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Energy Efficiency Services Laura Wolfe Missouri Department of Natural Resources - Missouri Energy Center Direct Testimony-Rate Design GR-2009-0434

## MISSOURI PUBLIC SERVICE COMMISSION

Type of Exhibit:

Case No.:

## **EMPIRE DISTRICT GAS COMPANY**

#### CASE NO. GR-2009-0434

## **DIRECT TESTIMONY**

## OF

## LAURA WOLFE

#### ON

## **BEHALF OF**

#### MISSOURI DEPARTMENT OF NATURAL RESOURCES

#### **ENERGY CENTER**

Jefferson City, Missouri November 3, 2009

<u>OWL</u> Exhibit No. 19 Case No(s). <u>C-2009-0434</u> Date 1 - 08 - 10 Rptr \_ 44

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| 1  | I. INTRODUCTION   |     |
|----|---|-----|
| 2  | 2. Please state your name and business address.   |     |
| 3  | A. My name is Laura Wolfe. My business address is Missouri Department of Natural Resources, Energy  | gу  |
| 4  | Center, 1101 Riverside Drive, P.O. Box 176, Jefferson City, Missouri 65102-0176.                    |     |
| 5  | Q. By whom and in what capacity are you employed?   |     |
| 6  | A. I am employed by the Missouri Department of Natural Resources as an Energy Specialist in t       | he  |
| 7  | Energy Policy and Analysis Program in the Missouri Energy Center ("MDNR-EC"). The Misson            | uri |
| 8  | Energy Center is located within the Missouri Department of Natural Resources, an agency of sta      | ate |
| 9  | government with its executive office located in Jefferson City, Missouri.                           |     |
| 10 | Q. Are you the same Laura Wolfe who filed Direct Testimony regarding revenue requirement in         |     |
| 11 | the case?   |     |
| 12 | A. Yes, I am.   |     |
| 13 | Q. What is the purpose of your direct testimony in these proceedings?                               |     |
| 14 | A. The purpose of my testimony is to address the Straight Fixed Variable ("SFV") rate design propos | sed |
| 15 | by Empire District Gas Company ("EDG"). I will specifically offer testimony regarding t             | the |
| 16 | following items:  |     |
| 17 | (1) EDG's request to implement a SFV rate design;   |     |
| 18 | (2) other utilities in Missouri using a SFV rate design;  |     |
| 19 | (3) a summary of the opinions of various national organizations of the SFV approach to rates; and   |     |
| 20 | (4) a recommendation to allow SFV only if energy efficiency funding levels are established a        | ta  |
| 21 | significant level.  |     |
| 22 | <u>II. EDG's REQUEST TO USE A STRIAGHT FIXED VARIABLE RATE DESIGN</u>                               |     |
| 23 | Q. Describe the current rate design used by EDG.  |     |
| 24 | A. EDG witness, Mr. H. Edwin Overcast, provides a concise description in his Direct Testimony       | of  |
| 25 | EDG's current rate design:  |     |
|    |   |     |

EDG's current residential service base rates consist of a customer charge and a flat volumetric charge for distribution. Both the customer charge and the volumetric charge differ for the North and South portions of the system when compared to the NW portion of the system. The volumetric charge is a per Ccf charge. The small general service base rates consist of a customer charge and a volumetric charge. For both residential and small general service customers the rate also includes a volumetric Purchased Gas Adjustment (PGA) charge and a Tax and License Rider charge in addition to the applicable base rate charges. The PGA charge differs by each system. North, South and NW based on the costs associated with the interstate pipelines that serve each segment of the system.<sup>1</sup>

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## Q. How are EDG's costs to deliver natural gas to its customers recovered through this rate design?

12 A. Mr. Overcast also provides a concise description of cost recovery in his testimony:

The customer charge and volumetric charge, referred to as base rate charges, recover the delivery service costs, including the costs that are incurred as a function of the number of customers and the design day demand that is placed on EDG's distribution system. Base rate costs represent the costs incurred to provide distribution service...<sup>2</sup>

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## Q. How are EDG's costs of natural gas recovered?

- 19 A. EDG recovers the cost of purchasing a supply of natural gas to meet the needs of its customers
- 20 through a Purchased Gas Adjustment ("PGA") similar to other natural gas utilities in Missouri.<sup>3</sup>

## 21 Q. How would you characterize EDG's current rate design?

22 A. I would characterize this as a volumetric rate design. The residential, small commercial firm, and

- small volume firm classes of customers each have a monthly flat customer service charge and also an
- energy charge applied to each Ccf used by the customer. EDG's remaining two classes of customers,
- 25 large volume form and large volume interruptible, have the same two rate elements (monthly
- 26 customer charge and an energy charge per Ccf) plus a billing demand charge applied to each Ccf
- used.

## 28 Q. Does EDG detail any problems with the current rate structure?

<sup>&</sup>lt;sup>1</sup> Direct Testimony of Mr. H. Edwin Overcast for Empire District Gas Company, page 23.

<sup>&</sup>lt;sup>2</sup> Ibid.

<sup>&</sup>lt;sup>3</sup> Empire District Gas Company, P.S.C. MO No. 2, Original Sheet 54 – Fourth Revised Sheet 63. Laclede Gas Company, P.S.C. MO No. 5, First Revised Sheet No. 15 – Fourth Revised 18a. Union Electric Company, P.S.C. MO No. 2, Seventh Revised Sheet 22 – Fourth Revised Sheet 29.1.

