

Exhibit No.:
Issue: Combined Heat and Power
Witness: Jane E. Epperson
Sponsoring Party: Missouri Department of
Economic Development,
Division of Energy
Type of Exhibit: Surrebuttal Testimony
Case No.: GR-2019-0077

MISSOURI PUBLIC SERVICE COMMISSION

UNION ELECTRIC COMPANY d/b/a/ AMEREN MISSOURI

CASE NO. GR-2019-0077

SURREBUTTAL TESTIMONY

OF

JANE E. EPPERSON

ON

BEHALF OF

MISSOURI DEPARTMENT OF ECONOMIC DEVELOPMENT

DVISION OF ENERGY

Jefferson City, Missouri

July 10, 2019

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

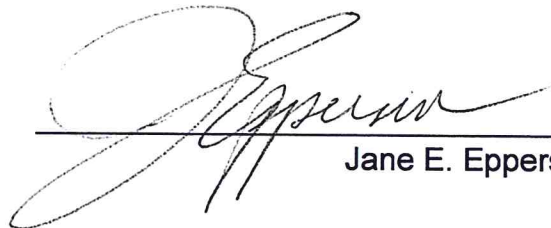
In the Matter of Union Electric Company)
d/b/a Ameren Missouri's Tariffs to Increase) **File No. GR-2019-0077**
Its Revenues for Natural Gas Service)

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 – Division of Energy as a Senior Energy Policy Analyst.
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 3rd day of July, 2019.



Notary Public

My commission expires: 4/26/20

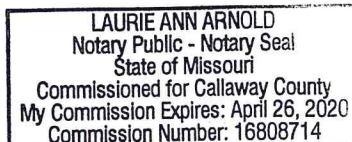


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I. INTRODUCTION

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

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

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

5 A. I am employed by the Missouri Department of Economic Development – Division
6 of Energy (DE) as a Senior Energy Policy Analyst.

7 **II. PURPOSE OF TESTIMONY**

8 **Q. What is the purpose of your Surrebuttal Testimony in this proceeding?**

9 A. The purpose of my testimony is to respond to the rebuttal testimonies of Union
10 Electric Company d/b/a Ameren Missouri (Ameren Missouri or Company)
11 witnesses Laureen Welikson, and Tom Byrne to clarify the purpose and intent of
12 my direct testimony.

13 **Q. Please summarize the purpose of your direct testimony in this case.**

14 A. The purpose of my direct testimony was to a) describe combined heat and power
15 (CHP) technology and associated energy efficiency, economic, and resiliency
16 benefits to customers, b) summarize Commission case history on CHP, as well as
17 related efforts to support customer options for utilizing CHP, and c) recommend
18 implementation of a CHP outreach effort by Ameren Gas Company.¹ Focused,
19 reasonable, and tested implementation steps were provided for the proposed CHP
20 outreach effort.

¹ Jane Epperson, Direct Testimony, Case No. GR-2019-0077 page 2, lines 8-12.

1 **III. RESPONSE TO REBUTTAL TESTIMONY OF LAUREEN WELIKSON**

2 **Q. Please summarize Company witness Lauren Welikson’s rebuttal testimony**
3 **on the subject of Combined Heat and Power (CHP).**

4 A. Ms. Welikson asserts that there is no reason to adopt DE’s specific
5 recommendations to implement a CHP outreach effort.² The response is based on
6 previous case (Case No. EO-2018-0211) testimony that asserted CHP systems
7 are not cost effective, that no customers have applied for a Company rebate, and
8 the four customers that did inquire about CHP expressed no further interest after
9 contact with the Company.³

10 **Q. What is the goal of DE’s proposed CHP outreach effort by Ameren?**

11 A. The goal of the proposed CHP outreach effort is to enable Ameren Gas customers
12 access to all energy options through education and information regarding CHP
13 opportunities that may meet their energy, resiliency, and cost needs.

