PRUDENCE REVIEW OF COSTS
RELATED TO THE FUEL ADJUSTMENT CLAUSE
FOR THE ELECTRIC OPERATIONS
OF
THE EMPIRE DISTRICT ELECTRIC COMPANY

September 1, 2009 through February 28, 2011

MISSOURI PUBLIC SERVICE COMMISSION
STAFF REPORT

FILE NO. EO-2011-0285

Jefferson City, Missouri
August 26, 2011

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

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Prudence Review of Costs Report

I. Executive Summary

The Missouri Public Service Commission ("Commission") first authorized The Empire District Electric Company ("Empire" or "Company") to use a Fuel Adjustment Clause ("FAC") in the Company's 2008 general rate case Case No. ER-2008-0093. The Commission subsequently approved continuation of Empire's FAC with modifications in its orders in the Company's 2010 and 2011 general rate cases, File Nos. ER-2010-0130 and ER-2011-0004.

Missouri Statute and Commission Rule, Section 386.266.4(4) RSMo (Supp. 2009), and 4 CSR 240-20.090(7), respectively, require prudence reviews of an electric utility's FAC no less frequently than at eighteen-month intervals. In this prudence review, Staff analyzed items affecting Empire's cost of fuel, purchased power, net emissions allowance, revenues from off-system sales, and renewable energy credits (RECs) sales for the third, fourth and fifth six-month accumulation periods of Empire's FAC. The third accumulation period began September 1, 2009, and ended February 28, 2010. The fourth accumulation period began March 1, 2010, and ended August 31, 2010. The fifth accumulation period began September 1, 2010, and ended February 28, 2011. Thus, the eighteen month Prudency Review period that is reviewed and documented in this report is from September 1, 2009 to February 28, 2011[1].

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

[1] Throughout this report, the phrase "variable fuel and purchase power costs" includes net emissions costs and revenues from off-system sales and renewable energy credits.

Staff analyzed a variety of items in examining whether Empire was prudent when making decisions related to costs and revenues associated with its FAC for the period September 1, 2009 to February 28, 2011. Based on its review, Staff has found no evidence of decisional imprudence by Empire in the items it examined.

II. Introduction

A. General Description of Empire's FAC

The FAC approved by the Commission allows Empire to recover (if the net costs exceed) from its ratepayers or refund (if the net costs are less than) to its ratepayers ninety-five percent of the difference between its prudently incurred variable fuel and purchase power costs and the base energy cost amount for each accumulation period (fuel cost recovery amount). Empire accumulates variable fuel and purchase power costs during six-month accumulation periods. Each six-month accumulation period is followed by a six-month recovery period where the over- or under-recovery during the previous six-month accumulation period relative to the base energy cost amount is flowed through to ratepayers by an increase or decrease in the Cost Adjustment Factor ("CAF"). An adjustment to the CAF is designed to offset that over- or under-recovery for a given accumulation period by the end of the six-month recovery period. Empire's FAC is also designed to true-up the difference between the revenues billed and the revenues authorized for collection during recovery periods. Any disallowance the Commission orders as a result of prudence reviews shall include interest at the Company's short-term interest rate[2] and will be accounted for as a true-up item.

Empire's third accumulation period began on September 1, 2009 and ended February 28, 2010. Empire's fuel cost recovery amount was $3,139,134 for the third accumulation period. Added to this amount was an additional $338,622 for revenues authorized for collection but not billed during the first recovery period ending November 30, 2009, and the interest cost of $2,142. This resulted in a total increase of $3,479,898 to Empire's CAF adjustment to allow billing of this additional revenue effective June 1, 2010, as a result of the Commission's order in File No. ER-2010-0275.

The fourth accumulation period began March 1, 2010, and ended August 31, 2010. Empire's fuel cost recovery amount was $5,510,843 for the fourth accumulation period.

