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OPC015
Fuel Adjustment Clause
Mantle/Direct
Public Counsel
ER-2016-0023

DIRECT TESTIMONY

OF

LENA M. MANTLE

Submitted on Behalf of the Office of the Public Counsel

EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2016-0023

April 1, 2016

OPC Exhibit No. 15
Date 6-2-16 Reporter KKF
File No. ER-2016-0023

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

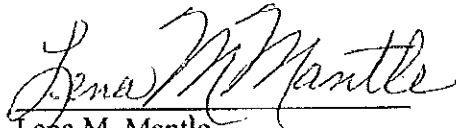
In the Matter of The Empire District)
 Electric Company's Request for)
 Authority to Implement a General) Case No. ER-2016-0023
 Rate Increase for Electric Service)

AFFIDAVIT OF LENA M. MANTLE

STATE OF MISSOURI)
) ss
 COUNTY OF COLE)

Lena M. Mantle, of lawful age and being first duly sworn, deposes and states:

1. My name is Lena M. Mantle. I am a Senior Analyst for the Office of the Public Counsel.
2. Attached hereto and made a part hereof for all purposes is my direct testimony.
3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.




 Lena M. Mantle
 Senior Analyst

Subscribed and sworn to me this 1st day of April 2016.



JERENE A. BUCKMAN
 My Commission Expires
 August 23, 2017
 Cole County
 Commission #13754037



 Jerene A. Buckman
 Notary Public

My Commission expires August 23, 2017.

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DIRECT TESTIMONY

OF

LENA M. MANTLE

THE EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2016-0023

INTRODUCTION

Q. Please state your name and business address.

A. My name is Lena M. Mantle and my business address is P.O. Box 2230, Jefferson City, Missouri 65102.

Q. By whom are you employed and in what capacity?

A. I am employed by the Missouri Office of the Public Counsel ("OPC") as a Senior Analyst.

Q. On whose behalf are you testifying?

A. I am testifying on behalf of the OPC.

Q. Please describe your experience and your qualifications.

A. I worked for the Staff of the Missouri Public Service Commission ("Staff") from August 1983 until I retired in December 2012. During the time I was employed at the Missouri Public Service Commission ("Commission"), I worked as an Economist, Engineer, Engineering Supervisor and Manager of the Energy Department. I was employed by the OPC in my current position in August 2014.

Attached as Schedule LMM-1 is a brief summary of my experience with Staff and a list of the Commission cases in which I filed testimony, Commission

1 rulemakings in which I participated, and Commission reports to which I contributed.

2 I am a Registered Professional Engineer in the State of Missouri.

3 **Q. Would you provide a summary of your background with respect to the Fuel**
4 **Adjustment Clause (“FAC”)?**

5 **A.** After the enactment of Section 386.266 of the Revised Missouri Statutes (RSMo),
6 Staff, OPC, representatives from the electric utilities, and other stakeholders,
7 including, worked together to draft proposed rules for the Commission’s
8 consideration to implement the statute. The draft rule development process included
9 many stakeholder meetings where the participants developed the proposed wording
10 of the draft rules. I attended and participated in all of the stakeholder meetings. I
11 was the Staff “scribe” at the meetings and personally recorded the compromise
12 language the stakeholders agreed upon. I also participated drafting language
13 regarding Staff’s positions for the stakeholders’ consideration in this process.

14 In June 2006, the Commission submitted proposed rules to the Secretary of
15 State that were published in the July 17, 2006, Missouri Register. I attended, on
16 behalf of the Staff, some of the public hearings the Commission held on its
17 proposed rules in August and September of 2006.

18 In my employment with Staff and OPC, I have either filed testimony or
19 participated in the determination of FAC positions in every general rate case where a
20 Missouri investor-owned electric utility requested the establishment or modification
21 of an FAC under the current statute. In addition, I have reviewed and, in some cases

1 offered testimony, in most of the FAC rate change, prudence review, and true-up
2 cases that have been conducted in Missouri.

3 Drawing on my experience, I have written a white paper providing
4 information on the history of the FAC in Missouri and a general description of the
5 FAC as implemented in Missouri. This whitepaper is attached to this testimony and
6 labeled "Schedule LMM-3."

7 **Q. Would you summarize the recommendation offered in this testimony?**

8 A. OPC recommends the Commission discontinue Empire's FAC because Empire did
9 not show the magnitude and volatility of the costs and revenues it proposes to
10 include in order for the Commission to make the appropriate, reasonable
11 determination of the costs and revenues as required by 4 CSR 240-20.090(2)(C).

12
13 **CONSIDERATIONS NECESSARY FOR CONTINUANCE OF AN FAC**

14 **Q. Why should the Commission discontinue an FAC for a utility it has**
15 **previously approved an FAC for?**

16 A. Just as the Commission should be cautious about discontinuing an FAC for a utility
17 that currently has an FAC, it should be just as cautious about granting continuation
18 of an FAC without adequate information from the electric utility regarding the need
19 for an FAC. The Commission should not approve an FAC for an electric utility just
20 because one is currently in place. The utility should show why it needs an FAC and
21 provide the Commission sufficient information to determine what costs and

1 revenues, if any, should be included in its request. If an electric utility requesting an
2 FAC does not include the information required for the Commission to make an
3 appropriate and reasonable determination, then the Commission should discontinue
4 the FAC.

5 The Commission has the authority to grant, or not grant, an FAC for each
6 electric utility.¹ An FAC is a significant deviation from the Commission's historical
7 prohibition against single issue ratemaking. A few costs and revenues are
8 recovered/returned in isolation of the totality of reduction and increases in costs
9 incurred as well as the revenues received by the utility. The FAC, like other single
10 issue ratemaking mechanisms, removes the incentive for the electric utility to most
11 efficiently manage fuel and purchased power costs. An FAC is not immediate rights
12 bestowed upon an electric utility but rather at the Commission's discretion to
13 approve, modify, or reject.

14 The electric utility determines type and timing of generation plants to build,
15 enters into contracts for fuel for generation, and participates in regional transmission
16 organizations ("RTOs"). The only way for customers to manage FAC costs is to use
17 more or less electricity. An FAC moves the risk of the fuel cost and market prices,
18 based on the decisions by the electric utility, to the customers who do not participate
19 in any of these decisions regarding these factors.

¹ Section 386.266.1

1 Because of this shift in risk to the customer, the exercise of discretion
2 requires comprehensive scrutiny by the Commission regarding whether or not it
3 should approve an FAC for the utility and, if it does, what costs and revenues should
4 be included. Because the volatility and manageability of costs change, the electric
5 utility should provide the detail necessary for the Commission to make an informed
6 decision in each rate case regardless of whether an FAC has previously been granted
7 and, if so, the length of time it has been in place. Anything less than careful
8 consideration of current conditions in each rate case trivializes the shift of risk to the
9 customers and the impact of an FAC on ratepayers.

