

Exhibit No.:
Issues: Standby Service Rider
Witness: Jane E. Epperson
Sponsoring Party: Missouri Department of
Economic Development –
Division of Energy
Type of Exhibit: Surrebuttal Testimony
Case Nos.: ER-2018-0145
ER-2018-0146

MISSOURI PUBLIC SERVICE COMMISSION

KANSAS CITY POWER & LIGHT COMPANY

KCP&L GREATER MISSOURI OPERATIONS COMPANY

CASE Nos. ER-2018-0145 and ER-2018-0146

SURREBUTTAL TESTIMONY

OF

JANE E. EPPERSON

ON

BEHALF OF

MISSOURI DEPARTMENT OF ECONOMIC DEVELOPMENT

DVISION OF ENERGY

Jefferson City, Missouri

September 4, 2018

Mo Div. Energy Exhibit No. 456
Date 10/3/18 Reporter JEB
File No. ER-2018-0145
ER-2018-0146

Exhibit #456

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) File No. ER-2018-0145
A General Rate Increase for Electric Service)

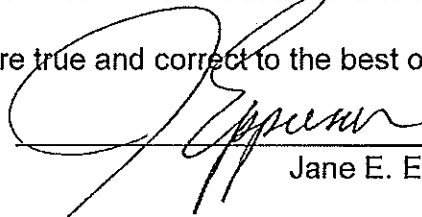
In the Matter of KCP&L Greater Missouri)
Operations Company's Request for Authority) File No. ER-2018-0146
To Implement a General Rate Increase for)
Electric Service)

AFFIDAVIT OF JANE E. EPPERSON

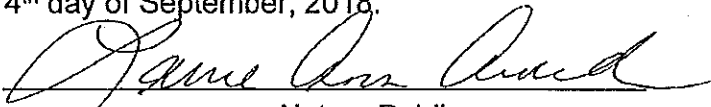
STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Jane E. Epperson, of lawful age, being duly sworn on her oath, deposes and states:

1. My name is Jane E. Epperson. I work in the City of Jefferson, Missouri, and I am employed by the Missouri Department of Economic Development as an Energy Policy Analyst, Division of Energy.
2. Attached hereto and made a part hereof for all purposes is my Surrebuttal Testimony on behalf of the Missouri Department of Economic Development – Division of Energy.
3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my knowledge.


Jane E. Epperson

Subscribed and sworn to before me this 4th day of September, 2018.


Notary Public

My commission expires: 4/26/20

Laurie Ann Arnold
Notary Public - Notary Seal
State of Missouri
Commissioned for Callaway County
My Commission Expires: April 26, 2020
Commission Number: 16808714

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1 | I. INTRODUCTION AND PURPOSE OF TESTIMONY

2 | Q. Please state your name and business address.

3 | A. My name is Jane E. Epperson. My business address is 301 West High Street,
4 | Suite 720, PO Box 1766, Jefferson City, Missouri 65102.

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

6 | A. I am employed by the Missouri Department of Economic Development ("DED"),
7 | Division of Energy ("DE") as an Energy Policy Analyst.

8 | Q. Have you previously filed testimony before the Missouri Public Service
9 | Commission ("Commission") in this case?

10 | A. Yes. I filed Direct Rate Design Testimony to a) clarify the obligation for utilities to
11 | provide cost-based standby service to customers who choose to self-generate a
12 | portion of their energy requirement, b) describe combined heat and power
13 | ("CHP") technology and associated energy efficiency and resiliency benefits, c)
14 | summarize results of the collaborative workshop that was held to develop a
15 | standby service rider ("SSR") for Union Electric Company d/b/a Ameren Missouri
16 | ("Ameren Missouri") pursuant to Case No. ER-2014-0258, and d) describe the
17 | components and characteristics of an SSR that is non-discriminatory. I also filed
18 | Rebuttal Rate Design Testimony to a) provide a list of deficiencies associated
19 | with Kansas City Power & Light Company's ("KCP&L") and KCP&L Greater
20 | Missouri Operations Company's ("GMO") (collectively, "Companies") proposed
21 | SSR, b) compare the Companies' proposed SSR to the Ameren Missouri SSR,
22 | and c) provide specific recommendations for revising the Companies' proposed
23 | SSR in this rate proceeding.