[2] 4 CSR 240-20.090(7)(A)

Subtracted from this amount was $191,669 which is the amount billed in excess of revenues authorized for collection during the second recovery period ending May 31, 2009. Also added was interest cost in the amount of $29,348. This interest cost includes interest on the over collection amount of $191,669 during the second recovery period. This resulted in a total increase of $5,348,522 to Empire's CAF adjustment to allow billing of this additional revenue effective December 1, 2010, as a result of the Commission's order in File No. ER-2011-0095.

The fifth accumulation period began September 1, 2010, and ended February 28, 2011. During this period, fuel costs were rebased effective September 10, 2010, as a result of the Commission's decision in Empire's general rate case File No. ER-2010-0130. Empire's fuel cost recovery amount was $1,524,771 for the fifth accumulation period. Added to this amount was an additional $319,884 for revenues authorized for collection but not billed during the third recovery period ending November 30, 2010, and interest costs of $28,743. This resulted in a total increase of $1,873,398 to Empire's CAF adjustment to allow billing of this additional revenue effective June 1, 2011, as a result of the Commission's order in File No. ER-2011-0320. The table below reflects the changes to Empire's CAFs for its third, fourth and fifth accumulation periods.

Accumulation Period		3	4	5
CAF - Primary and above		$0.00160 per kWh	$0.00248 per kWh	$0.00086 per kWh
CAF - Secondary		$0.00163 per kWh	$0.00253 per kWh	$0.00088 per kWh

B. Prudence Standard

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

> The PSC has defined its prudence standard as follows:
>
> [A] utility's costs are presumed to be prudently incurred.... However, the presumption does not survive "a showing of inefficiency or improvidence."
>
> ... [W]here some other participant in the proceeding creates a serious doubt as to the prudence of an expenditure, then the applicant has the burden of dispelling these doubts and proving the questioned expenditure to have been prudent. (Citations omitted).

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

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

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

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

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

III. Fuel and Purchase Power Costs

The Staff reviewed the areas listed below for decisional prudence for Empire's third, fourth and fifth accumulation periods.

A. Explanation of Fuel and Purchase Power Costs

For the purpose of Empire's FAC, fuel and purchase power costs are comprised of five major components: fuel costs, purchased power costs, net emission allowance costs, off-system sales revenue, and RECs revenue. Empire's FAC includes definitions and FERC accounts for each component of its FAC costs and revenues.

B. Financial Hedges

1. Description

For the period September 1, 2009 to February 28, 2009, ** ____ ** of the total electricity used by Empire's customers was generated by Empire's natural gas generation plants. Empire attempts to reduce the risk of operating natural gas generation plants by hedging against the fluctuations of natural gas process.

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Financial hedges can be described as:

> Making an investment to reduce the risk of adverse price movements in an asset. Normally, a hedge consists of taking an offsetting position in a related security, such as a futures contract. An example of a hedge would be if you owned a stock, then sold a futures contract stating that you will sell your stock at a set price, therefore avoiding market fluctuations. Investors use this strategy when they are unsure of what the market will do. A perfect hedge reduces your risk to nothing (except for the cost of the hedge).[3]

Staff reviewed Empire's activities to hedge against the fluctuations of natural gas prices.

2. Summary of Cost Implications

Empire employs hedging activities in an attempt to mitigate the impacts of market swings in natural gas prices.

3. Empire's Natural Gas Hedging Policy

The treatment of natural gas hedging costs for Empire's FAC is detailed in Empire's most recent Risk Management Policy ("RMP") dated March 15, 2011:

> Section 4, pages 10-11; The electric segment's specific hedge strategy goals are to provide for predictable fuel and purchased power costs over a multi-year period and to provide a framework to allow for management of its risk positions.
>
> The RMP is designed to provide the Supply Management Group (SMG) with a more comprehensive set of tools to mitigate the adverse impacts associated with changing natural gas or wholesale electricity prices.
>
> Risk management strategies involve an active "mark-to-market" assessment of market conditions to match its supply portfolio to its portfolio of retail and wholesale obligations.
>
> In effect, these strategies set out to determine how much market risk is reasonable to best minimize costs and volatility, while still providing the electric segment's customers with reasonable fuel costs.
>
> An overview of the electric segment's hedging targets for natural gas is outlined below.
>
> At least yearly, the electric segment will model its electric system with a production cost model to establish an expensed gas burn for retail load for each of the next four years. This budgeted gas burn will be developed utilizing a consistent methodology as that utilized in the Company's financial projections.
>
> From time to time as conditions change (i.e. unit outages, gas commitments, purchase power commitments), the SMG shall assess the electric segment's system to establish a new "expected" gas burn for native load.