10
11 **FAC FILING REQUIREMENTS**

12 **Q. Did Empire meet the filing requirements of the Commission for an FAC in**
13 **accordance with 4 CSR 240-3.161 Electric Utility Fuel and Purchased Power**
14 **Cost Recovery Mechanisms Filing and Submission Requirements?**

15 **A.** No, it did not. In its direct filing, Empire included a much more detailed list of the
16 costs and revenues it is proposing be included than it had in past rate cases. To the
17 best of my knowledge it is a complete listing of all the costs and revenues Empire is
18 proposing be included. However, 4 CSR 240-3.161(2) does not just require a
19 complete list. It also requires a complete explanation of each cost and revenue the
20 electric utility is proposing for recovery in its FAC.

1 The information Empire provided to meet the requirement of 4 CSR 240-
2 3.161(2)(H) and (I) does not provide the Commission desired transparency
3 regarding the costs and revenues Empire is requesting be included in its FAC. The
4 Commission's standard for complete explanations as required in 4 CSR 240-3.161
5 is found in its *Order of Rulemaking*² that states the electric utility not only provide a
6 list of all the costs and revenues it is proposing be included in its FAC, but it must
7 also include "every explanation and detail to allow a decision-maker to evaluate the
8 response fully and on its face, without forcing it to resort to asking for additional
9 explanations, clarification or documentation to reach a decision."³ The information
10 provided in this case regarding the costs and revenues Empire is proposing to be
11 included in its FAC does not meet the Commission's standard of a complete
12 explanation.

13 For example, Empire is proposing costs in subaccount "547301:
14 NonFAS133 Deriv (Gain)/Loss" be included in its proposed FAC. Empire's
15 complete explanation of this cost is "Gain/loss on Non-FAS133 derivatives for
16 combustion turbine generation."⁴ While this may be a complete explanation to
17 someone intimately familiar with Empire's accounts, this fails to provide an
18 adequate explanation to even a person with substantial knowledge of public utility
19 regulation. It brings up the questions of what are non-FAS133 derivatives and what

² Case No. EX-2006-0472

³ EFIS item 28, Final Order of Rulemaking, Attachment A, page 3

⁴ Direct testimony of Todd W. Tarter, Schedule TWT-5, page 4 of 7

1 it has to do with fuel and purchased power. The definition provided does not meet
2 the standard of “every explanation and detail to allow a decision-maker to evaluate
3 the response fully and on its face, without forcing it to resort to asking for additional
4 explanations, clarification or documentation to reach a decision.”

5 **Q. Why are these complete explanations important?**

6 **A.** Complete explanations are important because, as the Commission concluded in its
7 *Report and Order* in the recent Kansas City Power & Light Company (“KCPL”) rate
8 case numbered. ER-2014-0370, “It is the Commission that should make the
9 determination as to what costs or revenues should flow through the FAC, not the
10 electric utilities.”⁵ Without complete explanations as required by the Commission
11 FAC rule, there is no transparency regarding the costs and revenues that will be
12 included and the Commission cannot make an informed decision regarding which
13 costs and revenues should flow through the FAC.

14
15 **MAGNITUDE AND VOLATILITY OF FAC COSTS AND REVENUES**

16 **Q. Commission Rule 4 CSR 240-20.090(2)(C) requires the Commission to**
17 **consider the magnitude and volatility in determining whether or not a cost**
18 **should be included in an FAC. Did Empire meet the burden of providing the**
19 **magnitude and volatility of the costs and revenues it is requesting be**
20 **included in its FAC for the Commission’s consideration?**

1 A. No, it did not. As previously discussed, Empire included in the direct testimony of
2 Mr. Tarter a list of the costs and revenues it is proposing be included in its FAC.⁶
3 However, there is no mention of the magnitude or volatility of each cost and
4 revenue. The magnitude of some costs, such as coal and natural gas commodity
5 costs, are known to be large. However, Empire lists more than sixty (60)
6 subaccounts of costs and revenues it is requesting be included in its FAC. Many
7 subaccounts include more than one type of cost or revenue. Empire does not
8 provide the magnitude or a measure of volatility for any subaccount – including the
9 subaccounts that include the cost of coal and natural gas.

10 **Q. Does Empire incur all the costs listed in Mr. Tarter's direct testimony?**

11 A. No, it does not. Close examination of pages 1 and 2 of Schedule TWT-5 of Mr.
12 Tarter's direct testimony shows Empire's filed list of FAC costs includes propane,
13 generating unit price adjustments and broker fees, all of which Empire has yet to
14 incur. There is no discussion in Empire's direct case as to why the Commission
15 should allow these non-incurred costs types. There is no discussion regarding
16 whether these costs will be actually incurred by Empire or the expected magnitude
17 and volatility of these hypothetical, potential costs.

18 **Q. What is the harm of including costs Empire has not incurred?**

⁵ EFIS item 592, page 39

⁶ Direct Testimony of Todd W. Tarter, Schedule TWT-5

1 A. The Commission spoke of this harm in its *Report and Order* in the KCPL rate case,
2 case no. ER-2014-0370. On page 39 of this order, the Commission found
3 “(i)ncluding a cost or revenue in the FAC that KCPL does not currently incur or
4 record clouds the transparency of the FAC and unnecessarily complicates it.
5 (footnote deleted)” In its decision regarding the FAC, the Commission concluded
6 KCPL “should not include costs and revenues that KCPL is not currently incurring
7 or receiving, other than insurance recoveries, subrogation recoveries and settlement
8 proceeds related to costs and revenues included in the FAC.”⁷

9 **Q. Did Empire propose insurance recoveries, subrogation recoveries and**
10 **settlement proceeds related to costs and revenues be included in its proposed**
11 **FAC?**

12 A. Yes, it did. Empire included settlement proceeds, insurance recoveries and
13 subrogation recoveries even though it has not incurred these cost and/or revenues.

14 **Q. Should these costs and revenues be included even though these costs and**
15 **revenues have not been incurred/received?**

16 A. Yes. These costs and revenues should be included consistent with the
17 Commission’s determination in the KCPL rate case where it found on page 39 of its
18 *Report and Order*:

19 Insurance recoveries, subrogation recoveries and settlement proceeds
20 related to costs and revenues included in the FAC are revenues
21 typically related to an unexpected incident or accident. If these types

⁷ Page 40

1 of revenues do occur, it is likely that at some point in time, prior to
2 the receipt of the recovery or settlement, there were increased costs
3 or reduced revenues due to that circumstance that have been include
4 in the fuel adjustment rates paid by customers.
5

6 **Q. Did Empire provide any testimony regarding the volatility of the costs and**
7 **revenues it is proposing to include in its FAC?**

8 A. Not specifically. Empire FAC witness Mr. Tarter provided a very limited
9 discussion of the FAC base factor changes on page 17 of his direct testimony. His
10 discussion is very broad and is limited to costs at just two points in time – (1) what
11 was approved in the last case (ER-2014-0351), and (2) Empire’s pending proposal.

12 **Q. Does Mr. Tarter give a measure of the change in FAC base costs and**
13 **revenues?**

14 A. Mr. Tarter only gives two measures of change in his written testimony. On page 17
15 of his direct testimony, he states the FAC base factor proposed by Empire in this
16 case is only 0.15% higher than the current base factor. He also states the net
17 proposed fuel and purchased power expense is lower than the current fuel and
18 purchased power expense by about 1.2%.