Missouri Gas Energy, P.S.C. MO No. 1, Third Revised Sheet 14 - Nineteenth Revised 24.3.

1 A. Yes. Mr. Overcast presents two categories of problems he attributes to the current, volumetric rate 2 design: problems related to economically efficient price signals; and problems related to the failure to 3 provide a reasonable opportunity to collect the authorized level of revenue. Mr. Overcast also asserts 4 that the problems in both of the categories are made worse in the context of policy objectives that 5 promote cost-effective energy conservation to address resource constraints, obtain more efficient use 6 of capital and to help manage price level and volatility risks.

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8 With regard to economically efficient price signals, Mr. Overcast states that:

When fixed costs are recovered volumetrically, customers who conserve save costs that the 10 Company does not save. As noted above, this causes more frequent rate cases and from an economic perspective wastes resources. An economically efficient price signal matches the 12 reduction in cost for the company with the reduction in cost for the consumer. In the case of 13 EDG, the cost reduction from conservation is lower PGA related costs. Any customer savings in 14 excess of the cost of gas overstates the value of conservation and results in both excess 15 investments by the customer and cross subsidies among customers.<sup>4</sup>

- 17 With regards to the failure to provide a reasonable opportunity to collect the authorized level of
- 18 revenue, Mr. Overcast states that the revenue requirement for a natural gas company is based on
- 19 operating and maintenance costs, depreciations expenses and taxes, and an allowed rate of return, and
- 20 that none of these are weather normalized. These costs do not vary based on the volume of natural
- 21 gas used by customers. Mr. Overcast supports this statement stating "This fact is recognized by
- 22 regulatory bodies because they do not weather normalize any of these costs as would be appropriate if
- the costs varied with the volume of gas consumed."<sup>5</sup> Mr. Overcast concludes that "a volumetric base 23
- 24 rate falsely suggests that a customer that reduces consumption will somehow produce a corresponding
- 25 effect on the costs of providing base rate delivery service."<sup>6</sup>
- Q. Does EDG propose a different rate design? 26

<sup>&</sup>lt;sup>4</sup> Direct Testimony of Mr. H. Edwin Overcast for Empire District Gas Company, page 26.

<sup>&</sup>lt;sup>5</sup> Direct Testimony of Mr. H. Edwin Overcast for Empire District Gas Company, page 27.

<sup>&</sup>lt;sup>6</sup> Ibid.

1 A. Yes. Attachment LW-1 details the current rate elements and the proposed rate elements for residential 2 and commercial services. EDG proposes what I would characterize as a SFV rate design for its 3 residential customers and its smaller small commercial firm customers.<sup>7</sup> The proposed rate structure 4 for these customers consists of only two elements: a flat monthly charge and the PGA. EDG is not 5 proposing a true SFV rate design for all the small commercial firm customers, large volume firm 6 customers, and large volume interruptible customers at this time. EDG proposes a rate design that 7 still includes volumetric rate elements for the recovery of costs other than cost associated with the 8 purchase of natural gas (the PGA). Mr. Overcast characterizes this as an interim step in the direction 9 of a SFV rate design for these customers.

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## III. OTHER MISSOURI UTILITIES USING A SFV RATE DESIGN

12 Q. Do other natural gas utilities in Missouri employ a SFV rate design?

13 A. Yes. The Commission approved a SFV rate design for Atmos Energy Corporation in Case No. GR-

14 2006-0387.<sup>8</sup> However, the Commission's decision on the SFV rate design was challenged in court.

15 On June 23, 2009, the Missouri Court of Appeals, Western District, filed a decision stating:

16 Due to the absence of competent and substantial evidence to support the Commission's findings 17 regarding subsidization and Atmos's cost of service, we reverse the Commission's decisions 18 adopting the SFV rate design and approving consolidation of Atmos's districts and remand those 19 matters to the Commission for further proceedings.<sup>9</sup>

<sup>&</sup>lt;sup>7</sup> EDG currently has customer classes: residential, small commercial firm, small volume firm, large volume firm, and large volume interruptible. EDG is proposing to restructure its classes into six classes: residential, small commercial firm - small, small commercial firm - medium, small commercial firm - large, large volume firm, and large volume interruptible.

<sup>&</sup>lt;sup>8</sup> In the Matter of Atmos Energy Corporation's Tariff Revision Designed to Consolidate Rates and Implement a General Rate Increase for Natural Gas Service in the Missouri Service Area of Atmos, Missouri Public Service Commission Case No. GR-2006-0387, Report and Order, Effective March 4, 2007.

<sup>&</sup>lt;sup>9</sup> In the Missouri Court of Appeals, Western District, State of Missouri, ex rel. Public Counsel, Respondent, Atmos Energy Corporation, Appellant, vs. Missouri Public Service Commission, Respondent. Appeal from the Circuit Court of Cole County, Missouri, Case WD70219, Filed: June 23, 2009

- 1 The Commission's is seeking comments regarding this remand. The filing deadline was October 30,
- $2 2009.^{10}$
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- 4 The Commission approved a SFV rate design for Missouri Gas Energy ("MGE") for residential 5 customers in GR-2006-0422.<sup>11</sup> The Commission stated:
  - ...that MGE and Staff propose a SFV design only for MGE's Residential class and not for its Small General Service class because it is more heterogeneous than the Residential class. The Commission finds MGE and Staff's arguments for a rate design that will protect MGE from the vagaries of weather to be persuasive. The Commission shall approve the SFV rate design for MGE's residential class.
- 12 This decision was also challenged in court. The Missouri Court of Appeals Southern District denied
- 13 the appeal for the SFV rate design.<sup>12</sup> MGE's SFV rate design for residential customers is currently in
- 14 effect <sup>13</sup>
- 15

