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Service Commission

Exhibit No. 409

Office of the Public Counsel – Exhibit 409
Lena M. Mantle
Direct Testimony
File Nos. ER-2021-0240 & GR-2021-0241

Exhibit No.:

Issue(s):

Fuel Adjustment Clause (FAC)/

Customer Bills Mantle/Direct

Witness/Type of Exhibit:

Sponsoring Party:

Public Counsel ER-2021-0240

Case No .:

DIRECT TESTIMONY

OF

LENA M. MANTLE

Submitted on Behalf of the Office of the Public Counsel

UNION ELECTRIC COMPANY D/B/A AMEREN MISSOURI

FILE NO. ER-2021-0240

September 3, 2021

BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

In the Matter of the Union Electric)	
Company d/b/a Ameren Missouri's)	
Tariffs to Increase its Revenues for)	Case No. ER-2021-0240
Electric Service)	
)	

<u>AFFIDAVIT OF LENA M. MANTLE</u>

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 3rd day of September 2021.

NOTATI SEAL SE OF ME TIFFANY HILDEBRAND My Commission Expines August 8, 2023 Cole County Commission #15637121

Tiffany Hildebran Notary Public

My Commission expires August 8, 2023.

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DIRECT TESTIMONY

OF

LENA M. MANTLE

UNION ELECTRIC COMPANY d/b/a AMEREN MISSOURI

FILE NO. ER-2021-0240

1	INT	RODUCTION
2	Q.	Please state your name and business address.
3	A.	My name is Lena M. Mantle and my business address is P.O. Box 2230, Jefferson
4		City, Missouri 65102.
5	Q.	By whom are you employed and in what capacity?
6	A.	I am employed by the Missouri Office of the Public Counsel ("OPC") as a Senior
7		Analyst.
8	Q.	On whose behalf are you testifying?
9	A.	I am testifying on behalf of the OPC.
10	Q.	Please describe your experience and your qualifications.
11	A.	I was employed by the OPC in my current position as Senior Analyst in August 2014.
12		In this position, I have provided expert testimony in electric, gas, and water cases
13		before the Commission on behalf of the OPC. I am a Registered Professional
14		Engineer in the State of Missouri.
15		Prior to my employment by the OPC, I worked for the Staff of the Missouri
16		Public Service Commission ("Staff") from August 1983 until I retired as Manager of
17	:	the Energy Unit in December 2012. During the time of my employment at the
18		Missouri Public Service Commission ("Commission"), I worked as an Economist,
19		Engineer, Engineering Supervisor, and Manager of the Energy Unit. I was
20		instrumental in the development and application of the Commission's FAC rules and
21		the FAC's of the electric utilities in Missouri after the Missouri Legislature passed

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Section 366.266 RSMo in 2005, enabling the electric utilities to request a fuel adjustment clause ("FAC").

Attached as Schedule LM-D-3 is a brief summary of my experience with OPC and Staff and a list of the Commission cases in which I filed testimony, Commission rulemakings in which I participated, and Commission reports in rate cases to which I contributed as Staff.

Q. What is the purpose of your direct testimony?

A. In this testimony I recommend changes to the bills of customers that receive both natural gas and electric service from Union Electric Company d/b/a Ameren Missouri ("Ameren Missouri") so the customers will be able to easily identify the cost of the electric service separate from the cost of natural gas.

I also provide recommended modifications to Ameren Missouri's FAC that are intended to clarify some issues based on circumstances and FAC filings¹ that have been made since Ameren Missouri's last general rate case.

Q. Would you provide a summary of the modification to Ameren Missouri's FAC that you are recommending in this case?

- A. I am recommending Ameren Missouri's FAC be modified as follows:
 - Include steps to be taken to mitigate the impact of extraordinary changes in net fuel and purchase power costs;
 - 2. Not include the final adjustment to coal fuel inventory of a plant that has ceased generation to flow through the FAC; and
 - Require removal of fuel and purchased power costs for Ameren Missouri research and development projects.

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¹ These issues have arisen not just in Ameren Missouri's FAC filings but also in FAC filings of other Missouri electric utilities.