19 **Q. Is an increase in the FAC base cost of 0.15% “volatile”?**

20 A. No, it is not. The current FAC base costs that Mr. Tarter is referring to are the
21 normalized costs included in the *Global Stipulation And Agreement* from the last
22 Empire rate case (ER-2014-0351) with the noted exception of the transmission costs

1 that were modified based on the Commission's *Report and Order* from that case.⁸

2 The test year for the case ended at August 31, 2014 with a true-up through
3 December 31, 2014. According to Mr. Tarter's direct testimony, Empire's proposed
4 FAC base in this current case is based on predicted fuel costs for a time period not
5 designated in his testimony.⁹

6 Mr. Tarter is asking the Commission to make a determination that an
7 increase of 0.15% over an unknown time period is volatile enough to move the risk
8 of Empire's fuel and purchases power cost decisions to its customers. This small
9 percentage change over even a one year time period does not demonstrate volatility.

10 It instead shows stability in FAC costs.

11 **Q. Is a decrease in fuel and purchased power cost of 1.2% over this same**
12 **unknown time period "volatile"?**

13 **A.** No, it is not. This small change also shows stability in FAC costs.

14 **Q. Is this the only information regarding changes in FAC costs and revenues in**
15 **Mr. Tarter's testimony?**

16 **A.** No, it is not. Mr. Tarter attached a comparison of current FAC base costs and
17 revenues with the FAC base costs and revenues it is proposing to the Commission in
18 this case.

⁸ EFIS item 313

⁹ Page 18

1 | **Q. Is the information included on Mr. Tarter's Schedule TWT-10 consistent**
2 | **with his written testimony?**

3 | A. It does show the base factor would increase by 0.15%. However, it does not show
4 | the 1.2% reduction to fuel and purchased power costs. Attached to this testimony as
5 | "Schedule LMM-2" is Mr. Tarter's "Schedule TWT-10" with two additional
6 | columns – one shows the dollar difference between Empire's current and proposed
7 | FAC bases. The other shows the percentage difference for each row in his table.
8 | Schedule LMM-2 shows the fuel cost increases by 4.29% and purchased power
9 | energy charges decrease by 9.41%. Combined fuel and purchased power expenses
10 | show a decline of 0.08% - less than what Mr. Tarter provides in his testimony.

11 | **Q. Your schedule shows some large percentage changes in some costs and**
12 | **revenues. Does this indicate volatility in these costs?**

13 | A. It may indicate volatility but it is not conclusive because it is based on just two
14 | points in time. The Commission should be cautious about using only two data
15 | points – current costs and proposed costs - to conclude volatility. Multiple data
16 | points, including past cost and expected future cost, along with a good
17 | understanding of exactly what the cost includes should be considered in making a
18 | determination of volatility. For example, a cost may increase fifty-percent between
19 | these two points in time but may not increase over the next five years because the
20 | utility entered into a fixed contract for the service or product. Therefore, even

1 though there is a big difference in the cost across two points in time, that cost would
2 not be volatile going forward.

3 In addition, the Commission also needs to consider magnitude of the cost.
4 The largest percentage change on this schedule is an increase of 74.07% for variable
5 gas transportation. However, because of the magnitude of variable gas
6 transportation costs compared to the total fuel and purchased power costs (just
7 0.18%), the change in variable gas transportation costs may look volatile in isolation
8 and across these two points in time but only represents a small percentage (0.076%)
9 of the total proposed fuel and purchased power costs. Therefore, if this the
10 difference in cost at these two discreet points in time signifies the cost was volatile,
11 variable gas transportation costs do not meet the criteria of magnitude and volatility.

12
13 **SUMMARY**

14 **Q. To summarize your testimony, did Empire provide complete explanations of**
15 **the costs and revenues it is requesting the Commission allow it to include in**
16 **its FAC?**

17 **A. No, it did not.**

18 **Q. Do the limited measures of magnitude and volatility included in Empire's**
19 **direct testimony meet the burden of showing the magnitude and volatility**
20 **necessary for the Commission to determine which costs and revenues should**
21 **be included in an FAC?**

1 A. No, they do not.

2 **Q. Should the Commission approve an FAC for Empire without this**
3 **information?**

4 A. No, it should not. As stated in the *Report and Order* in the KCPL rate case,¹⁰ “it is
5 the Commission that should make the determination as to what costs or revenues
6 should flow through the FAC, not the electric utility.” Without information
7 regarding exactly what costs and revenues are being included and the magnitude and
8 volatility of each cost and revenue, the Commission cannot make the determination
9 required by its rules. Therefore, the Commission should not approve the
10 continuation of an FAC for Empire.

11 **Q. Does this conclude your direct testimony?**

12 A. Yes, it does.

¹⁰ Case no. ER-2014-0370, Page 39

Education and Work Experience Background for

Lena M. Mantle, P.E.

I received a Bachelor of Science Degree in Industrial Engineering from the University of Missouri, at Columbia, in May, 1983. I joined the Research and Planning Department of the Missouri Public Service Commission in August, 1983 and worked under the direct supervision of Dr. Michael Proctor. I became the Supervisor of the Engineering Analysis Section of the Energy Department in August, 2001. In July, 2005, I was named the Manager of the Energy Department. The Energy Department was renamed the Energy Unit in August, 2011. I am a registered Professional Engineer in the State of Missouri.

In my work at the Commission from May 1983 through August 2001, I worked in many areas of electric utility regulation. Initially I worked on electric utility class cost-of-service analysis and fuel modeling. As a member of the Research and Planning Department, I participated in the development of a leading-edge methodology for weather normalizing hourly class energy for rate design cases. I took the lead in developing personal computer programming of this methodology and applying this methodology to weather-normalize electric usage in numerous electric rate cases. I was also instrumental in the development of the Missouri Public Service Commission electronic filing and information system.

My responsibilities as the Supervisor of the Engineering Analysis section considerably broadened my work scope. I remained the lead Staff member on weather normalization in electric cases but also supervised the engineers in a wide variety of engineering analysis including electric utility fuel and purchased power expense estimation for rate cases, generation plant construction audits, review of territorial agreements, and resolution of customer complaints. As the Manager of the Energy Unit, I oversaw the activities of the Engineering Analysis section, the electric and natural gas utility tariff filings, the Commission's natural gas safety staff, fuel adjustment clause filings, resource planning compliance review and the class cost-of-service and rate design for natural gas and electric utilities.

I retired from the Commission Staff on December 31, 2012.

I began working at the Office of the Public Counsel as a Senior Analyst in August 2014. In my work for the Public Counsel, I provide analytic and engineering support in cases before the Commission.

Lists of the Missouri Public Service Commission rules in which I participated in the development of or revision to, Missouri Public Service Commission Staff reports that I contributed to and Cases that I provided testimony in follow.

