

# **LIHEAP Home Energy Notebook**

## **For Fiscal Year 2004**

**U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES**  
**Administration for Children and Families**  
**Office of Community Services**  
**Division of Family Assistance**

**Table A-4. Home heating: Average consumption per household, by all fuels and specified fuels, by all, non low income, low income and LIHEAP recipient households, by Census region, FY 2004<sup>1/</sup>**

	All Fuels <sup>2/</sup>	Natural Gas	Electricity	Fuel Oil	Kerosene	LPG
	(In MmBTUs) <sup>3/</sup>					
United States						
All households	44.2	56.9	13.5	75.9	43.6	52.5
Non low income households	46.2	58.6	14.8	78.3	53.2	55.9
Low income households <sup>4/</sup>	39.8	53.3	10.8	69.7	39.6	46.4
LIHEAP recipient households <sup>5/</sup>	57.4	72.7	17.8	95.0	58.2	42.8
Northeast						
All households	66.7	72.5	20.1	77.8	61.6	68.6
Non low income households	72.1	79.6	24.6	81.1	72.4	72.6
Low income households	55.9	60.7	12.7	68.9	54.2	52.6*
LIHEAP recipient households	72.9	78.8	21.9	93.1	60.0*	30.6*
Midwest						
All households	68.9	76.2	23.0	74.2	NC	64.4
Non low income households	70.6	76.5	29.3	74.4	NC	64.6
Low income households	65.0	75.2	13.2	74.0	NC	63.9
LIHEAP recipient households	70.1	84.9	18.2	99.0*	NC	60.4
South						
All households	27.8	43.7	12.3	68.3	29.7	41.5
Non low income households	28.7	45.0	12.7	68.4	24.4*	47.9
Low income households	25.8	40.9	11.2	67.5*	30.9	31.3
LIHEAP recipient households	34.3	51.0	19.6	117.6*	19.1*	26.8
West						
All households	26.2	34.1	11.1	49.9*	41.0*	45.8
Non low income households	28.0	35.0	12.8	49.9*	43.9*	44.6
Low income households	22.5	31.8	8.5	NC	39.2	47.7
LIHEAP recipient households	30.1	37.9	9.8	87.0*	NC	63.8*

<sup>1/</sup>Developed from the 2001 Residential Energy Consumption Survey (RECS), Energy Information Administration, U.S. Department of Energy, for FY 2004.

<sup>2/</sup>Weighted average of natural gas, electricity, fuel oil, kerosene, and liquefied petroleum gas space heating consumption. Consumption data are not collected for other fuels.

<sup>3/</sup>A British Thermal Unit (BTU) is the amount of energy necessary to raise the temperature of one pound of water one degree Fahrenheit. MmBTUs refer to values in millions of BTUs.

<sup>4/</sup>Households with income under the maximum in section 2605(b)(2)(B) of Public Law 97-35.

<sup>5/</sup>Includes households from the 2001 RECS LIHEAP supplemental sample.

\* = This figure should be viewed with caution because of the small number of sample cases.

NC = No cases in the 2001 RECS household sample.

# **A Look at Residential Energy Consumption in 1997**

**November 1999**

**Energy Information Administration  
Office of Energy Markets and End Use  
U.S. Department of Energy  
Washington, DC 20585**

This report was prepared by the Energy Information Administration, the independent statistical and analytical agency within the Department of Energy. The information contained herein should be attributed to the Energy Information Administration and should not be construed as advocating or reflecting any policy position of the Department of Energy or any other organization.