1 **Q. What is the purpose of your Surrebuttal Testimony?**

2 A. My Surrebuttal Testimony will a) address rebuttal testimony from the Companies
3 and Commission Staff ("Staff") regarding my Direct Testimony, and b)
4 recommend adoption of my proposed alternative SSR definitions that, in
5 combination with the alternative rates provided in DE witness Ms. Barbara J.
6 Meyer's Surrebuttal Testimony, resolve the deficiencies of the Companies'
7 proposed SSR.

8 **Q. What information did you review in preparing this testimony?**

9 A. In preparation for this testimony I reviewed the rebuttal testimonies of KCP&L and
10 GMO witness Mr. Bradley D. Lutz and Staff witness Ms. Claire M. Eubanks, PE.

11 **II. RESPONSE TO THE COMPANIES' REBUTTAL TESTIMONY ON STANDBY**
12 **SERVICE**

13 **Q. Please summarize the Companies' rebuttal testimony on the subject of**
14 **standby service.**

15 A. Mr. Lutz asserted that the Companies' proposed SSR did not include provisions
16 that would hinder CHP deployment by customers.

17 **Q. Do you agree with Mr. Lutz's assertion?**

18 A. No. As discussed in my Rebuttal Testimony on pages five through seven, there
19 are many barriers to CHP deployment associated with the Companies' proposal.
20 Specifically, the Companies' proposed SSR:

21 1. Discriminates within and between eligible customer classes through different
22 rates based on customer size and potential generation capacity;

- 1 2. Contains rate values that are not based on factual information, studies, or
- 2 models that reflect the unique cost of providing standby service;
- 3 3. Can result in duplicative demand-related charges for standby and
- 4 supplemental service;
- 5 4. Bases charges for a primary service customer on higher secondary service
- 6 charges;
- 7 5. Bases year-round charges on the higher summer season charges of the
- 8 generally available rate schedule;
- 9 6. Defines standby and maintenance service based upon the season instead of
- 10 on/off peak occurrence;
- 11 7. Is particularly discriminatory to the Small General Service ("SGS") class with
- 12 respect to interconnection and daily demand charges;
- 13 8. Requires an additional meter for larger customers, creating unnecessary
- 14 complexity and costs;
- 15 9. Requires a minimum operating limit for larger systems, penalizing customers
- 16 for the use of a CHP system;
- 17 10. Excludes energy storage systems from eligibility; and,
- 18 11. Is unnecessarily complex and lacks transparency.
- 19 **Q. Does the Companies' SSR proposal comply with the Commission's rules?**
- 20 A. No. The Commission's rules specify an electric utility's obligation to purchase
- 21 from, sell to, and interconnect with customer-generators. Specifically, the rules
- 22 state that:

1 "... rates shall be just and reasonable and in the public interest and shall
2 not discriminate against any qualifying facility in comparison to rates for
3 sales to other customers served by the electric utility. Rates for sales
4 which are based on accurate data and consistent system-wide costing
5 principles shall not be considered to discriminate against any qualifying
6 facility to the extent that those rates apply to the utility's other customers
7 with similar load or other cost-related characteristics".¹

8 The proposed SSR fails to meet the non-discriminatory threshold requirement of
9 being based upon accurate data and system-wide costing principles, as
10 described in my Rebuttal Testimony.

