

## **MEMORANDUM**

TO: Missouri Public Service Commission Official Case File,  
Case No. GR-2007-0208 Tariff Tracking No. JG-2009-0299  
Laclede Gas Company

FROM: Henry E. Warren, Energy Department – Tariffs/Rate Design

/s/ Thomas M. Imhoff 11/19/08  
Utility Operations Division/Date

/s/ Lera Shemwell 11/19/08  
General Counsel's Office/Date

SUBJECT: Staff Recommendation for Laclede Gas Company's Conservation and Energy Efficiency Programs Effective November 28, 2008

DATE: November 19, 2008

On October 28, 2008, Laclede Gas Company (Laclede or Company) of St. Louis, Missouri filed with the Commission four (4) tariff sheets with a proposed effective date of November 28, 2008. This filing proposes to implement the following two energy efficiency programs in the Company's tariff under Section 35 *Conservation and Energy Efficiency Programs*:

- A) Residential High Efficiency Rebate Program
- B) Commercial and Industrial (C/I) Rebate Program
- C) Program Year
- D) Program Tracking and Reporting
- E) Post-implementation Evaluation.

These programs replace the current Section 35 *Appliance and Rebate Program*. These programs were developed in accordance with provisions of the ORDER APPROVING UNANIMOUS STIPULATION AND AGREEMENT AND AUTHORIZING TARIFF FILING (Order) of Missouri Public Service Commission (PSC or Commission) in Case No. GR-2007-0208, effective July 29, 2007. The tariff sheets apply to all general service residential, commercial, and industrial customers located in all of Laclede's Missouri gas service divisions.

These programs are pursuant to paragraph 20 of the Stipulation and Agreement referenced in the Commission Order. This provides for the Energy Efficiency Collaborative (EEC), funding of \$150,000 for program development and implementation and up to \$3,500,000 for conservation and energy efficiency programs over three years.

On November 12, 2008, Laclede filed two (2) substitute tariff sheets to correct errors on the sheets originally filed.

### **Description of Residential High Efficiency Rebate Program**

This program replaces the Residential Rebates previously approved by the Commission. This program was described in the report, *Laclede Gas Company and Energy Efficiency Collaborative: Energy Efficiency Program Portfolio, September 18, 2008*, prepared by Applied

Energy Group (AEG) for Laclede and the EEC (Attached) in partial fulfillment of the Stipulation and Agreement in Case No. GR-2007-0208.

### Residential High Efficiency Program Purpose

The Residential High Efficiency Rebate Program is intended to aid and encourage residential Customers to purchase higher Annual Fuel Utilization Efficiency (AFUE) rated (more energy efficient) gas furnaces or boilers and Energy Star<sup>®</sup> thermostats for their homes. The energy savings per year are estimated to be 20,063 MCF and the demand saving is estimated to be 200.6 MCF. The Total Recourse Cost Test is estimated to be 3.75, the annual participation is estimated to be 1,360 customers (for furnaces and boilers), and the annual cost is \$350,000 (in addition, \$21,000 will be allocated for evaluation in year 2).

The benefits for a customer that participates in the program include:

- Significant savings on energy bills
- Higher home resale value
- A quieter, more comfortable living environment
- Improved air quality for better health
- Greater home durability with lower maintenance
- Increased environmental safety and energy efficiency

### Residential High Efficiency Program Administration

Energy Star<sup>®</sup> and AFUE are national programs of the U.S. Environmental Protection Agency (EPA) and U.S. Department of Energy (DOE). Laclede will be the administrator for the overall program, but most of the larger parts of the implementation of the programs will be done by third parties such as accepting applications, providing a call center for customer contact, and processing and mailing checks for our residential rebate program.

### Description of Residential High Efficiency Program

The Residential High Efficiency Rebate program is a direct impact program targeted to both the retrofit and new construction markets. It provides incentives for the installation of high efficiency heating systems. Standard efficiency gas heating equipment continues to be offered by dealers and, therefore, this program encourages customers to upgrade to higher efficiency options. Residential customers living in a one to four-unit structure, including both renters and low income, are eligible to participate. A rebate for ENERGY STAR<sup>®</sup> rated electronic set-back thermostat will also be offered.

### Residential High Efficiency Program Marketing

This program will be offered through HVAC dealers and Laclede. Laclede will promote this program through the HVAC community, on their website, through bill inserts, and possibly through cost effective local print media. Laclede will develop application forms that are available online and provide tools, such as usage comparisons and savings charts, for HVAC dealers to use to demonstrate the cost benefits of high efficiency systems. Laclede will also provide dealers with clear processes for informing buyers on how to obtain financing or rebates and will make this information available online for consumers.

#### Residential High Efficiency Program Process

The end use customer will be the primary person to receive the rebate. In the retrofit market, the HVAC dealer will verify the installation for the home owner-customer to receive the rebate. In the new construction market, if a buyer has been identified in a spec home, Laclede will provide the rebate to whomever the customer chooses (the builder or themselves). If the home has no buyer identified, the builder will receive the rebate. Under no circumstances will one home receive more than one rebate. To be eligible for the rebate, the purchaser must be a residential Laclede customer. The rebates are as detailed below.

Equipment Type	Rebates	Participants
Gas furnace (92% AFUE or higher)	\$150	1,000
Gas furnace (96% AFUE or higher)	\$200	330
Gas Boilers (90% AFUE or higher)	\$150	30
Electronic set-back thermostat	\$25	880

Financing: This program only provides a rebate. However, Laclede's EnergyWise program offers financing at market rates. Customers who receive a rebate are also eligible for financing through the EnergyWise program.

#### Residential High Efficiency Program Costs

Budget Categories	Year 1	Year 2
Project Delivery	\$40,000	\$40,000
Administration	\$32,500	\$32,500
Advertising/Promotion	\$35,000	\$35,000
Customer Incentive	\$242,500	\$242,500
Evaluation	\$0	\$21,000
Total	\$350,000	\$371,000

These amounts will provide for incentive payments, marketing costs, evaluation cost and Company administration costs. Payments will be provided until the budgeted funds for the total program are expended. To the extent there are excess funds for a given year, the amounts of excess shall be "rolled over" to be utilized for the Program in the succeeding year.

#### Residential High Efficiency Program Evaluation

The Company will provide an evaluation of the Program in 2010 (the second year). The evaluation will include a process and impact evaluation. Laclede will work with an external vendor to perform these evaluations.

### **Commercial and Industrial Rebate Program**

This program replaces the Commercial Rebates previously approved by the Commission. This program was described in the report, *Laclede Gas Company and Energy Efficiency Collaborative: Energy Efficiency Program Portfolio, September 18, 2008*, prepared by Applied Energy Group (AEG) for Laclede and the EEC in partial fulfillment of the Stipulation and Agreement in Case No. GR-2007-0208.

#### **C/I Rebate Program Purpose**

The C/I Rebate is a direct impact program for commercial and industrial (C/I) customers in the retrofit and new construction markets. This program offers both prescriptive rebates and custom rebates for the installation of natural gas energy efficiency improvements and will also offer a reimbursement for the cost of an energy audit that was performed in support of any measure that receives a rebate.

#### **C/I Rebate Program Administration**

Laclede will be the administrator for the overall program, but some of the larger parts of the implementation of the programs will be done by third parties such as accepting applications, providing a call center for customer contact, and processing and mailing checks for our residential rebate program. Laclede sales managers may choose to have a sales representative hand deliver the larger rebate checks rather than having AEG mail them.

#### **Description of C/I Rebate Program**

Certain measures will receive prescriptive rebates including those which install, replace or retrofit qualifying natural gas heating systems and set-back thermostats. Boiler and furnace tune-ups will also be eligible for a prescriptive rebate as will energy efficient food services equipment such as clam shell griddles, booster water heaters, etc. These rebates are based upon a fixed schedule by type and size of equipment. All other rebates under this project will receive financial incentives which are customized or individually determined using BENCOST. This will ensure that they pass the Societal B/C Test. A cap of \$40,000 will be placed on the rebates received by any one customer. This cap is based on the customer, not the account, and will be applied for the first nine months of any program year to prevent one or two large projects from using all the available funding. However, if there are monies available after nine months, the cap will be removed and larger projects may receive more than \$40,000.

