

*Exhibit No.:*  
*Issue(s):* *Residential definition  
and*

*Rate Stabilization  
Mechanism*

*Witness:* *Michael L. Stahlman*

*Sponsoring Party:* *MoPSC Staff*

*Type of Exhibit:* *Rebuttal Testimony*

*Case Nos.:* *GR-2017-0215 and  
GR-2017-0216*

*Date Testimony Prepared:* *October 20, 2017*

**MISSOURI PUBLIC SERVICE COMMISSION**

**COMMISSION STAFF DIVISION**

**TARIFF/RATE DESIGN**

**REBUTTAL TESTIMONY**

**OF**

**MICHAEL L. STAHLMAN**

**SPIRE MISSOURI, INC., d/b/a SPIRE**

**LACLEDE GAS COMPANY and MISSOURI GAS ENERGY  
GENERAL RATE CASE**

**CASE NOS. GR-2017-0215 AND GR-2017-0216**

**Jefferson City, Missouri  
October 2017**

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**MICHAEL L. STAHLMAN**

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1 **REBUTTAL TESTIMONY**

2 **OF**

3 **MICHAEL L. STAHLMAN**

4 **SPIRE MISSOURI, INC., d/b/a SPIRE**

5 **LACLEDE GAS COMPANY and MISSOURI GAS ENERGY**  
6 **GENERAL RATE CASE**

7 **CASE NOS. GR-2017-0215 AND GR-2017-0216**

8 Q. Please state your name and business address.

9 A. My name is Michael L. Stahlman, and my business address is Missouri Public  
10 Service Commission, P.O. Box 360, Jefferson City, Missouri, 65102.

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

12 A. I am employed by the Missouri Public Service Commission (“Commission”)  
13 as a Regulatory Economist III in the Energy Rate Design & Tariffs Unit, Economic Analysis  
14 Section, of the Tariff, Safety, Economic and Engineering Analysis Department in the  
15 Regulatory Review Division.

16 Q. Are you the same Michael L. Stahlman that supported sections in Staff’s Class  
17 Cost of Service/Rate Design Report?

18 A. Yes.

19 Q. What is the purpose of your testimony?

20 A. The purpose of my rebuttal testimony is to respond to LAC and MGE witness  
21 Michael R. Noack concerning the definition/applicability of residential customer and service,  
22 and MGE’s and LAC’s witnesses Glenn W. Buck, C. Eric Lobser, and Scott A. Weitzel,  
23 National Housing Trust witness Annika Brink, and Division of Energy’s witness Martin R.

1 Hyman concerning the proposed rate stabilization mechanism. Finally, I respond to a few  
2 policy points on rate design made by National Housing Trust witness Annika Brink.

3 **RESIDENTIAL CUSTOMER/SERVICE DEFINITION AND APPLICABILITY**

4 Q. Why does MGE propose changing the current definition and applicability of  
5 residential service to LAC's definition of a residential customer and availability?<sup>1</sup>

6 A. MGE's current tariff language prohibits residential service at locations other  
7 than a customer's domicile. Thus, as discussed on page 9 lines 4-10 of the Direct Testimony  
8 of Michael R. Noack, landlords and owners of rental property have expressed frustration for a  
9 given unit changing to small general service upon vacancy of a rental customer.

10 Q. Does Staff support this change?

11 A. Staff supports the overall concept, but has concerns with the specific language  
12 proposed by MGE. Since the proposed language mirrors LAC's current definition, Staff's  
13 concerns are also applicable to LAC's tariff language.

14 Q. What is the definition of residential service and applicability in MGE's  
15 currently effective tariff?

16 A. MGE's current definition of residential service is found on Tariff Sheet  
17 No. R-9 paragraph 1.33: "RESIDENTIAL SERVICE OR USE: The provision of or use of gas  
18 for household and domestic purposes." The applicability of residential service is found on  
19 Tariff Sheet No. 25:

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<sup>1</sup> As discussed in the Direct Testimony of Michael R. Noack starting on page 8 line 7 as the "Commercial-Domestic Use" adjustment through page 10 line 3.

1

APPLICABLE

To natural gas service supplied at one point of delivery to residential customers for domestic use by the customer or by members of customer's household for nonbusiness, noncommercial or nonindustrial purposes. Such domestic use shall include space heating, water heating, cooking, air conditioning, and other household uses.

2

Service hereunder is not available to locations served through a master meter or to a location other than the customer's domicile.

3

Q. What is the definition of a residential customer and applicability of the

4

residential service rate in LAC's currently effective tariff?

5

A. LAC's current definition of a residential customer is found on Tariff Sheet No.

6

R-3-b:

7

Residential Customer. A customer who purchases gas service for domestic use, including gas service provided to a single family dwelling or to a single meter serving a multiple family dwelling consisting of four (4) or fewer single family dwelling units, regardless of whether the customer is the ultimate consumer of the gas service. In addition, a customer who purchases gas service for such a dwelling while the dwelling is vacant shall be classified as a Residential Customer. This definition is intended to satisfy the provisions of Section 144.030 (23) RSMo, by establishing and maintaining a system and rate classification of "residential" to cause sales to residential customers under any of the Company's rate schedules to be considered as sales made for domestic use and thus exempt from sales tax.

