sub>") Emission Allowance Trading Program was established by Title IV of the 1990 Clean Air Act Amendments ("CAAA"). The program is intended to reduce environmental and human health impacts associated with the release of sulfur emissions from coal-fired electric power plants. CAAA requires electric utilities to reduce their SO<sub>2</sub> emissions, or purchase allowances, to meet this standard. The program is phased in, with the final SO<sub>2</sub> cap set at about 50% from 1980 levels by 2010.

Under the CAAA, power plants are allocated a 30-year stream of tradable allowances, each worth one ton of SO<sub>2</sub>. The allocation of allowances is based on an average capacity factor from the period 1985 to 1987. Allowances are awarded by the United States Environmental Protection Agency (“EPA”) every year, and are designated by vintage year. The vintage year denotes the first year the allowances may be used for compliance. Unused allowances can be sold or banked for use in subsequent years.

The EPA’s Clean Air Interstate Rule (“CAIR”), issued in 2005, was developed to address the transport of pollutants from upwind to downwind states. States in the eastern half of the country were required, over a six-year compliance period (2009-2015), to participate in a federal program intended to reduce emissions of SO<sub>2</sub> by 57% from 2003 levels and Nitrogen Oxides (“NO<sub>x</sub>”) by 61% from 2003 levels.

However, a number of petitions for judicial review of CAIR were filed in the D.C. Circuit Court, and on July 11, 2008, the D.C. Circuit Court of Appeals vacated the CAIR. A December 2008 court decision temporarily kept the requirements of CAIR in place and directed EPA to issue a new rule to implement Clean Air Act requirements concerning the transport of air pollution across state boundaries. On July 6, 2011, the EPA finalized the Cross-State Air Pollution Rule (“CSAPR”) that regulates power plant emissions of SO<sub>2</sub>, NO<sub>x</sub>, ozone and fine particulates. The requirements of CAIR were in effect during the prudence review period. The requirements of CSAPR were not in effect during the prudence review period; however, CSAPR requirements affect future accumulation periods.

The primary mechanism of CAIR is a cap-and-trade program that allows a major source of NO<sub>x</sub> and/or SO<sub>2</sub> to trade excess allowances when its emissions of a specific pollutant fall below its cap for that pollutant. 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. Under CAIR, starting in 2010, owners of power plants are required to submit two SO<sub>2</sub> allowances for each ton of SO<sub>2</sub> emitted. This ratio is further tightened in 2015 to 2.86 SO<sub>2</sub> allowances for each ton of SO<sub>2</sub> emitted.

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’s purchased power

contract with the Nebraska Public Power District's Gerald Gentleman power plant requires GMO to provide SO<sub>2</sub> allowances to Nebraska Public Power for the energy purchased under contract. The net effect is that GMO does not have enough allowances to cover its SO<sub>2</sub> emissions requirements, and must purchase SO<sub>2</sub> allowances.

To comply with CAIR, GMO has established an SO<sub>2</sub> inventory. This inventory is tracked in Company account 158.100 Emissions Allowance Inventory, and the cost for SO<sub>2</sub> allowances is tracked in FERC Account Number 509. The Company annually balances account 509 when the EPA yearly awards the additional SO<sub>2</sub> allowances.

For the 18 months of the prudence review period ending November 30, 2013, GMO's net SO<sub>2</sub> allowance expense was \*\* \_\_\_\_\_ \*\*.

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

If GMO imprudently used, purchased or banked its CAIR SO<sub>2</sub> 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 CAIR SO<sub>2</sub> allowances.

## **4. Documents Reviewed**

- a. Company response to Staff's Data Request Nos. 0002, 0034, 0036, 0037, 0038; and
- b. GMO monthly reports for the time period June 1, 2012, through November 30, 2013, required by 4 CSR 240-3.161(7).

*Staff Expert: David Roos*

## **H. Alternative Fuels**

### **1. Description**

At GMO's Sibley Generating Station, which has cyclone-fired boilers, one type of alternative fuel was burned during the prudence 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. Prior to the installation of the Selective Catalytic Reducer (“SCR”) to Sibley Unit 3 in late 2008, the maximum blend ratio was \*\* \_\_\_\_\_ \*\*. The maximum blend ratio was reduced to less than \*\* \_\_\_\_\_ \*\* after installation of the SCR. 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 prudence review period. Lake Road Unit 4/6 has been burning TDF since 2004 and is currently using a maximum blend ratio of \*\* \_\_\_\_\_ \*\*.

