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MISSOURI PUBLIC SERVICE COMMISSION

COMMISSION STAFF DIVISION

OPERATIONAL ANALYSIS DEPARTMENT

REBUTTAL TESTIMONY

OF

ROBIN L. KLIETHERMES

KANSAS CITY POWER AND LIGHT COMPANY

CASE NO. ER-2016-0285

*Jefferson City, Missouri
January 2017*

Staff Exhibit No. 210
Date 2-22-17 Reporter mm
File No. ER-2016-0285

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1 **REBUTTAL TESTIMONY**

2 **OF**

3 **ROBIN KLIETHERMES**

4 **KANSAS CITY POWER AND LIGHT COMPANY**

5 **CASE NO. ER-2016-0285**

6 Q. Please state your name and business address.

7 A. Robin Kliethermes, 200 Madison Street, Jefferson City, MO 65102.

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

9 A. I am employed by the Missouri Public Service Commission (“Commission”)
10 as a Utility Regulatory Manager of the Tariff and Rate Design Unit, of the Operation Analysis
11 division of the Commission Staff. My credentials and a listing of those cases in which I have
12 filed testimony before the Commission is attached as Schedule RK-r1.

13 Q. Have you previously filed testimony in this case?

14 A. No.

15 Q. What is the purpose of your rebuttal testimony?

16 A. The purpose of my rebuttal testimony is to adopt parts of Staff’s Class Cost of
17 Service Rate Design Report (“CCOS Report”) prepared by James A. Busch and explain a
18 correction to Staff’s calculation of the Residential customer charge. I will also respond to
19 Renew Missouri’s and Sierra Club’s witness Douglas B. Jester regarding inclining block rates
20 and KCPL’s witness Tim Rush regarding KCPL’s proposed Clean Charge Network (“CCN”)
21 tariff.

22 **RESIDENTIAL CUSTOMER**

23 Q. Have you identified a correction to Staff’s calculation of the Residential
24 Customer Charge?

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1 A. Yes. At the time of filing of the CCOS Report, December 14, 2016, Staff
2 calculated a residential customer charge of \$18.44. Upon further review, Staff found that
3 certain amortizations for solar rebates and pre-MEEIA costs were inadvertently included in its
4 calculation of the customer charge. Once these costs are removed from the calculation, Staff
5 calculates a fully-allocated residential customer charge of \$12.62.

6 Q. Does Staff's correction make the calculation of the fully allocated customer
7 charge amount consistent with the calculation of KCPL's current residential customer charge
8 of \$11.88?

9 A. Yes.

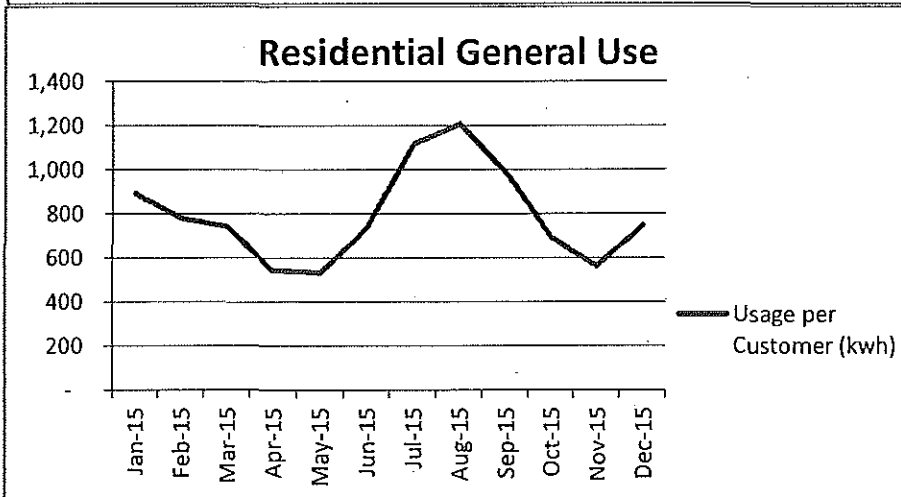
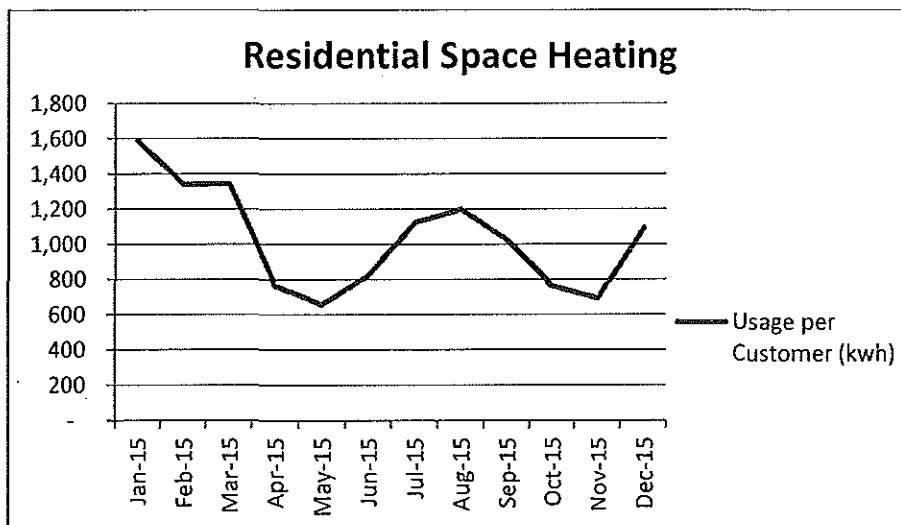
10 Q. Does this correction change Staff's rate design recommendation of no increase
11 in the current residential customer charge, unless the residential class experiences an overall
12 increase?

