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Witness: Jane Lohraff
Sponsoring Party: Missouri Department of Economic
Development - Division of Energy
Type of Exhibit: Direct Testimony
Case No: ER-2014-0351

MISSOURI PUBLIC SERVICE COMMISSION

EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2014-0351

DIRECT TESTIMONY

OF

JANE LOHRAFF

ON

BEHALF OF

MISSOURI DEPARTMENT OF ECONOMIC DEVELOPMENT

DIVISION OF ENERGY

Jefferson City, Missouri

February 11, 2015

(Rate Design)

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

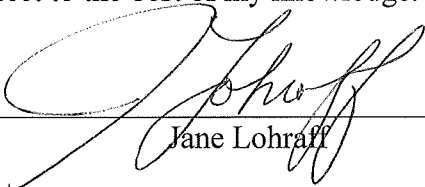
In the Matter of Empire District Electric Company)
Missouri's Tariffs to Increase Its Revenues for) ER-2014-0351
Electric Service)

AFFIDAVIT OF JANE LOHRAFF

STATE OF MISSOURI)
) **ss**
COUNTY OF COLE)

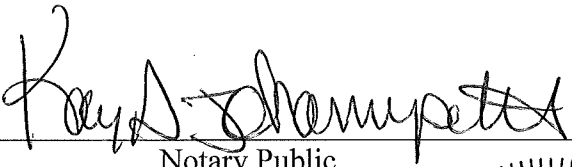
Jane Lohraff, of lawful age, being duly sworn on her oath, deposes and states:

1. My name is Jane Lohraff. 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 Direct 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 Lohraff

Subscribed and sworn to before me this, February 11, 2015.



Notary Public

My commission expires:

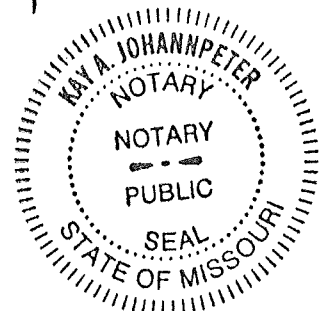
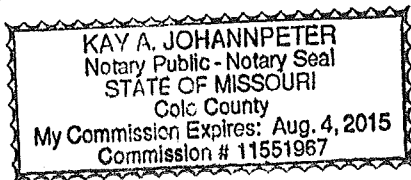


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1 **I. INTRODUCTION**

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

3 A. Jane Lohraff, Missouri Department of Economic Development, Division of Energy, 301
4 West High Street, Suite 720, Jefferson City, Missouri 65102.

5 **Q. Have you previously filed testimony in this case?**

6 A. No.

7 **Q. On whose behalf are you testifying?**

8 A. I am testifying on behalf of the Missouri Department of Economic Development,
9 Division of Energy (DE).

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

11 A. I received my Bachelor of Arts degree in Geology from Stephens College, Columbia,
12 Missouri and my Masters of Science in Geology from the University of Missouri-
13 Columbia.

14 I began work with the Missouri Department of Economic Development, Division of
15 Energy, in September, 2014. I am an Energy Policy Analyst. Prior to working with the
16 Missouri Department of Economic Development I was employed as a Policy Analyst,
17 Policy Coordinator, and Supervisor of the Policy Coordination Unit within the Missouri
18 Department of Conservation. Prior to working with the Missouri Department of
19 Conservation, I was employed as a Hydrologist III with Missouri Department of Natural
20 Resources, focusing on water policy and management issues.

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

22 A. I reviewed tariffs filed in Missouri Public Service Commission's Electronic Filing
23 Information System to inventory existing economic development riders in effect for

1 utilities regulated by the Missouri Public Service Commission. I reviewed examples of
2 economic development riders offered by utilities in other states to determine if they
3 included an energy efficiency requirement. I reviewed the Missouri Energy Efficiency
4 Investment Act (MEEIA)¹, and Commission Rules implementing MEEIA².