#### **C/I Rebate Program Marketing**

The project delivery and administrative budgets for this project reflects both the cost to process the prescriptive and custom rebates. Evaluating custom rebate applications requires significant analysis, often because customers do not have all the information necessary to run the BENCOST model. Many of the measures proposed under this project require outside expert assistance in order to determine the potential energy savings, base case, incremental cost and other parameters necessary for performing cost effectiveness testing. Many projects that are submitted for review will have to be modified or possibly rejected because they will not have the criteria necessary to qualify for rebate.

### C/I Rebate Program Process

The energy audit incentive will only be provided to a customer that qualifies for a rebate under this program. The incentive offer will be structured as follows:

- Non-Profit customers (i.e., schools and governmental customers) will be eligible for full cost reimbursement up to \$750 per building under 25,000 sq. ft. and \$1,000 for buildings over 25,000 sq. ft.
- All other types of C/I customers that are not included in the non-profit group will be eligible for a partial reimbursement up to \$375 per building under 25,000 sq. ft. and \$500 for buildings over 25,000 sq. ft.
- There will be a limit of three buildings per customer per year for audit incentives. Audits must be performed by qualified professionals. Audit reports must cover multiple aspects of energy use including:
  - HVAC System Controls
  - HVAC System Efficiency and Operation
  - Building Envelope
  - Commercial Cooking (where applicable)

The budget assumes that 40 audits will be conducted of which 20 will be for non-profits, schools and governmental customers, and 20 other C/I customers. The goal of 40 audits is consistent with the experience in other states by gas utilities.

#### Prescriptive Rebates for the C/I Rebate Program:

EQUIPMENT OR SERVICE	ELIGIBLE CUSTOMER SECTOR	REBATE
Continuous Modulating Burners	All C/I Customers	25% of equipment cost; \$15,000 cap per burner
Energy Star Electronic Set-Back Thermostat	All C/I Customers	\$40

#### Prescriptive rebates for the C/I Rebate program (continued):

EQUIPMENT OR SERVICE	ELIGIBLE CUSTOMER	REBATE
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Gas-fired Boiler Tune Up	SECTOR	
	C/I customers which are non-profit (i.e. schools and governmental agencies)	100% of the cost up to \$1,500 per building
	Other C/I customers	50% of the cost up to \$500 per boiler *boilers are eligible for tune-ups every two years.
High Efficiency Air-Forced Furnaces		
>=92% AFUE	All C/I Customers	\$200
>=94% AFUE	All C/I Customers	\$250
Vent Dampers	All C/I Customers	50% of equipment cost with a \$500 cap per boiler

#### C/I Rebate Program Costs

<i>Budget Categories</i>	<i>Year 1</i>	<i>Year 2</i>
Project Delivery	\$75,000	\$75,000
Administration	\$15,000	\$15,000
Advertising/Promotion	\$25,000	\$25,000
Customer Incentive	\$349,250	\$349,250
Evaluation	\$0	\$27,855
Total	\$464,250	\$492,105

The average incentive for a prescriptive rebate was assumed to be \$252 and for a custom rebate it was assumed to be \$9,000.

The C/I Rebate program will also provide custom rebates to C/I customers for the installation of any natural gas related energy efficiency improvement that does not qualify for a prescriptive rebate. All custom rebates will be individually determined and analyzed using BENCOST to ensure that they pass the Societal Benefit/Cost Test. Any measure that is pre-qualified (evaluated prior to being installed), must produce a Societal Benefit/Cost test result of 1.0 or higher.

Rebates are calculated as the lesser of the following:

- A buydown to a two year payback
- \$6.63 per MCF saved during the first year

The project delivery and administrative budgets for this project reflects both the cost to process the prescriptive and custom rebates.

#### C/I Rebate Program Evaluation

Because each project is analyzed individually to ensure it passes the Societal Test perspective, it is assumed that projects are cost effective. Some dollars have been put into the budget for a potential impact evaluation on a specific project or two.

Evaluating custom rebate applications requires significant analysis, often because customers do not have all the information necessary to run the BENCOST model. Many of the measures proposed under this project require outside expert assistance in order to determine the potential energy savings, base case, incremental cost and other parameters necessary for performing cost effectiveness testing. Many projects that are submitted for review will have to be modified or possibly rejected because they will not have the criteria necessary to qualify for rebate.

#### **Staff Recommendation**

The Commission's Energy Department Staff (Staff) has reviewed the filed tariff sheets and recommends approving the following tariff sheets, as filed on October 28, 2008, as substituted November 12, 2008, to go into effect for service on and after November 28, 2008, the requested effective date:

##### P.S.C. MO. No. 5 Consolidated

Second Revised Sheet No. R-45 canceling First Revised Sheet No. R-45

Second Revised Sheet No. R-46 canceling First Revised Sheet No. R-46

Second Revised Sheet No. R-47 canceling First Revised Sheet No. R-47

Second Revised Sheet No. R-48 canceling First Revised Sheet No. R-48

Because this filing was made on thirty (30) days or greater notice, no order is necessary to indicate approval.

The Staff has verified that this Company has filed its annual report and is not delinquent on any assessment. Staff is not aware of any other matter before the Commission that affects or is affected by this filing.

cc: Kenneth J. Neises  
Lewis Mills

Laclede Gas Company  
And  
Energy Efficiency Collaborative

Energy Efficiency Program Portfolio

September 18, 2008



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# ***INTRODUCTION AND COMMENTS***

## **1. Introduction**

As a result of Laclede Gas Company's most recent rate case (Case No. GR-2007-0208), the Laclede Energy Efficiency Collaborative was formed to identify cost effective energy efficiency programs and choose a portfolio of customer programs to be implemented. The Collaborative was formed and issued an RFP for a consultant to assist in the design, pre-implementation evaluation, and planning for a post-implementation evaluation of the programs. The Collaborative selected Applied Energy Group as the consultant. The first workshop was held on March 10, 2008 with two more meetings held on April 10 and June 16, 2008.

The rate case order allows Laclede to spend up to \$3,950,000 over the ensuing 3-year period on the energy efficiency programs. The total is comprised of \$3,500,000 to be tracked in a regulatory asset account and annual funding of \$150,000. With the RFP process and workshops taking close to nine months and more time needed to prepare the programs for implementation, Laclede has approximately two years to deliver the energy efficiency programs. Therefore this plan projects the program implementation to occur over the next two years. The Collaborative has agreed, however, that the goal is to offer energy efficiency programs to Laclede customers and the following actions would be taken, based on market demand:

- If the market demand is high for one or more programs and the funding for those programs are spent quickly, the Laclede EEC can request additional funding to meet the demand for the program<sup>1</sup>; or
- If the market demand is low for one or more programs, Laclede can request additional time to spend the dollars, or transfer the funds to other programs with greater participation.

## **2. Reporting**

The Unanimous Stipulation and Agreement approved in the Commission Order in GR-2007-0208, requires quarterly tracking and reporting regarding cost and participation in each energy efficiency program.

Dollars have been reserved for a simple tracking system that will track participants by program and assign deemed or actual energy savings to each participant. This will automate progress reports to the Collaborative and the regulators. The system will compare actual progress to goal. It will provide the capability for ad hoc reporting as well as pre-designed standard reports.

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<sup>1</sup> The Unanimous Stipulation and Agreement approved in the Commission Order allows the parties to unanimously agree to request that the Commission approve a greater expenditure for Laclede's energy efficiency programs.

### **3. Evaluation**

Two types of evaluations will be completed on the programs as appropriate.

- For each program, a process evaluation will be completed approximately nine to 12 months after the start of that program's implementation. These evaluations will identify improvements to delivery processes that will make the implementation of the program more effective.
- For direct impact programs, an impact evaluation will be completed. A high level evaluation plan is included in the program description.

Evaluations will be conducted during the second year of program implementation. Wherever possible, it is assumed that the program will be coordinated with and jointly offered by Laclede Gas and AmerenUE Electric. Therefore, wherever possible, evaluations will also be coordinated and jointly done. Samples will need to be coordinated. It is likely that cost sharing for the evaluation will be most applicable to process evaluations but both utilities can use the same impact evaluation vendor(s).