**Table CE1-3c. Total Energy Consumption in U.S. Households  
by Household Income, 1997**

	Total	1997 Household Income				Below Poverty Line	Eligible for Federal Assistance <sup>1</sup>	RSE Row Factors
		Less than \$10,000	\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 or More			
RSE Column Factor:	0.6	1.6	1.0	0.8	1.0	1.4	1.0	
<b>Million Households</b>								
Total U.S. Households .....	101.5	13.3	29.1	31.1	27.9	14.6	34.1	2.7
Number of Households, Fuels Used (more than one may apply):								
Electricity <sup>2</sup> .....	101.4	13.3	29.1	31.1	27.9	14.6	34.0	2.7
Natural Gas .....	61.9	8.0	17.0	19.0	17.9	9.1	20.4	4.3
Fuel Oil .....	10.0	1.3	2.5	3.2	3.0	1.4	3.4	10.4
Kerosene .....	3.5	0.4	1.2	1.2	0.6	0.6	1.4	14.5
LPG .....	8.1	1.0	2.4	2.7	1.9	1.2	2.8	12.7
Wood .....	15.0	0.7	3.0	4.7	6.7	1.1	3.0	9.4
<b>Quadrillion Btu</b>								
Total Btu Consumption, Fuels Used:								
Electricity								
Primary .....	10.72	1.01	2.69	3.27	3.74	1.24	2.98	3.6
Site .....	3.54	0.33	0.89	1.08	1.24	0.41	0.99	3.6
Natural Gas .....	5.28	0.53	1.30	1.65	1.80	0.63	1.53	5.5
Fuel Oil .....	1.01	0.11	0.22	0.31	0.37	0.11	0.30	11.5
Kerosene .....	0.06	0.01	0.02	0.02	0.01	0.01	0.03	23.5
LPG .....	0.36	0.04	0.11	0.13	0.08	0.04	0.12	15.3
Wood .....	0.43	0.03	0.10	0.14	0.15	0.04	0.12	14.3
Total (excludes primary electricity and wood) .....	10.25	1.02	2.54	3.19	3.49	1.22	2.96	3.2
<b>Physical Units</b>								
Physical Units of Total Consumption, Fuels Used:								
Electricity (billion kWh) .....	1,037	98	260	317	362	120	289	3.6
Natural Gas (billion cf) .....	5,143	516	1,270	1,604	1,752	618	1,490	5.5
Fuel Oil (million gallons) .....	7,273	761	1,598	2,262	2,653	811	2,138	11.5
Kerosene (million gallons) .....	437	67	161	154	54	98	193	23.5
LPG (million gallons) .....	3,937	412	1,177	1,428	920	484	1,286	15.3
Wood (million cords) .....	21.4	1.7	4.9	7.1	7.6	2.1	6.1	14.3
<b>Million Btu per Household<sup>3</sup></b>								
Total Btu Consumption per Household, Fuels Used:								
Electricity								
Primary .....	105.6	76.2	92.3	105.2	134.1	85.1	87.7	2.5
Site .....	34.9	25.2	30.5	34.7	44.3	28.1	28.9	2.5
Natural Gas .....	85.3	66.4	76.7	86.9	100.3	69.4	75.0	3.1
Fuel Oil .....	101.2	81.3	87.9	99.4	123.1	80.8	86.5	4.9
Kerosene .....	17.0	22.3	17.5	17.5	11.5	21.2	18.8	19.7
LPG .....	44.6	36.3	44.1	48.6	43.9	38.2	42.2	9.9
Wood .....	28.5	49.9	33.4	30.7	22.7	38.9	40.4	12.4
Total (excludes primary electricity and wood) .....	101.0	76.4	87.3	102.6	125.2	83.0	86.7	2.1

See footnotes at end of table.

