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Standby Service Rates  
**Witness:** Jane Lohraff  
**Sponsoring Party:** Missouri Department of Economic  
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**MISSOURI PUBLIC SERVICE COMMISSION**

**KANSAS CITY POWER & LIGHT COMPANY  
(KCP&L)**

**CASE NO. ER-2014-0370**

**DIRECT TESTIMONY**

**OF**

**JANE LOHRAFF**

**ON**

**BEHALF OF**

**MISSOURI DEPARTMENT OF ECONOMIC DEVELOPMENT**

**DIVISION OF ENERGY**

**Jefferson City, Missouri**

**April 16, 2015**

**(Rate Design)**



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1 I. INTRODUCTION

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

3 A. Jane Lohraff, 301 West High Street, Suite 720, Jefferson City, Missouri 65102.

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

5 A. I am employed by the Missouri Department of Economic Development, Division of  
6 Energy (“DE”) as an Energy Policy Analyst.

7 **Q. Please describe your educational background and employment experience.**

8 A. I received my Bachelor of Arts degree in Geology from Stephens College, Columbia,  
9 Missouri, and my Masters of Science in Geology from the University of Missouri-  
10 Columbia. I began work with the Missouri Department of Economic Development,  
11 Division of Energy, in September, 2014. Prior to working with the Division of Energy, I  
12 was employed as a Policy Analyst, Policy Coordinator, and Supervisor of the Policy  
13 Coordination Unit within the Missouri Department of Conservation. Prior to working  
14 with the Missouri Department of Conservation, I was employed as a Hydrologist III with  
15 Missouri Department of Natural Resources, focusing on water policy and management  
16 issues.

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

18 A. In preparation for my EDR/UCT testimony I reviewed the following items:

- 19 • Missouri Energy Efficiency Investment Act (“MEEIA”)<sup>1</sup>;
- 20 • Commission Rules implementing MEEIA<sup>2</sup>;

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<sup>1</sup> § 393.1075 RSMo.

<sup>2</sup> 4CSR 240-20.093 and 4CSR 240-20.094

- 1           • Kansas City Power & Light (KCP&L)'s Commercial and Industrial Demand Side  
2           Management Programs<sup>3</sup>;
- 3           • KCP&L's Economic Development Rider (EDR) and Urban Core Development Rider  
4           (UCD)<sup>4</sup>;
- 5           • Economic development rider tariffs in effect in Indiana and Wisconsin<sup>5</sup>.
- 6           In preparation for my Standby Rate testimony I reviewed the following items:
- 7           • KCP&L's Standby Service for Self-Generating Customers, Schedule SGC.<sup>6</sup>
- 8           • Material from Case No. ER-2014-0258 related to Ameren Missouri's standby service  
9           rate.
- 10          • Material from Case No. ER-2014-0351 related to Empire District Electric Company's  
11          standby service offerings.
- 12          • Materials related to best practices for standby service rate design including articles  
13          entitled *Standby Rates for Combined Heat and Power Systems Economic Analysis*  
14          *and Recommendations for Five States*<sup>7</sup>, and *Standby Rates for Customer-Sited*  
15          *Resources*<sup>8</sup>.

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<sup>3</sup> KCP&L Tariff sheets 1.72 – 1.80, 1.93 - 1.94

<sup>4</sup> KCP&L Tariff Sheets 32E – 32J and Tariff Sheets 41 – 41D

<sup>5</sup> Schedule JEL-1

<sup>6</sup> Schedule JEL-2

<sup>7</sup> Selecky, James, Kathy Iverson and Ali Al-Jabir (2014) *Standby Rates for Combined Heat and Power Systems Economic Analysis and Recommendations for Five States*, Regulatory Assistance Project. <http://www.raponline.org/document/download/id/7117>

<sup>8</sup> U.S. Environmental Protection Agency (2009) *Standby Rates For Customer-Sited Resources Issues, Considerations, and the Elements of Model Tariffs*.  
[http://www.epa.gov/chp/documents/standby\\_rates.pdf](http://www.epa.gov/chp/documents/standby_rates.pdf)

1 **Q. What additional experience do you have related to energy efficiency programs,**  
2 **MEEIA implementation and economic development riders?**

3 A. On behalf of the Division of Energy, I have participated in The Empire District Electric  
4 Company's 2<sup>nd</sup> and 3<sup>rd</sup> Demand Side Management Advisory Group Quarterly review  
5 meetings in 2014, Ameren Missouri MEEIA Program advisory group meetings, and  
6 Ameren Missouri MEEIA Technical Conferences. I have also filed testimony on linking  
7 MEEIA to economic development riders in Ameren Missouri's Case No. ER-2014-0258  
8 and Empire's Case No. ER-2014-0351.

