State Report – Missouri

This Appendix furnishes detailed information for Missouri, including:

- Statistical Overview – Key characteristics for Missouri households and housing units.

- Needs Assessment – Statistics for Missouri low-income households and estimates of the need for energy affordability and energy efficiency programs.

- Legal and Regulatory Framework – A description of the legal and regulatory framework for low-income programs and identification of any legal or regulatory barriers to program design enhancements.

- Low-Income Affordability Programs – Information on Missouri's publicly funded affordability programs, the ratepayer-funded affordability programs targeted by this study, and an assessment of the share of need currently being met.

- Affordability Program Evaluation – A summary of the available evaluation findings regarding the performance of Missouri's affordability programs.

- Energy Efficiency Programs – Information on Missouri's publicly funded energy efficiency programs and the ratepayer-funded energy efficiency programs targeted by this study.

- Energy Efficiency Program Evaluation – A summary of the available evaluation findings regarding the performance of Missouri's energy efficiency programs.

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I. Statistical Overview

Missouri is the 18th largest state in terms of population. It has about average income (33rd in median family income in 2005) and has about average poverty rate (21st in individuals below poverty). In 2005, the median housing value was $123,100 and the median rent was $593.

Most housing units (83%) in Missouri are heated with regulated fuels, predominantly natural gas (56%). Electricity prices are relatively low, 25% below the national average, while natural gas is just 1% below the national average. The weather is cold in the winter (5,219 heating degree days compared to the national average of 4,524) and moderate in the summer (1,250 cooling degree days compared to the national average of 1,242). Households are most at risk from the cold during the months of November through March, and are most at risk from the heat during the months of June through August.

The following population and housing statistics were developed using data from the 2005 American Community Survey (ACS).

Population Profile

Total Population	5.6 million
Individuals 65 and Over	0.7 million (13%)
Individuals Under 18	1.4 million (25%)
Individuals 5 & Over Who Speak a Language Other than English at Home	0.3 million (5%)
Individuals Below Poverty	13% (21st nationally)

Household Profile

Total Households	2.3 million
Median Household Income	$41,974 (36th nationally)
Homeowners	
Total Homeowners	1.6 million (71%)
Median Value	$123,100 (35th nationally)
Median Housing Burden	18%
Renters	
Total Renters	0.7 million (29%)
Median Rent	$593
Median Rental Burden	26%

The following energy statistics were derived from a number of sources, including the 2005 American Community Survey (ACS), the Energy Information Administration's (EIA) supplier data collection, and NOAA's National Climatic Data Center (NCDC).

Energy Profile

Home Heating Fuel (Source: 2005 ACS)	
Utility gas	56%
Electricity	27%
Fuel Oil	1%
Other	16%
2005 Energy Prices (Source: EIA)	
Natural gas, per ccf	$1.267
Electricity, per kWh	$0.0708
Fuel oil, per gallon	n/a
Weather (Source: NCDC)	
Heating Degree Days	5,219
Months of Winter (i.e., average temperature below 50°)	5
Cooling Degree Days	1,250
Months of Summer (i.e., average temperature above 70°)	3
Days with Temperatures Over 90°	39

[Note: Updates are available for energy prices and weather for 2006. Population statistics updates for 2006 will be available in August 2007.]

II. Profile of Low Income Households

Missouri policymakers have chosen to target the publicly funded and ratepayer-funded low income programs at households with incomes at or below 150% of the HHS Poverty Guideline. For 2005, the income standard for a one-person household was about $14,355 and the income standard for a four-person household was $29,025. For the analysis of low-income households in Missouri, we will focus on households with incomes at or below 150% of the HHS Poverty Guideline.

Table 1 furnishes information on the number of Missouri households with incomes that qualify them for the LIHEAP program and the ratepayer-funded programs. About 22% of Missouri households are income-eligible for these programs.

Table 1
Eligibility for Ratepayer Programs (2005)

Poverty Group	Number of Households	Percent of Households
Income at or below 150%	505,566	22%
Income above 150%	1,776,036	78%
ALL HOUSEHOLDS	2,281,602	100%

Source: 2005 ACS

Tables 2A and 2B furnish information on main heating fuels and housing unit type for Missouri low-income households. Table 2A shows that just under half of low-income households use natural gas as their main heating fuel, somewhat less than the 56% for all Missouri households. Low-income households are more likely to heat with electricity and other fuels than the Missouri average. Table 2B shows that one of the reasons for the higher rate of electric main heat is that 18% of low-income households are in buildings with 5 or more units. Many multiunit buildings use electric space heating rather than natural gas or fuel oil. About 56% of low-income households live in single family homes, while 14% live in buildings with 2-4 units. Twelve percent of households live in mobile homes.

Table 2A
Main Heating Fuel for Low-Income Households (2005)

Main Heating Fuel	Number of Households	Percent of Households
Electricity	165,815	33%
Fuel Oil	4,451	1%
No fuel used	1,938	0%
Other Fuels	85,678	17%
Utility Gas	247,684	49%
ALL LOW INCOME	505,566	100%

Source: 2005 ACS

Table 2B
Housing Unit Type for Low-Income Households (2005)

Housing Unit Type	Number of Households	Percent of Households
Building with 2-4 units	70,154	14%
Building with 5+	93,392	18%
Mobile Home	58,815	12%
Single Family	283,205	56%
ALL LOW INCOME	505,566	100%

Source: 2005 ACS

About 506,000 Missouri households are categorized as low-income. However, only those households that directly pay an electric bill or a gas bill are eligible for the Missouri ratepayer-funded programs. Table 2C shows that about 92% of low-income households directly pay an electric bill and that about 51% of low-income households directly pay a gas bill.

Table 2C
Low-Income Households
Direct Payment for Electric and/or Gas Bill (2005)

Poverty Group	Number of Households	Percent of Households
Electric Bill - Direct Payment	466,291	92%
Gas Bill - Direct Payment	255,791	51%
ALL INCOME ELIGIBLE	505,566	100%

Source: 2005 ACS

Tables 3A and 3B show the distribution of electric bills and burden for low-income households that do not heat with electricity and reported electric expenditures separately from gas expenditures.[1] Table 3A shows the distribution of electric expenditures for households that do not have electricity as their main heating fuel and Table 3B shows the electric energy burden.[2] Among these households, about 58% have electric bill that is less than $1,000 per year while about 20% have an annual electric bill of $1,500 or more. Electric energy burden is less than 5% of income for about 25% of these households, while it is greater than 15% of income for 23% of households.[3]

[1] The ACS allows respondents who have a combined electric and gas bill from one utility to report the total for both fuels. Those households are not included in these tables.

[2] Electric energy burden is defined as the household's annual electric bill divided by the household's annual income.

[3] About 13% of households have their electric usage included in their rent. These households have a nonzero electric energy burden, since part of their rent is used to pay the electric bill. However, since there is no way to measure the share of rent that is used to pay the electric bill, electric energy burden is unknown for these households.