Missouri Public Service Commission Rules

4 CSR 240-3.130	Filing Requirements and Schedule of Fees for Applications for Approval of Electric Service Territorial Agreements and Petitions for Designation of Electric Service Areas
4 CSR 240-3.135	Filing Requirements and Schedule of Fees Applicable to Applications for Post-Annexation Assignment of Exclusive Service Territories and Determination of Compensation
4 CSR 240-3.161	Electric Utility Fuel and Purchased Power Cost Recovery Mechanisms Filing and Submission Requirements
4 CSR 240-3.162	Electric Utility Environmental Cost Recovery Mechanisms Filing and Submission Requirements
4 CSR 240-3.190	Reporting Requirements for Electric Utilities and Rural Electric Cooperatives
4 CSR 240-14	Utility Promotional Practices
4 CSR 240-18	Safety Standards
4 CSR 240-20.015	Affiliate Transactions
4 CSR 240-20.017	HVAC Services Affiliate Transactions
4 CSR 240-20.090	Electric Utility Fuel and Purchased Power Cost Recovery Mechanisms
4 CSR 240-20.091	Electric Utility Environmental Cost Recovery Mechanisms
4 CSR 240-22	Electric Utility Resource Planning
4 CSR 240-80.015	Affiliate Transactions
4 CSR 240-80.017	HVAC Services Affiliate Transactions

Staff Direct Testimony Reports

ER-2012-0175	Capacity Allocation, Capacity Planning
ER-2012-0166	Fuel Adjustment Clause
ER-2011-0028	Fuel Adjustment Clause
ER-2010-0356	Resource Planning Issues
ER-2010-0036	Environmental Cost Recovery Mechanism
HR-2009-0092	Fuel Adjustment Rider
ER-2009-0090	Fuel Adjustment Clause, Capacity Requirements
ER-2008-0318	Fuel Adjustment Clause
ER-2008-0093	Fuel Adjustment Clause, Experimental Low-Income Program
ER-2007-0291	DSM Cost Recovery

Office of Public Counsel Case Listing

Case	Filing Type	Issue
WR-2015-0301	Direct, Rebuttal, Surrebuttal	Revenues
ER-2014-0370	Direct, Rebuttal, Surrebuttal	Fuel Adjustment Clause
ER-2014-0351	Direct, Rebuttal, Surrebuttal	Fuel Adjustment Clause
ER-2014-0258	Direct, Rebuttal, Surrebuttal	Fuel Adjustment Clause
EC-2014-0224	Surrebuttal	Policy, Rate Design

Missouri Public Service Commission Staff Case Listing

Case No.	Filing Type	Issue
ER-2012-0175	Rebuttal, Surrebuttal	Resource Planning Capacity Allocation
ER-2012-0166	Rebuttal, Surrebuttal	Fuel Adjustment Clause
EO-2012-0074	Direct/Rebuttal	Fuel Adjustment Clause Prudence
EO-2011-0390	Rebuttal	Resource Planning Fuel Adjustment Clause
ER-2011-0028	Rebuttal, Surrebuttal	Fuel Adjustment Clause
EU-2012-0027	Rebuttal, Surrebuttal	Fuel Adjustment Clause
ER-2010-0036	Supplemental Direct, Surrebuttal	Fuel Adjustment Clause
ER-2009-0090	Surrebuttal	Capacity Requirements
ER-2008-0318	Surrebuttal	Fuel Adjustment Clause
ER-2008-0093	Rebuttal	Fuel Adjustment Clause Low-Income Program
ER-2007-0004	Direct	Resource Planning
GR-2007-0003	Direct	Energy Efficiency Program Cost Recovery
ER-2007-0002	Direct	Demand-Side Program Cost Recovery
ER-2006-0315	Rebuttal	Demand-Side Programs Low-Income Programs
ER-2006-0315	Supplemental Direct	Energy Forecast
EA-2006-0314	Rebuttal	Jurisdictional Allocation Factor
EA-2006-0309	Rebuttal, Surrebuttal	Resource Planning
ER-2005-0436	Rebuttal, Surrebuttal	Low-Income Programs Energy Efficiency Programs
ER-2005-0436	Direct, Surrebuttal	Resource Planning
EO-2005-0329	Spontaneous	Demand-Side Programs Resource Planning
EO-2005-2063	Spontaneous	Demand-Side Programs Resource Planning
ER-2004-0570	Rebuttal, Surrebuttal	Energy Efficiency Programs Wind Research Program
ER-2004-0570	Direct	Reliability Indices
EF-2003-465	Rebuttal	Resource Planning
ER-2002-424	Direct	Derivation of Normal Weather
EC-2002-1	Direct, Rebuttal	Weather Normalization of Class Sales Weather Normalization of Net System
ER-2001-672	Direct, Rebuttal	Weather Normalization of Class Sales

		Weather Normalization of Net System
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Missouri Public Service Commission Staff Case Listing (cont.)

ER-2001-299	Direct	Weather Normalization of Class Sales Weather Normalization of Net System
EM-2000-369	Direct	Load Research
EM-2000-292	Direct	Load Research
EM-97-575	Direct	Normalization of Net System
ER-97-394, et. al.	Direct, Rebuttal, Surrebuttal	Weather Normalization of Class Sales Weather Normalization of Net System Energy Audit Tariff
EO-94-144	Direct	Weather Normalization of Class Sales Weather Normalization of Net System
ER-97-81	Direct	Weather Normalization of Class Sales Weather Normalization of Net System TES Tariff
ER-95-279	Direct	Normalization of Net System
ET-95-209	Rebuttal, Surrebuttal	New Construction Pilot Program
EO-94-199	Direct	Normalization of Net System
ER-94-163	Direct	Normalization of Net System
ER-93-37	Direct	Weather Normalization of Class Sales Weather Normalization of Net System
EO-91-74, et. al.	Direct	Weather Normalization of Class Sales Weather Normalization of Net System
EO-90-251	Rebuttal	Promotional Practices Variance
ER-90-138	Direct	Weather Normalization of Net System
ER-90-101	Direct, Rebuttal, Surrebuttal	Weather Normalization of Class Sales Weather Normalization of Net System
ER-85-128, et. al.	Direct	Demand-Side Update
ER-84-105	Direct	Demand-Side Update

FAC Comparison

<u>FUEL</u>	Current	Proposed	Difference	% Difference
Fuel	94,834,279	98,898,983	4,064,704	4.29%
Gas Transportation - Variable	147,028	255,927	108,899	74.07%
Gas losses (LUF) at Cost of Gas	776,334	1,084,470	308,136	39.69%
AQCS consumables - Variable	1,523,679	2,142,668	618,989	40.62%
FERC 501 labor costs	(174,495)		174,495	
Freeze Control Adder	28,895		(28,895)	
Other Fuel Related	3,734,040	3,572,855	(161,185)	-4.32%
TOTAL FUEL AND RELATED COSTS	100,869,760	105,954,903	5,085,143	5.04%
<u>PURCHASED POWER ENERGY CHARGES</u>				
Purchased power energy (Contracts)	40,228,865	36,522,550	(3,706,315)	-9.21%
50 MW Plum Point O&M Cost - Var	4,118,601	3,652,771	(465,830)	-11.31%
Purchased power energy	44,347,466	40,175,321	(4,172,145)	-9.41%
<u>OTHER ENERGY COSTS</u>				
Net Emission Allowances				
RTO Transmission	5,054,101	5,861,084	806,983	15.97%
Net ARR/TCR		(3,494,681)	(3,494,681)	
Less: Net RECs	(1,162,426)	(498,617)	663,809	-57.11%
Less: Off-System Sales Revenue	(6,805,841)	(5,234,982)	1,570,859	-23.08%
TOTAL FUEL & PURCHASED POWER	142,303,060	142,763,028	459,968	0.32%
Total kWh	5,302,880,000	5,311,097,835	8,217,835	0.15%
Base Cost per kWh	0.02684	0.02688	0.00004	0.15%
Base Cost per MWh	26.84	26.88	0.04	0.15%