13 A. No. Staff continues to recommend that if an overall increase is ordered in this
14 case that all components of the residential rate design be increased by the same percentage.
15 Because Staff is not recommending an overall increase be ordered in this case, Staff will not
16 address the various recommendations recommending no increase to the residential customer
17 charge. These recommendations generally duplicate those rejected by the Commission in the
18 last KCPL rate case, Case No. ER-2014-0370, in which the Commission ordered adoption of
19 Staff's calculated customer charge.

20 **RESPONSE REGARDING INCLINING BLOCK RATES**

21 Q. How would KCPL's current definition of winter months for the purposes of
22 rate design impact revenue stability if the Commission would migrate towards inclining block
23 rates, as recommended by Mr. Jester?

1 A. KCPL's current rate structure is made up of three blocks: the first 600 kWh,
2 the next 400 kWh, and the over 1,000 kWh; with a flat rate for the four summer months of
3 June, July, August, and September and a declining rate for the remaining eight months.
4 Currently Mr. Jester is advocating that the current declining block rate structure for the eight
5 months of the year that are not June, July, August, or September be changed to an inclining
6 block; however, average customer usage for those eight months of the year is drastically
7 different and one rate design may not work for all eight months. For example, the graphs
8 below show the average usage per customer per month for a residential general use customer
9 and for a residential space heating customer.



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1 It is important to note that the average usage per customer for a general use customer
2 for the months of April, May, and November, which are designated as winter months, does
3 not exceed the first 600 kWh, or first block, of KCPL's residential rate design. Shifting
4 revenue recovery from the first block (declining block rate) to the tail block (inclining block
5 rate) of over 1,000 kWh in these months can decrease the amount of overall revenue
6 recovered by the utility. Additionally, cumulative frequency distribution data provided by
7 KCPL shows that 68% of general use customers in April and May and 66% of general use
8 customers in November show usage of under 600 kWh.¹

9 Also, the average usage per customer in the months of December, January, February,
10 and March for a general use customer is drastically different from that of a space heating
11 customer in those same months. For example, a general use customer's average use only
12 exceeds 1,000 kWh in the summer months, while the average use of space heating customer is
13 above 1,000 kWh in only December, January, February, and March. Currently, the rate design
14 for the Residential General Use and Residential Space Heating classes share the same flat rate
15 in the summer but have different declining rates in the winter months.

