

1997 Consumption and Expenditures Tables

Space-Heating Consumption Tables

(34 pages, 110 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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World Wide Web: <http://www.eia.doe.gov/emeu/consumption>

Table CE2-1c. Space-Heating Energy Consumption in U.S. Households by Climate Zone, 1997

	Climate Zone ¹						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	1.2	1.0	1.1	1.2	1.2	
Million Households							
Total U.S. Households	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	25.7
Space Heating	100.7	9.3	28.0	22.5	19.4	21.6	8.4
Not Using a Major Fuel ²	1.0	0.3	0.2	0.2	0.1	Q	33.5
Using a Major Fuel ²	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	22.5
Number of Households with Space Heating, Major Fuels Used (more than one may apply):							
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	17.6
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
Quadrillion Btu							
Space-Heating Btu Consumption, Major Fuels Used:							
Electricity	0.40	0.03	0.09	0.13	0.07	0.08	12.3
Natural Gas	3.61	0.43	1.67	0.77	0.38	0.37	12.1
Fuel Oil	0.85	0.19	0.31	0.33	0.02	Q	20.3
Kerosene	0.06	0.02	0.01	0.01	0.02	(*)	28.6
LPG	0.26	0.04	0.09	0.06	0.05	0.02	30.1
Total	5.18	0.71	2.17	1.30	0.54	0.47	9.4
Physical Units							
Physical Units of Space-Heating Consumption, Major Fuels Used:							
Electricity (billion kWh)	118	9	26	39	22	22	12.3
Natural Gas (billion cf)	3,517	419	1,627	745	370	356	12.1
Fuel Oil (million gallons)	6,133	1,405	2,218	2,382	112	Q	20.3
Kerosene (million gallons)	436	119	98	80	124	15	28.6
LPG (million gallons)	2,823	393	999	621	557	253	30.1
Million Btu per Household							
Average Space-Heating Btu Consumption per Household							
Using a Major Fuel ²	52.0	79.4	78.0	58.3	27.9	21.9	4.9
For Main Space Heating	52.5	80.8	78.7	59.2	28.2	22.0	4.9
For Secondary Space Heating Only ...	17.6	35.9	25.6	6.6	12.4	Q	28.4

See footnotes at end of table.

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

	Climate Zone ¹						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	1.2	1.0	1.1	1.2	1.2	
Million Households							
Number of Households, Where the Main Space-Heating Fuel Is:							
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	17.4
Kerosene	1.0	0.2	0.2	0.1	0.3	Q	29.5
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	25.7
Million Btu per Household⁴							
Space-Heating Btu Consumption per Household,³ Where the Main Space-Heating Fuel Is:							
Electricity	12.8	25.8	19.1	18.9	10.7	6.5	6.2
Natural Gas	66.9	87.5	88.6	76.8	35.0	38.3	4.5
Fuel Oil	88.1	100.7	100.1	77.4	60.5	Q	6.4
Kerosene	41.5	58.0	59.6	46.7	31.6	Q	17.9
LPG	53.4	64.1	70.2	65.7	42.2	24.9	9.1
Physical Units (PU) per Household⁴							
Physical Units of Space-Heating Consumption per Household,³ Where the Main Space-Heating Fuel Is:							
Electricity (kWh)	3,760	7,564	5,589	5,547	3,148	1,914	6.2
Natural Gas (thousand cf)	65	85	86	75	34	37	4.5
Fuel Oil (gallons)	636	727	722	559	437	Q	6.4
Kerosene (gallons)	307	429	441	346	234	Q	17.8
LPG (gallons)	585	702	769	719	462	272	9.1
1997 Heating Degree-Days (HDD) per Household⁴							
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:							
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	3.7
Kerosene	4,959	6,979	6,620	4,461	4,007	Q	8.2
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

See footnotes at end of table.

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

	Climate Zone ¹						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	1.2	1.0	1.1	1.2	1.2	
Heated Square Footage (HSF) per Household⁴							
Heated Square Footage per Household,⁵ Where the Main Space-Heating Fuel Is:							
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	6.6
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
Space-Heating Intensity [PU÷(HDD×(HSF÷1000))]⁴							
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:							
Electricity (kWh)	0.794	0.663	0.676	0.791	0.881	0.931	5.3
Natural Gas (cubic feet)	7.876	5.337	6.967	8.805	10.365	10.128	3.3
Fuel Oil (gallons)	0.060	0.049	0.057	0.069	0.103	Q	6.2
Kerosene (gallons)	0.061	0.051	0.081	0.071	0.056	Q	17.4
LPG (gallons)	0.072	0.048	0.060	0.075	0.093	0.105	10.7

¹ 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.

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

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

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

⁵ 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.

(*) = Value rounds to zero in the units displayed.

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 CE2-2c. Space-Heating Energy Consumption in U.S. Households
by Year of Construction, 1997**

	Total	Year of Construction						RSE Row Factors
		1990 to 1997 ¹	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	
Million Households								
Total U.S. Households	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	35.7
Space Heating	100.7	9.6	17.3	19.4	14.3	12.4	27.7	4.3
Not Using a Major Fuel ²	1.0	Q	0.2	0.2	0.2	Q	0.3	34.0
Using a Major Fuel ²	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
Number of Households with Space Heating, Major Fuels Used (more than one may apply):								
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
Quadrillion Btu								
Space-Heating Btu Consumption, Major Fuels Used:								
Electricity	0.40	0.05	0.10	0.12	0.05	0.03	0.05	10.0
Natural Gas	3.61	0.27	0.34	0.49	0.49	0.52	1.50	7.9
Fuel Oil	0.85	0.03	0.05	0.08	0.11	0.12	0.46	17.2
Kerosene	0.06	(*)	0.01	0.01	0.01	(*)	0.03	30.4
LPG	0.26	0.03	0.03	0.05	0.03	0.02	0.10	18.0
Total	5.18	0.38	0.53	0.75	0.69	0.70	2.14	5.6
Physical Units								
Physical Units of Space-Heating Consumption, Major Fuels Used:								
Electricity (billion kWh)	118	14	29	36	14	9	16	10.0
Natural Gas (billion cf)	3,517	259	332	477	478	506	1,465	7.9
Fuel Oil (million gallons)	6,133	193	348	566	819	887	3,320	17.2
Kerosene (million gallons)	436	26	53	83	45	30	199	30.4
LPG (million gallons)	2,823	345	348	521	330	198	1,081	18.0
Million Btu per Household								
Average Space-Heating Btu Consumption per Household								
Using a Major Fuel ²	52.0	39.3	30.8	39.1	48.7	56.2	78.4	3.9
For Main Space Heating	52.5	39.7	31.2	39.6	49.1	56.5	79.4	3.9
For Secondary Space Heating Only	17.6	Q	5.9	15.8	18.5	23.7	25.2	29.3

See footnotes at end of table.