Table 3A
Electric Bills for Low-Income Households without Electric Heat (2005)

Electric Bill	Number of Households	Percent of Households
$1 to less than $500	69,468	22%
$500 to less than $1,000	112,646	36%
$1,000 to less than $1,500	67,109	21%
$1,500 or more	63,749	20%
TOTAL	312,972	100%

Source: 2005 ACS

Table 3B
Electric Burden for Low-Income Households without Electric Heat (2005)

Electric Burden	Number of Households	Percent of Households
0% to less than 5%	79,182	25%
5% to less than 10%	115,098	37%
10% to less than 15%	46,192	15%
15% or more	72,500	23%
TOTAL	312,972	100%

Source: 2005 ACS

Tables 4A and 4B show the distribution of electric bills and burden for low-income households that heat with electricity. Table 4A shows the distribution of electric expenditures and Table 4B shows the electric energy burden. Among these households, about 46% have an electric bill that is less than $1,000 per year while about 29% have an annual electric bill of $1,500 or more. Electric energy burden is less than 5% of income for about 15% of these households, while it is greater than 15% of income for 31%.

Table 4A
Electric Bills for Low-Income Households with Electric Heat (2005)

Electric Bill	Number of Households	Percent of Households
$1 to less than $500	17,752	13%
$500 to less than $1,000	46,959	33%
$1,000 to less than $1,500	35,569	25%
$1,500 or more	41,506	29%
TOTAL	141,786	100%

Source: 2005 ACS

Table 4B
Electric Burden for Low-Income Households with Electric Heat (2005)

Electric Burden	Number of Households	Percent of Households
0% to less than 5%	21,818	15%
5% to less than 10%	47,292	33%
10% to less than 15%	28,971	20%
15% or more	43,705	31%
TOTAL	141,786	100%

Source: 2005 ACS

Tables 5A and 5B show the distribution of gas bills and burden for low-income households that heat with gas and report their gas bills separately from their electric bills. Table 5A shows the distribution of gas expenditures and Table 5B shows the gas energy burden. Among these households, about 57% have a gas bill that is less than $1,000 per year while about 25% have an annual gas bill of $1,500 or more. Gas energy burden is less than 5% of income for about 32% of these households, while it is greater than 15% of income for 28%.

Table 5A
Gas Bills for Low-Income Households (2005)

Gas Bill	Number of Households	Percent of Households
$1 to less than $500	76,164	31%
$500 to less than $1,000	63,164	26%
$1,000 to less than $1,500	43,802	18%
$1,500 or more	61,128	25%
TOTAL	244,258	100%

Source: 2005 ACS

Table 5B
Gas Burden for Low-Income Households (2005)

Gas Burden	Number of Households	Percent of Households
0% to less than 5%	77,184	32%
5% to less than 10%	63,584	26%
10% to less than 15%	34,922	14%
15% or more	68,568	28%
TOTAL	244,258	100%

Source: 2005 ACS

Tables 6A and 6B show the distribution of total electric and gas expenditures for low-income households that pay bills directly to a utility company. Table 6A shows the distribution of electric and gas expenditures and Table 6B shows the electric and gas energy burden. About 93% of households have an electric bill, a gas bill, or both. Over one-fourth of low-income households have a total electric and gas bill that is less than $1,000 per year while almost one-fifth have an annual bill of $2,500 or more. Electric and gas energy burden is less than 5% of income for 9% of low-income households, while it is greater than 25% of income for just over one in five low income households.

Table 6A
Electric and Gas Bills for Low-Income Households (2005)

Electric and Gas Bill	Number of Households	Percent of Households
$1 to less than $500	33,147	7%
$500 to less than $1,000	107,047	21%
$1,000 to less than $1,500	107,749	21%
$1,500 to less than $2,000	76,588	15%
$2,000 to less than $2,500	54,118	11%
$2,500 or more	89,341	18%
No Bill	37,576	7%
ALL INCOME ELIGIBLE	505,566	100%

Source: 2005 ACS

Table 6B
Electric and Gas Burden for Low-Income Households (2005)

Electric and Gas Burden	Number of Households	Percent of Households
0% to less than 5%	44,199	9%
5% to less than 10%	130,807	26%
10% to less than 15%	99,339	20%
15% to less than 20%	51,569	10%
20% to less than 25%	34,011	7%
more than 25%	108,065	21%
No Bill	37,576	7%
ALL INCOME ELIGIBLE	505,566	100%

Source: 2005 ACS

We have developed a series of demographic tables for households that pay an electric or gas bill. Table 7 furnishes information on the presence of vulnerable members in the household and illustrates what share of the population might be particularly susceptible to energy-related health risks. Table 8 shows the household structure for these households, and Table 9 presents statistics on the language spoken at home by these households.

Over one-fourth of the low-income households with utility bills are elderly. Over one-fourth do not have any vulnerable household members. Some programs choose to target vulnerable households with outreach procedures and may offer priority to these households.

Table 7
Vulnerability Status for Low-Income Households with Utility Bills (2005)

Vulnerability Type	Number of Households	Percent of Households
Disabled	113,457	24%
Elderly	126,628	27%
No Vulnerable	126,634	27%
Young Child	101,271	22%
Total	467,990	100%

Source: 2005 ACS

Over one-third of the low-income households have children, slightly more than one-fourth are headed by a person 65 or older, while 37% are other household types. Single parent families with children represent close to one-fourth of low-income households with utility bills.

Table 8
Household Type for Low-Income Households with Utility Bills (2005)

Household Type	Number of Households	Percent of Households
Married with Children	65,770	14%
Other	172,657	37%
Senior Head of Household	122,893	26%
Single with Children	106,670	23%
TOTAL	467,990	100%

Source: 2005 ACS

Three percent of low income households speak Spanish and about 2% speak an Indo-European language (e.g., Russian, Polish).

Table 9
Language Spoken at Home by Low-Income Households with Utility Bills (2005)

Language Spoken	Number of Households	Percent of Households
English	434,266	93%
Spanish	16,044	3%
Indo-European	10,696	2%
Other	6,984	1%
TOTAL	467,990	100%

Source: 2005 ACS

III. Legal and Regulatory Framework

While the state of Missouri has no statewide utility-funded low-income affordability initiative, the state's electric and gas utilities have experimented with pilot programs to generate information about the operation and outcomes of improving affordability. Authority for the approval of such programs is found in their experimental nature. The Missouri state utility commission has, however, consistently asserted that it lacks statutory authority to order (or even approve) a broad-scale program. The discussion below will review the pilot programs developed in recent years, along with the state Commission's rationale in instances where programs have been *dis*approved and approved.