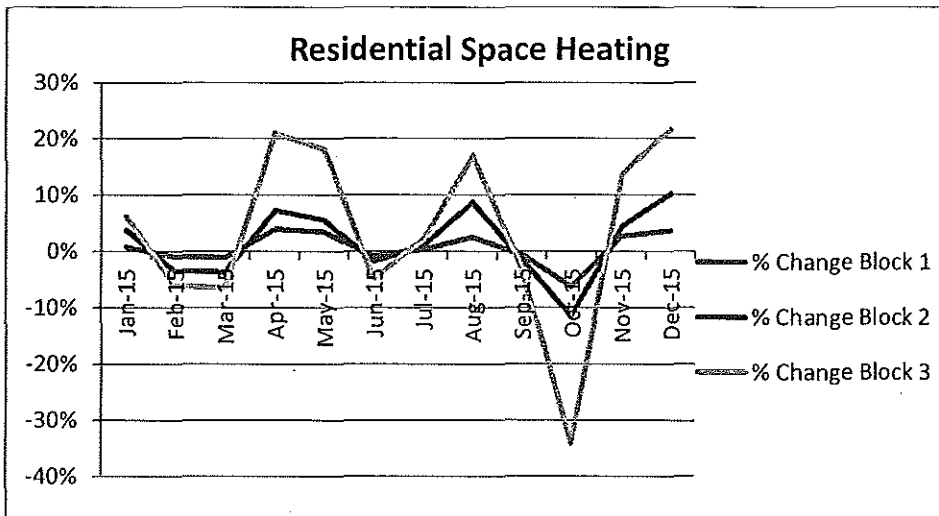
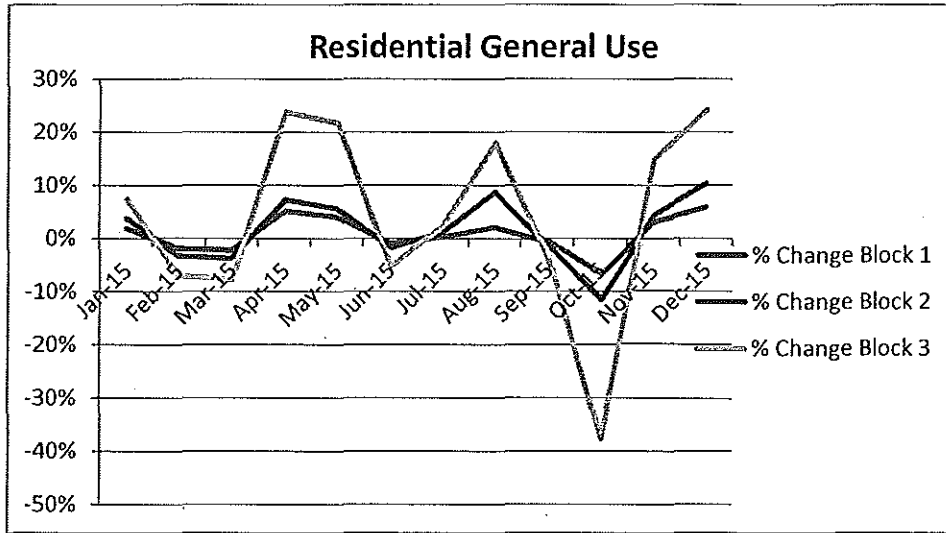
16 Q. If the Commission moved towards an inclining block rate using KCPL's
17 current rate design, can shifting revenue recovery to the tail block increase the impact of
18 changes in kWh on revenues?

19 A. Yes. The graph below shows the impact of weather normalization on each of
20 the three residential rate blocks for the Residential General Use and Residential Space
21 Heating classes. This graph shows that greater magnitude of changes – positive or negative –
22 will occur for the third block than for the second or first block. Similarly, a greater magnitude
23 of changes – positive or negative – occurs for the second block than for the first block.

¹ There are approximately 192,000 customer bills in the IRS1A General Use class.

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1 Finally, it shows that the magnitude of changes for the first block due to weather
2 normalization is relatively minor.



6

7 If the majority of revenue recovery not directly related to energy occurs in the first
8 block, there is less volatility in revenue recovery – positive or negative – associated with
9 weather variations. Moving revenue recovery to the second and third block will result in a
10 greater level of volatility in revenue recovery and customer bills than is currently experienced
11 due to weather.

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1 KCPL must obtain an additional kWh through either the SPP market or self-
2 generation. That kWh will have a cost, and that cost will be accounted for through the
3 operation of KCPL's FAC.

4 Q. Are there concerns with the interaction of KCPL's FAC and an inclining block
5 rate design, as it relates to revenue stability for both KCPL and its customers?

6 A. Yes. In general, when more customers use more energy, the cost of energy is
7 higher. For example, if a given month included an above average number of below average
8 temperature winter days, it is likely that the market price of energy for those hours would also
9 be above average. For that same month, we would expect that more customers would have
10 usage in the 2nd block and 3rd blocks, and that usage per customer would be greater than
11 average. Using an inclining block rate design would mean that there would be greater-than-
12 linear increases to company revenues as a result.

13 Without an FAC, the greater-than-linear increases to company revenues would be
14 netted by a greater-than-linear increase to the cost to obtain market energy to serve that load
15 (or the cost of peaking energy, if the utility fully supplies its own energy independent of the
16 market). However, with KCPL's FAC, the company is made whole for those above-average
17 energy costs per kWh. This example would result in the company over-recovering. Notably,
18 the inverse is true in atypically mild weather.

