

Exhibit No.:
Issue: Conservation and Energy
Efficiency Incentive
Programs
Witness: Theodore B. Reinhart, P.E.
Type of Exhibit: Direct Testimony
Sponsoring Party: Laclede Gas Company
Case No.: GR-2007-0____
Date Testimony
Prepared: December 1, 2006

LACLEDE GAS COMPANY

GR-2007-0____

DIRECT TESTIMONY

OF

THEODORE B. REINHART, P.E.

DECEMBER 2006

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DIRECT TESTIMONY OF THEODORE B. REINHART

1
2 Q. Please state your name and address?

3 A. My name is Theodore B. Reinhart and my business address is 720 Olive Street,
4 St. Louis, Missouri 63101.

5 Q. What is your present position?

6 A. I am Manager of Utilization Engineering and Market Development at Laclede
7 Gas Company ("Laclede" or "Company").

8 Q. Please state how long you have held your present position, and briefly describe
9 your responsibilities.

10 A. I was promoted to my present position in January 2003. In this position I am
11 responsible for managing the Utilization Engineering Department and Special
12 Projects managers. The members of these two groups provide technical
13 assistance to customers and Marketing Department personnel and promote
14 specific end use technologies such as desiccant dehumidification and on-site
15 power. The Utilization Engineering Department currently administers Laclede's
16 Low Income Weatherization Assistance and Insulation Financing Programs.

17 Q. Please describe your experience with Laclede.

18 A. I joined Laclede in August 1985 as a Project Engineer in the Sales Engineering
19 Department and was promoted to Engineering Supervisor in November 1993.
20 The department was renamed Utilization Engineering in 1994 and I was promoted
21 to manager of the department in January 1996.

22 Q. What is your educational background?

1 A. I graduated from Rice University in May 1978, with the degree of Bachelor of
2 Arts, majoring in physics. I received a Master of Science degree in Mechanical
3 and Aerospace Engineering in May 1984 from the University of Missouri -
4 Columbia. I am a licensed professional engineer in the states of Illinois and
5 Missouri.

6 Q. Have you previously submitted testimony before regulatory bodies?

7 A. No.

8 **PURPOSE OF TESTIMONY**

9 Q. What is the purpose of your testimony in this proceeding?

10 A. My testimony will describe a new program and modifications to existing
11 programs the Company is proposing to encourage and assist its customers to use
12 less natural gas.

13 **CONSERVATION INCENTIVE PROGRAM**

14 Q. Please explain the Conservation Incentive Program.

15 A. The Company is proposing the Conservative Incentive Program ("CIP") to further
16 encourage our residential space heating customers to reduce their natural gas
17 space heating requirements through conservation.

18 Q. Is this a pilot program?

19 A. The Company will run the program as described here as a pilot program for three
20 heating seasons beginning with the 2007-2008 heating season. Based on the
21 results of the first and second years of the program, and after consultations with
22 interested parties, the Company will propose to the Commission to continue,

1 modify or discontinue the program, with such proposal to become effective
2 following the third year of the program.

3 Q. What do you mean by conservation?

4 A. Natural gas conservation includes reducing thermostat settings; shutting off or
5 reducing heat to unused rooms; reducing infiltration; reducing the thermal
6 conductivity of walls, ceilings, foundations, and/or windows; increasing solar
7 gain; and/or increasing the efficiency of natural gas heating systems.

8 Q. What do you mean by "further encourage"?

9 A. As a result of increased natural gas commodity costs, our residential customers
10 have been paying about one dollar per therm for natural gas, not including the
11 fixed cost of local distribution. For customers using an average of 500 therms in
12 the billing months of December, January, and February, reducing their gas use by
13 10% would reduce their gas cost by about \$50. This savings in gas cost is a
14 permanent reduction. While this permanent savings certainly represents one
15 significant incentive to conserve, the Company's proposed CIP will further
16 encourage conservation by giving a rebate to those eligible residential space
17 heating customers who reduce their gas use by 10% or more.