9 **II. PURPOSE AND SUMMARY OF TESTIMONY**

10 **Q. What is the purpose of your testimony?**

11 A. The purpose of my testimony is to present DE's recommendation to modify KCP&L's  
12 EDR and UCD to include participation in applicable KCP&L MEEIA Programs as an  
13 eligibility requirement for taking service under the special rate.

14 I also address DE's recommendation to form a working group to review the Standby  
15 Service Tariff for the purposes of 1) ensuring that the design of standby rates and the  
16 terms and conditions of service are consistent with best practices and 2) to develop  
17 recommendations on cost-based rate levels.

18 **Q. Please provide a summary of your findings related to requiring MEEIA**  
19 **participation as a condition of receiving EDR and UCD discounted rates.**

20 A. The information I reviewed in preparation for this testimony resulted in these findings:

- 21 • MEEIA statute states that:  
22 It shall be the policy of the state to value demand-side  
23 investments equal to traditional investments...In support of  
24 this policy the commission shall ensure that utility financial

1 incentives are aligned with helping customers use energy  
2 more efficiently...<sup>9</sup>

3 • Commission rules cite the MEEIA statute (393.1075) and reinforce implementation  
4 of the state policy to “Ensure that utility financial incentives are aligned with helping  
5 customers use energy more efficiently...”<sup>10</sup> Economic development riders create  
6 incentives that have not yet been aligned with energy efficiency. My  
7 recommendation provides the Commission with the opportunity to establish that  
8 alignment.

9 • KCP&L’s MEEIA portfolio includes energy efficiency programs  
10 applicable to commercial and industrial customers—the same  
11 customers targeted for the EDR and UCD.

12 • KCP&L’s EDR and UCD tariff sheets should be modified to include  
13 participation in applicable Business Energy Efficiency Programs as  
14 an eligibility requirement for taking service under the special rate.

15 • Connecting energy efficiency with utility incentives is not a new  
16 idea. Public utility Commissions in Indiana and Wisconsin link  
17 energy efficiency considerations to EDR participation.

18 **III. LINKING ECONOMIC DEVELOPMENT INCENTIVES TO ENERGY**  
19 **EFFICIENCY PROGRAMS**

20 **Q. Would Commission approval of your recommendation cause KCP&L to develop**  
21 **new programs or personnel expertise?**

22 A. I do not anticipate the need for KCP&L to develop new programs or personnel expertise.

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<sup>9</sup> 393.1075.3

<sup>10</sup> 4CSR 240-20.093(2)(c)2

1 **Q. Please explain.**

2 A. KCP&L's programs and personnel are already in place and fully functioning to address  
3 1) new commercial and industrial customers interested in receiving the EDR/UCD; and  
4 2) customers that choose to take advantage of KCP&L's energy efficiency program  
5 incentives.

6 **Q. What exactly would be the direct impact on KCP&L if the Commission approved  
7 your recommendation?**

8 A. When a prospective EDR/UCD customer is in negotiation with KCP&L, an additional  
9 discussion would occur in which KCP&L's MEEIA programs would be reviewed and  
10 applicable measures identified. Only those measures that are both applicable and have an  
11 incremental pay back of five years or less would become part of the EDR/UCD. If there  
12 are no applicable measures identified, or the identified measures cannot meet the payback  
13 criteria, no energy efficiency measures would be required to receive EDR/UCD benefits.

14 **Q. Would a potential MEEIA opt-out customer be allowed to opt-out and receive  
15 discounted rates under the EDR/UCD schedules?**

16 A. No. All customers requesting special service rates under the EDR/UCD tariffs would be  
17 required to participate in MEEIA and implement all applicable energy efficiency  
18 measures with a payback period of five years or less.

19 **Q. Is it reasonable to require opt-out eligible customers to participate in MEEIA as a  
20 condition of receiving special rates under the EDR/UCD?**

21 A. Yes. Independently, both MEEIA and EDR/UCD participation are voluntary. It is  
22 reasonable that the Commission exercise its authority to specify efficiency-promoting



1 conditions for the voluntary EDR/UCD Tariff, including a requirement to participate in  
2 MEEIA for the term of the EDR/UCD.