- Q. If the Commission orders these modifications, would they only apply to Ameren Missouri?
 - A. Yes. Because the enabling statute only allows modification to FACs in general rate increase cases, Commission ordered modifications would apply only to Ameren Missouri until similar modifications can be made to the FACs of the other electric utilities in Missouri.

Customer Bills

- Q. What are you recommending the Commission order with regard to customer bills?
- A. I recommend the Commission order, for the monthly bills of Ameren Missouri electric customers that are also Ameren Missouri gas customers, Ameren Missouri clearly and distinctly state which charges are associated with electric service and which charges are associated with gas service along with a total cost of electric service and total cost of gas service. I have attached recent bills of residential and a small general service electric and natural gas customer to this testimony as Schedules LMM-D-1 and LMM-D-2 to show the myriad of charges on customers' bills and the illogical presentation of the charges. The "Current Charge Detail" of the small general service bill is shown below.

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Quirent Oharge Detail for Statement 04/21/2021	Taran da
Base Energy Chg-Small General 3 Phase	\$271.09
Seasonal Energy Chg-Small General 3 Phase	\$0.00
Gas Energy Charge · General Service	\$43.89
Electric Customer Charge · Small General 3 Phase	\$19.99
Gas Customer Charge · General Service	\$28.44
Renowable Energy Adjustment	\$0.59
Fuel Adjustment Charge	\$0.90
Purchase Gas Adjustment (PGA)	\$62.10
Delivery Charge Adjustment	\$0.52
Infrastructure Replacement Surcharge	\$0.00
Energy Efficiency Investment Charge	\$20.22
Jeff City-Cole Co Municipal Charge	\$28.58
Amount Due	\$476.32

Q. Which of these charges are for electric service and which are for gas service?

A. The table below shows which charges are electric service charges and which are natural gas service charges.

	Electric	Gas
Base Energy Chg - Small General 3 Phase	X	
Seasonal Energy Chg - Small General 3 Phase	X	
Gas Energy Charge – General Service		X
Electric Customer Charge – Small General 3 Phase	X	
Gas Customer Charge – General Service		X
Renewable Energy Adjustment	X	
Fuel Adjustment Charge	X	
Purchase Gas Adjustment (PGA)		X
Delivery Charge Adjustment		X
Infrastructure Replacement Surcharge		X
Energy Efficiency Investment Charge	X	

- Q. Is the total charge associated with electric service shown on the customer's bill?
- A. I could not find it on the residential or small general service bill.

- Q. Is the total charge associated with natural gas service shown on the customer's bill?
- A. I could not find it on the residential or small general service bill.
- Q. Why is it important for customers to easily be able to find how much of their Ameren Missouri monthly bill is for electric and how much is for natural gas?
- A. Bills provide price signals to customers. When charges for different services are disaggregated and intermingled, price signals and responses to actions and inactions are indistinguishable to customers. Without a separate total for electric and gas separately disclosed on customers' bills, customers cannot tell how much they are saving on their electric service from getting rid of their second refrigerator or from their natural gas service from replacing their old natural gas storage water heater with a demand water heater.

Therefore, I recommend the Commission require Ameren Missouri to distinguish on the bills of its electric and natural gas customers, which charges are for electric service, which charges are for natural gas service, and the total bill for electric service separate from natural gas service.

- Q. You have attached to this testimony a residential bill and a small general service bill. Is your recommendation that the electric and gas service costs be shown only on residential and small general service customer bills?
- A. No. While larger customers have the ability to calculate their electric service cost separately from their natural gas cost, it does not mean that they should have to do so to know the cost of the service provided. The cost of every customer's electric service should be easily identifiable separately from their gas service on their bill and not require customers to do additional calculations.

A.

Modification to the FAC for Treatment of Extreme Costs

- Q. The first modification that you are recommending is that Ameren Missouri's FAC be modified to include how extraordinary cost increases in net fuel and purchase power costs be treated. Why are you recommending the FAC be modified to accommodate extreme cost changes?
- A. The extended freeze in mid-February 2021 resulted in increases in fuel, purchased power and market revenues that, if passed through the FACs of two Missouri electric utilities, would have had a tremendous impact on their customers' ability to pay their electric bills. The restriction by statute that FACs can only be changed in rate cases limited the remedies available in this situation. Even so, the utilities are looking at different ways to recover their winter storm costs. The utilities' FACs should be modified to provide clarity to the companies, their customers, and the Commission for how this type of sudden, sharp change in costs will be handled in a manner that is affordable to customers while still allowing the utilities cost recovery with an opportunity for the Commission to review the prudency of those extraordinary costs.