18 Q. How will the rebate be calculated?

19 A. The initial rebate would be based on the gas costs actually paid by customers
20 during the December, January, and February billing periods. The total amount of
21 the rebates will be credited to customers' accounts on their April bills. For
22 example, if natural gas commodity costs are one dollar per therm, and a customer
23 using 500 therms reduces gas use by 10%, or from 500 therms to 450 therms, that

1 customer will pay \$450 in gas costs, saving \$50. Under the program, this
2 customer will receive a rebate equal to 10% of the cost of gas it used, or \$45 in
3 this case. If the same customer were to reduce use by 15%, (down to \$425), then
4 the customer would obtain gas cost savings of \$75 and receive a rebate of 15% on
5 the remaining \$425 in gas costs, in this instance a rebate of \$63.75.

6 Q. How will the CIP be funded?

7 A. Because rebates under the program will be discounts on the cost of gas, not
8 distribution cost, and are primarily designed to reduce gas costs both for the
9 individual customer as well as all other customers, the amount of the rebates
10 would be reflected in the PGA for residential customers as explained in the direct
11 testimony of Laclede witness Cline.

12 Q. How will the Company determine who will receive the rebate?

13 A. The Company will use a residential customer's historical gas use at his or her
14 premises during the December to February period as the baseline for determining
15 the amount of the rebate. A residential customer who has continuous service at
16 the same premise for two consecutive December through February heating
17 seasons and reduces combined gas use for the December through February billing
18 months by at least 10% compared to the historical gas use for the previous
19 December to February period as measured in therms per heating degree day using
20 a base of 65F (therms/HDD65), will be eligible to receive the rebate. If the
21 Company is unable to calculate for an individual customer a meaningful value in
22 therms/HDD65 for the historical gas use period and/or the rebate period due, for
23 example, to lack of access to the customer's meter, irregular use by the customer,

1 or for other reasons, then the customer will not be eligible to receive a rebate for
2 that period.

3 Q. How will the Company determine historical gas use?

4 A. Following the completion of the February 2007 billing cycle the Company will
5 identify those residential premises that have had continuous service throughout
6 the December 2006 through February 2007 billing months. The Company will
7 determine historical gas use in therms/HDD65 for each premise for which it has
8 sufficient consumption data. If the historical gas use for a premise cannot be
9 determined using data from the 2006-2007 heating season, it will be determined
10 during the next heating season for which sufficient consumption data is available.

11 Q. When would be the first time customers would be eligible to receive a rebate?

12 A. Customers would be eligible to receive a rebate for the first time in April 2008,
13 based on a comparison of their gas historical usage during the December 2006
14 through February 2007 period to their actual usage during the December 2007
15 through February 2008 period.

16 Q. If a customer receives a rebate, and the program is continued past the first year,
17 can they receive a rebate again in later years?

18 A. No. While the goal of the program is to expose customers to the benefits of
19 conserving, the majority of which comes from gas costs savings, it is not intended
20 to provide individual customers with an ongoing level of rebates. Nor is it
21 anticipated that such rebates would be necessary since customers will have
22 already seen how conservation can reduce their bills and are unlikely to forego

1 those savings simply because a rebate is no longer being offered. Accordingly,
2 customers will be limited to one rebate during the three-year term of the program.

3 **Reasons for a Residential Conservation Program**

4 Q. Why is Laclede promoting conservation?

5 A. The Company has promoted conservation and the efficient use of natural gas for
6 many years. However, in the high gas commodity price environment in which the
7 Company currently operates, customers are looking to Laclede to find ways to
8 save on what they pay for gas service. In the long run, high gas prices also
9 increase the level of uncollectible expenses, gas financing costs and other
10 expenses that the Company and its customers must pay to provide or receive
11 utility service. While the Company believes that increased natural gas supplies is
12 the most important way to bring gas rates back down, reducing demand even
13 incrementally will send the appropriate signals to the upstream commodity
14 markets, which hopefully will create downward demand pressure on the market
15 and help to lower prices for all customers.

16 Q. Laclede's service area represents a small percentage of the gas market. How can
17 this small amount of savings possibly affect the overall supply/demand balance in
18 a positive way?

