

Table WH5. Total Expenditures for Water Heating by Major Fuels Used, 2005
Billion Dollars

	U.S. Households (millions)	Total U.S. Using a Major Water Heating Fuel ⁵ (millions)	Major Fuels Used ⁵ (billion Dollars)				
			Total	Electricity	Natural Gas	Fuel Oil	LPG
Total	111.1	109.8	31.99	11.13	15.57	2.00	3.28
Census Region and Division							
Northeast.....	20.6	19.9	6.65	1.32	3.07	1.81	0.45
New England.....	5.5	5.3	1.95	0.48	0.69	0.66	0.12
Middle Atlantic.....	15.1	14.5	4.70	0.84	2.38	1.15	0.33
Midwest.....	25.6	25.4	6.84	1.80	4.10	Q	0.92
East North Central.....	17.7	17.6	4.73	1.27	2.85	N	0.60
West North Central.....	7.9	7.8	2.11	0.53	1.25	Q	0.32
South.....	40.7	40.5	11.46	6.31	4.08	Q	0.95
South Atlantic.....	21.7	21.7	5.92	3.83	1.72	Q	0.29
East South Central.....	6.9	6.9	1.95	1.06	0.66	Q	0.20
West South Central.....	12.1	12.0	3.60	1.42	1.70	N	0.47
West.....	24.2	24.0	7.04	1.70	4.32	Q	0.96
Mountain.....	7.6	7.5	2.19	0.53	1.22	Q	0.39
Pacific.....	16.6	16.5	4.85	1.18	3.10	Q	0.57
Four Most Populated States							
New York.....	7.1	6.7	2.36	0.31	0.98	0.80	0.26
Florida.....	7.0	7.0	1.86	1.56	0.25	N	Q
Texas.....	8.0	7.9	2.57	1.05	1.21	N	0.31
California.....	12.1	12.1	3.56	0.34	2.71	N	0.51
All Other States.....	76.9	76.2	21.65	7.88	10.42	1.20	2.14
Urban/Rural Location (as Self-Reported)							
City.....	47.1	46.5	12.50	4.13	7.00	0.64	0.74
Town.....	19.0	18.8	5.29	1.65	2.90	0.33	0.40
Suburbs.....	22.7	22.5	7.14	1.57	4.61	0.45	0.51
Rural.....	22.3	22.0	7.06	3.78	1.07	0.58	1.63
Climate Zone¹							
Less than 2,000 CDD and--							
Greater than 7,000 HDD.....	10.9	10.6	3.20	1.00	1.33	Q	0.50
5,500 to 7,000 HDD.....	26.1	25.8	7.16	1.70	4.11	0.76	0.58
4,000 to 5,499 HDD.....	27.3	26.8	7.85	2.58	3.76	0.79	0.73
Fewer than 4,000 HDD.....	24.0	23.9	7.14	2.14	4.03	Q	0.92
2000 CDD or More and--							
Less than 4,000 HDD.....	22.8	22.6	6.65	3.71	2.34	Q	0.54