5 **Q. What additional experience do you have related to energy efficiency programs and**
6 **MEEIA implementation?**

7 A. On behalf of the Division of Energy, I have participated in the Empire District Electric
8 Company's 2nd and 3rd Demand Side Management Advisory Group Quarterly review
9 meetings in 2014, Ameren Missouri MEEIA Program advisory group meetings, and
10 Ameren Missouri MEEIA Technical Conferences.

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

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

13 A. The purpose of my testimony is to present the Division of Energy's recommendation to
14 require customer participation in energy efficiency programs offered by Empire District
15 Electric Company (Empire or the Company) as an eligibility requirement for receiving
16 benefits under Empire's voluntary Economic Development Rider (EDR).

17 **Q. How does your direct testimony relate to the January 29, 2015 direct testimony of**
18 **DE's Dr. Alex Schroeder?**

19 A. In direct testimony Dr. Schroeder recommends that the Company maintain its current
20 portfolio of energy efficiency programs, until a MEEIA portfolio is in place. My
21 recommendation to require customers receiving benefits from Empire's EDR to also

¹ § 393.1075.3(2) RSMo.

² 4CSR 240-20.093 and 4CSR 240-20.094

1 participate in the Company's energy efficiency programs is complementary to Dr.
2 Schroeder's recommendation.

3 **Q. Does Empire have a MEEIA portfolio file pending before the Commission?**

4 A. Yes.

5 **Q. What if Empire chooses to not participate in MEEIA?**

6 A. The need for, and benefit of, aligning utility financial incentives with helping customers
7 use energy more efficiently exists whether the utility is participating in MEEIA or not.
8 Economic development riders create incentives that have not yet been aligned with
9 energy efficiency. That alignment should be accomplished either through continuation of
10 existing Empire energy efficiency programs or under its future MEEIA programs. If
11 approved by the Commission, my recommendation provides the opportunity to align
12 goals and improve energy efficiency in either case.

13 **Q. Please provide a summary of your findings and recommendations.**

14 A. My testimony supports customer participation in company-offered energy efficiency
15 programs as a condition of receiving discounted service under Empire's EDR.

- 16 • EDR participation is voluntary and provides a significant benefit to the recipient.
- 17 • Requiring EDR recipients to participate in company-offered energy efficiency
18 programs aligns utility financial incentives with helping customers use energy more
19 efficiently.
- 20 • All Empire customers and the State of Missouri benefit from energy efficiency in the
21 form of lower future energy costs, reduced environmental impacts, and associated
22 reduced power and fuel costs.

- 1 • Connecting energy efficiency with the EDR can also benefit Empire as the Company
2 transitions to a MEEIA by enabling them to count and receive credit for energy
3 efficiency savings generated under MEEIA.

4 **Q. What energy efficiency programs does Empire currently offer?**

5 A. Currently, Empire offers the following energy efficiency programs to its customers: 1)
6 ENERGY STAR® New Homes, 2) High Efficiency AC Rebate Program, 3) Home
7 Performance with ENERGY STAR® Program, 4) Low-Income New Homes, 5) Low-
8 Income Weatherization, 6) Building Operator Certification, and 7) Commercial &
9 Industrial Rebate Program. Details of these programs are found in Dr. Schroeder's direct
10 testimony.

11 **III. LINKING ECONOMIC DEVELOPMENT INCENTIVES TO ENERGY**
12 **EFFICIENCY PROGRAMS**

13 **Q. Please provide an overview of economic development riders currently offered by**
14 **Missouri's investor-owned electric utilities.**

15 A. Each of Missouri's four investor-owned electric utilities offer riders designed to promote
16 economic development and customer retention. A copy of each rider is provided in
17 Schedule JEL-1. The stated purpose of the riders is to encourage new or significantly
18 expanded industrial or commercial businesses to locate in the utilities' service areas by
19 offering a reduction in their utility rates.