During the prudence review period GMO’s alternate fuel expense used for generation was \*\* \_\_\_\_\_ \*\*.

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

If GMO’s use of alternative fuels was imprudent, ratepayer harm could result from an increase in FAC charges.

## **3. Conclusion**

Staff found no indication GMO’s use of alternate fuels were imprudent during the review period.

## **4. Documents Reviewed.**

Company response to Staff’s Data Requests Nos. 0001 and 0043.

*Staff Expert: Matthew J. Barnes*

## **I. Off-System Sales Revenue**

### **1. Description**

Off-system sales revenues (“OSSR”) are a component in the calculation of GMO’s FAR used to charge or refund fuel and purchased power costs to its customers. The appropriate tariff language for both tariff sheets in effect during the review period includes:

GMO’s FAC 1st Revised Sheet No. 127.8, effective July 1, 2011 through January 25, 2013, defines the “OSSR” components as:



- OSSR = Revenues from Off-system Sales:
  - Revenues from Off-system Sales shall exclude full & partial requirements sales to Missouri municipalities that are associated with GMO.

GMO's FAC 2<sup>nd</sup> Revised Sheet No. 126, effective January 26, 2013, and thereafter, defines the "OSSR" components 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 prudence review period, and GMO's off-system sales revenue amount is \*\* \_\_\_\_\_ \*\*.

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

GMO's revenues from off-system sales are an offset against total fuel and purchased power costs and net emission allowances. This is because GMO's ratepayers pay for the sources used for any energy that GMO sells.<sup>14</sup> If GMO did not make available its generating units in the SPP market for off-system sales to be made, ratepayers could be harmed by such imprudence by an increase in GMO's FAC charges.

## **3. Conclusion**

Staff found no indication that GMO imprudently did not make available its generating units in the SPP for off-system sales to be made.

## **4. Documents Reviewed**

- a. GMO's responses to Staff Data Request Nos. 0001 and 0002; and
- b. GMO's filings in this case and FAC tariff sheets.

*Staff Expert: Matthew J. Barnes*

## **J. MPower Rider and Energy Optimizer/Demand Response Programs**

### **1. Description**

There are two existing demand response programs that GMO has utilized to curtail GMO's load during the summer months when peak electric demand occurs. MPower is a

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<sup>14</sup> Serving those ratepayers (native load) is a higher priority than making an off-system sale.

voluntary load curtailment program for large commercial and industrial customers and provides a payment to customers for curtailing their load when requested to do so by GMO. Energy Optimizer is an air conditioning cycling program for residential and small commercial customers that allows the Company to cycle program participants' air conditioners off and on when the Company-provided thermostats receive a paging signal from GMO. These programs are designed to reduce customer load during peak periods to help defer future generation capacity additions and provide for additional capacity margin improvements in the energy supply.

On December 22, 2011, GMO filed a Missouri Energy Efficiency and Investment Act ("MEEIA") application for approval of fifteen (15) DSM programs, including the MPower and Energy Optimizer programs. A stipulation and agreement for GMO's MEEIA filing was filed in File No. EO-2012-0009 on October 29, 2012, and the Commission issued an order approving the stipulation and agreement on November 15, 2012. The demand response programs are described in the 10th revision of Electric Tariff Schedule No. 1; Tariff Sheet No. R-63.09 for the Energy Optimizer Program; and Tariff Sheet No. R-63.22 for the MPower program.

## **2. Demand-Side Program Discussion**

Staff has reviewed GMO's records and promotional/marketing materials for its MPower and Energy Optimizer programs. Staff believes that demand response is a valuable resource and should always be considered as one of the options to reduce the peak loading and thereby reduce the amount of generation and purchased power required to serve the native load. As a result of market fundamentals in SPP, GMO may acquire capacity in the open market at a lower price than through the MPower program.

In addition, there are additional factors and considerations that include reliability, contingency planning and scenarios, reserve requirements, NERC/SPP guidelines, and transmission congestion that impact the decision on the optimum mix of resources to utilize to meet the peak demand.