The Collaborative also agrees that, although unlikely, should the determination be made to end a specific program, the Collaborative can decide at that time to revisit plans to complete the impact evaluation.

### **4. Priorities and Roll-out Timelines**

While all programs are important and it is the Collaborative's desire to make all the programs available to Laclede customers as soon as possible, the EEC does not want to hold up all the programs until every program detail is complete. Furthermore, it is in the best interests of all impacted for Laclede and AmerenUE Electric to jointly offer some programs. The programs that will be jointly offered need more time to accommodate the Ameren planning process. Therefore, the following programs will be implemented first:

- High Efficiency Heating System Rebate Program
- C/I Rebate Program
- Tracking system.

In three to six months following the implementation of the above three programs, these next three programs should be implemented:

- Limited Income Weatherization
- Low to Limited Income Heating System Zero Percent Financing Program
- Online Energy Information and Audit Program

Finally, within six to nine months of the initial program rollouts, these last three

programs should be implemented:

- Home Performance with Energy Star
- Building Operator Certification
- Market Transformation and Education

The following chart illustrates the proposed program rollout schedule:

	8-Aug	8-Sep	8-Oct	8-Nov	8-Dec	8-Jan	9-Feb	9-Mar	9-Apr	9-May
Residential High Efficiency Heating System Rebate Program										
C/I Rebate Program										
Tracking System										
Limited Income WX Program										
Low to Ltd Inc Htg System Financing										
Online Energy Info/Audit Program										
Home Perf w/Energy Star*										
Building Operator Certification*										
Market Trans & Education										

#### 4. Benefit Cost Software

The software used to perform the benefit/cost screening has been adapted from Minnesota Department of Commerce “BenCost” software and is consistent with the California Standard Practice Manual. The input data required for the model includes the following:

- General Inputs – Applied to all energy conservation measures/programs, these data describe the utility avoided costs, economic evaluation conditions [e.g., discount rates], and customer rates. Each of the specific inputs is identified below with a description and their source<sup>2</sup>.
  - Retail Rate – the average cost of energy saved by the customer. The customer may be defined as residential or commercial/industrial if different rate structures exist. This rate is used to calculate the value of a particular measure/program from the customer’s perspective and can be used to calculate simple payback.

<sup>2</sup> The specific general inputs used in the model are contained in Appendix A.

- Commodity Cost – the utility avoided cost of energy. This represents the amount of money that would be saved by avoiding the delivery and consumption of one less unit of energy.
- Demand Cost – the utility cost savings achieved by avoiding the delivery of one less unit of demand.
- Variable O&M – the estimated utility cost savings achieved in operations and maintenance by the avoidance in energy, expressed as savings per unit of energy saved. This value may also be included in the Commodity Cost calculations and should not be duplicated.
- Environmental Damage Factor – the estimated value placed on avoiding environmental externalities such as emissions.
- Escalation Rate – economic inflation rate used for utility rates, costs, etc. [percent]. This escalation rate is applied to current values to estimate the value of the same costs in future dollars. The rate is applied to each of the costs identified above.
- Participant Discount Rate – the economic inflation rate applied to participant cash flows [percent]. This represents the customer's cost of money for which alternative investments may be made instead of the investment in energy savings measures. This value is used to determine net present value of costs and benefits in the Participant Test.
- Utility Discount Rate – the utility's cost of capital expressed as a percentage. This is representative of alternate utility investments, similar to Participant Discount Rate. This value is used determine net present value of costs and benefits in the Utility Cost Test and Revenue Requirements Test.
- Societal Discount Rate – similar to the other discount rates, this value represents the overall societal cost of money [percent] and is used in discounting the societal effects of savings. This value is used determine net present value of costs and benefits in the Societal Test.

- General Input Data Year – the year from which the source data is taken. In order to properly discount future costs of money, it is important to know from which year the input data is derived.
- Project Analysis Year – the first year of project analysis, representative of a mature program [year, e.g., 2009]. For the evaluation of planned programs, this represents the first year of program operations. Economic factors in the model are escalated appropriately to reflect the differences from data collection to program implementation.
- Project/Measure Specific Inputs – The following is a list of the inputs that are applied to an individual project/measure. These vary depending on program type, measure description, and nature of the energy savings. These data were developed by AEG using data provided by Laclede on project target markets and customer energy usage characteristics and other utility programs.
  - Utility Project Costs – the overall annual costs for the utility to implement the program under evaluation [annual \$]. This includes the utility cost for incentives, administration, evaluation, etc. for each year that program is planned. Utility incentives must be provided separately as these costs are handled differently from other utility costs in certain benefit cost tests.
  - Direct Participant Cost – the incremental cost of each energy savings measure [\$ per measure] before utility incentives. This represents what the customer would have to pay to achieve the benefits of the specified energy efficient measure. This is a one-time cost.
  - Other Participant Cost – if there are other costs such as increased annual maintenance these may be defined here [annual \$]. It is assumed that these are recurring costs over the life of the measure.
  - Other Energy Savings – if there are other energy savings [non-electric] such as fuel savings, these may be defined here [annual \$]. It is assumed that these are recurring savings over the life of the measure.
  - Project Life – the estimated lifetime that a project/measure will yield energy savings [years]. Measure life should be consistent with equipment life but in some instances the utility may choose to limit the savings to a predetermined life [e.g., 15 years maximum] for analysis purposes.

- Demand Savings – the amount of peak day reduction that the particular measure will yield.
- Coincident Factor – a factor applied to Demand Savings to determine the value of demand reduction that will be achieved during at the hour of the utility peak [in percent].
- Mcf/Participant Savings – the energy savings component of a particular measure. This is defined as the savings achieved for each measure.
- Number of Participants – the participation goal for a particular program.
- Incentive per Participant – the value of the utility incentive for each particular measure included in program. This value multiplied by the Number of Participants will yield the total utility incentive.
- Evaluation – Program evaluation is budgeted to occur in Year 2 of the implementation cycle.
- Program Write-ups – Each program write-up contains the following sections:
  - Peak Demand and Energy Consumption – This is an estimate of the demand and energy savings that can be expected to occur given the assumptions for each particular program.
  - Estimate of Program Cost Effectiveness – Each program undergoes benefit/cost screening. Five different perspectives have been analyzed (Total Resource Cost, Societal, Participant, Ratepayer Impact Measure (RIM) and Utility Cost. Appendix B contains a description of each of these tests.
  - Participation – The participation targets reflect equipment saturations in Laclede's service territory as well as replacement cycles and estimated penetrations for energy efficiency measures.
  - Program Budgets – Each program budget contains categories for program delivery, project management, marketing, incentives and evaluation. Some of the programs also contain start-up costs which are reflected in Year 1.

## **5. Plans for the Future**

The Collaborative intends to continue to communicate throughout the year. The Unanimous Stipulation and Agreement approved in the Commission Order in GR-2007-0208, requires quarterly tracking and reporting regarding cost and participation in each energy efficiency program. Meetings or conference calls will be scheduled as appropriate to discuss the quarterly tracking results.

In the Fall of 2009, the Collaborate will meet to review the progress of the programs and revisit the continued funding and evaluation of programs which were started first.



# ***LIMITED INCOME WEATHERIZATION PROGRAM***

## **1. PROJECT DESCRIPTION**

The Limited Income Weatherization program is a direct impact energy efficiency program targeted to the retrofit market. It is designed to assist those customers who fall just above the income guidelines for LIHEAP and low income weatherization and currently receive little to no assistance even though their need may be great. They are often referred to as the working poor or those on limited incomes who choose to pay their bills at the cost of not eating properly or taking their proper medications. This program will offer weatherization services to those at 60% of State Median Income Guidelines or 185% of Federal Poverty Guidelines, whichever is higher.

This program is designed to be administered by one organization such as Laclede or DNR and implemented by the Community Action Partnership (CAP) agencies. It will follow the same protocol as the current federal and state guidelines for low income weatherization. The program will provide significant energy savings to Laclede's limited income customers. Participants must be a Laclede residential customer, qualify as "limited income" under the above mentioned criteria, and have not participated in the DOE program since 1993.