¹ 4 CSR 240-20.060(5)

1 **III. RESPONSE TO PUBLIC SERVICE COMMISSION STAFF REBUTTAL**
2 **TESTIMONY ON STANDBY SERVICE**

3 **Q. Please summarize the Staff's rebuttal testimony on the subject of standby**
4 **service.**

5 **A.** Ms. Eubanks a) asserts that use of the annual avoided cost percentage was not
6 necessarily a metric for evaluating the fairness of a standby rate, b) was unclear
7 whether my recommended metrics could be applied to the Companies' rate
8 designs, and c) states non-opposition to the Companies' proposed SSR, while
9 acknowledging the absence of customer-specific information upon which it is
10 based.

11 **Q. Please explain avoided cost percentage ("ACP") and how it can be used as**
12 **a metric for evaluating fairness of a standby rate.**

13 **A.** The ACP is a metric taken from a U.S. Environmental Protection Agency report
14 entitled *Standby Rates for Customer-Sited Resources; Issues, Considerations*
15 *and the Elements of Model Tariffs.*² Section 4.1 states that one of the key
16 economic values of onsite generation is the displacement of purchased electricity
17 and the avoidance of those costs. Ideally, the reduction in electricity price should
18 be commensurate with the reduction in purchased electricity. Logically, if the
19 onsite system reduces consumption by 40 percent, the cost of electricity
20 purchases would also be reduced by 40 percent. The ACP metric compares the
21 value of the avoided purchases with the value of the full electricity requirements

² (https://www.epa.gov/sites/production/files/2015-10/documents/standby_rates.pdf)

1 on a per-kWh basis. There is a utility cost (not yet justified by the Companies)
2 associated with reserving generation capacity and providing additional service
3 during unplanned customer generation outages. CHP systems have been well-
4 documented to be highly reliable, i.e., unlikely to have an unplanned outage.
5 CHP systems (e.g., reciprocating engine, gas turbine, microturbine) are proven to
6 be available 93-99 percent of the year.³ The Companies should determine what
7 it costs to reserve/provide additional service for 1-7 percent of the year. The
8 metric of 90 percent ACP proposed in my Direct Testimony is very reasonable,
9 especially lacking any alternative proposed metric by the Companies or other
10 parties, and acknowledgement by the Companies that the proposed rider
11 charges are not supported by any data, studies, or workpapers (see Attachment
12 1).

13 **Q. Please address Staff's uncertainty regarding the applicability of your**
14 **recommended metrics to the Companies' rate designs.**

15 **A.** Metrics associated with the rate design principles include 1) simplicity,
16 understandability, public acceptability, and feasibility of application, 2) fairness of
17 the specific rates in the appointment of total cost of service among the different
18 consumers, and 3) avoidance of undue discrimination are universal. The
19 Companies' rate design includes a demand ratchet and declining block structure,
20 neither of which is in keeping with these rate design principles. However, the
21 SSR can be modified to link with the existing generally available rate schedules'

³ Catalog of CHP Technologies, U.S. Environmental Protection Agency Combined Heat and Power Partnership Program, 2017, Table 1-3.

1 designs, as demonstrated in Ms. Meyer's Surrebuttal Testimony, Tables 1-8; and
2 such modification would better align the SSR with these commonly accepted rate
3 design principles.

4 **IV. RESOLUTION OF DEFICIENCIES**

5 **Q. Should the deficiencies in the Companies' SSR proposal be resolved within**
6 **the time frame of these rate cases?**

7 A. Yes. Attachment 2, originating from a collaborative stakeholder process that
8 included Staff, Office of Public Counsel, Missouri Industrial Energy Consumers,
9 Veolia Waste, Kansas City Power & Light, Empire District Gas, Missouri Energy
10 Initiative, Renew Missouri and Missouri Office of Administration, provides
11 alternative SSR definitions that resolve many of the documented deficiencies.
12 This attachment has been adapted for KCP&L's rate structures. Similar
13 adaptations should be made for GMO's rate structures.

