MISSOURI

ON THE BRINK: 2005

THE HOME ENERGY AFFORDABILITY GAP
APRIL 2006

Finding #1

Poverty Level	Home Energy Burden
Below 50%	39.8%
50 – 74%	16.0%
75 – 99%	11.4%
100 – 124%	8.9%
125 – 149%	7.3%
150% - 185%	6.0%

Home energy is a crippling financial burden for low-income Missouri households. Missouri households with incomes of below 50% of the Federal Poverty Level pay 39.8% of their annual income simply for their home energy bills.

Home energy unaffordability, however, is not simply the province of the very poor. Even bills for households between 75% and 100% of Poverty take up 11.4% of income.

Finding #2

Poverty Level	No. of Households
Below 50%	113,308
50 – 74%	68,358
75 – 99%	79,385
100 – 124%	91,834
125 – 149%	102,104
150% - 185%	146,829

The number of households facing these energy burdens is staggering. According to the 2000 Census, more than 113,000 Missouri households live with income at or below 50% of the Federal Poverty Level and thus face a home energy burden of 39.8%.

More than 68,000 Missouri households live with incomes between 50% and 74% of Poverty (home energy burden of 16.0%). And more than 79,000 *more* Missouri households live with incomes between 75% and 99% of the Federal Poverty Level (home energy burden of 11.4%).

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Finding #3

	Home Energy Affordability Gap	Gross LIHEAP Allocation
2002 (base year)	$272,596,654	$38,745,874
2005 (current year)	$324,134,256	$43,032,954
Change	$51,537,602	$4,287,080

Existing sources of energy assistance do not adequately address the energy affordability gap in Missouri. Actual low-income energy bills exceeded affordable energy bills in Missouri by $324 million at 2004/2005 winter heating fuel prices. In contrast, Missouri received a gross allotment of federal energy assistance funds of $43.0 million for Fiscal Year 2005.

Missouri's LIHEAP allocation has lost ground relative to its Home Energy Affordability Gap. From 2002 to 2005, the total Home Energy Affordability Gap increased by $51.5 million. In comparison, the federal LIHEAP allocation to Missouri increased $4.3 million.

Finding #4

Home Energy Affordability Gap: 2002 (base year)	$272,596,654
Home Energy Affordability Gap: 2005 (current year)	$324,134,256
Home Energy Affordability Gap Index (2002 = 100)	118.9

The Home Energy Affordability Gap Index in Missouri was 118.9 for 2005. This Index indicates that the Home Energy Affordability Gap has increased 18.9% between 2002 and the current year.

The Home Energy Affordability Gap Index uses the year 2002 as its base year. In that year, the Index was set equal to 100. A current year Index of more than 100 thus indicates that the Home Energy Affordability Gap for Missouri has increased since 2002. A current year Index of less than 100 indicates that the Home Energy Affordability Gap has decreased since 2002.

Finding #5

End Use	Average Annual Bill
Electric	$616
Hot water	$257
Space heating	$466
Space Cooling	$94
Total annual bill	$1,433

The energy affordability gap in Missouri is not created exclusively, or even primarily, by home heating and cooling bills.

At 2004/2005 prices, while home heating bills were $466 of a $1,433 bill, electric bills (other than cooling) were $616. Annual cooling bills represented $94 in expenditures, while domestic hot water represented $257 in expenditures.

Finding #6

Fuel	2003 Price	2004 Price	2005 Price
Natural gas heating (ccf)	$0.801	$0.973	$1.078
Electric heating (kWh)	$0.060	$0.062	$0.064
Propane heating (gallon)	$1.109	$1.179	$1.384
Fuel Oil heating (gallon)	$1.409	$1.312	$1.737
Electric cooling (kWh)	$0.081	$0.080	$0.080

In Missouri, natural gas prices rose 10.8% during the 2004/2005 winter heating season. Fuel oil prices rose substantially (32.4%) while propane prices rose 17.4%.

Heating season electric prices rose modestly (3.7%) in the same period while cooling season electric prices stayed relatively constant (0.4%).

Missouri Energy Gap Rankings (scale of 1-51)

A higher ranking indicates better conditions while a lower ranking indicates worse conditions relative to other states.

AVERAGE DOLLAR AMOUNT BY WHICH ACTUAL HOME ENERGY BILLS EXCEEDED AFFORDABLE HOME ENERGY BILLS FOR HOUSEHOLDS BELOW 185% OF POVERTY LEVEL. **$539 per household** **RANK: #6**	**AVERAGE TOTAL HOME ENERGY BURDEN FOR HOUSEHOLDS BELOW 50% OF POVERTY LEVEL.** **39.8% of household income** **RANK: #7**
PERCENT OF INDIVIDUALS BELOW 100% OF POVERTY LEVEL. **11.7% of all individuals** **RANK: #28**	**COMBINED HEATING/COOLING AFFORDABILITY GAP COVERED BY FEDERAL HOME ENERGY ASSISTANCE.** **27.5% of gap is covered** **RANK: #4**

DEFINITIONS AND EXPLANATIONS

Each state (along with the District of Columbia) has been ranked (from 1 to 51) in terms of four separate measures of the extent of the energy affordability gap facing its low-income customers:

(1) The percent of individuals with annual incomes at or below 100% of the Federal Poverty Level. This data is obtained directly from the 2000 U.S. Census.