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### 3. Summary of Cost Implications

Although Staff understands the current economic conditions and reduced load have generally depressed capacity prices and utilizing demand response may not be the least cost option for every peak load situation, these conditions can change. A robust MPower and Energy Optimizer program will position GMO to have these demand response options available to select the least-cost option when GMO meets its reliability requirements, to satisfy peak load conditions for the benefit of all its customers.

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\_\_\_\_\_ \*\* GMO has confirmed that there are no MPower curtailment payments included in this FAC.

#### **4. Conclusion**

Staff's review did not find any imprudence with respect to GMO's decision process or for how it used its demand response programs to meet peak demand during the review period.

#### **5. Documents Reviewed**

- a. GMO's responses to Staff Data Requests Nos. 0044 and 0045;
- b. Phone conversation (06/11/14) and subsequent follow-up Emails (06/12 and 06/14, 2014 ) with Ed Blunk of GMO;
- c. Order Approving Stipulation and Agreement for GMO's MEEIA Filing No. EO-2012-0009;
- d. GMO's filings in this case and FAC tariff sheets;
- e. Direct testimony of Allen D. Dennis, lines 15-16, page 8;
- f. GMO MEEIA Filing No. EO-2012-0009; and
- g. KCP&L GMO DSM Advisory Group Quarterly Meeting Presentation, May 29, 2014.

*Staff Expert: Randy Gross*

### **K. 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, 2012. 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 18-month period ending November 30, 2013. 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 0055, 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. If GMO imprudently flowed the C.W. Mining settlements through its FAC, or did not flow them through it, 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 appropriate allocation of the settlement amount between MPS and L&P rate districts will be reviewed at the time the settlement proceeds are flowed through GMO's FAC.

## **4. Documents Reviewed**

- a. Direct Testimony of Staff witness Cary 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 Data Request No. 0042.

*Staff Expert: Matthew J. Barnes*

## **L. Renewable Energy Credit Purchases and Revenues**

### **1. Description**

The Missouri Renewable Energy Standard ("RES")<sup>15</sup> was adopted through a voters' ballot initiative (Proposition C) on November 4, 2008,<sup>16</sup> 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.<sup>17</sup> 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).<sup>18</sup> Renewable energy resources produce electrical energy and are wind, solar sources, thermal 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 Natural Resources ("MDNR"). Once an energy resource is certified, it begins

<sup>15</sup> § 393.1020 RSMo. Supp. 2013 and § 393.1030.1(1), RSMo. Supp. 2013

<sup>16</sup> § 393.1030, RSMo. Supp. 2013.

<sup>17</sup> 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.

<sup>18</sup> 4 CSR 240-20.100(5)(B).

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.<sup>19</sup> The cost of a REC (as a RES compliance cost) cannot be recovered through the FAC.<sup>20</sup> Revenues from the sale of RECs are recovered through the FAC as an off-set to fuel costs.

During the review period, GMO \*\* \_\_\_\_\_ \*\* and 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 and Ensign wind farms). Some of the RECs created by generation at Gray County and Ensign wind farms were used for 2012 and 2013 RES compliance. RECs from the St. Joseph Landfill Gas Facility were carried forward to future calendar years. No RECs were sold during the 18-month review period ending November 30, 2013; however, some non-solar RECs were sold in December 2013 and booked to offset fuel costs in January 2014. No costs for purchasing the solar RECs were recovered through the FAC during the review period.

In Staff data request no. 0053, Staff requested "the dollar values assigned to RECs from energy purchases from Ensign Wind Farms accrued for the period June 1, 2012 through November 30, 2013, and included in calculating GMO's Fuel Adjustment Clause charges..." GMO's responded, \*\* \_\_\_\_\_

\_\_\_\_\_ \*\* In Staff data request no. 0052, Staff requested the same information regarding Gray County and GMO provided a similar response, stating, \*\* \_\_\_\_\_

\_\_\_\_\_ \*\*

## **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

<sup>19</sup> 4 CSR 240-20.100(6)(B)(5)(J).

<sup>20</sup> 4 CSR 240-20.100(6)(A)(16).

when it had the opportunity to do so, ratepayer harm could result from increased costs or decreased revenues being included in the calculation of its FAC charges.

