

# 1997 Consumption and Expenditures Tables

## Space-Heating Expenditures Tables

(20 pages, 78 kb)

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These data are from the 1997 Residential Energy Consumption Survey (RECS) which provides information on the use of energy in residential housing units in the United States. The RECS is a national statistical survey that collects data for occupied primary housing units. RECS was first conducted in 1978; the sixth and most recent survey was conducted in 1997 RECS. The data were collected from a sample of 5,900 housing units statistically selected to represent the 101.5 million units in the United States. The 1997 data are available for the four Census regions, the nine Census divisions, and for the four most populous States--California, Florida, New York, and Texas.

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**Table CE2-1e. Space-Heating Energy Expenditures in U.S. Households by Climate Zone, 1997**

	Climate Zone <sup>1</sup>						RSE Row Factors
	Total	Fewer than 2,000 CDD and --				2,000 CDD or More and Fewer than 4,000 HDD	
		More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
		0.5	1.3	1.0	1.1		
RSE Column Factor:							
<b>Million Households</b>							
<b>Total U.S. Households</b> .....	101.5	9.3	28.0	22.5	19.5	22.2	8.3
No Space Heating .....	0.8	Q	Q	Q	Q	0.6	26.2
Space Heating .....	100.7	9.3	28.0	22.5	19.4	21.6	8.4
Not Using a Major Fuel <sup>2</sup> .....	1.0	0.3	0.2	0.2	0.1	Q	33.2
Using a Major Fuel <sup>2</sup> .....	99.7	8.9	27.8	22.2	19.2	21.5	8.5
For Main Space Heating .....	98.1	8.6	27.5	21.9	18.9	21.3	8.4
For Secondary Space Heating Only .....	1.6	0.3	0.4	0.4	0.4	Q	22.3
<b>Number of Households with Space Heating, Major Fuels Used (more than one may apply):</b>							
Electricity .....	42.0	2.7	8.0	9.6	8.8	12.9	8.8
Natural Gas .....	54.5	5.0	18.9	10.1	10.8	9.7	9.5
Fuel Oil .....	9.8	2.0	3.1	4.3	0.3	Q	17.4
Kerosene .....	3.5	0.4	0.8	0.9	0.9	0.4	18.9
LPG .....	5.6	0.7	1.4	1.1	1.4	1.0	27.1
<b>Billion Dollars</b>							
<b>Space-Heating Expenditures, Major Fuels Used:</b>							
Electricity .....	8.56	0.44	1.98	2.74	1.66	1.74	11.4
Natural Gas .....	24.11	2.53	10.71	5.78	2.62	2.47	11.6
Fuel Oil .....	6.07	1.35	2.22	2.37	0.11	Q	20.2
Kerosene .....	0.50	0.13	0.12	0.09	0.14	0.02	28.1
LPG .....	2.79	0.35	0.93	0.62	0.60	0.28	28.7
Total .....	42.03	4.80	15.95	11.60	5.14	4.53	8.1
<b>Dollars per Household</b>							
<b>Average Space-Heating Expenditures per Household</b>							
Using a Major Fuel <sup>2</sup> .....	421	538	573	522	267	211	3.5
For Main Space Heating .....	425	547	577	529	270	212	3.5
For Secondary Space Heating Only ...	175	283	238	92	142	Q	21.9
<b>Million Households</b>							
<b>Number of Households, Where the Main Space-Heating Fuel Is:</b>							
Electricity .....	29.6	1.1	4.3	6.8	6.5	10.9	10.5
Natural Gas .....	53.5	4.9	18.7	9.9	10.6	9.3	9.6
Fuel Oil .....	9.5	1.9	3.0	4.2	0.2	Q	17.3
Kerosene .....	1.0	0.2	0.2	0.1	0.3	Q	29.2
LPG .....	4.6	0.5	1.3	0.8	1.2	0.8	29.3
Other .....	2.6	0.6	0.6	0.6	0.5	0.3	22.9
No Space Heating .....	0.8	Q	Q	Q	Q	0.6	26.2

See footnotes at end of table.

**Table CE2-1e. Space-Heating Energy Expenditures in U.S. Households by Climate Zone, 1997 (Continued)**

	Climate Zone <sup>1</sup>						RSE Row Factors
	Total	Fewer than 2,000 CDD and --				2,000 CDD or More and Fewer than 4,000 HDD	
		More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factor:	0.5	1.3	1.0	1.1	1.2	1.1	
<b>Dollars per Household<sup>4</sup></b>							
<b>Space-Heating Expenditures per Household,<sup>3</sup> Where the Main Space-Heating Fuel Is:</b>							
Electricity .....	270	349	422	387	237	149	6.3
Natural Gas .....	446	513	568	580	241	258	4.3
Fuel Oil .....	629	700	722	555	449	Q	6.5
Kerosene .....	350	476	513	392	269	Q	18.5
LPG .....	567	598	708	711	491	301	9.5
<b>1997 Heating Degree-Days (HDD) per Household<sup>4</sup></b>							
<b>1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:</b>							
Electricity .....	3,225	7,182	6,012	4,332	2,620	1,406	3.7
Natural Gas .....	4,710	7,844	6,410	4,839	2,176	2,396	3.4
Fuel Oil .....	5,707	7,431	6,218	4,843	3,474	Q	3.6
Kerosene .....	4,959	6,979	6,620	4,461	4,007	Q	8.1
LPG .....	4,863	7,743	6,673	5,203	3,363	2,069	5.3
Average for All Households .....	4,368	7,640	6,340	4,694	2,449	1,865	2.4
<b>Heated Square Footage (HSF) per Household<sup>4</sup></b>							
<b>Heated Square Footage per Household,<sup>5</sup> Where the Main Space-Heating Fuel Is:</b>							
Electricity .....	1,468	1,589	1,376	1,618	1,364	1,462	3.8
Natural Gas .....	1,757	2,034	1,933	1,755	1,511	1,539	3.4
Fuel Oil .....	1,844	1,995	2,036	1,678	1,227	Q	3.9
Kerosene .....	1,023	1,202	821	1,093	1,041	Q	6.5
LPG .....	1,676	1,889	1,931	1,852	1,481	1,255	8.2
Average for All Households .....	1,667	1,937	1,850	1,698	1,447	1,485	2.3
<b>Space-Heating Intensity [Cents÷(HDD×(HSF÷1000))]<sup>4</sup></b>							
<b>Space-Heating Intensity, Where the Main Space-Heating Fuel Is:</b>							
Electricity .....	5.70	3.06	5.11	5.52	6.64	7.23	5.3
Natural Gas .....	5.39	3.22	4.58	6.82	7.33	6.99	4.2
Fuel Oil .....	5.98	4.72	5.70	6.83	10.54	Q	6.7
Kerosene .....	6.89	5.67	9.44	8.04	6.44	Q	18.8
LPG .....	6.96	4.08	5.49	7.38	9.86	11.58	12.3

<sup>1</sup> One of five climatically distinct areas, determined according to the 30-year average (1961-1990) of the annual heating and cooling degree-days. For this report, the heating or cooling degree-days are a measure of how cold or how hot a location is over a period of one year, relative to a base temperature of 65 degrees Fahrenheit. A household is assigned to a climate zone according to the 30-year average annual degree-days for an appropriate nearby weather station.

<sup>2</sup> The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

<sup>3</sup> Includes only the space-heating expenditures of the space-heating fuel. Not included are: 1) the expenditures of the main space-heating fuel for uses other than space heating; 2) the expenditures of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the expenditures of other fuels that are used as secondary space-heating fuels.

<sup>4</sup> Averages are for those households using each of the main space-heating fuels.

<sup>5</sup> In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

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.