**Table CE1-5u. Total Energy Consumption and Expenditures in U.S. Households by Household Demographics, 1997**

Household Demographics	Total End-Use Energy					RSE Row Factors
	Households (millions)	Total		Per Household		
		Consumption (quadrillion Btu)	Expenditures (billion dollars)	Consumption (million Btu)	Expenditures (dollars)	
RSE Column Factor:	1.1	1.4	1.3	0.8	0.6	
Total .....	101.5	10.25	135.79	101.0	1,338	1.2
Household Size						
1 Person .....	25.6	1.91	24.59	74.7	962	2.3
2 Persons .....	33.0	3.34	44.42	101.2	1,347	2.0
3 Persons .....	17.4	1.91	25.61	109.5	1,471	2.5
4 Persons .....	15.2	1.79	23.94	117.7	1,571	2.8
5 Persons .....	6.4	0.80	10.53	123.9	1,640	4.8
6 or More Persons .....	3.9	0.50	6.71	129.6	1,734	6.5
1997 Household Income						
Category						
Less than \$5,000 .....	3.8	0.30	3.85	81.3	1,028	6.5
\$5,000 to \$9,999 .....	9.6	0.71	9.41	74.4	985	5.1
\$10,000 to \$14,999 .....	10.3	0.86	10.97	83.2	1,063	4.4
\$15,000 to \$19,999 .....	10.4	0.91	12.29	87.6	1,182	3.9
\$20,000 to \$24,999 .....	8.4	0.77	10.39	91.7	1,233	3.7
\$25,000 to \$34,999 .....	15.6	1.53	19.94	98.0	1,276	3.0
\$35,000 to \$49,999 .....	15.5	1.66	21.61	107.1	1,394	2.5
\$50,000 to \$74,999 .....	16.4	1.96	26.25	119.1	1,599	3.2
\$75,000 or More .....	11.5	1.54	21.08	133.9	1,835	4.1
Below Poverty Line						
100 Percent .....	14.6	1.22	15.95	83.0	1,088	3.5
125 Percent .....	19.7	1.63	21.56	82.9	1,096	3.4
150 Percent .....	26.7	2.25	29.85	84.2	1,117	2.8
Eligible for Federal Assistance <sup>1</sup> .....						
	34.1	2.96	38.86	86.7	1,140	2.5
Age of Householder						
Under 25 Years .....	5.7	0.39	5.52	69.7	974	5.3
25 to 34 Years .....	18.5	1.63	21.93	87.7	1,184	2.9
35 to 44 Years .....	23.2	2.49	33.40	107.4	1,441	2.3
45 to 59 Years .....	25.6	2.90	38.89	113.4	1,519	2.1
60 Years and Over .....	28.5	2.83	36.05	99.4	1,265	2.6
Race of Householder						
White .....	78.5	8.16	108.12	103.9	1,378	1.4
Black .....	12.7	1.34	17.16	105.3	1,351	4.6
Other <sup>2</sup> .....	10.3	0.75	10.51	72.8	1,020	4.9
Householder of Hispanic Descent						
Yes .....	9.4	0.72	10.27	75.9	1,089	4.7
No .....	92.1	9.53	125.52	103.5	1,364	1.3

<sup>1</sup> Below 150 percent of poverty line or 60 percent of median State income.

<sup>2</sup> Includes 5.5 million householders who described themselves as Hispanic rather than White, Black, or other.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

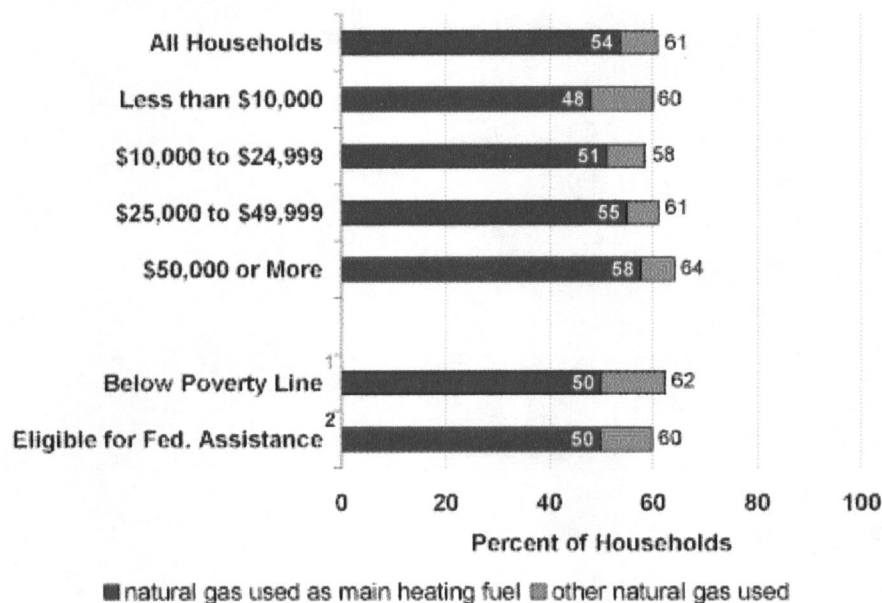
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