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			Total	Electricity	Natural Gas	Fuel Oil	LPG	
Type of Housing Unit								
Single-Family Detached.....	72.1	71.8	23.00	7.13	11.98	1.33		2.56
Single-Family Attached.....	7.6	7.5	2.03	0.59	1.26	Q		Q
Apartments in 2-4 Unit Buildings.....	7.8	7.7	1.84	0.62	0.98	0.17		Q
Apartments in 5 or More Unit Buildings.....	16.7	16.1	3.31	1.63	1.09	0.37		0.22
Mobile Homes.....	6.9	6.8	1.81	1.17	0.26	Q		0.31
Ownership of Housing Unit								
Owned	78.1	77.6	24.09	7.63	12.21	1.45		2.80
Single-Family Detached.....	64.1	63.8	20.56	6.12	10.77	1.26		2.42
Single-Family Attached.....	4.2	4.1	1.12	0.23	0.74	Q		Q
Apartments in 2-4 Unit Buildings.....	1.8	1.8	0.53	0.10	0.33	Q		Q
Apartments in 5 or More Unit Buildings.....	2.3	2.3	0.41	0.22	0.16	Q		Q
Mobile Homes.....	5.7	5.6	1.47	0.96	0.20	Q		0.26
Rented	33.0	32.2	7.90	3.50	3.36	0.56		0.48
Single-Family Detached.....	8.0	8.0	2.43	1.01	1.21	Q		Q
Single-Family Attached.....	3.4	3.4	0.91	0.35	0.51	Q		Q
Apartments in 2-4 Unit Buildings.....	5.9	5.8	1.32	0.51	0.65	0.10		Q
Apartments in 5 or More Unit Buildings.....	14.4	13.8	2.89	1.41	0.93	0.35		0.20
Mobile Homes.....	1.2	1.1	0.35	0.21	0.06	Q		Q
Year of Construction								
Before 1940.....	14.7	14.5	4.32	1.15	2.22	0.52		0.42
1940 to 1949.....	7.4	7.3	2.17	0.33	1.28	0.26		0.30
1950 to 1959.....	12.5	12.4	3.36	0.94	1.97	0.25		0.20
1960 to 1969.....	12.5	12.2	3.40	1.02	1.80	0.33		0.24
1970 to 1979.....	18.9	18.6	5.05	2.21	2.21	0.26		0.38
1980 to 1989.....	18.6	18.4	5.21	2.20	2.31	0.13		0.56
1990 to 1999.....	17.3	17.2	5.45	2.24	2.42	0.18		0.62
2000 to 2005.....	9.2	9.1	3.03	1.03	1.36	Q		0.55

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			Total	Electricity	Natural Gas	Fuel Oil	LPG	
Household Size								
1 Person.....	30.0	29.5	5.38	1.97	2.59	0.26	0.56	
2 Persons.....	34.8	34.4	9.81	3.41	4.73	0.66	1.02	
3 Persons.....	18.4	18.2	6.03	2.26	2.86	0.41	0.50	
4 Persons.....	15.9	15.8	5.69	1.92	2.78	0.35	0.63	
5 Persons.....	7.9	7.9	3.14	1.01	1.57	0.21	0.35	
6 or More Persons.....	4.1	4.1	1.94	0.56	1.05	Q	0.22	
2005 Household Income Category								
Less than \$10,000.....	9.9	9.5	2.15	0.92	0.90	0.15	0.18	
\$10,000 to \$14,999.....	8.5	8.3	1.88	0.85	0.72	0.17	0.14	
\$15,000 to \$19,999.....	8.4	8.3	1.99	0.84	0.78	0.20	0.17	
\$20,000 to \$29,999.....	15.1	14.9	3.81	1.64	1.69	0.16	0.32	
\$30,000 to \$39,999.....	13.6	13.4	3.67	1.56	1.67	0.17	0.27	
\$40,000 to \$49,999.....	11.0	11.0	3.02	1.08	1.50	0.19	0.26	
\$50,000 to \$74,999.....	19.8	19.7	6.14	1.95	3.15	0.29	0.75	
\$75,000 to \$99,999.....	10.6	10.5	3.50	1.17	1.82	0.30	0.21	
\$100,000 or More.....	14.2	14.1	5.84	1.12	3.35	0.38	0.99	
Income Relative to Poverty Line								
Below 100 Percent.....	16.6	16.2	4.18	1.78	1.67	0.33	0.39	
100 to 150 Percent.....	12.9	12.8	3.33	1.62	1.35	0.16	0.19	
Above 150 Percent.....	81.5	80.9	24.48	7.73	12.55	1.51	2.70	
Eligible for Federal Assistance²								
Yes.....	38.6	37.8	9.93	4.24	4.16	0.74	0.79	
No.....	72.5	72.0	22.06	6.89	11.41	1.27	2.49	
Payment Method for Utilities								
All Paid by Household.....	97.5	96.8	28.92	10.05	14.48	1.50	2.89	
Some Paid, Some in Rent.....	7.6	7.4	1.76	0.58	0.62	0.33	0.22	
All Included in Rent.....	4.7	4.3	0.95	0.33	0.35	0.14	Q	
Other Method.....	1.3	1.3	0.36	0.17	0.13	Q	Q	

