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**National Home Energy
Affordability Gap**

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**LOW-INCOME HOME ENERGY AFFORDABILITY
GAP REACHES \$18.2 BILLION**

In an effort to quantify the gap between “affordable” home energy bills and actual home energy bills, Fisher, Sheehan & Colton (FSC) has developed a model that estimates the “home energy affordability gap” on a county-by-county basis for the entire country. FSC found that the total annual “affordability gap” for 2002 for the nation as a whole reached roughly \$18.2 *billion* and that federal fuel assistance provided through the Low-Income Home Energy Assistance Program (LIHEAP) covered just a fraction of that gap.

Based on this county-specific data, FSC has prepared state-by-state Home Energy Affordability Gap Fact Sheets. The Fact Sheets available through this Affordability Gap analysis provide the following state-level information:

- Home energy burdens broken down by Poverty Level;
- Number of households broken down by Poverty Level;
- Home Energy Affordability Gap given winter 2002 heating prices (and normal weather), broken down by Poverty Level;
- Projected Home Energy Affordability Gap given estimated 2003 heating prices (and normal weather), broken down by Poverty Level;
- Low-income home energy bills, broken down by end use (heating, cooling, hot water, electricity);
- Average per-household Home Energy Affordability Gap for households below

185% of Poverty (state ranking amongst 50 states plus D.C.);

- Average total home energy burden for households below 50% of Poverty (state ranking amongst 50 states plus D.C.);
- Percentage of individuals below 100% of Poverty Level (state ranking amongst 50 states plus D.C.); and
- Combined heating/cooling affordability gap covered by federal energy assistance (state ranking amongst 50 states plus D.C.).

Home Energy Unaffordability

The problems arising from the unaffordability of home energy in the United States are substantial. A June 2001 report by the National Fuel Funds Network, and other national organizations, found that at the end of the 2000/2001 winter heating season, at least 4.3 million low-income households were at risk of having their utility service cut off because of an inability to pay their winter home energy bills. While natural gas prices moderated after the 2001/2002 winter heating season, recent increases in natural gas and fuel oil prices are again creating crisis situations for utility customers. These households are disproportionately low-income households.

That payment-troubled customers are disproportionately low-income households is commonly accepted. National data reported by the U.S. Census Bureau indicates that the proportion of households in arrears at any given point in time is substantially higher for the low-income population than for the population as a whole. One 1995 Census study reported that while 9.8% of non-poor families could not pay their utility bills in full, 32.4% of poor families could not do so. According to the Census Bureau, while 1.8% of non-poor families had their electric and/or natural gas service disconnected for nonpayment, 8.5% of poor families suffered this same deprivation.

It is not merely the nonpayment of bills that is of concern, however. One impact, but only one impact, of the unaffordability of home energy service is the nonpayment of bills. Previous research by the Iowa Department of Human Rights (DHR) found that bill nonpayment is perhaps not even the most significant of the adverse impacts of unaffordable home energy bills. A DHR study of Iowa LIHEAP recipients found that:

- Over 12 percent of Iowa LIHEAP recipients went without food to pay their home heating bill.
- More than one-in-five went without medical care to pay for heating bills. This included not seeking medical assistance when it was needed, not filling prescriptions for medicine when a doctor had prescribed it, and/or not taking prescription medicines in the dosage ordered by the doctor.
- Almost 30 percent reported that they did not pay other bills, but did not elaborate as to which bills were not paid.

In addition to not paying other bills, many low-income households incurred debt in order to pay both their home heating bills and other basic necessities. They borrowed from friends and/or neighbors, used credit cards to pay for food and other necessities, or did not pay the heating bill.

Affordability Gap by Region of the Country

The Mid-Atlantic region of the country has the highest total Home Energy Affordability Gap. The Affordability Gap varies based on the size of energy bills, the relative income levels of low-income households, and the number of low-income households. Because of the large number of low-income households in the Mid-Atlantic region, the total gap for that region reached \$3.4 billion.

Regional gaps were (in billions of dollars):

- New England: \$1.007 billion

- Mid-Atlantic: \$3.388 billion
- East North Central: \$2.105 billion
- West North Central: \$0.875 billion
- South Atlantic: \$3.240 billion
- East South Central: \$1.341 billion
- West South Central: \$2.906 billion
- Mountain: \$0.926 billion
- Pacific: \$2.402 billion
- Total nation: \$18.193 billion

The regions used for the Affordability Gap analysis correspond to the nine Census divisions.