20 **Q. Please provide examples of the economic incentives currently offered through**
21 **Missouri electric utilities' economic development riders.**

22 A. The key feature of the current economic development riders is that each offers significant
23 rate discounts for a period of potentially five years:

- 1 1. Empire District Electric Company’s economic development rider reduces the pre-
2 tax revenues by 30% the first year, 25% the second year, 20% the third year, 15%
3 the fourth year, and 10% the fifth year.³
- 4 2. Union Electric Company’s Economic Development and Retention Rider (EDRR)
5 offers a discount rate of not more than 15% discount from tariff rates, before tax
6 additions, for up to 60 months.⁴ The Company’s Economic Re-Development
7 Rider (ERR) offers a 15% discount from tariff rates, before tax additions, for up
8 to 60 months.⁵
- 9 3. Kansas City Power & Light Company’s (KCP&L) Economic Development Rider
10 reduces the pre-tax revenues by 30% the first year, 25% the second year, 20% the
11 third year, 15% the fourth year, and 10% the fifth year.⁶ KCP&L’s Urban Core
12 Development Rider (UCD) reduces pre-tax revenues either by a) 25% the first
13 year, 20% the second year, 15% the third year, 10% the fourth year, and 5% the
14 fifth year, or b) 10% per year for five years.⁷
- 15 4. Kansas City Power & Light Company –Greater Missouri Operations Company’s
16 (KCP&L-GMO) Economic Development Rider reduces the pre-tax revenues
17 under the rider by 30% the first year, 25% the second year, 20% the third year,
18 15% the fourth year, and 10% the fifth year.⁸

19 In addition to these types of incentives, which are generally available to all qualifying
20 customers, certain utilities have negotiated custom or longer-term discounts.

³ Schedule JEL-1, Empire Tariff Sheet 22a

⁴ Schedule JEL-1, Union Electric Company Tariff Sheet 86.1

⁵ Schedule JEL-1, Union Electric Company Tariff Sheet 87.1

⁶ Schedule JEL-1, KCPL Tariff Sheet 32B

⁷ Schedule JEL-1, KCPL Tariff Sheet 41B

⁸ Schedule JEL-1, KCP&L-GMO Tariff Sheet 123.3

1 **Q. What eligibility requirements are typically associated with Missouri utilities’**
2 **economic development riders?**

3 A. The Missouri electric utilities’ economic development riders are offered in conjunction
4 with local, regional or state governmental economic development activities and have a
5 number of eligibility requirements including customer characteristics and specific
6 demand characteristics such as peak load or load factor requirements. The currently
7 available economic development riders are offered to industrial and commercial
8 customers not engaged in selling or providing goods and services directly to the general
9 public, with the exception of the KCP&L UCD.

10 The riders also limit availability to certain customer rate classes. The Empire
11 District Electric Company’s Economic Development Rider applies to customers under
12 the General Power Service-GP, Total Electric Building Service-TEB, Large Power-LP, or
13 Special Transmission-ST rate schedules.⁹ Union Electric Company’s Economic
14 Development Rider applies only to 3M-Large General Service Rate, 4M-Small Primary
15 Service Rate, or 11M-Large Primary Service Rate.¹⁰ KCP&L’s Economic Development
16 Rider applies to Medium General Service-MSG, Large General Service-LGS, Large
17 Primary Service-LPS, Small General Service All Electric-SGA, Medium General Service
18 All Electric-MGA, or Large General Service All Electric-LGA rates.^{11,12} KCP&L’s
19 Urban Core Development Rider applies to Small General Service-SGS, Medium General
20 Service-MGS, Large General Service-LGS, Large Primary Service-LPS, Small General
21 Service All Electric-SGA, Medium General Service All Electric-MGS, Large General

⁹ Schedule JEL-1, Empire Tariff Sheet 22

¹⁰ Schedule JEL-1, Union Electric Company Tariff Sheet 86

¹¹ Schedule JEL-1, KCP&L Tariff Sheet 32E

¹² The SGA, MGA and LGA rates are no longer offered to new customers.

