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MISSOURI PUBLIC SERVICE COMMISSION

COMMISSION STAFF DIVISION

OPERATIONAL ANALYSIS DEPARTMENT

SURREBUTTAL TESTIMONY

OF

ROBIN KLIETHERMES

KANSAS CITY POWER AND LIGHT COMPANY

CASE NO. ER-2016-0285

Jefferson City, Missouri
January 2017

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1 same percentage, but any increases to the residential customer charge be capped at \$12.62.
2 Mr. Hyman states that Staff's recommendation is to increase the customer charge from \$11.88
3 to the fully allocated amount, regardless of the overall percentage increase ordered for the
4 residential class.¹

5 Q. At this time, is Staff recommending an overall increase in rates in this case?

6 A. No.

7 **RESPONSE REGARDING RESIDENTIAL RATE DESIGN**

8 Q. On page 5 and 6 of Mr. Hyman's rebuttal testimony, he states that the
9 collection of demand-related costs through the first rate block effectively causes residential
10 customers with average use to pay for demand-related costs irrespective of their usage during
11 peak. Is this correct?

12 A. Yes. Demand-related costs include costs related to KCPL's generation,
13 transmission and distribution facilities that are used to serve all levels of demand: base
14 demand or otherwise known as average demand, intermediate demand, and peak demand. For
15 example, if a customer uses any level of kWh during a month, they are placing a certain level
16 of kW demand on KCPL's electric system at any given point in time.

17 Q. Does a customer that uses 1,000kWh a month place more demand on KCPL's
18 electric system at any given point in time than a customer that uses 600kWh a month?

19 A. Maybe. Without the use of demand meters, this cannot be determined. For
20 example, a customer that uses 1,000 kWh a month may peak at a demand of 10kW, which
21 may or may not occur at the time the residential class or the system is peaking and a customer
22 that uses 600 kWh may peak at 15kW, which may or may not occur when the class or system

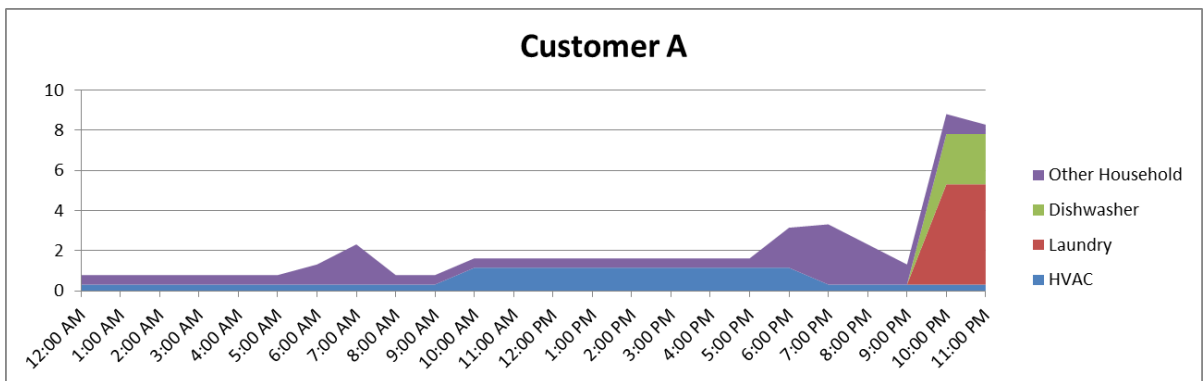
¹ Staff's direct-filed fully-allocated customer charge calculation was \$18.44. As discussed in my rebuttal testimony, Staff has corrected this amount to \$12.62.

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1 is peaking. Just because a customer uses more kWh in a given month does not mean that a
2 customer will place a greater demand at any given point in time on the electric system than a
3 customer that uses less kWh in a month.

