

Exhibit No.: _____
Issue(s): Advanced Meter Infrastructure
("AMI") Installation
Witness/Type of Exhibit: Burdge/Rebuttal
Sponsoring Party: Public Counsel
Case No.: ER-2016-0156

REBUTTAL TESTIMONY

OF

J. RICHMOND BURDGE

Submitted on Behalf of
The Office of the Public Counsel

KCP&L GREATER MISSOURI OPERATIONS COMPANY

Case No. ER-2016-0156

August 15, 2016

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

In the Matter of KCP&L Greater)	
Missouri Operations Company's)	
Request for Authority to Implement)	Case No. ER-2016-0156
a General Rate Increase for)	
Electric Service)	

AFFIDAVIT OF J. RICHMOND BURDGE

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

J. Richmond Burdge, of lawful age and being first duly sworn, deposes and states:

1. My name is J. Richmond Burdge. I am a Research Analyst for the Office of the Public Counsel.
2. Attached hereto and made a part hereof for all purposes is my rebuttal testimony.
3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.




J. Richmond Burdge

Subscribed and sworn to me this 15th day of August 2016.



JERENE A. BUCKMAN
My Commission Expires
August 23, 2017
Cole County
Commission #13754037



Jerene A. Buckman
Notary Public

My Commission expires August 23, 2017.

REBUTTAL TESTIMONY

OF

J. RICHMOND BURDGE

KCP&L—GREATER MISSOURI OPERATIONS COMPANY

CASE NO. ER-2016-0156

I. INTRODUCTION

Q. Please state your name and business address.

A. My name is J. Richmond Burdge and my business address is P.O. Box 2230, Jefferson City, Missouri 65102.

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

A. I am employed by the Missouri Office of the Public Counsel (“OPC”) as a Research Analyst.

Q. On whose behalf are you testifying?

A. I am testifying on behalf of the OPC.

Q. Please describe your experience and your qualifications.

A. I worked as an Environmental Specialist in the Water Protection Program of the Missouri Department of Natural Resources from July 2002 to November 2012. After receiving my M.A. in Sociology from Ball State University in July 2015, I was employed by OPC in January 2016 where I research many aspects of electric, water, and natural gas utility regulation - particularly distributed generation and smart grid technology, community solar projects, and marketing. I have also been involved in several electric and water utility case negotiations.

1 **Q. Have you previously provided testimony before the Public Service Commission (“the**
2 **Commission”)?**

3 A. This is my first opportunity to testify before the Commission.

4 **Q. What is the purpose of this testimony?**

5 A. The purpose of this testimony is to respond to Missouri Public Service Commission Staff
6 (“Staff”) witness Jerry Scheible’s statement on Advanced Meter Infrastructure (“AMI”)
7 installation and opt-out provision in the Revenue Requirement Cost of Service Staff
8 Report.

9 **II. ADVANCED METER INFRASTRUCTURE (“AMI”) INSTALLATION**

10 **Q. What is Staff’s position on this issue?**

11 A. Staff witness Mr. Jerry Scheible is recommending an AMI opt-out program for residential
12 customers with an initial set-up charge of \$75 and a monthly meter read charge of \$10.
13 These proposed charges are estimates to be re-evaluated in the next rate case after
14 implementation and cost tracking.

15 **Q. What concerns have been raised with respect to AMI meters?**

16 A. Two main kinds of concerns have been raised: those relating to health and to privacy.¹

17 **Q. What are the health-related concerns?**

18 A. Because most AMI meters emit radio-frequency (“RF”) pulses of radiation in order to
19 communicate with the utility, there has been some concern about the effect of this
20 radiation on human health. In Missouri, these concerns have been raised most prominently

¹ ER-2016-0156, Missouri Public Service Commission Staff Report, Revenue Requirement Cost of Service, p. 201, lines 5-8

1 in complaint case EC-2016-0230 against KCPL. No ruling has yet been made in this case.
2 However, smart meters operate in the same frequency range as cellular phones, and the
3 amount of radiation to which they would normally expose residents, particularly
4 considering that they are normally located outside the house, would be dwarfed by cellular
5 phones and microwave ovens, not to mention the cumulative effect of an array of other
6 modern household items and ambient broadcast waves. AMI meters normally operate at 5
7 percent duty cycle (i.e., transmit 5 percent of the time) and it has been demonstrated that
8 even if they operated at 100 percent duty cycle, exposure would still be far below Federal
9 Communications Commission (“FCC”) guidelines for exposure at these frequencies.²

10 **Q. What are the privacy and security concerns?**

11 A. There has been some concern that it would be possible for the utility or another party that
12 gained access to AMI data to determine what electrical devices are being used in a
13 household at any particular time. Abuse of such data would constitute a violation of
14 customer privacy on the part of utility employees, particularly if it were vulnerable to
15 hackers. However, this would only be possible if the data were segmented and transmitted
16 on the order of a few seconds. This is not normal industry practice.³ Most AMI meters
17 transmit data at intervals of every 15 minutes or greater, from which any detailed analysis

² “Health Impacts of Radio Frequency Exposure from Smart Meters”, California Council on Science and Technology, April 2011

³ Metering & Smart Metering International, “Researchers claim smart meters can reveal TV viewing habits” (<http://www.metering.com/researchers-claim-smart-meters-can-reveal-tv-viewing-habits/>)

1 of usage of individual appliances would be impossible.⁴ OPC has issued data requests to
2 KCPL to confirm that it complies with this industry standard.⁵

3 **Q. What is OPC's position?**

4 A. Any concerns that customers may have about AMI meters should be resolved as
5 satisfactorily as possible. This may eventually take the form of a fee-based opt-out
6 program, as Staff suggested, or a communications effort geared specifically toward those
7 customers who have concerns. OPC is conscious of the need for widespread installation of
8 AMI meters if such advanced billing mechanisms as time-of-use ("TOU") rates or demand
9 response are to be implemented efficiently in the future. In theory, if a large enough
10 number of customers opted out of AMI installation, the type of large-scale processing of
11 aggregate customer data that these mechanisms depend on would become less accurate
12 and efficient to the detriment of participating customers. While it is unlikely that enough
13 GMO customers would participate in an opt-out program to have such an effect, the
14 burden lies with GMO to show that this is not the case.

15 **Q. What is your response to Staff's position at this time?**

16 A. OPC is currently reserving the right to comment further on this topic in surrebuttal based
17 on the Company's response to outstanding data requests.

⁴ Smart Meter Texas, Frequently Asked Questions (https://www.smartmetertexas.com/CAP/public/home/home_faq.html#a1); Pacific Gas & Electric, "Understanding your energy use with SmartMeter" (https://www.pge.com/en_US/residential/save-energy-money/analyze-your-usage/your-usage/view-and-share-your-data-with-smartmeter/view-and-share-your-data-with-smartmeter.page); San Diego Gas and Electric, "Frequently Asked Questions about Smart Meters" (https://www.sdge.com/sites/default/files/documents/smartmeter_faq-long.pdf); Oklahoma Corporation Commission, "Common Questions Regarding Smart Meters" (<http://www.occeweb.com/pu/SMARTGRID/CommonQuestionsAboutSMARTMetersVER3.pdf>)

⁵ Public Counsel Data Request 3021 to KCP&L, ER-2016-0156, 8/8/16

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

2 A. Yes, it does.