## 16 <u>IV. OPINIONS OF NATIONAL ORGANIZATIONS REGARDING THE SFV RATE DESIGN</u>

## 17 Q. Have nationally recognized organizations addressed the SFV rate design?

- 18 A. Yes. Several nationally recognized organizations have addressed the SFV rate design in the context
- 19 of moving our country toward more efficient use of our energy resources. For example, the National
- 20 Action Plan for Energy Efficiency ("NAPEE") released a report entitled Customer Incentives for
- 21 Energy Efficiency Through Electric and Natural Gas Rate Design. One of the conclusions reached in
- this document is that shifting costs from volumetric to fixed charges, through rate designs such as

<sup>&</sup>lt;sup>10</sup> In the Matter of Atmos Energy Corporation's Tariff Revision Designed to Consolidate Rates and Implement a General Rate Increase for Natural Gas Service in the Missouri Service Area of Atmos, Case No. GR-2006-0387, Order Establishing Deadline for Responses, Effective October 7, 2009.

<sup>&</sup>lt;sup>11</sup> In the Matter of Missouri Gas Energy's Tariffs Increasing Rates for Gas Service Provided to Customers in the Company's Missouri Service, Missouri Public Service Commission Case No. GR-2006-0422, Report and Order, Effective March 30, 2007.

<sup>&</sup>lt;sup>12</sup> In the Missouri Court of Appeals, Southern District, State of Missouri, ex rel. Public Counsel, Relator-Appellant, vs. Missouri Public Service Commission, Respondent-Respondent; Missouri Gas Energy, A division of Southern Union Company, Plaintiff-Appellant vs. Missouri Public Service Commission, Defendant-Respondent. Appeals from the Circuit Court of Greene County, Missouri, Case Nos. SD29278 & SD29308 and SD29297 & SD29320, <sup>13</sup> Missouri Gas Energy, P.S.C. MO No. 1, Seventh Revised Sheet 25 – Third Revised 26.

- 1 straight fixed-variable, does not encourage customer energy efficiency. Fixed-rate options actually
- 2 tend to discourage customer energy efficiency. Specifically, it was stated in this publication:

This approach places all utility fixed costs in a fixed charge and all variable costs in a variable charge. Because it tends to shift costs out of volumetric charges, it tends to reduce customers' efficiency incentive, because the marginal price of additional consumption is reduced. While SFV rates are being considered to better reflect the utility's costs behind the rate, these rates do not encourage customers to change energy usage behavior or invest in efficient technologies. Such customer disincentives persist even when SFV rates are applied to individual components of the bill, such as charges for distribution service.<sup>14</sup>

- 11 Another example is a report released in March 2009 by the Ernest Orlando Lawrence Berkeley
- 12 National Laboratory ("LBNL") entitled Financial Analysis of Incentive Mechanisms to Promote
- 13 Energy Efficiency: Case Study of a Prototypical Southwest Utility. In this report, LBNL states:
- The Straight Fixed-Variable Rate Design has been proposed by a number of gas utilities and imposes a fixed charge to customers which is designed to recover all "fixed" costs.... This has the effect of stabilizing the revenues of a utility because changes in consumption by customers have much less impact on the overall amount of their bill. This rate design partially decouples a utility's revenues from its sales; however, it also has the effect of weakening the link between customers' total utility bills and their actual consumption levels, which reduces the price signal for individual consumers to conserve and undertake energy efficiency investments.<sup>15</sup>
- 22 The Regulatory Assistance Project has posted a relevant document on its website entitled Rate
- 23 Impacts and Key Design Elements of Gas and Electric Utility Decoupling: A Comprehensive Review,
- 24 states:

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It is ... possible to break the link between fixed cost recovery and ... natural gas consumption by changing how customers pay for energy utility services. In general, this is called "straight fixedvariable" rate design, in which the fixed monthly customer charge recovers all of the utility's fixed costs of service and the variable, energy-related charge, covers only the variable cost of energy. Some Commissions adopting this type of rate design have called it 'decoupling." While this rate design does break the link between sales and fixed cost recovery, it does so by greatly diminishing customer incentives to conserve or invest in energy efficiency.<sup>16</sup>

<sup>&</sup>lt;sup>14</sup> Customer Incentives for Energy Efficiency Through Electric and Natural Gas Rate Design, National Action Plan for Energy Efficiency, September 2009, http://www.epa.gov/RDEE/documents/rate\_design.pdf.

<sup>&</sup>lt;sup>15</sup> Financial Analysis of Incentive Mechanisms to Promote Energy Efficiency: Case Study of a Prototypical Southwest Utility, Ernest Orlando Lawrence Berkeley National Laboratory, LBNL-1598E, pages 6 – 7, http://escholarship.org/uc/item/7fw490d0#

<sup>&</sup>lt;sup>16</sup> Rate Impacts and Key Design Elements of Gas and Electric Utility Decoupling: A Comprehensive Review, by Pamela G. Lesh, 6/30/2009, <u>The Electricity Journal</u> Volume 22, Issue 8, October 2009, pages 65-71. http://www.raponline.org/showpdf.asp?PDF\_URL=%22/pubs/lesh-compreviewdecouplinginfoelecandgas-30june09.pdf%22

# Q. Is there a consistent assessment of the impact of SFV rate design on energy efficiency incentives for natural gas customers?