19 A. Certainly any savings by our customers will be small compared to increases in
20 national supplies and increases in demands from gas-fired electric generation or
21 other growing markets. However, other gas companies across the country are
22 encouraging conservation and the combined savings could create significant
23 downward pressure on gas demand. In addition, if we can encourage our

1 customers to adopt new habits and improve the efficiency of their homes, they
2 will be less affected if commodity costs remain high.

3 Q. How will Laclede's customers benefit from this program?

4 A. Customers who conserve will, of course, benefit through lower gas bills. Those
5 that earn rebates by conserving at least 10% will also benefit from these
6 additional savings. While non-conservers may initially realize slightly higher
7 commodity costs from the program due to the cost of the rebates being included in
8 the PGA, conservation programs should help to reduce their costs by reducing
9 pressure on the gas market and lowering commodity costs in the long term. Long
10 term reductions in the Company's load also may reduce fixed gas supply demand
11 and pipeline capacity reservation costs independently from variable commodity
12 costs.

13 **Estimated Participation, Savings, and Cost of the CIP**

14 Q. How many customers will receive rebates?

15 A. Pacific Gas & Electric Company (PG&E) had a similar program in place during
16 the 2005-2006 heating season in which approximately 20% of eligible customers
17 received rebates. Laclede held a series of customer focus groups, in which
18 customers expressed strong support for the program, although some were unsure
19 if they would be willing or able to take the necessary steps to reduce their use
20 enough to earn the rebate. One reason for this being a pilot program is because
21 the Company cannot determine at this point how many customers might conserve
22 enough to earn rebates. Based on PG&E's experience, however, we estimate that,
23 at the extreme, 20% of our residential customers might earn rebates but, based on

1 our colder weather and the response from our focus groups, 15% is a more
2 realistic estimate.

3 Q. How much will each customer conserve?

4 A. While PG&E's customers who earned rebates reduced their gas use by an average
5 of 26%, this was more easily accomplished in their climate which has
6 significantly less degree days. We will encourage our customers who are trying
7 to earn the rebate to select energy conservation measures that will combine to
8 reduce their gas use by 15% or more to increase their chance of actually saving at
9 least 10%. An unusually warm winter, while having the advantage of reducing
10 the gas use for all customers, also reduces the savings realized from energy
11 conservation measures and this is especially true for thermostat setback. Because
12 our meters are not read on a calendar month basis, but on a billing cycle basis, we
13 will also encourage our customers who are trying to earn the rebate to begin
14 conserving before they get their November bill and continue until after they get
15 their February bill. In a normal winter the Company expects those customers who
16 are trying to earn the rebate would reduce their gas use on average by 12% of
17 their normal gas use for the billing months of December through February.

18 Q. If a typical conserving customer's historical use is 500 therms for the billing
19 months of December through February, how much gas will be conserved by these
20 customers?

21 A. Using round numbers reflecting the smaller percentage of customers who could
22 be expected to qualify on Laclede's system, I have estimated that approximately

1 75,000 customers would conserve 12%, or 60 therms. This is a total savings of
2 4,500,000 therms, or at a rate of one dollar per therm, \$4,500,000.

3 Q. What will be total amount of rebates credited to these customers?

4 A. On average, each of these customers will reduce gas use to 440 therms which at
5 one dollar per therm will yield a gas cost of \$440. Under the CIP they would
6 receive an average rebate of \$52.80, and the 75,000 conservers as a group would
7 be rebated \$3,960,000. This amount will be added to the PGA account.

8 Q. How will this affect those customers that do not conserve?

9 A. The \$3,960,000 will be recovered through an increased PGA, which for
10 approximately 500,000 residential customers amounts to \$7.92 each. If this
11 amount is recovered on an annual basis, it will average about 66 cents per
12 residential customer per month. In the long term, conserving 4,500,000 therms,
13 about 1/2% of the Company's annual load, could reduce our fixed gas costs by
14 \$1,000,000 each year. The value of this reduction in overall costs would continue
15 to accumulate each year.

16 **ENERGYWISE DEALER PROGRAM**

17 Q. What is the EnergyWise Dealer Program?

18 A. The Company created the EnergyWise Dealer Program in 1997 to encourage our
19 customers to install high efficiency natural gas heating system with an Annual
20 Fuel Utilization Efficiency (AFUE) of 90% or greater. It provides several options
21 and interest rates depending on other equipment the customer may choose to
22 install at the same time as the natural gas heating system. The customers are
23 billed monthly on their gas bill for terms up to five years.