[3] www.investopedia.com

For the electric segment's purposes hedging includes physical forward purchases, physical management tools such as pipeline imbalance tariffs, park and loan, interruptible storage, OTC swaps and exchange traded financial contracts.

The electric segment will utilize the following procurement guidelines:

Hedge a minimum of 10% of year four expected gas burn
Hedge a minimum of 20% of year three expected gas burn
Hedge a minimum of 40% of year two expected gas burn
Hedge a minimum of 60% of year one expected gas burn

The SMG will have the flexibility to hedge up to 100% of the current year's and 80% of any future year's expected requirements while being cognizant of volume risk. The 80% target is an annual target and volumes up to 100% can be hedged in any given month. For years beyond year four, additional factors of long-term uncertainty in required volumes, counterparty credit, etc. should also be considered.

(By December 31 of current year we should have a minimum of 60% of the next years projected gas burn hedged.)

This progressive dollar cost averaging approach is intended to protect our customers and shareholders from volatility in the marketplace. In addition the progressive approach allows for increasing uncertainty of gas needs inherent in forecasting events occurring further in the future.

If changes in expected gas burns occur that make us more than 100% hedged in any given month, appropriate steps will be taken following consideration of accounting guidance and review by the RMOC. Given that there is some uncertainty in our modeling efforts, an overhedged position of 50,000 MMBtu's or less would generally not be considered material and not subject to action.

4. Conclusion

Staff found Empire's hedging activities to be in compliance with Empire's RMP. Staff found no indication of imprudence in Empire's administration of its hedging activities.

5. Documents Reviewed

a. Empire's responses to Staff Data Request Nos. 1, 2, 46 and 48; and

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

Staff Expert: Dana Eaves

C. Natural Gas Costs

1. Description

For the time period of September 1, 2009 to February 28, 2011, approximately ** ____ ** of the total electricity used by Empire's customers was generated by Empire's natural gas generation plants. Staff determined that a total of approximately ** ________ ** of Empire's fuel costs were associated with natural gas used in the generation of electricity. This total excludes Empire's natural gas costs for off system sales[4] but it does include various miscellaneous charges such as firm transportation service charges and other fuel handling expenses. Staff found no indication of imprudence regarding Empire's costs associated with the natural gas hedging contracts it had in place for the time period in this case.

2. Summary of Cost Implications

If it was found that Empire had been imprudent in its purchasing decisions relating to natural gas, rate payer harm could result from an increase in rates.

3. Conclusion

Staff found no indication of decisional imprudence associated with Empire's purchases of natural gas for the third, fourth and fifth accumulation periods reviewed in this case.

4. Documents Reviewed

a. Empire's responses to Staff Data Request Nos. 1, 2, 29 and 46 related to Empire's hedging of natural gas prices from September 1, 2009 to February 28, 2011; and

b. Empire's General Ledger, cost adjustment factor calculation ("CAFC"), and other work papers from this case to determine the amount that Empire paid for natural gas as compared to the total cost of natural gas that Empire claims it incurred during its third, fourth and fifth accumulation periods.

Staff Expert: Dana Eaves

D. Coal and Pet Coke Costs

1. Description

For the three accumulation periods reviewed, covering September 1, 2009 to February 28, 2011, approximately ** ____ ** of the total electricity used by Empire's customers was generated by coal generation plants. Staff concluded that approximately ** ________ ** of

[4] In the Commission's order in ER-2010-0130, effective September 10, 2010, the FAC definition of off-system sales revenue was changed from "actual total system off-system sales margin" to "actual total system off-system sales revenue." For the purpose of this report the Staff calculated and allocated a proportional amount of natural gas cost to off-system sales cost for the period September 10, 2010 to February 28, 2011 (the end of the prudence review period). This footnote also applies to fuel costs for: coal and pet coke, fuel oil, and tire derived fuel.