The ***Disapproved*** Laclede Gas Catch-up/Keep-up Pilot Program

In September 2002, Laclede Gas Company filed a proposed arrearage forgiveness program with the Missouri Public Service Commission. Under the proposed "Catch-up/Keep-up Plan," the Company would use discounts obtained off of its transportation gas rates, in part, to fund the reduction of arrears for low-income customers. According to the Missouri PSC, the Catch-up/Keep-up tariff:

> . . .would increase customers' costs for transportation of natural gas by $6 million by diverting up to that amount from the transportation discounts that would otherwise be returned to Laclede's customers. These diverted moneys would be placed in an escrow account to fund an arrearage forgiveness program. Currently, 100% of any pipeline discounts received by Laclede are flowed through to all non-transportation customers. Under Laclede's proposal, only 70% of the pipeline discounts would be flowed through to Laclede customers. The other 30% would be placed in an escrow account and used to reduce the arrearages of Laclede's low-income consumers.[4]

Under Laclede's proposed program, as qualifying customers made payments toward three months of their current bills (billed on a levelized monthly budget billing basis), one-fourth of the outstanding arrearages for such customers (or $375, whichever was less) would be forgiven.[5] As those arrearages were forgiven, funds would flow from the escrow account holding the pipeline discount into Laclede's accounts receivables.[6]

While the Missouri PSC rejected the Laclede program proposal, it did not base its rejection on jurisdictional grounds. Indeed, the Commission noted, that "a properly designed low-income assistance program should benefit all stakeholders by promoting conservation and by assisting low-income consumers in reducing their energy burden. The low-income customers may then be able to pay their utility bills, thereby reducing utility costs for all ratepayers."[7]

The Commission did, however, find "numerous problems with the design" of the proposed Catch-up/Keep-up program. The program, for example, "is not properly designed to address the low-income consumer needs for rate affordability and usage reduction." Even though "the success of the Program is dependent on the modification of the behavior of the low-income customer," the Commission said, "the expectation that low-income customers in the Program will become better able to pay their bills may be unrealistic." One problem noted by staff,

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[4] In the Matter of the Tariff Filing of Laclede Gas Company to Implement an Experimental Low-Income Assistance Program Called Catch-up/Keep-up, Case No. GT-2003-0117, Report and Order, at 4 (January 16, 2003). (hereafter, 2003 Laclede Order).
[5] Accordingly, the total arrears would be forgiven over a 12-month period.
[6] 2003 Laclede Order, at 4.
[7] Id., at 5.

according to the Commission, was that the proposed arrearage forgiveness program "does not provide any means to assist participants with payment of *current* gas bills. . ."[8]

Moreover, the Program proposal allowed broad discretion to third party community action agencies to "excuse" the three-consecutive payment requirement if an agency found that the program participant faced "extenuating circumstances." This discretion was bounded neither by a definition of "extenuating circumstances" nor by any limitation on the CAA exercise of discretion. "Regularly granting waivers for extenuating circumstances," the Commission found, "could mean that low-income customers would receive arrearage forgiveness without ever developing regular payment habits, which is a stated Program goal."[9]

The Commission further posited that the real impact of Laclede's proposed Catch-up/Keep-up program would be simply to improve the Company's financial condition.

> Although the program is not well-designed to meet the needs of low-income customers, it is likely to have a positive impact on the Company's current financial condition by improving cash flow and replacing income lost when the Commission denied Laclede's request to extend its Gas Supply Incentive Plan (GISP). The Program allows Laclede to divert a portion of the pipeline discounts that would otherwise be passed on to all ratepayers, and to then use those discounts to reduce the company's bad-debt expense. Thus, Laclede would receive a double recovery because bad-debt expense is already included in permanent rates.[10]

Moreover, the Commission continued, the Program allows Laclede to delay write-offs to a subsequent period.

> Customers who would otherwise have been written off because they were unable to make the necessary payment to come on-line under the Cold Weather Rule provisions[11] will have the "payment" made for them through the arrearage Program. By reactivating the Program participant's account, Laclede would also delay making any further write-offs on that account.[12]

Aside from the substantive frailties of the proposed Catch-up/Keep-up program, the Commission disapproved of several aspects of the cost-recovery for the proposed arrearage forgiveness program. Diverting the pipeline refunds, the Commission found, would violate the rate cap approved by stipulation in the immediately preceding Laclede base rate case proceeding. The proposal would divert $6 million to fund the program that "would otherwise be used to offset the transportation cost of gas and reduce the amount that all Laclede customers would pay on a per-unit basis." Moreover, the Commission held, the program, in its essence, requires all customers "to fund, in advance, bad debts that would normally be considered in future rate cases to the extent that the bad debts actually materialize."[13]

The results of these cost-recovery problems, the Commission held, involved an improvement in the financial condition of the Company at the expense of Company's ratepayers.

> The Commission finds that under the Program, Laclede would likely experience higher reported earnings as a result of the double recovery, prepayment or

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[8] 2003 Laclede Order, at 5 (emphasis added). The Program proposal required eligible customers to apply for assistance "from available sources." Id.
[9] Id., at 5.
[10] Id., at 6 – 7.
[11] See generally, 4 CSR 240-13.055(7)(C) (2007).
[12]2003 Laclede Order., at 7.
[13] Id., at 7.

> deferred recognition of its bad debt expense. Laclede would also benefit to the extent that it has access to the excess funds accumulated by the Program that permit it to meet its other cash flow requirements, regulated or nonregulated, with funds otherwise used for bad debt. Thus, Laclede would experience an increased cash flow and an increase in income that would flow directly to Laclede's bottom line and consequently to shareholders.[14]

To pay for these benefits to shareholders, "under the Program all customers, including low-income customers, would forego the benefit of pipeline discounts on their natural gas bills."

The Commission finally determined that the Company's recovery of its proposed Catch-up/Keep-up costs through the purchase gas adjustment clause was unlawful. The pipeline discounts would normally have been passed through to ratepayers via the PGA clause. That clause is to be "limited in nature to the cost of obtaining the gas itself"; it may not include "margin costs; in other words, the costs of doing business, such as labor or materials costs."[15] According to the PSC:

> The Commission is unwilling to adopt a policy that allows the collection of bad debt through the [purchase gas cost recovery] process. PGA costs are limited to recovery of natural gas costs necessary to bring the commodity from the production areas to the Company's city gate. City-gate delivered costs include the cost of the commodity itself, interstate pipeline transportation charges, and interstate storage charges, all of which are subject to a later prudence review. Margin costs such as payroll, depreciation, customer service, bill collection and bad debt expenses are considered in the context of a general rate case and not subject to an adjustment process. Laclede's Program proposes to include margin costs in the [purchase gas cost recovery] process. Such a use of [this mechanism] is unlawful and could be the downfall of this process.[16]

The Commission concluded that "a rate case would have been an appropriate place to consider the Program." It then determined that "the concept of an arrearage forgiveness program is worthy of review. The Commission hereby encourages the parties to establish a collaborative to meet and attempt to develop a possible alternative to the Catch-up/Keep-up Plan."[17]

In issuing such "encouragement," the Commission "acknowledges that there is the issue of whether the law permits a utility to charge, directly or indirectly, customers within the same class a different rate for the same service. As the commission is rejecting the tariff on other grounds, it need not address this question." Moreover, the Commission continued:

> The Commission appreciates the plight of low-income ratepayers and has previously authorized, and continues to support, a variety of other low-income support projects. The Commission has authorized an experimental pilot program for MGE that is similar to Laclede's proposal. That program, however, was implemented in the confines of a rate case where the Commission explored all relevant factors.[18]

The _ Approved**_ Laclede Gas Catch-up/Keep-up Pilot Program**

Subsequent to the Commission's rejection of Laclede's proposed Catch-up/Keep-up program, the Company, PSC Staff and Office of Public Counsel stipulated in Laclede's 2005 rate case

[14] Id., at 8.
[15] Id., at 10.
[16] Id., at 10 – 11.
[17] Id., at 11-12.
[18] Id., at 13 – 14.

that "a low-income energy assistance program. . .should be approved by the Commission."[19] The settlement of that 2005 rate case included a natural gas rate increase of roughly $8.5 million, compared to the $39 million originally requested by the Company. The Commission approved the low-income sections of the Stipulation without discussion.