1 Service All Electric-LGA schedules.^{13 14} KCP&L-GMO's Economic Development Rider
2 applies to Medium General Service-MGG, Large General Service-LGS, Large Primary
3 Service-LPS rates.¹⁵

4 The demand and load factor requirements of economic development riders also
5 differ by utility. The Empire District Electric Company requires an annual load factor of
6 50% and peak demand of 300 kW within the first two years of service under the rider.
7 Union Electric Company requires a minimum actual or projected average monthly peak
8 demand of 500 kW and a 55% load factor. KCP&L and KCP&L-GMO require the
9 annual load factor to equal or exceed 55% and a peak demand of 200 kW for years three
10 through five. The customer's annual load factor measures annual average load as a
11 proportion of peak load. Where customers fail to achieve threshold load factors, the
12 Empire, KCP&L and KCP&L-GMO economic development riders identify additional
13 factors which may be considered in determining if an economic development rider should
14 continue. Significant job creation or investment, or improved off-peak utilization of the
15 system are factors listed for consideration in continuing a discount.

16 KCP&L offers an Urban Core Development Rider to encourage re-development
17 of certain geographical areas within the Kansas City area to provide socio-economic
18 benefits as well as more efficient utilization of existing infrastructure.¹⁶ Union Electric
19 Company offers a similar economic re-development rider for the St. Louis geographical
20 area.¹⁷

¹³ Schedule JEL-1, KCP&L UCD Tariff Sheet 41B

¹⁴ The SGA, MGA and LGA rates are no longer offered to new customers.

¹⁵ Schedule JEL-1, KCP&L-GMO Tariff Sheet 123.1

¹⁶ Schedule JEL-1, KCP&L UCD Tariff Sheet 41

¹⁷ Schedule JEL-1, Union Electric Tariff Sheet 87

1 **Q. Have energy efficiency initiatives been tied to utility economic development riders in**
2 **other states?**

3 A. Yes. Included in Schedule JEL-2, are the following examples of tariffs from three states
4 which link energy efficiency to economic development riders:

5 1. Indiana: Northern Indiana Public Service Company has as one of the qualifying
6 criteria for participation that high-efficiency, end-use equipment and construction
7 technologies be used.¹⁸

8 2. Wisconsin: Alliant Energy/Wisconsin Power and Light's economic development rider
9 states that the customer "shall implement all economically viable energy efficient
10 options that have a payback period of five years or less."¹⁹

11 3. California: Pacific Gas and Electric Company requires a site inspection to identify
12 energy efficient options and advises the customer on the range of cost-effective
13 options.²⁰

14 **Q. Why should Empire's Economic Development Rider, Tariff Sheet 22 be modified to**
15 **require energy efficiency measures as an eligibility requirement for receiving EDR**
16 **benefits?**

17 A. There are a number of reasons to incorporate energy efficiency measures as an eligibility
18 requirement of Empire's EDR:

- 19 • Integrating Empire's existing energy efficiency programs into the voluntary economic
20 development riders will encourage high usage commercial and industrial customers to
21 practice energy efficiency. Increased participation in Company-offered energy

¹⁸ Schedule JEL-2, IURC EDR 677, Sheet No. 126

¹⁹ Schedule JEL-2, Alliant Energy Sheet No. 7.662

²⁰ Schedule JEL-2, Pacific Gas And Electric Company Electric Schedule ED, Sheet 3

1 efficiency programs can benefit Empire’s other customers and the Company by better
2 spreading program costs, reducing peak load, and ultimately deferring long-term need
3 for infrastructure upgrades and new energy supply resources.

- 4 • Achieving energy efficiency through Empire’s EDR is easily within reach using
5 existing programs, processes, and expertise.
- 6 • Utility Integrated Resource Plans (IRPs) have found that energy efficiency is
7 projected to be the least-expensive, long-term option to address future energy needs
8 for the citizens of Missouri. For example, the Ameren Missouri IRP, Figure 1.3,
9 shows that pursuing energy efficiency programs at a realistic, achievable potential
10 (RAP) level can produce the lowest levelized cost of energy (LCOE), which is a
11 measure of the per unit cost of energy produced by a resource over its expected useful
12 life expressed in cents per kilowatt-hour. LCOE includes all of the costs of
13 construction and ownership, such as the recovery of the capital investment and a fair
14 return for investors, and all of the costs of operations.²¹
- 15 • Reducing future energy use reduces reliance on fossil fuels and lowers emissions
16 furthering the energy policy goals of the State and better positioning individual
17 utilities and the State to meet federal Clean Air Act and perhaps Clean Power Plan
18 requirements when it becomes effective.