3 A. Yes. A rate design with greater fixed monthly charges and lesser volumetric charges produces less 4 impact on a customer's bill when the customer reduces his energy usage through energy efficiency 5 measures or conservation. The price signals for customers are not as strong for the natural gas 6 utility's customers, and do not incent customers to be energy efficient. Please refer to Schedule LW-7 2 for an example. Using an assumed monthly usage of 65Ccf for a residential customer on EDG's 8 south system, the calculations on LW-2 demonstrates the difference in the price signal a residential 9 customer gets from EDG's current, volumetric rate design versus EDG's proposed SFV rate design. 10 With the current rate structure, customers who reduce natural gas usage by 10% see an 8.77% 11 decrease on their monthly bill. Reduction of usage by 15% results in a 13.15% reduction of a 12 monthly bill, and a 25% reduction in usage results in a 21.92 reduction in the monthly bill. Using the 13 EDG's proposed rates for a residential customer on the south system, the reductions to the monthly 14 bill corresponding to the reductions in usage are much less: a 10% reduction in usage garners a 6.23% 15 reduction of the monthly bill; a 15% reduction in usage results in a 9.36% reduction of the monthly 16 bill; and a 25% reduction in usage generates a reduction to the monthly bill of 15.59%.

# Q. Does the SFV rate design have an impact on the incentive to a utility company regarding energy efficiency and conservation?

A. Yes, it does. The SFV does not create an incentive for the natural gas utility to invest in energy efficiency, but it does remove a disincentive to energy efficiency investment. When a utility recovers
a significant amount of its costs through volumetric rates, there is no reason for a utility to aggressively pursue energy efficiency measures. As Mr. Overcast stated in his direct testimony, "[w]hen fixed costs are recovered volumetrically, customers who conserve save costs that the Company does not save." The SFV rate design, however, stabilizes the recovery of the utility's costs

| 1                          | through flat, monthly rates rather than usage sensitive rates. A utility using a SFV rate design is not  |
|----------------------------|--|
| 2                          | as energy efficiency averse as a utility employing a volumetric rate design to recover its costs.  |
| 3                          | Q. Do nationally recognized organizations recognize and support removing disincentives for   |
| 4                          | utilities to promote energy efficiency?  |
| 5                          | A. Yes. In particular, the National Association of Regulatory Utility Commissioners ("NARUC") has  |
| 6                          | addressed the removal of disincentives for natural gas utilities to invest in energy efficiency. In July   |
| 7                          | of 2004, NARUC adopted a resolution submitted by the American Gas Association ("AGA") and the  |
| 8                          | Natural Resources Defense Council ("NRDC") entitled Joint Statement of the American Gas  |
| 9                          | Association and the Natural Resources Defense Council ("Joint Statement"). In the Joint Statement,   |
| 10                         | AGA and NRDC stated that:  |
| 11<br>12<br>13<br>14<br>15 | many states' rate structures offer – quite unintentionally – a significant financial disincentive for natural gas utilities to aggressively encourage their customers to use less natural gas, such as by providing financial incentives and education to promote energy-efficiency and conservation techniques. <sup>17</sup> |
| 16                         | and  |
| 17<br>18<br>19<br>20       | Our shared objective is to give utilities real incentives to encourage conservation and energy efficiency. With properly designed programs, the benefits could be significant and widespread <sup>18</sup>   |
| 21                         | The Joint Statement was reviewed and endorsed by the Alliance to Save Energy ("ASE") and the   |
| 22                         | American Council of an Energy Efficient Economy ("ACEEE"). NARUC's adopted Resolution on   |
| 23                         | Gas and Electric Energy Efficiency "encourage[d] State Commissions to review and consider the  |
| 24                         | recommendations contained in the Joint Statement of the American Gas Association, the Natural  |
| 25                         | Resources Defense Council, and the American Council for an Energy Efficient Economy". <sup>19</sup>  |
| 26                         |  |

<sup>&</sup>lt;sup>17</sup> Joint Statement of the American Gas Association and the Natural Resources Defense Council, Submitted to the National Association of Regulatory Utility Commissioners, July 2004, page 2.

http://ase.org/imgs/lib/e-FFICIENCY/joint\_AGA\_NRDC\_NARUC\_statement.pdf

<sup>&</sup>lt;sup>18</sup> Joint Statement of the American Gas Association and the Natural Resources Defense Council, Submitted to the National Association of Regulatory Utility Commissioners, July 2004, page 3.

http://ase.org/imgs/lib/e-FFICIENCY/joint\_AGA\_NRDC\_NARUC\_statement.pdf <sup>19</sup> Resolution on Gas and Electric Energy Efficiency. Adopted by the NARUC Board of Directors, July 14, 2004.

1 On November 16, 2005, NARUC adopted another pertinent resolution entitled *Resolution on Energy* 2 *Efficiency and Innovative Rate Design*. In this resolution, NARUC "encourages State commissions 3 and other policy makers to review the rate designs they have previously approved to determine 4 whether they should be reconsidered in order to implement innovative rate designs that will 5 encourage energy conservation and energy efficiency that will assist in moderating natural gas 6 demand and reducing upward pressure on natural gas prices...."<sup>20</sup>

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In May 2008, AGA and NRDC issued a Second Joint Statement of the American Gas Association and
 the Natural Resources Defense Council (Second Joint Statement). The Second Joint Statement

10 supports three common objectives:

1) removing disincentives for utilities to promote energy efficiency and reduce greenhouse gas emissions, and uniting to achieve increased savings through programs and standards;