Income will be verified by the CAP agency in a manner that encourages this target audience to participate. Participants will be provided a NEAT audit and conservation education. The recipient will be required to provide a co-pay of \$50. The auditor will identify weatherization work that is eligible for this program. If weatherization services are pursued, the participant (or the owner if it is a rental property) will be asked to provide a co-pay of \$100. CAP agencies will assess whether payment of co-pays are a barrier to participation and therefore need financing.

This program will be jointly offered by Laclede and AmerenUE Electric. Together, they will provide funding for all measures that have a savings-to-investment ratio (SIR) of 1.0 or higher. This assures the cost effectiveness of the program. If the participant would like to pursue measures that have an SIR of less than 1.0, the participant is welcome to do so at his/her own cost, further contributing to the cost effectiveness of the program. If desired, these measures may be implemented at a later date. However, the cost of travel and set up by the crew and administration by staff will be born by the participant if the measures are implemented at a later date when the crew revisits the premise for these additional measures.

This program will help limited income customers reduce their energy costs at little cost to the customer. CAP agencies offer a cost effective implementation capability, which allows most of the funds allocated to this program to go directly

to the purchase and installation of conservation measures. It will focus on building shell measures and will be coordinated with Ameren's program targeted to the same audience. Consequently, it is anticipated that costs and savings of building shell measures and marketing efforts will be shared with Ameren. If unsafe conditions may occur with tightening up and insulating the home, the home will not be weatherized.

The Limited Income Weatherization program will be made available to single family, duplex, three-plex and four-plex residential dwellings. Mobile homes will also be eligible but may not be more than 25% of participating residences. Rental units will also be eligible based on the renter providing the co-pay for the audit and the owner providing approval and the co-pay for the weatherization. Rental units will be limited to 50% of participating residences. Provisions will be added restricting the landlord from increasing rent because of the weatherization upgrades, similar to the current restrictions for the DOE Low-Income Weatherization Assistance Program. .

Laclede will work diligently to find qualifying limited income customers to participate in this program. The program will be promoted via bill inserts to make all customers, especially caregivers, aware of this service and targeted marketing to organizations that support and provide services for senior citizens and other community needs. Information on this program will also be disseminated through senior centers, Meals on Wheels, churches, and other similar community based assistance organizations. Laclede will communicate information about this program through the Company's website, as well as through the CAPs' various communication mediums with the low income community. CAPs will be encouraged to refer customers to this program if their applicants' incomes are just above the Low Income guidelines. Laclede can also provide information about the program to any low income customer in arrears.

Customers targeted by this program are often reluctant to participate in 'welfare' or 'charity' programs. They are often open, however, to a neighbors helping neighbors concept. Therefore, in the spirit of neighbors helping neighbors, participants will be invited to contribute a portion of their energy savings to Laclede's fuel fund to help another household in need of assistance.

## **2. ANNUAL PEAK DEMAND AND ENERGY SAVINGS (per year)**

It is estimated that the average savings per participant will be similar to that of the Low Income Weatherization Program.

Years	Demand (MCF)	Energy (MCF)
1 - 2	32.75	3,275

### 3. PROJECT COST EFFECTIVENESS

Because the measures implemented will have an SIR of 1.0 based on the NEAT audit, it is assumed the measures will be cost effective. Based on assumptions documented in the benefit cost model, results of the cost effectiveness analysis are as follows:

<b>Benefit-Cost Ratios with Demand Savings</b>				
<b>Societal</b>	<b>TRC</b>	<b>Utility</b>	<b>Ratepayer Impact</b>	<b>Participant</b>
<b>2.16</b>	<b>2.00</b>	<b>2.15</b>	<b>0.56</b>	<b>34.62</b>

<b>Benefit-Cost Ratios without Demand Savings</b>				
<b>Societal</b>	<b>TRC</b>	<b>Utility</b>	<b>Ratepayer Impact</b>	<b>Participant</b>
<b>1.88</b>	<b>1.72</b>	<b>1.85</b>	<b>0.48</b>	<b>34.62</b>

### 4. ANNUAL PARTICIPATION AND PROJECT USE PERCENTAGE (per year)

<b>Years</b>	<b>Participation</b>	<b>% Limited Income Participants</b>	<b>% Renter Participants</b>
<b>1 - 2</b>	100 Weatherizations 120 Audits	100%	Up to 50%

### 5. ANNUAL PROJECT BUDGET

<b>Budget Categories</b>	<b>Year 1</b>	<b>Year 2</b>
Project Delivery	\$189,760	\$189,760
Administration	\$9,000	\$9,000
Advertising/Promotion	\$1,500	\$1,500
Customer Incentive	n/a	n/a
Evaluation	\$0	\$12,016
<b>Total</b>	<b>\$200,260</b>	<b>\$212,276</b>

The program budget covers all administrative, marketing, and implementation costs such as the NEAT audit, weatherization and inspections. The program costs were based upon 2008 data provided by DNR. Budgets were determined on a cost per audit (\$275) and average cost per weatherization job for the 2008 program year (\$2,966). A 20% administration fee was added, the co-pays were deducted and the remaining costs for the delivery were equally divided between Laclede and Ameren. Marketing costs of \$3,000 were also divided between Laclede and Ameren.

These estimates are based on total cost of Low Income Weatherization per home. However, there will not be a maximum or average dollar expenditure placed on any home. We propose to implement all weatherization measures with a SIR of 1.0 or above for the program. As has been proven in low income weatherization, it is more cost effective to minimize the number of trips to a home and perform all cost effective weatherization measures during the visit.

## **6. PLAN TO EVALUATE PROJECT EFFECTIVENESS**

A process evaluation will be completed partly on an on-going basis by receiving feedback from the CAP agencies on participation, marketing, income verification, etc. A high level simple process evaluation will also be completed within one year of tariff effective date for this program.

An impact evaluation will be completed jointly with Ameren. The impact evaluation will determine the difference between pre- and post-implementation weather-normalized gas usage. It is likely that, with the daily data available from Laclede, a full 12 months of pre and post data will not be needed and a shorter time frame pre and post will provide a sound evaluation.

Laclede will begin capturing the data for all participants immediately after participation. This will ensure that data is available for any member of the sample.

# ***LOW TO LIMITED INCOME HEATING SYSTEM ZERO PERCENT FINANCING PROGRAM***

## **1. PROJECT DESCRIPTION**

The Low to Limited Income Heating System Zero Percent Financing Program is a direct impact energy efficiency program targeted to the retrofit market. It is designed to assist those customers who either qualify for low income weatherization but are unable to get their heating system replaced through the program or fall just above the income guidelines for low income assistance and cannot obtain assistance in replacing their heating system. They are often referred to as the working poor or those on limited incomes who choose to pay their bills at the cost of not eating properly or taking their proper medications.

This program will provide significant energy savings to Laclede's low and limited income customers by offering **zero interest financing for 100% of the cost of natural gas heating system replacements**<sup>3</sup> to Laclede customers at 60% of State Median Income Guidelines or 185% of Federal Poverty Guidelines, whichever is higher. To qualify as low to limited income, the customer's income will be verified by the CAP agency in a manner that encourages this target audience to participate. The customer must have been at the address for at least 1 year, be the property owner and allow a lien to be placed on the residence, be credit-worthy, have received no more than 4 notices for delinquency and no disconnect notice within the past 12 months and not be delinquent on any Laclede merchandise. A lien will be placed on the property until the loan is paid. The loan will have a maximum term of five years (60 months) and customers will be billed monthly on their regular gas bill. Maximum amount of the loan will be \$10,000. There would be no prepayment penalty.

This program is designed to be administered by Laclede, use Community Action Program (CAP) agencies and other community organizations for referrals and HVAC contractors for implementation. HVAC dealers will be provided with information on all Laclede programs so they know where to refer potential participants. Laclede customers purchasing natural gas heating systems from HVAC contractors will be required by the HVAC contractor to put a deposit on the purchase while financing is arranged. This deposit will be reimbursed when financing is arranged for the total purchase. Heating systems must be a minimum of 92% AFUE for furnaces and 90% AFUE for boilers.