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

	Total	Year of Construction						RSE Row Factors
		1990 to 1997 ¹	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	
Million Households								
Number of Households, Where the Main Space-Heating Fuel Is:								
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	35.7
Million Btu per Household⁴								
Space-Heating Btu Consumption per Household,³ Where the Main Space-Heating Fuel Is:								
Electricity	12.8	12.0	10.3	14.0	13.0	12.9	19.7	6.6
Natural Gas	66.9	56.1	53.3	60.0	58.0	63.7	83.1	4.1
Fuel Oil	88.1	95.5	87.0	77.5	75.2	84.7	95.1	6.9
Kerosene	41.5	Q	42.1	31.8	Q	Q	47.2	18.2
LPG	53.4	52.7	45.1	47.2	51.0	35.5	69.3	8.3
Physical Units (PU) per Household⁴								
Physical Units of Space-Heating Consumption per Household,³ Where the Main Space-Heating Fuel Is:								
Electricity (kWh)	3,760	3,529	3,028	4,091	3,812	3,786	5,771	6.6
Natural Gas (thousand cf)	65	55	52	58	57	62	81	4.1
Fuel Oil (gallons)	636	689	627	559	543	611	686	6.9
Kerosene (gallons)	307	Q	312	236	Q	Q	349	18.2
LPG (gallons)	585	577	494	517	558	389	759	8.3
1997 Heating Degree-Days (HDD) per Household⁴								
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:								
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

See footnotes at end of table.

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

	Total	Year of Construction						RSE Row Factors
		1990 to 1997 ¹	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	
Heated Square Footage (HSF) per Household⁴								
Heated Square Footage per Household,⁵ Where the Main Space-Heating Fuel Is:								
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
Space-Heating Intensity [PU÷{HDD×(HSF÷1000)}]⁴								
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:								
Electricity (kWh)	0.794	0.657	0.665	0.839	0.886	0.922	1.128	4.8
Natural Gas (cubic feet)	7.876	4.909	5.606	7.496	7.908	8.848	9.595	3.1
Fuel Oil (gallons)	0.060	0.036	0.048	0.054	0.058	0.061	0.066	7.0
Kerosene (gallons)	0.061	Q	0.050	0.066	Q	Q	0.065	16.2
LPG (gallons)	0.072	0.055	0.056	0.087	0.081	0.066	0.076	10.0

¹ 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.

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

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

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

⁵ 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.

(*) = Value rounds to zero in the units displayed.

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 CE2-3c. Space-Heating Energy Consumption in U.S. Households by Household Income, 1997

	Total	1997 Household Income				Below Poverty Line	Eligible for Federal Assistance ¹	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	
Million Households								
Total U.S. Households	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	26.0
Space Heating	100.7	13.1	28.8	31.0	27.8	14.3	33.5	2.8
Not Using a Major Fuel ²	1.0	0.3	0.2	0.3	Q	0.3	0.6	26.1
Using a Major Fuel ²	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	18.6
Number of Households with Space Heating, Major Fuels Used (more than one may apply):								
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
Quadrillion Btu								
Space-Heating Btu Consumption, Major Fuels Used:								
Electricity	0.40	0.05	0.11	0.12	0.12	0.05	0.12	8.3
Natural Gas	3.61	0.36	0.91	1.14	1.21	0.40	1.01	6.1
Fuel Oil	0.85	0.08	0.19	0.27	0.32	0.08	0.24	12.5
Kerosene	0.06	0.01	0.02	0.02	0.01	0.01	0.03	23.5
LPG	0.26	0.03	0.08	0.10	0.05	0.03	0.08	16.8
Total	5.18	0.52	1.31	1.64	1.71	0.58	1.48	4.1
Physical Units								
Physical Units of Space-Heating Consumption, Major Fuels Used:								
Electricity (billion kWh)	118	14	33	34	37	16	36	8.3
Natural Gas (billion cf)	3,517	347	885	1,108	1,177	387	985	6.1
Fuel Oil (million gallons)	6,133	553	1,361	1,920	2,299	589	1,703	12.5
Kerosene (million gallons)	436	67	161	153	54	98	193	23.5
LPG (million gallons)	2,823	300	850	1,089	583	352	906	16.8
Million Btu per Household								
Average Space-Heating Btu Consumption per Household								
Using a Major Fuel ²	52.0	40.4	45.9	53.4	62.0	41.3	44.9	3.5
For Main Space Heating	52.5	40.6	46.5	54.0	62.7	41.5	45.2	3.6
For Secondary Space Heating Only	17.6	Q	15.1	14.9	24.5	Q	15.6	25.7

See footnotes at end of table.

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

	Total	1997 Household Income				Below Poverty Line	Eligible for Federal Assistance ¹	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	
Million Households								
Number of Households, Where the Main Space-Heating Fuel Is:								
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	26.0
Million Btu per Household⁴								
Space-Heating Btu Consumption per Household,³ Where the Main Space-Heating Fuel Is:								
Electricity	12.8	10.4	11.9	13.0	15.2	11.4	11.1	5.3
Natural Gas	66.9	56.6	61.5	67.4	75.5	55.3	59.9	3.6
Fuel Oil	88.1	60.1	77.0	86.9	111.8	60.3	71.3	5.6
Kerosene	41.5	33.3	38.0	45.9	Q	38.1	35.7	16.7
LPG	53.4	43.4	51.7	54.6	61.7	44.1	49.2	7.0
Physical Units (PU) per Household⁴								
Physical Units of Space-Heating Consumption per Household,³ Where the Main Space-Heating Fuel Is:								
Electricity (kWh)	3,760	3,059	3,474	3,798	4,462	3,347	3,265	5.3
Natural Gas (thousand cf)	65	55	60	66	74	54	58	3.6
Fuel Oil (gallons)	636	434	556	627	806	435	515	5.5
Kerosene (gallons)	307	247	282	340	Q	282	264	16.7
LPG (gallons)	585	475	566	598	676	483	538	7.0
1997 Heating Degree-Days (HDD) per Household⁴								
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:								
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

See footnotes at end of table.

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

	Total	1997 Household Income				Below Poverty Line	Eligible for Federal Assistance ¹	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	
Heated Square Footage (HSF) per Household⁴								
Heated Square Footage per Household,⁵ Where the Main Space-Heating Fuel Is:								
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
Space-Heating Intensity [PU÷(HDD×(HSF÷1000))]⁴								
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:								
Electricity (kWh)	0.794	0.910	0.907	0.802	0.678	0.923	0.863	3.8
Natural Gas (cubic feet)	7.876	11.242	9.758	7.610	6.406	10.564	10.068	3.1
Fuel Oil (gallons)	0.060	0.082	0.061	0.060	0.056	0.076	0.069	6.5
Kerosene (gallons)	0.061	0.070	0.065	0.054	Q	0.076	0.067	11.9
LPG (gallons)	0.072	0.101	0.083	0.063	0.064	0.099	0.083	8.8

¹ Below 150 percent of poverty line or 60 percent of median State income.