The Commission subsequently approved the substantive design of Laclede's low-income program in May 2006.[20] The Commission noted in its order that "Staff states that the purpose of the Low-Income Energy Affordability Program is to provide a mechanism whereby certain customers of Laclede can pay off their past-due balances and maintain current payments of their gas usage through Laclede's winter months (November-April)." The Commission noted further that Staff had posited that "successful participation in the program should result in a greater number of Laclede customers becoming full-time current-paying customers."[21]

Under the Laclede program,[22] the company would devote bill credits in the sum of $550,000 annually to be made available during the months of November through April. Credits would be distributed to households with incomes at or below 150% of the Federal Poverty Level. To participate in the Winter Bill Payment Assistance Program, a customer would be required to make a minimum monthly payment of $40 during the six month winter period. Winter Bill Payment Assistance Program funds would be allocated in the following percentages and distributed in the following manner:

- 20% of the funds would be distributed to households with income at or below 50% of the Federal Poverty Level. These customers would receive a $60 average monthly credit, to be applied in the amounts of $60 in November and December; $80 in January; and $40 in March and April;

- 40% of funds would be distributed to households with income between 50% and 125% of the Poverty Level. These customers would receive a $60 average monthly credit, to be applied in the amounts of $60 in November and December, $80 in January and February, and $40 in March and April.

- 40% of funds would be distributed to households with income between 125% and 150% of Poverty Level. These customers would receive an average $70 monthly credit, to be applied in the amounts of $40 in November, $70 in December, $100 in January and February, $70 in March, and $40 in April.

The program design noted that the higher income tier receives a higher benefit amount because these customers do not qualify for federal LIHEAP assistance in Missouri.

In addition to the bill credits toward current bills, the Low-Income Energy Affordability Program incorporated an Arrearage Repayment Program as well. Funded at $350,000 annually, this program makes available benefits for households up to 185% of the Federal Poverty Level. In order to qualify for arrearage credits, households with income at or below 125% of Poverty Level must not only pay their current bill on time and in full, but must make a minimum $10 monthly arrearage payment. Customers with income between 125% and 185% of Poverty Level must make a minimum $15 monthly arrearage payment. Customers with income at or below 50% of the Poverty Level are not required to make the minimum arrears payments during the winter months; those minimum payments are instead made from program funds.

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[19] In the Matter of Laclede Gas Company's Tariff to Revise Natural Gas Rate Schedules, Case No. GR-2005-0284, Order Approving Stipulation and Agreement and Order Approving Tariff, at xxx (September 30, 2005).
[20] The original approval of the Commission was simply to have the Company develop a program in collaboration with the Staff and Public Counsel. This later approval was of the program design itself developed through that process.
[21] Order Approving Tariff Sheets Filed in Compliance with Commission Order, Case No. GR-2005=0284, (May 5, 2006).
[22] Tariff PSC Mo. No. 5, Consolidated, Original Sheet Nos. R-49 – R-52 (effective May 13, 2006).

The arrearage program will match 100% customer arrearage payments so long as both the current bill and the minimum arrears payment are made in full and on-time. Customers may also pay *more* than the minimum arrearage payment and obtain a correspondingly higher match. In addition, late fees are waived for any arrearages subject to the Arrearage Repayment Program so long as the customer is making his or her required payments.

The Missouri Gas Electric (MGE) Experimental Low-Income Rate (ELIR) Model

Approval of the Laclede Gas program was based on lessons learned from a prior “experimental low-income rate” (ELIR) operated by Missouri Gas Energy. The MGE ELIR program was adopted by stipulation in settlement of the Company’s 2001 rate case.[23] The ELIR program went into effect on November 1, 2001 and was to remain in place for two years. The Company did not ask for the program to be extended.[24] In approving the proposed ELIR program, the Commission did not address its underlying statutory authority to address rates for low-income customers. Instead, the Commission merely noted that “the provisions in the tariff are the result of extensive discussions and consensus among MGE, Staff and the Office of the Public Counsel.”

The major components of the proposed ELIR program had been spelled out in the Stipulation settling the rate case.[25] The MGE program involved providing “fixed credits” to customers with income at or below 150% of the Federal Poverty Level. Households with income below 100% of Poverty Level received a fixed monthly credit of $40. Households with income between 100% and 150% of Poverty Level received a fixed monthly credit of $20. The fixed monthly credits were designed to reduce energy burdens, on average, to an affordable percentage of income.

Disapproved MGE Program Funding Proposals

The Missouri Commission does not routinely find that it has authority to provide rate affordability assistance to low-income households, even on a temporary basis. Indeed, the Commission explicitly denied such assistance through a program proposed in 2001 by Missouri Gas Energy.[26] In 2001, MGE asked the Missouri PSC to allow the Company to assign certain federal refunds and unauthorized use charges to the Mid-America Assistance Coalition (MAAC) to assist low-income MGE customers who were having difficulty paying their bills. Both the PSC staff and the Office of Public Counsel opposed the Company’s request.[27]

MGE’s tariffs provide that revenues received from unauthorized use charges recovered through federal proceedings would be returned to ratepayers as a reduction in its gas cost recovery proceedings. MGE initiated the 2001 proceedings because it anticipated recovering approximately $356,715 from its transportation customers pursuant to bills issued in January 2001, for unauthorized usage by transportation customers in December 2000. In addition, the

[23] In the Matter of Tariff Revisions of Missouri Gas Energy, a Division of Southern Union Company, Designed to Increase Rates for Natural Gas Service to Customers in the Missouri Service Area of the Company, Case No. GR-2001-292, Order Approving Experimental Low Income Tariff (October 30, 2001).
[24] See generally, In the Matter of Tariff Revisions of Missouri Gas Energy, a Division of Southern Union Company, Designed to Increase Rates for Natural Gas Service to Customers in the Missouri Service Area of the Company, Case No. GR-2001-292, Order Extending an Experimental Low-Income Rates and Authorizing Disbursement of Funds, February 10, 2004.
[25] In the Matter of Tariff Revisions of Missouri Gas Energy, a Division of Southern Union Company, Designed to Increase Rates for Natural Gas Service to Customers in the Missouri Service Area of the Company, Case No. GR-2001-292, Order Approving Second Revised Stipulation and Agreement (July 5, 2001).
[26] In the Matter of Missouri Gas energy’s Application for Variance from Sheet Nos. 24.18 and 61.4 to Permit the Use of Certain Federal Refunds and Unauthorized Use Charge Collections for the Benefit of Low-Income Customers in the Company’s Service Area, Case No. GE-2001-393.
[27] Docket No. GE-2001-393, Report and Order, at 2 (March 6, 2001).

Company had received a pipeline refund of roughly $620,000 by order of the Federal Energy Regulatory Commission (FERC).

The Company committed to matching the use of these federal refunds with a contribution of $250,000 of its own funds. The Company argued that distribution of the $976,000 "to all customers through a reduction in [purchase gas recovery] rates would have a de minimis impact on the prospective rate of all sales customers."

