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Witness:	John A. Buchanan
Sponsoring Party:	Missouri Department of Natural Resources - Missouri Energy Center
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**MISSOURI PUBLIC SERVICE COMMISSION**

**LACLEDE GAS COMPANY**

**CASE NO. GR-2007-0208**

**DIRECT TESTIMONY**

**OF**

**JOHN A. BUCHANAN**

**ON**

**BEHALF OF**

**MISSOURI DEPARTMENT OF NATURAL RESOURCES**

**ENERGY CENTER**

Jefferson City, Missouri  
May 4, 2007

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1 **I. INTRODUCTION**

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

3 A. John A. Buchanan, Missouri Department of Natural Resources, Missouri Energy Center,  
4 1101 Riverside Drive, Jefferson City, Missouri.

5 **Q. What is the Missouri Energy Center?**

6 A. The Missouri Energy Center (EC) is a division within the Missouri Department of Natural  
7 Resources (DNR) and is the designated state energy office in Missouri responsible for the  
8 administration of the federal Low Income Weatherization Assistance Program (LIWAP) and  
9 the federal State Energy Program (SEP) established by the United States Congress in 1978,  
10 which is managed nationally by the United States Department of Energy (USDOE). The SEP  
11 consists of several statewide energy efficiency programs administered by the EC and funded  
12 by the USDOE.

13 The DNR is vested with the powers and duties set forth in Chapter 640.150, RSMo.

14 **What is your position with the Missouri Energy Center?**

15 A. I am a Senior Planner in the EC's Energy Policy and Planning Program at the Missouri  
16 Department of Natural Resources.

17 **Q. On whose behalf are you testifying?**

18 A. I am testifying on behalf of the Missouri Department of Natural Resources, an intervenor in  
19 these proceedings.

20 **Q. Please describe your educational background and business experience.**

21 A. I joined the Missouri Department of Natural Resources, Division of Energy, now the Energy  
22 Center, in July of 1980 as director of the Missouri Residential Conservation Service  
23 Program. In 1986, I was promoted to serve as the Senior Energy Planner within the

1 Director's Office at the Division of Energy. In this capacity, I was involved in a variety of  
2 programs and projects addressing energy, environmental, and natural resource issues. In  
3 October 1995, I was appointed as a Senior Energy Planner within the Policy and Planning  
4 Unit at the Division of Energy where my responsibilities include preparation of testimony  
5 filed in general rate or other cases by the DNR before the Missouri Public Service  
6 Commission (Commission), energy efficiency program design and development, energy  
7 emergency planning, energy supply and price monitoring and energy-related policy  
8 development. Prior to my employment with the Department of Natural Resources, I served as  
9 Special Assistant to the Mayor, City of Columbia, Missouri for two years. I have a Bachelor  
10 of Arts degree in Political Science from Columbia College. I am a former Fellow of the  
11 University of Missouri, where I received a Master of Science in Public Administration.

## 12 **II. PURPOSE AND SUMMARY OF TESTIMONY**

### 13 **Q. What is the purpose of your direct testimony in these proceedings?**

- 14 A. The purpose of my testimony is to address natural gas related energy efficiency issues with  
15 respect to Laclede Gas Company (Laclede). I will specifically offer testimony regarding:
- 16 (1) Establishing a formal working collaborative group to assist and expand Laclede's energy  
17 efficiency efforts to help meet its goal of reducing natural gas consumption that could  
18 lead to a reduction in natural gas costs;
- 19 (2) Recommending additional investments by Laclede to design, implement and evaluate  
20 successful energy efficiency programs for residential, commercial and industrial  
21 customers;
- 22 (3) Addressing the proposed Regulatory Compact with a focus on Laclede's proposed  
23 Conservation Incentive Program (CIP) as described in the Direct Testimony filed by Mr.

1 Kenneth J. Neises; and,

2 (4) Addressing conservation and energy incentive programs that were approved by the

3 Commission in Laclede's last rate case, GR-2005-0284, and as described in the Direct

4 Testimony filed by Mr. Theodore B. Reinhart, P.E..

5 **III. ENERGY EFFICIENCY PROGRAM DEVELOPMENT AND IMPLEMENTATION**

6 **Q. What recommendations do you have regarding energy efficiency programs for**  
7 **Laclede?**

8 A. To assist Laclede in its efforts to fully facilitate the identification, design and implementation  
9 of appropriate energy efficiency programs designed to reduce natural gas consumption by its  
10 customers and potentially lead to reductions in natural gas wholesale costs, the EC  
11 recommends that the Commission:

- 12 (1) Approve the establishment of a formal working collaborative group consisting of  
13 representatives from Laclede, Staff, OPC, the EC and other interested parties that have  
14 intervened in this rate case to coordinate energy-efficiency activities undertaken by  
15 Laclede.
- 16 (2) Authorize the collaborative to formulate and issue within 120 days of the effective date of  
17 the Report and Order related to GR-2007-0208 a Request for Proposal (RFP) to contract  
18 with a professional energy efficiency consultant to guide the collaborative and Laclede in  
19 the analysis and identification of cost-effective energy efficiency programs. The Order  
20 should further direct that the consultant be retained within 180 days from the date of  
21 issuance of the RFP.
- 22 (3) Authorize the collaborative to issue one or more RFPs and contract for the design,  
23 implementation and evaluation of all energy efficiency programs undertaken by Laclede.