### **3. Conclusion**

With regards to FAC prudence, Staff did not find evidence that GMO's management of its RECs during the review period was imprudent.

### **4. Documents Reviewed**

- a. Staff DRs 0049 through 0053; and
- b. GMO 2012 and 2013 Annual Renewable Energy Standard Compliance Reports.

*Staff Expert: David Roos*

## **M. 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. MDNR 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 MW generated available for in-state facilities.

Based on Staff's on-site observation of the facility, supplemented by review of test records, operating logs, computer data, and other documentation, Staff concludes 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 cost that were included in the 18-month review period ending November 2013 are \*\* \_\_\_\_\_ \*\*.



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 is a temporary fix that allows time for all interested parties to attempt to come to agreement on a solution that complies with the Commission Rules. Based on the Commission’s approval of GMO’s request for relief from Commission Rule 4 CSR 240-20.100(6)(A)(16), Staff will continue to work with GMO to reach a resolution concerning the treatment of the costs of landfill gas purchased for the Company’s St. Joseph Landfill Gas Facility.

## **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 includes the audited period so that GMO can recover RES compliance costs from the *St. Joseph Landfill Gas Facility* through its FAC for this June 1, 2012, through November 30, 2013, audit 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 0051;
- b. Staff Recommendation in File No. ER-2012-0175; and
- c. Waiver filings in File No. ER-2012-0175.

*Staff Expert: David Roos*

## N. 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. MDNR 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 wind PPAs. The contract is for the energy and RECs generated by the wind farm. In its response to Staff data request no. 0052 GMO stated, \*\* \_\_\_\_\_

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\_\_\_\_\_ \*\* Costs for purchasing the electricity bundled with the RECs under the Gray County Wind PPA are \*\* \_\_\_\_\_ \*\* for June 1, 2012 through November 30, 2013.

## **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 DRs 0002, 0049, 0050, 0052;
- b. GMO 2012 Annual Renewable Energy Standard Compliance Plan; and
- c. GMO 2013 Annual Renewable Energy Standard Compliance Plan.

*Staff Expert: David Roos*

## **O. Ensign Wind Purchased Power Agreement**

### **1. Description**

MDNR 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 prudence review period, GMO retired some Ensign Wind Energy Center RECs to comply with RES requirements. In its response to Staff data request no. 0053 GMO stated, \*\* \_\_\_\_\_

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\_\_\_\_\_ \*\* Costs for purchasing the electricity bundled with the RECs under the Gray County Wind PPA are \*\* \_\_\_\_\_ \*\* for June 1, 2012 through November 30, 2013.

### **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 DRs 0002, 0049, 0050, 0053;
- b. GMO 2012 Annual Renewable Energy Standard Compliance Plan; and
- c. GMO 2013 Annual Renewable Energy Standard Compliance Plan.

*Staff Expert: David Roos*

## **P. Purchased Power Costs**

### **1. Description**

Staff reviewed spot market purchases ("purchased power") and the results of GMO's natural gas hedging activities linked to its on-peak energy purchases.

Staff has determined GMO's total purchased power expense, that GMO is seeking to be recovered for the prudence review period, including natural gas hedging gains and losses, is \*\* \_\_\_\_\_ \*\* Included in this amount are the net gains/losses associated with its purchased power hedging activities. In GMO's response to Staff's Data Request No. 0002.1, it provides the results of its hedging activities for the review period. From that information, Staff has determined the net amount of hedging losses related to hedges placed to protect on-peak purchased power to be \*\* \_\_\_\_\_ \*\* for June 1, 2012 through November 30, 2013.

In addition to the PPAs discussed above, GMO also purchases hourly energy in the market 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 and purchased power contracts. During the prudence review period, GMO submitted revised tariff sheets that changed the components of GMO's FAC as follows:

GMO's FAC 1<sup>st</sup> Revised Sheet No 127.8, effective July 1, 2011 through January 25, 2013, defines the Purchased Power Costs ("PP") components as:

PP = Purchased Power Costs:

- Purchased power costs reflected in FERC Account Numbers 555: Purchased power costs, settlement proceeds, insurance recoveries, and subrogation recoveries for increased purchased power expenses in FERC Account Number 555, excluding capacity charges for purchased power contracts with terms in excess of one (1) year.