Staff argued that the Commission did not have the statutory authority to grant the requested waiver. According to the Commission:

> . . .Staff suggests that, in spite of the popularity of the cause, the Commission should not require ratepayers to fund utility contributions to charitable causes. Staff notes that the requested variance proposes to take funds from customers who are not eligible for other assistance with this winter's high gas bills, and who have had the opportunity to voluntarily make such transfers, and contribute those funds to a select few customers.[28]

The Commission denied MGE's request. Missouri statutes, the Commission said, forbid a utility from rebating any part of a collected rate "when such a rebate results in a lesser compensation by one person for the same service than is paid by another person for a like and contemporary service under the same or substantially similar circumstances." MGE's proposal, the PSC said, would "give a certain group of residential customers an indirect rebate by transferring the funds at issue to MAAC."

In addition, Missouri statutes prohibit providing refunds to fewer than all utility customers who are similarly situated. "MGE's proposal would provide refunds to only a subgroup (low-income customers) of the Residential class, which clearly violates the plain meaning of the statute. In fact, MGE's proposal creates a subgroup (low-income customers receiving funds from MAAC) within a subgroup (low-income customers) of the Residential class. Thus, MGE's proposal does not even treat all members of the subgroup of low-income customers in a like manner."

Finally, the Company's proposal would "result in undue and unreasonable discrimination" contrary to statute, the PSC held.

> Approving this variance would result in intraclass rate level differences, creating a new class of customers: the disadvantaged or low-income customer class. To date, the Commission has not created a disadvantaged or low-income customer class. Furthermore, the proper venue to discuss the appropriateness of creating a new customer class is not a variance case.[29]

Case law "makes clear," the Commission said, "that the classification of utility service is to be based upon the characteristics of the utility service provided, not on a circumstance of the customer. The statutes forbid charging one residential customer one rate, and charging another residential customer a different rate."[30] Indeed, the Missouri Commission held that the "special problems" of low-income consumers might well dictate *raising* rates to those customers in order to pay for program designed to pay for program designed to address those problems.[31] According to the Missouri Commission:

[28] Report and Order, at 4.
[29] Id., at 8.
[30] Id., at 9.
[31] In the Matter of the Joint Application of UtiliCorp United Inc. and St. Joseph Light & Power Company for Authority to Merge St. Joseph Light & Power Company with and into UtiliCorp United Inc., and, in Connect therewith, Certain Other Related Transactions, Case No. EM-2000-292, Report and Order, at 26 – 27 (December 14, 2000); see also, In the Matter of the Joint Application of UtiliCorp United Inc. and the Empire District Electric Company for Authority to

> Low-income customers have not previously been accorded status as a separate class of consumer when utility rates are designed. Standard rate design treatment attempts to match revenue requirement determination with cost causation by class. In other words, the class of consumers that causes a cost to a utility should be required to pay those costs through rates. The evidence presented by MDNR suggests that low-income consumers have special problems that UtiliCorp should address through additional programs. Those programs, of course, bear a cost. Thus, if the Commission were to require UtiliCorp to institute new programs to better serve its low-income consumers, without subsidization from other classes of consumers, it might be necessary to increase the rate charged to the class of low-income consumers in order to pay for those programs.[32]

The Commission opined: "Obviously, such a result would not be practical or desirable from the standpoint of the low-income consumers. But neither would it be fair and reasonable for the Commission to order UtiliCorp to institute such programs without giving it an opportunity to recover the cost of those programs through rates."[33]

The AmerenUE Clean Slate Program

Only 20 months after making this statement, however, the Missouri Commission did precisely that. In a settlement of AmerenUE's pending electric rate case, the Missouri Commission approved a nine million dollar ($9.0 million) program for low-income customers of that company. Known as the "Dollar More Clean Slate" program, the program was developed as part of a settlement approved in 2002 under which AmerenUE Missouri electric customers received $110 million in phased-in electric rate reductions. In approving the program, the Commission observed:

> AmerenUE, as part of the agreement, also commits to make certain investments in the communities it serves. It will make an initial $5 million contribution to its Dollar More Program on September 1, 2002, and will contribute $1 million more each year for the next four years. It will create a weatherization fund for its low-income customers, and initially fund it with $2 million on September 1, 2002, and an additional $500,000 each year for the next four years. Finally, AmerenUE will create a community development corporation and fund it with $5 million on September 1, 2002, and an additional $1 million each year for the next four years.[34]

All of these investments would be recorded below the line, the Order found, "and not treated as a regulated expense."[35] The Commission approved the agreement to assign the task of working out program details to a collaborative process.

Under the Clean Slate initiative, income-eligible active AmerenUE customers are required to pay 10 percent of the delinquent amount on his or her AmerenUE bill. In so doing, the customer will qualify for a Dollar More Clean Slate pledge that will cover the rest of the customer's outstanding balance. If a customer had already been disconnected for nonpayment, the customer would be required to pay 20 percent of their outstanding arrearage before being

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Merge the Empire District Electric Company with and into UtiliCorp United Inc. and, in Connection therewith, Certain Other Related Transactions, Case No. EM-20000-359, Report and Order, at 29 – 30 (December 28, 2000).
[32] Id.
[33] Id.
[34] Staff of the Missouri Public Service Commission v. Union Electric Company, d/b/a AmerenUE, Case Nos. EC-2002-1, Report and Order Approving Stipulation and Agreement, at 3 (July 25, 2002).
[35] Id., at 3.

qualified for the Clean Slate program to pay the remainder of the balance. Customers are allowed, but not required, to enroll in the Company's levelized budget billing plan as part of the Clean Slate program.

Summary and Conclusions

The Missouri Public Service Commission has been uneven in its treatment of low-income rate affordability programs and it is difficult to draw consistent conclusions about the way in which the Commission will construe its statutory authority. On a policy basis, it is clear from the disapproved Catch-up/Keep-up program that a utility must be able to draw a clear connection between the outcomes of a proposed program and the program components. Mere distribution of funding to low-income customers under the auspices of "improving affordability" will not be accepted. It is equally clear from the approved Catch-up/Keep-up program that an approved program will need to demonstrate some comprehensiveness in approach, not only in delivering benefits but in imposing responsibilities on the recipient customers.

It is clear from the Missouri Commission's disapproval of the Catch-up/Keep-up program that the Commission will expect any low-income program to be able to document benefits "to all stakeholders." One of those benefits should be reduced utility costs for all ratepayers. To the extent that a company argues its program will reduce costs, however, there must be a mechanism through which those cost reductions can be captured and passed-through to remaining ratepayers. One problem – perhaps the *major* problem – with Laclede's original Catch-up/Keep-up proposal was that it would result in, or certainly had the appearance of resulting in, reduced costs and increased revenues outside of a rate case context, such that all benefits would flow only to shareholders in increased earnings.

There can be little question today but that, to the extent that any low-income program is approved in Missouri, the Missouri commission will *not* approve recovery of the costs of such a program through a utility's gas cost recovery mechanism. Just as the Ohio Supreme Court found that there was not statutory authority for that recovery mechanism for Ohio's PIPP, the Missouri commission has found that Missouri's statutes do not allow for such recovery.

While the Missouri Commission has not approved long-term full-scale rate affordability programs by the state's natural gas or electric utilities, holding that it is prohibited from approving preferential rates in the MGE pipeline refund proceeding, the Commission has been willing to approve substantial, multi-million dollar experimental rate affordability programs. The nine million dollar AmerenUE Clean Slate program, for example, did not run afoul of the state's statutory proscription of preferential or discriminatory rates. Nor did the revised Laclede Low-Income Energy Affordability Program.