- (4) Require Laclede to commit to adequate funding to implement the energy efficiency programs identified by the consultants in coordination with the collaborative and which are determined to be cost effective. Annual funding levels should begin at 0.5 percent of Laclede's annual operating revenues (which would be a funding level of approximately \$4 million) by 2009 and increase to 1.0 percent of its annual operating revenues (or a funding level of approximately \$8 million) by 2012.
- (5) Authorize all costs related to the design, implementation and evaluation of cost-effective energy efficiency programs to be eligible for inclusion in a regulatory asset account as used by other Missouri utilities.
- (6) Require Laclede, in consultation with the collaborative, to report progress to the Commission and the collaborative regarding its energy efficiency program design and implementation on a regularly scheduled basis to be recommended by the collaborative until such time as the collaborative formally recommends to the Commission a specific end date for such reports. Laclede should continue to provide program details, data and updates on a regularly scheduled basis to the collaborative.
- (7) Maintain the current status of the Appliance and HVAC Rebate Program for a period of no less than 18 additional months (or until such time as the energy efficiency program development analysis process is completed) with the assistance and coordination of the collaborative group, using the outstanding balance of funds collected for the program. Transition funding for this program would be handled as part of the regulatory asset account cost recovery method.
- (8) Authorize Laclede to transfer annually the sum of no less than \$951,000 to the DNR Environmental Improvement and Energy Resources Authority (EI ERA) to be used for

1 the Low-Income Weatherization Assistance Program (LIWAP). The DNR Energy  
2 Center proposes to manage the LIWAP on behalf of Laclede, including communications  
3 with EIERA about the appropriate release of funds to LIWAP subgrantees.

4 The EC is proposing that funding for the LIWAP continue to be rate based, and, therefore  
5 would not be included in the annual funding levels proposed in EC recommendation (4),  
6 above.

7 **Q. Does Laclede propose energy efficiency programs in this case?**

8 A. Yes. Laclede is recommending the continuation of programs established in its last rate case,  
9 GR-2005-0284, and a new Conservation Improvement Program (CIP). Laclede expresses its  
10 support for energy efficiency programs and its desire to send pricing signals to the upstream  
11 commodity markets by reducing gas consumption, “which hopefully will create downward  
12 demand pressure on the market and help to lower prices for all customers.” (Direct  
13 Testimony, Theodore Reinhart, page 6, lines 8-15)

14 **Q. Do you agree that reductions in natural gas consumption could result in downward**  
15 **pressure on the wholesale market and help to lower natural gas prices?**

16 A. Yes. According to a recent study completed by the American Council for an Energy-  
17 Efficient Economy (ACEEE), reductions in natural gas consumption could result in  
18 wholesale natural gas price reductions. Because of the very tight and volatile U.S. natural  
19 gas market, the study estimated that a reduction of about 1 percent per year in total U.S. gas  
20 demand could potentially result in wholesale natural gas price reductions of 10 to 20 percent.  
21 The study identifies new energy policies and additional funding for energy efficiency  
22 programs necessary to achieve savings significant enough to reduce the wholesale price of  
23 natural gas as well as to generate direct cost savings to natural gas consumers. The study

1 estimated an annual energy efficiency investment by each of the 8 Midwest states, including  
2 Missouri, based on each state's proportional allocation of total projected regional natural gas  
3 savings in 2010. From a regional perspective, in order to reduce natural gas demand  
4 sufficiently to pressure wholesale prices downward, the study roughly estimated that  
5 Missouri would be required to expend approximately \$12 million per year for natural gas  
6 related energy efficiency programs through the year 2020. The study estimates that the  
7 dollar savings impact of the associated natural gas price reductions from this level of  
8 investment would be approximately \$921 million for Missouri by 2015 and an additional  
9 \$847 million by the year 2020.<sup>1</sup>

10 **Q. Will Laclede's proposed investment in energy efficiency programs send sufficient price**  
11 **signals to pressure wholesale prices lower?**

12 A. No, I do not believe that the energy efficiency funding levels proposed by Laclede will result  
13 in sufficient savings to contribute to lower wholesale natural gas prices. As I noted earlier in  
14 my testimony, a more significant level of investment in energy efficiency is required to  
15 potentially pressure natural gas wholesale prices lower. I am not suggesting that Laclede  
16 alone can have a significant impact on wholesale prices through its energy efficiency  
17 programs, but Laclede can and should contribute in a more meaningful way toward a  
18 regional reduction in natural gas consumption.

19 **Q. Is there data to support the level of energy efficiency investments that would result in**  
20 **direct benefits to natural gas customers, the utility, shareholders and potentially**  
21 **pressure wholesale prices lower?**

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<sup>1</sup> Examining the Potential for Energy Efficiency To Help Address the Natural Gas Crisis in the Midwest, January 2005, Report Number U051, American Council for an Energy-Efficient Economy



1 A. Yes. In addition to the American Council on an Energy-Efficient Economy study, the  
2 National Action Plan for Energy Efficiency sponsored by the USDOE and the United States  
3 Environmental Protection Agency and prepared by 50 leading organizations, including a  
4 variety of natural gas companies, among them PG&E, the source of Laclede's Fixed Price  
5 Program, noted the most effective energy efficiency projects were funded at a level equal to a  
6 minimum range of 0.5 to 1.5 percent of a natural gas utility's annual operating revenue.<sup>2</sup>  
7 Based on the 2005 annual operating revenues reported by Laclede, the minimum level of  
8 annual energy efficiency program investments should be approximately \$4 to \$12.2 million.

9 **Q. What level of energy efficiency funding should the Commission consider for Laclede?**

10 A. The EC recommends an annual amount beginning in 2009 at 0.5 percent of Laclede's  
11 operating revenue (approximately \$4 million) and increasing to 1.0 percent (approximately  
12 \$8 million) by 2012 to implement cost-effective energy efficiency programs for its  
13 customers.

14 **Q. How should the Commission treat these energy investment funds?**

15 A. All energy efficiency funds expended by Laclede should be treated as a cost of providing  
16 service by Laclede. Laclede should report such expenditures to a regulatory asset account.  
17 Laclede should be allowed to amortize these costs over a ten (10)- year period. Laclede  
18 should be authorized to include such costs in its application to recover these and similar  
19 expenditures in a future rate case at which time the Commission would evaluate whether the  
20 costs were incurred in a prudent, just and reasonable manner.

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<sup>2</sup> National Action Plan for Energy Efficiency, July 2006

1 **Q. Has the staff of the Commission recommended this method of cost recovery?**

2 A. Yes. Staff witness, Lena Mantle, Manager of the Energy Department, Utility Operations  
3 Division, Missouri Public Service Commission, proposed this cost recovery process in  
4 AmerenUE's last natural gas rate case, GR-2007-0003, as well as AmerenUE's electric rate  
5 case, ER-2007-0002 (Direct Testimony, Lena Mantle, GR-2007-0003, page 2, lines 13-23;  
6 page 3, lines 1-21; page 4, lines 1-23 and page 5, lines 1-4). In addition, the Commission has  
7 approved this method of cost recovery in recent rate cases for Kansas City Power & Light  
8 Company, Empire District Electric Company and Aquila, Inc.