Empire's fuel cost was associated with the coal and pet coke used in the generation of electricity. Empire's Riverton generating facility uses a blended coal mix (coal and pet coke) to achieve proper operational parameters. The cost of coal and pet coke fuel does not include the cost of fuel used for off-system sales, but it does include various miscellaneous charges such as rail and other ground transportation service charges, and other fuel handling expenses. Staff found no indication of imprudence regarding Empire's costs associated with the coal and pet coke contracts it had in place for the relevant time period.

2. Summary of Cost Implications

If it was found that Empire had been imprudent in its purchasing decisions relating to coal and pet coke, rate payer harm could result from an increase in rates.

3. Conclusion

Staff found no indication of decisional imprudence by Empire for its purchase of coal and pet coke for the third, fourth and fifth accumulation periods of Empire's FAC which cover the period September 1, 2009 to February 28, 2011.

4. Documents Reviewed

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

b. Empire's responses to Staff Data Request Nos. 1, 2 and 4; and

c. Empire's General Ledger, CAFC, and other work papers to determine the amount that Empire paid for coal and pet coke as compared to the total cost of coal and pet coke that Empire claims it incurred during its third, fourth and fifth accumulation periods.

Staff Expert: Dana Eaves

E. Fuel Oil Costs

1. Description

For the three accumulation periods reviewed, September 1, 2009 to February 28, 2011, Staff concluded that approximately ** _______ ** of Empire's cost of fuel was associated with fuel oil used in the generation of electricity. Empire's generating facilities use fuel oil mostly during startups to achieve proper operational parameters. The cost of fuel oil used to generate electricity does not include the cost of fuel Empire used for off-system sales but it does include various miscellaneous charges, such as rail and other ground transportation service charges and other miscellaneous fuel handling expenses.

2. Summary of Cost Implications

If it was found that Empire had been imprudent in its purchasing decisions relating to fuel oil, rate payer harm could result from an increase in rates.

3. Conclusion

Staff found no indication of decisional imprudence regarding Empire's costs associated with its fuel oil contracts in place for September 1, 2009 to February 28, 2011, the review period in this case.

4. Documents Reviewed

a. Empire's General Ledger;

b. Empire's responses to Staff Data Request Nos.1, 2, 4, and 30; and

c. CAFC and other supporting work papers in this case to determine the amount Empire paid for fuel oil as compared to the total cost of fuel oil Empire claims it incurred during its third, fourth and fifth accumulation periods.

Staff Expert: Dana Eaves

F. Tire Derived Fuel ("TDF") Costs

1. Description

For the accumulation periods reviewed, the Staff concluded that approximately ** ________ ** of the cost of fuel was associated with TDF used in the generation of electricity. The Asbury generating facility uses a blended coal mix (coal and TDF) in order to achieve proper operational parameters. This cost of TDF excludes the amount associated with the cost of fuel for off-system sales. The cost of TDF does include various miscellaneous charges such as rail and other ground transportation service charges and other miscellaneous fuel handling expenses. Staff found no indication of imprudence regarding costs associated with TDF contracts in place for the time period in this case.

2. Summary of Cost Implications

If it was found that Empire had been imprudent in its purchasing decisions relating to TDF, rate payer harm could result from an increase in rates.

3. Conclusion

Staff found no indication of imprudence for the purchase of TDF for the three accumulation periods reviewed.

4. Documents Reviewed

a. Empire's General Ledger;

b. Empire's responses to Staff Data Request Nos. 1, 2 and 4; and

c. CAFC and other supporting work papers in this case to determine the amount Empire paid for TDF as compared to the total cost of TDF Empire claims it incurred during its third, fourth and fifth accumulation periods.