GMO's FAC tariff 2<sup>nd</sup> Revised Sheet No. 125 through 2<sup>nd</sup> Revised Sheet No. 126, effective January 26, 2013, and thereafter, 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.

As part of Staff's prudence review in File No. EO-2011-0390, Staff recommended an adjustment of approximately \$14 million that reflected net losses associated with GMO's use of New York Mercantile Exchange ("NYMEX") natural gas futures contracts in an attempt to mitigate spot purchased power energy price volatility (cross hedging). As a result of a hearing associated with prudence issues raised by Staff, the Commission issued a *Report and Order*<sup>21</sup> on September 4, 2012. The Commission found:

The Commission's Staff has failed to provide substantial controverting evidence to rebut the presumption of the prudence of GMO's hedging practices. The Commission's Staff has failed to meet its burden, by a preponderance of the evidence, of proving the GMO was imprudent with its hedging practices during the prudence review period of June 1, 2009 through November 30, 2010. The Commission's Staff has failed to meet its burden, by a preponderance of the evidence, of proving GMO engaged in improper accounting practices in violation of the Accounting Authority Order from File Number ER-2005-0436. The Commission's Staff has failed to meet its burden, by a preponderance of the evidence, of proving that GMO violated the Uniform System of Accounts. The Commission's Staff has failed to meet its

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<sup>21</sup> In the Matter of the Third Prudence Review of Costs Subject to the Commission-Approved Fuel Adjustment Clause of KCP&L Greater Missouri Operations Company, File No. EO-2011-0390, Report and Order.

burden, by a preponderance of the evidence, of proving GMO violated its Fuel Adjustment Clause Tariff. All of Staff's allegations, and the relief sought by Staff, will be denied.

Also, as a result of File No. EO-2011-0390, the Commission found it was appropriate to open an investigatory docket, File No. EW-2013-0101, "to review policies or procedures with regard to electric companies' hedging programs that will hopefully assist the utilities with developing effective hedging programs that serve the public interest by mitigating the rising costs of fuel."<sup>22</sup> The Staff filed its initial report in that file on April 8, 2013, and after further investigation filed an additional report on January 31, 2014. Staff reported it found the meetings with the investor-owned utilities to be productive but no broad agreement was reached between the parties. GMO responded to Staff's reports and agreed that informal annual meetings with Staff would allow for further discussions related to GMO's hedging activities and other risk mitigation strategies. On April 16, 2014, an order was issued by the Commission closing the investigatory docket.

Included in Table 4 are the results for the review period of GMO hedging practices as related to natural gas during the prudence review period.

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<sup>22</sup> In the Matter of a Working Docket to Address the Hedging Practices of Electric Utilities used to Mitigate the Rising Costs of Fuel (File No. EW-2013-0101)

**Table 4**  
**Purchased Power Hedging Results**

	Projected Natural Gas Burn Converted to MMBtu <b>For Own Generation</b>	Projected Natural Gas MMBtu Equivalents for <b>On Peak Purchased Power</b>	Total
MMBtu Requirements	** _____ **	** _____ **	** _____ **
Percentage of MMBtu Requirements by type	** _____ **	** _____ **	
Volume Actually Hedged (MMBtu)	** _____ **	** _____ **	** _____ **
Volume of Hedges Actual Used (MMBtu)	** _____ **	** _____ **	** _____ **
Volume of Hedges Not Used (MMBtu)	** _____ **	** _____ **	** _____ **
Percent of Hedges Not Used	** _____ **	** _____ **	** _____ **
Net Gains/(Losses) from Hedging Activities	** _____ **	** _____ **	** _____ **
Percent of Losses by activity	** _____ **	** _____ **	

## 2. Summary of Cost Implication

If GMO was imprudent in its hedging practices, ratepayer harm could result from an increase in the hedging costs that are collected through GMO's FAC charges.

### **3. Conclusion**

GMO continues to experience cash losses associated with its hedging activities. In File No. EO-2011-0390, the Commission found that Staff was unable to provide substantial controverting evidence to rebut the presumption of the prudence of GMO's hedging practices. Staff's review has found only similar evidence. Therefore, although Staff continues to have concerns related to GMO's "cross hedging" on-peak energy prices with NYMEX natural gas futures contracts; Staff is not recommending an adjustment in this prudence review.