3 **Q. Is it logical to deduce that the commercial and industrial customers who have**  
4 **elected to participate in KCP&L's energy efficiency programs have done so because**  
5 **it was to their benefit?**

6 A. Yes.

7 **Q. Is it logical to deduce that a potential EDR/UCD customer might also see**  
8 **participation in KCP&L's energy efficiency program to be to their benefit?**

9 A. Yes.

10 **Q. What KCP&L MEEIA energy efficiency programs currently exist that may be**  
11 **applicable to potential EDR/UCD customers?**

12 A. The Business Standard Rebate Program, the Business Custom Rebate Program, and the  
13 Programmable Thermostat Rebate.

14 **Q. Please describe KCP&L's Business Standard Rebate Program.**

15 A. KCP&L's Business Standard Rebate Program offers pre-set rebates on: energy efficient  
16 lighting; HVAC; motors, pumps, fans and drives; EnergyStar appliances; food services  
17 and refrigeration; building shell measures; and building computing measures. Customers  
18 receive the lesser of the rebate amount or 50% of the installed costs.

19 **Q. Please describe KCP&L's Business Custom Rebate Program.**

20 A. KCP&L's Business Custom Rebate Program offers direct payments and credits for pre-  
21 approved projects not covered in the Standard Program, including new equipment  
22 purchases, facility modernization, and industrial process improvements. Customers

1 receive the lesser of 1) a buydown to a two year payback; or 2) 50% of the incremental  
2 cost.

3 **Q. Please describe KCP&L's Programmable Thermostat Program.**

4 A. KCP&L's Programmable Thermostat Program enables a customer to have a  
5 programmable thermostat installed by a certified technician at no cost in return for an  
6 agreement to allow KCP&L to control peak demand from June through September by  
7 raising the temperature a few degrees when demand is high. These cycling events last no  
8 more than four hours and typically occur less than four times per year.

9 **Q. Please summarize KCP&L's EDR.**

10 A. The purpose of the EDR is:

11 to encourage industrial and commercial businesses development  
12 in Missouri and retain existing load where possible. These  
13 activities will attract capital expenditures to the State, diversify  
14 the Company's customer base, create jobs and serve to improve  
15 the utilization efficiency of existing Company facilities.<sup>11</sup>

16 The key EDR incentive is a reduction of pre-tax revenues by 30% the first year, 25% the  
17 second year, 20% the third year, 15% the fourth year, and 10% the fifth year.<sup>12</sup>

18 The EDR is only available:

- 19 • To customers qualified for service under Medium General Service ("MGS"), Large  
20 General Service ("LGS"), Large Primary Service ("LPS"), Medium General All  
21 Electric ("MGA"), Large General All Electric ("LGA") schedules;
- 22 • In conjunction with local, regional and state governmental economic development  
23 activities where incentives have been offered and accepted by the customer to locate

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<sup>11</sup> KCP&L Tariff Sheet 32E

<sup>12</sup> KCP&L Tariff Sheets 32G

1 new facilities, expand existing facilities, or retain existing facilities in the Company's  
2 service area;

- 3 • To customers not engaged in the business of selling or providing goods and services  
4 directly to the general public;
- 5 • To customers not shifting loads between GMO and KCP&L;
- 6 • To facilities with a peak demand projected to be at least two hundred kW within two  
7 years of the date the customer first receives service under this rider (and maintained  
8 in years three through five); and
- 9 • To new or existing facilities with an annual load factor of fifty-five percent or greater  
10 within two years (and maintained in years three through five) OR a) 100 or more new  
11 permanent full-time jobs created, b) capital investment of \$5 million or more, c)  
12 additional off-peak usage.

13 **Q. Please summarize KCP&L's UCD.**

14 A. The purpose of the UCD is:

15 To encourage industrial and commercial businesses to  
16 develop within that portion of the Company's service  
17 territory which is bounded by the Missouri River on the  
18 north, Interstate 435 on the south and east, and State Line  
19 Road on the west.<sup>13</sup>

20 The key UCD incentive is a reduction of pre-tax revenues by 25% the first year, 20% the  
21 second year, 15% the third year, 10% the fourth year, and 5% the fifth year and whose  
22 annual peak demand and load factor are 240 kW and 50% respectively.<sup>14</sup>

23 The UCD availability/applicability criteria:

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<sup>13</sup> KCP&L Tariff Sheet 41