Staff Expert: Dana Eaves

G. Iatan 2 Fuel and Purchase Power Costs

1. Description

Empire is co-owner of the Iatan 2 generating facility from which it began receiving energy in August 2010. As a result of the "Non-Unanimous Stipulation and Agreement and Joint Proposal Regarding Certain Procedural Matters,"[5] filed and approved in File No. ER-2010-0130, Empire's share of fuel costs associated with Iatan 2 were deferred into a regulatory asset account until such a time as the Iatan 2 plant could be included in rates. The amount of $3,617,581 for the review period has been removed from fuel expense and included into the regulatory asset account for future recovery in rates. That same Stipulation and Agreement provided for special regulatory treatment of Empire's share of the value of the power generated by Iatan 2 as purchased power until Iatan 2 was put into Empire's rates on June 15, 2011, as a result of File No. ER-2011-0004.[6] During the review period in this case, Empire modified the CAFC beginning August 2010 when Iatan 2 began generating electricity. This modification reflected

[5] *Stipulation and Agreement and Joint Proposal Regarding Certain Procedural Matters* in File No. ER-2010-0130, pages 5-6; "(ii) that Empire can continue to use Construction Accounting for Iatan 2 in accordance with the provisions of the Empire Experimental Regulatory Plan Stipulation , Case No. EO-2005-0263."
[6] Which is outside of the parameters of this prudence review.

reflected the power taken by Empire as purchase power beginning in August 2010 continuing through the entire review period ending February 28, 2011. The amount of $10,149,705 was reflected in the CAFC as a result of the regulatory treatment given to Iatan 2 mentioned above.

2. Summary of Cost Implications

If it was found that Empire had been imprudent in following the proper reporting, rate payer harm could result from an increase in rates.

3. Conclusion

Staff found no indication of imprudence for the reporting of Iatan 2 deferred fuel costs for the three accumulation periods reviewed.

4. Documents Reviewed

a. Empire's responses to Staff Data Request Nos.1, 2 and 4; and

b. CAFC filings, Stipulation and Agreement and Joint Proposal Regarding Certain Procedural Matters in File No. ER-2010-0130 and Commission Orders in File No. ER-2011-0004.

Staff Expert: Dana Eaves

H. Purchased Power Agreements

1. Description

Empire had four long-term Purchased Power Agreements ("PPAs") in effect for the accumulation periods reviewed. These include two PPAs for wind energy, a PPA for base load energy from the Westar's Jeffery Energy Center that expired May 31, 2010, during the fourth accumulation period and a PPA for base load energy from the Plum Point Power Plant that began in-service operation August 12, 2010, beginning the fourth accumulation period. The PPAs were provided as Highly Confidential responses by Empire to Staff's Data Request No. 23. Staff reviewed the following PPAs for prudency:

a. Renewable Resource Energy Purchase Agreement between The Empire District Electric Company and Elk River Windfarm, LLC (Elk River Windfarm became operational December 15, 2005);

b. A Renewable Resource Power Purchase Agreement by and between Cloud County Wind Farm, LLC and The Empire District Electric Company (Cloud County Wind Farm became operational December 23,2008);

c. Participation Power Agreement between The Empire District Electric Company and Western Resources, Inc. (Expired May 31, 2010); and

d. Purchase Power Agreement between Plum Point Energy Associates, LLC and The Empire District Electric Company (Plum Point became operational August 12, 2010)

2. Summary of Cost Implications

If it was found that Empire had been imprudent by purchasing additional power or capacity to meet its demand, rate payer harm could result from an increase in rates.

3. Conclusion

Staff found no evidence of imprudence related to Empire's long-term purchased power contracts.