14 **Q. Why is an outreach effort beneficial for increased deployment of CHP in**
15 **Missouri?**

16 A. In recognition of the national importance to capitalize on CHPs strengths as a
17 reliable, high-efficiency, lower-emission electricity and heating/cooling source for
18 critical infrastructure, the U.S. Department of Energy created the Combined Heat
19 and Power for Resiliency Accelerator.⁴ The Accelerator puts a national spotlight
20 on the issue in support of state efforts. Resiliency may be defined as the ability of

² Lauren M. Welikson, Rebuttal Testimony, Case No. GR-2019-0077 page 7, lines 8-9.

³ *Ibid.*, lines 3-8.

⁴ <https://betterbuildingsinitiative.energy.gov/accelerators/combined-heat-and-power-resiliency>

1 a facility to recover to partial or full function after an interruption in energy service.
2 Critical infrastructure may be defined as those facilities that, if incapacitated
3 (energy outage), would have a substantial negative impact on public health and
4 safety or economic security.

5 **Q. Is there additional progress being made in support of a customer’s option to**
6 **deploy CHP in Missouri?**

7 A. Standardized, factory-built CHP systems are now available through a national,
8 open source electronic catalog of vetted providers.⁵ Pre-packaged CHP systems
9 will save 20 percent of project cost and 30 percent of project time. This electronic
10 catalog addresses one of the significant barriers to CHP deployment in the
11 Midwest.

12 **Q. Are there other reasons to consider supporting CHP adoption?**

13 A. There is also a 10 percent federal tax credit for the purchase of CHP projects to
14 2021⁶

15 **Q. What is your estimation for why CHP has not had wider adoption in**
16 **Missouri?**

17 A. DE believes there is a lack of awareness of CHP in Missouri. A participant survey
18 conducted after the April 10, 2018 CHP Summit held in St. Louis, Missouri
19 indicated that while 40% of respondents had an “average” understanding of CHP
20 prior to the Summit, 78% of respondents expressed a “high” level of interest in
21 CHP after the Summit. In the 2018 paper entitled *A National Review of Combined*

⁵ <https://energy.mo.gov/packaged-chp-ecatalog>

⁶ <http://programs.dsireusa.org/system/program/detail/658>

1 *Heat and Power Programs in Utility Energy Efficiency Portfolios* the authors found
2 that, of the 20 utilities (gas and electric) that currently offer incentives to encourage
3 customer adoption of CHP, common success factors include “a dedicated
4 marketing and *outreach strategy* (emphasis added) to attract customers and help
5 them through the process of installing CHP, which can be complex and time-
6 consuming.”⁷

7 **Q. Describe what Ameren Missouri has done to encourage CHP Adoption.**

8 A. In addition to a business customer’s applicable full service class tariff charges,
9 customers who choose to utilize CHP are subject to Standby Service Rider (SSR)
10 charges. Standby service rates are critical to determining the feasibility of CHP
11 deployment and have been generally recognized as a barrier to implementation.⁸
12 ^{9 10 11} Standby service tariffs can be highly complex and sometimes based upon
13 charges that are higher than may be necessary, with both factors serving as an
14 impediment to generation technologies such as CHP. Ameren has made
15 significant progress in developing a cost-based SSR tariff that is more

⁷ Kelly, M. and A. Hampson. 2018. A National Review of Combined Heat and Power Program in Utility Energy Efficiency Portfolios. Proceedings of the 2018 ACEEE Summer Study on Energy Efficiency in Buildings. Washington, DC.

⁸ American Council for an Energy Efficient Economy, 2011. Chittum, Anna, and Nate Kaufman, *Challenges Facing Combined Heat and Power Today: A State by State Assessment*, Report Number IE111. Pages 22, 51

⁹ American Council for an Energy Efficient Economy, 2013. Chittum, Anna and Kate Farley, Utilities and the CHP Value Proposition, Report Number IE134. Page 4.