19 Q. Given the usage levels described above, is a flat or inclining block design the
20 best tool available to address policy objectives to use rate design to encourage conservation?

21 A. Respectfully, probably not. For example, a large residence with a high number
22 of occupants could be doing all possible measures to conserve energy above and beyond the
23 level that is cost effective under any rate design, and still receive a higher bill under inclining

1 | block. Conversely, a customer could be very inefficient, but if small enough, not receive any
2 | price signal to conserve. Given these considerations, as well as the policy desire for price
3 | signals to minimize production and distribution capacity costs, time-differentiated rates such
4 | as time-of-use rate designs can accomplish the same goals as inclining block rates, with
5 | greater precision and fewer unintended consequences such as revenue instability and
6 | disproportionate economic impact to ratepayers of varying sizes.

7 | Q. Based on this information do you agree with Mr. Jester that the Commission
8 | should migrate away from declining block rates and towards inclining block rates?

9 | A. Not exactly. Staff is not opposed to moving towards flat or inclining block
10 | rates; however, coupling inclining block rates with KCPL's current distinction of winter
11 | months as the remaining eight months of the year that are not June, July, August, or
12 | September could negatively impact revenue stability. Also, given the design of KCPL's Fuel
13 | Adjustment Clause, ("FAC") certain cost-based assumptions that may underlie inclining block
14 | designs in other jurisdictions are inapplicable to KCPL's rates at this time. However, if any
15 | significant restructuring of residential rates is to occur, Staff recommends a move towards
16 | time-variable rates over a move to inclining block rates.

17 | Q. What is Staff's recommendation if the Commission wanted to move towards
18 | inclining block rates?

19 | A. First, Staff would recommend that KCPL, for rate design purposes, define the
20 | winter months as the months of December, January, February, and March and create a third
21 | group, designating the months of October, November, April, and May as shoulder months.
22 | Staff would recommend inclining rates be designed for only the Summer and Winter billing
23 | months, with flat or declining rates in place for the shoulder months for the reasons described

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1 above. Finally, Staff recommends that a gradual approach be used to mitigate rate shock,
2 with a no more than 50% reduction to the existing differential in this case, for the peak winter
3 months of December, January, February, and March.

4 RESPONSE TO KCPL's CLEAN CHARGE NETWORK TARIFF

5 Q. Did you review the CCN tariff proposed by KCPL providing rates and rate
6 structure for commercial electric vehicle charging?

7 A. Yes

8 Q. Do you agree with the manner KCPL used to develop these rates and rate
9 structure?

10 A. Not entirely. Staff would recommend a Level 3 charging rate design based on
11 existing Small General Service ("SGS") rates similar to that proposed by KCPL. Staff
12 disagrees with KCPL's proposal to base Level 2 commercial PEV charging on residential
13 rates, and therefore, would also base Level 2 charging on SGS rates.

14 Q. Does Level 3 charging exert a greater demand on the distribution system than
15 Level 2 charging, as Mr. Rush discusses?

16 A. Yes. Staff agrees that Level 2 charging has a lower draw on the distribution
17 infrastructure than does Level 3 charging. However, that does not change the character of
18 service when determining where a customer is commercial or residential for purposes of
19 electric service classification.

20 Q. Does KCPL's SGS tariff reflect differing demand-related charges that would
21 be calculated for Level 2 versus Level 3 charging?

22 A. Yes. KCPL's SGS tariff has a separate facilities demand charge for demand in
23 excess of 25 kW, and there is also a separate demand charge that is applicable to all kW in

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1 | excess of 25 kW. Level 3 charging is in excess of 25 kW, while Level 2 charging is around
2 | 5 kW.

3 | Q. Do these differing demand charges provide a cost basis for a rate differential
4 | between Level 2 and Level 3 charging using only the SGS tariff, without using the residential
5 | tariff?

6 | A. Yes. Please see Table 1 below, which provides the calculations for rates based
7 | on the SGS tariff for both Level 2 and Level 3 charging. There is a noticeable difference in
8 | the rates for Level 2 and Level 3 charging, which are based on the demand-related charges
9 | already in place under the SGS tariff. However, Staff's proposed rates based on the SGS
10 | tariff for Level 2 charging is not significantly different from the rates Mr. Rush proposes.

11 | Q. Do you agree with KCPL's proposal for a session charge range?