19
20
21

²¹ Ameren Missouri, Investing in Missouri//2014 Integrated Resource Plan, Executive Summary, p. 7

1 **IV. PROPOSED TARIFF MODIFICATION**

2 **Q. How should Empire’s Economic Development Rider, Tariff Sheet 22 be modified to**
3 **incorporate energy efficiency measures as an eligibility requirement for receiving**
4 **EDR benefits?**

5 A. I recommend adding a final sentence to the Availability section of Tariff Sheet 22 stating
6 “Electric service under this rider is only available in conjunction with participation in
7 applicable energy efficiency programs offered by Empire with the goal of implementing
8 all economically viable energy efficiency opportunities with a payback period of five
9 years or less.”

10 **Q. How should Empire’s Economic Development Rider, Tariff Sheet 22 be modified to**
11 **describe the customer obligations to participate in Empire’s energy efficiency**
12 **programs as a condition of receiving the EDR?**

13 A. The tariff should be modified to describe that in order to be eligible for the economic
14 development riders the customer would be required to meet with Empire’s business
15 program representatives to identify economically viable energy efficiency opportunities
16 and implement all economically viable programs or projects that have a projected pay-
17 back period of five years or less. The tariff should also be modified to require that
18 implementation of all such programs or projects should occur within the contract term for
19 service under the EDR. Finally, the tariff should state that customers have the option to
20 request an independent economic analysis of the economic viability of such programs or
21 projects, at the customer’s cost.²²

22

²² This language mimics Wisconsin Power and Light EDR Sheet No. 7.662

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

2 A. The energy efficiency requirement should apply to customers initiating a request to take
3 service under the EDR following the effective date of the modified tariff.

4 **Q. How might the EDR customer benefit from your recommendation?**

5 A. In addition to the reduced utility rate specified by the economic development rider, the
6 customer may benefit from reduced energy consumption, potentially improved bottom
7 line and profit margins, and improved productivity and competitiveness. The customer
8 would continue to benefit from the energy efficiency measures for the life of the
9 measures, beyond the term of the economic development rider.

10 **Q. Do you anticipate that requiring implementation of energy efficiency measures will**
11 **significantly increase costs to economic development rider customers?**

12 A. There could be initial upfront costs for the energy efficiency measures, less any
13 incentives from Empire's energy efficiency programs. However, only those
14 economically viable energy efficiency measures with a payback period of five years
15 would be implemented. Adding MEEIA as a participation requirement could actually
16 result in substantial net savings to the participant through lower operating costs in the
17 long term.

18 **Q. How would the proposal benefit Empire's other customers?**

19 A. All customers benefit from improved system efficiency in the form of lower future
20 energy bills, reduced demand for new energy sources and reduced environmental
21 impacts.

22

23

1 **Q. How would the proposal benefit the State?**

2 A. The state of Missouri can benefit from the recommendation by connecting existing
3 program and funding streams, legislative and policy direction, and the private sector to
4 effectively incent economic activity that accomplishes Missouri's energy goals. Reduced
5 emissions can also help the individual utilities and the State meet federal Clean Air Act
6 requirements and perhaps Clean Power Plan requirements when it becomes effective.

7 **Q. Are there unrealized potential areas where implementation of energy efficiency
8 measures could result in energy savings and associated customer benefits?**

9 A. Yes, there are numerous, untapped areas for energy efficiency, including water company
10 infrastructure repair, drinking and waste water treatment operations, and utility assisted
11 local building code adoption, compliance and enforcement. I attended public meetings
12 associated with development of the Missouri Comprehensive State Energy Plan, where
13 these opportunities were identified during discussion among Steering Committee experts
14 from around the state.

15 **IV. CONCLUSION**

16 **Q. Please restate your recommendation.**

17 A. The Commission should approve the Division of Energy's recommendation to make
18 customer participation in the Empire-offered energy efficiency programs an eligibility
19 requirement for receiving economic development rider benefits.

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

21 A. Yes, thank you.

22