4. Documents Reviewed

a. Empire's Responses to Staff Data Request No. 24 in EO-2011-0285; and

b. Empire's Responses to Staff Data Request No.253 in ER-2010-0130

Staff Expert: Dana Eaves

I. Purchased Power Energy Costs

1. Description

Staff reviewed both the prices and the amounts Empire paid for purchased power under the contracts listed in Section H, other short-term contracts, and spot market purchases. Over the three accumulation periods, September 1, 2009 to February 28, 2011, Empire's purchased power costs total was ** ________ **. The two wind energy contracts mentioned in the preceding section are "take or pay" contracts, (i.e., Empire has to pay for the energy whether it needs it or not), and in addition to electricity, include the associated RECs. The spot market average price, during the review period, overall was lower than usual, due to lower market prices for natural gas. This resulted in many instances where it would have been more economical for Empire to generate energy using its' natural gas units, or purchase energy on the market rather than receive energy under the “take or pay” wind contracts. This is not the norm, generally natural gas prices are highly volatile and stable wind energy contracts are often used to hedge against volatility in natural gas prices. The wind PPAs do not appear to be imprudent at this time, but they should be closely evaluated in the future. Also, the Western Resource’s PPA was replaced with the Plum Point PPA and since Plum Point allows for a stable energy supply into the future, the PPA appears to be prudent.

In addition to the long-term purchase power contracts discussed above, Empire also purchases hourly energy in the market from other electric suppliers to help meet Empire’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 Empire’s generating units and the cost of capacity purchases.

2. Summary of Cost Implications

If it was found that Empire had been imprudent by purchasing additional power or energy to meet its demand at a rate above which Empire could generate itself, rate payer harm could result from an increase in rates.

3. Conclusion

Staff found no evidence Empire acted imprudently with regard to its purchases of hourly energy in the market during the period September 1, 2009 to February 28, 2011 review period. It is likely that Empire’s fuel and purchase power costs were higher in the period reviewed than they would have been had the wind power Empire used been economically dispatched instead of take-or-pay. However, these wind contracts are long-term contracts and must be viewed in light of the long-term needs of the Company and the fact that generation sources can only be added in amounts greater than what is needed in the short-term to minimize the costs and risks over the long-run. In addition, energy from these wind contracts is used by Empire to comply with the requirements for renewable energy found in 4 CSR 240-20.100 Electric Utility Renewable Energy Resource Standard Requirements. Staff does not find the costs associated with Empire’s Elk River Wind Farm, Cloud County Wind Farm, and Plum Point contracts to be imprudent.

4. Documents Reviewed

a. Empire's responses to Staff Data Request Nos. 1, 2, 4, 10, 11, 12, 16, 18, 21, 23, 24, 28 and 40; and

b. Hourly purchased power data submitted by Empire in compliance with 4 CSR 240-3.190.

Staff Expert: Dana Eaves

J. Off-System Sales

1. Description

In the Commission's order in ER-2010-0130, effective September 10, 2010, the FAC definition of off-system sales revenue was changed from "actual total system off-system sales margin" to "actual total system off-system sales revenue." For the purpose of this report the Staff calculated and allocated a proportional amount of natural gas cost to off-system sales cost for the period September 10, 2010 to February 28, 2011 (the end of the prudence review period).

For the accumulation periods reviewed, the Staff concluded that the level of off-system sales revenues were ** ________ ** and off-system sales and transmission costs were ** ________ ** resulting in off-system sales margins of ** ________ **.

Staff reviewed the off-system sales quantity, revenues and costs over the review period. Staff compared the quantity and margins to historical information regarding Empire's off-system sales.[7]

2. Summary of Revenue Implications

Empire's pursuit of off-system sales at a profit offsets total fuel and purchase power costs, although serving native load is a higher priority. If it was found that Empire had been imprudent in making off-system sales or that Empire had not pursued off-system sales, rate payer harm could result from an increase in rates.

[7] In the Commission's order in ER-2010-0130, effective September 10, 2010, the FAC definition of off-system sales revenue was changed from "actual total system off-system sales margin" to "actual total system off-system sales revenue." For the purpose of this report the Staff calculated and allocated a proportional amount of natural gas cost to off-system sales cost for the period September 10, 2010 to February 28, 2011 (the end of the prudence review period). This footnote also applies to fuel costs for: coal and pet coke, fuel oil, and tire derived fuel.

3. Conclusion

Staff found no evidence Empire was imprudent with regard to off-system sales.

4. Documents Reviewed

a. Monthly reports submitted in compliance with 4 CSR 240-3.161(5);

b. Empire's response to Staff Data Request Nos. 1 and 2; and

c. Monthly Outage data submitted by Empire in compliance with 4 CSR 240-3.190.