12 | A. No. As discussed in Staff's Response to Certain Commission Questions, any
13 | session charge should be established as a set dollar rate in the tariff, and not be subject to the
14 | discretion of a host site as KCPL requests.

15 | Q. What is Staff's Recommendation regarding KCPL's CCN tariffed rates?

16 | A. Table 1 below describes three different scenarios of how Staff would
17 | recommend that rates be determined for KCPL's public charging stations using a Time-of-
18 | Use rate structure that provides cost recovery consistent with the existing SGS's demand-
19 | related charges. Those demand-related charges are billed based on the metered customer non-
20 | coincident peak, but are generally allocated to the classes in relation to some measure of class
21 | peak demand. Therefore, allocation of these demand-related charges to the on-peak hours
22 | sends price signals to customers regarding the impact of the time of the charge on the overall
23 | system costs. This design also sends price signals to customers regarding changes in the cost

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1 of energy over the course of the day. Staff's calculated rates in Table 1 offer options for how
2 to relate the demand-related costs to the time periods of the ToU design. Staff's rate
3 recommendation includes an on-peak and an off-peak period with options of a super on-peak
4 or super off-peak rate period.² Since the public charging stations, when connected to the grid,
5 can be considered equivalent to a SGS customer, in addition to the below rates, Staff also
6 recommends that SGS rates for MEEIA and FAC, as billed to customers on that tariff, and
7 any applicable taxes be added to the final bill an EV user would receive at the charging
8 station.

9 Table 1: Staff's Recommended Charging Station Rates

Station Capital Recovery and Expense AND Commercial Fixed Charge	A	\$ 218.75	+	\$ 18.37	/Month	
Commercial Demand-Dependant Charges for 5 kW	B	\$ -		/Month		
Commercial Demand-Dependant Charges for 50 kW	C	\$ 118.77		/Month		
Energy Charge	D	\$ 0.1078		/kWh		
Energy Charge, Time Adjusted to Off-Peak	E	\$ 0.1043		/kWh		
Energy Charge, Time Adjusted to On-Peak	F	\$ 0.1193		/kWh		
	Scenario I		Scenario II		Scenario III	
	Level 2	Level 3	Level 2	Level 3	Level 2	Level 3
Session Charge	A + B	A + C	A	A	A	A
Super Off Peak	E	E	E	E	E	E
Off Peak			D	D	D	D
On Peak			D + B	D + C		
Super On Peak	F	F	F + B	F + C	F + B	F + C
	Scenario I		Scenario II		Scenario III	
	Level 2	Level 3	Level 2	Level 3	Level 2	Level 3
Session Charge / Hour	\$ 0.66	\$ 1.65	\$ 0.66	\$ 0.66	\$ 0.66	\$ 0.66
Super Off Peak \$/kWh			\$ 0.1043	\$ 0.1043	\$ 0.1043	\$ 0.1043
Off Peak \$/kWh	\$ 0.104	\$ 0.104	\$ 0.1078	\$ 0.1078		
On Peak \$/kWh			\$ 0.1235	\$ 0.1633	\$ 0.1078	\$ 0.1078
Super On Peak \$/kWh	\$ 0.119	\$ 0.119	\$ 0.1350	\$ 0.1748	\$ 0.1507	\$ 0.2303

11 Q. Do other Staff witnesses address KCPL's proposed CCN tariff in Rebuttal
12 testimony?

² Dollar values for letters A, B and C in the table are based on estimates for hours spent charging a day and the number of active stations. Energy and demand charges are based on KCPL's current SGS tariffed rates.

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1 A. Yes. While I have discussed Staff's response to KCPL's CCN tariff regarding
2 rate considerations, Staff witness Byron Murray responds to testimony concerning residential-
3 at-home PEV charging and Staff's recommendation regarding recovery of CCN costs.

4 Q. Does this conclude your rebuttal testimony?

5 A. Yes.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Kansas City Power & Light)
Company's Request for Authority to)
Implement A General Rate Increase for)
Electric Service)

Case No. ER-2016-0285

AFFIDAVIT OF ROBIN KLIETHERMES

STATE OF MISSOURI)
)
COUNTY OF COLE) ss.

COMES NOW ROBIN KLIETHERMES and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing Rebuttal Testimony; and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.

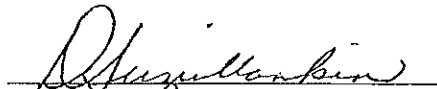


ROBIN KLIETHERMES

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 6th day of January, 2017.