14 **Q. Why should the SGS class be exempt from a minimum size requirement to**
15 **take service under the Companies' SSR?**

16 A. The 100 kW minimum requirement of the SSR is too high for this class of
17 customers to make utilization of CHP meaningful. The Companies' response to
18 DED-DE Data Request 308 indicates that only 12 SGS customers in GMO's
19 territory had an average annual demand over 200 kW, while 27,514 SGS
20 customers in KCP&L's territory had an average annual demand of 69 kW. Taken
21 together, this data suggests that most SGS customers would be unqualified to
22 take service under the Companies' proposed SSR.

1 **Q. Should SGS customers be allowed to interconnect distributed generation**
2 **systems, including CHP, without imposing demand-based standby**
3 **charges?**

4 **A.** Yes. Smaller SGS customers should be allowed to install and interconnect
5 systems of a size to suit their needs without imposing demand-related standby
6 charges. Under KCP&L's general tariffs, such customers are not subject to
7 demand charges, instead paying higher costs for energy (Table 5 Jane E.
8 Epperson Rebuttal Testimony). This rate structure justifies avoidance of demand-
9 based standby charges for smaller SGS customers.

10 **Q. Does DE witness Ms. Meyer's testimony resolve the rate and structure**
11 **deficiencies described in your Rebuttal Testimony?**

12 **A.** Yes. Based on analysis and materials developed in the Ameren Missouri SSR
13 collaborative workshop, Ms. Meyer proposes solutions that incorporate the
14 Companies' generally available rate designs to produce alternative SSR rates
15 (see Tables 1-8 of Ms. Meyer's Surrebuttal Testimony). Ms. Meyer also
16 performed modifications to the Ameren Missouri SSR Study Tool to make it
17 effective for the KCP&L Large General Service, Secondary Voltage class.

18 **Q. Should the Companies be required to create an SSR Study Tool for other**
19 **applicable classes and make it available on their website?**

20 **A.** Yes. The SSR Study Tool provided on the Companies' website may further
21 facilitate its use and enhance the transparency of the SSR process and rates.

1 **V. RECOMMENDATIONS**

2 **Q. What are your recommendations regarding the Companies' proposed SSR?**

3 A. I recommend the Commission direct the Companies to:

4 a) Exempt smaller SGS customers from demand-related standby charges
5 under their SSRs.

6 b) Adopt the Definitions and Select General Provisions in Attachment 2 of
7 this testimony, in association with the proposed rates and structure in Tables 1-8
8 of Ms. Meyer's Surrebuttal Testimony. Similar adaptations should be made for
9 GMO's rate structures.

10 c) Adopt the draft KCP&L SSR Study Tool, as modified to reflect the
11 Companies' rate designs for Large General Service, Secondary Voltage.

12 d) Perform similar modification of the draft KCP&L SSR Study Tool to reflect
13 the Companies' other customer service classes applicable to the SSRs and
14 make all such tools available on the Companies' website.

15 **Q. Does this conclude your testimony?**

16 A. Yes.

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Case Nos. ER-2018-0145 and ER-2018-0146

ATTACHMENT 1. KCPL/GMO Response to Data Request DED-300

KCPL GMO
Case Name: 2018 GMO Rate Case
Case Number: ER-2018-0146

Response to Poston Marc Interrogatories - DED_20180523
Date of Response: 5/30/2018

Question:DED-300

Please provide a copy of all studies performed by or on behalf of Kansas City Power & Light Company (KCPL) and Greater Missouri Operations Company (GMO) that quantify the difference in cost of providing service to a CHP customer and a non-CHP customer with similar load or other cost-related characteristics. Please specify which of the workpapers, if any, associated with any KCPL and GMO witnesses' testimony support the calculations contained within the proposed Standby Service Rider, Sheet 28. To the extent that any of the requested information is not available, please indicate any intent and timeline for performing said studies/analysis. If another party to this case issued a similar Data Request, please provide a copy of the response to that Data Request.

Response:

The Company has not performed or had performed any studies of this nature. The Company has provided information to support Customer evaluations of CHP. But does not have access to any of the results.