**Table CE2-2e. Space-Heating Energy Expenditures in U.S. Households by Year of Construction, 1997**

	Total	Year of Construction						RSE Row Factors
		1990 to 1997 <sup>1</sup>	1980 to 1989	1970 to 1979	1960 to 1969	1950 to 1959	1949 or Before	
RSE Column Factor:	0.5	1.5	1.2	1.0	1.1	1.1	0.9	
<b>Million Households</b>								
<b>Total U.S. Households</b> .....	101.5	9.7	17.3	19.6	14.4	12.5	27.9	4.3
No Space Heating .....	0.8	Q	Q	0.2	Q	Q	0.2	35.5
Space Heating .....	100.7	9.6	17.3	19.4	14.3	12.4	27.7	4.3
Not Using a Major Fuel <sup>2</sup> .....	1.0	Q	0.2	0.2	0.2	Q	0.3	34.1
Using a Major Fuel <sup>2</sup> .....	99.7	9.6	17.1	19.2	14.1	12.4	27.3	4.3
For Main Space Heating .....	98.1	9.5	16.8	18.8	13.9	12.3	26.8	4.3
For Secondary Space Heating Only .....	1.6	Q	0.3	0.4	0.2	0.1	0.5	23.4
<b>Number of Households with Space Heating, Major Fuels Used (more than one may apply):</b>								
Electricity .....	42.0	4.5	10.9	10.1	5.6	3.9	7.1	6.2
Natural Gas .....	54.5	4.7	6.5	8.3	8.5	8.3	18.3	6.4
Fuel Oil .....	9.8	0.3	0.6	1.0	1.5	1.5	4.9	14.8
Kerosene .....	3.5	0.2	0.5	0.8	0.4	0.3	1.4	18.4
LPG .....	5.6	0.7	0.9	1.2	0.7	0.6	1.6	15.5
<b>Billion Dollars</b>								
<b>Space-Heating Expenditures, Major Fuels Used:</b>								
Electricity .....	8.56	0.98	2.16	2.58	1.04	0.69	1.11	9.3
Natural Gas .....	24.11	1.76	2.30	3.09	3.22	3.56	10.17	7.8
Fuel Oil .....	6.07	0.19	0.36	0.55	0.81	0.88	3.28	17.3
Kerosene .....	0.50	0.03	0.06	0.09	0.05	0.03	0.23	29.8
LPG .....	2.79	0.35	0.36	0.53	0.33	0.22	1.00	18.2
Total .....	42.03	3.32	5.23	6.85	5.44	5.38	15.80	4.7
<b>Dollars per Household</b>								
<b>Average Space-Heating Expenditures per Household</b>								
Using a Major Fuel <sup>2</sup> .....	421	347	306	357	385	433	578	3.0
For Main Space Heating .....	425	350	309	362	388	435	585	3.0
For Secondary Space Heating Only .....	175	Q	102	170	186	211	220	22.4
<b>Million Households</b>								
<b>Number of Households, Where the Main Space-Heating Fuel Is:</b>								
Electricity .....	29.6	3.9	9.3	8.5	3.4	2.2	2.3	8.4
Natural Gas .....	53.5	4.7	6.2	8.1	8.3	8.1	18.1	6.5
Fuel Oil .....	9.5	0.3	0.5	1.0	1.5	1.4	4.7	14.6
Kerosene .....	1.0	Q	0.1	0.3	Q	Q	0.3	29.8
LPG .....	4.6	0.6	0.7	1.0	0.6	0.5	1.4	17.1
Other .....	2.6	Q	0.4	0.6	0.4	0.2	0.8	21.3
No Space Heating .....	0.8	Q	Q	0.2	Q	Q	0.2	35.5

See footnotes at end of table.

**Table CE2-2e. Space-Heating Energy Expenditures in U.S. Households by Year of Construction, 1997 (Continued)**

	Year of Construction							RSE Row Factors
	Total	1990 to 1997 <sup>1</sup>	1980 to 1989	1970 to 1979	1960 to 1969	1950 to 1959	1949 or Before	
RSE Column Factor:	0.5	1.5	1.2	1.0	1.1	1.1	0.9	
<b>Dollars per Household<sup>4</sup></b>								
<b>Space-Heating Expenditures per Household,<sup>3</sup> Where the Main Space-Heating Fuel Is:</b>								
Electricity .....	270	246	225	295	275	271	389	6.3
Natural Gas .....	446	371	357	378	380	436	562	4.0
Fuel Oil .....	629	695	638	544	536	605	679	7.6
Kerosene .....	350	Q	350	267	Q	Q	400	17.9
LPG .....	567	579	501	511	540	415	698	8.0
<b>1997 Heating Degree-Days (HDD) per Household<sup>4</sup></b>								
<b>1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:</b>								
Electricity .....	3,225	3,362	3,038	3,293	3,182	3,048	3,742	5.9
Natural Gas .....	4,710	4,507	4,536	4,652	4,304	4,481	5,137	3.4
Fuel Oil .....	5,707	6,313	5,915	5,521	5,518	5,657	5,762	3.9
Kerosene .....	4,959	Q	6,111	4,141	Q	Q	4,820	12.5
LPG .....	4,863	4,973	4,771	4,248	4,525	4,145	5,680	7.3
Average for All Households .....	4,368	4,129	3,780	4,057	4,171	4,344	5,152	2.5
<b>Heated Square Footage (HSF) per Household<sup>4</sup></b>								
<b>Heated Square Footage per Household,<sup>5</sup> Where the Main Space-Heating Fuel Is:</b>								
Electricity .....	1,468	1,599	1,500	1,481	1,352	1,347	1,367	3.6
Natural Gas .....	1,757	2,468	2,041	1,676	1,660	1,565	1,641	3.0
Fuel Oil .....	1,844	3,043	2,204	1,880	1,683	1,757	1,805	5.6
Kerosene .....	1,023	Q	1,011	859	Q	Q	1,122	7.5
LPG .....	1,676	2,125	1,857	1,393	1,522	1,428	1,754	7.3
Average for All Households .....	1,667	2,099	1,733	1,573	1,574	1,541	1,646	2.1
<b>Space-Heating Intensity [Cents÷(HDD×(HSF÷1000))]<sup>4</sup></b>								
<b>Space-Heating Intensity, Where the Main Space-Heating Fuel Is:</b>								
Electricity .....	5.70	4.58	4.95	6.04	6.40	6.60	7.60	5.4
Natural Gas .....	5.39	3.33	3.86	4.85	5.32	6.22	6.66	3.7
Fuel Oil .....	5.98	3.62	4.89	5.24	5.77	6.08	6.53	7.5
Kerosene .....	6.89	Q	5.66	7.49	Q	Q	7.40	16.9
LPG .....	6.96	5.48	5.65	8.64	7.84	7.01	7.01	10.6

<sup>1</sup> New construction for 1997 includes only those housing units built and occupied between January and the April-August period when the household interviews were conducted.

<sup>2</sup> The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

<sup>3</sup> Includes only the space-heating expenditures of the space-heating fuel. Not included are: 1) the expenditures of the main space-heating fuel for uses other than space heating; 2) the expenditures of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the expenditures of other fuels that are used as secondary space-heating fuels.

<sup>4</sup> Averages are for those households using each of the main space-heating fuels.

<sup>5</sup> In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

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.