- 13 2) developing performance-based incentives for utilities to promote energy efficiency and
   reduced greenhouse gas emissions; and
   15 3) recognizing the potential contributions of efficient natural gas use in promoting reduced
  - 3) recognizing the potential contributions of efficient natural gas use in promoting reduced greenhouse gas emissions.
- 18 As with AGA and NRDC's original Joint Statement submitted in 2004, this Second Joint Statement
- 19 was reviewed and endorsed by ASE and ACEEE. NARUC adopted a resolution on Second Joint
- 20 Statement of AGA and NRDC stating it "encourages commissions to consider the principles and
- 21 recommendations set out in the Second Joint Statement of the American Gas Association and the

22 Natural Resources Defense Council and encourages State Commissions and other policymakers to

- 23 review and give strong consideration to favorably approving gas distribution proposals consistent
- 24 with these principles and recommendations.<sup>21</sup>

## 25 Q. Can you summarize the different impacts of rate design on customer and utility incentives to

- 26
- invest in energy efficiency?

<sup>20</sup> Resolution on Energy Efficiency and Innovative Rate Design, http://fossil.energy.gov/epact/Section\_1818/AGA\_supp\_energyefficiency\_(2).pdf A. Yes. A natural gas customer has a greater incentive to invest in energy efficiency measures when
rates are more volumetric than flat. Volumetric rate designs provide customers with a stronger price
signal than a SFV rate design. However, a natural gas utility that is recovering costs through
volumetric rates has a disincentive to invest in energy efficiency. The SFV rate design mitigates that
disincentive by lowering the threat of failing to recover costs and approved return on investment
when volumes decrease.

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## V. RECOMMENDATION TO ALLOW A SFV RATE DESIGN ONLY IF ENERGY

## **EFFICIENCY FUNDING IS SIGNIFICANT**

10 Q. What do you recommend to reconcile the reduced customer incentive with the reduced utility

## 11 disincentive to invest in energy efficiency created by the SFV rate design?

12 A. The SFV rate design is being employed in Missouri already by two natural gas utilities: MGE and

13 Atmos (although under remand). In both cases, the companies agreed to invest in energy efficiency

14 to help and encourage customers to use natural gas energy more efficiently. In the Commission's

15 Report and Order in GR-2006-0387, Atmos' 2006 rate case, the Commission stated:

16Based on the specific facts in this case, the Commission finds that placing all non-gas costs into a17fixed delivery charge, within the context of a zero revenue increase and the consolidation of the18operating districts into three service areas (NEMO, WEMO, and SEMO) will provide for just and19reasonable rates *if* it is accompanied by a meaningful energy efficiency and conservation program20as described above. ... If Atmos chooses to enter into a significant energy efficiency and21conservation program as set out in this order to be approved by the Commission, it may file tariffs22including a fixed delivery charge rate design.<sup>22</sup>

<sup>&</sup>lt;sup>21</sup> Resolution on Second Joint Statement of the American Gas Association and the Natural Resources Defense Council in Support of Measures to Promote Increased Energy Efficiency and Reduction in Greenhouse Gas Emissions. Adopted by the NARUC Board of Directors, July 23, 2008.

<sup>&</sup>lt;sup>22</sup> In the Matter of Atmos Energy Corporation's Tariff Revision Designed to Consolidate Rates and Implement a General Rate Increase for Natural Gas Service in the Missouri Service Area of Atmos, Missouri Public Service Commission Case No. GR-2006-0387, Report and Order, Effective March 4, 2007, page 44.

| 1                      | On June 28, 2007, Atmos filed tariff sheets to implement Energy Conservation and Efficiency   |
|------------------------|---|
| 2                      | Program, and the Commission approved the tariff sheets effective August 31, 2007. <sup>23</sup>   |
| 3                      |   |
| 4                      | The Commission approved a SFV rate design for MGE's residential customers in MGE's 2007 rate  |
| 5                      | case, GR-2006-0422. In the Report and Order in this rate case, the Commission stated that:  |
| 6<br>7<br>8<br>9<br>10 | Currently, MGE has an incentive to sell more gas to at least recover its costs. The current rate design therefore discourages natural gas conservation efforts on the part of the company. If the SFV design is adopted, the company is committed to offering several natural gas conservation initiatives. <sup>24</sup> |
| 11                     | An investment in an aggressive portfolio of energy efficiency of programs will mitigate the weaker  |
| 12                     | price signals a customer receives from monthly bills issued by a natural gas utility employing a SFV  |
| 13                     | rate design. The natural gas company will not be harmed by reduced natural gas usage attributable to  |
| 14                     | energy efficiency measures with the SFV rate design.  |
| 15                     | Q. Do you recommend an aggressive energy efficiency portfolio for EDG to invest?  |
| 16                     | A. Yes. Please refer to my Direct Testimony regarding Revenue Requirement filed in this case. An  |
| 17                     | array of programs making up the portfolio are detailed in that testimony, as is the investment levels of  |
| 18                     | approximately \$217,000 for 2010, approximately \$327,000 for 2011, and approximately \$655,000 for   |
| 19                     | 2012. This level of investment in energy efficiency is appropriate for EDG regardless of the rate   |
| 20                     | design employed. The impact of the SFV rate design on customers' incentive to invest in energy  |
| 21                     | efficiency, and the removal of the disincentive for the utility to invest in energy efficiency the SFV  |
| 22                     | rate design provides, provide additional support to the investment level I have recommended.  |
| 23                     |   |

 <sup>&</sup>lt;sup>23</sup> In the Matter of Atmos Energy Corporation's Tariff Revision Designed to Consolidate Rates and Implement a General Rate Increase for Natural Gas Service in the Missouri Service Area of Atmos, Missouri Public Service Commission Case No. GR-2006-0387, Order Approving Tariff Sheets in Compliance with Report and Order, Effective August 31, 2007.
 <sup>24</sup> In the Matter of Missouri Gas Energy's Tariffs Increasing Rates for Gas Service Provided to Customers in the

<sup>&</sup>lt;sup>24</sup> In the Matter of Missouri Gas Energy's Tariffs Increasing Rates for Gas Service Provided to Customers in the Company's Missouri Service, Missouri Public Service Commission Case No. GR-2006-0422, Report and Order, Effective March 30, 2007, page 11.