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The availability of residential service is found on Tariff Sheet No. 2: "This rate schedule is available for all gas service rendered by the Company to residential customers, including space heating service."

18

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20

Q. What are Staff's concerns with the current language in LAC's tariff?

21

A. First, the statutory citation, Section 144.030 (23) RSMo, is incorrect. The

22

legislature has amended the law, so the citation should read "Section 144.030.2.(24)".<sup>2</sup>

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<sup>2</sup> (24) Except as otherwise provided in section 144.032, all sales of metered water service, electricity, electrical current, natural, artificial or propane gas, wood, coal or home heating oil for domestic use and in any city not within a county, all sales of metered or unmetered water service for domestic use:

Rebuttal Testimony of  
Michael L. Stahlman

1           Second, while LAC’s definition limits the definition of a residential customer to a  
2 single family dwelling or to a single meter serving a multiple family dwelling consisting of  
3 four (4) or fewer single family dwelling units, Section 144.030.2.(24) does not appear to  
4 have any such limitations.<sup>3</sup>

5           Finally, Staff is concerned about the appropriateness of using RSMo 144, a chapter  
6 concerning Sales and Use Tax and applicable to the Missouri Department of Revenue, as a  
7 basis for defining residential service ad hoc.

8           Q.     Do the Commission’s rules provide a definition of a residential customer  
9 or service?

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(a) "Domestic use" means that portion of metered water service, electricity, electrical current, natural, artificial or propane gas, wood, coal or home heating oil, and in any city not within a county, metered or unmetered water service, which an individual occupant of a residential premises uses for nonbusiness, noncommercial or nonindustrial purposes. Utility service through a single or master meter for residential apartments or condominiums, including service for common areas and facilities and vacant units, shall be deemed to be for domestic use. Each seller shall establish and maintain a system whereby individual purchases are determined as exempt or nonexempt;

(b) Regulated utility sellers shall determine whether individual purchases are exempt or nonexempt based upon the seller's utility service rate classifications as contained in tariffs on file with and approved by the Missouri public service commission. Sales and purchases made pursuant to the rate classification "residential" and sales to and purchases made by or on behalf of the occupants of residential apartments or condominiums through a single or master meter, including service for common areas and facilities and vacant units, shall be considered as sales made for domestic use and such sales shall be exempt from sales tax. Sellers shall charge sales tax upon the entire amount of purchases classified as nondomestic use. The seller's utility service rate classification and the provision of service thereunder shall be conclusive as to whether or not the utility must charge sales tax;

(c) Each person making domestic use purchases of services or property and who uses any portion of the services or property so purchased for a nondomestic use shall, by the fifteenth day of the fourth month following the year of purchase, and without assessment, notice or demand, file a return and pay sales tax on that portion of nondomestic purchases. Each person making nondomestic purchases of services or property and who uses any portion of the services or property so purchased for domestic use, and each person making domestic purchases on behalf of occupants of residential apartments or condominiums through a single or master meter, including service for common areas and facilities and vacant units, under a nonresidential utility service rate classification may, between the first day of the first month and the fifteenth day of the fourth month following the year of purchase, apply for credit or refund to the director of revenue and the director shall give credit or make refund for taxes paid on the domestic use portion of the purchase. The person making such purchases on behalf of occupants of residential apartments or condominiums shall have standing to apply to the director of revenue for such credit or refund;

<sup>3</sup> Staff Data Request No. 0203.1 requested information from LAC and MGE concerning customer impacts should this provision change. In response, LAC and MGE stated: “There is not a way to obtain the requested information from Laclede’s billing system.”

1 A. Yes, there are two applicable definitions in Chapter 13:

2 4 CSR 240-13.015 (1)(G): “Customer means a person or legal entity  
3 responsible for payment for service, except one denoted as a guarantor.”

4 4 CSR 240-13.015 (1)(AA): “Residential service or service means the  
5 provision of or use of a utility service for domestic purposes.”

6 Q. Does Staff have recommended tariff language?

7 A. While Staff supports a consolidated residential definition and elimination of  
8 MGE’s clause limiting residential service only to locations of a customer’s domicile, Staff  
9 would be open to many different solutions. For instance, Staff could support tariff language  
10 that reflects MGE’s current tariff language excluding the prohibition of residential service to  
11 locations other than the customer’s domicile, tariff language more reflective of the definitions  
12 in Chapter 13, or tariff language borrowed from another natural gas utility as provided in  
13 Schedule MLS-r1.<sup>4</sup>

14 **REVENUE STABILIZATION MECHANISM**

15 Q. What is MGE/LAC’s proposed Revenue Stabilization Mechanism?

16 A. The Revenue Stabilization Mechanism, as discussed by MGE and LAC  
17 witnesses Glenn W. Buck, C. Eric Lobser, and Scott A. Weitzel, is a proposal to have a  
18 separate charge on customer bills that would vary in response to changes in average  
19 customer usage.

20 Q. Do other witnesses discuss MGE/LAC’s proposed Revenue Stabilization  
21 Mechanism?

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<sup>4</sup> The Empire District Gas Company’s definition mirrors Laclede’s current definition; therefore, Staff would have similar issues with using Empire’s definition.

1           A.     Yes, both National Housing Trust witness Annika Brink and Division of  
2 Energy’s witness Martin R. Hyman offer qualified support for MGE/LAC’s proposed  
3 Revenue Stabilization Mechanism.