¹⁰ [EPA] Environmental Protection Agency. 2009. *Standby Rates for Customer-Sited Resources: Issues, Considerations, and the Elements of Model Tariffs*. Washington, D.C.: US Environmental Protection Agency.

¹¹ Casten, S. and M. Karegianes. 2007. "[The Legal Case Against Standby Rates.](#)" *The Electricity Journal* 20 (9): 37-46.

1 understandable and transparent, as well as providing a billing tool to aid the
2 customer in estimating actual SSR costs.

3 **IV. RESPONSE TO REBUTTAL TESTIMONY OF TOM BYRNE**

4 **Q. Please summarize Company witness Tom Byrne’s rebuttal testimony on the**
5 **subject of CHP.**

6 A. Mr. Byrne indicates that the CHP outreach effort DE is recommending is
7 inappropriate for consideration in the context of a rate case. He states “The
8 purpose of a rate case is to examine Ameren Missouri’s cost of service and
9 determine just and reasonable rates. It is not a vehicle for the Commission to order
10 the utility to undertake programs that particular stakeholders might want.”¹²

11 **Q. Is the Commission prohibited, within the context of a rate case, from**
12 **addressing issues other than cost of service and the determination of just**
13 **and reasonable rates?**

14 A. No. Rate cases typically serve as a forum for stakeholders to raise a diversity of
15 issues. Since the last Ameren Gas case in 2010 (Case No. GR-2010-0363), much
16 has changed in the natural gas energy sector, and for CHP, dramatic progress has
17 occurred in just the last five years.

¹² Tom Byrne, Rebuttal Testimony Case No. GR-2019-0077 page 19, lines 16-18.

1 **Q. Did your direct testimony recommend that the Commission “order” Ameren**
2 **Missouri “to undertake an extensive program to promote the use of**
3 **combined heat and power technologies in its service territory¹³” as Mr. Byrne**
4 **states in his rebuttal testimony?**

5 A. No. I did not request the Commission “order” Ameren to participate in a CHP
6 outreach program,¹⁴ nor did I intend to recommend such an order. My testimony
7 does recommend a finite, focused outreach effort¹⁵ for the purpose of informing
8 the Commission, Company, and all stakeholders of CHP opportunities. The
9 proposed outreach effort includes no incremental revenue request. Outreach
10 materials utilized by Liberty Utilities in a similar effort already exist and the
11 confidential analysis performed by the USDOE CHP Technical Assistance
12 Partnership¹⁶ is of no cost to Ameren and/or its customers.

13 **V. CONCLUSION**

14 **Q. What is the takeaway you would like the Company and Commission to**
15 **consider when thinking about CHP adoption?**

16 A. Lack of awareness of CHP and its benefits, especially for resiliency of critical
17 facilities, is a barrier to deployment that can be addressed today with no change in
18 revenue requirement.

¹³ Tom Byrne, Rebuttal Testimony Case No. GR-2019-0077 page 19, lines 6-7.

¹⁴ Jane Epperson, Direct Testimony Case No. GR-2019-0077 page 2, lines 8-12.

¹⁵ Jane Epperson, Direct Testimony Case No. GR-2019-0077 page 14, lines 6-10.

¹⁶ <https://betterbuildingssolutioncenter.energy.gov/chp/central-chp-technical-assistance-partnership>

1 **Q. Please summarize your testimony.**

2 A. DE proposes a CHP outreach effort focused on those business customers that
3 receive both gas and electric service from the company and who require a
4 significant thermal load throughout the year, with particular focus on critical
5 facilities. The recommendation is similar to the CHP outreach effort implemented
6 in partnership with another Missouri gas utility. The outreach would direct
7 interested customers to a cost free feasibility analysis conducted by DOE's CHP
8 TAP program.

9 **Q. Does this conclude your Surrebuttal Testimony?**

10 A. Yes.