Merely because a region has a high total Home Energy Affordability Gap, however, does not mean that it has a large Affordability Gap on a per-household basis. New England, for example, has the highest per-household gap for all households with incomes at or below 185% of the Federal Poverty Level (\$920 per household). The Mid-Atlantic and West South Central regions also have high per-household Affordability Gaps:

- New England: \$920 per household
- Mid-Atlantic: \$896 per household
- East North Central: \$526 per household
- West North Central: \$480 per household
- South Atlantic: \$601 per household
- East South Central: \$613 per household
- West South Central: \$752 per household
- Mountain: \$517 per household
- Pacific: \$530 per household
- Total nation: \$639 per household

The per household Affordability Gap is the dollar amount it would take to reduce actual home energy bills to an affordable home energy burden. Affordable home energy burdens were set equal to 6% of household income.

The Role of Federal Fuel Assistance.

Federal fuel assistance covers but a fraction of the gap between affordable home energy bills for low-income households and actual home energy bills. In 2002, the Low-Income Home Energy Assistance Program (LIHEAP) provided

\$1.7 billion toward the \$18.2 billion affordability gap (a coverage rate of 9.2%). The West North Central region had the best LIHEAP coverage rate (21.7%) while the West South Central, East South Central and South Atlantic regions lagged.

The extent to which LIHEAP covered the Home Energy Affordability Gap solely for heating/cooling by region is:

- New England: 16.1%
- Mid-Atlantic: 11.6%
- East North Central: 18.0%
- West North Central: 21.7%
- South Atlantic: 5.2%
- East South Central: 5.4%
- West South Central: 2.6%
- Mountain: 9.3%
- Pacific: 6.0%
- Total nation: 9.2%

If the analysis is limited to heating and cooling bills only (excluding electric bills), the LIHEAP coverage rate goes up to 20.4% nationally, but still is considerably below where the level of need lies. The LIHEAP coverage rates for the Southern regions still lag far behind.

The extent to which LIHEAP covered the Home Energy Affordability Gap solely for heating/cooling by region is:

- New England: 28.6%
- Mid-Atlantic: 24.6%
- East North Central: 33.1%
- West North Central: 42.6%
- South Atlantic: 11.4%
- East South Central: 10.5%
- West South Central: 6.4%
- Mountain: 20.3%
- Pacific: 22.1%
- Total nation: 20.4%

Individual State Affordability Gaps

Individual states can be ranked as to the level of their affordability gap. One way to do this is to examine the home energy burden for households with incomes below 50% of the Federal Poverty Level. The home energy burden is simply the household's home energy bill as a percentage of income. A hypothetical household with a \$10,000 income and a \$1,500 home energy burden, in other words, would have a home energy burden of 15% ($\$1,500 / \$10,000 = 0.15$).

Colorado has the lowest home energy burden for households below 50% of the Federal Poverty Level (32.9%). This means that, in the best state, these low-income households pay more than 30% of their income simply for home energy. Vermont (61.3%) and Maine (57.6%) have the highest home energy burdens for households below 50% of Poverty.

The generally-accepted rule is that households should not pay more than 30% of their income for total shelter costs, including rent/mortgage, utilities, insurance, and taxes.

The states with the five highest and five lowest home energy burdens for households below 50% of Poverty Level are:

The five lowest burden states were: Colorado (32.9%) (1); Washington (34.3%) (2); Nebraska (35.0%) (3); Oregon (35.7%) (4); and Indiana (36.8%) (5).

The five highest burdens states were: Vermont (61.3%) (51); Maine (57.6%) (50); Hawaii (56.2%) (49); Delaware (54.7%) (48); New Hampshire (54.7%) (47).

Availability of Data

A copy of the complete set of Home Energy Affordability Gap State Fact Sheets can be obtained by accessing the Home Energy Affordability Gap web page at:

<http://www.fsconline.com/work/heag/heag.htm>

A summary presentation of the FSC Home Energy Affordability Gap, made to the June 2003 National Fuel Funds Network (NFFN) annual conference, can be downloaded by clicking on this link on the Home Energy Affordability Gap web page: *NFFN Home Energy Affordability Gap presentation*.

A summary presentation of the uses to which FSC's Home Energy Affordability Gap can be put can be obtained by clicking on this link: *NFFN Home Energy Affordability Gap—Uses of Data*.

In addition, the complete set of state Fact Sheets can be obtained on CDROM (at no charge for up to 10 copies) by sending a request to:

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FSC specializes in providing economic, financial and regulatory consulting. The areas in which *FSC* has worked include infrastructure financing, public enterprise planning and development, natural resource economics, community economic development, telecommunications, public sector labor economics, planning and zoning, regulatory economics, energy law and economics, fair housing, and public welfare policy.

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