4           Q.     What legal citation is identified as authorizing this mechanism?

5           A.     LAC/MGE witness Buck cites RSMo §386.266.3. It reads:

6                     Subject to the requirements of this section, any gas corporation may make an  
7 application to the commission to approve rate schedules authorizing periodic  
8 rate adjustments outside of general rate proceedings to reflect the non-gas  
9 revenue effects of increases or decreases in residential and commercial  
10 customer usage due to variations in either weather, conservation, or both.

11          Q.     Does LAC/MGE’s proposal conform to this statute?

12          A.     No. LAC/MGE’s revenue stabilization mechanism would adjust for all  
13 changes in average customer use, not solely due to variations in weather and/or conservation.  
14 For example, this mechanism would also make adjustments due to fuel switching, rate  
15 switching, new customers with non-average usage, and due to economic factors. LAC/MGE  
16 witness Scott A. Weitzel affirmatively responds in his direct testimony that the proposed  
17 Revenue Stabilization Mechanism provides a “per customer base revenue amount.”<sup>5</sup> Thus,  
18 Division of Energy’s witness Martin R. Hyman is incorrect when he states that the proposed  
19 mechanism would only make adjustments for “the portions of sales and revenues related to  
20 weather and changes in customer use due to efficiency or conservation.”<sup>6</sup>

21          Q.     Division of Energy’s (“DE”) witness Martin R. Hyman stated “DE would not  
22 oppose the implementation of the RSM “if . . . the Companies meet any rate design-related

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<sup>5</sup> Direct Testimony of Scott A. Weitzel, p. 22, ll. 11-15

<sup>6</sup> Direct Testimony of Martin R. Hyman, p. 3, ll. 12-16.



1 recommendations addressed in DE’s subsequent testimony.”<sup>7</sup> Has DE sponsored any rate  
2 design-related recommendations in direct testimony?

3 A. No.

4 Q. Is “conservation” defined within RSMo §386?

5 A. No. In fact, “conservation” is used only one other time in that chapter; Section  
6 §386.266.13 which reads: “The public service commission shall appoint a task force,  
7 consisting of all interested parties, to study and make recommendations on the cost recovery  
8 and implementation of conservation and weatherization programs for electrical and gas  
9 corporations.”

10 Typically energy conservation is distinguished from energy efficiency. The U.S.  
11 Energy Information Administration states:

12 The terms energy efficiency and energy conservation have distinct meanings:

- 13 • Energy efficiency is using technology that requires less energy to perform  
14 the same function. Using a compact fluorescent light bulb that requires less  
15 energy instead of using an incandescent bulb to produce the same amount  
16 of light is an example of energy efficiency.
- 17 • Energy conservation is any behavior that results in the use of less energy.  
18 Turning the lights off when leaving the room and recycling aluminum cans  
19 are both ways of conserving energy.<sup>8</sup>

20 Q. Could this mechanism allow LAC and MGE to receive more than their  
21 authorized rate of return?

22 A. Yes. LAC’s and MGE’s proposal deems a consumer’s average usage is based  
23 on the outcome of a rate case and would only change as a result of weather and conservation.

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<sup>7</sup> Direct Testimony of Martin R. Hyman, p. 15, ll. 14-18. Also see p. 7, ll. 16-19.

<sup>8</sup> U.S. Energy Information Administration (2016). “Energy Efficiency and Conservation.”  
[https://www.eia.gov/energyexplained/index.cfm?page=about\\_energy\\_efficiency](https://www.eia.gov/energyexplained/index.cfm?page=about_energy_efficiency). (22SEP17).

1 Thus, if LAC and MGE were to add low-usage customers, this mechanism would treat their  
2 usage as too low and allow LAC and MGE to recover the difference between that new  
3 customers' lower than average usage and an average customer's usage. Schedule MLS-r2  
4 makes changes to LAC's and MGE's witness Glenn W. Buck's Schedule GWB-D2 to  
5 demonstrate this issue.<sup>9</sup>

6 Additionally, as Staff noted in its Class Cost of Service and Rate Design Reports,  
7 several large customers that are more typical of Large General Service ("LGS") customers are  
8 currently in the Small General Service ("SGS") class. Should those customers move to an  
9 LGS class after this rate case, the overall average usage of the SGS class would decrease, thus  
10 providing LAC and MGE with additional compensation with no change in actual *total* usage.

11 Q. One of the benefits of the Revenue Stabilization Mechanism cited by LAC and  
12 MGE witness Mr. Lobser is that it will "provide residential and commercial customers with  
13 more stability in their bills."<sup>10</sup> Do these customers currently have a mechanism that would  
14 stabilize their bills?

15 A. Yes. Both LAC and MGE have budget billing options that would smooth  
16 these bills, and the associated companies' revenues, over the course of a year.

17 Q. Could the Revenue Stabilization Mechanism create less stability in customer  
18 billings?

19 A. Yes. LAC and MGE witnesses Glenn W. Buck and Scott A. Weitzel discuss  
20 an annual true-up of the Revenue Stabilization Mechanism.<sup>11</sup> If a relatively warm winter

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<sup>9</sup> Schedule GWB-2 has a couple labeling errors: "Usage Variance for RSM ( H – C )" should be "( C – H )" and "RSM Deferral ( I X A X C )" should be "( I X A X D )".