Electric Utility Fuel Adjustment Clause in Missouri:
History and Application Whitepaper

Lena M. Mantle, P.E.
Senior Analyst
Office of the Public Counsel

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Introduction

The purpose of this whitepaper is to provide a general description of the history of electric utility fuel adjustment clauses ("FACs") in Missouri prior to and after the passage of Section 386.266 Revised Missouri Statutes ("RSMo") in 2005¹ and provide an understanding of the functionality of the FACs currently implemented throughout the State of Missouri. This whitepaper is not an exhaustive description of the FAC in Missouri but is intended to provide a basic understanding of the history and application of Section 386.266 RSMo in a neutral and unbiased manner.

Recovery of Fuel and Purchased Power Costs Prior to Section 386.266 RSMo

In the 1979 Missouri Supreme Court opinion of *Utility Consumer Council of Missouri, Inc. v. P.S.C.*,² the Court concluded FAC surcharges were unlawful because they allowed rates to go into effect without considering all relevant factors. The Court warned "to permit such a clause would lead to the erosion of the statutorily-mandated fixed rate system."³ The Court further explained, "If the (L)egislature wishes to approve automatic adjustment clauses, it can of course do so by amendment of the statutes and set up appropriate statutory checks, safeguards, and mechanisms for public participation."⁴

After this Supreme Court opinion, fuel and purchased power costs for Missouri investor-owned utilities were normalized and included in the determination of the utility's revenue requirement in general rate proceedings. This provided an incentive to the electric utility that, if it managed its activities in a manner that allowed it to reliably serve its customers at a cost lower than what was included in its revenue requirement in the last rate case, all the savings were retained by the electric utility's shareholders in higher reported net income. If costs were greater than the costs included in the revenue requirement, the shareholders absorbed the increased costs in lower reported net income. When the electric utility believed that it could no longer absorb the increased costs, the electric utility would ask the Commission for an increase in its rates.

¹ Section 386.266 RSMo was Truly Agreed To and Finally Passed by the Missouri House of Representatives and Senate on April 27, 2005. Governor Matt Blunt signed this legislation on July 14, 2005.

http://www.senate.mo.gov/05info/BTS_Web/Actions.aspx?SessionType=R&BillID=5755

² State ex rel. Utility Consumers Council, Inc. v. P.S.C., 585 S.W.2d 41(MO. 1979)

³ Id. at 57.

⁴ Id.

This incentive worked well for the Missouri electric utilities and their customers for the next twenty-five years. The two largest investor-owned electric utilities, Union Electric Company ("Union Electric") and Kansas City Power & Light Company ("KCPL") went for a period of twenty years without a rate increase request due to several factors including the excess generation they built in the 1970's and 1980's. Capital costs of these plants were directly included in the customers' rates of these electric utilities. Excess generation and capacity from these utilities and other regional providers that over-built was sold through long-term contracts on a cost-plus basis to the smaller investor-owned electric utilities in the state. This resulted in minimal rate increase requests for these smaller investor-owned electric utilities and offset some of the capital costs being paid by the customers of Union Electric and KCPL. Eventually the large utilities' customers load requirements grew into the need for their own capacity and they did not renew the long-term contracts. Then, to meet their customers' needs, the smaller electric utilities began to build the least cost option - natural-gas fired generation plants. While these plants were inexpensive to build, the fuel cost was uncertain.

In the early 1990's, restructuring of the electric utilities began occurring in other parts of the nation. In the mid-1990's, the Missouri Legislature considered restructuring investor-owned electric utility companies. At the end of 2000, after two months of extraordinarily cold weather and continued reports of extreme natural gas storage withdrawals, the commodity price of natural gas spiked to nearly \$10 per thousand cubic feet ("Mcf") in late December after remaining consistently between \$1/Mcf to \$3/Mcf since the inception of the unregulated wholesale natural gas markets in the 1980s.⁵ These wildly fluctuating natural gas prices had little impact on the total fuel costs of KCPL and Union Electric since most of their needs were met through nuclear and coal generation. However, the fluctuating natural gas prices significantly impacted the smaller electric utilities' fuel and purchased power costs.

Overview of Section 386.266 RSMo

The provisions of Section 386.266 RSMo, also known as Senate Bill 179 ("SB 179"), took effect on January 1, 2006.⁶ This section gives the Missouri Public Service Commission ("Commission"), among other things, the authority to approve rate schedules authorizing periodic rate adjustments outside of general rate proceedings to reflect increases and decreases in its prudently incurred fuel and purchased power costs, including transportation costs.

An FAC is a mechanism designed to reflect increases and decreases in fuel and purchased power costs, including transportation costs. The statute, in addition to requiring approval from

⁵ Missouri Public Service Commission EFIS Case No. GW2001398XXX, Item no. 44, Final Report of the Missouri Public Service Commission's Natural Gas Commodity Price Task Force, August 29, 2001

⁶ §386.266.12.

the Commission for the implementation of an FAC, includes additional provisions - including some consumer protections. It allows the Commission to include features designed to provide incentives to improve the efficiency and cost-effectiveness of fuel and purchased-power procurement activities of electric utilities with FACs. It also requires the Commission to approve, modify, or reject FACs only as a part of a general rate case proceeding in which all costs and relevant factors are considered. If the Commission approves an FAC, the electric utility with the FAC must file a general rate increase case with effective dates of new rates no later than four years after its approval. Prudence reviews of the costs included in an FAC are to be conducted at least every eighteen months and true-ups are required at least annually. Amounts charged/refunded to the customers through an FAC are required to be separately disclosed on the customer's bill.

Section 386.266.1 RSMo, which grants the Commission the authority to approve, reject, or modify FACs applies only to investor-owned electric utilities in Missouri. At the time it became effective, there were four investor-owned electric utilities in Missouri – Union Electric, KCPL, Aquila, Inc. (“Aquila”), and the Empire District Electric Company (“Empire”). Union Electric subsequently did business as AmerenUE and is now doing business as Ameren Missouri. Aquila is now doing business as KCP&L – Greater Missouri Operations Company (“GMO”).

Development of Commission Rules Regarding FACs

Section 386.266.9 RSMo gives the Commission the authority to promulgate rules to govern the structure, content, and operation of FACs. The Commission is also given the authority to promulgate rules regarding the procedures for the submission, frequency, examination, hearing, and approval of FACs.

