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Issue(s): Energy Efficiency Program  
Witness/Type of Exhibit: Marke/Surrebuttal  
Sponsoring Party: Public Counsel  
Case No.: GR-2014-0152

**SURREBUTTAL TESTIMONY**

**OF**

**GEOFF MARKE**

Submitted on Behalf of  
the Office of the Public Counsel

**LIBERTY UTILITIES (MIDSTATES NATURAL GAS) CORP.  
D/B/A LIBERTY UTILITY**

**CASE NO. GR-2014-0152**

August 15, 2014

OPC Exhibit No. 45  
Date 9/8/14 Reprinter SJP  
File No \_\_\_\_\_

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

In the Matter of Liberty Utilities (Midstates )  
 Natural Gas) Corp. d/b/a Liberty Utilities' )  
 Tariff Revisions Designed To Implement a )  
 General Rate Increase for Natural Gas Service )  
 in the Missouri Service Areas of the Company )

Case No. GR-2014-0152

**AFFIDAVIT OF GEOFF MARKE**

STATE OF MISSOURI )  
 ) ss  
 COUNTY OF COLE )

Geoff Marke, of lawful age and being first duly sworn, deposes and states:


1. My name is Geoff Marke. I am a Regulatory Economist for the Office of the Public Counsel.
2. Attached hereto and made a part hereof for all purposes is my surrebuttal 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.

  
 \_\_\_\_\_  
 Geoff Marke

Subscribed and sworn to me this 15<sup>th</sup> day of August 2014.



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

  
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 Jerene A. Buckman  
 Notary Public

My commission expires August 23, 2017.

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**SURREBUTTAL TESTIMONY**

**OF**

**GEOFF MARKE**

**LIBERTY UTILITIES**

**CASE NO. GR-2014-0152**

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

2 A. Dr. Geoff Marke, Economist, Office of the Public Counsel (OPC or Public Counsel), P.O.  
3 Box 2230, Jefferson City, Missouri 65102.

4 **I. INTRODUCTION AND RECOMMENDATION**

5 **Q. What is the purpose of your surrebuttal testimony?**

6 A. The purpose of this testimony is to respond to comments regarding an energy efficiency (EE)  
7 program for Liberty in the rebuttal testimony of the Missouri Public Service Commission's  
8 Staff (Staff) witness Kory Boustead. I will also respond to the rebuttal testimony of the  
9 Missouri Division of Energy's (DE) witness Joe Gassner and his proposed treatment of low-  
10 income weatherization funding and administration for Liberty.

11 **Q. Please summarize your educational and employment background.**

12 A. I received a Bachelor of Arts Degree in English from The Citadel, a Masters of Arts Degree  
13 in English from The University of Missouri, St. Louis, and a Doctorate of Philosophy in  
14 Public Policy Analysis from Saint Louis University (SLU). At SLU, I served as a graduate  
15 assistant where I taught undergraduate and graduate course work in urban policy and public

1 finance. I also conducted mixed-method research in transportation, economic development,  
2 and emergency management.

3 I have been in my present position with OPC since April of 2014 where I have been  
4 responsible for economic analysis and policy research in electric utility operations. Prior to  
5 joining OPC, I was employed by the Missouri Public Service Commission as a Utility Policy  
6 Analyst II in the Energy Resource Analysis Section, Energy Unit, Utility Operations  
7 Department, Regulatory Review Division. My primary duties in that role involved  
8 reviewing, analyzing and writing recommendations concerning electric utility resource  
9 planning, fuel adjustment clauses, and demand-side management programs. I have also been  
10 employed by the Missouri Department of Natural Resources (later transferred to the  
11 Department of Economic Development), Energy Division where I served as a Planner III and  
12 functioned as the lead policy analyst on electric cases. I have worked in the private sector,  
13 most notably serving as the Lead Researcher for Funston Advisory based out of Detroit,  
14 Michigan. My experience with Funston involved a variety of specialized consulting  
15 engagements with both private and public entities; additionally, I have provided analysis on  
16 independent compliance audits.

17 **Q. Please summarize your primary positions and conclusions?**

18 A. Public Counsel recommends that the Commission suspend any expenditures towards  
19 Liberty's energy efficiency program until they are subject to a current cost-effectiveness  
20 screening under the guidance of Liberty's Energy Efficiency Advisory Group. It would be

1 premature and inappropriate to agree to any funding level before the Commission knew  
2 whether the programs are cost-effective as designed.

3 Additionally, in this case, Public Counsel recommends the Commission not approve DE's  
4 request that up to 5% of the Low Income Weatherization funding be directed to DE to  
5 administer and monitor the program.