<sup>14</sup> KCP&L Tariff Sheet 41B

- 1           • Customers qualified for service under MGS, LGS, LPS, MGA, LGA (like the EDR)  
2           plus Medium General All Electric and Small General Service;
- 3           • Like the EDR, the UCD must be in conjunction with local, regional and state  
4           governmental economic development activities where incentives have been offered  
5           and accepted to locate or expand existing facilities in the Urban Core Development  
6           Area;
- 7           • Unlike the EDR, UCD customers may sell or provide goods and services directly to  
8           the general public; and
- 9           • Unlike the EDR, the UCD is available to customers who meet one of the following  
10          three criteria: A) locate in a new facility and maintain two or more permanent full-  
11          time job positions within the Urban Core Development Area; B) expand existing  
12          facilities, or locate in rehabilitated existing facilities and maintain two or more  
13          permanent full-time job positions and where the amount of expenditure for such  
14          facilities is not less than ten percent of the assessed value; and C) expand existing  
15          facilities, or locate in rehabilitated existing facilities and where the amount of  
16          expenditure for such facilities is not less than twenty five percent of the assessed  
17          value.

1 **Q. Can you provide examples from other states' tariffs which link energy efficiency**  
2 **initiatives to economic development rider incentives?**

3 A. Yes. Indiana: Northern Indiana Public Service Company's EDR specifies, under  
4 Qualifying Criteria, Power Use Characteristics: "High-efficiency, end-use equipment  
5 and construction technologies."<sup>15</sup>

6 Wisconsin: Alliant Energy/Wisconsin Power and Light's EDR states that the customer  
7 "shall implement all economically viable energy efficient options that have a payback  
8 period of five years or less."<sup>16</sup>

9 **IV. PROPOSED EDR AND UCD TARIFF MODIFICATIONS**

10 **Q. How should KCP&L's Economic Development Rider, Tariff Sheet 32G and Urban**  
11 **Core Development Rider, Tariff Sheet 41A be modified to incorporate energy**  
12 **efficiency measures as an eligibility requirement for receiving benefits?**

13 A. I recommend adding the following language: "Electric service under this rider is  
14 available in conjunction with participation in applicable MEEIA energy efficiency  
15 programs offered by KCP&L with the goal of implementing all appropriate measures  
16 with a payback period of five years or less."

17 **Q. To which customers should the tariff modifications apply?**

18 A. The energy efficiency requirement should apply to customers initiating a request to take  
19 service under the EDR/UCD following the effective date of the modified tariffs.

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<sup>15</sup> Schedule JEL-1, IURC EDR 677, Sheet No. 126

<sup>16</sup> Schedule JEL-1, Alliant Energy, Sheet No. 7.662

1 **V. STANDBY SERVICE FOR SELF-GENERATING CUSTOMERS**

2 **Q. Please provide a summary of your findings related to your recommendation to**  
3 **create a workshop to review standby service rates.**

4 A. Review of KCP&L's Standby Service for Self-Generating Customers, Schedule SGC  
5 resulted in the following findings:

- 6 • Properly designed standby rates can facilitate efficiency gains, energy independence and  
7 demand-side management opportunities associated with combined heat and power  
8 (“CHP”) technologies;
- 9 • CHP technologies require significant up-front investment. Standby rates are a key factor  
10 in determining the cost-effectiveness of projects. Customers considering such projects  
11 can benefit from rate elements, rate levels and terms and conditions of service that are  
12 consistent with best practices for standby tariff design;
- 13 • KCP&L's Schedule SGC went into effect in 1997. There was one revision in 2013,  
14 which addressed the load that would qualify for Economic Development Rider benefits.  
15 However, there is no recent evidence that the rates continue to be cost-based; and
- 16 • Stakeholders have agreed to review stand-by rates as a result of both the recent Ameren  
17 Missouri and Empire District Electric Company rate cases. Conducting a concurrent  
18 review of KCP&L's standby rates could promote efficiency in the use of stakeholder  
19 resources and result in greater consistency in the design of standby service offerings.

1 **VI. PROPOSED STANDBY TARIFF REVIEW**

2 **Q. Please describe how properly designed standby rates can facilitate efficiency gains,**  
3 **energy independence and demand-side management opportunities associated with**  
4 **combined heat and power technologies.**

5 A. Properly designed standby rates can allow customers to deploy distributed generation  
6 including CHP technology that can produce 60 percent to 80 percent higher efficiency  
7 levels than traditional units. In Missouri, many of the largest CHP installations are  
8 utilized by hospitals, universities and government entities to meet a portion of energy  
9 needs as well as to ensure the availability of sufficient energy generation needed to meet  
10 critical functions during emergencies. A number of large industrial customers in the  
11 State also utilize CHP. On site generation inherently offers some level of energy  
12 independence and enables business decisions to be made that can lower energy costs by  
13 reducing or shifting load served by the utility.