Soon after Section 386.266 RSMo went into effect, the Staff of the Public Service Commission (“Staff”) began developing rules governing the implementation of this section. It was determined that there would be two rules: one rule, *4 CSR 240-3.161 Electric Utility Fuel and Purchased Power Cost Recovery Mechanisms Filing and Submission Requirements*, provides the filing and information requirements necessary for requesting approval, continuation, modification, and discontinuation of an FAC along with filing and submission requirements for changes to the FAC rates and true-ups. It also provides the contents of quarterly surveillance reports and monthly reporting requirement for electric utilities that have an FAC. A second rule, *4 CSR 240-20.090 Electric Utility Fuel and Purchased Power Cost Recovery Mechanisms*, provides the structure and governance requirements for an FAC.

Staff worked diligently with a broad group of stakeholders - including representatives from electric utilities, large customers, AARP, and the Office of the Public Counsel (“OPC”) in the

development of proposed rules. Auditors, engineers, economists, and attorneys worked together in over fifteen workshops collaborating to craft specific regulatory language.

The Commission opened Case No. EX-2006-0472 on June 15, 2006 with a finding of necessity for rules to establish and implement an FAC and began the formal rulemaking process with the proposed 4 CSR 240-3.161 and 4 CSR 240-20.090 rules developed through the collaborative workshop process. Public hearings regarding the proposed FAC rules were held in Kansas City, St. Louis, Overland, Cape Girardeau, Jefferson City and Joplin in late August 2006 and early September 2006. Written comments were received from seven individuals and fourteen groups/companies. The Commission issued its final orders of rulemaking on September 21, 2006.⁷ The final order was published in the December 1, 2006 *Missouri Register* effective January 30, 2007.⁸

Key Provisions of the FAC Rules

Concerns were raised that an FAC would contribute to over-earnings by electric utilities by the non-utility parties that participated through the workshops and those providing comments in the formal rulemaking process. Despite these concerns, the final FAC rules do not contain an earnings test.

In FAC proceedings, the Commission is only required to review the costs and revenues included in the FAC. Decreases in expenses and increases in revenues not included in the FAC are not considered. However, utilities with an FAC are required by Commission rules to submit quarterly surveillance reports to Staff, OPC, and other parties. These surveillance reports include rate base quantifications, capital quantifications, and income statements for the electric utilities as a whole.⁹ The information from these reports includes the earnings of the electric utility for the prior quarter.

The rules require FAC recoveries be based on historical costs.¹⁰ Therefore, before the electric utility can begin billing to recover FAC costs, said costs must be incurred and any revenues included in the FAC to offset those costs must be reflected. Interest at the utility's short-term debt rate is applied to the net of these costs and revenues and recovered/returned to the ratepayers through the FAC rate.

The rules are not prescriptive regarding the design of FAC rates. However, 4 CSR 240-20.090(9) does require that FAC rates reflect differences in losses incurred in the delivery of electricity at

⁷ Missouri Public Service Commission, Case No. EX-2006-0472, EFIS items 27 and 28

⁸ <http://s1.sos.mo.gov/CMSimages/adrules/moreg/previous/2006/v31n23/v31n23b.pdf>

⁹ 4 CSR 240-3.161(6)

¹⁰ 4 CSR 240-20.090(2)(F)

different voltage levels for different rate classes based on system loss studies that must be conducted at least every four years.

While Section 386.266.1 RSMo allows the Commission to include features in an FAC designed to provide the electric utilities with incentives to improve the efficiency and cost-effectiveness of the utilities fuel and purchased-power procurement activities, the rules are not prescriptive regarding the incentive features. Instead, it allows incentive features to be proposed in rate cases in which an electric utility requests the establishment, continuation, or modification of an FAC.¹¹ Incentive features can be proposed for the Commission's consideration by any of the parties in rate cases in which the electric utility is proposing the establishment, continuation, or modification of an FAC.

Section 386.266 RSMo is silent regarding the inclusion in an FAC of any fuel-related type of revenues. The Commission rules do not require the inclusion of fuel-related revenues, such as off-system sales revenues,¹² in an FAC. The rules do require that if an FAC includes revenues from off-system sales, the FAC include prudently-incurred fuel and purchased power costs associated with off-system sales.¹³

History of Requests for FACs

Empire was the first electric utility to request cost recovery of fuel costs under Section 386.266 RSMo. On February 1, 2005, while the Commission rules were being drafted, Empire filed Case No. ER-2006-0315. In this case, Empire did not request an FAC. Instead it requested an Energy Cost Rider ("ECR") to recover costs between rate cases. Due to a stipulation Empire had entered into in a prior rate case, the Commission required Empire to remove from its pleadings and other filings its request and support for an ECR.¹⁴ Prior to Empire's next rate case, Case No. ER-2008-0093 filed on October 1, 2007, the Commission rules were effective. The Commission granted Empire an FAC in its July 30, 2008 *Report and Order* in ER-2008-0093 and authorized continuation of an FAC with modifications in all general rate cases subsequently filed by Empire.

On July 3, 2006, two of Missouri's investor-owned electric utilities filed general rate increase cases in which they requested an FAC. Union Electric, then doing business as AmerenUE, requested an FAC in Case No. ER-2007-0002 and Aquila requested an FAC in Case No. ER-2007-0004. While the FAC rules were not final at this time, the Commission had, just eighteen days

¹¹ 4 CSR 240-20.090(11)

¹² Off-system sales revenues are the revenues from sales of energy by the electric utility above what is needed by the utility's customers.

¹³ 4 CSR 240-3.161(1)(A) and 4 CSR 240-20.090(1)(B)

¹⁴ EFIS item 57, *Order Clarifying Continued Applicability of the Interim Energy Charge*, effective May 12, 2006.

earlier, sent proposed rules to the Missouri Office of the Secretary of State for publication in the Missouri Register. The Commission's determination of the final FAC rules occurred while these rate cases were pending.

In its May 22, 2007 *Report and Order* in the AmerenUE case ER-2007-0002, the Commission concluded:

After carefully considering the evidence and arguments of the parties, and balancing the interests of ratepayers and shareholders, the Commission concludes that AmerenUE's fuel and purchased power costs are not volatile enough [to] justify the implementation of a fuel adjustment clause at this time.

AmerenUE filed another general rate increase case (ER-2008-0318) on April 4, 2008, again seeking the Commission's approval of an FAC. In its January 27, 2009 *Report and Order*¹⁵, the Commission authorized AmerenUE to implement an FAC. It has authorized continuation of an FAC with modifications in all general rate cases subsequently filed by Union Electric (now doing business as Ameren Missouri).

The Commission authorized the first FAC for a Missouri investor-owned electric utility under Section 386.266 RSMo in its May 17, 2007 *Report and Order* in Aquila's general rate proceeding (Case No. ER-2007-0004). FACs were approved for Aquila's two rate districts then designated as Aquila Networks-MPS and Aquila Networks-L&P. The actual effective date of the Aquila's FAC was delayed when the Commission found proposed FAC tariff sheets filed by Aquila were not consistent with its *Report and Order*. Tariff sheets implementing the FAC consistent with the Commission's *Report and Order* were approved on June 29, 2007 effective July 5, 2007. Following this rate case, Aquila was acquired by Great Plains Energy, Inc. in July 2008 and became GMO. The Commission has authorized continuation of an FAC with modifications in all general rate cases subsequently filed by GMO.