<sup>10</sup> Direct Testimony of C. Eric Lobser, p. 33, ll. 16-17.

<sup>11</sup> "In order to create a mechanism that helps stabilize customers' bills, we are proposing that, similar to with the PGA clause, the RSM will have one required filing a year as well as up to 3 additional discretionary filings no closer than 60 days apart per filing" (Direct Testimony of Glenn W. Buck, p. 13, ll. 2-3). See also Direct Testimony of Scott A. Weitzel, p. 22, ll. 16-21.

1 were to be subsequently followed by a relatively cold winter, the Revenue Stabilization  
2 Mechanism would initially start at a higher rate due to the warm period<sup>12</sup> and compound the  
3 problem of high customer bills if the subsequent period is abnormally cold.

4 Q. Another benefit cited by LAC and MGE witness Mr. Lobser, National Housing  
5 Trust witness Annika Brink, and Division of Energy's witness Martin R. Hyman is that it  
6 could mitigate the disincentive of the utility from pursuing energy efficiency programs.  
7 Is there a negative aspect of this mechanism's impact on energy efficiency?

8 A. Yes. First, this mechanism would reduce the incentive for customers to pursue  
9 energy efficiency since it would work to increase customer bills for any reduction in usage.  
10 Secondly, both National Housing Trust witness Annika Brink and Division of Energy's  
11 witness Martin R. Hyman discuss requiring LAC and MGE to increase spending in energy  
12 efficiency programs, but do not discuss the cost effectiveness of these programs. It is unclear  
13 how further increases to LAC's and MGE's rate base will work to the benefit of all customers.  
14 In fact, Division of Energy's witness Martin R. Hyman's testimony seems to indicate that  
15 these programs only benefit program participants and not all customers.<sup>13</sup>

16 Q. Are there other policy considerations that were not discussed by LAC and  
17 MGE witness C. Eric Lobser?

18 A. Yes. One aspect of this policy is that it removes some of the ability of  
19 customers to control their own bills; a customer's final bill will include a rate that is a  
20 function of other customers' usage. An aspect of this effect is that lower income customers,  
21 who may have fewer resources to invest in energy efficient devices and may live in

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<sup>12</sup> LAC/MGE witness C. Eric Lobser discusses initiating the mechanism at the beginning of a heating season (p. 36, ll. 8-9).

<sup>13</sup> Direct Testimony of Martin R. Hyman, p. 8, ll. 1-21.

1 rental properties,<sup>14</sup> would gradually bear a greater proportion of this charge as higher income  
2 customers become more energy efficient.

3 Q. Are there other issues in this rate case that would complicate the structure of a  
4 revenue stability mechanism?

5 A. Yes. Blocked volumetric rates would add some complexity, although not  
6 insurmountable, over which tariffed rates would be applied to a usage variance in determining  
7 the proper RSM deferral. Also, Staff has recommended combining LAC's three C&I rate  
8 classes<sup>15</sup> and MGE's SGS and LGS rate classes into one General Service rate class for each  
9 jurisdiction. LAC and MGE propose to apply this mechanism to the Residential and SGS  
10 classes. If the Commission orders one General Service rate class for LAC and MGE, the  
11 revenue stability mechanism would likely need to be limited to only the residential  
12 customer classes.

13 Q. What is Staff's recommendation regarding the revenue stability mechanism?

14 A. Staff recommends rejection of the revenue stability mechanism as the proposed  
15 mechanism goes beyond the statute and provides LAC and MGE a path to receive revenues  
16 beyond an authorized rate of return.

17 Should the Commission decide to authorize a Revenue Stability Mechanism, Staff  
18 recommends that the Commission limit the mechanism to the residential classes only and  
19 limit the adjustment to variations due to weather. Staff's recommendation to limit the  
20 mechanism to variances in weather is two-fold: first, based on the weather normalization  
21 regressions performed by Staff for the Cost of Service Report filed in this case, a mechanism  
22 based solely on weather could account for over 97% of usage variation within a given year;

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<sup>14</sup> As discussed by National Housing Trust witness Annika Brink on page 6, lines 3 through 8.

<sup>15</sup> The Commercial and Industrial classes: C1, C2, and C3.

1 secondly, evaluating which usage changes are due solely to conservation or other factors can  
2 be an expensive and litigious process. Schedules MLS-r3 and MLS-r4 demonstrate how a  
3 weather normalization adjustment for a natural gas utility works in Kentucky and Virginia.  
4 These tariff sheets can provide guidance on how a revenue stabilization mechanism could be  
5 structured if the Commission does not agree with Staff's primary recommendation of not  
6 authorizing a revenue stabilization mechanism.

7 **RATE DESIGN POLICY**

8 Q. Do you agree with National Housing Trust's witness Annika Brink that "low  
9 income multifamily households have high energy burdens (see my revenue requirement  
10 testimony in this case) and Midwestern multifamily homes use 43% more energy per square  
11 foot than single family detached homes" (p. 4, ll. 7-10)?

12 A. Yes, but it is unclear what useful information can be obtained from these  
13 statements. For instance, one would expect a household with a lower income to have a higher  
14 energy burden than a household with higher income because energy consumption would  
15 likely not change perfectly proportional to changes in income. Likewise a television would  
16 consume the same amount of electricity regardless of the size of room it is in, and since  
17 multifamily homes tend to have less square footage than single family detached homes, one  
18 would expect smaller residences to have higher energy consumption per square foot.