9 **IV. CONSERVATION INCENTIVE PROGRAM**

10 **Q. Please describe Laclede's proposed Conservation Incentive Program (CIP).**

11 A. Laclede witness Mr. Kenneth J. Neises summarizes a "Regulatory Compact" that consists of,  
12 among other things, a new fixed price option under which customers would be able to lock in  
13 the price they pay for gas costs each year for their expected usage and a new conservation  
14 program, the Conservation Incentive Program (CIP), that rewards eligible customers who  
15 reduce their natural gas usage with credits or rebates on their utility bills (Direct Testimony,  
16 Kenneth J. Neises, pages 10-12). Additional details regarding the CIP are offered by Laclede  
17 witness Mr. Theodore Reinhart.

18 **Q. Why is Laclede proposing the Regulatory Compact?**

19 A. According to Laclede, the purpose of the Regulatory Compact is to provide Laclede's  
20 customers with more natural gas price choices, ensure that customers pay the true cost of the  
21 gas customers use and to provide Laclede with a more desirable revenue recovery  
22 mechanism (Direct Testimony, Kenneth J. Neises, page 3, lines 2-14).

23 **Q. Is Laclede proposing the CIP for other purposes?**

1 A. Yes. Laclede believes that a reduction in natural gas demand by its customers may send  
2 pricing signals to the upstream commodity markets, “which hopefully will create downward  
3 demand pressure on the market and help to lower prices for all customers.” (Direct  
4 Testimony, Theodore Reinhart, page 6, lines 8-15)

5 **Q. Did Laclede share information about the proposed Regulatory Compact with its**  
6 **customers to gauge interest and participation?**

7 A. Yes. According to Laclede, the Vandiver Group, on behalf of Laclede, conducted two focus  
8 group sessions in November 2006 to share information about the Fixed Rate Program and the  
9 Conservation Incentive Program (Response to Data Request, DNR-0023, Amy DeWitte,  
10 Laclede Gas Company, April 23, 2007).

11 **Q. Who participated in these Focus Group meetings and what were the general results?**

12 A. Two focus group meetings were conducted by the Vandiver Group: November 7, 2006 in  
13 Clayton, Missouri for City of St. Louis customers and November 8 in Earth City, Missouri  
14 for St. Louis County customers. A combined total of just 22 customers participated at both  
15 sessions. The Vandiver Group concluded that of the two pilot programs discussed, the CIP  
16 won a broader base of support, while customers cited several concerns regarding the Fixed  
17 Rate Program. According to the Vandiver Group report, “As a trust building measure, it was  
18 recommended that Laclede hire a respected third party to establish a ‘fair’ rate and explain  
19 that rate to Laclede customers.” (Response to Data Request, DNR-0023, Amy DeWitte,  
20 Laclede Gas Company, April 23, 2007)

21 **Q. In your opinion, based on the conclusions of the Vandiver Group report, did Laclede**  
22 **customers indicate support for the Fixed Rate Program?**

23 A. No. Based on the questions and concerns outlined by the report, it appears to be apparent

1 that Laclede customers do not support a Fixed Rate Program. To that end, if customers have  
2 concerns regarding this type of program, it is unclear how Laclede would provide sufficient  
3 information to its customers to assure that customers fully understand the objectives of the  
4 program, fully encourage participation by customers or assure that customers receive any  
5 benefits from the program. Given the lack of participation in Laclede's Appliance and HVAC  
6 Rebate Program, the Energy Center must question Laclede's effectiveness in promoting a  
7 more complex program such as a Fixed Rate Program.

8 **Q. How many customers are expected to participate in the Fixed Rate Program?**

9 A. Laclede is proposing to limit the availability of this program during its first year of operation  
10 to approximately 25,000 customers and to expand the program to additional customers  
11 "assuming that it is well-received and Laclede can fashion terms for its implementation that  
12 are workable and acceptable (Direct Testimony, Kenneth J. Neises, page 11, lines 22-23 and  
13 page 12, line1-3).

14 **Q. Please briefly describe Laclede's CIP.**

15 A. According to Laclede, the CIP is being proposed to allow eligible customers, who reduce  
16 natural gas consumption by at least 10 percent over the months of November through  
17 February compared to the same period in the prior year, to receive a one-time rebate equal to  
18 the percentage reduction of the cost of gas the customer actually used. The CIP would be  
19 available for 3 years following Commission approval.  
20 To illustrate the rebate calculation method, Laclede assumes a natural gas commodity cost at  
21 one dollar per therm and consumption of 500 therms during the four month rebate period.  
22 Assuming the customer reduces his consumption by 10 percent, from 500 therms to 450  
23 therms, the customers will pay \$450 in gas costs, realizing immediate cost savings of \$50.

1 Under the CIP, the customer will receive a rebate on his April bill equal to 10 percent of the  
2 cost of gas the customer used (the same factor as the reduction in gas consumption), or in this  
3 case \$45.

4 If the same customer reduces consumption by 15 percent, down from \$500 to \$425, then the  
5 customer obtains gas cost savings of \$75 and will receive a rebate of 15 percent on the  
6 remaining \$425 in gas costs, or \$63.75.

7 Energy savings will be calculated compared to the prior 4 month period based on therms per  
8 heating degree day using a base of 65F (therms/HDD65).

9 **Q. Is a 10 percent reduction in natural gas consumption easily achievable by Laclede**  
10 **customers?**

11 **A.** Yes. Simply reducing thermostat settings during evening hours and during unoccupied  
12 periods, such as daily work hours, by 1 degree Fahrenheit from a baseline of 68 degrees  
13 Fahrenheit for 8 hours would provide a savings of approximately 1 percent in space heating  
14 expenses. According to the USDOE, A Consumer's Guide to Energy Efficiency and  
15 Renewable Energy, September 12, 2005, turning a thermostat back 10 to 15 degrees for 8  
16 hours can save about 5 percent to 15 percent a year on space heating expense  
17 Water heating can account for 14 percent to 25 percent of the energy consumed in a home.  
18 According to that same USDOE publication, each 10 degree Fahrenheit reduction in water  
19 temperature settings would provide a savings of approximately 3 percent to 5 percent in  
20 energy costs  
21 These two actions alone could provide Laclede gas customers with a 10 percent reduction in  
22 natural gas usage.