KCPL was the last Missouri electric utility to be granted an FAC. At the time SB 179 was being debated at the Legislature, KCPL was negotiating a regulatory plan addressing financial considerations of KCPL's investment in Iatan 2 and other investments and the timeliness of the recovery of the costs of these investments. As a part of the *Stipulation and Agreement*,¹⁶ KCPL agreed that prior to June 1, 2015, it would not seek to utilize any mechanism authorized in SB 179. Therefore, KCPL did not request an FAC until its general rate case ER-2014-0370 filed on

¹⁵ EFIS item no. 589, page 70

¹⁶ Case No. EO-2005-0329, EFIS item no. 1

October 30, 2014. The Commission granted KCPL an FAC in its September 2, 2015 *Report and Order*.¹⁷ Tariff sheets implementing an FAC for KCPL became effective September 29, 2015.

General Structure of FACs in Missouri

While there are some differences in the details of each electric utility's FAC, the general structure is the same. In each rate case, an estimate of the FAC costs and revenues is identified and included in the base rates of each electric utility. The FAC rate is based on the difference between the FAC costs billed in base rates and the actual FAC costs incurred. FAC costs are tracked in a designated accumulation period and the difference between actual FAC costs and the FAC cost in based rates is recovered or returned in a designated recovery period.

Even though the rule is not prescriptive regarding the design of the FAC rate, all of the electric utility's FAC rates are volumetric rates based on customer energy usage in practice. An FAC base factor is calculated in each general rate proceeding as the rate case normalized FAC costs divided by the normalized kilowatt-hours ("kWh"). This factor is used to calculate the net base energy cost ("NBEC") for each accumulation period.

The Commission requires the FAC be based on historical costs¹⁸ so there could not be an FAC rate until FAC costs were incurred. Therefore the initial FAC rate ("FAR") was set at zero when the Commission approved the establishment of an FAC for each of the electric utilities.

To derive a rate to be charged the customers after FAC costs have been incurred, the difference between the actual costs incurred ("ANEC") and the NBEC for the accumulation period must be determined. The NBEC is calculated as the base factor multiplied by the energy usage during the accumulation period. This is the amount in base rates that has been billed to recover FAC costs. To derive the FAC rate for the accumulation period, the difference between the accumulation period ANEC and NBEC, either positive or negative, is divided by the expected energy use of the utility's customers over the recovery period. Because rule requires voltage losses to be taken into account, a FAR is calculated for each of the voltage levels that the utility provides service at based on loss factors derived in the last rate case. These loss-adjusted FARs are the rate used to bill the FAC to the customers.

Accumulation and Recovery Periods

An accumulation period is the time over which the electric utility tracks the ANEC. The Commission allows up to four accumulation periods a year but requires at least one

¹⁷ EFIS item no. 592, page 30

¹⁸ 4 CSR 240-20.090(2)(F)

accumulation period a year. The Recovery Period is the time period over which the difference between the accumulation period ANEC and NBEC is billed the utility's customers.

The accumulation periods and recovery periods for the electric utilities are shown in the table below.

<u>Electric Utility</u>	<u>Accumulation Periods</u>	<u>Recovery Periods</u>
Ameren Missouri	February through May June through September October through January	October through May February through September June through January
KCPL	January through June July through December	October through September April through March
GMO	June through November December through May	March through February September through August
Empire	September through February March through August	June through November December through May

The recovery periods are twice as long as the accumulation periods for Ameren Missouri, KCPL, and GMO in order to lower the FAC rate and minimize the impact of the change in rates on the customers' bills. Ameren Missouri's accumulation periods are four months and the costs from the four month accumulation period are billed (recovered or returned) over eight months. The accumulation periods of KCPL and GMO are six months while the recovery periods are twelve months. Empire is the only utility where the recovery period is the same length as the accumulation period - both are six months.

For the three electric utilities that have recovery periods that are twice as long as the accumulation periods, the FAR that is billed the customer is actually the sum of the loss-adjusted FARs for two different accumulation periods.

The timing of recovery periods for Ameren Missouri, KCPL, and Empire were set to minimize the number of times during a year that rate changes impact customer bills. The base rates for all of the electric utilities change twice a year. Base rates are higher in the summer months of June through September for all of the electric utilities because typically the cost to provide electricity is higher in these summer months. The lower, non-summer rates are billed in October through May.

The timing of the recovery periods of Ameren Missouri means that customers see both base rates and FAC rate changes in June and October and then see another rate change in February. Without alignment of the timing of FAC recovery periods, customers of Ameren Missouri could be impacted by changes in rates five times a year – base rates would change twice and FAC rates would change three times.

Similarly, the beginning of one of the FAC recovery periods for KCPL is October when base rates also change. This results in KCPL customers seeing changes in rates just three times a year instead of potentially four rate changes. Empire's recovery periods were also set with one of the FAC recovery periods begin when base rates change for summer in June, resulting in rates changing for Empire customers only three times a year.

Price Signal Resulting From FACs

There is a common misconception that FACs provide customers more accurate price signals than the base rates. There are several reasons Missouri's FAC does not provide accurate price signals to customers. First, Missouri's FAC is based on historical costs so customers are not billed the difference in the FAC costs until months after the costs are incurred. For example, fuel costs incurred in January for KCPL are not billed to its customers until the recovery period that begins in October.

Second, the accumulation periods bill costs or return savings to customers over several months. Increases in FAC costs in one month may be offset by decreases in FAC costs in the next month. In addition, the accumulation periods cross seasons of the year when FAC costs typically vary because the load requirements of the customers vary. For these reasons, the length of the accumulation period mutes any price signal.

Finally, long recovery periods reduce FAC rate volatility to customers but it also mutes the price signal to customers. For example, any increase in KCPL costs in January is recovered over the time period of October of that same year through September of the next year. An increase in January is spread out over the twelve months of the recovery period so the customer would not be reacting contemporaneously. In addition, the customer would not even be billed for the increase in costs in January until the October billing month. If FAC costs are volatile, the customer may be reacting to an increase in the FAR when costs are actually decreasing. In this case, the FAC is sending the wrong price signal to the customer.

For these reasons, the design and application of FACs in Missouri do not send accurate price signals to customers.

True-Up of FACs

The law requires that true-ups of FACs occur at least annually.¹⁹ The purpose of a true-up is to make sure that the electric utility recovers all the costs that it is entitled to or all amounts due to the customers are refunded. Section 386.266 RSMo requires the true-up amount include interest at the electric utility's short-term interest rate.

In practice, true-ups occur after the end of each recovery period. Because KCPL, GMO, and Empire have two recovery periods a year, there are two true-ups a year for these electric utilities. There are three true-ups a year for Ameren Missouri since it has three recovery periods a year. A true-up is simply a comparison of the actual FAC billed the customers in the recovery period to the difference between the actual FAC costs and NBEC in the corresponding accumulation period. This difference, either negative or positive, is added as a true-up amount to the FAC costs to be billed in the next recovery period.