Q. How should the FAC be modified?

While it is obvious that modifications should be made to the FACs for such occurrences, the exact modifications are not quite so obvious. It is logical that what constitutes an extreme impact on net FAC costs should be clarified. However, determining how to do that is not as obvious. Should an extreme cost impact be based on the impact to customers' bills? Should it be based on change in fuel and purchased power costs? If so, should it be based on a change in cost for a month, an accumulation period, or some other period of time? There are other potential ways to determine whether or not a change in fuel costs is extreme enough for special treatment and none is an obvious choice.

What is the "special treatment" of extreme costs? The FAC could be modified to allow the recovery of prudent costs be collected over more than one

recovery period. But then how many cost recovery periods should a cost be recoverable over before costs are shifted to be securitized or placed in a regulatory asset account for treatment in the next rate case? What is the interest rate that should be used? Should the utility be allowed to recover more than 95% of the costs permitted under the FAC?

Another question is how do other Missouri statutes and requirements play into this? How is cost recovery affected by PISA? Is the recovery amount limited by PISA?

Again, the need is obvious; the solution is not. Stakeholders should work together to establish modifications to Ameren Missouri's, Evergy's and Liberty's FACs that would clarify for all stakeholders the process if another sharp, sudden cost increase hits the costs and revenues that flow through it. FACs shield the utilities from the impact of sudden, unexpected changes in fuel and purchased power costs, and revenues. They also should be designed in a manner that shields the customers from those same sudden, unexpected changes in fuel and purchased power costs, and revenues.

Modification to the FAC Regarding Coal Inventory Adjustments

- Q. The next modification to the FAC that you are recommending is that the final adjustment to coal fuel inventory of a plant that has ceased generation not be included as a FAC cost. Why is this modification necessary?
- A. When a plant is no longer operating, a final accounting adjustment is made to expense the fuel that has become part of the basemat of the coal pile.² This is the cost of coal that, over time, has become unburnable. The FAC includes fuel costs associated with Ameren Missouri's generating plant arising from steam plant

² According to the FERC USoA when coal is purchased, the cost is recorded in an asset account 151 Fuel Stock which is the book cost of fuel on hand. The cost is cleared to account 501 when it is used to generate electricity. In the case of a newly retired coal plant, the cost remaining in account 151 is cleared to another account, such as account 182.3, for consideration in the next general rate case.

operations³ and the Federal Energy Regulatory Commission ("FERC") uniform system accounts provides that account 501 is to account for "fuel used in the production of steam for the generation of electricity", i.e. fuel burned to produce energy. Because this final inventory adjustment is for fuel that cannot be burned, it cannot be used to produce steam to generate electricity and the cost of the basemat fuel should not flow through the FAC.

Q. Why is this a concern?

A. Two other investor-owned utilities have included in their FACs final "coal inventory adjustments" for basemat coal of generation plants at retirement only to have these costs removed from the FAC. Modifying the FAC to specifically state the cost of basemat coal is not an FAC cost will prevent this from happening when Ameren Missouri retires coal plants.

Q. Does this mean that Ameren Missouri cannot recover the cost of basemat coal?

A. No. Ameren Missouri can still request recovery of basemat coal as a retirement cost, but not as a FAC cost.

Modification to FAC for Research and Development Projects

- Q. The third modification you are recommending is that the cost of energy consumed by research and development projects not be included in the FAC. Why are you making this recommendation?
- A. At the time that this testimony is being written, there is a FAC rate change case, ER-2022-0026, where this is an issue. It is Ameren Missouri's position that the FAC prohibits it from removing the energy costs of its bitcoin mining research project from the FAC.⁴ It is yet to be determined how this will be resolved, but this

³ Current tariff sheet 71.1, 1st Revised, Mo.P.S.C. Schedule 6 and proposed tariff sheet 71.17, Original, Mo.P.S.C. Schedule 6 attached to the direct testimony of Ameren Missouri witness Andrew M. Meyer as Schedule AMM-D3.