The circumstances under which a program proposal is acceptable and when it is not acceptable are not clear. For example, the proposal to use some of Laclede's rate reduction to fund that company's Arrearage Repayment Program did not run afoul of the Missouri statute prohibiting rebates, while the MGE's proposal to use its pipeline refund (and unauthorized usage charges) for a nearly identical purpose was deemed to be a forced charitable contribution and an "indirect rebate." The Commission opined in rejecting the Laclede Catch-up/Keep-up program that "the concept of an arrearage forgiveness program is worthy of review." It then held that MGE's proposal to fund such benefits "would provide refunds to only a subgroup (low-income customers of the Residential class, which clearly violates the plain meaning of the statute."

While some low-income customers in Missouri are currently benefiting from creatively designed temporary rate affordability and arrearage management programs, the state of the law in Missouri is in disarray. Clear regulatory direction on what can be approved, for whom, and under what circumstances, may well be merited in this state.

IV. Low-Income Affordability Programs

The three major affordability programs available to low-income households in Missouri are the LIHEAP Program, the Missouri Gas Electric Experimental Low-Income Rate (ELIR), and the Laclede Gas Low-Income Energy Affordability Program.

- LIHEAP Program – In 2005, the Missouri LIHEAP program received about $48 million in funding from the Federal government.[36] Since about 82% of low-income households use natural gas or electricity for their home heating fuel, we will estimate that about $39.4 million was made available to gas and electric customers for LIHEAP benefits.

- Missouri Gas Electric Experimental Low-Income Rate (ELIR) – In 2005, the Missouri Lifeline program furnished about $30,800 in electric and gas benefits to low-income households.[37] [Note: 2005 was the last year of the program.]

- Laclede Gas Low-Income Energy Affordability Program – In 2005, the Laclede Gas program furnished about $1 million in gas benefits to low-income households.[38]

In total, about $40 million was available to help pay the electric and gas bills for low-income households. Using the ACS data, we estimated the following statistics regarding the aggregate electric and gas bills for low-income households in Missouri.

- Aggregate Electric and Gas Bill – The total electric and gas bill paid directly by low-income households is estimated to be about $784 million. The available funding of $40 million in benefits would cover about 5% of the total bill for low-income households.

- 5% Need Standard – Some analysts suggest that 5% of income is an affordable amount for low-income households to pay for the energy needs. The aggregate value of electric and gas bills that exceeds 5% of income is estimated to be about $606 million. The available funding of $40 million in benefits could cover about 7% of the unaffordable amount for low-income households. [Note: If benefits from any of the three programs are allocated to households with an energy burden less than 5% of income, the program would not cover 7% of the estimated need.]

- 15% Need Standard – Some analysts suggest that 15% of income is an affordable amount for low-income households to pay for the energy needs. The aggregate value of electric and gas bills that exceeds 15% of income is estimated to be about $231 million. The available funding of $40 million in benefits could cover about 17% of the unaffordable amount for low-income households if it were targeted to only those households with energy bills greater than 15% of income.

- 25% Need Standard – Many low-income households pay more than 25% of income for energy service. Among the ratepayer-funded low-income programs that have used a percent-of-income guideline in their benefit determination process, none have been as high as 25% of income for combined use of electric and gas. The aggregate value of electric and gas bills that exceeds 25% of income is estimated to be about $130 million. The available funding of $40 million in benefits could cover about 31% of the unaffordable amount for low-income households if it were targeted to households with energy bills greater than 25% of income.

[36] Source: LIHEAP Clearinghouse
[37] Source: LIHEAP Clearinghouse
[38] Source: LIHEAP Clearinghouse

These statistics demonstrate that, currently, the Missouri LIHEAP program furnishes most of the benefits available to low-income households. The LIHEAP program, along with the available ratepayer funded programs cover part of the total low-income need. In addition, since the LIHEAP Program does not require households to exceed these need thresholds to receive benefits, some of the funding is being allocated to households that do not exceed these need standards.

The MGE ELIR program offered low-income customers a fixed credit on their bill. Other program design elements included:

- Oversight – The PUC approved the program, but did not actively oversee the program.
- Program Operations – MGE managed the program. Clients were offered the ELIR through a mail contact and were enrolled after completing a program application.
- Program Requirements – Clients were required to enroll in a budget billing plan, were required to make consistent bill payments, and were required to apply for LIHEAP.

The following table furnishes details on the program design and implementation.

Program State	Missouri
Program Name	Experimental Low-Income Rate (ELIR)
Utility Company (If Applicable)	Missouri Gas Energy
Program Goals	Make natural gas bills affordable to low-income customers.
Funding Source (SBC or Rates)	Rates (each Residential customer charged $.08 a month for 24 months)
Annual Program Funds – Allocated (2006)	This program is no longer operational. However, residential customers were charged $.08 per month for 24 months. This charge collected $832,331.37 for the entire program. Missouri was authorized to put the program in place on August 15, 2001 (the program was actually implemented in March/April of 2002) and the program ended July 2006. Nothing was allocated for 2006.
Annual Program Funds – Expended (2006)	$30,787
# of Households Served (2006)	208 households
Participation Limit (Maximum # of Enrollees)	1000
Eligibility – % of Poverty Level	Household incomes must be at or below 100% of the FPL.
Eligibility – Other Criteria	Participants were MGE customers in the Joplin area.
Targeted Groups	None
Benefit Calculation Type (% of Income, Benefit Matrix, etc.)	Benefit Matrix.
Benefit Calculation (Document Formula)	o Customers with income below 50% of the FPL received a monthly fixed credit of $40 o Customers with income between 51% and 100% of the FPL received a monthly credit of $20 per month.
Benefit Amount (Mean Subsidy)	Mean Subsidy: $160 ($23/month) over the 7 months that represent the 2006 Program Year
Benefit Limit	For customers with income below 50% of the FPL: $480 For customers with income between 51% and 100% of the FPL: $240
% of Program Dollars Spent on Administrative Costs	1.2%

Benefit Distribution (Fixed Payment, Fixed Payment with a Limit, Fixed Credit, Fixed Credit with Budget Billing, etc.)	Fixed Monthly Credit
Arrearage Forgiveness Plan – Y/N	No.
Amount Eligible for Forgiveness (Dollars, %, or Unlimited)	N/A
Forgiveness Requirement (Payments, On-Time Payments)	N/A
Forgiveness Period (One-Time, 12 months, 24 months, etc.)	N/A
Program Manager (PUC, State, Utility)	MGE
Data Manager (PUC, State, Utility, Other)	MGE
Enrollment Responsibility (Utility, CAP, etc.)	MGE
Application Method (Mail, In-Person, Phone)	Participants were solicited by mail and participants responded by mail if they wanted to participate.
Joint Application	No.
Recertification Required – Y/N	No. Participants received the credit for two years as long as they abided by program requirements: 1. Enroll in the level pay plan; 2. If they have an outstanding balance, they have to pay the balance over a period of 12, 24, or 30 months; 3. Complete and return a questionnaire related to energy usage; 4. Apply for LIHEAP annually; 5. Apply for any other energy assistance programs referred to them by the company; and 6. Pay their gas bill in full and on-time.
Recertification Frequency	N/A
Recertification Method (Agency, Automatic Enrollment, Self-Certification)	N/A
Recertification Procedures	N/A
Removal Reasons	Participants were removed if they: o Didn't pay their bill (participants were allowed to miss one payment). o Didn't want to participate in the Level Pay Program (a budget billing program).
Other Communications	No.
Budget Counseling	No.
Evaluation Frequency	The last impact evaluation was performed in 2004. Regular evaluations are not required by statute.
Coordination with LIHEAP	ELIR participants were required to apply for LIHEAP.
Coordination with WAP	ELIR participants were required to apply for WAP.
Coordination with Energy Efficiency Programs	No.
Coordination with Other Energy Affordability Programs	No.