23 **Q. Are there mechanisms included in Laclede's CIP that would ensure customers would**

1       **not increase natural gas usage after receiving a CIP rebate?**

2       **A.** No. A customer may intentionally reduce consumption in order to receive a rebate and then  
3       elect to increase natural gas usage, therefore eliminating any long-term reductions in natural  
4       gas consumption.

5       **Q. What is the estimated number of Laclede customers that may participate in the CIP?**

6       **A.** According to Laclede, an estimated 75,000 customers will participate in the CIP (Direct  
7       Testimony, Theodore Reinhart, page 9, line 1).

8       **Q. Is it possible that more than 75,000 customers may participate in the CIP?**

9       **A.** Yes. According to Laclede, the company is assuming a 15 percent participation rate from a  
10       pool of 500,000 eligible customers. However, Laclede notes that as many as 90,000  
11       customers may participate based on an estimated participation rate of 15 percent from a pool  
12       of 600,000 eligible customers (Response to Data Request, DNR-0036, Amy DeWitte, Laclede  
13       Gas Company, April 23, 2007).

14       **Q. What are the estimated savings that may result from the CIP?**

15       **A.** According to Laclede, assuming a participation rate of 75,000 customers, these customers  
16       would reduce their natural gas consumption by 12 percent or 60 therms, resulting in a total  
17       savings of 4,500,000 therms for a savings of \$4.5 million based on a price of \$1 per therm.

18       **Q. What, if any, impact would such savings have on Laclede's fixed gas cost?**

19       **A.** Laclede assumes that a savings of 4.5 million therms represents about 0.5 percent of  
20       Laclede's annual gas load and would reduce fixed gas costs by \$1 million per year.

21       **Q. Could the actual fixed gas cost savings be lower than Laclede's estimate?**

22       **A.** Yes. According to Laclede, the estimated savings resulting in a reduction in annual load by  
23       4.5 million therms would be approximately \$724,166 (Response to Data Request, DNR-

0007, Amy DeWitte, Laclede Gas Company, March 7, 2007). Given these two sets of standards offered by Laclede, the DNR is unclear as to the actual reduction in annual gas load that may be realized by Laclede due to the program.

**Q. Did Laclede calculate potential savings and the related annual gas load reduction based on Laclede's estimate of 90,000 customers participating in the CIP?**

A. No.

**Q. If more than the estimated 75,000 customers achieve natural gas savings of 10 percent or more, could this result in additional credits issued by Laclede and a subsequent increase in program costs defrayed by the purchase gas adjustment (PGA)?**

A. Yes. Based on Laclede's responses to DNR Data Requests, Data Requests DNR-0006 and 0026, Laclede uses an estimate to determine participation, but does not establish a ceiling on the number of customers that may actually participate creating the potential for a significantly higher cost to support the CIP

**Q. How will the CIP be funded?**

A. Laclede proposes to fund the CIP through Laclede's Purchase Gas Adjustment (PGA) (Direct Testimony, Theodore Reinhart, page 4, lines 9-11 and Direct Testimony, Michael T. Cline, page 21, line 1-5).

**Q. Does this mean that all customers will pay for the CIP regardless of participation?**

A. Yes. According to Laclede, under the CIP the average rebate amount is \$52.80. Calculated on an estimated 75,000 participating customers, total rebate credits would be approximately \$3,960,000. Based on 500,000 customers, Laclede estimates the cost will be \$7.92 per customer or \$0.66 per customer per month (Direct Testimony, Theodore Reinhart, page 9, lines 4-12).

1 **Q. Are there other potential costs related to these programs?**

2 A. Yes. Laclede is proposing to expend approximately \$100,000 to advertise and promote these  
3 programs (Response to Data Request, DNR-0016, Amy DeWitte, March 7, 2007).

4 **Q. How will Laclede residential customers participate in the CIP?**

5 A. Laclede customers are automatically eligible to participate in the CIP. Laclede does not  
6 anticipate requiring customers to formally advise Laclede regarding their intention to  
7 participate (Response to Data Request, DNR-0008, Amy DeWitte, Laclede Gas Company,  
8 March 7, 2007). Customers that experience a 10 percent or greater reduction in natural gas  
9 consumption for the four month period November through February compared to the same  
10 period in the prior year following Commission approval would receive a credit rebate in their  
11 April utility bill (Direct Testimony, Theodore Reinhart, page 5, lines 12-15).

12 **Q. Please briefly describe any restrictions regarding participation in the CIP.**

13 A. According to Laclede, if the company is unable to calculate a meaningful value using  
14 therms/HDD65, lack of access to customer's meters, irregular use by the customer, or for  
15 "other reasons" not identified by Laclede, then the customer will not be eligible to receive a  
16 rebate for that period.

17 **Q. Does Laclede propose any methods to advise customers that they were unable to  
18 participate in the CIP based on the restrictions noted by Laclede?**

19 A. No. Laclede does not provide any information as to the intent or method by which to advise  
20 customers that they are ineligible to participate in the program due to the restrictions outlined  
21 by Laclede.

22 **Q. Does the program potentially restrict participation by low-income, seasonal or other  
23 customers?**



1 A. Yes. Customers who have difficulty paying their utility bills, such as low-income, fix-  
2 income or elderly and handicapped customers, may be precluded from participating in this  
3 program. These customers may have irregular natural gas use due to service interruptions if  
4 they are unable to fully pay their utility bill or may require specific space heating  
5 requirements due to health or age. If for any reason Laclede cannot estimate a base-line  
6 value in therms/HDD65 for these customers, they will not be permitted to participate in this  
7 program.