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

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

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

⁵ 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 CE2-4c. Space-Heating Energy Consumption 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	1.8	1.2	1.4	
Million Households						
Total U.S. Households	101.5	73.7	5.6	15.8	6.3	4.2
No Space Heating	0.8	0.4	Q	0.3	Q	37.5
Space Heating	100.7	73.4	5.6	15.5	6.2	4.2
Not Using a Major Fuel ¹	1.0	0.6	Q	0.2	Q	34.5
Using a Major Fuel ¹	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
Number of Households with Space Heating, Major Fuels Used (more than one may apply):						
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	13.1
Kerosene	3.5	2.7	Q	Q	0.6	14.8
LPG	5.6	4.4	Q	Q	1.1	15.4
Quadrillion Btu						
Space-Heating Btu Consumption, Major Fuels Used:						
Electricity	0.40	0.31	0.02	0.04	0.04	9.7
Natural Gas	3.61	3.11	0.24	0.15	0.12	8.9
Fuel Oil	0.85	0.74	0.04	0.07	Q	16.2
Kerosene	0.06	0.04	Q	Q	0.02	25.9
LPG	0.26	0.21	Q	Q	0.04	17.9
Total	5.18	4.39	0.30	0.26	0.23	5.7
Physical Units						
Physical Units of Space-Heating Consumption, Major Fuels Used:						
Electricity (billion kWh)	118	89	6	11	12	9.7
Natural Gas (billion cf)	3,517	3,024	234	144	115	8.9
Fuel Oil (million gallons)	6,133	5,307	282	501	Q	16.2
Kerosene (million gallons)	436	271	Q	Q	139	25.9
LPG (million gallons)	2,823	2,312	Q	Q	465	17.9
Million Btu per Household						
Average Space-Heating Btu Consumption per Household						
Using a Major Fuel ¹	52.0	60.4	54.2	16.9	37.0	4.6
For Main Space Heating	52.5	61.3	54.2	16.9	37.7	4.6
For Secondary Space Heating Only	17.6	18.3	Q	Q	12.3	29.5

See footnotes at end of table.

Table CE2-4c. Space-Heating Energy Consumption 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	1.8	1.2	1.4	
Million Households						
Number of Households, Where the Main Space-Heating Fuel Is:						
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	13.2
Kerosene	1.0	0.5	Q	Q	0.4	26.0
LPG	4.6	3.5	Q	Q	1.0	16.7
Other	2.6	2.1	Q	0.2	0.3	23.7
No Space Heating	0.8	0.4	Q	0.3	Q	37.5
Million Btu per Household³						
Space-Heating Btu Consumption per Household,² Where the Main Space-Heating Fuel Is:						
Electricity	12.8	16.1	11.9	4.6	16.1	5.8
Natural Gas	66.9	72.4	69.7	26.8	56.3	4.7
Fuel Oil	88.1	101.5	83.5	38.4	Q	6.7
Kerosene	41.5	40.2	Q	Q	45.3	18.5
LPG	53.4	57.3	Q	Q	40.8	6.8
Physical Units (PU) per Household³						
Physical Units of Space-Heating Consumption per Household,² Where the Main Space-Heating Fuel Is:						
Electricity (kWh)	3,760	4,730	3,494	1,347	4,714	5.8
Natural Gas (thousand cf)	65	70	68	26	55	4.7
Fuel Oil (gallons)	636	733	602	277	Q	6.7
Kerosene (gallons)	307	298	Q	Q	336	18.5
LPG (gallons)	585	627	Q	Q	447	6.8
1997 Heating Degree-Days (HDD) per Household³						
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:						
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

See footnotes at end of table.

Table CE2-4c. Space-Heating Energy Consumption 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	1.8	1.2	1.4	
Heated Square Footage (HSF) per Household³						
Heated Square Footage per Household,⁴ Where the Main Space-Heating Fuel Is:						
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
Space-Heating Intensity [PU÷(HDD×(HSF÷1000))]³						
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:						
Electricity (kWh)	0.794	0.820	1.030	0.482	1.159	4.2
Natural Gas (cubic feet)	7.876	7.611	13.019	6.717	13.161	3.8
Fuel Oil (gallons)	0.060	0.057	0.100	0.069	Q	7.3
Kerosene (gallons)	0.061	0.056	Q	Q	0.072	13.9
LPG (gallons)	0.072	0.066	Q	Q	0.109	8.8

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

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

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

⁴ 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 CE2-5u. Space-Heating Energy Consumption and Expenditures in U.S. Households by Household Demographics, 1997

Household Demographics	Space-Heating Energy					RSE Row Factors
	Households (millions)	Total		Per Household		
		Consumption (quadrillion Btu)	Expenditures (billion dollars)	Consumption (million Btu)	Expenditures (dollars)	
	RSE Column Factor:	0.9	1.3	1.1	1.0	
Total Households Using a Major Space-Heating Fuel¹	99.7	5.18	42.03	52.0	421	1.7
Household Size						
1 Person	25.1	1.13	9.44	45.2	376	3.2
2 Persons	32.6	1.77	14.42	54.4	442	2.6
3 Persons	17.0	0.91	7.38	53.5	434	3.4
4 Persons	15.0	0.81	6.51	54.0	433	3.8
5 Persons	6.2	0.34	2.67	55.2	429	6.1
6 or More Persons	3.7	0.21	1.60	55.0	429	9.2
1997 Household Income Category						
Less than \$5,000	3.5	0.16	1.26	44.6	356	8.7
\$5,000 to \$9,999	9.3	0.36	3.07	38.7	331	5.9
\$10,000 to \$14,999	10.0	0.44	3.56	44.5	356	6.1
\$15,000 to \$19,999	10.2	0.47	3.87	46.1	379	4.9
\$20,000 to \$24,999	8.3	0.39	3.35	47.4	403	4.8
\$25,000 to \$34,999	15.4	0.79	6.41	51.6	417	3.9
\$35,000 to \$49,999	15.4	0.85	6.72	55.1	437	3.2
\$50,000 to \$74,999	16.3	0.99	7.87	60.7	484	4.2
\$75,000 or More	11.3	0.73	5.91	64.0	521	5.0
Below Poverty Line						
100 Percent	14.0	0.58	4.73	41.3	338	4.7
125 Percent	18.8	0.78	6.47	41.4	344	4.5
150 Percent	25.7	1.08	8.93	42.0	347	3.8
Eligible for Federal Assistance²	33.0	1.48	12.20	44.9	370	3.4
Age of Householder						
Under 25 Years	5.6	0.17	1.43	29.7	256	7.2
25 to 34 Years	18.1	0.74	6.16	41.0	340	4.0
35 to 44 Years	22.6	1.16	9.37	51.2	414	2.8
45 to 59 Years	25.3	1.46	11.84	57.6	468	2.8
60 Years and Over	28.1	1.66	13.23	59.0	471	3.2
Race of Householder						
White	77.6	4.21	34.22	54.3	441	1.8
Black	12.5	0.68	5.45	54.1	435	6.6
Other ³	9.6	0.29	2.35	30.3	245	6.6
Householder of Hispanic Descent						
Yes	9.0	0.27	2.21	29.8	246	7.0
No	90.7	4.91	39.81	54.1	439	1.8

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

² Below 150 percent of poverty line or 60 percent of median State income.