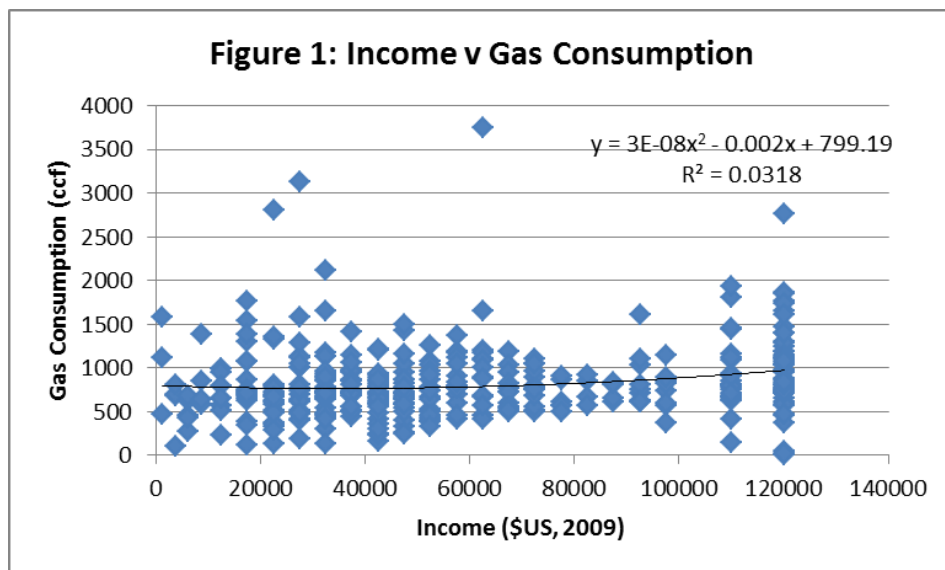
19 Furthermore, Ms. Brink is conflating this issue by shifting from "low energy users" to  
20 "low income multifamily households" and "single family detached homes" which includes  
21 low, mid, and upper income levels, and by shifting from discussing low natural gas  
22 consumption to generic energy consumption that will include other forms of fuel.

23 Q. Do you agree that "Midwestern multifamily households tend to use less total  
24 energy than other households: less than half of what is consumed by a Midwestern single

1 family detached home according to 2009 Residential Energy Consumption Survey [RECS]  
2 data”<sup>16</sup>?

3 A. Yes, but again, Ms. Brink is conflating this issue by shifting from “low-income  
4 multifamily households” to “Midwestern multifamily households” and by shifting from  
5 discussing low natural gas consumption to generic energy consumption that will include other  
6 forms of fuel.

7 Additionally, it is unclear why Ms. Brink would use Midwestern proxy information  
8 concerning low income usage when the 2009 RECS data is available and can specifically  
9 identify the income and consumption of Missouri residents that consume natural gas. Figure  
10 1 is a graph of income<sup>17</sup> compared to usage for Missouri residents identified in the 2009  
11 RECS as using natural gas that also provided bill information.



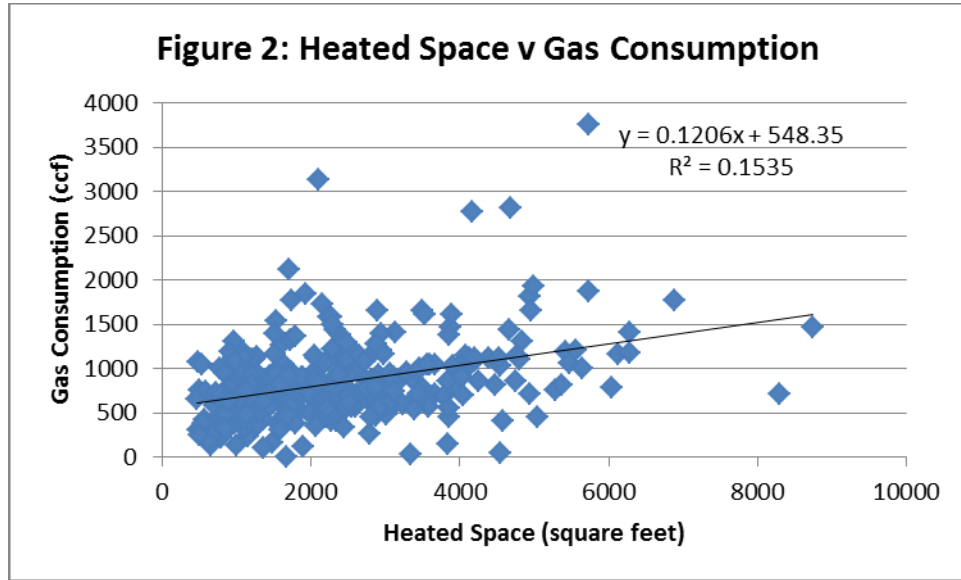
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<sup>16</sup> Direct Testimony of Annika Brink, p. 4, ll. 10-12.

<sup>17</sup> The survey responses for income are grouped into ranges (e.g. \$45,000 to \$49,999).