8 These are precisely the natural gas customers that need assistance from Laclede the most.  
9 Laclede should examine methods by which to engage more customers in energy efficiency  
10 programs rather than establishing standards that preclude the participation of customers  
11 needing greater assistance in using natural gas more efficiently.

12 **Q. Do you have other concerns regarding the CIP?**

13 A. Yes. In order for customers to be fully credited under the CIP, Laclede would be required to  
14 take necessary actions to accurately calculate energy reductions on a prescribed schedule for  
15 the period November through February. Accurate gas meter readings are required to assure  
16 that customer meters are read consistently in a manner to identify energy usage for each of  
17 the benchmark months of November through February. If a customer's meter is not read on  
18 the last day of each month, Laclede would be required to adjust the meter readings prior to  
19 November and following February to calculate the actual gas usage for the each specific 4-  
20 month period. Laclede would also need to accurately identify the exact volume of gas  
21 consumed by participating customers in the prior year during the same 4-month period.  
22 Also, it is important to note that customers that take no energy efficiency actions at all, but  
23 experience natural gas reductions during a given month due to utility service interruptions,

1 including electric or natural gas service, resulting in irregular service, might receive a billing  
2 credit if service interruption resulted in natural gas consumption reduction of 10 percent or  
3 more compared to the same period in the prior year (Response to Data Request, DNR-0023,  
4 Amy DeWitte, April 23, 2007).

5 Such holidays as Thanksgiving, Christmas and New Year's during these months may also  
6 impact the comparative periods if during the test year the household was fully occupied with  
7 guests, or if occupants were absent due to prolonged periods away from the household.

8 Laclede should provide greater detail to the Commission regarding the methodology to be  
9 used to fully calculate potential usage volumes between the baseline year and any year when  
10 a Laclede customer could receive a credit rebate.

11 **Q. Do you support the CIP as proposed by Laclede?**

12 A. No. The EC supports programs that result in long-term and sustainable energy usage  
13 reductions that benefit individual customers and provide utility-wide benefits. The CIP as  
14 proposed by Laclede does not provide long-term and sustainable reductions in natural gas  
15 consumption.

16 **V. APPLIANCE AND HVAC REBATE PROGRAM**

17 **Q. Does Mr. Reinhart address Laclede's Appliance and HVAC Rebate Program?**

18 A. Yes. Mr. Reinhart provides details related to the Appliance and HVAC Rebate Program  
19 recommended by the EC and approved by the Commission in Laclede's last rate case, GR-  
20 2005-0284 (Direct Testimony, Theodore Reinhart, page 12, lines 8-23; page 13, lines 1-18).

21 **Q. Does Laclede propose to continue the Appliance and HVAC Rebate Program?**

22 A. Yes. Laclede proposes to continue the Appliance and HVAC Rebate Program, but is  
23 recommending certain changes to the program (Direct Testimony, Theodore Reinhart, page

12, lines 13-23; page 13, lines 1-18).

**Q. Please briefly summarize Laclede's Appliance and HVAC Rebate Program.**

A. In Laclede's last rate case, GR-2005-0284, the EC recommended the establishment of the Appliance and HVAC Rebate Program for residential and commercial customers. Laclede proposed the inclusion of a Rental Property rebate component. The Commission approved the Appliance and HVAC Rebate Program with an annual funding commitment by Laclede at \$300,000. Funds were to be divided into three categories and modeled on similar programs previously approved by the Commission. The three categories included:

- (1) Residential Rebates funded at \$150,000 per year that provide Laclede residential customers with incentive rebates of up to 50% of the unit cost, or a maximum \$450 per unit, for combination space and water heater systems and incentive rebates of up to 50%, or a maximum \$250 per unit, for high efficiency furnaces and high efficiency boilers. Space heat and combination space heat and water heater units must be ENERGY STAR rated.
- (2) Commercial rebates funded at \$100,000 per year that provide Laclede commercial customers with incentive rebates of up to 50% of the unit cost, or a maximum \$750 per unit, for high efficiency natural gas utilization equipment that is ENERGY STAR rated.
- (3) Rental Property rebates funded at \$50,000 per year that provide Laclede rental property owners of eight units or less and contained within a single building with incentive rebates of up to 50% of the unit cost, or a maximum \$750 per unit, for high efficiency natural gas utilization equipment that is ENERGY STAR rated.

**Q. Please summarize Laclede's proposed changes to the Appliance and HVAC Rebate Program.**

1 A. Laclede is proposing the following:

- 2 (1) Eliminate the commercial portion of the Appliance and HVAC Rebate Program;
- 3 (2) Combine the commercial rebate funds at \$100,000 per year with the residential rebate  
4 program and rental property rebate program to be funded at \$300,000 per year (Response  
5 to Data Request, DNR-0041, Amy DeWitte, Laclede Gas Company, April 25, 2007);
- 6 (3) Rename the program to the High Efficiency Space Heating Rebate Program;
- 7 (4) Remove the ENERGY STAR requirement and establish a new requirement that the  
8 maximum input of the heating system be 300,000 Btu per hour; and
- 9 (5) Require the installation of a programmable setback thermostat as part of any high  
10 efficiency furnace installation, unless a similar thermostat is already in use (Direct  
11 Testimony, Theodore Reinhart, pages 12-13).

12 **Q. Please briefly summarize Laclede's rationale for the proposed changes.**

13 A. According to Laclede, the proposed changes to the program are based on:

- 14 (1) The limited number of commercial rebates issued. According to Laclede, since the  
15 inception of the Appliance and HVAC Rebate Program, Laclede has issued just 2  
16 commercial rebates (Direct Testimony, Theodore Reinhart, pg. 12, line 13-14);
- 17 (2) Concerns that ENERGY STAR qualified commercial equipment have a standard gas  
18 efficiency rating which has caused confusion with some contractors (Direct Testimony,  
19 Theodore Reinhart, pg. 13, lines 2-4); and,
- 20 (3) The difficulty in determining when an appliance is ENERGY STAR qualified due to the  
21 infrequent updating of official lists (Direct Testimony, Theodore Reinhart, page 13, lines  
22 4-6).