**Table CE2-3e. Space-Heating Energy Expenditures 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:	0.7	1.4	1.0	0.9	1.0	1.3	1.0	
<b>Million Households</b>								
<b>Total U.S. Households</b> .....	101.5	13.3	29.1	31.1	27.9	14.6	34.1	2.8
No Space Heating .....	0.8	0.2	0.4	0.1	Q	0.3	0.5	25.9
Space Heating .....	100.7	13.1	28.8	31.0	27.8	14.3	33.5	2.8
Not Using a Major Fuel <sup>2</sup> .....	1.0	0.3	0.2	0.3	Q	0.3	0.6	26.1
Using a Major Fuel <sup>2</sup> .....	99.7	12.8	28.5	30.7	27.6	14.0	33.0	2.9
For Main Space Heating .....	98.1	12.7	28.0	30.3	27.1	13.9	32.5	2.9
For Secondary Space Heating Only .....	1.6	Q	0.6	0.5	0.5	Q	0.4	18.7
<b>Number of Households with Space Heating, Major Fuels Used (more than one may apply):</b>								
Electricity .....	42.0	5.6	12.1	12.3	11.9	5.8	13.7	5.0
Natural Gas .....	54.5	6.4	14.9	17.1	16.1	7.3	17.0	4.7
Fuel Oil .....	9.8	1.3	2.5	3.1	2.9	1.4	3.4	10.4
Kerosene .....	3.5	0.4	1.2	1.2	0.6	0.6	1.4	14.4
LPG .....	5.6	0.7	1.7	2.1	1.2	0.8	1.9	14.2
<b>Billion Dollars</b>								
<b>Space-Heating Expenditures, Major Fuels Used:</b>								
Electricity .....	8.56	1.03	2.35	2.44	2.75	1.10	2.62	8.0
Natural Gas .....	24.11	2.43	6.09	7.59	8.00	2.64	6.82	6.1
Fuel Oil .....	6.07	0.49	1.32	1.89	2.37	0.52	1.61	13.0
Kerosene .....	0.50	0.08	0.19	0.17	0.06	0.12	0.22	23.4
LPG .....	2.79	0.30	0.84	1.03	0.61	0.35	0.92	16.7
Total .....	42.03	4.33	10.78	13.12	13.79	4.73	12.20	3.3
<b>Dollars per Household</b>								
<b>Average Space-Heating Expenditures per Household</b>								
Using a Major Fuel <sup>2</sup> .....	421	338	378	427	499	338	370	2.6
For Main Space Heating .....	425	339	382	431	504	340	373	2.6
For Secondary Space Heating Only .....	175	Q	154	155	231	Q	144	20.0
<b>Million Households</b>								
<b>Number of Households, Where the Main Space-Heating Fuel Is:</b>								
Electricity .....	29.6	4.4	9.1	8.5	7.6	4.4	10.4	6.6
Natural Gas .....	53.5	6.2	14.7	16.6	15.9	7.2	16.8	4.8
Fuel Oil .....	9.5	1.3	2.4	3.0	2.8	1.3	3.3	10.4
Kerosene .....	1.0	0.2	0.3	0.4	Q	0.3	0.5	23.7
LPG .....	4.6	0.6	1.5	1.8	0.8	0.7	1.6	14.9
Other .....	2.6	0.4	0.8	0.7	0.6	0.4	1.0	18.0
No Space Heating .....	0.8	0.2	0.4	0.1	Q	0.3	0.5	25.9

See footnotes at end of table.

**Table CE2-3e. Space-Heating Energy Expenditures in U.S. Households by Household Income, 1997 (Continued)**

	1997 Household Income					Below Poverty Line	Eligible for Federal Assistance <sup>1</sup>	RSE Row Factors
	Total	Less than \$10,000	\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 or More			
RSE Column Factor:	0.7	1.4	1.0	0.9	1.0	1.3	1.0	
<b>Dollars per Household<sup>4</sup></b>								
<b>Space-Heating Expenditures per Household,<sup>3</sup> Where the Main Space-Heating Fuel Is:</b>								
Electricity .....	270	219	244	269	331	234	236	5.2
Natural Gas .....	446	386	411	448	500	367	404	3.6
Fuel Oil .....	629	388	538	617	832	387	488	6.0
Kerosene .....	350	286	320	386	Q	328	306	16.7
LPG .....	567	472	553	560	685	479	540	6.6
<b>1997 Heating Degree-Days (HDD) per Household<sup>4</sup></b>								
<b>1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:</b>								
Electricity .....	3,225	3,429	3,122	3,227	3,228	3,356	3,317	4.3
Natural Gas .....	4,710	4,252	4,503	4,927	4,853	4,223	4,415	2.8
Fuel Oil .....	5,707	5,186	6,001	5,686	5,715	5,264	5,648	2.9
Kerosene .....	4,959	3,593	4,758	5,801	Q	3,722	4,123	12.1
LPG .....	4,863	4,326	4,725	5,185	4,806	4,440	4,598	6.6
Average for All Households .....	4,368	4,051	4,198	4,552	4,486	4,048	4,192	2.0
<b>Heated Square Footage (HSF) per Household<sup>4</sup></b>								
<b>Heated Square Footage per Household,<sup>5</sup> Where the Main Space-Heating Fuel Is:</b>								
Electricity .....	1,468	981	1,226	1,468	2,037	1,080	1,140	2.6
Natural Gas .....	1,757	1,152	1,363	1,750	2,366	1,208	1,312	2.7
Fuel Oil .....	1,844	1,023	1,514	1,824	2,525	1,088	1,328	4.0
Kerosene .....	1,023	975	910	1,087	Q	1,001	963	7.0
LPG .....	1,676	1,092	1,448	1,833	2,201	1,103	1,411	5.3
Average for All Households .....	1,667	1,074	1,331	1,675	2,283	1,146	1,259	1.8
<b>Space-Heating Intensity [Cents÷(HDD×(HSF÷1000))]<sup>4</sup></b>								
<b>Space-Heating Intensity, Where the Main Space-Heating Fuel Is:</b>								
Electricity .....	5.70	6.51	6.36	5.68	5.04	6.44	6.25	4.3
Natural Gas .....	5.39	7.88	6.70	5.20	4.35	7.19	6.97	3.6
Fuel Oil .....	5.98	7.31	5.92	5.95	5.76	6.75	6.51	6.9
Kerosene .....	6.89	8.17	7.39	6.12	Q	8.80	7.71	12.9
LPG .....	6.96	9.98	8.08	5.89	6.47	9.77	8.32	9.1

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

<sup>2</sup> The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

<sup>3</sup> Includes only the space-heating expenditures of the space-heating fuel. Not included are: 1) the expenditures of the main space-heating fuel for uses other than space heating; 2) the expenditures of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the expenditures of other fuels that are used as secondary space-heating fuels.

<sup>4</sup> Averages are for those households using each of the main space-heating fuels.

<sup>5</sup> In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

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.