By calculations, if you are referring to the rates proposed in the Standby Service Rider, no workpapers are available. All rates on GMO Schedule SSR are derived from the generally available ("GA") rate schedules for Small General Service, Large General Service, and Large Power Service tariffs based on the following relationships. No workpapers were produced.

(Please note, due to slight changes applied to the generally available rates and inadvertently not transferred to the SSR Schedule, actual amounts shown on the proposed tariff vary slightly from these relationships.)

Capacity greater than or equal to 100kW and less than or equal to 2MW
Capacity Reservation Charge – 25% of GA rate Summer Base Demand

Interconnection Charge – Two times the GA rate Facility Charge

Capacity greater than 2MW and less than or equal to 10MW

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Standby Service Metering & Administration Charge – Customer Meter cost from Class Cost of Service study (rounded to nearest \$10) plus \$100 for Administration

Capacity Reservation Charge – 25% of GA rate Summer Base Demand

Demand Charge

Backup – 125% of GA rate Base Summer Demand (expressed as daily rate (1/30th))

Maintenance – 100% of GA rate Summer Base Demand (expressed as daily rate (1/30th))

Energy Charge

Backup – 100% of first energy block of GA rate Summer Base Energy Charge

Maintenance – 100% of second energy block of GA rate Summer Base Energy Charge (If no second block is present, set to 100% of first energy block)

No additional analysis of CHP or of the rates proposed is planned.

A similar data request was received from Missouri Staff and the response to that data request, DR#0321, has been included, in its entirety in this response.

Information provided by: Brad Lutz, Regulatory Affairs

Attachment: QDED-206_Verification.pdf

ATTACHMENT 2. Alternative KCPL/GMO SSR Definitions and Select General Provisions

STANDBY SERVICE RIDER

APPLICABILITY

Applicable to each customer with behind the meter on-site parallel distributed generation and/or storage system(s) with a capacity over 100 kilowatts (kW), as a modification to standard electric service supplied under either the tariffed rate schedules of Medium General Service, Large General Service, or Large Power Service.

Customers with emergency backup, solar or wind generation that is not integrated with a storage system are exempt from this Rider.

DEFINITIONS

DISTRIBUTED GENERATION AND/OR STORAGE - Customer's private on-site generation and/or storage that:

1. is located behind the meter on the customer's premises,
2. has a rated capacity of 100 kW or more,
3. operates in parallel with the Company's system, and
4. adheres to applicable interconnection agreement entered into with the Company.

SUPPLEMENTAL SERVICE - Electric service provided by the Company to customer to supplement normal operation of the customer's on-site parallel distributed generation and/or storage in order to meet the customer's full service requirements.

STANDBY SERVICE - Service supplied to the premises by the Company in the event of the customer exceeding its Supplemental Contract Capacity. Standby Service may be needed on either a scheduled or unscheduled basis. Standby Service comprises capacity and associated energy during the time it is used.

BACKUP SERVICE - Unscheduled Standby Service.

MAINTENANCE SERVICE - Scheduled Standby Service.

BACK-UP SERVICE - The portion of Standby Contract Capacity and associated energy used without advance permission from the Company. The customer must notify the Company within thirty (30) minutes of taking Back-up Service for amounts over five (5) megawatts (MW). For Back-up Service billed, the customer shall be charged the daily standby demand charge for back-up service and back-up energy charges associated

with Standby Service. The rates for these charges as well as the monthly fixed charges are stated in this Rider. Back-up Service Charges will be shown and calculated separately on the customer bill.

MAINTENANCE SERVICE - The portion of Standby Contract Capacity used with advance permission from the Company. The customer must schedule Maintenance Service with the Company not less than six (6) days prior to its use. Unless otherwise agreed to by the Company, Maintenance Service shall be limited to not more than six (6) occurrences and not more than sixty (60) total and partial days during twelve (12) consecutive billing periods (based on billing dates). Maintenance Service may be available during all months and shall not be greater than the seasonal Standby Contract Capacity. The scheduling of Maintenance Service may be restricted by the Company during times associated with system peaking conditions or other times as necessary. For Maintenance Service billed, the customer shall be charged the daily standby demand charge for maintenance service associated with Standby Service Demand. The rates for these daily demand charges as well as the monthly fixed charges are stated in this Rider. Energy charges for Maintenance Service associated with the Standby Service will be billed as standard energy charges per the applicable tariffed rate schedule. Maintenance Service charges will be shown and calculated separately on the customer bill.