1 Q. What changes are you proposing to this program?

2 A. The Company is proposing four changes. The first is to change the Seasonal
3 Energy Efficiency Ratio (SEER) requirement, which is now 12 or more. In the
4 time since the program began, the federal minimum efficiency for electric central
5 air conditioners has increased from 10 SEER to 13 SEER, making the program's
6 minimum of 12 obsolete. The Company is proposing that the electric air
7 conditioner have an SEER of 14 or more.

8 Q. What is the second change you are proposing?

9 A. Under the existing program, there are three basic options that qualify for
10 financing. The first is for a high efficiency heating system with a gas air
11 conditioner or a high efficiency electric air conditioner. The second is for a high
12 efficiency heating system with other energy efficient gas appliances. Finally, the
13 third option is for a high efficiency heating system by itself. Currently the interest
14 rates vary, with the first option having the lowest rate, the second option 0.5%
15 higher, and the third option another 0.5% above that. The Company is proposing
16 that the second option be dropped and the first and third options be combined
17 under the same interest rate.

18 Q. Why is the Company proposing that option 3 have the same interest rate as option
19 1?

20 A. We have proposed to apply the same interest rate because we do not believe that
21 providing a lower interest rate where a central air conditioning unit has been
22 added than what is offered when only a gas furnace is installed benefits our
23 customers significantly enough to justify a lower interest rate. Option 1 is still

1 needed, however, because consumers often install both the heating and cooling
2 system together under a single contract. The Company believes that if the
3 program did not allow the cooling system to be financed, contractors would be
4 less likely to offer our financing when both systems are installed because they
5 would not want to have two contracts, one for the cooling system and one for the
6 heating system. Without the financing and the ability to put the cost of the
7 installation on their gas bill, some customers would not choose the high efficiency
8 heating system and a conservation opportunity would be lost. Also, higher
9 efficiency electric air conditioners may benefit our customers to the extent that
10 they reduce summer demand for natural gas generated electric power.

11 Q. Why is the Company proposing to eliminate the second option?

12 A. The Company is proposing that the second option (which includes the installation
13 of other energy efficient gas appliances) be dropped because the efficiency of
14 these appliances is not defined and they could easily be installed under a separate
15 contract. Since the program began, only 3% of contracts have used option 2 so
16 eliminating it will have little or no impact on the number of installations of high
17 efficiency gas heating systems.

18 Q. What is the third change the Company is proposing?

19 A. The program already allows the financing of a gas air conditioner if installed with
20 a high efficiency gas heating system. We are proposing that the program
21 explicitly include gas-fired desiccant dehumidifiers as a gas air conditioner.

22 Q. What is the fourth change to the program?

1 A. We are proposing that the program be changed to require that a programmable set
2 back thermostat be installed as part of any high efficiency furnace installation,
3 unless a set back thermostat is already installed and this is noted on the contract.
4 This is not a requirement for high efficiency boiler systems because they do not
5 always benefit from thermostat set back due to their higher mass.

6 **APPLIANCE AND HVAC REBATE PROGRAM**

7 Q. What is the Appliance and HVAC Rebate Program?

8 A. The Company created the Appliance and HVAC Rebate Program during the
9 winter of 2005/2006 to encourage our customers to install high efficiency natural
10 gas heating system with an Annual Fuel Utilization Efficiency (AFUE) of 90% or
11 greater and an Energy Star rating.

12 Q. What changes is the Company proposing for this program?

13 A. Since the program began there have been two commercial rebates issued, and
14 these were for residential-type furnaces. While many commercial appliances are
15 Energy Star rated, they are combined heating and cooling units with high
16 efficiency cooling components. The gas heating section is not high efficiency.
17 The Company is proposing that this funding be combined with the residential and
18 rental property rebate portions of the program. The Company is also proposing
19 that the name of the program be changed to the High Efficiency Space Heating
20 Rebate Program.