**Table CE2-4e. Space-Heating Energy Expenditures in U.S. Households by Type of Housing Unit, 1997**

	Type of Housing Unit					RSE Row Factors
	Total	Single-Family	Multifamily		Mobile Home	
			Two to Four Units	Five or More Units		
RSE Column Factor:	0.6	0.6	1.7	1.2	1.4	
<b>Million Households</b>						
<b>Total U.S. Households</b> .....	101.5	73.7	5.6	15.8	6.3	4.2
No Space Heating .....	0.8	0.4	Q	0.3	Q	37.0
Space Heating .....	100.7	73.4	5.6	15.5	6.2	4.2
Not Using a Major Fuel <sup>1</sup> .....	1.0	0.6	Q	0.2	Q	34.0
Using a Major Fuel <sup>1</sup> .....	99.7	72.7	5.6	15.3	6.1	4.2
For Main Space Heating .....	98.1	71.3	5.6	15.3	5.9	4.3
For Secondary Space Heating Only .....	1.6	1.4	Q	Q	0.2	21.7
<b>Number of Households with Space Heating, Major Fuels Used (more than one may apply):</b>						
Electricity .....	42.0	28.0	2.1	8.7	3.2	6.6
Natural Gas .....	54.5	43.4	3.5	5.5	2.1	7.0
Fuel Oil .....	9.8	7.4	0.5	1.8	Q	13.0
Kerosene .....	3.5	2.7	Q	Q	0.6	14.8
LPG .....	5.6	4.4	Q	Q	1.1	15.4
<b>Billion Dollars</b>						
<b>Space-Heating Expenditures, Major Fuels Used:</b>						
Electricity .....	8.56	6.45	0.46	0.88	0.77	9.2
Natural Gas .....	24.11	20.64	1.66	1.07	0.74	9.0
Fuel Oil .....	6.07	5.40	0.28	0.35	Q	16.8
Kerosene .....	0.50	0.32	Q	Q	0.16	25.5
LPG .....	2.79	2.26	Q	Q	0.47	17.9
Total .....	42.03	35.07	2.45	2.34	2.18	4.5
<b>Dollars per Household</b>						
<b>Average Space-Heating Expenditures per Household</b>						
Using a Major Fuel <sup>1</sup> .....	421	482	436	153	357	3.2
For Main Space Heating .....	425	488	436	153	362	3.2
For Secondary Space Heating Only .....	175	177	Q	Q	168	20.1
<b>Million Households</b>						
<b>Number of Households, Where the Main Space-Heating Fuel Is:</b>						
Electricity .....	29.6	17.7	1.6	7.9	2.4	8.6
Natural Gas .....	53.5	42.5	3.4	5.5	2.1	7.2
Fuel Oil .....	9.5	7.1	0.5	1.8	Q	13.1
Kerosene .....	1.0	0.5	Q	Q	0.4	26.1
LPG .....	4.6	3.5	Q	Q	1.0	16.7
Other .....	2.6	2.1	Q	0.2	0.3	23.5
No Space Heating .....	0.8	0.4	Q	0.3	Q	37.0

See footnotes at end of table.



**Table CE2-4e. Space-Heating Energy Expenditures in U.S. Households by Type of Housing Unit, 1997 (Continued)**

	Type of Housing Unit					RSE Row Factors
	Total	Single-Family	Multifamily		Mobile Home	
			Two to Four Units	Five or More Units		
RSE Column Factor:	0.6	0.6	1.7	1.2	1.4	
<b>Dollars per Household<sup>3</sup></b>						
<b>Space-Heating Expenditures per Household,<sup>2</sup> Where the Main Space-Heating Fuel Is:</b>						
Electricity .....	270	337	269	108	306	5.5
Natural Gas .....	446	481	481	194	350	4.4
Fuel Oil .....	629	745	606	193	Q	7.2
Kerosene .....	350	341	Q	Q	378	18.4
LPG .....	567	602	Q	Q	451	6.5
<b>1997 Heating Degree-Days (HDD) per Household<sup>3</sup></b>						
<b>1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:</b>						
Electricity .....	3,225	3,165	3,728	3,132	3,644	5.4
Natural Gas .....	4,710	4,679	5,111	4,713	4,665	3.6
Fuel Oil .....	5,707	5,878	6,139	4,960	Q	3.7
Kerosene .....	4,959	4,503	Q	Q	5,288	13.4
LPG .....	4,863	5,050	Q	Q	4,116	7.4
Average for All Households .....	4,368	4,439	4,816	3,930	4,215	2.7
<b>Heated Square Footage (HSF) per Household<sup>3</sup></b>						
<b>Heated Square Footage per Household,<sup>4</sup> Where the Main Space-Heating Fuel Is:</b>						
Electricity .....	1,468	1,823	910	892	1,116	2.8
Natural Gas .....	1,757	1,979	1,020	824	893	2.4
Fuel Oil .....	1,844	2,176	976	812	Q	2.5
Kerosene .....	1,023	1,182	Q	Q	881	6.4
LPG .....	1,676	1,888	Q	Q	995	4.6
Average for All Households .....	1,667	1,950	982	858	998	1.7
<b>Space-Heating Intensity [Cents÷(HDD×(HSF÷1000))]³</b>						
<b>Space-Heating Intensity, Where the Main Space-Heating Fuel Is:</b>						
Electricity .....	5.70	5.84	7.92	3.88	7.52	4.6
Natural Gas .....	5.39	5.19	9.22	4.99	8.40	4.1
Fuel Oil .....	5.98	5.83	10.11	4.79	Q	7.9
Kerosene .....	6.89	6.42	Q	Q	8.11	14.9
LPG .....	6.96	6.32	Q	Q	11.00	9.5

<sup>1</sup> The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

<sup>2</sup> Includes only the space-heating expenditures of the space-heating fuel. Not included are: 1) the expenditures of the main space-heating fuel for uses other than space heating; 2) the expenditures of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the expenditures of other fuels that are used as secondary space-heating fuels.

<sup>3</sup> Averages are for those households using each of the main space-heating fuels.

<sup>4</sup> In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

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.

**Table CE2-7e. Space-Heating Energy Expenditures in U.S. Households by Four Most Populated States, 1997**

	Four Most Populated States					RSE Row Factors
	Total U.S.	New York	California	Texas	Florida	
<b>Million Households</b>						
<b>Total U.S. Households</b> .....	101.5	6.8	11.5	7.0	5.9	NF
No Space Heating .....	0.8	Q	Q	Q	Q	52.1
Space Heating .....	100.7	6.8	11.4	6.9	5.7	1.1
Not Using a Major Fuel <sup>1</sup> .....	1.0	Q	0.1	Q	Q	42.8
Using a Major Fuel <sup>1</sup> .....	99.7	6.7	11.2	6.9	5.7	1.1
For Main Space Heating .....	98.1	6.6	11.0	6.9	5.7	1.0
For Secondary Space Heating Only .....	1.6	Q	0.2	Q	Q	30.6
<b>Number of Households with Space Heating, Major Fuels Used (more than one may apply):</b>						
Electricity .....	42.0	1.3	4.1	3.8	4.8	7.0
Natural Gas .....	54.5	3.4	7.9	3.9	0.8	7.5
Fuel Oil .....	9.8	2.8	Q	Q	Q	18.7
Kerosene .....	3.5	Q	Q	Q	Q	25.1
LPG .....	5.6	Q	0.2	0.3	Q	26.6
<b>Billion Dollars</b>						
<b>Space-Heating Expenditures, Major Fuels Used:</b>						
Electricity .....	8.56	0.25	0.51	0.66	0.31	14.5
Natural Gas .....	24.11	2.52	1.25	0.98	0.11	10.0
Fuel Oil .....	6.07	1.59	Q	Q	Q	27.2
Kerosene .....	0.50	Q	Q	Q	Q	46.7
LPG .....	2.79	Q	0.09	0.08	Q	28.1
Total .....	42.03	4.45	1.91	1.72	0.47	5.9
<b>Dollars per Household</b>						
<b>Average Space-Heating Expenditures per Household</b>						
Using a Major Fuel <sup>1</sup> .....	421	661	170	248	83	6.0
For Main Space Heating .....	425	665	171	249	83	6.0
For Secondary Space Heating Only .....	175	Q	108	Q	Q	32.2
<b>Million Households</b>						
<b>Number of Households, Where the Main Space-Heating Fuel Is:</b>						
Electricity .....	29.6	0.4	2.9	2.9	4.7	10.7
Natural Gas .....	53.5	3.4	7.8	3.8	0.7	8.6
Fuel Oil .....	9.5	2.7	Q	Q	Q	17.9
Kerosene .....	1.0	Q	Q	Q	Q	47.0
LPG .....	4.6	Q	0.2	0.3	Q	27.9
Other .....	2.6	0.2	0.3	Q	Q	26.8
No Space Heating .....	0.8	Q	Q	Q	Q	52.1

See footnotes at end of table.