(2) The average total home energy burden for households with income at or below 50% of the Federal Poverty Level shows the percentage of income that households with these incomes spend on home energy. "Total home energy" includes all energy usage, not merely heating and cooling. A home energy bill is calculated on a county-by-county basis. The statewide average is a population-weighted average of county-by-county data.

(3) The average affordability gap (in dollars per household) for all households with income at or below 185% of Poverty is the dollar difference between actual total home energy bills and bills that are set equal to an affordable percentage of income. Affordability for total home energy bills is set at 6% of household income.

(4) The extent to which federal energy assistance covers the combined heating/cooling affordability gap for each state. The combined heating/cooling affordability gap is the difference between actual heating/cooling bills and bills that are set equal to an affordable percentage of income. Affordability for combined heating/cooling bills is set at 2% of income. This measure thus examines the proportion of the heating/cooling gap that is covered by the gross federal Low-Income Home Energy Assistance Program (LIHEAP) allocation to the state assuming that the entire LIHEAP allocation is used for cash benefits.

In the state's rankings, a higher ranking indicates better conditions while a lower ranking indicates worse conditions relative to other states. Thus, for example:

(1) The state with the rank of #1 has the lowest percentage of individuals living in households with income at or below 100% of the Federal Poverty Level while the state with the rank of #51 has the highest percentage.

(2) The state with the rank of #1 has the lowest average home energy burden for households with income below 50% of the Federal Poverty Level while the state with the rank of #51 has the highest average home energy burden.

(3) The state with the rank of #1 has the lowest average affordability gap (dollars per household) while the state with the rank of #51 has the highest dollar gap.

(4) The state with the rank of #1 has the highest percentage of its heating/cooling affordability gap covered by federal energy assistance while the state with the rank of #51 has the lowest percentage of its heating/cooling gap covered.

All references to "states" include the District of Columbia as a "state." Low-income home energy bills are calculated using average residential revenues per unit of energy. State financial resources and utility-specific discounts are not considered.

Energy bills are a function of the following primary factors:

- Tenure of household (owner/renter)
- Housing unit size (by tenure)
- HDDs and CDDs (by county)
- Household size (by tenure)
- Heating fuel mix (by tenure)
- Energy use intensities (by fuel and end use)

Bills are estimated using the U.S. Department of Energy's "energy intensities" published in the most recent DOE Residential Energy Consumption Survey (RECS). The energy intensities used for each state are those published for the Census Division in which the state is located. State-specific demographic data is obtained from the most recent Decennial Census of the U.S. Census Bureau. Heating Degree-Days (HDDs) and Cooling Degree-Days (CDDs) are obtained from the National Weather Service's Climate Prediction Center on a county-by-county basis for the entire country. State price data for each end-use is obtained from the Energy Information Administration's (EIA) fuel-specific price reports (e.g., Natural Gas Monthly, Electric Power Monthly).

Each state's Home Energy Affordability Gap is calculated on a county-by-county basis. Once total energy bills are estimated for each county, each county bill is weighted by the percentage of persons below 185% of the Federal Poverty Level in each county to the total statewide population below 185% of the Federal Poverty Level to derive a statewide result.

The Home Energy Affordability Gap Index uses 2002 as its base year. In that year, the Index was set equal to 100. A current year Index of more than 100 thus indicates that the Home Energy Affordability Gap has increased since 2002. A current year Index of less than 100 indicates that the Home Energy Affordability Gap has decreased since 2002.

The Home Energy Affordability Gap is a function of many variables. Increases in income, for example, result in decreases in the Gap while increases in energy prices result in an increase in the Gap. The Home Energy Affordability Gap Index allows the reader to determine the cumulative impact of these variables. Since the Gap is calculated assuming normal Heating Degree Days (HDDs) and Cooling Degree Days (CDDs), temperatures do not have an impact on the Gap or the Home Energy Affordability Gap Index.

Price data for the various fuels underlying the calculation of the Home Energy Affordability Gap was used from the following time periods:

Heating prices	
Natural gas	February 2005
Fuel oil	February 2005
Liquefied petroleum gas (LPG)	February 2005
Electricity	February 2005
Cooling prices	August 2005
Non-heating prices	
Natural gas	May 2005
Fuel oil	May 2005
Liquefied petroleum gas (LPG)	May 2005
Electricity	May 2005