### **4. Documents Reviewed**

- a. GMO's responses to Staff Data Request in File No. EO-2014-0242 and GMO's responses to Staff Data Request in File No. EO-2013-0325;
- b. Attended formal meetings, reports filed, and other information distributed in conjunction with File No. EW-2013-0101; and
- c. GMO's filings in this case and FAC tariff sheets.

*Staff Expert: Dana Eaves*

## **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 as defined in the Pricing Schedule of the current GMO Revolving Credit Agreement. A simple mathematical average of all the daily rates for the month is then computed. For the prudence review period, GMO's interest amount applied to the under-recovered or over-recovered fuel and purchased power costs were \*\* \_\_\_\_\_ \*\* and \*\* \_\_\_\_\_ \*\* 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: Matthew J. Barnes*

**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

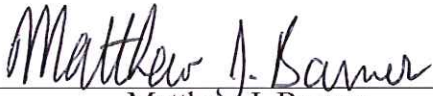
In the Matter of the Fourth )  
Prudence Review of Costs Subject )  
to the Commission-Approved Fuel )  
Adjustment Clause of The Empire )  
District Electric Company )

Case No. EO-2014-0242

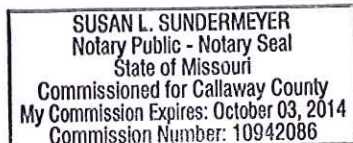
**AFFIDAVIT OF MATTHEW J. BARNES**

STATE OF MISSOURI     )  
                                  ) ss  
COUNTY OF COLE     )

Matthew J. Barnes, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report in pages 1-6, 16-19, 21-23, 26-28, + 38-39; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.

  
Matthew J. Barnes

Subscribed and sworn to before me this 29<sup>th</sup> day of August, 2014.



  
Notary Public

**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

In the Matter of the Fourth )  
Prudence Review of Costs Subject )  
to the Commission-Approved Fuel )  
Adjustment Clause of The Empire )  
District Electric Company )

Case No. EO-2014-0242

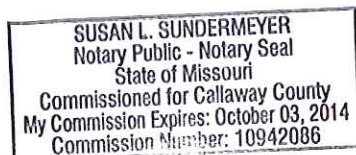
**AFFIDAVIT OF DANA E. EAVES**

STATE OF MISSOURI     )  
                                  ) ss  
COUNTY OF COLE     )

Dana E. Eaves, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report in pages 11-14 + 34-38; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.

  
Dana E. Eaves

Subscribed and sworn to before me this 29<sup>th</sup> day of August, 2014.



  
Notary Public

**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

In the Matter of the Fourth )  
Prudence Review of Costs Subject )  
to the Commission-Approved Fuel )  
Adjustment Clause of The Empire )  
District Electric Company )

Case No. EO-2014-0242

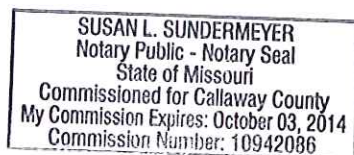
**AFFIDAVIT OF DAVID C. ROOS**

STATE OF MISSOURI     )  
                                  ) ss  
COUNTY OF COLE     )

David C. Roos, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report in pages 19-21 + 28-34; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.

  
\_\_\_\_\_  
David C. Roos

Subscribed and sworn to before me this 29<sup>th</sup> day of August, 2014.



  
\_\_\_\_\_  
Notary Public

**BEFORE THE PUBLIC SERVICE COMMISSION**  
**OF THE STATE OF MISSOURI**

In the Matter of the Fourth )  
Prudence Review of Costs Subject )  
to the Commission-Approved Fuel )  
Adjustment Clause of The Empire )  
District Electric Company )

Case No. EO-2014-0242

**AFFIDAVIT OF RANDY S. GROSS**

STATE OF MISSOURI     )  
                                  ) ss  
COUNTY OF COLE     )

Randy S. Gross, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report in pages 7-11, 14-15, & 23-26; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.

  
\_\_\_\_\_  
Randy S. Gross

Subscribed and sworn to before me this 29<sup>th</sup> day of August, 2014.



  
\_\_\_\_\_  
Notary Public