**Table CE2-7e. Space-Heating Energy Expenditures in U.S. Households by Four Most Populated States, 1997 (Continued)**

	Four Most Populated States				RSE Row Factors	
	Total U.S.	New York	California	Texas		Florida
RSE Column Factor:	0.4	1.1	0.9	1.3	2.1	
<b>Dollars per Household<sup>3</sup></b>						
<b>Space-Heating Expenditures per Household,<sup>2</sup> Where the Main Space-Heating Fuel Is:</b>						
Electricity .....	270	523	155	215	64	13.9
Natural Gas .....	446	742	158	254	136	4.8
Fuel Oil .....	629	570	Q	Q	Q	12.3
Kerosene .....	350	Q	Q	Q	Q	29.9
LPG .....	567	Q	417	303	Q	11.0
<b>1997 Heating Degree-Days (HDD) per Household<sup>3</sup></b>						
<b>1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:</b>						
Electricity .....	3,225	6,058	1,853	2,167	457	9.0
Natural Gas .....	4,710	5,976	1,775	2,589	760	7.9
Fuel Oil .....	5,707	5,003	Q	Q	Q	5.0
Kerosene .....	4,959	Q	Q	Q	Q	24.8
LPG .....	4,863	Q	3,415	2,810	Q	12.6
Average for All Households .....	4,368	5,579	1,870	2,422	503	5.2
<b>Heated Square Footage (HSF) per Household<sup>3</sup></b>						
<b>Heated Square Footage per Household,<sup>4</sup> Where the Main Space-Heating Fuel Is:</b>						
Electricity .....	1,468	1,199	1,235	1,355	1,567	5.4
Natural Gas .....	1,757	1,799	1,438	1,608	1,906	5.4
Fuel Oil .....	1,844	1,496	Q	Q	Q	6.6
Kerosene .....	1,023	Q	Q	Q	Q	11.5
LPG .....	1,676	Q	1,253	1,344	Q	6.8
Average for All Households .....	1,667	1,628	1,381	1,492	1,597	3.3
<b>Space-Heating Intensity [Cents÷(HDD×(HSF÷1000))]³</b>						
<b>Space-Heating Intensity, Where the Main Space-Heating Fuel Is:</b>						
Electricity .....	5.70	7.20	6.77	7.31	9.01	6.8
Natural Gas .....	5.39	6.90	6.19	6.10	9.39	6.4
Fuel Oil .....	5.98	7.61	Q	Q	Q	11.8
Kerosene .....	6.89	Q	Q	Q	Q	27.1
LPG .....	6.96	Q	9.75	8.04	Q	16.0

<sup>1</sup> The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

<sup>2</sup> Includes only the space-heating expenditures of the space-heating fuel. Not included are: 1) the expenditures of the main space-heating fuel for uses other than space heating; 2) the expenditures of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the expenditures of other fuels that are used as secondary space-heating fuels.

<sup>3</sup> Averages are for those households using each of the main space-heating fuels.

<sup>4</sup> In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

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.

**Table CE2-8e. Space-Heating Energy Expenditures in U.S. Households by Urban/Rural Location, 1997**

	Urban/Rural Location <sup>1</sup>					RSE Row Factors
	Total	City	Town	Suburbs	Rural	
	0.6	1.0	1.3	1.2	1.0	
<b>Million Households</b>						
<b>Total U.S. Households</b> .....	101.5	48.2	18.2	18.6	16.5	4.2
No Space Heating .....	0.8	0.5	Q	0.2	Q	22.5
Space Heating .....	100.7	47.7	18.2	18.4	16.4	4.2
Not Using a Major Fuel <sup>2</sup> .....	1.0	0.3	0.1	Q	0.5	27.6
Using a Major Fuel <sup>2</sup> .....	99.7	47.4	18.0	18.4	15.9	4.2
For Main Space Heating .....	98.1	47.2	17.8	18.3	14.8	4.2
For Secondary Space Heating Only .....	1.6	0.2	0.2	Q	1.1	19.8
<b>Number of Households with Space Heating, Major Fuels Used (more than one may apply):</b>						
Electricity .....	42.0	18.7	7.5	8.1	7.7	5.5
Natural Gas .....	54.5	30.3	9.6	11.2	3.5	6.2
Fuel Oil .....	9.8	3.2	2.3	1.6	2.8	11.6
Kerosene .....	3.5	1.0	0.6	0.5	1.4	16.1
LPG .....	5.6	0.5	1.0	0.3	3.8	17.8
<b>Billion Dollars</b>						
<b>Space-Heating Expenditures, Major Fuels Used:</b>						
Electricity .....	8.56	3.04	1.74	1.73	2.05	8.2
Natural Gas .....	24.11	12.72	4.54	5.15	1.70	7.6
Fuel Oil .....	6.07	1.51	1.51	1.11	1.94	13.7
Kerosene .....	0.50	0.09	0.13	0.03	0.25	24.8
LPG .....	2.79	0.18	0.55	0.14	1.91	20.2
Total .....	42.03	17.54	8.46	8.17	7.86	4.4
<b>Dollars per Household</b>						
<b>Average Space-Heating Expenditures per Household</b>						
Using a Major Fuel <sup>2</sup> .....	421	370	469	444	495	2.7
For Main Space Heating .....	425	371	472	446	519	2.6
For Secondary Space Heating Only .....	175	160	165	Q	185	19.6
<b>Million Households</b>						
<b>Number of Households, Where the Main Space-Heating Fuel Is:</b>						
Electricity .....	29.6	13.9	5.0	5.5	5.2	7.2
Natural Gas .....	53.5	29.7	9.5	11.0	3.3	6.2
Fuel Oil .....	9.5	3.1	2.3	1.5	2.6	11.6
Kerosene .....	1.0	0.2	0.2	Q	0.6	26.5
LPG .....	4.6	0.4	0.9	0.2	3.1	19.1
Other .....	2.6	0.5	0.3	Q	1.6	18.1
No Space Heating .....	0.8	0.5	Q	0.2	Q	22.5

See footnotes at end of table.

**Table CE2-8e. Space-Heating Energy Expenditures in U.S. Households by Urban/Rural Location, 1997 (Continued)**

	Urban/Rural Location <sup>1</sup>					RSE Row Factors
	Total	City	Town	Suburbs	Rural	
RSE Column Factor:	0.6	1.0	1.3	1.2	1.0	
<b>Dollars per Household<sup>4</sup></b>						
<b>Space-Heating Expenditures per Household,<sup>3</sup> Where the Main Space-Heating Fuel Is:</b>						
Electricity .....	270	204	327	298	363	5.1
Natural Gas .....	446	424	477	464	502	3.6
Fuel Oil .....	629	479	656	727	729	5.3
Kerosene .....	350	299	453	Q	342	17.8
LPG .....	567	439	596	609	571	8.2
<b>1997 Heating Degree-Days (HDD) per Household<sup>4</sup></b>						
<b>1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:</b>						
Electricity .....	3,225	2,756	4,075	3,104	3,799	4.5
Natural Gas .....	4,710	4,475	5,083	4,976	4,857	3.1
Fuel Oil .....	5,707	5,402	6,204	5,103	5,993	3.6
Kerosene .....	4,959	3,301	5,921	Q	5,230	11.5
LPG .....	4,863	4,247	5,691	3,659	4,777	9.3
Average for All Households .....	4,368	4,023	4,986	4,405	4,678	2.2
<b>Heated Square Footage (HSF) per Household<sup>4</sup></b>						
<b>Heated Square Footage per Household,<sup>5</sup> Where the Main Space-Heating Fuel Is:</b>						
Electricity .....	1,468	1,276	1,408	1,755	1,738	2.8
Natural Gas .....	1,757	1,597	1,801	2,087	1,965	2.8
Fuel Oil .....	1,844	1,345	1,851	2,390	2,116	3.6
Kerosene .....	1,023	943	1,043	Q	1,032	7.0
LPG .....	1,676	1,362	1,529	2,194	1,720	8.0
Average for All Households .....	1,667	1,482	1,675	2,011	1,824	1.9
<b>Space-Heating Intensity [Cents÷(HDD×(HSF÷1000))]<sup>4</sup></b>						
<b>Space-Heating Intensity, Where the Main Space-Heating Fuel Is:</b>						
Electricity .....	5.70	5.79	5.69	5.48	5.49	4.5
Natural Gas .....	5.39	5.93	5.21	4.46	5.26	3.5
Fuel Oil .....	5.98	6.60	5.72	5.96	5.74	6.1
Kerosene .....	6.89	9.61	7.33	Q	6.34	16.5
LPG .....	6.96	7.59	6.85	7.58	6.95	11.2

<sup>1</sup> Based on the household respondent's description rather than the Federal Government definition.