Staff Expert: Dana Eaves

K. SO_2 Allowances

1. Description

The U.S sulfur dioxide ("SO_2") 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. It requires electric utilities to reduce their SO_2 emissions by about fifty percent (50%) from 1980 levels or purchase allowances to meet this standard.

Under CAAA power plants are allocated a 30-year stream of tradable allowances, each worth one ton of SO_2. The allocations are based on an average capacity factor from the period 1985 to 1987. Allowances are awarded by the Environmental Protection Agency ("EPA") every year and are designated by vintage year. The vintage year denotes the first year the allowances are usable for compliance. Unused allowances can be sold or banked for use in subsequent years.

The US EPA's Clean Air Interstate Rule ("CAIR"), issued in 2005, and 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_2 by 57 percent (57%) from 2003 levels and Nitrogen Oxide ("NO_x") by 61 percent (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 Clean Air Interstate Rule. 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_2, NO_x , ozone and fine particulate. The requirements of CAIR were in affect during the prudence review period, and this report assumes that these requirements, or similar requirements, will remain in effect in the future.

The primary mechanism of the rule is a cap-and-trade program that will allow 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. 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, the power plants are required to submit two SO_2 allowances for each ton of SO_2 emitted. This ratio is further tightened to 2.86 allowances for each ton of SO_2 emitted in 2015.

Empire receives its SO_2 allowances from the EPA on a yearly basis to meet its annual SO_2 emissions. These allowances have no cost and therefore they are banked at zero cost. Gains from disposition of allowances are credited to FERC account 254 with subsequent recognition of income in FERC 411. Since they are recorded at zero cost, there is no subsequent charge to expense, FERC accounts 509, as they are retired. In addition, Empire does not currently purchase SO_2 allowances.

The Asbury, Riverton and Iatan I coal plants collectively receive 11,723 allowances per year. These plants burn low sulfur Western coal (Powder River Basin), higher sulfur blend coal and/or petroleum coke. In addition, TDF is used as a supplemental fuel at the Asbury Plant. Currently, Empire finds itself in a position where, although Empire receives allowances and continues to carry a bank of allowances, that surplus has rapidly decreased in the previous five years and is projected to continue decreasing in the years ahead. When Empire's SO_2 allowance bank is exhausted, currently estimated to be mid-2012, Empire will need to purchase additional SO_2 allowances or build a flue gas desulphurization ("FGD") scrubber system at the Asbury Plant.

2. Summary of Cost Implications:

At the point when the existing bank of SO_2 allowances is exhausted, Empire will be required to purchase additional credits to offset its emissions. These purchases of allowances could possibly increase fuel costs and will be included in the FAC calculation.

3. Conclusion

Based on the documents reviewed, Staff found no indication of imprudence. The variations of the number of allowances used during the accumulation periods are a function of the tons of coal burned during the accumulation periods and the sulfur content of the coal.

4. Documents Reviewed:

Empire's responses to Staff Data Request Nos. 39, 41, 42, 43, and 47.

Staff Expert: David Roos

L. Renewable Energy Credit Revenue

1. Description

Empire began receiving wind energy from the Elk River Windfarm in 2005. Additionally, Empire contracted to begin receiving wind energy from Cloud County Wind Farm, LLC in 2009. Empire is currently receiving wind energy from both of these entities to meet its customers' energy demand. As a part of these contracts, Empire receives RECs, which are credits issued under the Center for Resource Solutions' "green-e" program that certify that one megawatt-hour of electricity has been generated by a facility engaged in the production of renewable energy, such as wind, solar or biomass. Empire is certified to sell its RECs by the Center for Resource Solutions. The Stipulation and Agreement in File No. ER-2010-0130 requires Empire to use revenues from the selling of RECs as an offset to its fuel and purchase power cost in its FAC calculations. REC revenues first appeared in FAC fuel and purchase power cost calculations September 10, 2010. From the time period September 10, 2010 through February 28, 2011 ** ________ ** of REC revenue was used to offset fuel and purchase power costs.