The true-up amount is keyed off of the FAC billed and not the FAC revenues recovered. This is to reduce complexity of how to deal with under-paid bills. While the FAC amount is separately identified on the customer's bill, the customer that only pays a portion of their bill does not designate what portion of the bill they are paying. The portion of the bill not paid is included with unpaid bills as uncollectible. The treatment of uncollectibles is determined in the rate case and is not dealt with in the FAC.

Incentive Mechanism

The Commission may include in an FAC incentives to improve the efficiency and cost-effectiveness of the electric utilities' fuel and purchased power procurement.²⁰ The Commission, for each of the electric utilities, found allowing the utility to have one hundred percent recovery of its FAC costs through an FAC would act as a disincentive for the utility to control FAC costs. The Commission determined recovering a share of the difference between the NBEC and ANEC allows the electric utility a sufficient opportunity to earn a fair return on equity while protecting customers by providing the utility an incentive to control costs. Currently, the Commission has set that sharing percentage for all of the electric utilities to be 95%/5% - 95% of any increase above NBEC to be billed to customers and the electric utility

¹⁹ Section 386.266.4(2)

²⁰ Section 386.266.1

absorbs 5% while 95% of an decrease in FAC cost below NBEC would be credited to customers and the electric utility retain 5% of the decrease.²¹

Given this incentive mechanism, the amount to be billed through the FAC is 95% of the difference between the ANEC and the NBEC. The result of this incentive mechanism is that, when FAC costs are above the amounts included in base rates, the electric utility recovers almost 100% of the FAC costs. If FAC costs are below the amounts included in base rates, the utility recovers more than 100% of its FAC costs. The table below shows examples of what occurs when actual costs are greater, equal to, and less than what is in the NBEC.

Impact of 95%/5% Sharing Mechanism

NBEC	ANEC	Diff	FAC Amt Billed to Customers	Amt Absorbed/ (Retained) by Company	Total Billed to Customers	% FAC Costs Billed
\$100	\$150	\$50	\$47.50	\$2.50	\$147.50	98.3%
\$100	\$110	\$10	\$9.50	\$0.50	\$109.50	99.5%
\$100	\$100	\$0	\$0	\$0	\$100.00	100.0%
\$100	\$90	(\$10)	(\$9.50)	(\$0.50)	\$90.50	100.6%
\$100	\$50	(\$50)	(\$47.50)	(\$2.50)	\$52.50	105%

This table shows the utility will bill its customers for 98.3% of its FAC costs when its ANEC is 50% higher than what is included in base rates, i.e., even if the actual FAC costs incurred are 50% higher than what was included in the base rates, the electric utility recovers 98.3% of its FAC costs.²² Likewise, if actual fuel costs are 50% lower than what is included in base rates, the utility will recover 105% of its FAC costs. If the utility manages to reduce its FAC costs any amount below NBEC, will recover more 100% of its FAC costs. These relationships hold true regardless of the magnitude of the NBEC.

Importance of Correct NBEC

Because Missouri's FAC is based on the difference between a subset of normalized costs and revenues set in a rate case and actual costs and revenues, it is important the costs and revenues included in the NBEC of the FAC are the same as the costs and revenues included in base rates. The table below shows three different scenarios. To simplify the example, in these

²¹ While parties in rate cases have proposed different sharing percentages and/or different incentive mechanisms, the only incentive mechanism implemented has been a 95%/5% sharing of the difference between ANEC and NBEC.

²² For a utility to bill only 95% of its actual costs, the actual FAC costs would need to be over 1,000 times greater than the costs included in base rates

scenarios there is no sharing of the difference between ANEC and NBEC. All of the difference between the ANEC and NBEC is billed or returned to the customers.

Net Base Energy Cost (NBEC)	FAC Costs in Base Rates	Actual Net Energy Cost (ANEC)	Billed FAC Costs	Total FAC Costs Billed	Total Billed as % of ANEC
Scenario 1 - NBEC Equal FAC Costs in Rates					
\$100	\$100	\$110	\$10	\$110	100.00%
\$100	\$100	\$100	\$0	\$100	100.00%
\$100	\$100	\$90	(\$10)	\$90	100.00%
Scenario 2 - NBEC Lower than FAC Costs in Rates					
\$100	\$110	\$110	\$10	\$120	109.09%
\$100	\$110	\$100	\$0	\$110	110.00%
\$100	\$110	\$90	(\$10)	\$100	111.11%
Scenario 3 - NBEC Higher than FAC Costs in Rates					
\$100	\$90	\$110	\$10	\$100	90.91%
\$100	\$90	\$100	\$0	\$90	90.00%
\$100	\$90	\$90	(\$10)	\$80	88.89%

The first scenario is a correct treatment of NBEC and FAC costs in Rates. NBEC is equal to the FAC costs included in base rates. In this scenario, when ANEC is higher than NBEC, the total FAC costs billed the customer is the \$100 billed in the base rates and \$10 billed through the FAC for a total of \$110. When the ANEC is the same as the NBEC, the customers are billed nothing through the FAC and the utility recovers all of its FAC costs through its base rates. Lastly, when the actual costs are less than the NBEC, the customers' bills are reduced and the utility recovers all of its actual fuel costs.

In Scenario 2, the NBEC designated in the FAC is less than the FAC costs in rates. In this scenario, the customers always end up paying more than they should. Even when ANEC is the same as the FAC costs included in rates, the customer pays for the difference between the ANEC and NBEC. This results in the customers always paying more than the actual FAC costs.

In Scenario 3, the NBEC is set higher than the FAC costs included in rates. In this scenario, the electric utility does not collect the actual energy costs even when they are equal to the NBEC because the amount of FAC costs included in rates is less than the NBEC. The amount recovered is the lower FAC costs included in rates and the difference between the higher NBEC and ANEC.

These scenarios show the importance of insuring the FAC costs included in base rates are the same as the NBEC. If they are not set correctly, either the customers overpay or the company is not afforded the opportunity to recover its costs as intended.

Future Application of the FAC

The FAC rules have a requirement that the Commission review the effectiveness of the rules by no later than December 31, 2010. On November 12, 2010, the Commission opened a repository file, EW-2011-0139²³ for documents and comments regarding effectiveness of the FAC rules. The electric utilities, OPC, and other interested parties filed comments regarding the need for revisions to the rules. The Commission issued an order on March 27, 2014 directing Staff to file a status report on the revision of the rules. The Staff began hosting a series of three workshops for stakeholders to provide input to Staff on its review of the rules and, where possible, prepare collaborative revisions to the rules. On February 4, 2015, the Commission directed Staff to complete its review and file its recommendations regarding changes to the rules by September 15, 2015. The Commission later extended that completion date to November 20, 2015 and then to February 15, 2016. At the time that this whitepaper was written, the Staff has committed to providing a final recommendation regarding revisions to the rules to the Commission the week of April 11, 2016. Should the Commission pursue revisions to the rules, there will be additional opportunity for interested stakeholders to provide input in the formal rulemaking process.

This whitepaper will be updated after that revision as necessary.

²³ EW-2011-0139, *In The Matter Of A Repository File Concerning Staff's Review Of The Commission's Fuel Adjustment Clause Rules*