³ Includes 5.1 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.

Table CE2-6u. Space-Heating Energy Consumption and Expenditures in U.S. Households by Usage Indicators, 1997

Usage Indicators	Space-Heating Energy					RSE Row Factors
	Households (million)	Total		Per Household		
		Consumption (quadrillion Btu)	Expenditures (billion dollars)	Consumption (million Btu)	Expenditures (dollars)	
	RSE Column Factor:	1.0	1.3	1.2	0.9	
Total Households Using a Major Space-Heating Fuel¹	99.7	5.18	42.03	52.0	421	1.8
1997 Heating Degree-Days (HDD)						
Less than 4,000	42.0	1.00	10.29	23.9	245	5.8
4,000 to 5,499	21.2	1.24	10.79	58.6	509	7.1
5,500 to 6,999	25.9	2.06	15.26	79.6	588	4.8
7,000 or More	10.5	0.87	5.68	82.4	539	10.0
Estimated Heated Floorspace Category (square feet)²						
Fewer than 600	7.6	0.23	2.02	30.8	268	6.6
600 to 999	21.0	0.84	6.97	39.7	332	4.1
1,000 to 1,599	29.8	1.49	12.12	49.9	406	3.5
1,600 to 1,999	15.1	0.91	7.36	59.9	487	3.8
2,000 to 2,399	7.8	0.49	3.92	63.3	502	5.2
2,400 to 2,999	5.3	0.36	2.88	67.8	546	6.5
3,000 or More	4.1	0.35	2.64	85.3	645	9.1
No Estimate Provided	9.0	0.52	4.11	57.4	456	6.3
Household Size						
1 Person	25.1	1.13	9.44	45.2	376	3.3
2 Persons	32.6	1.77	14.42	54.4	442	2.6
3 Persons	17.0	0.91	7.38	53.5	434	3.4
4 Persons	15.0	0.81	6.51	54.0	433	3.8
5 Persons	6.2	0.34	2.67	55.2	429	6.1
6 or More Persons	3.7	0.21	1.60	55.0	429	9.2
Weekday Home Activities						
Home Used for Business						
Yes	7.2	0.42	3.31	58.0	462	7.0
No	92.6	4.76	38.71	51.5	418	1.7
Energy-Intensive Activity						
Yes	2.4	0.14	1.07	57.8	455	10.7
No	97.4	5.04	40.95	51.8	421	1.7
Someone Home All Day						
Yes	50.3	2.80	22.44	55.7	446	2.3
No	49.5	2.38	19.59	48.2	396	2.5
Winter Temperature Settings						
Lower When No One Home						
Yes	45.0	2.27	18.48	50.5	410	2.5
No	54.7	2.91	23.54	53.1	430	2.1
Lower During Sleeping Hours						
Yes	47.0	2.43	19.53	51.6	415	2.5
No	52.7	2.76	22.50	52.3	427	2.0
Adequacy of Insulation						
Well Insulated	37.5	1.83	15.29	48.8	408	2.7
Adequately Insulated	43.8	2.29	18.45	52.3	421	2.4
Poorly Insulated	18.0	1.04	8.15	57.5	452	4.1

See footnotes at end of table.

Table CE2-6u. Space-Heating Energy Consumption and Expenditures in U.S. Households by Usage Indicators, 1997 (Continued)

Usage Indicators	Space-Heating Energy					RSE Row Factors
	Households (million)	Total		Per Household		
		Consumption (quadrillion Btu)	Expenditures (billion dollars)	Consumption (million Btu)	Expenditures (dollars)	
	RSE Column Factor:	1.0	1.3	1.2	0.9	
Secondary Heating Fuel (more than one may apply)						
No	65.6	3.17	25.35	48.4	387	2.2
Yes	34.2	2.01	16.68	58.8	488	3.3
Electricity	15.7	0.93	7.68	58.9	489	5.3
Natural Gas	4.9	0.36	2.56	73.5	520	8.0
Kerosene	2.6	0.15	1.41	59.9	552	8.9
Wood	12.9	0.69	5.94	53.6	462	4.9
Other	2.1	0.12	1.16	55.5	562	9.4
Main Heating Equipment						
Central Warm-Air Furnace	56.6	3.31	24.53	58.5	433	2.5
Steam or Hot-Water System	13.4	1.21	9.00	90.1	670	4.8
Heat Pump	9.7	0.13	2.64	13.5	273	7.5
Built-In Electric Units	7.5	0.12	2.43	16.4	327	8.1
Floor, Wall, or Pipeless Furnace	4.8	0.15	1.07	30.9	225	10.0
Room Heater	4.3	0.17	1.38	38.5	317	7.3
Other	4.4	0.09	0.97	20.9	220	7.7
No Main Equipment	0.8	Q	Q	Q	Q	18.4
Age of Main Heating Equipment						
Less than 2 Years	8.7	0.43	3.62	49.7	417	5.2
2 to 4 Years	12.1	0.64	5.21	52.4	429	4.6
5 to 9 Years	19.9	0.93	7.87	46.8	396	3.9
10 to 19 Years	25.0	1.17	9.89	46.9	395	3.3
20 Years or More	26.0	1.63	12.48	62.8	480	3.3
Don't Know	9.0	0.38	2.96	42.0	330	7.7
No Main Equipment	0.8	Q	Q	Q	Q	18.4
Amount of Heat Provided by Main Heating Equipment						
All or Almost All	93.3	4.84	38.91	51.9	417	1.8
About Three-Fourths	4.2	0.22	2.01	52.2	476	7.2
Closer to One-Half	3.2	0.12	1.11	36.1	344	9.2
No Main Equipment	0.8	Q	Q	Q	Q	18.4
Average Electricity Cost for Main Space-Heating (cents per kWh)						
Less than 6	5.1	0.12	1.80	24.2	354	7.3
6 to Less than 9	18.0	0.24	4.86	13.1	270	6.3
9 or More	6.5	0.06	1.66	8.9	256	12.3
Average Natural Gas Cost for Main Space-Heating (dollars per 1000 cf)						
Less than 4.50	1.2	0.13	0.51	107.5	414	15.2
4.50 to Less than 6	13.2	1.06	5.63	80.3	428	6.5
6 or More	39.1	2.41	18.15	61.8	465	4.2

See footnotes at end of table.