⁴ EU-2022-0030, Verified Application of Union Electric Company d/b/a Ameren Missouri for Deferral Authority, paragraph 6.

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Q.

A.

rate case provides an opportunity to modify Ameren Missouri's FAC to expressly prohibit the cost of such a project from the FAC.

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What is your opinion regarding research and development projects such as bitcoin mining?

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16 17 It is my opinion that no cost related to Ameren Missouri's cryptocurrency endeavor, or any endeavor beyond the scope of electric utility regulation, be included in rate base and/or funded with ratepayer backing, including the electricity consumed. If Ameren Missouri wants to enter into speculative commodities, like virtual currencies, then it should do so as a non-regulated service where ratepayers are unexposed to the risks associated with them. OPC witness Dr. Geoff Marke provides additional testimony regarding OPC's position in his direct testimony in this case.

Therefore, I recommend that the FAC explicitly require the removal of the energy costs for research and development projects from the Actual Net Energy Costs of the FAC.

- Q. Does this conclude your direct testimony?
- A. Yes.

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Gurrent Charge Datail for Statement 07/08/2021	
Summer Electric Energy Charge · Residential	\$154.59
Winter Elec Energy Chy 0-760 kWh-Residential	\$0.00
Gas Energy Charge - Residential	\$0.00
Electric Customer Charge - Residential	\$9.08
Gas Customer Charge · Residential	\$15.00
Renewable Energy Adjustment	\$0.22
Fuel Adjustment Charge	\$4.03
Purchase Gas Adjustment (PGA)	\$0.00
Delivery Charge Adjustment	\$0.00
Infrastructure Replacement Surcharge	\$0,00
Energy Efficiency Investment Charge	\$6,96
Missouri Local Sales Tax	\$1.90
Joff City-Colo Co Municipal Charge	\$12.12
Credit	.\$4.17
Amount Duc	\$199.71

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Current

Usage

1309 kWh

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Due Date:	07/29/2021
Account Number	
Customer Name	워크 (1)
Service Address	Company of the compan
Previous Statement	\$0.00



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Electric Usage Summary (kWh)

So far this year, you're using 4.4% loss

July Statement

Electric Usage in Kilowatt Hours (kWh)

Electric Service Datails

Gas Service from

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Number

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Electric Service from 06/06/2021 - 07/08/2021

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Class Starvier Details July Statement Gas Usage in Cubic Feet (CCF) Gas Usage Summary (CCF) 150 So far this year, you're using 12.8% less 100 than last year 50 2020 438 CCF 77°F 52°F 2021 382 GCF Feb Jun Jul Average Monthly Temperature (°F) Usega from Jay J.J. for 2020 & 2021

Summer Is Here. Can Your AC Keep Up?

Right now, you can get up to \$900 cash back when you upgrade to a new energy-efficient HVAC system. If your unit is 10 years old or older, consider upgrading now before it's too late.

To get the details and find a participating contractor, scanthe QR code or visit:

AmerenMissouriSavings.com/Summer

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Account Messages

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Current Charge Detail for Statement 04/21/2021	
Base Energy Chg-Small General 3 Phase	\$271.09
Seasonal Energy Chg-Small General 3 Phase	\$0.00
Gas Energy Charge - General Service	\$43.89
Electric Customer Charge · Small General 3 Phase	\$19.99
Gas Customer Charge - General Service	\$28.44
Renewable Energy Adjustment	\$0.59
Fuel Adjustment Charge	\$0,90
Purchase Gas Adjustment (PGA)	\$62.10
Delivery Charge Adjustment	\$0.52
Infrastructure Replacement Surcharge	\$0.00
Energy Efficiency Investment Charge	\$20.22
Jeff City-Cole Co Municipal Charge	\$28.58
Amount Due	\$476.32

Electric Servic	eiftom Ok	3/21/2021) -	04/19/2021	29/Days
Gas Service fro	ma Ok	3)21)2021	04/19/2021	20Days
Meler	Current	Previous	Current	Reading 1
Number	Reading	Reading	Usage	Туре
	007331	007302	3480 kV/h	Actual
	002375	002231	144 CCF	Actual