23 **Q. Do you agree with all of the proposed changes presented by Laclede?**

1 A. No. The EC recommended the establishment of the Appliance and HVAC Rebate Program  
2 for residential and commercial customers in Laclede's last rate case, GR-2005-0284. Since  
3 the program was implemented April 1, 2006, Laclede's recommended changes are based on  
4 participation data extending to January 2007, a period of just 10 months. I do not believe  
5 that the program has sufficient history to alter the program to the extent proposed by Laclede.  
6 Further, Laclede does not provide sufficient explanation or insights for the limited number of  
7 commercial rebates provided to date.

8 Also, Laclede proposed the inclusion of the Rental Property incentive rebate under the  
9 Appliance and HVAC Rebate Program. However, Laclede did not include Direct Testimony  
10 as to the limited number of rebates issued under this component of the program. According  
11 to Laclede, for the 10-month period April 1, 2006 through January 2007, Rental Property  
12 rebate payments totaled \$3,250 out of \$100,000 available for such rebates (Response to Data  
13 Request, DNR-0045, Amy DeWitte, Laclede Gas Company, April 25, 2007).

14 Without further review of the promotional efforts made by Laclede for the Appliance and  
15 HVAC Rebate Program, the internal system used by Laclede to process and pay rebate  
16 applications, as well as the procedures used to avoid or prevent the rejection of applications  
17 after rebate reservations were issued by Laclede, I do not believe that such changes should be  
18 instituted. Data on the program during the aforementioned 10-month period indicates that  
19 Laclede rejected as many as 15 rebate applications after rebate reservations were issued  
20 (Response to Data Request, DNR 43-45, Amy DeWitte, Laclede Gas Company, April 25,  
21 2007).

22 If program participation criteria were clearly conveyed to potential program participants at  
23 any time up to and including the rebate reservation, the number of rejected rebate

1 applications should have been minimal, if any. Also, I am particularly concerned over  
2 Laclede's proposal to eliminate the ENERGY STAR requirement since several models of  
3 high efficiency natural gas furnaces and boilers are clearly labeled as ENERGY STAR  
4 qualified and easily identifiable by natural gas customers and contractors. Laclede proposes  
5 to substitute the ENERGY STAR requirement with a 300,000 Btu per hour requirement  
6 (related to the size of the unit); however, Laclede does not propose an Annual Fuel  
7 Utilization Efficiency (AFUE) factor (related to the unit's efficiency). Laclede does require a  
8 similar AFUE rating in its EnergyWise financing program and notes "As these two programs  
9 are often used together by contractors when installing high efficiency equipment, having  
10 similar program requirements will encourage their use." (Direct Testimony, Theodore  
11 Reinhart, page 13, lines 10-12). However, Laclede has no data to substantiate the number of  
12 EnergyWise customers participating in its Appliance and HVAC Rebate Program (Response  
13 to Data Request, DNR-0013, Amy DeWitte, Laclede Gas Company, March 7, 2007).  
14 ENERGY STAR uses an AFUE standard of 90 percent for natural gas space heating  
15 equipment, the same AFUE used by the EnergyWise program.  
16 Commercial high efficiency natural gas utilization equipment (non-space heating) includes  
17 appliances such as fryers and steamers. ENERGY STAR does not apply the AFUE standard  
18 of 90 percent to these appliances. Fryers must meet a minimum cooking efficiency of 50  
19 percent while steamers must meet a minimum cooking efficiency of 38 percent.  
20 The United States Environmental Protection Agency posts qualified ENERGY STAR  
21 products on a regular basis on its Internet Home Page at <http://www.energystar.gov/>  
22 Finally, with respect to Laclede's proposal to mandate the installation of programmable  
23 setback thermostats in the absence of such devices at the time a new furnace is installed, I do

1 not believe the cost of such installation should be borne by the customer. If Laclede requires  
2 the installation of a programmable thermostat, Laclede should pay for the cost of the  
3 thermostat and any installation charges.

4 **Q. Please briefly summarize the status of the Laclede Appliance and HVAC Rebate**  
5 **Program.**

6 **A.** According to Laclede, the Residential Rebate Program was funded at \$300,000 from April 1,  
7 2006 through August 31, 2007 (16 months). Based on data extending April 1 through  
8 January 31, Laclede received rebate reservation requests totaling \$219,750. However,  
9 Laclede expended just \$153,750, leaving a fund balance of \$146,250.

10 The Commercial Rebate Program was funded at \$200,000 during the same period. Laclede  
11 received rebate reservation requests totaling \$10,500 and expended \$1,500, leaving a balance  
12 of \$198,500.

13 As to the Rental Property Rebate Program, the EC is unclear as to the actual number of  
14 rebate reservations made or rebate dollars that were actually paid by Laclede. The Rental  
15 Property Rebate Program was funded at \$100,000 during this 16-month period. In response  
16 to a DNR data request, Laclede reported receiving just \$5,250 in rebate reservations and  
17 expending \$3,250, leaving a balance of \$96,750. (Response to Data Request, DNR-0043,  
18 Amy DeWitte, Laclede Gas Company, April 25, 2007) However, in response to a different  
19 DNR Data Request, Laclede stated that "No rebates have been issued under the rental  
20 property rebate program." (Response to Data Request, DNR-46, Amy DeWitte, Laclede Gas  
21 Company, April 25, 2007)

22 **Q. Please summarize any changes the EC proposes for this program.**

23 **A.** In order to assist Laclede in implementing successful energy efficiency programs, including

1 high efficiency incentive rebate programs such as the Appliance and HVAC Rebate Program,  
2 the EC recommends the following:

3 (1) Maintain the current status of the Appliance and HVAC Rebate Program for a period of  
4 no less than 18 additional months (or until such time as the energy efficiency program  
5 development analysis process recommended earlier in my testimony is completed and  
6 programs are being implemented) to allow additional customers to participate and to  
7 establish sufficient history to allow evaluation of the program results and benefits.

8 (2) Transition funding for this program to the regulatory asset account cost recovery method.