Table CE2-6u. Space-Heating Energy Consumption and Expenditures in U.S. Households by Usage Indicators, 1997 (Continued)

Usage Indicators	Space-Heating Energy					RSE Row Factors
	Households (million)	Total		Per Household		
		Consumption (quadrillion Btu)	Expenditures (billion dollars)	Consumption (million Btu)	Expenditures (dollars)	
	RSE Column Factor:	1.0	1.3	1.2	0.9	
Average Fuel Oil Cost for Main Space-Heating (dollars per gallon)						
Less than .95	3.3	0.24	1.45	73.1	442	8.8
.95 to Less than 1.10	4.7	0.47	3.49	100.1	740	7.5
1.10 or More	1.3	0.13	1.14	102.1	898	17.9
Average LPG Cost for Main Space-Heating (dollars per gallon)						
Less than .75	0.4	0.03	0.22	75.0	540	12.6
.75 to Less than 1.00	1.8	0.12	1.20	64.9	653	10.7
1.00 or More	2.3	0.10	1.26	44.1	553	12.2
Main Space-Heating Fuel Paid by Household						
All Major Fuels¹						
Yes	86.8	4.71	38.51	54.3	444	1.9
No	11.3	0.44	3.24	39.0	286	5.7
Electricity						
Yes	27.4	0.40	7.99	14.7	292	4.5
No	2.2	0.01	0.33	6.5	151	16.0
Natural Gas						
Yes	46.9	3.30	22.19	70.3	473	3.0
No	6.5	0.30	2.10	46.1	321	7.1
Fuel Oil						
Yes	7.2	0.73	5.41	101.3	752	7.0
No	2.3	0.11	0.68	49.8	299	11.5
LPG						
Yes	4.5	0.24	2.62	54.9	587	7.5
No	0.1	0.01	0.07	44.1	506	21.8
Kerosene						
Yes	0.9	0.04	0.34	42.6	366	15.6
No	Q	Q	Q	Q	Q	NF

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

² Estimates provided by the household interview respondents, who were asked which category best described the total heated floorspace in the home.

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 CE2-7c. Space-Heating Energy Consumption 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	
Million Households						
Total U.S. Households	101.5	6.8	11.5	7.0	5.9	NF
No Space Heating	0.8	Q	Q	Q	Q	55.0
Space Heating	100.7	6.8	11.4	6.9	5.7	1.0
Not Using a Major Fuel ¹	1.0	Q	0.1	Q	Q	45.2
Using a Major Fuel ¹	99.7	6.7	11.2	6.9	5.7	1.0
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	32.3
Number of Households with Space Heating, Major Fuels Used (more than one may apply):						
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	18.9
Kerosene	3.5	Q	Q	Q	Q	26.4
LPG	5.6	Q	0.2	0.3	Q	27.4
Quadrillion Btu						
Space-Heating Btu Consumption, Major Fuels Used:						
Electricity	0.40	0.01	0.02	0.03	0.01	14.4
Natural Gas	3.61	0.27	0.19	0.17	0.01	12.7
Fuel Oil	0.85	0.23	Q	Q	Q	27.0
Kerosene	0.06	Q	Q	Q	Q	50.3
LPG	0.26	Q	0.01	0.01	Q	29.9
Total	5.18	0.52	0.22	0.21	0.03	8.7
Physical Units						
Physical Units of Space-Heating Consumption, Major Fuels Used:						
Electricity (billion kWh)	118	2	5	9	4	14.4
Natural Gas (billion cf)	3,517	267	184	167	8	12.7
Fuel Oil (million gallons)	6,133	1,640	Q	Q	Q	27.0
Kerosene (million gallons)	436	Q	Q	Q	Q	50.3
LPG (million gallons)	2,823	Q	81	94	Q	29.9
Million Btu per Household						
Average Space-Heating Btu Consumption per Household						
Using a Major Fuel ¹	52.0	76.9	19.5	30.5	4.6	8.8
For Main Space Heating	52.5	77.3	19.7	30.6	4.6	8.9
For Secondary Space Heating Only	17.6	Q	Q	Q	Q	51.3

See footnotes at end of table.

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

	Total U.S.	Four Most Populated States				RSE Row Factors
		New York	California	Texas	Florida	
RSE Column Factor:	0.3	1.2	0.8	1.4	2.2	
Million Households						
Number of Households, Where the Main Space-Heating Fuel Is:						
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	18.1
Kerosene	1.0	Q	Q	Q	Q	49.5
LPG	4.6	Q	0.2	0.3	Q	28.7
Other	2.6	0.2	0.3	Q	Q	27.4
No Space Heating	0.8	Q	Q	Q	Q	55.0
Million Btu per Household³						
Space-Heating Btu Consumption per Household,² Where the Main Space-Heating Fuel Is:						
Electricity	12.8	14.0	4.8	10.1	2.7	14.7
Natural Gas	66.9	80.7	23.8	44.7	11.3	6.4
Fuel Oil	88.1	81.5	Q	Q	Q	11.9
Kerosene	41.5	Q	Q	Q	Q	31.4
LPG	53.4	Q	33.0	32.1	Q	15.0
Physical Units (PU) per Household³						
Physical Units of Space-Heating Consumption per Household,² Where the Main Space-Heating Fuel Is:						
Electricity (kWh)	3,760	4,103	1,414	2,963	798	14.7
Natural Gas (thousand cf)	65	79	23	44	11	6.4
Fuel Oil (gallons)	636	588	Q	Q	Q	11.9
Kerosene (gallons)	307	Q	Q	Q	Q	31.4
LPG (gallons)	585	Q	361	352	Q	15.0
1997 Heating Degree-Days (HDD) per Household³						
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:						
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	26.1
LPG	4,863	Q	3,415	2,810	Q	12.9
Average for All Households	4,368	5,579	1,870	2,422	503	5.2

See footnotes at end of table.

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

	Total U.S.	Four Most Populated States				RSE Row Factors
		New York	California	Texas	Florida	
RSE Column Factor:	0.3	1.2	0.8	1.4	2.2	
Heated Square Footage (HSF) per Household³						
Heated Square Footage per Household,⁴ Where the Main Space-Heating Fuel Is:						
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	6.7
Kerosene	1,023	Q	Q	Q	Q	12.1
LPG	1,676	Q	1,253	1,344	Q	7.0
Average for All Households	1,667	1,628	1,381	1,492	1,597	3.3
Space-Heating Intensity [PU÷(HDD×(HSF÷1000))]³						
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:						
Electricity (kWh)	0.794	0.565	0.618	1.009	1.114	7.1
Natural Gas (cubic feet)	7.876	7.311	9.095	10.458	7.587	4.5
Fuel Oil (gallons)	0.060	0.079	Q	Q	Q	11.1
Kerosene (gallons)	0.061	Q	Q	Q	Q	25.5
LPG (gallons)	0.072	Q	0.084	0.093	Q	14.9

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

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

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

⁴ 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 CE2-8c. Space-Heating Energy Consumption in U.S. Households by Urban/Rural Location, 1997