1 Figure 2 compares the heated living space of those sampled residents to their natural  
2 gas usage.



4

5 Table 1 compares housing types of those sampled residents to average heated square  
6 footage of those units, the average natural gas consumption, and the average income of the  
7 occupant.

8

	Average Heated Space (square feet)	Average Gas Consumption (ccf)	Average Income
Apartment Building 5+ Units	771	574	\$ 23,523
Apartment Building 2-4 Units	1,207	593	\$ 36,607
Single Family Attached	2,131	673	\$ 52,900
Single Family Detached	2,352	850	\$ 62,030
Mobile Home	957	561	\$ 15,417

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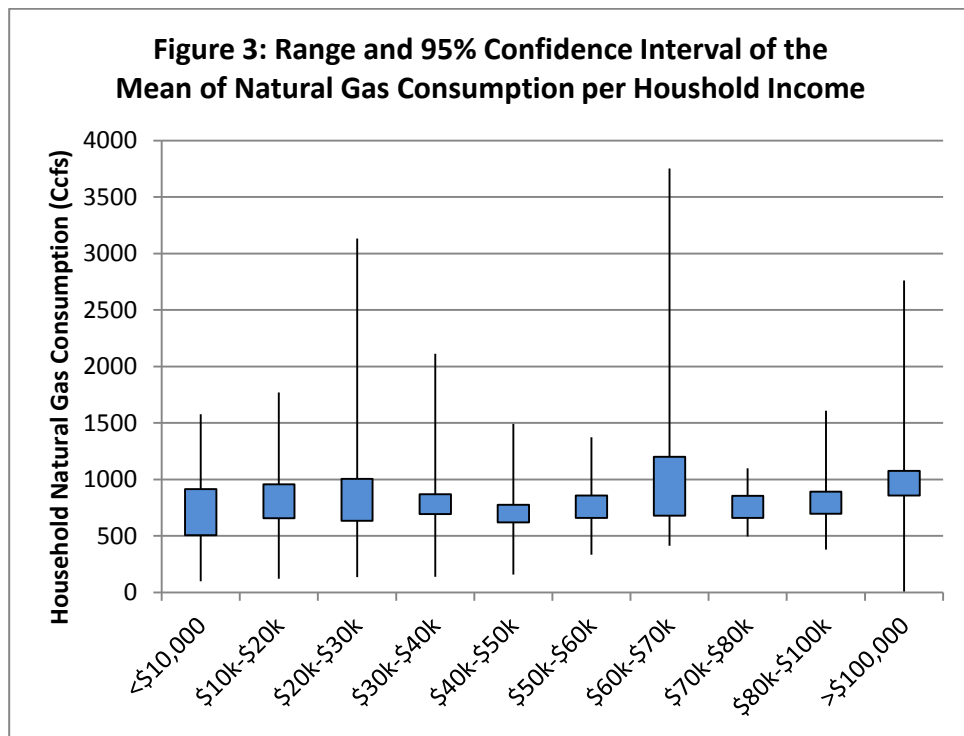
10 Q. What conclusions should be drawn from Figures 1 and 2 and Table 1?

11 A. Table 1 could support broad generalizations concerning the income and natural  
12 gas consumption of residents that live in a given housing type, but Table 1 also demonstrates

Rebuttal Testimony of  
Michael L. Stahlman

1 that a large amount of information is lost when using averages. As shown in Figures 1 and 2,  
2 there is a large range around the averages, thus there is less confidence, statistically speaking,  
3 in the average itself. Figure 3 below is similar to Figure 1, but provides the confidence  
4 interval around the mean and range rather than specific data points. As can be seen, the  
5 confidence interval around the average can be in the hundreds of cubic feet.

6



7

8 Q. Does this conclude your rebuttal testimony?

8

9 A. Yes it does.

9



**BEFORE THE PUBLIC SERVICE COMMISSION**

**OF THE STATE OF MISSOURI**

In the Matter of Laclede Gas Company's )  
Request to Increase Its Revenues for ) Case No. GR-2017-0215  
Gas Service )

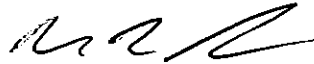
In the Matter of Laclede Gas Company )  
d/b/a Missouri Gas Energy's Request to ) Case No. GR-2017-0216  
Increase Its Revenues for Gas Service )

**AFFIDAVIT OF MICHAEL L. STAHLMAN**

STATE OF MISSOURI )  
 ) ss.  
COUNTY OF COLE )

**COMES NOW MICHAEL L. STAHLMAN** and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing Rebuttal Testimony; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

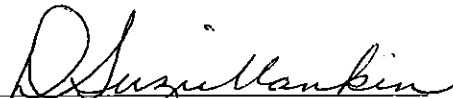


**MICHAEL L. STAHLMAN**

**JURAT**

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 18<sup>th</sup> day of October, 2017.

D. SUZIE MANKIN  
Notary Public - Notary Seal  
State of Missouri  
Commissioned for Cole County  
My Commission Expires: December 12, 2020  
Commission Number: 12412070



Notary Public

**Schedule MLS-r1: Missouri Natural Gas Utilities' Definitions of Residential Service/Customer and Their Applicability/Availability**

**Empire (R-4):**

AA. Residential service means the provision of or use of a utility service for domestic purposes.