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

Robin Kliethermes

Present Position:

I am the Utility Regulatory Manager of the Tariff and Rate Design Unit, Operational Analysis Department, Commission Staff Division, of the Missouri Public Service Commission. I had this position since July 16th, 2016. I have been employed by the Missouri Public Service Commission since March of 2012. In May of 2013, I presented on Class Cost of Service and Cost Allocation to the National Agency for Energy Regulation of Moldova (ANRE) as part of the National Association of Regulatory Utility Commissioners (NARUC) Energy Regulatory Partnership Program. I also serve on the Electric Meter Variance Committee.

Educational Background and Work Experience:

I have a Bachelor of Science degree in Parks, Recreation and Tourism with a minor in Agricultural Economics from the University of Missouri – Columbia in 2008, and a Master of Science degree in Agricultural Economics from the same institution in 2010. Prior to joining the Commission, I was employed by the University of Missouri Extension as a 4-H Youth Development Specialist and County Program Director in Gasconade County.

Additionally, I completed two online classes through Bismarck State College: Energy Markets and Structures (ENRG 420) in December, 2014 and Energy Economics and Finance (ENRG 412) in May, 2015.

Previous Testimony of Robin Kliethermes

Case No.	Company	Type of Filing	Issue
ER-2012-0166	Ameren Missouri	Staff Report	Economic Considerations
ER-2012-0174	Kansas City Power & Light Company	Staff Report	Economic Considerations
ER-2012-0175	KCP&L Greater Missouri Operations Company	Staff Report	Economic Considerations & Large Power Revenues
ER-2012-0345	Empire District Electric Company	Staff Report	Economic Considerations, Non-Weather Sensitive Classes & Energy Efficiency
HR-2014-0066	Veolia Kansas City	Staff Report	Revenue by Class and Class Cost of Service
GR-2014-0086	Summit Natural Gas	Staff Report	Large Customer Revenues
GR-2014-0086	Summit Natural Gas	Rebuttal	Large Customer Revenues
EC-2014-0316	City of O'Fallon Missouri and City of Ballwin, Missouri v. Union Electric Company d/b/a Ameren Missouri	Staff Memorandum	Overview of Case
EO-2014-0151	KCP&L Greater Missouri Operations Company	Staff Recommendation	Renewable Energy Standard Rate Adjustment Mechanism (RESRAM)
ER-2014-0258	Ameren Missouri	Staff Report	Rate Revenue by Class, Class Cost of Service study, Residential Customer Charge
ER-2014-0258	Ameren Missouri	Rebuttal	Weather normalization adjustment to class billing units
ER-2014-0258	Ameren Missouri	Surrebuttal	Residential Customer Charge and Class allocations
ER-2014-0351	Empire District Electric Company	Staff Report	Rate Revenue by Class, Class Cost of Service study, Residential Customer Charge

Case No.	Company	Type of Filing	Issue
ER-2014-0351	Empire District Electric Company	Rebuttal & Surrebuttal	Residential Customer, Interruptible Customers
ER-2014-0370	Kansas City Power & Light Company	Staff Report	Rate Revenue by Class, Class Cost of Service study, Residential Customer Charge
ER-2014-0370	Kansas City Power & Light Company	Rebuttal & Surrebuttal	Class Cost of Service, Rate Design, Residential Customer Charge
ER-2014-0370	Kansas City Power & Light Company	True-Up Direct & True-Up Rebuttal	Customer Growth & Rate Switching
EE-2015-0177	Kansas City Power & Light Company	Staff Recommendation	Electric Meter Variance Request
EE-2016-0090	Ameren Missouri	Staff Recommendation	Tariff Variance Request
EO-2016-0100	KCP&L Greater Missouri Operations Company	Staff Recommendation	RESRAM Annual Rate Adjustment Filing
ET-2016-0185	Kansas City Power & Light Company	Staff Recommendation	Solar Rebate Tariff Change
ER-2016-0023	Empire District Electric Company	Staff Report	Rate Revenue by Class, CCOS and Residential Customer Charge
ER-2016-0023	Empire District Electric Company	Rebuttal & Surrebuttal	Residential Customer Charge and CCOS
ER-2016-0156	KCP&L Greater Missouri Operations	Staff Report	Rate Revenue by Class, CCOS and Residential Customer Charge
ER-2016-0156	KCP&L Greater Missouri Operations	Rebuttal & Surrebuttal	Data Availability, Energy Efficiency Revenue Adj., Residential Customer Charge