	Urban/Rural Location ¹					RSE Row Factors
	Total	City	Town	Suburbs	Rural	
	0.6	1.0	1.2	1.3	1.0	
Million Households						
Total U.S. Households	101.5	48.2	18.2	18.6	16.5	4.2
No Space Heating	0.8	0.5	Q	0.2	Q	22.3
Space Heating	100.7	47.7	18.2	18.4	16.4	4.2
Not Using a Major Fuel ²	1.0	0.3	0.1	Q	0.5	27.7
Using a Major Fuel ²	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	19.9
Number of Households with Space Heating, Major Fuels Used (more than one may apply):						
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
Quadrillion Btu						
Space-Heating Btu Consumption, Major Fuels Used:						
Electricity	0.40	0.14	0.08	0.08	0.10	8.5
Natural Gas	3.61	1.93	0.68	0.75	0.26	7.6
Fuel Oil	0.85	0.22	0.21	0.15	0.27	13.7
Kerosene	0.06	0.01	0.02	(*)	0.03	25.1
LPG	0.26	0.02	0.05	0.01	0.18	20.1
Total	5.18	2.31	1.04	0.99	0.84	5.0
Physical Units						
Physical Units of Space-Heating Consumption, Major Fuels Used:						
Electricity (billion kWh)	118	41	24	24	30	8.5
Natural Gas (billion cf)	3,517	1,875	663	729	250	7.6
Fuel Oil (million gallons)	6,133	1,605	1,516	1,060	1,952	13.7
Kerosene (million gallons)	436	79	113	24	220	25.1
LPG (million gallons)	2,823	174	584	121	1,944	20.1
Million Btu per Household						
Average Space-Heating Btu Consumption per Household						
Using a Major Fuel ²	52.0	48.8	57.7	53.9	52.8	3.7
For Main Space Heating	52.5	48.9	58.1	54.1	55.4	3.7
For Secondary Space Heating Only	17.6	18.6	18.3	Q	17.8	25.8

See footnotes at end of table.

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

	Urban/Rural Location ¹					RSE Row Factors
	Total	City	Town	Suburbs	Rural	
	0.6	1.0	1.2	1.3	1.0	
Million Households						
Number of Households, Where the Main Space-Heating Fuel Is:						
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	26.7
LPG	4.6	0.4	0.9	0.2	3.1	19.1
Other	2.6	0.5	0.3	Q	1.6	18.2
No Space Heating	0.8	0.5	Q	0.2	Q	22.3
Million Btu per Household⁴						
Space-Heating Btu Consumption per Household,³ Where the Main Space-Heating Fuel Is:						
Electricity	12.8	9.4	15.2	14.1	18.4	5.2
Natural Gas	66.9	64.2	71.6	67.5	76.3	3.8
Fuel Oil	88.1	70.8	91.3	95.9	101.5	5.3
Kerosene	41.5	34.2	54.3	Q	40.9	17.6
LPG	53.4	40.4	58.1	48.7	53.9	8.2
Physical Units (PU) per Household⁴						
Physical Units of Space-Heating Consumption per Household,³ Where the Main Space-Heating Fuel Is:						
Electricity (kWh)	3,760	2,752	4,460	4,131	5,394	5.2
Natural Gas (thousand cf)	65	63	70	66	74	3.8
Fuel Oil (gallons)	636	511	659	692	732	5.3
Kerosene (gallons)	307	253	402	Q	303	17.6
LPG (gallons)	585	443	636	534	591	8.2
1997 Heating Degree-Days (HDD) per Household⁴						
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:						
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	11.6
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

See footnotes at end of table.

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

	Total	Urban/Rural Location ¹				RSE Row Factors
		City	Town	Suburbs	Rural	
RSE Column Factor:	0.6	1.0	1.2	1.3	1.0	
Heated Square Footage (HSF) per Household⁴						
Heated Square Footage per Household,⁵ Where the Main Space-Heating Fuel Is:						
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
Space-Heating Intensity [PU÷(HDD×(HSF÷1000))]⁴						
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:						
Electricity (kWh)	0.794	0.783	0.777	0.759	0.817	4.0
Natural Gas (cubic feet)	7.876	8.747	7.614	6.327	7.785	3.1
Fuel Oil (gallons)	0.060	0.070	0.057	0.057	0.058	5.9
Kerosene (gallons)	0.061	0.081	0.065	Q	0.056	15.2
LPG (gallons)	0.072	0.077	0.073	0.066	0.072	10.3

¹ Based on the household respondent's description rather than the Federal Government definition.

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

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

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

⁵ 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.

(*) = Value rounds to zero in the units displayed.

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 CE2-9c. Space-Heating Energy Consumption 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	
	0.6	1.0	1.2	1.4	
RSE Column Factor:					
Million Households					
Total U.S. Households	101.5	19.7	14.4	5.3	NF
No Space Heating	0.8	Q	Q	Q	33.6
Space Heating	100.7	19.7	14.4	5.3	NF
Not Using a Major Fuel ¹	1.0	0.2	Q	Q	29.2
Using a Major Fuel ¹	99.7	19.5	14.3	5.2	NF
For Main Space Heating	98.1	19.2	14.1	5.1	0.9
For Secondary Space Heating Only	1.6	0.3	0.2	0.1	25.6
Number of Households with Space Heating, Major Fuels Used (more than one may apply):					
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
Quadrillion Btu					
Space-Heating Btu Consumption, Major Fuels Used:					
Electricity	0.40	0.05	0.03	0.01	11.5
Natural Gas	3.61	0.74	0.62	0.12	9.5
Fuel Oil	0.85	0.65	0.38	0.27	12.8
Kerosene	0.06	0.03	0.01	0.01	31.0
LPG	0.26	0.01	Q	0.01	29.2
Total	5.18	1.48	1.06	0.43	3.2
Physical Units					
Physical Units of Space-Heating Consumption, Major Fuels Used:					
Electricity (billion kWh)	118	14	10	4	11.5
Natural Gas (billion cf)	3,517	720	602	118	9.5
Fuel Oil (million gallons)	6,133	4,722	2,741	1,981	12.8
Kerosene (million gallons)	436	213	104	109	31.0
LPG (million gallons)	2,823	159	Q	58	29.2
Million Btu per Household					
Average Space-Heating Btu Consumption per Household					
Using a Major Fuel ¹	52.0	76.0	73.8	82.0	3.3
For Main Space Heating	52.5	76.7	74.4	82.9	3.3
For Secondary Space Heating Only	17.6	35.6	32.6	41.3	24.8

See footnotes at end of table.