(Sheet 9):

**AVAILABILITY**

This service is available to all residential customers. A "residential" ("domestic") customer under this rate classification is a customer who purchases natural gas for "domestic use." "Domestic use" under this rate classification includes that portion of natural gas, which is ultimately consumed at a single-family or individually metered multiple-family dwelling, and shall apply to all such purchases regardless of whether the customer is the ultimate consumer. This schedule is intended to satisfy the provisions of Section 144.030(23) RSMo by establishing and maintaining a system and rate classification of "residential" to cause the residential sales and purchases of natural gas under this rate schedule to be considered as sales for domestic use.

**Laclede (R-3-b):**

Residential Customer. A customer who purchases gas service for domestic use, including gas service provided to a single family dwelling or to a single meter serving a multiple family dwelling consisting of four (4) or fewer single family dwelling units, regardless of whether the customer is the ultimate consumer of the gas service. In addition, a customer who purchases gas service for such a dwelling while the dwelling is vacant shall be classified as a Residential Customer. This definition is intended to satisfy the provisions of Section 144.030 (23) RSMo, by establishing and maintaining a system and rate classification of "residential" to cause sales to residential customers under any of the Company's rate schedules to be considered as sales made for domestic use and thus exempt from sales tax.

(Sheet Number 2):

Availability – This rate schedule is available for all gas service rendered by the Company to residential customers, including space heating service.

**Liberty (22):**

**AVAILABILITY:**

This schedule is available to Customers consuming gas for space heating, water heating, cooking, air conditioning and other proper purposes in private residences, individual apartments and in a multifamily dwelling, and using a type A or B meter. Service may not be shared or resold.

(Sheet 76): Residential: Service provided for domestic purposes.

**MGE (Laclede, R-9):**

1.33 RESIDENTIAL SERVICE OR USE: The provision of or use of gas for household and domestic purposes.

**Laclede Gas Company / Missouri Gas Energy**  
**GR-2017-0215 / GR-2017-0216**

(Sheet 25):

APPLICABLE

To natural gas service supplied at one point of delivery to residential customers for domestic use by the customer or by members of customer's household for nonbusiness, noncommercial or nonindustrial purposes. Such domestic use shall include space heating, water heating, cooking, air conditioning, and other household uses.

Service hereunder is not available to locations served through a master meter or to a location other than the customer's domicile.

**Summit Natural Gas of Missouri, Inc. For: Gallatin Division (Sheet 8):**

GENERAL SERVICE (GS)

— Availability - This rate schedule is available for all firm gas service rendered by the Company, including space heating service. All customers formerly receiving service under the City of Hamilton Residential and Small Commercial rate schedule and under the City of Gallatin Rate Schedules S-Taxable, A, X and Y (Residential) shall be rendered service under this Schedule.\*

**Summit Natural Gas of Missouri, Inc. For: Warsaw Division, Lake of the Ozarks Division (Sheet 9, 10):**

GENERAL SERVICE (GS)

— Availability - This rate schedule is available for all firm gas service rendered by the Company, including space heating service, for customers with annual usage of less than 3,000 Ccf.+

**Summit Natural Gas of Missouri, Inc. For: Rogersville Division, Branson Division (Sheet 11, 12)**

GENERAL SERVICE (GS)

— Availability – This rate schedule is available for all firm gas service rendered by the Company, including space heating service.

(Sheet 82):

(7) Residential Customer - One who uses or will use natural gas for the primary purposes of space heating or cooling, water heating, and/or other appliances.+

**Union Electric (5):**

RESIDENTIAL SERVICE RATE

Applicable to gas service to all residential customers as defined in Section I.H. of Company's Rules and Regulations. As indicated in Section IX., Resale of Service of Company's Rules and Regulations, this service may not be resold.

Laclede Gas Company / Missouri Gas Energy  
GR-2017-0215 / GR-2017-0216

(Sheet No. 40):

\*1. Residential Customer

The user, for domestic purposes, of gas service supplied by the Company to individually metered residences and apartments consisting of one or more rooms for the use of one or more persons as a housekeeping unit with space for eating, living and sleeping, and permanent provisions for cooking and sanitation.

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2. General Service Customer

The user of gas service in a single metered residential multiple occupancy dwelling, a combined residential and non-residential activity or for any other non-residential purpose.

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**Laclede Gas Company / Missouri Gas Energy**  
**GR-2017-0215 / GR-2017-0216**

<b>Hypothetical Billing Determinates - Month of February</b>					
	<u>Customer Charge</u>		<u>Usage</u>	<u>Total</u>	<u>Non-Gas Revenue/Customer</u>
Customers & Therms	(A) 455,770	(B)	62,714,017		
Therms/Customers (B/A)		(C)	137.6		
Tariff Rates	\$20.00	(D)	\$0.2350		
Non-Gas Revenues	\$9,115,400		\$14,737,794	\$23,853,194	\$52.34
Annual Usage / Customer			782	(E) 356,412,140	
<b>Growth of 2000 Low Usage Customers (75 Therms each) - Month of February</b>					
Actual Customers & Therms	(F) 457,770	(G)	62864017		
		(H)	137.3		
Non-Gas Revenues	\$9,155,400		\$14,773,044	\$23,928,444	\$52.27
Usage Variance for RSM (C - H)		(I)	0.3		
RSM Deferral (I*A*D)				\$ 29,294	(\$0.06)
RSM Rate (J/E)		(K) \$	0.0001	(Assumes a \$0 previous balalnce for RSM)	
Change in Revenues with RSM Deferral	\$40,000		\$64,543.52	\$104,544	
Change in Revenues without RSM	\$40,000		\$35,250	\$75,250	

ATMOS ENERGY CORPORATION  
 (NAME OF UTILITY)

**Weather Normalization Adjustment Rider**

**WNA**

**1. Applicable**

Applicable to Rate G-1 Sales Service, excluding industrial class only.