14 **Q. What level of up-front investment is associated with CHP technologies?**

15 A. Schedule JEL-3 contains Table 1-3 from the U.S. EPA's *Catalog of CHP Technologies*,  
16 which shows the range of sizes and installed costs for selected CHP technologies. Based  
17 on information in Table 1-3 I estimate that up-front investments can range from about  
18 \$1,200 /kW<sub>e</sub> installed cost for a 40 MW gas turbine to \$4,300/kW<sub>e</sub> installed cost for a .03  
19 MW microturbine unit.<sup>17</sup>

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<sup>17</sup> Schedule JEL-3. U.S. Environmental Protection Agency (2015) *Catalog of CHP Technologies*.  
p 1-6 [http://www.epa.gov/chp/documents/catalog\\_chptech\\_full.pdf](http://www.epa.gov/chp/documents/catalog_chptech_full.pdf)

1 **Q. How do standby rates factor into determining the cost-effectiveness of CHP**  
2 **projects?**

3 A. Ill-structured standby rates can function as a direct deterrent to the implementation of  
4 CHP projects. In determining the cost-effectiveness as a consideration of project  
5 viability, CHP customers must consider standby rates in comparison to taking full service  
6 from the investor-owned utilities (“IOU”).

7 **Q. How would customers considering a CHP projects benefit from rate elements, rate**  
8 **levels and terms and conditions of service that are consistent with best practices for**  
9 **standby tariff design?**

10 A. Cost-based rate elements for components of service allow the customer to take and pay  
11 for service according to the customer’s need and provide clear price signals allowing the  
12 customer to minimize operating costs when possible. For example, CHP customers  
13 should schedule planned maintenance to occur in off-peak times, which results in a cost  
14 savings for the customer and a benefit to the utility system. Another example is the  
15 choice a customer may make to purchase utility power when it costs less than onsite  
16 generation. Every customer decision that can result in cost savings associated with  
17 efficient use of energy increases profitability and competitiveness.

18 **Q. KCP&L’s Schedule SGC tariff went into effect in 1997 and has been revised once in**  
19 **2013 to limit EDR benefits to baseload. Why is it reasonable to reevaluate standby**  
20 **service rates at this time?**

21 A. Since 1997 there has been increasing interest in the benefits and efficacy of distributed  
22 generation. Distributed generation customers may be motivated by a number of benefits,  
23 including lower utility bills, increased energy independence and control, and utilization



1 of alternative energy technologies. The design and structure of standby rates have a  
2 direct effect on the efficacy of a customer's choice to deploy distributed generation. It's  
3 in Missouri's interest for utility regulations to reflect the best available information and  
4 respond to potential economic development opportunities. Effective standby rates may  
5 incent customers to generate electricity on-site while fairly addressing the associated  
6 costs to the utility. The U.S. EPA's *Standby Rates for Customer-Sited Resources Issues,*  
7 *Considerations, and the Elements of Model Tariffs* suggests that favorable standby rate  
8 design gives customers an incentive to use energy efficiently, to minimize costs imposed  
9 on the system, and to avoid charges when service is not taken.<sup>18</sup>

10 **Q. Stakeholders have agreed to review stand-by rates as a result of recent settlements**  
11 **in the Ameren Missouri and Empire District Electric Company rate cases. Please**  
12 **explain how conducting a concurrent review of KCP&L's standby rates would be**  
13 **beneficial.**

14 A. The review of current best management practices for standby rates is applicable to all  
15 regulated IOU's. Concurrent review of standby rates would promote efficiency of staff  
16 time and resources. Concurrent review may also result in a better product, due to  
17 collaboration, and potentially greater consistency of standby rates.

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<sup>18</sup> U.S. Environmental Protection Agency (2009) *Standby Rates For Customer-Sited Resources Issues, Considerations, and the Elements of Model Tariffs*.  
[http://www.epa.gov/chp/documents/standby\\_rates.pdf](http://www.epa.gov/chp/documents/standby_rates.pdf)

1 **VII. CONCLUSION**

2 **Q. Please restate your recommendations.**

3 A. The Division of Energy respectfully recommends that:

- 4 1) the Commission approve modifications to KCP&L's Economic Development Rider  
5 and Urban Core Development Rider to include participation in applicable KCP&L  
6 MEEIA programs as eligibility requirements for taking service under these special rates.  
7 2) a working group be established to review KCP&L's Standby Service Tariff for the  
8 purposes of 1) ensuring that the design of standby rates and the terms and conditions of  
9 service are consistent with best practices and 2) to develop recommendations for cost-  
10 based rate levels.

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

12 A. Yes, thank you.