## Q. Does this conclude your testimony?

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2 A. Yes, it does.

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

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In the matter of The Empire District Gas Company of Joplin, Missouri for **)**; authority to file tariffs increasing rates ) for gas service provided to customers ) in the Missouri service area of the Company

Case No. GR-2009-0434

## AFFIDAVIT OF LAURA WOLFE

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| STATE OF MISSOURI | )   | 1.85  |
|-------------------|-----|-------|
| CITY OF JEFFERSON | •)• | 1.000 |

Laura Wolfe, of lawful age, being duly sworn on his oath, deposes and states:

- 1. My name is Laura Wolfe. I work in the City of Jefferson, Missouri, and I am employed by the Missouri Department of Natural Resources as Senior Planner, Missouri Energy Center, Office of the Director.
- 2. Attached hereto and made a part hereof for all purposes is my Direct Testimony on behalf of the Missouri Department of Natural Resources - Missouri Energy Center consisting of 13 pages all of which have been prepared in written form for introduction into evidence in the above-referenced docket.
- 3. Thereby 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

โลกกัส

ay of November, 2009 Subscribed and sworn to before me this.

Notary Public My commission expires:

KAY A. JOHANNRETER Notary Public - Notary Seal STATE OF MISSOURI Moniteau County My Commission Expires: Aug. 4, 2011 Commission # 07551967



## Empire District Gas Company Rate Case 2009 - GR-2009-0434 Comparison of Current Rate Schedules and Proposed Rate Schedules

## Residential

## Residential

**Proposed Rate Elements** 

## **Current Rate Elements**

|                           |               | System        |               |
|---------------------------|---------------|---------------|---------------|
|                           | South         | North         | Northwest     |
| Customer Charge per Month | \$<br>9.50    | \$<br>9.50    | \$ 7.00       |
| Energy Charge per Ccf     | \$<br>0.27370 | \$<br>0.27370 | \$<br>0.26540 |
| PGA                       | \$<br>0.76489 | \$<br>0.79004 | \$<br>0.73323 |

#### System South North Northwest Delivery Service Charge per \$ \$ Month 30.00 30.00 \$ 30.00 \$ \$ \$ PGA 0.76489 0.73323 0.79004

Small Commercial Firm (Non-residential firm customers with annual usage less than 5,000 Ccf)

Small Commercial Firm-Small (Non-residential firm customers with annual usage less than 5,000 Ccf)

## **Current Rate Elements**

## **Proposed Rate Elements**

|                           |               | System        |               |
|---------------------------|---------------|---------------|---------------|
|                           | South         | North         | Northwest     |
| Customer Charge per Month | \$<br>17.40   | \$<br>17.40   | \$ 13.50      |
| Energy Charge per Ccf     | \$<br>0.27370 | \$<br>0.27370 | \$<br>0.25000 |
| PGA                       | \$<br>0.76489 | \$<br>0.79004 | \$<br>0.73323 |

|                             | System  |         |           |
|-----------------------------|---------|---------|-----------|
|                             | South   | North   | Northwest |
| Delivery Service Charge per | \$      | \$      |           |
| Month                       | 64.00   | 64.00   | \$ 64.00  |
|                             | \$      | \$      | \$        |
| PGA                         | 0.76489 | 0.79004 | 0.73323   |

## Empire District Gas Company Rate Case 2009 - GR-2009-0434 Comparison of Current Rate Schedules and Proposed Rate Schedules

Small Volume Firm (Non-residential firm customers with annual usage of at least 5,000 Ccf but less than 40,000 Ccfs)

## **Current Rate Elements**

|                           |               | System        |               |
|---------------------------|---------------|---------------|---------------|
|                           | South         | North         | Northwest     |
| Customer Charge per Month | \$<br>50.00   | \$<br>50.00   | \$ 40.00      |
| Energy Charge per Ccf     | \$<br>0.22790 | \$<br>0.22790 | \$<br>0.22500 |
| PGA                       | \$<br>0.76489 | \$<br>0.79004 | \$<br>0.73323 |

Small Commercial Firm-Medium (Non-residential firm customers with annual usage at least 5,000 Ccf but less than 20,000 Ccf)

## **Proposed Rate Elements**

|                             | System  |         |           |
|-----------------------------|---------|---------|-----------|
|                             | South   | North   | Northwest |
| Delivery Service Charge per | \$      | \$      | \$        |
| Month                       | 110.00  | 110.00  | 110.00    |
| Delivery Charge per Ccf     | \$      | \$      | \$        |
|                             | 0.11000 | 0.11000 | 0.11000   |
| PGA                         | \$      | \$      | \$        |
|                             | 0.76489 | 0.79004 | 0.73323   |

Small Commercial Firm-Large (Non-residential firm customers with annual usage at least 20,000 Ccf but less than 40,000 Ccf)