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## Household Income

The use of natural gas for any end use and as the main heating fuel was approximately the same regardless of household income category (Figure 1). In contrast, natural gas consumption and expenditures per household did vary by household income—higher income households consumed more and spent more on average (Figures 2 and 3). Higher income households lived in larger housing units, which require more energy for heating. Natural gas prices varied little by household income (Figure 4).

**Figure 1. Percent of Households That Use Natural Gas by Household Income, 1997**



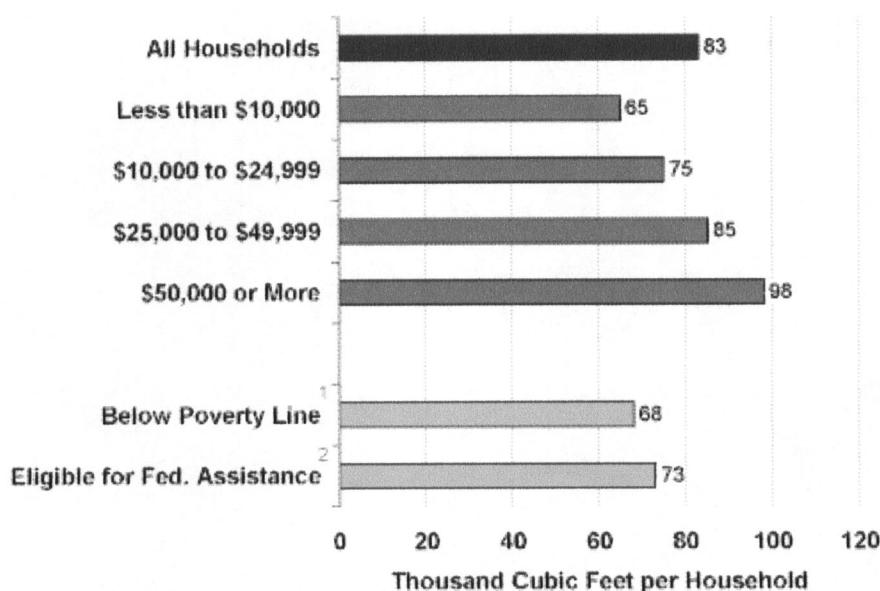
**Notes:**

1. Poverty line: Low-income classification defined by U.S. Census Bureau and U.S. Office of Management and Budget.

2. Eligible for Federal assistance: Below 150 percent of U.S. poverty line or equal to, or below, 60 percent of median State income.

Source: Residential Energy Consumption Survey 1997.