9 Currently, funds to support the Appliance and HVAC Rebate Program are funded  
10 through rates. To date, Laclede gas customers have paid \$600,000 to support the  
11 program, but Laclede has expended just \$158,500, leaving an outstanding balance of  
12 \$441,500 or 74 percent of available funds to date (Response to Data Request, DNR-0021,  
13 Amy DeWitte, Laclede Gas Company, April 10, 2007). The remaining balance of funds  
14 should be expended, but future spending for this program should be accounted for using  
15 the proposed regulatory asset account cost recovery method as envisioned for other  
16 energy efficiency programs identified in the collaborative process

17 (3) Establish a formal working collaborative group consisting of representatives from  
18 Laclede, EC, Staff, the OPC and other interested parties to meet regularly to address the  
19 design and implementation of the program. A working collaborative should provide the  
20 necessary support and guidance to achieve the same level of success of other similarly  
21 modeled programs approved by the Commission. The collaborative format has been used  
22 effectively to design and implement energy efficiency programs funded by other  
23 Missouri utilities.



1 (4) Require Laclede to provide regularly scheduled reports to the collaborative regarding the  
2 number of reservations issued, the number of customers seeking reservations, the number  
3 and amount of rebates issued by Laclede and the number of applications rejected. This  
4 reporting process will help the collaborative and Laclede monitor the progress of program  
5 implementation and recommend any program modifications based on these reports. The  
6 collaborative would establish all specific reporting variables.

7 (5) Authorize the collaborative to make any necessary adjustments to the program in order to  
8 facilitate its successful implementation to allow Laclede residential and commercial  
9 customers to fully participate in this worthwhile program.

10 **Q. Please describe similar natural gas rebate programs offered by Missouri regulated**  
11 **natural gas companies approved by the Commission.**

12 **A.** AmerenUE has a similar natural gas rebate pilot program with funding at \$165,000 over a 3-  
13 year period. Pursuant to the Stipulation and Agreement in GR-2003-0517, a collaborative  
14 group consisting of AmerenUE, Staff, OPC and the EC was established to design the  
15 components of the residential and commercial energy efficient equipment program. The  
16 collaborative has met regularly since the inception of the program.

17 AmerenUE provided funding of \$55,000 in 2004, \$81,550 in 2005 and \$55,800 in 2006 to  
18 support rebate programs for ENERGY STAR qualified residential furnace replacement and  
19 residential programmable thermostats; residential hot water heater wraps, hot water pipe  
20 insulation and low flow showerheads; and commercial ENERGY STAR qualified energy  
21 efficient natural gas utilization equipment.

22 Since its inception, AmerenUE has successfully implemented the rebate program, including  
23 the commercial rebate component. September 2007 marks the end of the third and final

1 phase of the program authorized in GR-2003-0517, and AmerenUE has expended nearly all  
2 available funds.

3 Because of the success of the program, in AmerenUE's last general rate case, GR-2007-0003,  
4 the Commission approved the continuation of the program with funding at \$100,000 per year  
5 (Stipulation and Agreement, GR-2007-0003, pg. 17).

6 **Q. Please summarize the progress of the AmerenUE rebate program.**

7 A. According to AmerenUE witness, Mr. Richard Mark, the residential furnace rebate  
8 program and the commercial gas utilization equipment programs were successful (GR-2007-  
9 0003, Direct Testimony, Richard J. Mark, pg. 9, line 18-22 and pg. 10, line 1-22.) Mr. Mark  
10 noted that the rebate programs addressing programmable thermostats and low-cost measures  
11 including water heater wraps and pipe insulation were not as successful, but AmerenUE  
12 "continued these programs in an attempt to provide a benefit to those customers who are  
13 unable to participate in the alternative programs." (GR-2007-0003, Direct Testimony,  
14 Richard J. Mark, pg. 10, line 15-22 and pg. 11, line 1-2)

15 The program was funded at \$55,000 in 2004. As noted by Mr. Mark, the residential furnace  
16 rebate program and the commercial natural gas equipment rebate programs were well-  
17 received. Due to the overwhelming response to the residential furnace and commercial gas  
18 utilization programs that depleted all available funds in these rebate categories, AmerenUE  
19 increased funding for the program to \$81,550 in 2005.

20 Funds for programmable thermostats and low-cost measures categories were reduced due to  
21 the limited response; however, the residential furnace and commercial gas utilization  
22 equipment rebate funding levels were nearly doubled, with the residential rebates raised from  
23 \$33,334 in 2004 to \$63,100 in 2005. Commercial rebates were increased from \$8,333 in

1 2004 to \$16,500 in 2005. During the 2005 program year, 249 residential customers replaced  
2 older less efficient natural gas furnaces with higher efficiency ENERGY STAR qualified  
3 furnaces. In addition, 22 AmerenUE commercial gas customers participated in the program.  
4 Available funds for these rebate categories were exhausted by the end of the program period.  
5 In the 2006 program year that began October 2006, total available funds were limited to  
6 \$55,850 since the program was authorized at \$165,000 over a three-year period. Funds for  
7 programmable thermostats were maintained at \$2,250 consistent with the number of rebates  
8 issued in the 2005 program period. Residential furnace rebates were funded at \$41,600 or  
9 \$21,500 below the 2005 program year level; and, commercial gas utilization equipment  
10 rebates were reduced from \$4,500 to \$12,000.  
11 As of March 28, 2007, AmerenUE has paid \$20,942 in incentive rebates and has an  
12 additional \$30,975 in rebate reservations pending. AmerenUE has an uncommitted fund  
13 balance of just \$3,933 available through September 2007.

14 **Q. Are there other regulated Missouri natural gas utilities preparing to offer similar**  
15 **programs?**

16 A. Yes. The EC is currently participating in a working collaborative with members from the  
17 Staff, the OPC and Atmos Gas Company to initiate a similar pilot rebate program no later  
18 than August 31, 2007 pursuant to the company's last rate case, GR-2006-0387 (Report and  
19 Order, February 22, 2007, page 22).

## 20 **VI. LOW INCOME WEATHERIZATION PROGRAM**

21 **Q. Does Mr. Reinhart address Laclede's Low-Income Weatherization Assistance**  
22 **Program?**

23 A. Yes. Mr. Reinhart provides details related to the Low-Income Weatherization Assistance

1 Program (LIWAP) recommended by the EC and approved by the Commission in Laclede's  
2 last rate case, GR-2005-0284 (Direct Testimony, Theodore Reinhart, page 14, lines 17-22;  
3 page 15, line 1-5).