## **Proposed Rate Elements**

|                             | System  |         |           |
|-----------------------------|---------|---------|-----------|
|                             | South   | North   | Northwest |
| Delivery Service Charge per | \$      | \$      | \$        |
| Month                       | 200.00  | 200.00  | 200.00    |
| Delivery Charge per Ccf     | \$      | \$      | \$        |
|                             | 0.11000 | 0.11000 | 0.11000   |
| PGA                         | \$      | \$      | \$        |
|                             | 0.76489 | 0.79004 | 0.73323   |

## Empire District Gas Company Rate Case 2009 - GR-2009-0434 Comparison of Current Rate Schedules and Proposed Rate Schedules

Large Volume Firm (Annual natural gas requirements at a single address or location equal or exceed 40,000 Ccf)

## **Current Rate Elements**

|                           | System  |         |           |
|---------------------------|---------|---------|-----------|
|                           | South   | North   | Northwest |
| Customer Charge per Month | \$      | \$      | \$        |
|                           | 215.00  | 215.00  | 200.00    |
| Energy Charge per Ccf     | \$      | \$      | \$        |
|                           | 0.02885 | 0.02885 | 0.04850   |
| Billing Demand per Ccf    | \$      | \$      | \$        |
|                           | 0.40000 | 0.40000 | 0.40000   |
| PGA                       | \$      | \$      | \$        |
|                           | 0.76489 | 0.79004 | 0.73323   |

Large Volume Interruptible (Annual natural gas requirements at a single address or location equal or exceed 40,000 Ccf)

## **Current Rate Elements**

|                           | System  |         |           |  |  |  |  |
|---------------------------|---------|---------|-----------|--|--|--|--|
|                           | South   | North   | Northwest |  |  |  |  |
|                           | \$      | \$      | \$        |  |  |  |  |
| Customer Charge per Month | 215.00  | 215.00  | 200.00    |  |  |  |  |
|                           | \$      | \$      | \$        |  |  |  |  |
| Energy Charge per Ccf     | 0.02885 | 0.02885 | 0.04850   |  |  |  |  |
|                           | \$      | \$      | \$        |  |  |  |  |
| Billing Demand per Ccf    | 0.40000 | 0.40000 | 0.40000   |  |  |  |  |
|                           | \$      | \$      | \$        |  |  |  |  |
| PGA                       | 0.60091 | 0.61798 | 0.66358   |  |  |  |  |

Large Volume Firm (Annual natural gas requirements at a single address or location equal or exceed 40,000 Ccf)

## Proposed Rate Elements

|                             | System  |         |           |  |  |  |  |
|-----------------------------|---------|---------|-----------|--|--|--|--|
|                             | South   | North   | Northwest |  |  |  |  |
| Delivery Service Charge per | \$      | \$      | \$        |  |  |  |  |
| Month                       | 400.00  | 400.00  | 400.00    |  |  |  |  |
| Delivery Charge per Ccf     | \$      | \$      | \$        |  |  |  |  |
|                             | 0.02000 | 0.02000 | 0.02000   |  |  |  |  |
| Demand Charge per Ccf       | \$      | \$      | \$        |  |  |  |  |
|                             | 0.60000 | 0.60000 | 0.60000   |  |  |  |  |
| PGA                         | \$      | \$      | \$        |  |  |  |  |
|                             | 0.76489 | 0.79004 | 0.73323   |  |  |  |  |

Large Volume Interruptible (Annual natural gas requirements at a single address or location equal or exceed 40,000 Ccf)

## **Proposed Rate Elements**

|                             | System  |                  |           |  |  |  |  |
|-----------------------------|---------|------------------|-----------|--|--|--|--|
|                             | South   | North            | Northwest |  |  |  |  |
| Delivery Service Charge per | \$      | \$               | \$        |  |  |  |  |
| Month                       | 400.00  | 400.00           | 400.00    |  |  |  |  |
| Delivery Charge per Ccf     | \$      | \$               | \$        |  |  |  |  |
|                             | 0.02000 | 0.02000          | 0.02000   |  |  |  |  |
| Demand Charge per Ccf       | \$      | \$               | \$        |  |  |  |  |
|                             | 0.60000 | 0.60000          | 0.60000   |  |  |  |  |
| PGA                         | \$      | \$               | \$        |  |  |  |  |
|                             | 0.60091 | 0. <u>61</u> 798 | 0.66358   |  |  |  |  |

## Laura Wolfe

## **Prior Career Experience:**

## State of Missouri, Missouri Public Service Commission

## Utility Policy Analyst I.....November 2002 – April 2007

I was responsible for monitoring the activities of interstate pipelines that provide natural gas to communities in the State of Missouri, assessing the impact of the activities upon the natural gas rates of Missouri citizens, and advising the Missouri Public Service Commission of appropriate positions and actions to take in response. I designed and developed several models using Excel, most notably an interactive model to quickly calculate the Cost of Service and Rate of Return for a rate of return regulated interstate pipeline.

## Sprint

#### **Docket Manager**......February 2001 – October 2002

I was responsible for monitoring all telecommunications regulatory activities in Missouri and Kansas, and assessing Sprint's need to participate in various cases, dockets, and industry forums in both states. I represented Sprint during discussions and negotiations with regulatory commission staffs, and coordinated all activities related to participation in dockets and cases, including preparation of draft pleadings, correspondence, etc. Most cases involved the coordination of a multidiscipline team of economists, attorneys, engineers, billing and services specialists, tariff managers, etc.