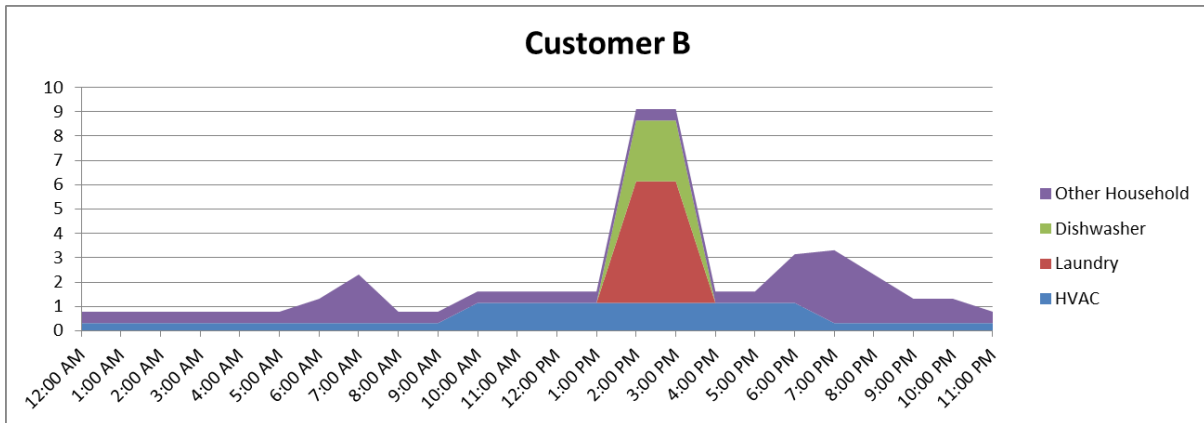
4 Q. If a customer uses more than 1,000kWh in a month, is it reasonable to assume
5 that the level of usage greater than 1,000kWh occurred while the class and/or system peaked?

6 A. No. For example, Customer A uses 50kWh a day. A typical day's usage for
7 Customer A is provided below, which indicates Customer A does laundry and runs the
8 dishwasher late in the evening. Customer A exerts a maximum hourly demand of 8.8 kW on
9 the system and uses 1,500kWh in this month. Customer A's maximum hourly demand
10 occurred at 11:00 pm.



11
12 For the first 20 days of the month, every kWh Customer A uses is below 1,000kWh.
13 For the last 10 days of the month, every kWh Customer A uses is above 1,000kWh. In
14 contrast, Customer B also uses 50kWh a day. A typical day's usage for Customer B is
15 provided below, which indicates Customer B does laundry and runs the dishwasher early in
16 the evening. Customer B exerts a maximum hourly demand of 9.1 kW on the system, and uses
17 1,500kWh in this month. Customer B's maximum hourly demand occurred at 2:00 pm and
18 3:00 pm.

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1 For the first 20 days of the month, every kWh Customer B uses is below 1,000kWh.

2 For the last 10 days of the month, every kWh Customer B uses is above 1,000kWh.

3
4 If we assume a summer day with a peak at 2:00, Customer B is exerting more than 4
5 times the demand on the system at that time as that exerted by Customer A. While Customer
6 A is using energy during system peak, Customer A's usage does not drive the system peak to
7 the extent of Customer B's usage. For the first 20 days of Customer A's usage with its
8 evening peak, and for the first 20 days of Customer B's usage with its afternoon peak, all
9 usage is below 1,000 kWh. Similarly, for the last 10 days of Customer A's usage and the last
10 10 days of Customer B's usage, all usage is over 1,000 kWh.

11 Q. If a customer uses less than 1,000kWh in a month, is it reasonable to assume
12 that customer had less than average usage while the class and/or system peaked?

13 A. No. As discussed and illustrated above, there is diversity in energy
14 consumption over time in the Residential class. Absent a Time-of-Use (ToU) rate design or
15 incorporation of a billing determinant to measure a customer's peak demand coincident with
16 system or class peak, it is unreasonable to assume that any given kWh of energy that a
17 customer uses greater than 1,000kWh was used during a system peak or a residential class
18 peak.

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1 Q. Is the rate design for KCPL's residential class a ToU rate design?

2 A. No. Although Staff is supportive of a ToU rate design, KCPL's current
3 residential rate design is simply a blocked rate design where a customer's first 600kWh is
4 billed in block 1, their next 400kWh is billed in block 2, and their monthly usage greater than
5 1,000 kWh is billed in block 3. There is no determination of the time that these customers
6 used energy or the level of demand that a given customer placed on the system at a given time
7 during the month that the usage occurred. Mr. Hyman is attempting to justify cost causation
8 using customer usage determinants that unfortunately provide little to no justification for cost
9 causation since the time at which the energy occurred and at what rate it occurred are
10 unknown.