SUPPLEMENTAL CONTRACT CAPACITY - The customer must designate and contract by season the maximum amount of demand, in kW, taken at the premises through the billing meter that may be billed on the applicable standard tariffed rate and shall be mutually agreeable to customer and Company. The Supplemental Contract Capacity shall insofar as possible estimate ninety percent (90%) of the historic or probable loads of the facility as adjusted for customer generation.

STANDBY CONTRACT CAPACITY - The higher of:

1. The number of kilowatts mutually agreed upon by Company with customer as representing the customer's maximum service requirements under all conditions of use less Supplemental Contract Capacity, and such demand shall be specified in customer's Electric Service Agreement. Such amount shall be seasonally designated and shall not exceed the nameplate rating(s) of the customer's own generation. The amount of Standby Contract Capacity will generally consider the seasonal (summer or winter billing periods) capacity ratings and use of the generator(s), or may be selected based on a Company approved load shedding plan.
2. The maximum demand established by customer in use of Company's service less the product of Supplemental Contract Capacity and 110%.

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Fixed monthly charges for generation and transmission access and facilities shall be levied upon a capacity not to exceed the nameplate rating(s) of the customer's generating unit(s).

SUPPLEMENTAL DEMAND - The lesser of:

1. Supplemental Contract Capacity or
2. The Total Billing Demand in this Rider.

STANDBY SERVICE DEMAND - The Total Billing Demand as determined in this Rider in excess of the Supplemental Contract Capacity.

TOTAL BILLING DEMAND - Total Billing Demand for purposes of this Rider shall be the maximum 30 minute demand established during peak hours or 50% of the maximum 30 minute demand established during off-peak hours, whichever is greater, but in no event less than 25 kW for Medium General Service, 200 kW for Large General Service, nor less than 1,000 kW for Large Power Service.

FACILITIES CHARGE FOR SUPPLEMENTAL SERVICE – The monthly facilities charge for supplemental service shall equal the facilities charge of the tariffed rate schedule multiplied by the Supplemental Contract Capacity.

OFF-PEAK PERIOD - Off-Peak Hours shall be the hours between 7:00 p.m. and 11:00 a.m. of the following day; all hours between 7:00 p.m. Friday and 11:00 a.m. of the following Monday; all hours on the following holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.

ON-PEAK PERIOD - On-Peak Hours are all hours other than Off-Peak Hours.

GENERAL PROVISIONS

The contract term shall be one (1) year, automatically renewable, unless usage, plant modifications or additional generation requires a change to Supplemental Contract Capacity or Standby Contract Capacity.

The Company will install and maintain the necessary suitable meters for measurement of service rendered hereunder. The Company may inspect generation logs or other evidence that the customer's generator is being used in accordance with the provisions this Rider.

Power production equipment at the customer site shall not commence parallel operation until after inspection by the Company and a written interconnection agreement is

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executed. The sale of excess energy to the Company may be included in the interconnection or other agreement.

If at any time customer desires to increase demand above the capacity of Company's facilities used in supplying said service due to plant modifications, customer will sign a new agreement for the full capacity of service required and in accordance with applicable rules governing extension of its distribution system.

Those customers choosing to install more than one (1) generating unit on the same premises will have a seventy five percent (75%) discount applied to the monthly Generation and Transmission Access Charges and Facilities Charges applicable to each additional generator on the same premises.

In addition to the above specific rules and regulations, all of Company's General Rules and Regulations shall apply to the supply of service under this Rider.