## Costing Administrator.....October 1999 – February 2001

I was responsible for performing all cost studies and analysis of Sprint inter-office transport networks. I gathered all necessary inputs and processed those inputs through Sprint's forward-looking network cost model. I created a comprehensive, internal user's manual for that module. I also analyzed cost studies created by other telecommunications companies, and created an add-on module to the Sprint's forward-looking network cost model to calculate the costs for High Capacity Loops.

## 

I prepared technical documents for competitive local telecommunications companies and inter-exchange telecommunications companies. I also advised new entrants in the telecommunications industry in Missouri regarding commission rules and processes.

## State of Missouri, Missouri Department of Labor and Industrial Relations

## Special Project Manager.....January 1999 – August 1999

I managed the transition of the Missouri Adaptive Telephone Equipment Program from the MoPSC to DOLIR. I re-established the policies and procedures of the program, renegotiated vendor contracts, and completed a seamless transition of the program from the PSC to DOLIR.

## State of Missouri, Missouri Public Service Commission

## Utility Regulatory Auditor III.....July 1996 – January 1999

My primary responsibility was as the Administrator of Relay Missouri and the Missouri Adaptive Telephone Equipment Program. I managed the budget administration, program expenditure projections, funding analysis, contract administration, and advisory committee coordination. My other responsibilities included evaluating telecommunications filings for the Commission, preparing recommendations to the Commission, and appearing as an expert witness for the Staff via written testimony and in-person cross examination of testimony on the stand during proceedings.

## State of Missouri, Office of Missouri State Treasurer

## Senior Compliance Auditor.....April 1995 – July 1996

I performed all audits necessary for the Investments Division. Primarily, I performed compliance audits of banks and borrowers participating in the Missouri Linked Deposit Program. I also performed periodic audits of the State of Missouri's Federal Reserve Accounts.

## State of Missouri, Department of Economic Development, Professional Registration

Real Estate Examiner.....August 1993 – March 1995

I performed compliance audits of licensed real estate brokers in the State of Missouri. These audits sought to verify compliance with rules and statutes related to proper agency notice, business practices, and management of escrow accounts.

## State of Missouri, Missouri Public Defender System

Purchasing and Property Specialist.....August 1989 – April 1993

I managed all purchasing activities for this state agency. This included the purchase of all expendable supplies, expendable property, and service contracts. I was also responsible for coordinating the opening of several new public defender offices, and I was the facility manager of the Public Defender Complex in Columbia, Missouri.

## State of Missouri, Office of Administration, Division of Accounting

Accounting Analyst......September 1985 – August 1989

I was responsible for the financial reporting of a series of refunding bonds for the State of Missouri. I also managed the Non-expendable Inventory System for the Office of Administration, and assisted in the annual preparation of the Office of Administration budget request.

## Empire District Gas Company Rate Case 2009 - GR-2009-0434 Sensitivity of Rate Design to Usage Reductions – Residential Customer

Sample Monthly Usage



#### South System - Current Design

|                           |     |           |     |           | Use Reduction |            |                     |              |       |                     |              |               |                     |  |  |
|---------------------------|-----|-----------|-----|-----------|---------------|------------|---------------------|--------------|-------|---------------------|--------------|---------------|---------------------|--|--|
|                           |     |           |     |           | 10%           |            |                     | 15%          |       |                     | 25%          |               |                     |  |  |
| Current Rate Elements     | Cui | rent Rate | Mon | thly Bill | Mon           | ithly Bill | % Bill<br>Reduction | Monthly Bill |       | % Bill<br>Reduction | Monthly Bill |               | % Bill<br>Reduction |  |  |
| Customer Charge per Month | \$  | 9.50      | \$  | 9.50      | \$            | 9.50       |                     | \$           | 9.50  |                     | \$           | 9.50          |                     |  |  |
| Energy Charge per Ccf     |     | 0.27370   |     | 17.79     |               | 16.01      |                     |              | 15.12 |                     |              | 1 <u>3.34</u> |                     |  |  |
| Total PGA per Ccf         |     | 0.76489   |     | 49.72     | <u> </u>      | 44.75      |                     |              | 42.26 |                     | [            | 37.29         |                     |  |  |
|                           |     |           | \$  | 77.01     | \$            | 70.26      | 8.77%               | \$           | 66.88 | 13.15%              | \$           | 60.13         | 21.92%              |  |  |

South System - Proposed Design

|                                   |               |     |           | Use Reduction |       |                     |              |       |                         |     |            |                     |
|-----------------------------------|---------------|-----|-----------|---------------|-------|---------------------|--------------|-------|-------------------------|-----|------------|---------------------|
|                                   |               |     |           |               | 10%   |                     |              | 15    | 5%                      | 25% |            |                     |
| Proposed SFV Rate Elements        | Proposed Rate | Mor | thly Bill | Monthly Bill  |       | % Bill<br>Reduction | Monthly Bill |       | % Bill % Bill Reduction |     | nthly Bill | % Bill<br>Reduction |
| Delivery Service Charge per Month | \$ 30.00      | \$  | 30.00     | \$            | 30.00 |                     | \$           | 30.00 |                         | \$  | 30.00      |                     |
| Total PGA per Ccf                 | 0.76489       |     | 49.72     |               | 44.75 |                     |              | 42.26 |                         |     | 37.29      |                     |
|                                   |               | \$  | 79.72     | \$            | 74.75 | 6.23%               | \$           | 72.26 | 9.36%                   | \$  | 67.29      | 15.59%              |