21 Q. Are there any other changes the Company is proposing?

22 A. Yes. The Company is proposing that the Energy Star requirement be replaced
23 with a requirement that the maximum input of the heating system be 300,000 Btu

1 per hour. The Energy Star requirement has introduced several problems in
2 administering the program. One is the issue of commercial equipment being
3 Energy Star rated but only having standard gas efficiency which has caused
4 confusion with some contractors. Another issue is the continuing difficulty in
5 determining when an appliance is Energy Star rated due to the infrequent updating
6 of official lists. Natural gas heating systems with an AFUE of 90% or greater are
7 required for the EnergyWise financing program. This has proved to be a
8 sufficient requirement for that successful program and the heating appliance
9 AFUE is easily determined by the contractor and written on the contract. As
10 these two programs are often used together by contractors when installing high
11 efficiency equipment, having similar program requirements will encourage their
12 use.

13 Q. What is the final change to this program the Company is proposing?

14 A. The program will be changed to require that a programmable setback thermostat
15 be installed as part of any high efficiency furnace installation, unless a set back
16 thermostat is already installed and this is noted on the contract. As with the
17 EnergyWise financing program, a set back thermostat will not be required for a
18 high efficiency boiler installation.

19 **INSULATION FINANCING PROGRAM**

20 Q. What is the Insulation Financing Program?

21 A. The Company's Insulation Financing Program encourages our customers to install
22 ceiling insulation and other insulation and weatherization measures to improve the
23 energy efficiency of their homes. It is offered at a 3% interest rate because adding

1 insulation and weatherizing an older home without insulation is one of the best
2 investments that can be made and should be strongly encouraged.

3 Q. What changes is the Company proposing to the program?

4 A. The Company is proposing that the list of home energy conservation
5 improvements include the repair of residential potable hot water leaks where the
6 water in the home is heated using natural gas. These repairs must be done by a
7 licensed plumber, subcontracted by the insulation contractor, and may include:
8 replacing washers and/or valve stems, replacing fixtures where leaking valves
9 cannot be repaired, repairing leaking potable hot water pipes, installing insulation
10 on hot water piping, replacing leaking drain valves and safety valves on water
11 heaters, and replacing leaking water heaters.

12 Q. Are there proposed changes to the maximum loan amounts or terms?

13 A. Yes. The Company is proposing that the maximum loan per dwelling unit be
14 increased to \$3000 and that loans be repaid within 5 years.

15 **LOW INCOME WEATHERIZATION ASSISTANCE PROGRAM**

16 Q. What is the Low Income Weatherization Assistance Program?

17 A. Through the Low Income Weatherization Assistance Program the Company
18 provides a total of \$500,000 in grants to the six community action agencies that
19 serve counties in the Company's service area. These agencies in turn identify
20 qualified customers of the company that can benefit from cost-effective
21 weatherization measures, including air sealing, insulation, furnace tuning, and
22 sometimes replacement of doors, windows, and/or furnaces.

23 Q. What changes is the Company proposing to this program.

1 A. The Missouri Department of Natural Resources ("DNR") currently administers a
2 much larger low income weatherization program through the same agencies. This
3 program is funded using federal tax dollars. Laclede proposes that the DNR
4 administer the Company's weatherization funds in conjunction with the federal
5 program.

6 Q. What is the benefit of this change?

7 A. This change would simplify the reporting requirements for the community action
8 agencies. While the agencies would still need to ensure that Laclede funds are
9 spent only on the homes of Laclede customers, they would no longer need to
10 provide separate reports to both Laclede and DNR.

11 **PROMOTION OF EFFICIENCY PROGRAMS**

12 Q. What other steps does the Company plan to take to promote energy conservation
13 to its customers?

14 A. The Company plans to promote these various energy conservation programs to its
15 customers through radio, bill messages, and new content on its website. The
16 company's intent is to present these individual programs in an integrated fashion
17 to ensure that our customers are aware of the energy conservation measures that
18 are available to them.

19 Q. Does this conclude your testimony?

20 A. Yes, it does.

KAREN A. ZURLIENE
NOTARY PUBLIC - NOTARY SEAL
STATE OF MISSOURI, CITY OF ST. LOUIS
MY COMMISSION EXPIRES FEBRUARY 18, 2008