

# ON THE BRINK: 2005

## THE HOME ENERGY AFFORDABILITY GAP APRIL 2006

### Finding #1

	Home Energy Affordability Gap	Gross LIHEAP Allocation	
2002 (base year)	\$18,193,257,723	\$1,669,935,373	Existing sources of energy assistance do not adequately address the energy affordability gap in the Total US. Actual low-income energy bills exceeded affordable energy bills in the Total US by \$23,192 million at 2004/2005 winter heating fuel prices. In contrast, the Total US received a gross allotment of federal energy assistance funds of \$1,854.7 million for Fiscal Year 2005.
2005 (current year)	\$23,192,404,589	\$1,854,707,201	
Change	\$4,999,146,866	\$184,771,828	

### Finding #2

Home Energy Affordability Gap: 2002 (base year)	\$18,193,257,723	The Home Energy Affordability Gap Index in the Total US was 127.5 for 2005. This Index indicates that the Home Energy Affordability Gap has increased 27.5% between 2002 and the current year.
Home Energy Affordability Gap: 2005 (current year)	\$23,192,404,589	
Home Energy Affordability Gap Index (2002 = 100)	127.5	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 the Total US division has increased since 2002. A current year Index of less than 100 indicates that the Home Energy Affordability Gap has decreased since 2002.

## Definitions and Explanations

Each state (along with the District of Columbia) has a Home Energy Affordability Gap 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. State data are then aggregated into Census Division totals as follows:

East North Central	Illinois, Indiana, Michigan, Ohio, Wisconsin
East South Central	Alabama, Kentucky, Mississippi, Tennessee
Mid-Atlantic	New Jersey, New York, Pennsylvania
Mountain	Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming
New England	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont
Pacific	Alaska, California, Hawaii, Oregon, Washington
South Atlantic	Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia
West North Central	Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota
West South Central	Arkansas, Louisiana, Oklahoma, Texas

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).

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 2005 Home Energy Affordability Gap was used from the following time periods:

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