Laclede will inform HVAC community about this program, communicate information about this program through the Company's website, and leverage the CAPs' various communication mediums with the low and limited income

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<sup>3</sup> This program allows qualified customers to finance, at zero percent interest, 100% of the cost of the heating system replacement. The High Efficiency Heating System Rebate program will offer a rebate and the EnergyWise program offers market-based financing.

community. HVAC dealers will be provided with information on the Laclede program so they know where to refer potential participants. Laclede can also provide information about the project to any low income customer who has called with payment issues or high bill complaints.

Customers targeted by this program are often reluctant to participate in 'welfare' or 'charity' programs. They are often open, however, to a neighbors helping neighbors concept. Therefore, in the spirit of neighbors helping neighbors, participants will be invited to contribute a portion of their energy savings to Laclede's fuel fund to help another household in need of assistance.

## 2. ANNUAL PEAK DEMAND AND ENERGY SAVINGS (per year)

Years	Demand (MCF)	Energy (MCF)
1 - 2	13.1	1,306

## 3. PROJECT COST EFFECTIVENESS

Benefit-Cost Ratios with Demand Savings				
Societal	TRC	Utility	Ratepayer Impact	Participant
1.87	1.73	1.73	0.53	Infinity

Benefit-Cost Ratios without Demand Savings				
Societal	TRC	Utility	Ratepayer Impact	Participant
1.63	1.49	1.49	0.45	Infinity

## 4. ANNUAL PARTICIPATION AND PROJECT USE PERCENTAGE (per year)

Years	Participation	% Limited Income Participants	% Renter Participants
1 - 2	120 (100 furnaces & 20 boilers)	100%	25%

## 5. ANNUAL PROJECT BUDGET

Budget Categories	Year 1	Year 2
Project Delivery	\$93,987	\$93,987
Administration	\$5,000	\$5,000
Advertising/Promotion	n/a	n/a
Customer Incentive	n/a	n/a
Evaluation	\$0	\$5,939
Total	\$98,987	\$104,926

The project delivery budget assumes a \$150 administrative fee per loan and a cost of capital (interest rate) for the loan dollars of 5.36%. Administrative payments to CAP agencies will be determined as details for this program and the Limited Income Weatherization program delivery are negotiated, subject to review by the EEC.

## 6. PLAN TO EVALUATE PROJECT EFFECTIVENESS

A process evaluation will be completed within one year of implementation. The goals of the process evaluation will be to identify barriers to participation, possible improvements in delivery processes, and whether changes to the financing approval process by Laclede is actually removing barriers for HVAC dealers.

The impact evaluation will determine the difference between pre- and post-implementation weather-normalized gas usage. It is likely that, with the daily data available from Laclede, a full 12 months of pre and post data will not be needed and a shorter time frame pre and post will provide a sound evaluation. Laclede will begin capturing the data for all participants immediately after participation. This will ensure that data is available for any member of the sample.

Laclede will work with an external vendor to perform these evaluations.

# **HOME PERFORMANCE WITH ENERGY STAR PROGRAM**

## **1. PROJECT DESCRIPTION**

Home Performance with ENERGY STAR® is a unique program which enhances the traditional existing home energy audit service. This program uses the ENERGY STAR® brand to help encourage and facilitate whole-house energy improvements to existing housing. It focuses on the private-sector contractors and service professionals who currently work on existing homes – replacing HVAC systems, adding insulation, installing new windows, etc. The Missouri Home Performance with ENERGY STAR® Initiative requires contractors to be accredited under Building Performance Institute (BPI) standards. Technicians must possess appropriate skills and are field-tested to obtain certification, further lending credibility to services offered.

The program strives to provide homeowners with consumer education, value and a whole-house approach. A participating BPI-certified Home Performance contractor<sup>4</sup> can identify and fix a variety of home energy efficiency problems, including poor insulation, air leaks through cracks and gaps, and ineffective moisture control by first performing a home assessment. Upon completion of the inspection, the contractor will provide an itemized cost estimate for each suggested improvement.

Contractors are trained to provide "one-stop" problem solving that identifies multiple improvements that, as a package, will increase the home's energy efficiency. While the program goal is saving energy, its market-based approach and message focus on addressing a variety of customer needs – comfort, energy savings, durability, and health & safety. It also encourages the development of a skilled and available contractor/provider infrastructure that has an economic self-interest in providing and promoting comprehensive, building science-based, retrofit services.

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<sup>4</sup> A BPI-Certified Home Performance Contractor must be certified by BPI, a national resource for building science technology that sets standards for assessing and improving the energy performance of homes. A certified Home Performance contractor can performance-test a home using the most advanced whole house testing technologies and produce a Comprehensive Home Assessment report. Note that Laclede does not warrant the products and/or services of participating contractors.



The benefits for a customer that participates in the program include:

- Significant savings on energy bills
- Higher home resale value
- A quieter, more comfortable living environment
- Improved air quality for better health
- Greater home durability with lower maintenance
- Increased environmental safety and energy efficiency

Laclede will offer this program with Ameren UE. Ameren is still in the process of determining final program details. Therefore, Laclede has set aside a budget for this program but has no further details at this time (tbd abbreviates to be determined).

The utilities are following MO Senate Bill 1181 which may allow tax credits only for energy savings from non-utility offered programs. At a minimum, customers will need to be educated on their choices for assistance.

## 2. ANNUAL PEAK DEMAND AND ENERGY SAVINGS (per year)

Years	Demand (MCF)	Energy (MCF)
1 - 2	tbd	tbd

## 3. PROJECT COST EFFECTIVENESS

Benefit-Cost Ratios with Demand Savings				
Societal	TRC	Utility	Ratepayer Impact	Participant
tbd	tbd	tbd	tbd	tbd

Benefit-Cost Ratios without Demand Savings				
Societal	TRC	Utility	Ratepayer Impact	Participant
tbd	tbd	tbd	tbd	tbd

Benefit cost tests will be based on Laclede's contribution and the total gas savings expected from the program.

**4. ANNUAL PARTICIPATION (per year)**

Years	Participation
1 - 2	tbd

**5. PROJECT BUDGET**

Budget Categories	Year 1	Year 2
Project Delivery	tbd	tbd
Administration	tbd	tbd
Advertising/Promotion	tbd	tbd
Customer Incentive	tbd	tbd
Evaluation	tbd	tbd
Total	\$300,000	\$300,000

**6. PLAN TO EVALUATE PROJECT EFFECTIVENESS**

Laclede will coordinate impact evaluation activities with AmerenUE. Laclede has a separate budget to perform process evaluations for all its programs.

# ***RESIDENTIAL HIGH EFFICIENCY REBATE PROGRAM***

## **1. PROJECT DESCRIPTION**

The Residential High Efficiency Rebate program is a direct impact program targeted to both the retrofit and new construction markets. It provides incentives for the installation of high efficiency heating systems. Standard efficiency gas heating equipment continues to be offered by dealers and, therefore, this program encourages customers to upgrade to higher efficiency options. Residential customers living in a one to four-unit structure, including both renters and low income, are eligible to participate. A rebate for ENERGY STAR® rated electronic set-back thermostat will also be offered.

Rebates: The end use customer will be the primary person to receive the rebate. In the retrofit market, this is fairly straightforward. However, in the new construction market, it can be more difficult. The goal is to get a higher efficiency heating system installed. Therefore, if a buyer has been identified in a spec home, we will provide the rebate to whomever the customer chooses (the builder or themselves). If the home has no buyer identified, the builder will receive the rebate. Under no circumstances will one home receive more than one rebate. To be eligible for the rebate, the purchaser must be a residential Laclede customer. The rebates are as detailed below.

<b>Equipment Type</b>	<b>Rebates</b>	<b>Participants</b>
Gas furnace (92% AFUE or higher)	\$150	1,000
Gas furnace (96% AFUE or higher)	\$200	330
Gas Boilers (90% AFUE or higher)	\$150	30
Electronic set-back thermostat	\$25	880

Financing: This program only provides a rebate. However, Laclede's EnergyWise program offers financing at market rates. Customers who receive a rebate are also eligible for financing through the EnergyWise program.