Table CE2-9c. Space-Heating Energy Consumption 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	1.2	1.4	
Million Households					
Number of Households, Where the Main Space-Heating Fuel Is:					
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	31.2
LPG	4.6	0.2	Q	Q	28.0
Other	2.6	0.5	0.3	0.2	22.8
No Space Heating	0.8	Q	Q	Q	33.6
Million Btu per Household³					
Space-Heating Btu Consumption per Household,² Where the Main Space-Heating Fuel Is:					
Electricity	12.8	18.0	18.1	18.0	6.2
Natural Gas	66.9	80.7	80.2	83.2	3.3
Fuel Oil	88.1	90.7	85.4	99.3	5.1
Kerosene	41.5	56.0	52.5	59.5	14.3
LPG	53.4	58.1	Q	Q	10.3
Physical Units (PU) per Household³					
Physical Units of Space-Heating Consumption per Household,² Where the Main Space-Heating Fuel Is:					
Electricity (kWh)	3,760	5,284	5,291	5,265	6.2
Natural Gas (thousand cf)	65	79	78	81	3.3
Fuel Oil (gallons)	636	654	616	716	5.1
Kerosene (gallons)	307	415	389	441	14.3
LPG (gallons)	585	636	Q	Q	10.3
1997 Heating Degree-Days (HDD) per Household³					
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:					
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	2.1

See footnotes at end of table.

Table CE2-9c. Space-Heating Energy Consumption 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	1.2	1.4	
Heated Square Footage (HSF) per Household³					
Heated Square Footage per Household,⁴ Where the Main Space-Heating Fuel Is:					
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
Space-Heating Intensity [PU÷{HDD×(HSF÷1000)}]³					
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:					
Electricity (kWh)	0.794	0.600	0.599	0.602	4.6
Natural Gas (cubic feet)	7.876	7.527	7.447	7.974	2.9
Fuel Oil (gallons)	0.060	0.063	0.069	0.056	5.7
Kerosene (gallons)	0.061	0.057	0.065	0.050	14.0
LPG (gallons)	0.072	0.062	Q	Q	14.2

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

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

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

⁴ 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 CE2-10c. Space-Heating Energy Consumption in U.S. Households
by Midwest Census Region, 1997**

	Midwest Census Region				RSE Row Factors
	Total U.S.	Census Division			
		Total	East North Central	West North Central	
			0.5	1.0	
RSE Column Factor:					
Million Households					
Total U.S. Households	101.5	24.1	16.9	7.2	NF
No Space Heating	0.8	Q	Q	Q	34.4
Space Heating	100.7	24.1	16.9	7.2	NF
Not Using a Major Fuel ¹	1.0	0.3	Q	Q	40.3
Using a Major Fuel ¹	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	28.6
Number of Households with Space Heating, Major Fuels Used (more than one may apply):					
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
Quadrillion Btu					
Space-Heating Btu Consumption, Major Fuels Used:					
Electricity	0.40	0.06	0.04	0.02	17.2
Natural Gas	3.61	1.66	1.26	0.40	6.8
Fuel Oil	0.85	0.10	0.06	0.04	19.9
Kerosene	0.06	Q	Q	Q	31.5
LPG	0.26	0.13	0.08	0.06	19.3
Total	5.18	1.96	1.44	0.52	4.0
Physical Units					
Physical Units of Space-Heating Consumption, Major Fuels Used:					
Electricity (billion kWh)	118	18	11	6	17.2
Natural Gas (billion cf)	3,517	1,615	1,226	389	6.8
Fuel Oil (million gallons)	6,133	734	453	282	19.9
Kerosene (million gallons)	436	Q	Q	Q	31.5
LPG (million gallons)	2,823	1,458	828	630	19.3
Million Btu per Household					
Average Space-Heating Btu Consumption per Household					
Using a Major Fuel ¹	52.0	82.3	85.8	73.7	4.0
For Main Space Heating	52.5	83.1	86.2	75.6	3.9
For Secondary Space Heating Only	17.6	20.7	Q	Q	36.5

See footnotes at end of table.

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

	Midwest Census Region				RSE Row Factors
	Total U.S.	Census Division			
		Total	East North Central	West North Central	
	RSE Column Factor:	0.5	1.0	1.1	
Million Households					
Number of Households, Where the Main Space-Heating Fuel Is:					
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	31.0
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	34.4
Million Btu per Household³					
Space-Heating Btu Consumption per Household,² Where the Main Space-Heating Fuel Is:					
Electricity	12.8	20.3	18.5	24.3	6.9
Natural Gas	66.9	92.0	94.9	83.9	2.8
Fuel Oil	88.1	96.5	96.9	96.1	4.6
Kerosene	41.5	Q	Q	Q	19.7
LPG	53.4	72.7	79.3	65.6	6.4
Physical Units (PU) per Household³					
Physical Units of Space-Heating Consumption per Household,² Where the Main Space-Heating Fuel Is:					
Electricity (kWh)	3,760	5,941	5,415	7,116	6.9
Natural Gas (thousand cf)	65	90	92	82	2.8
Fuel Oil (gallons)	636	698	700	696	4.6
Kerosene (gallons)	307	Q	Q	Q	19.7
LPG (gallons)	585	796	869	718	6.4
1997 Heating Degree-Days (HDD) per Household³					
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:					
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

See footnotes at end of table.

Table CE2-10c. Space-Heating Energy Consumption 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	
Heated Square Footage (HSF) per Household³					
Heated Square Footage per Household,⁴ Where the Main Space-Heating Fuel Is:					
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	7.6
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
Space-Heating Intensity [PU÷{HDD×(HSF÷1000)}]³					
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:					
Electricity (kWh)	0.794	0.639	0.667	0.613	5.7
Natural Gas (cubic feet)	7.876	6.885	7.193	6.067	3.3
Fuel Oil (gallons)	0.060	0.045	0.049	0.041	5.5
Kerosene (gallons)	0.061	Q	Q	Q	16.0
LPG (gallons)	0.072	0.061	0.065	0.057	10.4

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

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

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

⁴ 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 CE2-11c. Space-Heating Energy Consumption 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:						
Million Households						
Total U.S. Households	101.5	35.9	18.7	6.3	10.8	NF
No Space Heating	0.8	0.3	Q	Q	Q	44.3
Space Heating	100.7	35.6	18.5	6.3	10.8	NF
Not Using a Major Fuel ¹	1.0	0.2	Q	Q	Q	39.7
Using a Major Fuel ¹	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	20.4
Number of Households with Space Heating, Major Fuels Used (more than one may apply):						
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	15.7
LPG	5.6	2.6	1.2	1.0	0.4	17.4
Quadrillion Btu						
Space-Heating Btu Consumption, Major Fuels Used:						
Electricity	0.40	0.21	0.10	0.05	0.05	9.8
Natural Gas	3.61	0.71	0.28	0.13	0.29	11.9
Fuel Oil	0.85	0.07	0.07	Q	Q	29.6
Kerosene	0.06	0.02	0.02	(*)	Q	23.5
LPG	0.26	0.08	0.04	0.03	0.01	22.2
Total	5.18	1.09	0.51	0.22	0.36	7.1
Physical Units						
Physical Units of Space-Heating Consumption, Major Fuels Used:						
Electricity (billion kWh)	118	60	30	16	14	9.8
Natural Gas (billion cf)	3,517	687	277	124	286	11.9
Fuel Oil (million gallons)	6,133	526	508	Q	Q	29.6
Kerosene (million gallons)	436	161	126	33	Q	23.5
LPG (million gallons)	2,823	921	429	352	140	22.2
Million Btu per Household						
Average Space-Heating Btu Consumption per Household						
Using a Major Fuel ¹	52.0	30.8	28.1	35.0	33.0	7.2
For Main Space Heating	52.5	31.2	28.3	35.8	33.3	7.2
For Secondary Space Heating Only	17.6	9.6	14.3	5.4	Q	30.7

See footnotes at end of table.