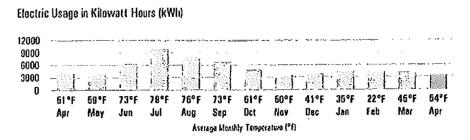
AMOUNT DUE	\$476.32
Due Date:	05/12/2021
Account Number	•
Customer Name	
Service Address	**************************************
Previous Statement	\$673.63
Last Payment · 04/05/2021	\$673.63
P-PGA \$0.43126855 per CCF	



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Lectric Service Datell's

April Statement



Electric Usage Summary (kWh)

So far this year, you're using 21.5% loss than last year



2020 20,640 kV/h 2021 16,200 kWh

Ursije kim Jandije ku 2020 & 2021

58492 41493 13073 3330S 6553185 0C330S CD6611 0001/00D1 NTEDNAI ISC OMIV

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Page 1 of 1



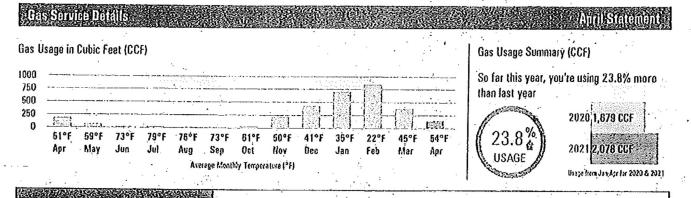
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Education and Work Experience Background of Lena M. Mantle, P.E.

In my position as Senior Analyst for the Office of the Public Counsel ("OPC") I provide analytic and engineering support for the OPC in electric, gas, and water cases before the Commission. I have worked for the OPC since August, 2014.

I retired on December 31, 2012 from the Public Service Commission Staff as the Manager of the Energy Unit. As the Manager of the Energy Unit, I oversaw and coordinated the activities of five sections: Engineering Analysis, Electric and Gas Tariffs, Natural Gas Safety, Economic Analysis, and Energy Analysis sections. These sections were responsible for providing Staff positions before the Commission on all of the electric and gas cases filed at the Commission. This included reviews of fuel adjustment clause filings, resource planning compliance, gas safety reports, customer complaint reviews, territorial agreement reviews, electric safety incidents and the class cost-of-service and rate design for natural gas and electric utilities.

Prior to being the Manager of the Energy Unit, I was the Supervisor of the Engineering Analysis Section of the Energy Department from August, 2001 through June, 2005. In this position, I supervised 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 all the while remaining the lead Staff conducting weather normalization in electric cases.

From the beginning of my employment with the Commission in the Research and Planning Department in August, 1983 through August, 2001, I worked in many areas of electric utility regulation. Initially I worked on electric utility class cost-of-service analysis, fuel modeling and what has since become known as demand-side management. As a member of the Research and Planning Department under the direct supervision of Dr. Michael Proctor, 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 a member of the team that assisted in the development of the Missouri Public Service Commission electronic filing and information system ("EFIS").

I received a Bachelor of Science Degree in Industrial Engineering from the University of Missouri, at Columbia, in May, 1983. I am a registered Professional Engineer in the State of Missouri.

Lists of the cases I have filed testimony as an OPC, the Missouri Public Service Commission rules in which I participated in the development of or revision to, and the cases that I provided testimony in follow.