2. Summary of Cost Implications

If it was found that Empire had been imprudent by not selling RECs when it had the opportunity to do so, rate payer harm could result from an increase in rates.

NP

3. Conclusion

Staff did not find any evidence of imprudent sales of RECs during the time period examined in this review.

4. Documents Reviewed

a. Staff COS Report from ER-2010-0130; and

b. Empire FAC work papers.

Staff Expert: David Roos

IV. Interest Cost

1. Description

During the accumulation period Empire is required to calculate a monthly interest amount based on Empire's short-term debt borrowing rate that is applied to the under-recovered or over-recovered fuel and purchase power costs. The short-term debt borrowing rate is Empire's $150 million revolving credit facility that had a Commercial Paper credit rating of A-3 by Standard and Poor's[8] during the period September 1, 2009 through February 28, 2011. An increase or decrease in Empire's Commercial Paper credit rating influences the interest rate that Empire applies to the under-recovered or over-recovered fuel and purchase power costs. For the period September 1, 2009 through February 28, 2011, Empire's short-term borrowing rate averaged 1.41 percent (1.41%). The interest amount is component "I" of the CAFC.

2. Summary of Interest Implications

If it was found that Empire had been imprudent during the calculation of the monthly interest amounts or using a short-term debt borrowing rate that did not fairly represent the actual cost of Empire's short-term debt, ratepayer harm could result from a CAF that is too high or too low.

3. Conclusion

Staff found no evidence Empire acted imprudently with regard to the monthly interest amount applied to the under-recovered or over-recovered fuel and purchase power costs.

[8]Standard and Poor's Global Credit Portal® Ratings Direct, Empire District Electric Co., March 17, 2011.

4. Documents Reviewed

a. Empire's interest calculation work papers in support of the interest calculation amount on the under-recovered or over-recovered balance; and

b. Empire's Standard and Poor's credit rating report.

Staff Expert: Matthew Barnes

V. Outages

1. Description

Empire generates much of its energy with its own generating stations. Outages taken at any of the generating units can have an impact on how much Empire will pay for fuel and purchase power, and could result in Empire asking for more fuel and purchase power cost than is necessary. Outages can be either planned or unplanned. Staff examined the outages and the timing of these outages to determine if these outages were prudently taken. An example of an imprudent outage would be a planned outage of a large coal unit during peak demand times.

Empire owns 50 MW of the Plum Point facility. Plum Point experienced unscheduled outages during accumulation periods 4 and 5 related to boiler issues. The repair work to the boiler was not charged to the owners of the Plum Point Facility because the boiler was still under warranty. In Data Request 49.2, Staff asked Empire if the warranty also included the cost of replacement power. Empire responded: "After further examination of the EPC Contact, it does not appear that the fuel costs associated with the plant outages are recoverable as a Warranty claim." Staff has reviewed the warranty contract, Section 11 Amended and Restated EPC Agreement as provided in Response to Staff data request 49.1, and is in agreement with the Company that fuel costs associated with the warranted outages could not be recovered from the manufacturer as a part of the warranty claim, and, therefore, Empire is not imprudently recovering the costs of replacement power through the FAC.

Empire also owns 102 MW of the Iatan 2 facility. Iatan 2 experienced unscheduled outages during accumulation period 5 related to boiler issues. The repair work to the boiler was not charged to the owners of the Iatan 2 facility because the boiler was still under warranty. Staff determined that fuel costs associated with the warranted outages could not be recovered from the manufacturer as a part of the warranty claim, and, therefore, Empire is not imprudently recovering the costs of replacement power through the FAC.

2. Summary of Cost Implications

An imprudent outage could result in Empire purchasing expensive spot power or running its more expensive gas units to meet demand. Thus, Empire would purchase more natural gas than necessary and, consequently, have higher fuel costs.

3. Conclusion

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

4. Documents Reviewed

a. Empire's responses to Staff Data Request Nos. 3, 4, 5 and 6; and

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

Staff Expert: Leon Bender