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

	South Census Region					RSE Row Factors
	Total U.S.	Census Division			RSE Column Factor:	
		Total	South Atlantic	East South Central		
	0.5	0.9	1.2	1.4	1.5	
Million Households						
Number of Households, Where the Main Space-Heating Fuel Is:						
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	19.9
No Space Heating	0.8	0.3	Q	Q	Q	44.3
Million Btu per Household³						
Space-Heating Btu Consumption per Household,² Where the Main Space-Heating Fuel Is:						
Electricity	12.8	11.3	9.7	17.8	11.0	6.3
Natural Gas	66.9	50.1	51.9	54.1	47.1	6.7
Fuel Oil	88.1	64.9	64.0	Q	Q	6.5
Kerosene	41.5	25.7	22.6	Q	Q	18.7
LPG	53.4	38.2	44.0	35.5	31.9	9.6
Physical Units (PU) per Household³						
Physical Units of Space-Heating Consumption per Household,² Where the Main Space-Heating Fuel Is:						
Electricity (kWh)	3,760	3,319	2,829	5,207	3,221	6.3
Natural Gas (thousand cf)	65	49	51	53	46	6.7
Fuel Oil (gallons)	636	469	462	Q	Q	6.5
Kerosene (gallons)	307	190	167	Q	Q	18.7
LPG (gallons)	585	418	481	388	350	9.6
1997 Heating Degree-Days (HDD) per Household³						
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:						
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

See footnotes at end of table.

Table CE2-11c. Space-Heating Energy Consumption 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	1.5	
Heated Square Footage (HSF) per Household³						
Heated Square Footage per Household,⁴ Where the Main Space-Heating Fuel Is:						
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
Space-Heating Intensity [PU÷(HDD×(HSF÷1000))]³						
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:						
Electricity (kWh)	0.794	0.910	0.845	0.956	1.016	4.7
Natural Gas (cubic feet)	7.876	10.100	9.061	10.159	11.219	3.8
Fuel Oil (gallons)	0.060	0.068	0.067	Q	Q	11.3
Kerosene (gallons)	0.061	0.069	0.063	Q	Q	16.4
LPG (gallons)	0.072	0.091	0.095	0.085	0.099	9.1

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

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

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

⁴ 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.

(*) = Value rounds to zero in the units displayed.

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 CE2-12c. Space-Heating Energy Consumption in U.S. Households by West Census Region, 1997

	West Census Region				RSE Row Factors
	Total U.S.	Census Division			
		Total	Mountain	Pacific	
RSE Column Factor:	0.5	1.1	1.7	1.1	
Million Households					
Total U.S. Households	101.5	21.8	6.2	15.6	NF
No Space Heating	0.8	0.5	Q	0.5	18.4
Space Heating	100.7	21.3	6.2	15.2	NF
Not Using a Major Fuel ¹	1.0	0.3	Q	0.2	28.8
Using a Major Fuel ¹	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	20.5
Number of Households with Space Heating, Major Fuels Used (more than one may apply):					
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	25.2
Kerosene	3.5	0.2	Q	Q	20.4
LPG	5.6	0.6	0.3	0.3	21.9
Quadrillion Btu					
Space-Heating Btu Consumption, Major Fuels Used:					
Electricity	0.40	0.09	0.02	0.07	5.6
Natural Gas	3.61	0.51	0.25	0.26	6.7
Fuel Oil	0.85	0.02	Q	0.01	29.9
Kerosene	0.06	(*)	Q	Q	30.4
LPG	0.26	0.03	0.02	0.01	25.1
Total	5.18	0.65	0.29	0.36	4.7
Physical Units					
Physical Units of Space-Heating Consumption, Major Fuels Used:					
Electricity (billion kWh)	118	26	5	21	5.6
Natural Gas (billion cf)	3,517	495	239	256	6.7
Fuel Oil (million gallons)	6,133	151	Q	108	29.9
Kerosene (million gallons)	436	33	Q	Q	30.4
LPG (million gallons)	2,823	285	179	105	25.1
Million Btu per Household					
Average Space-Heating Btu Consumption per Household					
Using a Major Fuel ¹	52.0	30.9	46.9	24.4	4.8
For Main Space Heating	52.5	31.3	47.4	24.7	4.9
For Secondary Space Heating Only	17.6	12.1	Q	9.3	29.7

See footnotes at end of table.

Table CE2-12c. Space-Heating Energy Consumption 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	1.1	1.7	1.1	
Million Households					
Number of Households, Where the Main Space-Heating Fuel Is:					
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	23.6
Kerosene	1.0	Q	Q	Q	33.9
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	18.4
Million Btu per Household³					
Space-Heating Btu Consumption per Household,² Where the Main Space-Heating Fuel Is:					
Electricity	12.8	12.0	10.4	12.5	5.6
Natural Gas	66.9	39.7	60.9	29.9	5.0
Fuel Oil	88.1	82.5	Q	Q	13.6
Kerosene	41.5	Q	Q	Q	21.5
LPG	53.4	46.3	58.0	34.4	7.2
Physical Units (PU) per Household³					
Physical Units of Space-Heating Consumption per Household,² Where the Main Space-Heating Fuel Is:					
Electricity (kWh)	3,760	3,518	3,044	3,662	5.6
Natural Gas (thousand cf)	65	39	59	29	5.0
Fuel Oil (gallons)	636	595	Q	Q	13.6
Kerosene (gallons)	307	Q	Q	Q	21.5
LPG (gallons)	585	507	635	377	7.2
1997 Heating Degree-Days (HDD) per Household³					
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:					
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	17.9
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

See footnotes at end of table.

Table CE2-12c. Space-Heating Energy Consumption 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	1.1	1.7	1.1	
Heated Square Footage (HSF) per Household³					
Heated Square Footage per Household,⁴ Where the Main Space-Heating Fuel Is:					
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	8.3
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
Space-Heating Intensity [PU÷{HDD×(HSF÷1000)}]³					
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:					
Electricity (kWh)	0.794	0.822	0.648	0.880	5.2
Natural Gas (cubic feet)	7.876	7.893	6.670	8.987	4.0
Fuel Oil (gallons)	0.060	0.045	Q	Q	11.3
Kerosene (gallons)	0.061	Q	Q	Q	17.5
LPG (gallons)	0.072	0.068	0.068	0.069	14.4

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

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

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

⁴ 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.

(*) = Value rounds to zero in the units displayed.

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.

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