<sup>2</sup> The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

<sup>3</sup> Includes only the space-heating expenditures of the space-heating fuel. Not included are: 1) the expenditures of the main space-heating fuel for uses other than space heating; 2) the expenditures of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the expenditures of other fuels that are used as secondary space-heating fuels.

<sup>4</sup> Averages are for those households using each of the main space-heating fuels.

<sup>5</sup> In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

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.

**Table CE2-9e. Space-Heating Energy Expenditures in U.S. Households by Northeast Census Region, 1997**

	Northeast Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			Middle Atlantic	New England	
RSE Column Factor:	0.6	1.0	1.3	1.4	
<b>Million Households</b>					
<b>Total U.S. Households</b> .....	101.5	19.7	14.4	5.3	NF
No Space Heating .....	0.8	Q	Q	Q	33.3
Space Heating .....	100.7	19.7	14.4	5.3	NF
Not Using a Major Fuel <sup>1</sup> .....	1.0	0.2	Q	Q	29.1
Using a Major Fuel <sup>1</sup> .....	99.7	19.5	14.3	5.2	NF
For Main Space Heating .....	98.1	19.2	14.1	5.1	1.0
For Secondary Space Heating Only .....	1.6	0.3	0.2	0.1	25.6
<b>Number of Households with Space Heating, Major Fuels Used (more than one may apply):</b>					
Electricity .....	42.0	5.0	3.8	1.2	7.3
Natural Gas .....	54.5	9.2	7.7	1.5	9.5
Fuel Oil .....	9.8	7.3	4.5	2.8	10.1
Kerosene .....	3.5	0.9	0.6	0.3	19.9
LPG .....	5.6	0.4	0.2	0.1	27.6
<b>Billion Dollars</b>					
<b>Space-Heating Expenditures, Major Fuels Used:</b>					
Electricity .....	8.56	1.39	1.00	0.39	12.3
Natural Gas .....	24.11	6.39	5.28	1.11	9.9
Fuel Oil .....	6.07	4.62	2.67	1.96	12.8
Kerosene .....	0.50	0.24	0.12	0.12	30.6
LPG .....	2.79	0.19	0.12	0.07	30.9
Total .....	42.03	12.83	9.18	3.65	1.9
<b>Dollars per Household</b>					
<b>Average Space-Heating Expenditures per Household</b>					
Using a Major Fuel <sup>1</sup> .....	421	657	642	699	2.0
For Main Space Heating .....	425	663	647	707	2.0
For Secondary Space Heating Only .....	175	294	285	311	20.2
<b>Million Households</b>					
<b>Number of Households, Where the Main Space-Heating Fuel Is:</b>					
Electricity .....	29.6	2.3	1.7	0.6	12.3
Natural Gas .....	53.5	9.2	7.7	1.5	9.5
Fuel Oil .....	9.5	7.1	4.4	2.7	10.1
Kerosene .....	1.0	0.4	0.2	Q	30.9
LPG .....	4.6	0.2	Q	Q	27.9
Other .....	2.6	0.5	0.3	0.2	22.8
No Space Heating .....	0.8	Q	Q	Q	33.3

See footnotes at end of table.

**Table CE2-9e. Space-Heating Energy Expenditures in U.S. Households by Northeast Census Region, 1997 (Continued)**

	Northeast Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			Middle Atlantic	New England	
RSE Column Factor:	0.6	1.0	1.3	1.4	
<b>Dollars per Household<sup>3</sup></b>					
<b>Space-Heating Expenditures per Household,<sup>2</sup> Where the Main Space-Heating Fuel Is:</b>					
Electricity .....	270	534	522	565	4.9
Natural Gas .....	446	697	685	763	3.6
Fuel Oil .....	629	641	599	707	5.3
Kerosene .....	350	467	441	494	15.2
LPG .....	567	718	Q	Q	9.1
<b>1997 Heating Degree-Days (HDD) per Household<sup>3</sup></b>					
<b>1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:</b>					
Electricity .....	3,225	5,812	5,729	6,028	2.2
Natural Gas .....	4,710	5,801	5,773	5,954	1.7
Fuel Oil .....	5,707	5,753	5,162	6,696	3.1
Kerosene .....	4,959	6,647	5,739	7,557	8.3
LPG .....	4,863	6,457	Q	Q	7.1
Average for All Households .....	4,368	5,811	5,579	6,449	2.2
<b>Heated Square Footage (HSF) per Household<sup>3</sup></b>					
<b>Heated Square Footage per Household,<sup>4</sup> Where the Main Space-Heating Fuel Is:</b>					
Electricity .....	1,468	1,516	1,541	1,451	6.8
Natural Gas .....	1,757	1,800	1,817	1,706	4.1
Fuel Oil .....	1,844	1,801	1,731	1,914	3.0
Kerosene .....	1,023	1,103	1,049	1,157	6.3
LPG .....	1,676	1,590	Q	Q	8.2
Average for All Households .....	1,667	1,748	1,745	1,757	2.3
<b>Space-Heating Intensity [Cents÷(HDD×(HSF÷1000))]<sup>3</sup></b>					
<b>Space-Heating Intensity, Where the Main Space-Heating Fuel Is:</b>					
Electricity .....	5.70	6.06	5.92	6.46	6.6
Natural Gas .....	5.39	6.68	6.53	7.51	3.6
Fuel Oil .....	5.98	6.18	6.70	5.52	6.1
Kerosene .....	6.89	6.38	7.33	5.65	16.2
LPG .....	6.96	7.00	Q	Q	13.6

<sup>1</sup> The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

<sup>2</sup> Includes only the space-heating expenditures of the space-heating fuel. Not included are: 1) the expenditures of the main space-heating fuel for uses other than space heating; 2) the expenditures of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the expenditures of other fuels that are used as secondary space-heating fuels.

<sup>3</sup> Averages are for those households using each of the main space-heating fuels.

<sup>4</sup> In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

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.

**Table CE2-10e. Space-Heating Energy Expenditures in U.S. Households  
by Midwest Census Region, 1997**

	Total U.S.	Midwest Census Region			RSE Row Factors
		Total	Census Division		
			East North Central	West North Central	
RSE Column Factor:	0.5	1.0	1.1	1.6	
<b>Million Households</b>					
<b>Total U.S. Households</b> .....	101.5	24.1	16.9	7.2	NF
No Space Heating .....	0.8	Q	Q	Q	34.3
Space Heating .....	100.7	24.1	16.9	7.2	NF
Not Using a Major Fuel <sup>1</sup> .....	1.0	0.3	Q	Q	40.1
Using a Major Fuel <sup>1</sup> .....	99.7	23.8	16.8	7.0	0.6
For Main Space Heating .....	98.1	23.5	16.6	6.8	1.5
For Secondary Space Heating Only .....	1.6	0.3	Q	Q	28.5
<b>Number of Households with Space Heating, Major Fuels Used (more than one may apply):</b>					
Electricity .....	42.0	6.2	4.2	2.0	7.2
Natural Gas .....	54.5	18.1	13.3	4.8	5.3
Fuel Oil .....	9.8	1.1	0.6	0.4	17.5
Kerosene .....	3.5	0.4	0.4	Q	16.8
LPG .....	5.6	2.0	1.0	1.0	20.2
<b>Billion Dollars</b>					
<b>Space-Heating Expenditures, Major Fuels Used:</b>					
Electricity .....	8.56	1.22	0.80	0.42	17.0
Natural Gas .....	24.11	9.78	7.34	2.44	7.3
Fuel Oil .....	6.07	0.70	0.44	0.26	20.1
Kerosene .....	0.50	Q	Q	Q	30.7
LPG .....	2.79	1.30	0.77	0.53	20.6
Total .....	42.03	13.03	9.38	3.65	2.5
<b>Dollars per Household</b>					
<b>Average Space-Heating Expenditures per Household</b>					
Using a Major Fuel <sup>1</sup> .....	421	548	560	519	2.6
For Main Space Heating .....	425	553	562	530	2.5
For Secondary Space Heating Only .....	175	192	Q	109	27.5
<b>Million Households</b>					
<b>Number of Households, Where the Main Space-Heating Fuel Is:</b>					
Electricity .....	29.6	2.7	1.9	0.8	15.6
Natural Gas .....	53.5	17.9	13.2	4.7	5.4
Fuel Oil .....	9.5	1.0	0.6	0.4	17.1
Kerosene .....	1.0	Q	Q	Q	30.9
LPG .....	4.6	1.8	0.9	0.9	21.8
Other .....	2.6	0.6	0.3	Q	31.4
No Space Heating .....	0.8	Q	Q	Q	34.3

See footnotes at end of table.



**Table CE2-10e. Space-Heating Energy Expenditures in U.S. Households by Midwest Census Region, 1997 (Continued)**

	Midwest Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			East North Central	West North Central	
RSE Column Factor:	0.5	1.0	1.1	1.6	
<b>Dollars per Household<sup>3</sup></b>					
<b>Space-Heating Expenditures per Household,<sup>2</sup> Where the Main Space-Heating Fuel Is:</b>					
Electricity .....	270	405	383	455	6.9
Natural Gas .....	446	542	553	512	3.4
Fuel Oil .....	629	662	682	630	4.3
Kerosene .....	350	Q	Q	Q	19.7
LPG .....	567	705	807	596	6.3
<b>1997 Heating Degree-Days (HDD) per Household<sup>3</sup></b>					
<b>1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:</b>					
Electricity .....	3,225	6,120	6,302	5,712	3.1
Natural Gas .....	4,710	6,596	6,586	6,624	2.1
Fuel Oil .....	5,707	7,484	7,153	8,002	3.0
Kerosene .....	4,959	Q	Q	Q	16.3
LPG .....	4,863	6,747	6,561	6,949	4.1
Average for All Households .....	4,368	6,592	6,574	6,635	1.9
<b>Heated Square Footage (HSF) per Household<sup>3</sup></b>					
<b>Heated Square Footage per Household,<sup>4</sup> Where the Main Space-Heating Fuel Is:</b>					
Electricity .....	1,468	1,519	1,288	2,033	6.5
Natural Gas .....	1,757	1,973	1,951	2,033	3.2
Fuel Oil .....	1,844	2,057	2,004	2,140	3.9
Kerosene .....	1,023	Q	Q	Q	7.5
LPG .....	1,676	1,926	2,028	1,816	6.4
Average for All Households .....	1,667	1,919	1,881	2,012	2.1
<b>Space-Heating Intensity [Cents÷{HDD×(HSF÷1000)}]<sup>3</sup></b>					
<b>Space-Heating Intensity, Where the Main Space-Heating Fuel Is:</b>					
Electricity .....	5.70	4.36	4.71	3.91	5.6
Natural Gas .....	5.39	4.17	4.30	3.80	3.7
Fuel Oil .....	5.98	4.30	4.76	3.68	4.9
Kerosene .....	6.89	Q	Q	Q	17.8
LPG .....	6.96	5.43	6.06	4.72	11.4

<sup>1</sup> The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

<sup>2</sup> Includes only the space-heating expenditures of the space-heating fuel. Not included are: 1) the expenditures of the main space-heating fuel for uses other than space heating; 2) the expenditures of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the expenditures of other fuels that are used as secondary space-heating fuels.

<sup>3</sup> Averages are for those households using each of the main space-heating fuels.

<sup>4</sup> In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

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.

**Table CE2-11e. Space-Heating Energy Expenditures in U.S. Households by South Census Region, 1997**

	South Census Region					RSE Row Factors
	Total U.S.	Census Division				
		Total	South Atlantic	East South Central	West south Central	
RSE Column Factor:						
<b>Million Households</b>						
<b>Total U.S. Households</b> .....	101.5	35.9	18.7	6.3	10.8	NF
No Space Heating .....	0.8	0.3	Q	Q	Q	44.1
Space Heating .....	100.7	35.6	18.5	6.3	10.8	NF
Not Using a Major Fuel <sup>1</sup> .....	1.0	0.2	Q	Q	Q	39.5
Using a Major Fuel <sup>1</sup> .....	99.7	35.4	18.3	6.3	10.8	NF
For Main Space Heating .....	98.1	34.8	18.0	6.1	10.7	NF
For Secondary Space Heating Only .....	1.6	0.6	0.3	0.2	Q	20.2
<b>Number of Households with Space Heating, Major Fuels Used (more than one may apply):</b>						
Electricity .....	42.0	21.3	12.0	3.8	5.6	4.8
Natural Gas .....	54.5	14.4	5.7	2.4	6.3	7.3
Fuel Oil .....	9.8	1.1	1.1	Q	Q	28.3
Kerosene .....	3.5	1.9	1.3	0.4	Q	15.6
LPG .....	5.6	2.6	1.2	1.0	0.4	17.4
<b>Billion Dollars</b>						
<b>Space-Heating Expenditures, Major Fuels Used:</b>						
Electricity .....	8.56	4.26	2.28	0.94	1.03	9.0
Natural Gas .....	24.11	5.05	2.38	0.87	1.80	10.6
Fuel Oil .....	6.07	0.58	0.57	Q	Q	30.1
Kerosene .....	0.50	0.19	0.15	0.04	Q	23.9
LPG .....	2.79	1.01	0.50	0.38	0.13	21.1
Total .....	42.03	11.10	5.88	2.25	2.97	4.5
<b>Dollars per Household</b>						
<b>Average Space-Heating Expenditures per Household</b>						
Using a Major Fuel <sup>1</sup> .....	421	314	321	358	275	4.5
For Main Space Heating .....	425	317	324	365	277	4.4
For Secondary Space Heating Only .....	175	124	157	91	Q	25.3
<b>Million Households</b>						
<b>Number of Households, Where the Main Space-Heating Fuel Is:</b>						
Electricity .....	29.6	17.5	10.4	2.9	4.2	7.2
Natural Gas .....	53.5	13.7	5.4	2.3	6.1	7.5
Fuel Oil .....	9.5	1.1	1.1	Q	Q	27.5
Kerosene .....	1.0	0.4	0.4	Q	Q	20.8
LPG .....	4.6	2.1	0.8	0.8	0.4	18.1
Other .....	2.6	0.8	0.5	0.2	Q	19.7
No Space Heating .....	0.8	0.3	Q	Q	Q	44.1

See footnotes at end of table.