The Laclede Low-income Energy Affordability program offered low-income customers a fixed credit on their bill during the winter months to help eliminate arrears and/or reduce the impacts of high bills. Other program design elements included:

- Program Administration – The utility manages the program.
- Program Intake – The utility contracts with Community Action Agencies to identify clients and enroll them in the program.
- Arrearage Forgiveness – The program includes an up-front arrearage forgiveness amount after the customer makes a down-payment on arrears. Additional arrearage forgiveness is granted for continuation on the program.
- Program Requirements – Clients are required to make consistent payments, including a payment toward their arrears.

The following table furnishes details on the program design and implementation.

Program State	Missouri
Program Name	Laclede Gas Company's Low-Income Energy Affordability Program
Utility Company (If Applicable)	Laclede Gas
Program Goals	To make energy bills more affordable.
Funding Source (SBC or Rates)	Rates- $.08 monthly surcharge.
Annual Program Funds – Allocated (2006)	2005-2006 Heating Year: $550,000 – Winter Bill Payment Assistance Program $450,000 – Arrearage Repayment Program $50,000 – Administrative Costs
Annual Program Funds – Expended (2006)	$382,000 (Nov. 2005-Currently)
# of Households Served (2006)	2,148 (2005-2006)
Participation Limit (Maximum # of Enrollees)	The participation limit was originally set at 1500 per heating system but the Program funds have allowed them to surpass this limit.
Eligibility – % of Poverty Level	150% of FPL – Winter Bill Payment Assistance 185% of FPL – Arrearage Repayment Program
Eligibility – Other Criteria	No.
Targeted Groups	Community Action Agencies were asked to target customers with high usage and/or large arrearages.
Benefit Calculation Type (% of Income, Benefit Matrix, etc.)	Benefit Matrix
Benefit Calculation (Document Formula)	0-50% of FPL: 20% of funds, $60 average monthly credit for winter months. 51-125% FPL: 40% of funds, $60 average monthly credit for winter months. 126-150% FPL: 40% of funds, $70 monthly credit for winter months. (This credit is greater because these customers do not qualify for LIHEAP.)
Benefit Amount (Mean Subsidy)	$177.63 (November 2005-November 2006)
Benefit Limit	0-50% of FPL: $360 51-125% FPL: $360 126-150% FPL: $420
% of Program Dollars Spent on Administrative	5% - $50,000 of the Program annual funding level is set aside to pay for administrative costs.

Costs	
Benefit Distribution (Fixed Payment, Fixed Payment with a Limit, Fixed Credit, Fixed Credit with Budget Billing, etc.)	Fixed Credit.
Arrearage Forgiveness Plan – Y/N	Yes.
Amount Eligible for Forgiveness (Dollars, %, or Unlimited)	All customers must pay a minimum arrearage amount. Customers below 125% of the FPL pay $10 and customers between 126% and 185% of the FPL pay $15. (Customers below 50% of the FPL will not be required to make a payment toward their arrearages in the winter period. During these months, the minimum monthly arrearage payment will come from Program Funds.) The Program will match this monthly arrearage payment, provided that the customer's previous bill is paid in full. The customer can designate a greater arrearage amount upon entrance to the Program. **April – June Enrollment Period:** o The customer must first make a payment sufficient to reduce his or her arrearage balance by 1/3 of the unpaid balance. Upon making this initial payment, the customer will receive an ARP credit equivalent to 15% of his or her arrearage balance. o On November 1, any customer who has remained current in the ARP will receive an additional Program credit to be applied to their arrearage balance in the amount of 15% of their original arrearage balance. **July – March Enrollment Period:** o The customer will not qualify for the upfront ARP credit or the November 1 credit o Would continue to qualify for the dollar-for-dollar matching from Program funds.
Forgiveness Requirement (Payments, On-Time Payments)	Customers must pay their current monthly bill on time and in full. Customers must pay a monthly arrearage amount.
Forgiveness Period (One-Time, 12 months, 24 months, etc.)	Until the customer's arrearage has been eliminated.
Program Manager (PUC, State, Utility)	Laclede Gas
Data Manager (PUC, State, Utility, Other)	Laclede Gas
Enrollment Responsibility (Utility, CAP, etc.)	Community Action Agencies
Application Method (Mail, In-Person, Phone)	Customers must visit a Community Action Agency in-person. Send someone out for homebound clients.
Joint Application	The CAA may use household registration from other assistance programs (e.g., LIHEAP) to determine eligibility for the Program.
Recertification Required – Y/N	Yes.
Recertification Frequency	Annually.
Recertification Method (Agency, Automatic Enrollment, Self-Certification)	Visit Agency.
Recertification Procedures	Submit a new application form; submit new income proof forms.
Removal Reasons	Participants may be removed if they incur two or more delinquencies in either the summer period (May – October) or the winter period (November – April), unless the CAA has determined and notified the Company that extenuating circumstances have caused the delinquencies.
Other Communications	Only if they return to the Community Action Agencies. Households must review and agree to implement any cost-free self-help energy conservation measures identified by the CAA.
Budget Counseling	Applicants are provided with basic budgeting information, as well as information about other potential sources of income such as the Earned Income Tax Credit.
Evaluation Frequency	The Program has never been evaluated. The Program is required to submit a report with annual statistics to the Missouri Public Service Commission and the Office of Public Council.

Coordination with LIHEAP	The CAA may use household registration from other assistance programs (e.g., LIHEAP) to determine eligibility for the Program.
Coordination with WAP	None.
Coordination with Energy Efficiency Programs	None.
Coordination with Other Energy Affordability Programs	None.

V. Affordability Program Evaluation Findings

Fisher Sheehan & Colton was hired by Missouri Gas Energy (MGE) Company to conduct an evaluation of Missouri Gas Energy's Experimental Low-Income Rate (ELIR).[39] The evaluation analyzed whether low-income MGE customers who received program benefits improved their payment patterns. Program participants were analyzed between December 2001 and August 2003.

The ELIR provides a fixed monthly credit of $40 to customers with income below 50 percent of the poverty level and a fixed monthly credit of $20 to customers with income between 50 percent and 150 percent of the poverty level. ELIR benefits were provided to LIHEAP recipients who resided in a single geographic region, so the impact of the program could be analyzed.