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	U.S. Households (millions)	Total U.S. Using a Major Water Heating Fuel ⁵ (millions)	Major Fuels Used ⁵ (billion Dollars)					
			Total	Electricity	Natural Gas	Fuel Oil	LPG	
Ethnic Origin of Householder								
Hispanic Descent.....	14.8	14.5	4.47	1.65	2.00	0.39	0.42	
Non-Hispanic Descent.....	96.3	95.3	27.52	9.48	13.57	1.61	2.85	
Race of Householder³								
White.....	79.1	78.4	22.99	7.79	11.04	1.42	2.74	
Hispanic.....	5.0	5.0	1.53	0.60	0.61	0.12	0.20	
Non-Hispanic.....	74.1	73.4	21.46	7.19	10.42	1.31	2.54	
Black.....	13.4	13.3	3.72	1.53	1.83	0.20	0.16	
Hispanic.....	0.3	0.3	0.12	Q	Q	Q	N	
Non-Hispanic.....	13.1	13.0	3.60	1.46	1.80	0.19	0.16	
Asian.....	3.3	3.3	0.94	0.28	0.58	Q	Q	
Multi-Racial.....	1.3	1.3	0.34	0.11	0.20	Q	Q	
Other.....	7.1	7.0	1.94	0.55	1.08	0.15	0.17	
Undetermined (Race Reported as Hispanic).....	6.9	6.6	2.06	0.88	0.85	0.21	Q	
Age of Householder								
Under 25 Years.....	5.5	5.2	1.26	0.72	0.39	Q	Q	
25 to 34 Years.....	18.2	18.0	5.34	2.18	2.59	0.19	0.38	
35 to 44 Years.....	22.2	22.0	7.36	2.61	3.70	0.32	0.73	
45 to 54 Years.....	23.3	23.2	7.36	2.21	3.69	0.59	0.87	
55 to 64 Years.....	18.0	17.8	5.36	1.67	2.56	0.39	0.74	
65 to 74 Years.....	12.3	12.1	2.97	0.98	1.44	0.17	0.38	
75 Years or More.....	11.7	11.5	2.33	0.76	1.20	0.24	0.13	
Adults Age 65 or Older in Household								
Yes.....	26.9	26.4	6.41	2.06	3.30	0.50	0.55	
No.....	84.2	83.4	25.58	9.08	12.27	1.51	2.72	
Children Under Age 5 in Household								
Yes.....	15.0	14.9	5.35	1.99	2.59	0.27	0.51	
No.....	96.1	94.9	26.64	9.15	12.98	1.73	2.77	
Children Age 5 to 16 in Household								
Yes.....	28.1	28.0	10.58	3.47	5.26	0.61	1.24	
No.....	83.0	81.8	21.41	7.67	10.31	1.39	2.04	

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			Total	Electricity	Natural Gas	Fuel Oil	LPG	
Number of Water Heaters								
1.....	106.3	106.1	29.27	10.67	14.85	1.84	1.92	
2 or More.....	3.7	3.7	2.72	0.47	0.72	0.17	1.36	
Do Not Use Hot Water.....	1.1	N	N	N	N	N	N	
Age of Main Water Heater								
Used by One Housing Unit								
Less than 2 Years.....	14.7	14.6	4.90	1.48	2.58	0.15	0.69	
2 to 4 Years.....	18.6	18.6	5.68	2.06	2.85	0.21	0.57	
5 to 9 Years.....	25.5	25.5	7.70	2.83	3.76	0.24	0.87	
10 to 19 Years.....	20.1	20.1	5.79	1.88	3.09	0.31	0.51	
20 Years or More.....	6.8	6.8	1.87	0.73	0.79	0.23	Q	
Don't Know.....	12.0	12.0	3.17	1.23	1.57	0.12	0.26	
No Separate Water Heater.....	1.9	1.9	0.52	0.12	0.08	Q	Q	
Used by Two or More Housing Units								
Less than 2 Years.....	0.3	0.3	0.05	Q	Q	Q	N	
2 to 4 Years.....	0.5	0.5	0.11	Q	Q	Q	Q	
5 to 9 Years.....	0.5	0.5	0.14	Q	0.08	Q	Q	
10 to 19 Years.....	0.6	0.6	0.12	Q	0.04	Q	N	
20 Years or More.....	0.6	0.6	0.15	Q	0.03	Q	Q	
Don't Know.....	4.4	4.4	1.04	0.40	0.38	0.19	Q	
No Separate Water Heater.....	3.4	3.4	0.75	0.23	0.25	0.21	Q	
Size of Main Water Heater								
Used by One Housing Unit								
Small (30 gallons or less).....	17.1	17.1	4.11	2.00	1.51	0.17	0.43	
Medium (31 to 49 gallons).....	52.4	52.4	14.96	4.54	8.41	0.51	1.48	
Large (50 gallons or more).....	27.1	27.0	9.59	3.62	4.61	0.32	1.03	
Tankless water heater.....	1.1	1.1	0.45	Q	0.09	0.26	Q	
No Separate Water Heater.....	1.9	1.9	0.52	0.12	0.08	Q	Q	
Used by Two or More Housing Units								
Small (30 gallons or less).....	1.4	1.4	0.39	0.09	0.15	Q	Q	
Medium (31 to 49 gallons).....	2.4	2.4	0.52	0.23	0.19	Q	Q	
Large (50 gallons or more).....	2.8	2.8	0.63	0.24	0.24	Q	Q	
Tankless water heater.....	0.2	0.2	0.08	N	Q	Q	N	
No Separate Water Heater.....	3.4	3.4	0.75	0.23	0.25	0.21	Q	

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Clothes Washer								
Do Not Use a Clothes Washer.....	19.3	18.6	3.69	1.76	1.10	0.43	0.41	
Use a Clothes Washer.....	91.8	91.2	28.29	9.37	14.48	1.57	2.87	
Top Loading.....	84.1	83.6	25.50	8.55	13.03	1.39	2.53	
Front Loading.....	7.7	7.7	2.79	0.82	1.45	0.18	0.35	
Age of Clothes Washer								
Less than 2 Years.....	15.7	15.6	5.21	1.76	2.71	0.18	0.56	
2 to 4 Years.....	21.1	21.0	7.01	2.23	3.37	0.45	0.96	
5 to 9 Years.....	28.9	28.6	8.73	3.10	4.31	0.49	0.82	
10 to 19 Years.....	19.9	19.8	5.70	1.70	3.18	0.37	0.46	
20 Years or More.....	4.1	4.0	1.06	0.36	0.56	Q	Q	
Don't Know.....	2.2	2.2	0.59	0.23	0.34	Q	N	
Frequency of Clothes Washer Use								
Use a Clothes Washer in the Home.....	91.8	91.2	28.29	9.37	14.48	1.57	2.87	
1 Load Each Week.....	7.3	7.1	1.56	0.53	0.91	Q	Q	
2 to 5 Loads Each Week.....	39.0	38.8	10.85	3.49	5.72	0.65	1.00	
6 to 9 Loads Each Week.....	33.8	33.6	11.31	3.81	5.60	0.60	1.30	
10 to 15 Loads Each Week.....	9.3	9.3	3.61	1.24	1.72	0.27	0.39	
More than 15 Loads Each Week.....	2.4	2.4	0.95	0.31	0.52	Q	Q	
Do Not Use a Clothes Washer in the Home.....	19.3	18.6	3.69	1.76	1.10	0.43	0.41	
Usual Water Temperature Setting								
Wash Cycle								
Hot.....	6.7	6.7	1.99	0.61	1.17	0.13	Q	
Warm.....	50.5	50.2	15.85	4.66	8.47	0.91	1.81	
Cold.....	34.6	34.3	10.46	4.10	4.83	0.53	0.99	
Rinse Cycle								
Hot.....	1.6	1.6	0.51	0.18	0.30	N	Q	
Warm.....	18.2	18.1	5.59	1.65	3.05	0.37	0.52	
Cold.....	72.0	71.6	22.19	7.54	11.12	1.20	2.33	
Energy Star Clothes Washer⁴								
Yes.....	21.7	21.7	7.61	2.10	4.07	0.50	0.94	
No.....	10.4	10.4	3.18	1.39	1.39	0.11	0.29	
Don't Know.....	4.5	4.5	1.42	0.49	0.62	Q	0.28	
Unit is More Than 4 Years Old.....	55.1	54.7	16.08	5.39	8.39	0.94	1.36	

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Dishwasher								
Do Not Use a Dishwasher.....	64.7	64.4	20.59	6.76	10.40	1.16	2.27	
Use a Dishwasher.....	46.4	45.4	11.40	4.38	5.17	0.84	1.01	
Age of Dishwasher								
Less than 2 Years.....	11.5	11.4	3.95	1.29	2.07	0.13	0.46	
2 to 4 Years.....	14.6	14.5	4.86	1.55	2.40	0.31	0.60	
5 to 9 Years.....	19.2	19.1	5.97	1.98	3.07	0.29	0.63	
10 to 19 Years.....	12.8	12.8	4.06	1.31	2.02	0.27	0.45	
20 Years or More.....	3.3	3.3	0.98	0.28	0.46	Q	Q	
Don't Know.....	3.3	3.3	0.77	0.36	0.38	Q	Q	
Frequency of Dishwasher Use								
Use a Dishwasher.....	64.7	64.4	20.59	6.76	10.40	1.16	2.27	
At Least Once Each Day.....	11.3	11.3	4.46	1.35	2.36	0.30	0.45	
4 to 6 Times a Week.....	11.7	11.7	4.26	1.28	2.12	0.25	0.60	
2 to 3 Times a Week.....	21.8	21.6	6.65	2.08	3.47	0.37	0.72	
Once each Week.....	9.0	8.9	2.42	0.93	1.13	0.10	0.25	
Less than Once Each Week.....	10.9	10.9	2.82	1.12	1.32	0.13	0.25	
Do Not Use a Dishwasher.....	46.4	45.4	11.40	4.38	5.17	0.84	1.01	
Energy Star Dishwasher⁴								
Yes.....	16.4	16.2	5.85	1.65	3.06	0.34	0.81	
No.....	6.6	6.6	1.91	0.80	0.87	Q	0.20	
Don't Know.....	3.1	3.1	1.04	0.39	0.54	Q	Q	
Unit is More Than 4 Years Old.....	38.6	38.5	11.78	3.92	5.93	0.72	1.21	

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Other Water Heating							
Hot Tubs or Spas	6.7	6.6	2.38	0.69	1.24	Q	0.34
Electricity.....	5.3	5.2	1.82	0.67	0.85	Q	0.20
Natural Gas.....	1.2	1.2	0.49	Q	0.38	N	Q
Swimming Pools	1.9	1.9	1.10	0.18	0.51	Q	0.31
Natural Gas.....	1.2	1.2	0.66	Q	0.38	Q	Q
Electricity.....	0.4	0.4	0.27	Q	Q	Q	Q
Propane/LPG.....	0.3	0.3	0.17	Q	Q	Q	Q
Some Other Fuel.....	Q	Q	Q	Q	N	N	N
Electric Water Beds	2.2	2.1	0.68	0.32	0.26	Q	Q
1.....	1.9	1.8	0.58	0.29	0.22	Q	Q
2 or More.....	0.3	0.3	0.10	Q	Q	N	Q
Heaters Used all Year	1.7	1.7	0.55	0.23	0.22	Q	Q
1.....	1.5	1.5	0.45	0.20	0.18	Q	Q
2 or More.....	0.3	0.3	0.10	Q	Q	N	Q

1 One of five climatically distinct areas, determined according to the 30-year average (1971-2000) of the annual heating and cooling degree-days. A household is assigned to a climate zone according to the 30-year average annual degree-days for an appropriate nearby weather station.

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

3 Respondents were permitted to select more than one racial category to describe themselves. The "Other" category includes Native Americans, Native Alaskans, and Pacific Islanders.

4 The question of whether the appliance was an Energy Star appliance was asked only of those households having an appliance that was four years old or less.

5 The major water heating fuels are electricity, natural gas, fuel oil, and liquefied petroleum gas (LPG).

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

N = No cases in the reporting sample.

(*) Number less than 0.5, 0.05, or 0.005 depending on the number of significant digits in the column, rounded to zero.

Notes: • 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 2005 Residential Energy Consumption Survey.