**Table CE2-11e. Space-Heating Energy Expenditures in U.S. Households by South Census Region, 1997 (Continued)**

	South Census Region					RSE Row Factors
	Total U.S.	Census Division			West south Central	
		Total	South Atlantic	East South Central		
RSE Column Factor:	0.5	0.9	1.2	1.4	1.4	
<b>Dollars per Household<sup>3</sup></b>						
<b>Space-Heating Expenditures per Household,<sup>2</sup> Where the Main Space-Heating Fuel Is:</b>						
Electricity .....	270	233	213	312	230	5.9
Natural Gas .....	446	358	432	367	288	5.8
Fuel Oil .....	629	518	516	Q	Q	6.6
Kerosene .....	350	221	196	Q	Q	19.6
LPG .....	567	451	553	408	330	8.4
<b>1997 Heating Degree-Days (HDD) per Household<sup>3</sup></b>						
<b>1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:</b>						
Electricity .....	3,225	2,382	2,110	3,403	2,346	6.3
Natural Gas .....	4,710	2,970	3,197	3,326	2,637	5.6
Fuel Oil .....	5,707	3,857	3,844	Q	Q	7.2
Kerosene .....	4,959	3,010	2,871	Q	Q	10.4
LPG .....	4,863	2,991	2,832	3,250	2,766	9.5
Average for All Households .....	4,368	2,705	2,588	3,362	2,527	4.1
<b>Heated Square Footage (HSF) per Household<sup>3</sup></b>						
<b>Heated Square Footage per Household,<sup>4</sup> Where the Main Space-Heating Fuel Is:</b>						
Electricity .....	1,468	1,532	1,586	1,601	1,351	2.5
Natural Gas .....	1,757	1,627	1,744	1,559	1,550	3.2
Fuel Oil .....	1,844	1,785	1,786	Q	Q	6.2
Kerosene .....	1,023	919	920	Q	Q	6.4
LPG .....	1,676	1,531	1,781	1,404	1,275	5.5
Average for All Households .....	1,667	1,570	1,640	1,552	1,462	2.1
<b>Space-Heating Intensity [Cents÷(HDD×(HSF÷1000))]<sup>3</sup></b>						
<b>Space-Heating Intensity, Where the Main Space-Heating Fuel Is:</b>						
Electricity .....	5.70	6.40	6.36	5.73	7.26	6.1
Natural Gas .....	5.39	7.40	7.76	7.09	7.05	6.0
Fuel Oil .....	5.98	7.53	7.52	Q	Q	11.2
Kerosene .....	6.89	8.01	7.43	Q	Q	18.1
LPG .....	6.96	9.86	10.97	8.94	9.35	9.6

<sup>1</sup> The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

<sup>2</sup> Includes only the space-heating expenditures of the space-heating fuel. Not included are: 1) the expenditures of the main space-heating fuel for uses other than space heating; 2) the expenditures of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the expenditures of other fuels that are used as secondary space-heating fuels.

<sup>3</sup> Averages are for those households using each of the main space-heating fuels.

<sup>4</sup> In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

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.

**Table CE2-12e. Space-Heating Energy Expenditures in U.S. Households by West Census Region, 1997**

	Total U.S.	West Census Region			RSE Row Factors
		Total	Census Division		
			Mountain	Pacific	
RSE Column Factor:	0.5	1.0	1.7	1.1	
<b>Million Households</b>					
<b>Total U.S. Households</b> .....	101.5	21.8	6.2	15.6	NF
No Space Heating .....	0.8	0.5	Q	0.5	18.3
Space Heating .....	100.7	21.3	6.2	15.2	NF
Not Using a Major Fuel <sup>1</sup> .....	1.0	0.3	Q	0.2	28.7
Using a Major Fuel <sup>1</sup> .....	99.7	21.0	6.1	14.9	NF
For Main Space Heating .....	98.1	20.6	6.0	14.6	NF
For Secondary Space Heating Only .....	1.6	0.4	Q	0.3	20.4
<b>Number of Households with Space Heating, Major Fuels Used (more than one may apply):</b>					
Electricity .....	42.0	9.4	2.5	7.0	5.2
Natural Gas .....	54.5	12.8	4.0	8.8	3.5
Fuel Oil .....	9.8	0.3	Q	0.2	25.1
Kerosene .....	3.5	0.2	Q	Q	20.4
LPG .....	5.6	0.6	0.3	0.3	21.9
<b>Billion Dollars</b>					
<b>Space-Heating Expenditures, Major Fuels Used:</b>					
Electricity .....	8.56	1.70	0.39	1.30	6.1
Natural Gas .....	24.11	2.89	1.23	1.66	6.1
Fuel Oil .....	6.07	0.17	Q	0.13	32.2
Kerosene .....	0.50	0.04	Q	Q	29.3
LPG .....	2.79	0.28	0.16	0.12	24.9
Total .....	42.03	5.07	1.83	3.24	3.1
<b>Dollars per Household</b>					
<b>Average Space-Heating Expenditures per Household</b>					
Using a Major Fuel <sup>1</sup> .....	421	241	299	217	3.2
For Main Space Heating .....	425	243	301	219	3.3
For Secondary Space Heating Only .....	175	141	Q	121	18.3
<b>Million Households</b>					
<b>Number of Households, Where the Main Space-Heating Fuel Is:</b>					
Electricity .....	29.6	7.1	1.7	5.4	7.0
Natural Gas .....	53.5	12.7	4.0	8.7	3.6
Fuel Oil .....	9.5	0.2	Q	Q	23.5
Kerosene .....	1.0	Q	Q	Q	33.7
LPG .....	4.6	0.5	0.3	0.3	24.9
Other .....	2.6	0.7	0.2	0.5	18.9
No Space Heating .....	0.8	0.5	Q	0.5	18.3

See footnotes at end of table.

**Table CE2-12e. Space-Heating Energy Expenditures in U.S. Households by West Census Region, 1997 (Continued)**

	West Census Region				RSE Row Factors
	Total U.S.	Census Division			
		Total	Mountain	Pacific	
RSE Column Factor:	0.5	1.0	1.7	1.1	
<b>Dollars per Household<sup>3</sup></b>					
<b>Space-Heating Expenditures per Household,<sup>2</sup> Where the Main Space-Heating Fuel Is:</b>					
Electricity .....	270	221	214	224	5.4
Natural Gas .....	446	225	306	188	4.4
Fuel Oil .....	629	676	Q	Q	15.9
Kerosene .....	350	Q	Q	Q	21.5
LPG .....	567	495	556	434	6.1
<b>1997 Heating Degree-Days (HDD) per Household<sup>3</sup></b>					
<b>1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:</b>					
Electricity .....	3,225	3,354	3,524	3,302	6.2
Natural Gas .....	4,710	3,136	5,262	2,157	4.5
Fuel Oil .....	5,707	5,258	Q	Q	7.3
Kerosene .....	4,959	Q	Q	Q	17.7
LPG .....	4,863	5,150	6,513	3,768	7.5
Average for All Households .....	4,368	3,300	4,849	2,664	3.4
<b>Heated Square Footage (HSF) per Household<sup>3</sup></b>					
<b>Heated Square Footage per Household,<sup>4</sup> Where the Main Space-Heating Fuel Is:</b>					
Electricity .....	1,468	1,277	1,333	1,260	3.2
Natural Gas .....	1,757	1,560	1,690	1,500	3.7
Fuel Oil .....	1,844	2,499	Q	Q	6.7
Kerosene .....	1,023	Q	Q	Q	8.2
LPG .....	1,676	1,446	1,441	1,452	9.3
Average for All Households .....	1,667	1,469	1,586	1,421	2.9
<b>Space-Heating Intensity [Cents÷{HDD×(HSF÷1000)}]<sup>3</sup></b>					
<b>Space-Heating Intensity, Where the Main Space-Heating Fuel Is:</b>					
Electricity .....	5.70	5.17	4.56	5.38	6.2
Natural Gas .....	5.39	4.60	3.44	5.80	4.6
Fuel Oil .....	5.98	5.14	Q	Q	14.2
Kerosene .....	6.89	Q	Q	Q	19.5
LPG .....	6.96	6.65	5.92	7.93	14.3

<sup>1</sup> The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

<sup>2</sup> Includes only the space-heating expenditures of the space-heating fuel. Not included are: 1) the expenditures of the main space-heating fuel for uses other than space heating; 2) the expenditures of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the expenditures of other fuels that are used as secondary space-heating fuels.

<sup>3</sup> Averages are for those households using each of the main space-heating fuels.

<sup>4</sup> In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

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.