**Figure 2. Natural Gas Consumption per Household by Household Income, 1997**



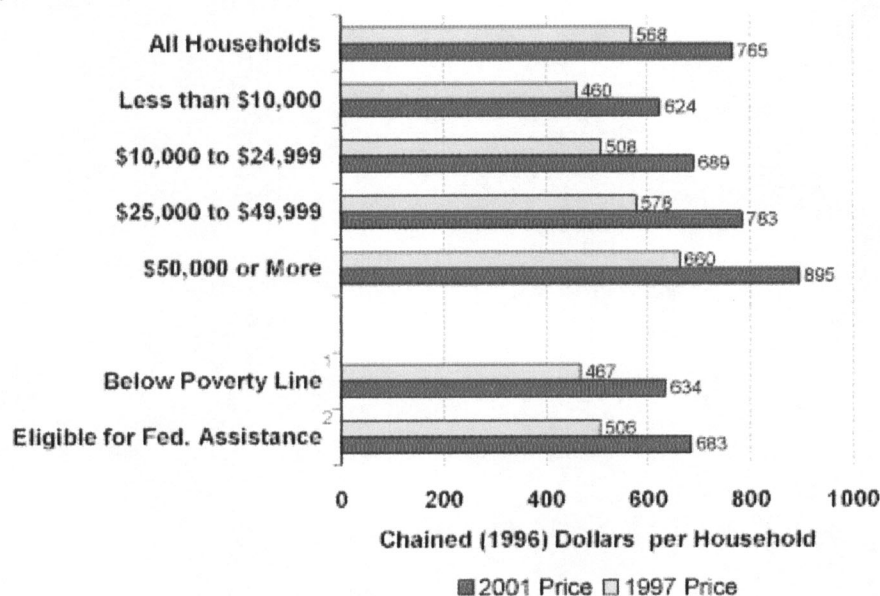
## Notes:

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Source: Residential Energy Consumption Survey 1997.

**Figure 3. Natural Gas Expenditures per Household in 1997 by Household Income (Based on 1997 and 2001 Prices)**



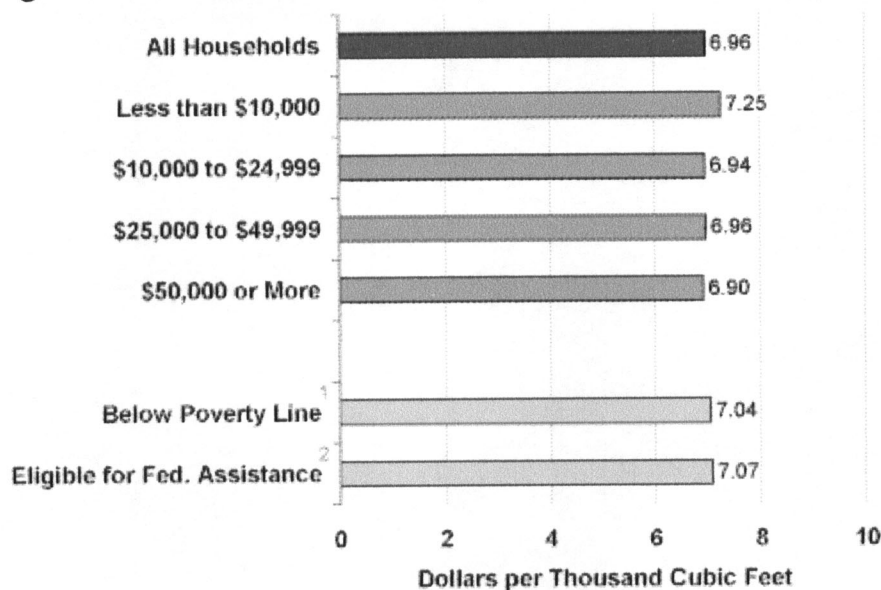
## Notes:

1. Poverty line: Low-income classification defined by U.S. Census Bureau and U.S. Office of Management and Budget.

2. Eligible for Federal assistance: Below 150 percent of U.S. poverty line or equal to, or below, 60 percent of median State income.

Source: Residential Energy Consumption Survey 1997 and EIA, *Short-Term Energy Outlook February 2001*.



**Figure 4. Natural Gas Prices by Household Income, 1997****Notes:**

1. Poverty line: Low-income classification defined by U.S. Census Bureau and U.S. Office of Management and Budget.
2. Eligible for Federal assistance: Below 150 percent of U.S. poverty line or equal to, or below, 60 percent of median State income.

Source: Residential Energy Consumption Survey 1997.

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