The benefits for a customer that participates in the program include:

- Significant savings on energy bills
- Higher home resale value
- A quieter, more comfortable living environment
- Improved air quality for better health
- Greater home durability with lower maintenance
- Increased environmental safety and energy efficiency

This program will be offered through HVAC dealers and Laclede. Laclede will promote this program through the HVAC community, on their website, through bill inserts, and possibly through cost effective local print media. Laclede will develop application forms that are available online and provide tools, such as usage comparisons and savings charts, for HVAC dealers to use to demonstrate the cost benefits of high efficiency systems. Laclede will also provide dealers with clear processes for informing buyers on how to obtain financing or rebates and will make this information available online for consumers.

**2. ANNUAL PEAK DEMAND AND ENERGY SAVINGS (per year)**

Years	Demand (MCF)	Energy (MCF)
1 - 2	200.6	20,063

**3. PROJECT COST EFFECTIVENESS**

Benefit-Cost Ratios with Demand Savings				
Societal	TRC	Utility	Ratepayer Impact	Participant
4.04	3.75	8.80	0.70	5.34

Benefit-Cost Ratios without Demand Savings				
Societal	TRC	Utility	Ratepayer Impact	Participant
3.51	3.22	7.57	0.60	5.34

**4. ANNUAL PARTICIPATION (per year)**

Years	Participation
1 - 2	1,360

**5. PROJECT BUDGET (per year)**

<b>Budget Categories</b>	<b>Year 1</b>	<b>Year 2</b>
Project Delivery	\$40,000	\$40,000
Administration	\$32,500	\$32,500
Advertising/Promotion	\$35,000	\$35,000
Customer Incentive	\$242,500	\$242,500
Evaluation	\$0	\$21,000
Total	\$350,000	\$371,000

**6. PLAN TO EVALUATE PROJECT EFFECTIVENESS**

A process evaluation will be completed within one year of implementation. The goals of the process evaluation will be to identify barriers to participation, possible improvements in delivery processes, and whether changes to the financing approval process by Laclede is actually removing barriers for HVAC dealers.

The impact evaluation will determine the difference between pre- and post-implementation weather-normalized gas usage. It is likely that, with the daily data available from Laclede, a full 12 months of pre and post data will not be needed and a shorter time frame pre and post will provide a sound evaluation. Laclede will begin capturing the data for all participants immediately after participation. This will ensure that data is available for any member of the sample.

Laclede will work with an external vendor to perform these evaluations.

# **ONLINE ENERGY INFORMATION AND AUDIT PROGRAM**

## **1. PROJECT DESCRIPTION**

The online energy information and audit program allows all residential customers to access their billing information and analyze their usage. This tool will analyze what end uses make up what percent of their usage, and provide information on ways to save energy by end use through a searchable resource center. It contains an online energy audit, pinpointing improvements that can be made and estimating the benefits of the improvement through an online calculator.

The online energy information and audit program can also allow the user to analyze why their bill may have changed from one month to another, thereby serving as a self-managed high bill analyzer. It educates the customer on what parts of their bills are affected by their usage versus rate changes and weather.

A home comparison also displays a comparison of the customer's home versus an average similar home via an Energy guide label concept. The software uses that specific customer's usage history (downloaded by the utility), making all analyses very specific to that customer and their home.

Ameren currently offers this program using the Aclara (formerly Nexus) software. Initial conversations with Aclara verify it is possible for Laclede to also use Aclara and customers of both Ameren and Laclede can have their electric and gas usage downloaded into the same file while maintaining the confidentiality of one utility's data from the other utility. Laclede customers that are not AmerenUE customers will just have their gas information utilized.

Laclede will work with Ameren to promote this program. It is anticipated that this program will primarily be promoted through bill inserts, the company's website, and cost effective media. The call center will also be utilized in informing customers of this offering when customers sign up for service or for online bill payment options, etc.

## **2. ANNUAL PEAK DEMAND AND ENERGY SAVINGS (per year)**

<b>Years</b>	<b>Demand (MCF)</b>	<b>Energy (MCF)</b>
<b>1 - 2</b>	n/a	n/a

### 3. PROJECT COST EFFECTIVENESS

Benefit-Cost Ratios with Demand Savings				
Societal	TRC	Utility	Ratepayer Impact	Participant
n/a	n/a	n/a	n/a	n/a

Benefit-Cost Ratios without Demand Savings				
Societal	TRC	Utility	Ratepayer Impact	Participant
n/a	n/a	n/a	n/a	n/a

### 4. ANNUAL PARTICIPATION (per year)

Years	Participation
1 - 2	44,250

It is assumed that 7.5% of residential customers will use the site annually.

### 5. PROJECT BUDGET

Budget Categories	Year 1	Year 2
Project Delivery	\$218,000	\$108,000
Administration	\$37,500	\$37,500
Advertising/Promotion	\$25,000	\$25,000
Customer Incentive	\$0	\$0
Evaluation	\$0	\$10,230
Total	\$280,500	\$180,730

### 6. PLAN TO EVALUATE PROJECT EFFECTIVENESS

As this is an educational program, no impact evaluation is planned. Laclede has a separate budget to perform process evaluations for all its programs.

## ***C/I REBATE PROGRAM***

### **1. PROJECT DESCRIPTION**

The C/I Rebate is a direct impact program for commercial and industrial (C/I) customers in the retrofit and new construction markets. This program offers both prescriptive rebates and custom rebates for the installation of natural gas energy efficiency improvements and will also offer a reimbursement for the cost of an energy audit that was performed in support of any measure that receives a rebate.

Certain measures will receive prescriptive rebates including those which install, replace or retrofit qualifying natural gas heating systems and set-back thermostats. Boiler and furnace tune-ups will also be eligible for a prescriptive rebate as will energy efficient food services equipment such as clam shell griddles, booster water heaters, etc. These rebates are based upon a fixed schedule by type and size of equipment. All other rebates under this project will receive financial incentives which are customized or individually determined using *BENCOST*. This will ensure that they pass the Societal B/C Test. A cap of \$40,000 will be placed on the rebates received by any one customer. This cap is based on the customer, not the account, and will be applied for the first nine months of any program year to prevent one or two large projects from using all the available funding. However, if there are monies available after nine months, the cap will be removed and larger projects may receive more than \$40,000.

Audit: The energy audit incentive will only be provided to a customer that qualifies for a rebate under this program. The incentive offer will be structured as follows:

- Non-Profit customers (i.e., schools and governmental customers) will be eligible for full cost reimbursement up to \$750 per building under 25,000 sq. ft. and \$1,000 for buildings over 25,000 sq. ft.
- All other types of C/I customers that are not included in the non-profit group will be eligible for a partial reimbursement up to \$375 per building under 25,000 sq. ft. and \$500 for buildings over 25,000 sq. ft.
- There will be a limit of three buildings per customer per year for audit incentives. Audits must be performed by qualified professionals<sup>5</sup>. Audit reports must cover multiple aspects of energy use including:
  - HVAC System Controls
  - HVAC System Efficiency and Operation
  - Building Envelope
  - Commercial Cooking (where applicable)

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<sup>5</sup> Qualified is defined as having a CEM, being a Professional Engineer, or having equivalent experience. Laclede will keep a list of qualified auditors to assist customers.



The budget assumes that 40 audits will be conducted of which 20 will be for non-profits, schools and governmental customers, and 20 other C/I customers. The goal of 40 audits is consistent with the experience in other states by gas utilities.

The following is the list of the available prescriptive rebates for the C/I Rebate program:

EQUIPMENT OR SERVICE	ELIGIBLE CUSTOMER SECTOR	REBATE
Continuous Modulating Burners	All C/I Customers	25% of equipment cost; \$15,000 cap per burner
Energy Star Electronic Set-Back Thermostat	All C/I Customers	\$40
Gas-fired Boiler Tune Up	C/I customers which are non-profit (i.e. schools and governmental agencies)	100% of the cost up to \$1,500 per building
	Other C/I customers	50% of the cost up to \$500 per boiler
		<i>*boilers are eligible for tune-ups every two years.</i>
High Efficiency Air-Forced Furnaces		
>=92% AFUE	All C/I Customers	\$200
>= 94% AFUE	All C/I Customers	\$250
Vent Dampers	All C/I Customers	50% of equipment cost with a \$500 cap per boiler

The C/I Rebate program will also provide custom rebates to C/I customers for the installation of any natural gas related energy efficiency improvement that does not qualify for a prescriptive rebate. All custom rebates will be individually determined and analyzed using *BENCOST* to ensure that they pass the Societal Benefit/Cost Test. Any measure that is pre-qualified (evaluated prior to being installed), must produce a Societal Benefit/Cost test result of 1.0 or higher.