The distribution charge per Mcf for gas service as set forth in G-1 Sales Service shall be adjusted by an amount herein under described as the Weather Normalization Adjustment (WNA). The WNA shall be applicable to Rate G-1 Sales Service, excluding Industrial Sales Service.

The WNA shall apply to all residential, commercial and public authority bills based on meters read during the months of November through April. The WNA shall increase or decrease accordingly by month. The WNA will not be billed to reflect meters read during the months of May through October. Customer base loads and heating sensitivity factors will be determined by class and computed annually.

**2. Computation of Weather Normalizing Adjustment**

The WNA shall be computed by using the following formula:

$$WNA_i = R_i \frac{(HSF_i (NDD - ADD))}{(BL_i + (HSF_i \times ADD))}$$

Where:

- $i$  = any rate schedule or billing classification within a rate schedule that contains more than one billing classification
- $WNA_i$  = Weather Normalization Adjustment Factor for the  $i$ th rate schedule or classification expressed as a rate per Mcf
- $R_i$  = weighted average rate (distribution charge) of temperature sensitive sales for the  $i$ th schedule or classification
- $HSF_i$  = heat sensitive factor for the  $i$ th schedule or classification
- $NDD$  = normal billing cycle heating degree days (based upon NOAA 20-year normal for the period of September 1996 through August 2015)
- $ADD$  = actual billing cycle heating degree days
- $BL_i$  = base load for the  $i$ th schedule or classification

(T)

DATE OF ISSUE November 23, 2015  
 Month/Date/Year

DATE EFFECTIVE August 15, 2016  
 Month/Date/Year

Issued by Authority of an Order of the Public Service Commission in  
 Case No. 2015-00343

ISSUED BY /s/ Mark A. Martin  
 Signature of Officer

TITLE Vice President – Rates and Regulatory Affairs

**KENTUCKY  
 PUBLIC SERVICE COMMISSION**

**Talina R. Mathews  
 EXECUTIVE DIRECTOR**

*Talina R. Mathews*

EFFECTIVE

**8/15/2016**

PURSUANT TO 807 KAR 5:011 SECTION 9 (1)

**Schedule MLS-r3**

ATMOS ENERGY CORPORATION

WEATHER NORMALIZATION ADJUSTMENT

1. APPLICABILITY

The Weather Normalization Adjustment will become effective on August 1, 2009 for the twelve month period of May 1, 2008 through April 30, 2009 and will be applicable for each twelve month period, thereafter. The Weather Normalization Adjustment is applicable to service delivered under the terms of rate schedules 610 and 620 throughout the entire service area of the Company based on the most recent 30-year average of heating degree days. A separate Weather Normalization Adjustment will be calculated for customers in each rate schedule in each weather zone. The East weather zone shall include all customers in and adjacent to Blacksburg, Radford, Pulaski and Wytheville. The West weather zone shall include all customers in and adjacent to Bristol, Marion and Abingdon.

2. CALCULATION OF ADJUSTMENT

The Weather Normalization Adjustment Factor will be calculated for each customer class and weather zone as follows:

- (1) Ccf Volume Adj. =  $(\text{HDD Normal} - \text{HDD Actual}) * M * (\text{Annual no. of bills}/12)$
- (2) Total Revenue Adjustment = Volume Adj. \* Non-Gas Commodity Margin
- (3) Adjustment Factor Per Ccf = Total Rev Adj./Annual Weather Sensitive Usage
- (4) Any residual balance (positive or negative) as a result of actual Weather Normalization Adjustment revenue collected compared to the total revenue adjustment set forth in (2) above shall be added to the following year's revenue adjustment amount.

Note: M will be the slope of the most recent 36 months regression equation for the adjustment period for each rate schedule and weather zone. Annual Weather Sensitive Usage is defined as the 12 months total actual usage less the Base Load usage for the same period. *The Base Load usage is defined as the intercept value resulting from the most recent 36 months regression equation multiplied times the 12 months total of bill counts.*

3. BILLING

All adjustments, if applicable, will be included on the monthly bill as an adjustment factor applicable to all Ccfs in excess of the Base Load intercept value as set forth in (2) above and will be effective for the 12 month period of August through July that occurs after the preceding Weather Normalization Adjustment period of May through April as set forth in (1) above.

4. LATE PAYMENT CHARGE

Any late payment penalties applicable to a customer's bill will also apply to Weather Normalization Adjustment amounts.

5. TAXES

Weather Normalization Adjustments will be subject to any effective tax based upon revenue receipts levied by governing bodies.

Issued by: Patricia J. Childers, VP Rates & Regulatory Affairs

Date Issued: August 29, 2014

Effective Date: October 1, 2014

Pursuant to Order in Case Number PUE-2008-00007

Schedule MLS-r4

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