6 **II. ENERGY EFFICIENCY**

7 **Q. What are Liberty's current EE programs?**

8 **A.** Liberty's current EE portfolio includes the following items:

- 9 • Customer education outreach
  - 10 ○ Workshops held to educate teachers how to teach energy efficiency and
  - 11 sustainability to their students
- 12 • High Efficiency Natural Gas Water Heating and Space Heating Rebates
  - 13 ○ Programmable thermostat
    - 14 ▪ Rebate of \$25
  - 15 ○ Energy Star rated natural gas furnace
    - 16 ▪ AFUE  $\geq$  92% and  $<$  94% rebate of \$200
    - 17 ▪ AFUE  $\geq$  94% and  $<$  96% rebate of \$250
    - 18 ▪ AFUE  $\geq$  96% rebate of \$300

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- Energy Star rated boiler
  - AFUE  $\geq$  85% and  $<$  90%      rebate of \$200
  - AFUE  $\geq$  90%      rebate of \$300
- Energy Star rated combination space heating and water heating systems
  - Rebate of \$450
- Water heating system
  - EF  $\geq$  0.62 and  $<$  0.67      rebate of \$50
  - EF  $\geq$  0.67 and  $<$  0.82      rebate of \$125
  - EF  $\geq$  0.82      rebate of \$200
- The Energize Liberty Utilities Homes Program
  - A program intended to promote energy efficiency for existing residential customers by offering free direct installation of low-cost energy conservation measures, financial incentives for energy audits and the installation of natural gas energy-efficiency measures that improve home energy performance.  
Rebates can include:
    - 100 percent of the energy audit (up to \$500)
    - 100 percent of the direct installation costs where measures are deemed appropriate
    - Additional incentives to offset the cost of eligible building shell and equipment

- Up to \$2000 for Tier 1 (achieve 10% natural gas savings)
- Up to \$5000 for Tier 2 (achieve 20% natural gas savings)

3 **Q. How have Liberty's EE programs performed to date?**

4 A. According to a July 23<sup>rd</sup> Energy Conservation and Efficiency Program Update, Liberty  
5 reported that in their most recent program year (Sep 13 – Aug 14) total spending consisted of  
6 70.1% of their allocated budget. This was an increase from the previous year (60.3%) which  
7 was almost entirely realized through an uptick in furnace rebates. Regardless, the company  
8 has not come close to exceeding their annual allocated budget in any given program year.

9 **Q. Are these programs cost-effective?**

10 A. These programs may have been cost-effective in 2010, but it would be incorrect to assume  
11 that all of these measures are cost effective in August 2014.

12 **Q. Could you give an example of a rebate that may not be cost effective anymore?**

13 A. There are numerous evaluations that suggest that actual energy savings for programmable  
14 thermostats often fall short of expected savings. Indeed, ENERGY STAR, the Environmental  
15 Protection Agency's (EPA) own program to identify and promote energy efficiency  
16 measures, elected to suspend labeling programmable thermostats with their designation in  
17 2009 and have since not revisited it due to their overstated performance.

18 For programmable thermostats to manifest expected realization rates, attention needs to be  
19 allocated to defining accurate assumptions about consumer behavior. What recent



1 evaluations have shown is that, especially in territories where the avoided energy costs are  
2 low, customer's value comfort more than energy efficiency savings. That conclusion is  
3 drawn from evaluation, measurement and verification (EM&V) reports that measure, in part,  
4 the realization rate, which shows the difference between the evaluated savings against the  
5 estimated savings. In Missouri, this was most recently seen with the results of Ameren  
6 Missouri's EM&V of their programmable thermostat.<sup>1</sup> In that study 56.10% of the  
7 participants were estimated to be "free riders"<sup>2</sup> and the realization rates of actual energy  
8 savings were so poor that the measure was dropped entirely as a stand-alone item in the first  
9 year of a three-year cycle.<sup>3</sup>

10 This is just one example. Presently, there is no assurance that any of the current programs are  
11 cost effective.

12 **Q. What steps would need to take place to remedy this potential problem?**

13 **A.** This issue was raised at Liberty's Energy Efficiency Advisory Group on July 23<sup>rd</sup> and the  
14 company has proposed to create a request for proposal to solicit bids from consultants to  
15 perform cost-effective tests on measures for the next program year. Because of the  
16 uncertainty inherent in the present program design, Public Counsel cannot support increasing  
17 Liberty's EE budget and has reservations about moving forward with any future expenditures  
18 until more information becomes available.

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<sup>1</sup> See EO-2012-0142: Revised Evaluation, Measurement and Verification (EM&V) Reports 6/12/2014

<sup>2</sup> This evaluation term describes energy efficiency program participants who would have taken the recommended actions on their own, even if the program did not exist. <http://aceee.org/glossary/9#letterf>

<sup>3</sup> Realization rates of only 15% were seen in Ameren's CoolSavers Program and only 19% as a standalone measure in their RebateSavers Program.

1 **III. LOW-INCOME WEATHERIZATION**

2 **Q. Does Public Counsel support DE’s proposal for an annual funding level of \$105,000 for**  
3 **low-income weatherization?**

4 A. Public Counsel recommends the Commission support this proposed amount as it is both  
5 appropriate and consistent with the amount of funds relative to other Commission-approved  
6 low-income weatherization programs.

7 **Q. Does Public Counsel support the proposal that up to 5% of the \$105,000.00 funding**  
8 **level be directed to DE to administer and monitor the low-income weatherization**  
9 **program?**

10 A. Public Counsel recommends that the Commission not approve this proposal. The annual  
11 funding would be better utilized for its intended purposes—weatherizing low income homes;  
12 and the amount of weatherization activity at issue in this case is very limited. Presently, DE  
13 receives federal funds to administer and monitor weatherization activities, and those funds  
14 are sufficient to ensure both accountability and training of the local Community Action  
15 Partnership (CAP) agencies in this case. If DE needs more funds to administer and monitor  
16 the limited weatherization activities at issue in this case, Public Counsel believes the  
17 appropriate way to augment DE’s budget is through the legislative process, and not through  
18 ratemaking.

19

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

2 | **A. Yes, it does.**