4 **Q. Does Laclede propose to continue the Low-Income Weatherization Assistance**  
5 **Program?**

6 **A.** Yes. Laclede proposes to continue the LIWAP with an annual funding commitment of  
7 \$500,000. Laclede also proposes that the DNR administer Laclede's LIWAP funds in  
8 conjunction with the federal LIWAP administered by DNR's EC (Direct Testimony,  
9 Theodore Reinhart, page 15, lines 7-10).

10 **Q. Can and would DNR administer Laclede's LIWAP funds in conjunction with the**  
11 **federal LIWAP?**

12 **A.** Yes. The DNR can administer Laclede's LIWAP funds in conjunction with the federal  
13 LIWAP program. The DNR is currently managing similar funds for AmerenUE, and Atmos  
14 Energy Corporation has DNR administer similar funds pursuant to Atmos' last rate case, GR-  
15 2006-0387. Funds from Laclede would be held in a separate account administered by DNR's  
16 Environmental Improvement and Energy Resources Authority. The DNR Energy Center  
17 would manage the LIWAP in behalf of Laclede, including communicating with EIERA about  
18 the appropriate release of funds to LIWAP subgrantees. Funds would be expended directly  
19 to the community action agencies that administer the federal LIWAP within Laclede's  
20 service territory and would be used specifically for Laclede's eligible low-income  
21 households with natural gas space heat receiving LIWAP services. Specific details regarding  
22 the management of funds would be coordinated between the DNR and Laclede.

23 **Q. What is DNR's recommended funding level for Laclede's current LIWAP?**

1 A. According to the U.S. Census Bureau, approximately 1 out of 5 Missouri households live  
2 within 150 percent of the Federal Poverty Level (FPL). Laclede currently serves  
3 approximately 593,000 residential customers. Assuming 20 percent of these households live  
4 at or below the 150 percent FPL, approximately 118,000 households are eligible to receive  
5 low-income weatherization assistance services.

6 Laclede currently provides \$500,000 to support LIWAP. This represents a net contribution  
7 of approximately \$0.79 on a per customer basis (total of all customers including residential,  
8 commercial and industrial).

9 Other investor-owned natural gas companies currently support LIWAP at higher per-  
10 customer funding levels: \$1.28 (Atmos), \$1.53 (MGE) and \$2.18 (AmerenUE).

11 The U.S. Congress has reduced funding for the federal LIWAP for the next program year  
12 beginning July 1, 2007. Missouri will see a 16 percent reduction in federal LIWAP funds, a  
13 loss of more than \$1 million. As a result, fewer low-income households will receive federal  
14 LIWAP services unless additional funds are committed to this very cost effective and  
15 worthwhile program.

16 Given the large number of potential low-income households eligible to receive LIWAP services  
17 within Laclede's service territory, the EC is proposing that Laclede provide no less than  
18 \$951,000 annually to support LIWAP services in its service territory.

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19 **Q. How does this annual funding compare to other Missouri investor-owned natural gas**  
20 **companies?**

21 A. Assuming a total of approximately 634,000 customers, the \$951,000 annual commitment  
22 would result in a per customer charge of \$1.50 per year, similar to Atmos, MGE and  
23 AmerenUE.

1 **Q. Have recent events potentially suppressed the number of eligible households from**  
2 **seeking LIWAP assistance?**

3 **A.** Recently, the Missouri Department of Social Services that administers the Low Income  
4 Home Energy Assistance Program (LIHEAP), a federal utility billing assistance program,  
5 initiated a direct mailing application process providing greater convenience to LIHEAP  
6 applicants. According to local community action agencies, this has resulted in a decline in  
7 the number of LIWAP applications because eligible low-income clients are no longer  
8 required to apply in person for LIHEAP services at community action agency offices. This  
9 process has reduced the agency's ability to advise low-income clients about the availability  
10 of the LIWAP and the potential benefits of participating in the program.

11 **Q. Would additional funding help promote participation in the LIWAP?**

12 **A.** Additional funding would allow the local agencies to promote the program by making low-  
13 income clients aware of the availability and benefits of LIWAP. Completing LIWAP  
14 services on more eligible households will help reduce natural gas consumption by Laclede's  
15 low-income customers and would help reduce the overall demand for natural gas due to  
16 enhanced efficiency.

## 17 **VII. ENERGY RESOURCE DEVELOPMENT**

18 **Q. Does the EC have recommendations regarding energy resource development?**

19 **A.** At present, Laclede, like most Midwest states, relies on natural gas supplies from other states.  
20 According to the ACEEE, 92 percent of total natural gas consumed in the Midwest is  
21 imported from outside the region.<sup>3</sup>

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<sup>3</sup> Examining the Potential for Energy Efficiency To Help Address the Natural Gas Crisis in the Midwest, Executive Summary, Report Number U051, January 2005

1 Laclede is proposing a series of programs with a goal of reducing consumption of natural gas  
2 derived from sources outside Missouri, thus reducing the overall cost of natural gas delivered  
3 to Laclede.

4 In order to further reduce reliance on out-state sources of natural gas, the EC recommends  
5 that Laclede examine any opportunities to develop and utilize gas energy resources that may  
6 be available within Missouri. These potential gas resource sites may include landfill or  
7 confined animal feeding operation sites that may provide affordable supplies of methane.

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

9 **A.** Yes. Thank you.

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

In the Matter of Laclede Gas Company's )  
Tariff to Revise Natural Gas Rate Schedules ) Case No. GR-2007-0208

## AFFIDAVIT OF JOHN A. BUCHANAN

**STATE OF MISSOURI            )**  
  **) SS**  
**CITY OF JEFFERSON        )**

John A. Buchanan, of lawful age, being duly sworn on his oath, deposes and states:

1. My name is John A. Buchanan. 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 24 pages all of which have been prepared in written form for introduction into evidence in the above-referenced docket.
3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my knowledge.

John A. Buchanan

Subscribed and sworn to before me this \_\_\_\_\_ day of May, 2007

Notary Public

My commission expires: