

2001 Consumption and Expenditures Tables

Water-Heating Consumption Tables

(26 pages, 117 kb)

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These data are from the 2001 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 energy-related data for occupied primary housing units. RECS was first conducted in 1978; the twelfth and most recent survey was conducted in 2001. In the 2001 RECS, data were collected from a sample of 4,822 households in housing units statistically selected to represent the 107.0 million housing units in the United States. The RECS 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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Contacts: Stephanie J. Battles, Survey Manager (stephanie.battles@eia.doe.gov)

World Wide Web: <http://www.eia.doe.gov/emeu/consumption>

Table CE4-1c. Water-Heating Energy Consumption in U.S. Households by Climate Zone, 2001

	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		
		0.4	1.6	1.0	1.1		
Million Households							
Total U.S. Households	107.0	9.2	28.6	24.0	21.0	24.1	8.1
No Water Heating	Q	Q	Q	Q	Q	Q	NF
Water Heating	106.9	9.2	28.6	24.0	20.9	24.0	8.1
Not Using a Major Fuel ²	0.2	Q	Q	Q	Q	Q	91.7
Using a Major Fuel ²	106.7	9.2	28.6	24.0	20.9	24.0	8.1
For Main Water Heating	106.5	9.2	28.6	24.0	20.8	23.9	8.1
Number of Households with Water Heating, Major Fuels Used:							
Electricity	41.6	4.1	7.4	8.6	8.6	13.0	10.3
Natural Gas	58.2	3.8	19.2	12.4	12.2	10.6	8.9
Fuel Oil	4.7	0.8	1.5	2.4	Q	Q	20.5
LPG	3.0	0.6	0.8	0.6	0.5	0.5	27.6
Quadrillion Btu^a							
Water-Heating Btu Consumption, Major Fuels Used:							
Electricity	0.36	0.04	0.06	0.08	0.07	0.11	11.9
Natural Gas	1.15	0.07	0.39	0.24	0.24	0.21	9.3
Fuel Oil	0.13	0.03	0.04	0.06	Q	Q	22.0
LPG	0.05	0.01	0.01	Q	0.01	0.01	25.6
Total ³	1.68	0.14	0.51	0.38	0.32	0.33	7.0
Physical Units^a							
Physical Units of Water-Heating Consumption, Major Fuels Used:							
Electricity (billion kWh)	104	11	18	22	21	32	11.9
Natural Gas (billion cf)	1,115	68	383	231	229	204	9.3
Fuel Oil (million gallons)	950	193	311	445	Q	Q	22.0
LPG (million gallons)	515	111	144	Q	73	88	25.6
Million Btu per Household^a							
Average Water-Heating Btu Consumption per Household							
Using a Major Fuel ²	15.8	15.7	17.9	16.0	15.1	13.6	2.9
For Main Water Heating	15.8	15.7	17.9	16.0	15.2	13.7	2.9
Million Households							
Number of Households, Where the Main Water-Heating Fuel Is:							
Electricity	40.8	4.0	7.3	8.5	8.1	12.8	10.4
Natural Gas	58.0	3.7	19.1	12.4	12.2	10.6	8.9
Fuel Oil	4.6	0.8	1.4	2.4	Q	Q	21.1
LPG	2.9	0.6	0.8	0.6	0.5	0.4	27.7
No Water Heating	Q	Q	Q	Q	Q	Q	NF

See footnotes at end of table.

Table CE4-1c. Water-Heating Energy Consumption in U.S. Households by Climate Zone, 2001 (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:	0.4	1.6	1.0	1.1	1.2	1.1	
Million Btu per Household^{5,a}							
Water-Heating Btu Consumption per Household,⁴ Where the Main Water-Heating Fuel Is:							
Electricity	8.7	9.2	8.3	8.9	9.0	8.5	3.6
Natural Gas	19.7	18.5	20.5	19.1	19.3	19.7	2.9
Fuel Oil	28.1	32.7	29.9	25.5	Q	Q	5.2
LPG	15.9	17.4	16.9	14.2	13.5	17.0	10.1
Physical Units (PU) per Household^{5,a}							
Physical Units of Water-Heating Consumption per Household,⁴ Where the Main Water-Heating Fuel Is:							
Electricity (kWh)	2,552	2,700	2,429	2,607	2,636	2,486	3.6
Natural Gas (thousand cf)	19	18	20	19	19	19	2.9
Fuel Oil (gallons)	203	236	215	184	Q	Q	5.2
LPG (gallons)	174	190	186	156	148	186	10.1
Number of Household Members (NHM) per Household⁵							
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:							
Electricity	2.4	2.6	2.3	2.5	2.5	2.4	3.1
Natural Gas	2.7	2.4	2.6	2.5	3.0	2.7	3.1
Fuel Oil	2.4	2.4	2.5	2.4	Q	Q	6.2
LPG	2.6	2.6	2.6	2.3	2.2	3.3	9.3
Water-Heating Intensity^{5,a} (PU÷NHM)							
Water-Heating Intensity, Where the Main Water-Heating Fuel Is:							
Electricity	1,048	1,049	1,050	1,063	1,055	1,031	3.2
Natural Gas	7.2	7.4	7.8	7.4	6.3	7.1	2.9
Fuel Oil	84	97	88	77	Q	Q	7.1
LPG	68	73	72	68	67	56	11.1

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 a small amount of kerosene use for water heating.

⁴ Includes only the water-heating consumption of the water-heating fuel. Not included are: 1) the consumption of the main water-heating fuel for uses other than water heating; 2) the consumption of the main water-heating fuel where it is the secondary, and not the main, water-heating fuel, and; 3) the consumption of other fuels that are used as secondary water-heating fuels.

⁵ Averages are for those households using each of the main water-heating fuels.

^a The row factor in this section is underestimated because it contains no error for estimating the end-use.

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 2001 Residential Energy Consumption Survey.

**Table CE4-2c. Water-Heating Energy Consumption in U.S. Households
by Year of Construction, 2001**

	Total	Year of Construction					1949 or Before	RSE Row Factors
		1990 to 2001 ¹	1980 to 1989	1970 to 1979	1960 to 1969	1990 to 1999		
RSE Column Factor:	0.5	1.5	1.2	1.0	1.2	1.1	0.9	
Million Households								
Total U.S. Households	107.0	15.5	18.2	18.8	13.8	14.2	26.6	4.3
No Water Heating	Q	Q	Q	Q	Q	Q	Q	NF
Water Heating	106.9	15.5	18.2	18.7	13.8	14.2	26.5	4.3
Not Using a Major Fuel ²	0.2	Q	Q	Q	Q	Q	Q	84.9
Using a Major Fuel ²	106.7	15.4	18.2	18.7	13.7	14.2	26.4	4.3
For Main Water Heating	106.5	15.4	18.2	18.7	13.6	14.1	26.4	4.3
Number of Households with Water Heating, Major Fuels Used:								
Electricity	41.6	6.5	9.8	9.8	4.2	4.4	6.9	6.6
Natural Gas	58.2	8.3	7.7	7.8	8.7	8.8	16.9	6.4
Fuel Oil	4.7	0.2	0.3	0.5	0.7	0.9	2.1	19.6
LPG	3.0	0.5	0.4	0.7	0.2	0.3	0.8	23.2
Quadrillion Btu^a								
Water-Heating Btu Consumption, Major Fuels Used:								
Electricity	0.36	0.06	0.08	0.08	0.04	0.04	0.06	7.7
Natural Gas	1.15	0.19	0.16	0.15	0.16	0.18	0.31	7.0
Fuel Oil	0.13	0.01	0.01	0.02	0.02	0.02	0.05	20.0
LPG	0.05	0.01	0.01	0.01	(*)	(*)	0.01	24.7
Total ³	1.68	0.27	0.27	0.25	0.21	0.24	0.44	4.6
Physical Units^a								
Physical Units of Water-Heating Consumption, Major Fuels Used:								
Electricity (billion kWh)	104	18	25	24	10	10	17	7.7
Natural Gas (billion cf)	1,115	185	160	141	153	171	306	7.0
Fuel Oil (million gallons)	950	48	101	115	136	166	384	20.0
LPG (million gallons)	515	94	68	116	32	50	156	24.7
Million Btu per Household^{5,a}								
Average Water-Heating Btu Consumption per Household								
Using a Major Fuel ²	15.8	17.3	14.8	13.6	15.6	16.8	16.6	2.7
For Main Water Heating	15.8	17.3	14.8	13.6	15.7	16.9	16.6	2.7
Million Households								
Number of Households, Where the Main Water-Heating Fuel Is:								
Electricity	40.8	6.4	9.8	9.8	4.1	4.1	6.7	6.8
Natural Gas	58.0	8.3	7.7	7.8	8.6	8.8	16.9	6.4
Fuel Oil	4.6	0.2	0.3	0.5	0.7	0.9	2.0	20.2
LPG	2.9	0.5	0.4	0.7	0.2	0.3	0.8	23.2
No Water Heating	Q	Q	Q	Q	Q	Q	Q	NF

See footnotes at end of table.

Table CE4-2c. Water-Heating Energy Consumption in U.S. Households by Year of Construction, 2001 (Continued)

	Total	Year of Construction					1990 to 1999	1949 or Before	RSE Row Factors
		1990 to 2001 ¹	1980 to 1989	1970 to 1979	1960 to 1969				
RSE Column Factor:	0.5	1.5	1.2	1.0	1.2	1.1	0.9		
Million Btu per Household^{5,a}									
Water-Heating Btu Consumption per Household,⁴ Where the Main Water-Heating Fuel Is:									
Electricity	8.7	9.4	8.6	8.5	8.7	8.6	8.6	3.4	
Natural Gas	19.7	22.9	21.3	18.6	18.2	19.9	18.5	2.9	
Fuel Oil	28.1	35.0	44.5	32.8	25.8	24.8	26.1	7.7	
LPG	15.9	17.1	14.1	15.0	13.2	17.2	17.1	11.1	
Physical Units (PU) per Household^{5,a}									
Physical Units of Water-Heating Consumption per Household,⁴ Where the Main Water-Heating Fuel Is:									
Electricity (kWh)	2,552	2,752	2,522	2,480	2,543	2,522	2,535	3.4	
Natural Gas (thousand cf)	19	22	21	18	18	19	18	2.9	
Fuel Oil (gallons)	203	252	321	237	186	179	188	7.7	
LPG (gallons)	174	187	155	164	144	189	187	11.1	
Number of Household Members (NHM) per Household⁵									
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:									
Electricity	2.4	2.7	2.4	2.3	2.4	2.4	2.5	3.2	
Natural Gas	2.7	3.1	2.6	2.7	2.5	2.6	2.6	2.9	
Fuel Oil	2.4	2.9	3.2	2.8	2.4	2.1	2.3	7.1	
LPG	2.6	3.1	2.5	2.4	2.0	2.6	2.5	11.7	
Water-Heating Intensity^{5,a} (PU÷NHM)									
Water-Heating Intensity, Where the Main Water-Heating Fuel Is:									
Electricity	1,048	1,023	1,042	1,061	1,080	1,071	1,033	2.7	
Natural Gas	7.2	7.1	8.0	6.7	7.1	7.4	7.0	3.0	
Fuel Oil	84	87	101	84	78	87	81	10.1	
LPG	68	60	61	67	73	72	74	13.3	

¹ New construction for 2001 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 a small amount of kerosene use for water heating.

⁴ Includes only the water-heating consumption of the water-heating fuel. Not included are: 1) the consumption of the main water-heating fuel for uses other than water heating; 2) the consumption of the main water-heating fuel where it is the secondary, and not the main, water-heating fuel, and; 3) the consumption of other fuels that are used as secondary water-heating fuels.

⁵ Averages are for those households using each of the main water-heating fuels.

^a The row factor in this section is underestimated because it contains no error for estimating the end-use.

(*) = 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 2001 Residential Energy Consumption Survey.

Table CE4-3c. Water-Heating Energy Consumption in U.S. Households by Household Income, 2001

	Total	2001 Household Income				Below Poverty Line	Eligible for Federal Assistance ¹	RSE Row Factors
		Less than \$10,000	\$10,000 to \$29,999	\$30,000 to \$49,999	\$50,000 or More			
RSE Column Factor:	0.6	1.6	1.0	0.9	0.8	1.5	0.9	
Million Households								
Total U.S. Households	107.0	11.0	30.6	27.1	38.3	15.0	33.8	3.3
No Water Heating	Q	Q	Q	Q	Q	Q	Q	NF
Water Heating	106.9	11.0	30.5	27.1	38.3	14.9	33.7	3.3
Not Using a Major Fuel ²	0.2	Q	Q	Q	Q	Q	Q	72.4
Using a Major Fuel ²	106.7	11.0	30.5	27.0	38.2	14.9	33.7	3.3
For Main Water Heating	106.5	11.0	30.4	27.0	38.1	14.9	33.7	3.3
Number of Households with Water Heating, Major Fuels Used:								
Electricity	41.6	4.7	13.4	10.8	12.7	6.4	14.3	6.0
Natural Gas	58.2	5.6	15.5	14.1	23.0	7.9	17.7	5.2
Fuel Oil	4.7	0.4	1.1	1.3	2.0	0.4	1.1	15.5
LPG	3.0	0.3	0.9	1.0	0.8	0.4	0.9	19.4
Quadrillion Btu^a								
Water-Heating Btu Consumption, Major Fuels Used:								
Electricity	0.36	0.03	0.10	0.09	0.13	0.05	0.11	6.4
Natural Gas	1.15	0.08	0.26	0.27	0.53	0.13	0.31	5.7
Fuel Oil	0.13	0.01	0.02	0.03	0.06	0.01	0.03	17.2
LPG	0.05	(*)	0.01	0.02	0.01	(*)	0.01	21.2
Total ³	1.68	0.13	0.40	0.42	0.73	0.19	0.47	3.7
Physical Units^a								
Physical Units of Water-Heating Consumption, Major Fuels Used:								
Electricity (billion kWh)	104	9	29	28	39	14	33	6.4
Natural Gas (billion cf)	1,115	82	257	267	510	124	304	5.7
Fuel Oil (million gallons)	950	76	176	246	452	83	221	17.2
LPG (million gallons)	515	19	164	184	148	45	156	21.2
Million Btu per Household^{5,a}								
Average Water-Heating Btu Consumption per Household								
Using a Major Fuel ²	15.8	11.5	13.2	15.5	19.2	12.9	14.0	2.3
For Main Water Heating	15.8	11.5	13.2	15.5	19.3	12.9	14.0	2.3
Million Households								
Number of Households, Where the Main Water-Heating Fuel Is:								
Electricity	40.8	4.7	13.1	10.6	12.4	6.2	14.0	6.0
Natural Gas	58.0	5.6	15.4	14.1	23.0	7.8	17.6	5.2
Fuel Oil	4.6	0.4	1.0	1.3	1.9	0.4	1.1	15.9
LPG	2.9	0.3	0.9	1.0	0.8	0.4	0.9	19.5
No Water Heating	Q	Q	Q	Q	Q	Q	Q	NF

See footnotes at end of table.

Table CE4-3c. Water-Heating Energy Consumption in U.S. Households by Household Income, 2001 (Continued)

	2001 Household Income					Below Poverty Line	Eligible for Federal Assistance ¹	RSE Row Factors
	Total	Less than \$10,000	\$10,000 to \$29,999	\$30,000 to \$49,999	\$50,000 or More			
RSE Column Factor:	0.6	1.6	1.0	0.9	0.8	1.5	0.9	
Million Btu per Household^{5,a}								
Water-Heating Btu Consumption per Household,⁴ Where the Main Water-Heating Fuel Is:								
Electricity	8.7	6.3	7.6	8.8	10.7	7.8	8.1	2.7
Natural Gas	19.7	14.9	17.1	19.4	22.8	16.3	17.7	2.4
Fuel Oil	28.1	27.7	22.9	26.5	32.1	26.8	28.9	6.2
LPG	15.9	6.2	16.4	17.6	16.6	10.0	15.4	9.8
Physical Units (PU) per Household^{5,a}								
Physical Units of Water-Heating Consumption per Household,⁴ Where the Main Water-Heating Fuel Is:								
Electricity (kWh)	2,552	1,850	2,231	2,593	3,122	2,282	2,367	2.7
Natural Gas (thousand cf)	19	15	17	19	22	16	17	2.4
Fuel Oil (gallons)	203	200	165	192	231	193	209	6.2
LPG (gallons)	174	68	180	192	182	110	168	9.8
Number of Household Members (NHM) per Household⁵								
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:								
Electricity	2.4	1.7	2.2	2.5	2.9	2.4	2.5	3.0
Natural Gas	2.7	2.0	2.4	2.7	3.0	2.8	2.8	2.6
Fuel Oil	2.4	2.1	1.7	2.5	2.8	2.3	2.5	7.2
LPG	2.6	1.3	2.5	2.8	2.9	2.5	2.7	10.7
Water-Heating Intensity^{5,a} (PU÷NHM)								
Water-Heating Intensity, Where the Main Water-Heating Fuel Is:								
Electricity	1,048	1,060	1,008	1,053	1,073	970	962	2.6
Natural Gas	7.2	7.2	7.0	6.9	7.4	5.7	6.1	2.7
Fuel Oil	84	94	96	76	83	84	84	8.6
LPG	68	53	73	69	64	43	63	11.8

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 a small amount of kerosene use for water heating.

⁴ Includes only the water-heating consumption of the water-heating fuel. Not included are: 1) the consumption of the main water-heating fuel for uses other than water heating; 2) the consumption of the main water-heating fuel where it is the secondary, and not the main, water-heating fuel, and; 3) the consumption of other fuels that are used as secondary water-heating fuels.

⁵ Averages are for those households using each of the main water-heating fuels.

^a The row factor in this section is underestimated because it contains no error for estimating the end-use.

(*) = 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 2001 Residential Energy Consumption Survey.

Table CE4-4c. Water-Heating Energy Consumption in U.S. Households by Type of Housing Unit, 2001

	Type of Housing Unit					RSE Row Factors
	Total	Single-Family	Apartments in Buildings With		Mobile Homes	
			Two to Four Units	Five or More Units		
RSE Column Factor:	0.5	0.5	1.6	1.3	1.8	
Million Households						
Total U.S. Households	107.0	73.7	9.5	17.0	6.8	4.4
No Water Heating	Q	Q	Q	Q	Q	NF
Water Heating	106.9	73.6	9.5	17.0	6.8	4.4
Not Using a Major Fuel ¹	0.2	Q	Q	Q	Q	82.3
Using a Major Fuel ¹	106.7	73.5	9.5	16.9	6.8	4.4
For Main Water Heating	106.5	73.3	9.5	16.8	6.8	4.4
Number of Households with Water Heating, Major Fuels Used:						
Electricity	41.6	25.9	3.4	7.4	4.9	7.5
Natural Gas	58.2	42.8	5.7	8.2	1.5	6.7
Fuel Oil	4.7	3.0	0.4	1.3	Q	19.5
LPG	3.0	2.5	Q	Q	0.4	22.3
Quadrillion Btu^a						
Water-Heating Btu Consumption, Major Fuels Used:						
Electricity	0.36	0.24	0.02	0.04	0.05	8.4
Natural Gas	1.15	0.93	0.08	0.10	0.03	7.4
Fuel Oil	0.13	0.10	0.01	0.02	Q	20.5
LPG	0.05	0.04	Q	Q	(*)	23.4
Total ²	1.68	1.31	0.12	0.17	0.08	4.5
Physical Units^a						
Physical Units of Water-Heating Consumption, Major Fuels Used:						
Electricity (billion kWh)	104	71	7	13	14	8.4
Natural Gas (billion cf)	1,115	907	82	98	28	7.4
Fuel Oil (million gallons)	950	698	76	176	Q	20.5
LPG (million gallons)	515	458	Q	Q	51	23.4
Million Btu per Household^{4,a}						
Average Water-Heating Btu Consumption per Household						
Using a Major Fuel ¹	15.8	17.9	12.4	10.0	12.2	2.7
For Main Water Heating	15.8	17.9	12.4	10.0	12.2	2.7
Million Households						
Number of Households, Where the Main Water-Heating Fuel Is:						
Electricity	40.8	25.2	3.4	7.4	4.9	7.6
Natural Gas	58.0	42.7	5.7	8.1	1.5	6.7
Fuel Oil	4.6	2.9	0.4	1.3	Q	20.2
LPG	2.9	2.5	Q	Q	0.3	22.6
No Water Heating	Q	Q	Q	Q	Q	NF

See footnotes at end of table.

Table CE4-4c. Water-Heating Energy Consumption in U.S. Households by Type of Housing Unit, 2001 (Continued)

	Type of Housing Unit					RSE Row Factors
	Total	Single-Family	Apartments in Buildings With		Mobile Homes	
			Two to Four Units	Five or More Units		
RSE Column Factor:	0.5	0.5	1.6	1.3	1.8	
Million Btu per Household^{4,a}						
Water-Heating Btu Consumption per Household,³ Where the Main Water-Heating Fuel Is:						
Electricity	8.7	9.6	6.7	5.9	10.0	3.1
Natural Gas	19.7	21.8	14.8	12.4	18.8	3.1
Fuel Oil	28.1	32.3	25.7	19.0	Q	5.9
LPG	15.9	16.7	Q	Q	12.6	8.8
Physical Units (PU) per Household^{4,a}						
Physical Units of Water-Heating Consumption per Household,³ Where the Main Water-Heating Fuel Is:						
Electricity (kWh)	2,552	2,804	1,953	1,716	2,927	3.1
Natural Gas (thousand cf)	19	21	14	12	18	3.1
Fuel Oil (gallons)	203	233	185	137	Q	5.9
LPG (gallons)	174	183	Q	Q	138	8.8
Number of Household Members (NHM) per Household⁴						
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:						
Electricity	2.4	2.6	2.2	1.9	2.7	3.1
Natural Gas	2.7	2.8	2.4	2.1	2.4	3.1
Fuel Oil	2.4	2.6	1.7	2.1	Q	7.3
LPG	2.6	2.7	Q	Q	2.2	8.6
Water-Heating Intensity^{4,a} (PU÷NHM)						
Water-Heating Intensity, Where the Main Water-Heating Fuel Is:						
Electricity	1,048	1,082	895	925	1,094	2.7
Natural Gas	7.2	7.5	6.0	5.7	7.6	3.6
Fuel Oil	84	89	112	64	Q	9.1
LPG	68	68	Q	Q	62	9.3

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

² Includes a small amount of kerosene use for water heating.

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

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

^a The row factor in this section is underestimated because it contains no error for estimating the end-use.

(*) = 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 2001 Residential Energy Consumption Survey.

Table CE4-5.1u. Water-Heating Energy Consumption and Expenditures by Household Member and Demographics, 2001

Household Demographics	Water-Heating Energy								RSE Row Factors
	Households (millions)	Total ^a		Per Household ^a			Per Household Member ^a		
		Consumption (quadrillion Btu)	Expenditures (billion dollars)	Consumption (million Btu)	Expenditures (dollars)	Household Members	Consumption (million Btu)	Expenditures (dollars)	
RSE Column Factor:	1.3	1.5	1.4	0.9	0.8	0.7	0.9	0.8	
Total Households Using a Major Water-Heating Fuel¹	106.7	1.68	21.61	15.8	203	2.6	6.2	79	1.2
Household Size									
1 Person	28.1	0.27	3.59	9.6	128	1.0	9.6	128	2.1
2 Persons	35.0	0.52	6.73	14.9	192	2.0	7.5	96	2.1
3 Persons	17.0	0.30	3.94	17.8	232	3.0	5.9	77	2.7
4 Persons	15.6	0.32	4.02	20.6	258	4.0	5.1	65	3.1
5 Persons	7.1	0.17	2.11	23.6	296	5.0	4.7	59	4.1
6 or More Persons	4.0	0.10	1.24	25.5	312	6.7	3.8	47	4.4
2001 Household Income Category									
Less than \$9,999	11.0	0.13	1.63	11.5	149	1.9	6.1	79	4.8
\$10,000 to \$14,999	7.6	0.09	1.25	11.8	164	2.1	5.6	77	5.2
\$15,000 to \$19,999	8.9	0.12	1.54	13.0	173	2.3	5.7	76	4.5
\$20,000 to \$29,999	14.0	0.20	2.62	14.1	188	2.3	6.0	80	3.5
\$30,000 to \$39,999	13.9	0.21	2.72	14.9	196	2.6	5.8	77	3.2
\$40,000 to \$49,999	13.1	0.21	2.80	16.2	213	2.7	6.0	79	3.8
\$50,000 to \$74,999	21.6	0.39	4.86	17.9	225	2.9	6.1	77	2.7
\$75,000 to \$99,999	8.1	0.16	1.94	19.3	241	2.9	6.6	82	4.1
\$100,000 or More	8.5	0.19	2.25	22.6	263	3.0	7.5	87	4.6
Income Relative to Poverty Line									
Below 100 Percent	14.9	0.19	2.54	12.9	170	2.6	5.0	66	3.6
100 to 150 Percent	11.4	0.17	2.28	14.7	200	2.7	5.4	74	4.2
Above 150 Percent	80.3	1.32	16.79	16.5	209	2.5	6.5	82	1.4
Eligible for Federal Assistance²									
Yes	33.7	0.47	6.20	14.0	184	2.7	5.3	69	2.3
No	73.0	1.21	15.41	16.6	211	2.5	6.6	84	1.5
Age of Householder									
Under 25 Years	6.1	0.08	1.15	12.8	188	2.6	4.8	71	5.1
25 to 34 Years	16.8	0.26	3.54	15.7	211	3.0	5.2	69	3.0
35 to 44 Years	22.3	0.41	5.14	18.4	230	3.3	5.6	70	2.6
45 to 54 Years	20.7	0.36	4.52	17.5	219	2.7	6.4	80	2.8
55 to 64 Years	14.5	0.23	3.00	15.7	207	2.1	7.3	97	3.2
65 to 74 Years	12.6	0.17	2.10	13.3	167	1.8	7.4	94	3.7
75 Years or More	11.2	0.14	1.69	12.2	151	1.5	8.2	101	4.2
No answer/refused	2.5	0.04	0.48	15.2	188	2.3	6.5	81	7.5
Race of Householder									
Non-Hispanic	96.6	1.52	19.70	15.8	204	2.5	6.4	82	1.4
Non-Hispanic White	78.5	1.22	15.88	15.6	202	2.4	6.5	84	1.6
Non-Hispanic Black	12.7	0.22	2.79	17.6	221	2.7	6.6	82	3.8
Multi-racial ³	0.9	0.01	0.21	16.7	236	2.8	5.9	84	16.1
Other ⁴	4.5	0.06	0.83	14.0	185	3.3	4.3	56	6.1
Hispanic	10.1	0.16	1.91	15.6	188	3.3	4.7	57	4.4

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 Respondents could select one or more race categories to describe themselves.

⁴ Includes Native American, Native Alaskan, Asian, and Pacific Islander households.

^a The column factor in this section is underestimated because it contains no error for estimating the end-use.

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 2001 Residential Energy Consumption Survey.

Table CE4-5.2u. Water-Heating Energy Consumption and Expenditures by Square Feet and Household Demographics, 2001

Household Demographics	Water-Heating Energy								RSE Row Factors
	Households (millions)	Total ^a		Per Household ^a			Per Square Feet ^a		
		Consumption (quadrillion Btu)	Expenditures (billion dollars)	Consumption (million Btu)	Expenditures (dollars)	Square Feet	Consumption (1000 Btu)	Expenditures (dollars)	
RSE Column Factor:	1.2	1.4	1.3	0.8	0.7	0.8	1.0	1.0	
Total Households Using a Major Water-Heating Fuel¹	106.7	1.68	21.61	15.8	203	1,974	8.0	0.10	1.4
Household Size									
1 Person	28.1	0.27	3.59	9.6	128	1,430	6.7	0.09	2.5
2 Persons	35.0	0.52	6.73	14.9	192	2,081	7.2	0.09	2.4
3 Persons	17.0	0.30	3.94	17.8	232	2,097	8.5	0.11	3.1
4 Persons	15.6	0.32	4.02	20.6	258	2,342	8.8	0.11	3.4
5 Persons	7.1	0.17	2.11	23.6	296	2,317	10.2	0.13	4.8
6 or More Persons	4.0	0.10	1.24	25.5	312	2,301	11.1	0.14	5.4
2001 Household Income Category									
Less than \$9,999	11.0	0.13	1.63	11.5	149	1,173	9.8	0.13	4.7
\$10,000 to \$14,999	7.6	0.09	1.25	11.8	164	1,330	8.9	0.12	5.3
\$15,000 to \$19,999	8.9	0.12	1.54	13.0	173	1,494	8.7	0.12	4.5
\$20,000 to \$29,999	14.0	0.20	2.62	14.1	188	1,555	9.1	0.12	3.6
\$30,000 to \$39,999	13.9	0.21	2.72	14.9	196	1,724	8.6	0.11	3.5
\$40,000 to \$49,999	13.1	0.21	2.80	16.2	213	2,062	7.9	0.10	4.1
\$50,000 to \$74,999	21.6	0.39	4.86	17.9	225	2,362	7.6	0.10	3.2
\$75,000 to \$99,999	8.1	0.16	1.94	19.3	241	2,682	7.2	0.09	4.5
\$100,000 or More	8.5	0.19	2.25	22.6	263	3,395	6.7	0.08	4.4
Income Relative to Poverty Line									
Below 100 Percent	14.9	0.19	2.54	12.9	170	1,231	10.5	0.14	3.7
100 to 150 Percent	11.4	0.17	2.28	14.7	200	1,495	9.8	0.13	4.1
Above 150 Percent	80.3	1.32	16.79	16.5	209	2,181	7.5	0.10	1.6
Eligible for Federal Assistance²									
Yes	33.7	0.47	6.20	14.0	184	1,437	9.7	0.13	2.5
No	73.0	1.21	15.41	16.6	211	2,222	7.5	0.10	1.7
Age of Householder									
Under 25 Years	6.1	0.08	1.15	12.8	188	1,150	11.1	0.16	5.2
25 to 34 Years	16.8	0.26	3.54	15.7	211	1,667	9.4	0.13	3.4
35 to 44 Years	22.3	0.41	5.14	18.4	230	2,097	8.8	0.11	2.9
45 to 54 Years	20.7	0.36	4.52	17.5	219	2,305	7.6	0.09	3.0
55 to 64 Years	14.5	0.23	3.00	15.7	207	2,212	7.1	0.09	3.5
65 to 74 Years	12.6	0.17	2.10	13.3	167	1,928	6.9	0.09	4.0
75 Years or More	11.2	0.14	1.69	12.2	151	1,776	6.9	0.08	4.6
No answer/refused	2.5	0.04	0.48	15.2	188	1,974	7.7	0.10	7.9
Race of Householder									
Non-Hispanic	96.6	1.52	19.70	15.8	204	2,034	7.8	0.10	1.6
Non-Hispanic White	78.5	1.22	15.88	15.6	202	2,085	7.5	0.10	1.8
Non-Hispanic Black	12.7	0.22	2.79	17.6	221	1,830	9.6	0.12	4.7
Multi-racial ³	0.9	0.01	0.21	16.7	236	1,526	11.0	0.15	15.6
Other ⁴	4.5	0.06	0.83	14.0	185	1,816	7.7	0.10	7.4
Hispanic	10.1	0.16	1.91	15.6	188	1,407	11.1	0.13	4.6

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 Respondents could select one or more race categories to describe themselves.

⁴ Includes Native American, Native Alaskan, Asian, and Pacific Islander households.

^a The column factor in this section is underestimated because it contains no error for estimating the end-use.

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 2001 Residential Energy Consumption Survey.

Table CE4-6.1u. Water-Heating Energy Consumption and Expenditures by Household Member and Usage Indicators, 2001

Usage Indicators	Water-Heating Energy								RSE Row Factors
	Households (millions)	Total ^a		Per Household ^a			Per Household Member ^a		
		Consumption (quadrillion Btu)	Expenditures (billion dollars)	Consumption (million Btu)	Expenditures (dollars)	Household Members	Consumption (thousand Btu)	Expenditures (dollars)	
	RSE Column Factor:	1.4	1.6	1.6	0.8	0.7	0.7	0.9	
Total Households Using a Major Water-Heating Fuel¹ ..	106.7	1.68	21.61	15.8	203	2.6	6.2	79	1.2
Weekday Home Activities									
Home Used for Business									
Yes	7.5	0.14	1.82	18.3	243	2.9	6.3	84	4.6
No/Don't Know	99.2	1.54	19.79	15.6	200	2.5	6.1	79	1.3
Energy-Intensive Activity									
Yes	1.7	0.03	0.37	17.3	221	2.8	6.2	80	8.8
No/Don't Know	105.0	1.65	21.25	15.7	202	2.6	6.2	79	1.3
Someone Home All Day									
Yes	52.9	0.87	10.98	16.4	208	2.7	6.1	76	1.8
No/Don't Know	53.8	0.81	10.64	15.1	198	2.4	6.3	82	1.7
Total Floorspace Category² (square feet)									
Fewer than 500	3.8	0.03	0.48	8.7	126	1.8	4.8	70	8.0
500 to 999	21.7	0.24	3.44	11.2	159	2.1	5.4	77	3.1
1,000 to 1,499	22.7	0.32	4.33	14.0	191	2.5	5.6	77	3.0
1,500 to 1,999	16.6	0.27	3.47	16.2	209	2.7	6.1	78	3.1
2,000 to 2,499	13.5	0.24	2.99	17.9	222	2.7	6.6	82	3.4
2,500 to 2,999	9.3	0.16	1.97	17.6	211	2.7	6.5	78	3.7
3,000 to 3,499	6.8	0.14	1.74	20.8	256	3.1	6.7	82	5.2
3,500 to 3,999	4.1	0.09	1.08	22.2	266	3.2	7.0	83	6.4
4,000 or More	8.2	0.18	2.11	22.3	259	3.0	7.5	87	4.1
Year of Construction									
1939 or Before	18.8	0.31	3.64	16.5	193	2.5	6.7	78	3.6
1940 to 1949	7.6	0.13	1.54	17.0	203	2.7	6.4	76	5.0
1950 to 1959	14.2	0.24	2.84	16.8	200	2.5	6.7	80	3.3
1960 to 1969	13.7	0.21	2.59	15.6	189	2.4	6.4	78	3.3
1970 to 1979	18.7	0.25	3.68	13.6	196	2.5	5.4	78	3.2
1980 to 1989	18.2	0.27	3.86	14.8	212	2.5	5.9	85	3.4
1990 to 1999	14.5	0.25	3.26	17.1	225	2.9	5.9	77	4.9
2000 to 2001 ³	0.9	0.02	0.21	20.0	230	3.4	5.9	68	12.9
Housing Unit Type and Number of Bedrooms									
Mobile Homes	6.8	0.08	1.44	12.2	212	2.6	4.7	82	5.8
Less than 3 Bedrooms	3.7	0.04	0.71	11.0	192	2.0	5.5	95	7.1
3 or More Bedrooms	3.1	0.04	0.73	13.6	235	3.3	4.2	72	7.3
Single-Family Detached	63.0	1.12	14.05	17.8	223	2.7	6.5	82	1.8
Less than 3 Bedrooms	12.2	0.17	2.25	14.2	184	2.0	7.2	93	3.5
3 Bedrooms	33.5	0.57	7.22	17.1	215	2.7	6.4	81	2.3
4 Bedrooms	14.3	0.30	3.70	21.2	258	3.3	6.4	77	3.4
5 or More Bedrooms	2.9	0.07	0.88	25.7	303	3.8	6.9	81	7.1
Single-Family Attached	10.6	0.19	2.23	18.0	211	2.7	6.7	79	5.4
Less than 3 Bedrooms	3.9	0.06	0.71	15.7	181	2.1	7.5	87	8.3
3 Bedrooms	4.6	0.08	0.96	17.4	211	2.7	6.4	78	6.8
4 or More Bedrooms	2.1	0.05	0.56	23.6	269	3.8	6.3	71	11.9
Apartments in Buildings With 2 to 4 Units	9.5	0.12	1.57	12.4	165	2.3	5.4	73	4.9
Less than 2 Bedrooms	2.6	0.02	0.31	9.4	120	1.7	5.5	70	9.7
2 Bedrooms	5.0	0.06	0.84	11.8	167	2.1	5.5	78	5.4
3 or More Bedrooms	1.8	0.03	0.41	18.1	224	3.4	5.2	65	9.9

See footnotes at end of table.

Table CE4-6.1u. Water-Heating Energy Consumption and Expenditures by Household Member and Usage Indicators, 2001 (Continued)

Usage Indicators	Water-Heating Energy								RSE Row Factors
	Households (millions)	Total ^a		Per Household ^a			Per Household Member ^a		
		Consumption (quadrillion Btu)	Expenditures (billion dollars)	Consumption (million Btu)	Expenditures (dollars)	Household Members	Consumption (thousand Btu)	Expenditures (dollars)	
	RSE Column Factor:	1.4	1.6	1.6	0.8	0.7	0.7	0.9	
Apartments in Buildings									
With 5 or More Units	16.9	0.17	2.33	10.0	138	2.0	5.0	69	4.8
Less than 2 Bedrooms	8.5	0.07	0.89	7.7	105	1.5	5.0	69	5.3
2 Bedrooms	7.0	0.08	1.13	12.0	163	2.3	5.3	71	8.7
3 or More Bedrooms	1.5	0.02	0.31	14.1	212	3.3	4.2	63	10.1

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

² Does **not** include floorspace for unheated garages.

³ New construction for 2001 includes only those housing units built and occupied between January and the April-August period when the household interviews were conducted.

^a The column factor in this section is underestimated because it contains no error for estimating the end-use.

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 2001 Residential Energy Consumption Survey.

Table CE4-6.2u. Water-Heating Energy Consumption and Expenditures by Square Feet and Usage Indicators, 2001

Usage Indicators	Water-Heating Energy								RSE Row Factors
	Households (millions)	Total ^a		Per Household ^a			Per Square Feet ^a		
		Consumption (quadrillion Btu)	Expenditures (billion dollars)	Consumption (million Btu)	Expenditures (dollars)	Square Feet	Consumption (1000 Btu)	Expenditures (dollars)	
	RSE Column Factor:	1.4	1.6	1.5	0.8	0.7	0.7	0.9	
Total Households Using a Major Water-Heating Fuel¹ ..	106.7	1.68	21.61	15.8	203	1,974	8.0	0.10	1.5
Weekday Home Activities									
Home Used for Business									
Yes	7.5	0.14	1.82	18.3	243	2,584	7.1	0.09	5.1
No/Don't Know	99.2	1.54	19.79	15.6	200	1,928	8.1	0.10	1.6
Energy-Intensive Activity									
Yes	1.7	0.03	0.37	17.3	221	2,529	6.8	0.09	8.9
No/Don't Know	105.0	1.65	21.25	15.7	202	1,966	8.0	0.10	1.5
Someone Home All Day									
Yes	52.9	0.87	10.98	16.4	208	2,064	8.0	0.10	2.1
No/Don't Know	53.8	0.81	10.64	15.1	198	1,886	8.0	0.10	1.9
Total Floorspace Category² (square feet)									
Fewer than 500	3.8	0.03	0.48	8.7	126	405	21.4	0.31	6.7
500 to 999	21.7	0.24	3.44	11.2	159	770	14.5	0.21	3.1
1,000 to 1,499	22.7	0.32	4.33	14.0	191	1,232	11.4	0.15	2.7
1,500 to 1,999	16.6	0.27	3.47	16.2	209	1,737	9.3	0.12	3.2
2,000 to 2,499	13.5	0.24	2.99	17.9	222	2,227	8.0	0.10	3.2
2,500 to 2,999	9.3	0.16	1.97	17.6	211	2,733	6.4	0.08	3.4
3,000 to 3,499	6.8	0.14	1.74	20.8	256	3,226	6.4	0.08	5.2
3,500 to 3,999	4.1	0.09	1.08	22.2	266	3,697	6.0	0.07	6.1
4,000 or More	8.2	0.18	2.11	22.3	259	5,282	4.2	0.05	3.9
Year of Construction									
1939 or Before	18.8	0.31	3.64	16.5	193	2,029	8.1	0.10	3.6
1940 to 1949	7.6	0.13	1.54	17.0	203	1,853	9.2	0.11	4.9
1950 to 1959	14.2	0.24	2.84	16.8	200	2,004	8.4	0.10	3.7
1960 to 1969	13.7	0.21	2.59	15.6	189	1,834	8.5	0.10	3.8
1970 to 1979	18.7	0.25	3.68	13.6	196	1,737	7.8	0.11	3.5
1980 to 1989	18.2	0.27	3.86	14.8	212	1,925	7.7	0.11	3.9
1990 to 1999	14.5	0.25	3.26	17.1	225	2,371	7.2	0.09	5.7
2000 to 2001 ³	0.9	0.02	0.21	20.0	230	3,036	6.6	0.08	15.7
Housing Unit Type and Number of Bedrooms									
Mobile Homes	6.8	0.08	1.44	12.2	212	1,055	11.6	0.20	5.7
Less than 3 Bedrooms	3.7	0.04	0.71	11.0	192	835	13.2	0.23	6.9
3 or More Bedrooms	3.1	0.04	0.73	13.6	235	1,319	10.3	0.18	7.2
Single-Family Detached	63.0	1.12	14.05	17.8	223	2,427	7.4	0.09	1.9
Less than 3 Bedrooms	12.2	0.17	2.25	14.2	184	1,611	8.8	0.11	3.9
3 Bedrooms	33.5	0.57	7.22	17.1	215	2,288	7.5	0.09	2.5
4 Bedrooms	14.3	0.30	3.70	21.2	258	3,063	6.9	0.08	3.7
5 or More Bedrooms	2.9	0.07	0.88	25.7	303	4,320	6.0	0.07	7.3
Single-Family Attached	10.6	0.19	2.23	18.0	211	2,192	8.2	0.10	5.6
Less than 3 Bedrooms	3.9	0.06	0.71	15.7	181	1,548	10.1	0.12	7.8
3 Bedrooms	4.6	0.08	0.96	17.4	211	2,301	7.5	0.09	7.1
4 or More Bedrooms	2.1	0.05	0.56	23.6	269	3,168	7.4	0.08	11.0
Apartments in Buildings With 2 to 4 Units	9.5	0.12	1.57	12.4	165	1,393	8.9	0.12	4.9
Less than 2 Bedrooms	2.6	0.02	0.31	9.4	120	899	10.5	0.13	9.2
2 Bedrooms	5.0	0.06	0.84	11.8	167	1,403	8.4	0.12	5.8
3 or More Bedrooms	1.8	0.03	0.41	18.1	224	2,061	8.8	0.11	10.7

See footnotes at end of table.

Table CE4-6.2u. Water-Heating Energy Consumption and Expenditures by Square Feet and Usage Indicators, 2001 (Continued)

Usage Indicators	Water-Heating Energy								RSE Row Factors
	Households (millions)	Total ^a		Per Household ^a			Per Square Feet ^a		
		Consumption (quadrillion Btu)	Expenditures (billion dollars)	Consumption (million Btu)	Expenditures (dollars)	Square Feet	Consumption (1000 Btu)	Expenditures (dollars)	
		1.4	1.6	1.5	0.8	0.7	0.7	0.9	
RSE Column Factor:									
Apartments in Buildings									
With 5 or More Units	16.9	0.17	2.33	10.0	138	847	11.8	0.16	4.6
Less than 2 Bedrooms	8.5	0.07	0.89	7.7	105	640	12.0	0.16	4.9
2 Bedrooms	7.0	0.08	1.13	12.0	163	1,005	11.9	0.16	7.9
3 or More Bedrooms	1.5	0.02	0.31	14.1	212	1,294	10.9	0.16	10.4

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

² Does **not** include floorspace for unheated garages.

³ New construction for 2001 includes only those housing units built and occupied between January and the April-August period when the household interviews were conducted.

^a The column factor in this section is underestimated because it contains no error for estimating the end-use.

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 2001 Residential Energy Consumption Survey.

Table CE4-7c. Water-Heating Energy Consumption in U.S. Households by Four Most Populated States, 2001

	Total U.S.	Four Most Populated States				RSE Row Factors
		New York	California	Texas	Florida	
RSE Column Factor:	0.4	1.7	0.9	1.4	1.2	
Million Households						
Total U.S. Households	107.0	7.1	12.3	7.7	6.3	NE
No Water Heating	Q	Q	Q	Q	Q	NF
Water Heating	106.9	7.1	12.3	7.6	6.3	NE
Not Using a Major Fuel ¹	0.2	Q	Q	Q	Q	97.8
Using a Major Fuel ¹	106.7	7.0	12.2	7.6	6.3	NE
For Main Water Heating	106.5	7.0	12.1	7.6	6.3	1.2
Number of Households with Water Heating, Major Fuels Used:						
Electricity	41.6	0.9	2.3	3.0	5.2	7.9
Natural Gas	58.2	4.4	10.0	4.6	1.2	5.4
Fuel Oil	4.7	1.7	Q	Q	Q	15.3
LPG	3.0	Q	0.4	Q	Q	33.2
Quadrillion Btu^a						
Water-Heating Btu Consumption, Major Fuels Used:						
Electricity	0.36	0.01	0.01	0.03	0.04	11.2
Natural Gas	1.15	0.08	0.18	0.09	0.02	8.0
Fuel Oil	0.13	0.04	Q	Q	Q	14.5
LPG	0.05	Q	0.01	Q	Q	33.1
Total ²	1.68	0.13	0.20	0.12	0.06	3.6
Physical Units^a						
Physical Units of Water-Heating Consumption, Major Fuels Used:						
Electricity (billion kWh)	104	2	4	8	13	11.2
Natural Gas (billion cf)	1,115	76	175	92	17	8.0
Fuel Oil (million gallons)	950	295	Q	Q	Q	14.5
LPG (million gallons)	515	Q	61	Q	Q	33.1
Million Btu per Household^{4,a}						
Average Water-Heating Btu Consumption per Household						
Using a Major Fuel ¹	15.8	18.1	16.2	15.9	9.6	3.5
For Main Water Heating	15.8	18.1	16.2	15.9	9.7	3.6
Million Households						
Number of Households, Where the Main Water-Heating Fuel Is:						
Electricity	40.8	0.9	1.8	3.0	5.1	8.4
Natural Gas	58.0	4.4	9.9	4.5	1.2	5.5
Fuel Oil	4.6	1.6	Q	Q	Q	16.0
LPG	2.9	Q	0.4	Q	Q	33.3
No Water Heating	Q	Q	Q	Q	Q	NF

See footnotes at end of table.

Table CE4-7c. Water-Heating Energy Consumption in U.S. Households by Four Most Populated States, 2001 (Continued)

	Four Most Populated States					RSE Row Factors
	Total U.S.	New York	California	Texas	Florida	
RSE Column Factor:	0.4	1.7	0.9	1.4	1.2	
Million Btu per Household^{4,a}						
Water-Heating Btu Consumption per Household,³ Where the Main Water-Heating Fuel Is:						
Electricity	8.7	7.8	6.7	8.7	8.4	5.7
Natural Gas	19.7	17.5	18.1	20.6	15.2	4.2
Fuel Oil	28.1	24.8	Q	Q	Q	6.0
LPG	15.9	Q	12.9	Q	Q	14.3
Physical Units (PU) per Household^{4,a}						
Physical Units of Water-Heating Consumption per Household,³ Where the Main Water-Heating Fuel Is:						
Electricity (kWh)	2,552	2,292	1,967	2,537	2,450	5.7
Natural Gas (thousand cf)	19	17	18	20	15	4.2
Fuel Oil (gallons)	203	179	Q	Q	Q	6.0
LPG (gallons)	174	Q	141	Q	Q	14.3
Number of Household Members (NHM) per Household⁴						
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:						
Electricity	2.4	2.8	2.5	2.3	2.5	4.5
Natural Gas	2.7	2.5	3.1	3.0	2.7	2.7
Fuel Oil	2.4	2.3	Q	Q	Q	6.1
LPG	2.6	Q	2.4	Q	Q	13.1
Water-Heating Intensity^{4,a} (PU÷NHM)						
Water-Heating Intensity, Where the Main Water-Heating Fuel Is:						
Electricity	1,048	814	802	1,124	989	4.0
Natural Gas	7.2	6.8	5.7	6.8	5.4	5.6
Fuel Oil	84	77	Q	Q	Q	8.7
LPG	68	Q	59	Q	Q	19.2

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

² Includes a small amount of kerosene use for water heating.

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

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

^a The row factor in this section is underestimated because it contains no error for estimating the end-use.

NE = RSE row factor not estimated because RSE's for all statistics in this row are between 0.0 and 1.0 percent.

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 2001 Residential Energy Consumption Survey.

Table CE4-8c. Water-Heating Energy Consumption in U.S. Households by Urban/Rural Location, 2001

	Urban/Rural Location ¹					RSE Row Factors
	Total	City	Town	Suburbs	Rural	
	0.5	0.9	1.4	1.2	1.2	
Million Households						
Total U.S. Households	107.0	49.9	18.0	21.2	17.9	4.2
No Water Heating	Q	Q	Q	Q	Q	NF
Water Heating	106.9	49.8	18.0	21.2	17.9	4.2
Not Using a Major Fuel ²	0.2	Q	Q	Q	Q	73.5
Using a Major Fuel ²	106.7	49.7	18.0	21.2	17.8	4.2
For Main Water Heating	106.5	49.5	18.0	21.1	17.8	4.2
Number of Households with Water Heating, Major Fuels Used:						
Electricity	41.6	15.8	7.0	7.1	11.6	6.6
Natural Gas	58.2	32.6	9.4	13.0	3.1	5.9
Fuel Oil	4.7	1.6	1.1	1.0	1.0	16.2
LPG	3.0	0.3	0.5	Q	2.1	21.3
Quadrillion Btu^a						
Water-Heating Btu Consumption, Major Fuels Used:						
Electricity	0.36	0.12	0.06	0.06	0.12	7.7
Natural Gas	1.15	0.61	0.19	0.28	0.06	6.3
Fuel Oil	0.13	0.04	0.03	0.03	0.04	15.5
LPG	0.05	(*)	0.01	Q	0.03	23.1
Total ³	1.68	0.77	0.29	0.37	0.25	3.9
Physical Units^a						
Physical Units of Water-Heating Consumption, Major Fuels Used:						
Electricity (billion kWh)	104	34	17	18	36	7.7
Natural Gas (billion cf)	1,115	592	189	275	60	6.3
Fuel Oil (million gallons)	950	269	231	196	254	15.5
LPG (million gallons)	515	43	76	Q	375	23.1
Million Btu per Household^{5,a}						
Average Water-Heating Btu Consumption per Household						
Using a Major Fuel ²	15.8	15.4	16.1	17.5	14.3	2.1
For Main Water Heating	15.8	15.4	16.1	17.6	14.3	2.1
Million Households						
Number of Households, Where the Main Water-Heating Fuel Is:						
Electricity	40.8	15.3	6.9	7.0	11.6	6.6
Natural Gas	58.0	32.5	9.4	13.0	3.1	5.9
Fuel Oil	4.6	1.5	1.1	1.0	1.0	16.5
LPG	2.9	0.2	0.5	Q	2.1	21.0
No Water Heating	Q	Q	Q	Q	Q	NF

See footnotes at end of table.

Table CE4-8c. Water-Heating Energy Consumption in U.S. Households by Urban/Rural Location, 2001 (Continued)

	Urban/Rural Location ¹					RSE Row Factors
	Total	City	Town	Suburbs	Rural	
RSE Column Factor:	0.5	0.9	1.4	1.2	1.2	
Million Btu per Household^{5,a}						
Water-Heating Btu Consumption per Household,⁴ Where the Main Water-Heating Fuel Is:						
Electricity	8.7	7.5	8.2	8.7	10.6	2.8
Natural Gas	19.7	18.7	20.4	21.7	19.7	2.5
Fuel Oil	28.1	23.6	29.2	27.2	34.7	6.4
LPG	15.9	15.6	13.1	Q	16.5	10.2
Physical Units (PU) per Household^{5,a}						
Physical Units of Water-Heating Consumption per Household,⁴ Where the Main Water-Heating Fuel Is:						
Electricity (kWh)	2,552	2,210	2,404	2,536	3,104	2.8
Natural Gas (thousand cf)	19	18	20	21	19	2.5
Fuel Oil (gallons)	203	170	211	196	250	6.4
LPG (gallons)	174	171	144	Q	181	10.2
Number of Household Members (NHM) per Household⁵						
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:						
Electricity	2.4	2.3	2.3	2.4	2.7	2.6
Natural Gas	2.7	2.6	2.7	2.8	2.4	2.7
Fuel Oil	2.4	2.1	2.5	2.5	2.8	5.7
LPG	2.6	2.5	2.1	Q	2.6	9.6
Water-Heating Intensity^{5,a} (PU÷NHM)						
Water-Heating Intensity, Where the Main Water-Heating Fuel Is:						
Electricity	1,048	955	1,036	1,037	1,168	2.2
Natural Gas	7.2	6.9	7.4	7.6	8.0	2.9
Fuel Oil	84	81	86	80	90	6.9
LPG	68	69	67	Q	69	10.1

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 a small amount of kerosene use for water heating.

⁴ Includes only the water-heating consumption of the water-heating fuel. Not included are: 1) the consumption of the main water-heating fuel for uses other than water heating; 2) the consumption of the main water-heating fuel where it is the secondary, and not the main, water-heating fuel, and; 3) the consumption of other fuels that are used as secondary water-heating fuels.

⁵ Averages are for those households using each of the main water-heating fuels.

^a The row factor in this section is underestimated because it contains no error for estimating the end-use.

(*) = 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 2001 Residential Energy Consumption Survey.

Table CE4-9c. Water-Heating Energy Consumption in U.S. Households by Northeast Census Region, 2001

	Northeast Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			Middle Atlantic	New England	
RSE Column Factor:	0.5	1.0	1.2	1.6	
Million Households					
Total U.S. Households	107.0	20.3	14.8	5.4	NE
No Water Heating	Q	Q	Q	Q	NF
Water Heating	106.9	20.2	14.8	5.4	NE
Not Using a Major Fuel ¹	0.2	Q	Q	Q	83.7
Using a Major Fuel ¹	106.7	20.2	14.8	5.4	NE
For Main Water Heating	106.5	20.2	14.8	5.4	NE
Number of Households with Water Heating, Major Fuels Used:					
Electricity	41.6	4.7	3.3	1.5	10.0
Natural Gas	58.2	10.8	8.9	1.9	8.7
Fuel Oil	4.7	4.4	2.6	1.9	13.1
LPG	3.0	0.3	Q	0.2	24.9
Quadrillion Btu^a					
Water-Heating Btu Consumption, Major Fuels Used:					
Electricity	0.36	0.04	0.03	0.01	11.1
Natural Gas	1.15	0.19	0.16	0.03	9.6
Fuel Oil	0.13	0.12	0.07	0.06	14.6
LPG	0.05	0.01	Q	(*)	21.4
Total ²	1.68	0.36	0.26	0.11	2.6
Physical Units^a					
Physical Units of Water-Heating Consumption, Major Fuels Used:					
Electricity (billion kWh)	104	11	8	3	11.1
Natural Gas (billion cf)	1,115	189	155	34	9.6
Fuel Oil (million gallons)	950	900	490	410	14.6
LPG (million gallons)	515	65	Q	34	21.4
Million Btu per Household^{4,a}					
Average Water-Heating Btu Consumption per Household					
Using a Major Fuel ¹	15.8	18.0	17.4	19.6	2.6
For Main Water Heating	15.8	18.0	17.4	19.6	2.7
Million Households					
Number of Households, Where the Main Water-Heating Fuel Is:					
Electricity	40.8	4.7	3.2	1.4	9.9
Natural Gas	58.0	10.8	8.9	1.9	8.7
Fuel Oil	4.6	4.4	2.5	1.8	13.7
LPG	2.9	0.3	Q	0.2	24.9
No Water Heating	Q	Q	Q	Q	NF

See footnotes at end of table.

Table CE4-9c. Water-Heating Energy Consumption in U.S. Households by Northeast Census Region, 2001 (Continued)

	Northeast Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			Middle Atlantic	New England	
RSE Column Factor:	0.5	1.0	1.2	1.6	
Million Btu per Household^{4,a}					
Water-Heating Btu Consumption per Household,³ Where the Main Water-Heating Fuel Is:					
Electricity	8.7	8.0	8.3	7.3	4.2
Natural Gas	19.7	18.1	18.1	18.1	2.9
Fuel Oil	28.1	28.2	26.6	30.5	4.5
LPG	15.9	17.5	Q	19.1	11.8
Physical Units (PU) per Household^{4,a}					
Physical Units of Water-Heating Consumption per Household,³ Where the Main Water-Heating Fuel Is:					
Electricity (kWh)	2,552	2,342	2,428	2,149	4.2
Natural Gas (thousand cf)	19	18	18	18	2.9
Fuel Oil (gallons)	203	204	192	220	4.5
LPG (gallons)	174	192	Q	209	11.8
Number of Household Members (NHM) per Household⁴					
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:					
Electricity	2.4	2.5	2.6	2.3	3.7
Natural Gas	2.7	2.4	2.4	2.4	2.9
Fuel Oil	2.4	2.4	2.4	2.4	4.6
LPG	2.6	2.6	Q	2.5	10.2
Water-Heating Intensity^{4,a} (PU÷NHM)					
Water-Heating Intensity, Where the Main Water-Heating Fuel Is:					
Electricity	1,048	929	925	937	3.3
Natural Gas	7.2	7.3	7.3	7.2	4.0
Fuel Oil	84	84	78	92	5.9
LPG	68	74	Q	84	10.9

1 The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).
 2 Includes a small amount of kerosene use for water heating.
 3 Includes only the water-heating consumption of the water-heating fuel. Not included are: 1) the consumption of the main water-heating fuel for uses other than water heating; 2) the consumption of the main water-heating fuel where it is the secondary, and not the main, water-heating fuel, and; 3) the consumption of other fuels that are used as secondary water-heating fuels.
 4 Averages are for those households using each of the main water-heating fuels.
 a The row factor in this section is underestimated because it contains no error for estimating the end-use.
 (*) = Value rounds to zero in the units displayed.
 NE = RSE row factor not estimated because RSE's for all statistics in this row are between 0.0 and 1.0 percent.
 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 2001 Residential Energy Consumption Survey.

**Table CE4-10c. Water-Heating Energy Consumption in U.S. Households
by Midwest Census Region, 2001**

	Midwest Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			East North Central	West North Central	
	0.6	0.9	1.3	1.5	
Million Households					
Total U.S. Households	107.0	24.5	17.1	7.4	NE
No Water Heating	Q	Q	Q	Q	NF
Water Heating	106.9	24.5	17.1	7.4	NE
Not Using a Major Fuel ¹	0.2	Q	Q	Q	72.5
Using a Major Fuel ¹	106.7	24.5	17.1	7.4	NE
For Main Water Heating	106.5	24.5	17.1	7.4	NE
Number of Households with Water Heating, Major Fuels Used:					
Electricity	41.6	6.4	4.2	2.2	6.8
Natural Gas	58.2	17.0	12.5	4.5	4.0
Fuel Oil	4.7	Q	Q	Q	19.4
LPG	3.0	1.3	0.5	0.7	23.0
Quadrillion Btu^a					
Water-Heating Btu Consumption, Major Fuels Used:					
Electricity	0.36	0.05	0.03	0.02	7.6
Natural Gas	1.15	0.35	0.26	0.09	4.8
Fuel Oil	0.13	Q	Q	Q	21.9
LPG	0.05	0.02	0.01	0.01	24.7
Total ²	1.68	0.43	0.30	0.12	2.6
Physical Units^a					
Physical Units of Water-Heating Consumption, Major Fuels Used:					
Electricity (billion kWh)	104	16	10	6	7.6
Natural Gas (billion cf)	1,115	341	253	88	4.8
Fuel Oil (million gallons)	950	Q	Q	Q	21.9
LPG (million gallons)	515	232	93	139	24.7
Million Btu per Household^{3,a}					
Average Water-Heating Btu Consumption per Household					
Using a Major Fuel ¹	15.8	17.4	17.7	16.8	2.6
For Main Water Heating	15.8	17.4	17.7	16.8	2.6
Million Households					
Number of Households, Where the Main Water-Heating Fuel Is:					
Electricity	40.8	6.3	4.2	2.2	6.8
Natural Gas	58.0	16.9	12.4	4.5	3.9
Fuel Oil	4.6	Q	Q	Q	20.2
LPG	2.9	1.3	0.5	0.7	23.0
No Water Heating	Q	Q	Q	Q	NF

See footnotes at end of table.

Table CE4-10c. Water-Heating Energy Consumption in U.S. Households by Midwest Census Region, 2001 (Continued)

	Midwest Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			East North Central	West North Central	
RSE Column Factor:	0.6	0.9	1.3	1.5	
Million Btu per Household^{3,a}					
Water-Heating Btu Consumption per Household,³ Where the Main Water-Heating Fuel Is:					
Electricity	8.7	8.6	8.0	9.7	3.0
Natural Gas	19.7	20.6	20.8	20.1	2.7
Fuel Oil	28.1	Q	Q	Q	6.8
LPG	15.9	16.9	16.0	17.5	6.4
Physical Units (PU) per Household^{3,a}					
Physical Units of Water-Heating Consumption per Household,³ Where the Main Water-Heating Fuel Is:					
Electricity (kWh)	2,552	2,515	2,337	2,854	3.0
Natural Gas (thousand cf)	19	20	20	20	2.7
Fuel Oil (gallons)	203	Q	Q	Q	6.8
LPG (gallons)	174	185	175	192	6.4
Number of Household Members (NHM) per Household³					
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:					
Electricity	2.4	2.4	2.3	2.5	3.3
Natural Gas	2.7	2.6	2.6	2.4	3.3
Fuel Oil	2.4	Q	Q	Q	6.8
LPG	2.6	2.6	2.7	2.5	5.9
Water-Heating Intensity^{3,a} (PU÷NHM)					
Water-Heating Intensity, Where the Main Water-Heating Fuel Is:					
Electricity	1,048	1,069	1,034	1,126	3.9
Natural Gas	7.2	7.8	7.7	8.0	2.1
Fuel Oil	84	Q	Q	Q	9.1
LPG	68	72	65	77	5.6

¹ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).
² Includes a small amount of kerosene use for water heating.
³ Includes only the water-heating consumption of the water-heating fuel. Not included are: 1) the consumption of the main water-heating fuel for uses other than water heating; 2) the consumption of the main water-heating fuel where it is the secondary, and not the main, water-heating fuel, and; 3) the consumption of other fuels that are used as secondary water-heating fuels.
^a Averages are for those households using each of the main water-heating fuels.
^a The row factor in this section is underestimated because it contains no error for estimating the end-use.
NE = RSE row factor not estimated because RSE's for all statistics in this row are between 0.0 and 1.0 percent.
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 2001 Residential Energy Consumption Survey.

Table CE4-11c. Water-Heating Energy Consumption in U.S. Households by South Census Region, 2001

	South Census Region					RSE Row Factors
	Total U.S.	Census Division			Total	
		South Atlantic	East South Central	West south Central		
RSE Column Factor:	0.4	0.9	1.0	1.9	1.4	
Million Households						
Total U.S. Households	107.0	38.9	20.3	6.8	11.8	NE
No Water Heating	Q	Q	Q	Q	Q	NF
Water Heating	106.9	38.9	20.3	6.8	11.8	NE
Not Using a Major Fuel ¹	0.2	Q	Q	Q	Q	93.2
Using a Major Fuel ¹	106.7	38.9	20.3	6.8	11.8	NE
For Main Water Heating	106.5	38.8	20.2	6.8	11.7	NE
Number of Households with Water Heating, Major Fuels Used:						
Electricity	41.6	22.6	13.5	4.4	4.7	6.6
Natural Gas	58.2	15.5	6.3	2.2	7.0	8.4
Fuel Oil	4.7	Q	Q	Q	Q	25.0
LPG	3.0	0.7	0.3	0.2	Q	30.1
Quadrillion Btu^a						
Water-Heating Btu Consumption, Major Fuels Used:						
Electricity	0.36	0.20	0.12	0.05	0.04	7.7
Natural Gas	1.15	0.32	0.13	0.04	0.15	8.7
Fuel Oil	0.13	Q	Q	Q	Q	28.1
LPG	0.05	0.01	0.01	(*)	Q	28.5
Total ²	1.68	0.54	0.26	0.09	0.19	3.2
Physical Units^a						
Physical Units of Water-Heating Consumption, Major Fuels Used:						
Electricity (billion kWh)	104	60	35	13	12	7.7
Natural Gas (billion cf)	1,115	313	127	42	144	8.7
Fuel Oil (million gallons)	950	Q	Q	Q	Q	28.1
LPG (million gallons)	515	111	56	17	Q	28.5
Million Btu per Household^{3,a}						
Average Water-Heating Btu Consumption per Household						
Using a Major Fuel ¹	15.8	13.9	12.8	13.3	16.3	3.2
For Main Water Heating	15.8	14.0	12.9	13.3	16.3	3.2
Million Households						
Number of Households, Where the Main Water-Heating Fuel Is:						
Electricity	40.8	22.4	13.4	4.4	4.6	6.6
Natural Gas	58.0	15.4	6.3	2.2	6.9	8.4
Fuel Oil	4.6	Q	Q	Q	Q	26.0
LPG	2.9	0.6	Q	0.2	Q	27.3
No Water Heating	Q	Q	Q	Q	Q	NF

See footnotes at end of table.

Table CE4-11c. Water-Heating Energy Consumption in U.S. Households by South Census Region, 2001 (Continued)

	South Census Region					RSE Row Factors
	Total U.S.	Census Division			West south Central	
		Total	South Atlantic	East South Central		
RSE Column Factor:	0.4	0.9	1.0	1.9	1.4	
Million Btu per Household^{3,a}						
Water-Heating Btu Consumption per Household,³ Where the Main Water-Heating Fuel Is:						
Electricity	8.7	9.1	8.8	10.3	8.7	3.0
Natural Gas	19.7	20.8	20.8	19.6	21.3	3.9
Fuel Oil	28.1	Q	Q	Q	Q	8.7
LPG	15.9	15.0	Q	8.3	Q	10.1
Physical Units (PU) per Household^{3,a}						
Physical Units of Water-Heating Consumption per Household,³ Where the Main Water-Heating Fuel Is:						
Electricity (kWh)	2,552	2,661	2,587	3,015	2,536	3.0
Natural Gas (thousand cf)	19	20	20	19	21	3.9
Fuel Oil (gallons)	203	Q	Q	Q	Q	8.7
LPG (gallons)	174	165	Q	91	Q	10.1
Number of Household Members (NHM) per Household³						
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:						
Electricity	2.4	2.5	2.5	2.5	2.2	2.9
Natural Gas	2.7	2.7	2.6	2.2	2.8	2.9
Fuel Oil	2.4	Q	Q	Q	Q	8.7
LPG	2.6	2.5	Q	1.4	Q	11.7
Water-Heating Intensity^{3,a} (PU÷NHM)						
Water-Heating Intensity, Where the Main Water-Heating Fuel Is:						
Electricity	1,048	1,083	1,030	1,195	1,134	1.9
Natural Gas	7.2	7.6	7.7	8.5	7.3	3.9
Fuel Oil	84	Q	Q	Q	Q	11.7
LPG	68	66	Q	66	Q	11.3

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

² Includes a small amount of kerosene use for water heating.

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

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

^a The row factor in this section is underestimated because it contains no error for estimating the end-use.

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

NE = RSE row factor not estimated because RSE's for all statistics in this row are between 0.0 and 1.0 percent.

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 2001 Residential Energy Consumption Survey.

Table CE4-12c. Water-Heating Energy Consumption in U.S. Households by West Census Region, 2001

	Total U.S.	West Census Region			RSE Row Factors
		Total	Census Division		
			Mountain	Pacific	
RSE Column Factor:	0.5	1.0	1.7	1.2	
Million Households					
Total U.S. Households	107.0	23.3	6.7	16.6	NE
No Water Heating	Q	Q	Q	Q	NF
Water Heating	106.9	23.3	6.7	16.6	NE
Not Using a Major Fuel ¹	0.2	Q	Q	Q	77.4
Using a Major Fuel ¹	106.7	23.2	6.7	16.5	NE
For Main Water Heating	106.5	23.0	6.7	16.3	NE
Number of Households with Water Heating, Major Fuels Used:					
Electricity	41.6	7.9	2.3	5.5	5.0
Natural Gas	58.2	15.0	4.1	10.9	2.7
Fuel Oil	4.7	Q	Q	Q	20.7
LPG	3.0	0.7	0.2	0.5	26.2
Quadrillion Btu^a					
Water-Heating Btu Consumption, Major Fuels Used:					
Electricity	0.36	0.06	0.02	0.04	7.0
Natural Gas	1.15	0.28	0.08	0.20	3.8
Fuel Oil	0.13	Q	Q	Q	23.3
LPG	0.05	0.01	(*)	0.01	26.4
Total ²	1.68	0.35	0.11	0.24	2.5
Physical Units^a					
Physical Units of Water-Heating Consumption, Major Fuels Used:					
Electricity (billion kWh)	104	18	5	12	7.0
Natural Gas (billion cf)	1,115	272	81	191	3.8
Fuel Oil (million gallons)	950	Q	Q	Q	23.3
LPG (million gallons)	515	108	40	68	26.4
Million Btu per Household^{4,a}					
Average Water-Heating Btu Consumption per Household					
Using a Major Fuel ¹	15.8	15.1	15.7	14.9	2.5
For Main Water Heating	15.8	15.2	15.8	14.9	2.5
Million Households					
Number of Households, Where the Main Water-Heating Fuel Is:					
Electricity	40.8	7.3	2.3	5.0	4.9
Natural Gas	58.0	14.9	4.1	10.8	2.8
Fuel Oil	4.6	Q	Q	Q	21.6
LPG	2.9	0.7	0.2	0.5	26.2
No Water Heating	Q	Q	Q	Q	NF

See footnotes at end of table.

Table CE4-12c. Water-Heating Energy Consumption in U.S. Households by West Census Region, 2001 (Continued)

	West Census Region				RSE Row Factors
	Total U.S.	Census Division			
		Total	Mountain	Pacific	
RSE Column Factor:	0.5	1.0	1.7	1.2	
Million Btu per Household^{4,a}					
Water-Heating Btu Consumption per Household,³ Where the Main Water-Heating Fuel Is:					
Electricity	8.7	8.1	7.9	8.2	4.4
Natural Gas	19.7	18.7	20.2	18.1	2.7
Fuel Oil	28.1	Q	Q	Q	7.2
LPG	15.9	14.0	15.4	13.3	9.9
Physical Units (PU) per Household^{4,a}					
Physical Units of Water-Heating Consumption per Household,³ Where the Main Water-Heating Fuel Is:					
Electricity (kWh)	2,552	2,386	2,320	2,416	4.4
Natural Gas (thousand cf)	19	18	20	18	2.7
Fuel Oil (gallons)	203	Q	Q	Q	7.2
LPG (gallons)	174	153	169	146	9.9
Number of Household Members (NHM) per Household⁴					
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:					
Electricity	2.4	2.4	2.4	2.4	3.7
Natural Gas	2.7	3.0	2.9	3.0	2.3
Fuel Oil	2.4	Q	Q	Q	7.2
LPG	2.6	2.6	3.0	2.4	10.8
Water-Heating Intensity^{4,a} (PU÷NHM)					
Water-Heating Intensity, Where the Main Water-Heating Fuel Is:					
Electricity	1,048	1,000	948	1,026	3.9
Natural Gas	7.2	6.1	6.8	5.9	2.9
Fuel Oil	84	Q	Q	Q	9.7
LPG	68	58	57	59	16.6

1 The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).
 2 Includes a small amount of kerosene use for water heating.
 3 Includes only the water-heating consumption of the water-heating fuel. Not included are: 1) the consumption of the main water-heating fuel for uses other than water heating; 2) the consumption of the main water-heating fuel where it is the secondary, and not the main, water-heating fuel, and; 3) the consumption of other fuels that are used as secondary water-heating fuels.
 4 Averages are for those households using each of the main water-heating fuels.
^a The row factor in this section is underestimated because it contains no error for estimating the end-use.
 (*) = Value rounds to zero in the units displayed.
 NE = RSE row factor not estimated because RSE's for all statistics in this row are between 0.0 and 1.0 percent.
 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.
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