Rebates are calculated as the lesser of the following:

- A buydown to a two year payback
- \$6.63 per MCF saved during the first year

The following are examples of how each of these criteria could determine the custom rebate:

<b>Custom rebate project with marginal energy savings</b>	
Incremental cost	\$130,000
MCF savings	3,400
Customer annual bill savings	\$22,400
Payback	5.80
rebate at 2 year payback	\$85,200
<b>rebate at \$6.63 per MCF</b>	<b>\$22,542</b>
<b>Custom rebate project with high energy savings</b>	
Incremental cost	\$55,000
MCF savings	3,800
Customer annual bill savings	\$22,400
Payback	2.46
<b>rebate at 2 year payback</b>	<b>\$10,200</b>
rebate at \$6.63 per MCF	\$25,194

Note that the \$ per MCF criteria will usually be the deciding factor for projects that have lower societal BC results due to high cost per MCF saved. The payback criteria conversely would be the deciding factor for projects that have higher societal BC results due to lower cost per MCF saved.

The project delivery and administrative budgets for this project reflects both the cost to process the prescriptive and custom rebates. Evaluating custom rebate applications requires significant analysis, often because customers do not have all the information necessary to run the *BENCOST* model. Many of the measures proposed under this project require outside expert assistance in order to determine the potential energy savings, base case, incremental cost and other parameters necessary for performing cost effectiveness testing. Many projects that are submitted for review will have to be modified or possibly rejected because they will not have the criteria necessary to qualify for rebate.

The participation goal of 344 prescriptive rebates and 27 custom rebates is based upon the experience with other gas utilities. Given the wide mix of measures and size of projects covered under this C/I Rebate Project, the participation goal is considered less important than the energy savings goals.

## 2. ANNUAL PEAK DEMAND AND ENERGY SAVINGS (per year)

Years	Demand (MCF)	Energy (MCF)
1 - 2	525.4	52,540

## 3. PROJECT COST EFFECTIVENESS

Benefit-Cost Ratios with Demand Savings				
Societal	TRC	Utility	Ratepayer Impact	Participant
5.83	5.41	14.95	0.83	6.53

Benefit-Cost Ratios without Demand Savings				
Societal	TRC	Utility	Ratepayer Impact	Participant
5.08	4.66	12.87	0.72	6.53

The cost of the audits was not incorporated into the program benefit cost tests. Had they been added into the program costs, the change to the B/C results would have been insignificant.

## 4. ANNUAL PARTICIPATION (per year)

Years	Non-Profit Audits	Other Audits	Prescriptive Rebates	Custom Rebates
1 - 2	20	20	317	27

**5. ANNUAL PROJECT BUDGET (per year)**

<b>Budget Categories</b>	<b>Year 1</b>	<b>Year 2</b>
Project Delivery	\$75,000	\$75,000
Administration	\$15,000	\$15,000
Advertising/Promotion	\$25,000	\$25,000
Customer Incentive	\$349,250	\$349,250
Evaluation	\$0	\$27,855
Total	\$464,250	\$492,105

The average incentive for a prescriptive rebate was assumed to be \$252 and for a custom rebate it was assumed to be \$9,000.

**6. PLAN TO EVALUATE PROJECT EFFECTIVENESS**

Because each project is analyzed individually to ensure it passes the Societal Test perspective, it is assumed that projects are cost effective. Some dollars have been put into the budget for a potential impact evaluation on a specific project or two.

## ***BUILDING OPERATOR CERTIFICATION PROGRAM***

### **1. PROJECT DESCRIPTION**

The Building Operator Certification (BOC) Program is a professional development program in the energy and resource efficient operations of buildings. To receive certification an individual must attend a series of one to two-day classes in facility maintenance and operation and demonstrate competence in technical areas by completing course tests and projects.

There are two levels of certification: Level I - Building System Maintenance and Level II - Equipment Troubleshooting and Maintenance. Development support for BOC was originally provided by the Northwest Energy Efficiency Council (NEEC), a non-profit group of electric utilities, state governments, public interest groups, and industry representatives committed to promoting affordable, energy-efficient products and services. In Missouri, the Midwest Energy Efficiency Alliance (MEEA) and the Missouri Department of Natural Resources (DNR) will work with Laclede and Ameren to promote and implement this program.

The program is targeted towards customers with facilities that employ full-time building operators and to property management firms. It is targeted not only to the facilities manager but to the personnel who actually perform maintenance functions.

The cost to participate in the training is approximately \$1,150 per participant. Laclede will rebate 50% of the cost for the training when the participant completes the courses and receives certification. If the participant is also an Ameren customer, Laclede proposes that Ameren and Laclede each pay 35% of the cost with the participant's company funding the remaining 30%.

### **2. EFFECT ON PEAK DEMAND AND ENERGY CONSUMPTION (per year)**

<b>Year</b>	<b>Demand (MCF)</b>	<b>Energy (MCF)</b>
<b>1 - 2</b>	<b>52.31</b>	<b>5,231</b>

### 3. ESTIMATE OF PROJECT COST EFFECTIVENESS

Benefit-Cost Ratios with Demand Savings				
Societal	TRC	Utility	Ratepayer Impact	Participant
3.38	3.14	6.39	0.78	4.40

Benefit-Cost Ratios without Demand Savings				
Societal	TRC	Utility	Ratepayer Impact	Participant
2.94	2.70	5.50	0.67	4.40

### 4. ANNUAL PARTICIPATION (per year)

Year	Participation	% Limited Income Participants	% Renter Participants
1 - 2	40	0%	0%

(Based on 5 Laclede only trainees and 35 joint Laclede and Ameren trainees.)

### 5. PROJECT BUDGET (per year)

Budget Categories	Year 1	Year 2
Project Delivery	\$5,000	\$5,000
Administration	\$3,250	\$3,250
Advertising/Promotion	\$2,500	\$2,500
Customer Incentive	\$16,963	\$16,963
Evaluation	\$0	\$1,663
Total	\$27,713	\$29,376

## **6. PLAN TO EVALUATE PROJECT EFFECTIVENESS**

A process evaluation will be completed after the first set of level one training programs has been completed.

The impact evaluation will attempt to determine whether training attendees have put into practice any of the improved maintenance procedures they learned. This will be accomplished by obtaining 12 months pre-attendance usage for the buildings maintained by attendees, having attendees report on their actions, then capturing usage data on a monthly basis for 12 months after the training is completed. Data will be weather normalized. It is likely that, with the daily data available from Laclede, a full 12 months of pre and post data will not be needed and a shorter time frame pre and post will provide a sound evaluation.

Laclede will work with an external vendor to perform these evaluations.