The main findings of the evaluation were:

- The fixed credits represented an average discount of approximately 30 percent of participants' bills.
- ELIR appears to have improved bill payment coverage for low-income participants. An average of 27 percent of ELIR participants had an arrearage in any given month, compared to 52 percent of LIHEAP recipients who did not participate in the ELIR. Of those customers who had arrearages, they averaged $104 for ELIR participants, compared to $173 for LIHEAP recipients who did not participate in the ELIR.
- ELIR participants have more consistent bill payment patterns than non-participants. ELIR customers mostly ranged from 60 to 80 percent of bills paid, compared to 50 to 70 percent of bills paid for LIHEAP recipients who did not participate in the ELIR.
- ELIR appears to have reduced the frequency of collections actions for program participants. Approximately one percent of ELIR participants had service terminations during the program period, compared to nearly three percent of the LIHEAP recipients who did not participate in the ELIR.

VI. Low-Income Energy Efficiency Programs

The three major sources of funding for energy efficiency programs available to low-income households in Missouri are the DOE Weatherization Assistance Program (WAP), the Laclede Gas Weatherization Program, and the AmerenUE Low-Income Weatherization Assistance Program.

[39] The Impact of Missouri Gas Energy's Experimental Low-Income Rate (ELIR) On Utility Bill Payments by Low-income Customers: Preliminary Assessment, Roger D. Colton, October 2003.

- DOE WAP Program – In 2005, Missouri received about $6 million in funding for the Weatherization Program. These funds were distributed to local agencies to deliver weatherization services to low-income households.[40]

- Laclede Gas Weatherization Program – In 2005, the Laclede Gas Weatherization program was funded at a level of about $300,000.[41]

- AmerenUE Low-Income Weatherization Assistance Program – In 2005, the AmerenUE Low-Income Weatherization Assistance Program was funded at a level of about $500,000.[42]

In total, about $6.8 million was available to help furnish energy efficiency services to low income households in Missouri.

It is a little more challenging to estimate the need for energy efficiency programs. In general, we would suggest that energy efficiency programs should be used in place of affordability programs when the energy efficiency programs result in cost-effective savings to the household. The literature on energy efficiency programs demonstrates that programs that target high users achieve the highest savings levels and are the most-effective. For electric baseload, programs that target households that use 8,000 kWh or more are most cost-effective. For electric heating, programs that target households that use 16,000 or more kWh are most cost-effective. For gas heating, programs that target households that use 1,200 or more therms are most cost-effective.

Our primary state-level data source, the ACS, does not ask respondents to report on the amount of electricity or natural gas that they use. However, we can develop a proxy for usage based on the respondent's estimate of the household's electric and gas bill. [Note: kWh price = 7.08 cents, therm price = $1.267].

Using the ACS data, we developed estimates of the number of households that would be eligible for energy efficiency programs using the cost-effectiveness targets. Table 10 shows that 78% of households could be targeted for high baseload bills, 49% could be targeted for high electric heat bills, and 25% could be target for high gas usage.

Table 10
Need for Energy Efficiency Programs for Low-Income Households (2005)

Group	Number of Households with Bills	Number of Households with High Bills	Percent of Households with High Bills
Electric Baseload Services[43]	321,120	249,659	78%
Electric Heating Services	141,786	68,833	49%
Gas Heating Services	225,339	57,114	25%

Source: 2005 ACS

In general, low-income weatherization programs spend about $3,000 per unit including all costs for administration and service delivery. With the available funds, Missouri could serve about 2,250 households, or about 2% of the high usage homes needing *weatherization assistance*, and 1% of the homes needing electric baseload services. Longer-term efforts to reduce the

[40] Source: LIHEAP Clearinghouse
[41] Source: LIHEAP Clearinghouse
[42] Source: LIHEAP Clearinghouse
[43] For households that report electric and natural gas expenditures as one bill, we allocated half of the cost to electricity and half of the cost to natural gas.

energy usage for the best targets in Missouri would required significantly more funding.

We collected information on the Laclede Weatherization Program. The key design components of that program include:

- Utility Administration – The utility company administers this program.
- CAA Intake and Delivery – The local community action agency furnishes client intake services and delivery the weatherization services.
- WAP Coordination – The program is coordinated with the delivery of WAP to low-income program participants.

The following table furnishes information on the Laclede Weatherization Program.

Program State	Missouri
Program Name	Laclede Gas Company's Weatherization Programs
Utility Company (If Applicable)	Laclede Gas
Program Goals	This program is intended to assist eligible customers, through conservation, education and weatherization, in reducing their use of energy and thereby lessen the level of arrearages experienced by such customers and potentially the level of uncollectibles experienced by the company.
Funding Source (SBC or Rates)	Rates
Annual Program Funds – Allocated (2006)	$300,000 (2005-2006 Program Year for the period of May 1, 2005 - April 30, 2006)
Annual Program Funds – Expended (2006)	$327,505.16 (These funds were expended in the 2005-2006 Program Year and they include funds carried over from 2004-2005 Program Year)
# of Households Served (2006)	191 (2005-2006 Program Year)
Participation Limit	None.
Eligibility – % of Poverty Level	150% of FPL
Eligibility – Home Type	Not specified.
Eligibility – Energy Usage	Not specified.
Eligibility – Participation in Energy Assistance	Not specified.
Eligibility – Other Criteria	Laclede Gas Customers.
Targeted Groups	Customers with high usage and/or large arrearages. The CAAs may give priority to households with children or elderly, but this is not a stated goal of either the tariff or the Program's contracts with the agencies.
Measure Determination	Visual inspection, blower door test, NEAT
Mean Costs per Home (2006)	$1602 (2005-2006 Program Year)
Targeted Average Cost (2006)	$2,000
Cost Limit	$3,000
Landlord Contribution	None.
% of Program Dollars Spent on Administrative Costs	10% - Smaller out-of-state agencies 5% - The two larger urban agencies
Efficiency Measures	Heating system clean & tune, air sealing, storm windows, insulation, doors and windows, and basic repair. The Program will not usually replace a working heating system but will replace faulty systems as a "health and safety" item allowed under the program.

Customer Education – Y/N	Yes.
Education as Part of Service Delivery – Y/N	Yes.
Education Separate from Service Delivery – Y/N	No.
Follow-Up with Customers – Y/N	No.
Program Manager (PUC, State, Utility)	Laclede Gas.
Data Manager (PUC, State, Utility, Other)	Laclede Gas
Enrollment Responsibility (Utility, CAP, etc.)	CAA
Number of Provider Agencies and/or Contractors	6
Type of Provider (For-Profit, CAA, etc.)	CAA
Application Method (Mail, In-Person, Telephone)	Community Action agency dependent- mail.
Joint Application	No.
Reasons for Service Denial	o Health and Safety Reasons. o Weatherization measures will not improve house.
Type of Follow-Up	None.
Quality Control (Inspections?, etc.)	CAA's return to the home to see if the measures are effective.
Evaluation Frequency	Department of Natural Resources evaluates each agency every year.
Coordination with LIHEAP	This Program does not coordinate with LIHEAP.
Coordination with WAP	This program supplements the Federal WAP.
Coordination with Energy Affordability Programs	This Program does not coordinate with energy affordability programs.
Coordination with Other Energy Efficiency Programs	This Program does not coordinate with other energy efficiency programs.

VII. Energy Efficiency Program Evaluation Findings

We were not able to identify any evaluation reports for the energy efficiency program studied in Missouri.