Office of Public Counsel Case Listing

Case	Filing Type	Issue
GR-2021-0108	Direct, Rebuttal, Surrebuttal	Weather Normalization Adjustment mechanism,
		miscellaneous tariff issues
WR-2020-0240	Direct, Rebuttal, Surrebuttal	Normalized customer usage, revenue stabilization
		mechanism
EO-2020-0262	Direct	FAC Imprudence
ER-2020-0311	Rebuttal	FAC rate change
ER-2019-0374	Direct, Rebuttal, Surrebuttal	Weather Norm Rider, Fuel Adjustment Clause
ER-2019-0355	Direct, Rebuttal	Fuel Adjustment Clause, Unregulated
		Competition tariff sheet
EO-2019-0067 &	Rebuttal	Prudence of GMO steam auxiliary costs and
EO-2019-0068		GMO and KCPL's wind PPAs
EA-2019-0010	Rebuttal, Surrebuttal	Energy Market Prices, Customer Protections
GO-2019-0058 &	Direct, Rebuttal	Weather
GO-2019-0059		
ER-2018-0145 &	Direct, Rebuttal, Surrebuttal	Purchased Power, Customer Bills, Crossroads,
ER-2018-0146		Resource Planning
EO-2018-0092	Rebuttal, Surrebuttal	OPC Opposition of Request for Approval of
		Changes to Resource Plan
WR-2017-0285	Direct, Rebuttal, Surrebuttal	Normalized base usage
GR-2017-0215 &	Direct, Rebuttal, Surrebuttal	Energy Efficiency and Low-Income Programs
GR-2017-0216		
EO-2017-0065	Direct, Rebuttal, Surrebuttal	Fuel Adjustment Clause Prudence Review
ER-2016-0285	Direct, Rebuttal, Surrebuttal	Fuel Adjustment Clause
ER-2016-0179	Direct, Rebuttal, Surrebuttal	Fuel Adjustment Clause,
ER-2016-0156	Direct, Rebuttal, Surrebuttal	Fuel Adjustment Clause, Resource Planning
ER-2016-0023	Direct, Rebuttal, Surrebuttal	Fuel Adjustment Clause
WR-2015-0301	Direct, Rebuttal, Surrebuttal	Revenues,
		Environmental Cost Recovery Mechanism
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 Rules

20 CSR 4240-3	Filing Requirements for Electric Utilities (various rules)
20 CSR 4240-14	Utility Promotional Practices
20 CSR 4240-18	Safety Standards
20 CSR 4240-20.015	Electric Utility Affiliate Transactions
20 CSR 4240-20.017	HVAC Services Affiliate Transactions
20 CSR 4240-20.090	Electric Utility Fuel and Purchased Power Cost Recovery Mechanisms
20 CSR 4240-20.091	Electric Utility Environmental Cost Recovery Mechanisms
20 CSR 4240-22	Electric Utility Resource Planning
20 CSR 4240-80.015	Steam Heating Utility Affiliate Transactions
20 CSR 4240-80.017	HVAC Services Affiliate Transactions

Missouri Public Service Commission Staff Testimony

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-2010-0356	Rebuttal, Surrebuttal	Resource Planning
		Allocation of Iatan 2
EO-2010-0255	Direct/Rebuttal	
ER-2010-0036	Supplemental Direct,	Fuel Adjustment Clause
	Surrebuttal	
ER-2009-0090	Surrebuttal	Capacity Requirements
ER-2008-0318	Surrebuttal	Fuel Adjustment Clause
ER-2008-0093	Rebuttal, Surrebuttal	Fuel Adjustment Clause
		Low-Income Program
ER-2007-0004	Direct, Surrebuttal	Resource Planning
GR-2007-0003	Direct	Energy Efficiency Program Cost Recovery
ER-2007-0002	Direct	Demand-Side Program Cost Recovery
ER-2006-0315	Supplemental Direct,	Energy Forecast, Demand-Side Programs
	Rebuttal	Low-Income Programs
ER-2006-0314	Rebuttal	Jurisdictional Allocation Factor
EA-2006-0309	Rebuttal, Surrebuttal	Resource Planning
ER-2005-0436	Direct, Rebuttal, Surrebuttal	Low-Income Programs, Energy Efficiency
		Programs, Resource Planning
EO-2005-0329	Spontaneous	Demand-Side Programs, Resource Planning
EO-2005-0293	Spontaneous	Demand-Side Programs, Resource Planning
ER-2004-0570	Direct, Rebuttal, Surrebuttal	Reliability Indices, Energy Efficiency Programs
		Wind Research Program
EF-2003-0465	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
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-97-515	Direct	Normalization of Net System

Case No.	Filing Type	Issue
ER-97-394, et. al.	Direct, Rebuttal, Surrebuttal	Weather Normalization of Class Sales
		Weather Normalization of Net System
		Energy Audit Tariff
EO-94-174	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