## **SUMMARY**

### **Number of Customers Touched and Effect on Peak Demand and Energy Consumption**

<b>Program</b>	<b>CUSTOMERS TOUCHED</b>	<b>Demand (MCF)</b>	<b>Energy (MCF)</b>
Limited Income Weatherization	120	32.75	3,275
Low to Limited Income Heating System Zero Percent Financing	120	13.1	1,306
Home Performance w/Energy Star	tbd	tbd	tbd
Residential High Efficiency Heating System/Rebate	1,360	200.6	20,063
Online Energy Info and Audit	44,250	n/a	n/a
C/I Rebate	344	525.4	52,540
Building Operator Certification	40		
<b>Total</b>	<b>46,234</b>	<b>722</b>	<b>77,184</b>



### Project Budget (For Year 1)

<b>Budget Categories</b>	<b>Program Delivery</b>	<b>Administration</b>	<b>Advertising/ Promotion</b>	<b>Customer Incentive</b>	<b>Total</b>
Limited Income Weatherization	\$189,760	\$9,000	\$1,500	\$0	<b>\$200,260</b>
Low to Limited Income Heating System Zero Percent Financing	\$93,987	\$5,000	\$0	\$0	<b>\$98,987</b>
Home Perf w/Energy Star	tbd	tbd	tbd	tbd	<b>\$300,000</b>
Residential High Efficiency Heating System Rebate	\$40,000	\$32,500	\$35,000	\$242,500	<b>\$350,000</b>
Online Energy Info and Audit	\$218,000	\$37,500	\$25,000	\$0	<b>\$280,500</b>
C/I Rebate Program	\$75,000	\$15,000	\$25,000	\$349,250	<b>\$464,250</b>
Building Operator Certification	\$5,000	\$3,250	\$2,500	\$16,963	<b>\$27,713</b>
Market Transformation and Education					<b>\$155,000</b>
Simple Tracking System/ Process Eval					<b>\$75,000</b>
<b>Total</b>	<b>\$621,747</b>	<b>\$102,250</b>	<b>\$89,000</b>	<b>\$608,713</b>	<b>\$1,951,710</b>

**Project Budget (For Year 2)**

<b>Budget Categories</b>	<b>Program Delivery</b>	<b>Administration</b>	<b>Advertising/Promotion</b>	<b>Customer Incentive</b>	<b>Evaluation</b>	<b>Total</b>
Limited Income Weatherization	\$189,760	\$9,000	\$1,500	\$0	\$12,016	<b>\$212,276</b>
Low to Limited Income Heating System Zero Percent Financing	\$93,987	\$5,000	\$0	\$0	\$5,939	<b>\$104,926</b>
Home Perf w/Energy Star	tbd	tbd	tbd	tbd	tbd	<b>\$300,000</b>
Residential High Efficiency Heating System Rebate	\$40,000	\$32,500	\$35,000	\$242,500	\$21,000	<b>\$371,000</b>
Online Energy Info and Audit	\$108,000	\$37,500	\$25,000	\$0	\$10,230	<b>\$180,730</b>
C/I Rebate Program	\$75,000	\$15,000	\$25,000	\$349,250	\$27,855	<b>\$492,105</b>
Building Operator Certification	\$5,000	\$3,250	\$2,500	\$16,963	\$1,663	<b>\$29,376</b>
Market Transformation and Education						<b>\$155,000</b>
Simple Tracking System/ Process Eval						<b>\$75,000</b>
<b>Total</b>	<b>\$511,747</b>	<b>\$102,250</b>	<b>\$89,000</b>	<b>\$608,713</b>	<b>\$78,703</b>	<b>\$1,920,413</b>

### Program Benefit-Cost Ratios with Demand Savings

Programs	Societal	TRC	Utility	Ratepayer Impact	Participant
Limited Income Weatherization	2.16	2.00	2.15	0.56	34.62
Low to Limited Income Heating System Zero Percent Financing	1.87	1.73	1.73	0.53	Infinity
Residential High Efficiency Heating System Rebate	4.04	3.75	8.80	0.70	5.34
C/I Rebate Program	5.83	5.41	14.95	0.83	6.53
Building Operator Certification (BOC) Program	3.38	3.14	6.39	0.78	4.40

### Program Benefit-Cost Ratios without Demand Savings

Programs	Societal	TRC	Utility	Ratepayer Impact	Participant
Limited Income Weatherization Program	1.88	1.72	1.85	0.48	34.62
Low to Limited Income Heating System Zero Percent Financing	1.63	1.49	1.49	0.45	Infinity
Residential High Efficiency Heating System Rebate Program	3.51	3.22	7.57	0.60	5.34
C/I Rebate Program	5.08	4.66	12.87	0.72	6.53
Building Operator Certification (BOC) Program	2.94	2.70	5.50	0.67	4.40

## APPENDIX A

Company:  
Global Inputs

Laclede  
Gas

Input Data			Escalation Rate
1) Retail Rate (\$/MCF) =	\$13.60 Residential \$11.70 Commercial		3.00%
2) Non-Gas Fuel Retail Rate (\$/Fuel Unit) = Non-Gas Fuel Units (ie. kWh, Gallons, etc) =	\$0.069 per kwh		0.00%
3) Commodity Cost (\$/MCF) =	\$8.80		3.00%
4) Demand Cost (\$/Unit/Yr) =	\$144.00		3.00%
5) Peak Reduction Factor =	1.00%		
6) Variable O&M (\$/MCF) =	\$0.094		3.00%
7) Non-Gas Fuel Cost (\$/Fuel Unit) =	\$0.035 per kwh		0.00%
8) Non-Gas Fuel Loss Factor	10.00%		
9) Gas Environmental Damage Factor =	\$0.8000 per mcf		3.00%
10) Non Gas Fuel Environmental Damage Factor =	\$0.00		0.00%
11) Participant Discount Rate =	8.00% Residential 8.00% Commercial		
12) Utility Discount Rate =	6.50%		
13) Societal Discount Rate =	6.50%		
14) General Input Data Year =	2007		
15) Project Analysis Year 1 =	2009		
15a) Project Analysis Year 2 =	2010		

## APPENDIX B

Test Name	Benefit Components	Cost Components	Test Descriptions
<b>Ratepayer Impact Test (RIM)</b>  other names include: Non-Participant Test	Avoided Energy (Mcf)  Variable O&M (per Mcf)  Avoided Demand (per Mcf)	Lost Revenue (Mcf * retail rate)  Program costs (total program costs as shown in budgets)	A test which measures what happens to customer bills or rates due to changes in utility revenues and operating costs caused by a DSM program. The benefits for the RIM are the savings from avoided supply or other system costs. The costs for the RIM are the program costs incurred by the utility, the incentives paid to the participants, and decreased revenues for any period when load has been decreased
<b>Utility Cost Test</b>  other names include: Revenue Requirements	Avoided Energy (Mcf)  Variable O&M (per Mcf)  Avoided Demand (per Mcf)	Program costs (total program costs as shown in budgets)	A benefit-cost test which measures the net costs of a demand-side management program as a resource option based on the costs incurred by the utility (including incentive costs) and excluding any net costs incurred by the participant. The benefits for the Utility Cost Test are the avoided supply costs of energy and demand. The costs for the Utility Cost Test are the program costs incurred by the utility, the incentives paid to the customer, and any increased supply costs.
<b>TRC/Societal Test</b>	Avoided Energy (Mcf)  Variable O&M (per Mcf) Avoided Demand (per Mcf) Avoided Environmental (per kWh)	Program costs (total program costs as shown in budgets)  Incremental Measure Cost (out of pocket costs for participant)	A benefit-cost test which measures the net costs of a demand-side program as a resource option based on the total costs of the program, including both the participants' and the utility's costs. The benefits are avoided supply costs and beneficial externalities (only Societal includes externalities). The costs are the program costs (including equipment costs) paid by both the utility and the participants plus the increase in supply costs for any period in which load has been increased.
<b>Participant Test</b>	Program Incentives Utility Bill Savings	Incremental Measure Cost (out of pocket costs for participant)	This benefit-cost test evaluates DSM programs from the perspective of the program's participants. The benefits include reductions in utility bills, incentives paid by the utility and any state, federal or local tax benefits received. The costs include all out-of-pocket expenses incurred as a result of participating in a program.



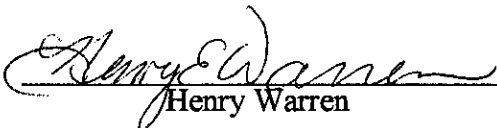
**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

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

**AFFIDAVIT OF HENRY WARREN**

STATE OF MISSOURI     )  
                                  ) ss  
COUNTY OF COLE       )

Henry Warren, of lawful age, on oath states: that he participated in the preparation of the foregoing Staff Recommendation in memorandum form, to be presented in the above case; that the information in the Staff Recommendation was provided to him; that he has knowledge of the matters set forth in such Staff Recommendation; and that such matters are true to the best of his knowledge and belief.

  
Henry Warren

Subscribed and sworn to before me this 19<sup>th</sup> day of November, 2008.



SUSAN L. SUNDERMEYER  
My Commission Expires  
September 21, 2010  
Callaway County  
Commission #06942086

  
Notary Public