11 Q. Do you understand what Mr. Hyman means by his statement on page 6 of his
12 rebuttal testimony that Staff's CCoS study uses a detailed base, intermediate, and peak
13 methodology which calculates class-level base, intermediate, and peak demands – not
14 demands based on the Company's rate blocks?

15 A. No. KCPL's rate blocks for the residential class account for a total customer's
16 energy usage during a month and do not represent a level of customer demand. Demand and
17 energy are very different and should not be used interchangeably. For example, a kW of
18 demand represents a customer's or a class' demand on the electric system at an instant in
19 time, whereas a customer's total kWh or a class' total kWh represents the sum of all kW in a
20 given time period, such as a month.

21 Q. Did Mr. Hyman develop any alternative production allocators based on his
22 criticism of Staff's allocation?

23 A. No.

1 **RESPONSE REGARDING DISTRIBUTION ALLOCATION**

2 Q. On page 22 of Mr. Brubaker's rebuttal testimony, he mentions that Staff's
3 allocator to allocate distribution substation costs did not remove a level of demand
4 representing customers served at transmission. Mr. Brubaker also mentions that Staff's
5 allocator used to allocate distribution primary costs to customers did not remove a level of
6 demand for customers served at substation and transmission. Is this correct?

7 A. Yes. Staff has recalculated its distribution allocators to remove an estimate of
8 non-coincident demand from the non-coincident demand representing the entire Large Power
9 Service ("LPS") class to account for customers served at transmission and substation.

10 Q. When allocating distribution secondary costs did Staff remove a level of
11 non-coincident peak demand from the total non-coincident peak demand for the LPS class to
12 remove customers served at primary voltage?

13 A. Yes. However, Staff has updated this allocation to remove customers served at
14 transmission and substation as well.

15 Q. Has Staff updated its CCoS to account for these changes?

16 A. Yes, Staff witness Sarah Kliethermes provides a summary of the results in her
17 surrebuttal testimony and in Schedule SLK-s1.

18 Q. What did Mr. Brubaker state in his testimony regarding the distribution
19 secondary allocator?

20 A. Mr. Brubaker claims that Staff's estimation of LPS's non-coincident peak
21 ("NCP") representing primary service customers is too low because it uses the average load at
22 peak of all LPS customers and not just the average load of primary service level customers at
23 peak, which Mr. Brubaker argues would result in a higher number since the number in
24 KCPL's workpaper is higher.

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1 Q. Is the average load of primary service level customers at the time the rate class
2 peaks known, in order for Staff to calculate the allocator based on Mr. Brubaker's suggestion?

3 A. This level of information it is not known for the large general service and
4 medium general service classes. It may be possible to develop this information from
5 individual customer hourly load data for the large power class, but it is not clear how this
6 information would relate to normalized class level values.

7 Q. As argued by Mr. Brubaker, do KCPL's workpapers clearly show the level of
8 the LPS class' NCP that is attributable to each sub-class of customers within a rate group,
9 such as Large Power Transmission, Large Power Substation or Large Power Primary?

10 A. No. The coincident peak ("CP") and NCP that KCPL provided in its
11 workpapers are not actual CPs and NCPs directly related to the customers' usage behaviors in
12 the respective sub-classes, but are instead the result of an estimation process. KCPL uses the
13 load factor of the entire LPS class which includes customers at all voltage levels, (secondary,
14 primary, substation, and transmission) and then applies that load factor to the average demand
15 of each sub-class. This provides an estimated CP per sub-class. KCPL then applies the
16 coincident factor of the entire LPS class, which again includes customers at all voltage levels,
17 to each subclass' estimated CP in order to estimate an NCP for that sub-class. This estimation
18 assumes that each sub-class regardless of voltage level has the same coincident factor and the
19 same load factor.

20 Q. Why does KCPL estimate the level of NCP attributable to each sub-class
21 instead of using the actual NCP of each sub-class?

22 A. KCPL's load research data is not designed to produce class NCP and CP at the
23 different voltage levels within a rate group where customers are served at different voltage

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1 | levels, such as LPS or Large General Service (“LGS”). Staff understands that this data only
2 | produces a CP and NCP for the rate group as whole.

3 | Q. Does this conclude your surrebuttal testimony?

4 | 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 Surrebuttal 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 27th day of January, 2017.

JESSICA LUEBBERT Notary Public - Notary Seal State of Missouri Commissioned for Cole County My Commission Expires: February 19, 2019 Commission Number: 15633434



Notary Public