

Table 3.6. Gross Expenditures Intensities for Sum of Major Fuels by Main Heating Fuel, 1992
(Dollars per Square Foot)

Building Characteristics	Buildings with Heat						Buildings Without Heat	RSE Row Factor
	All Buildings	All Heated Buildings	Main Heat					
			Electricity	Natural Gas	Fuel Oil	District Heat		
RSE Column Factor:	0.6	0.6	1.1	0.7	1.2	1.4	2.3	
All Buildings	1.06	1.12	1.16	1.06	1.01	1.76	0.42	7.50
Building Floorspace (square feet)								
1,001 to 5,000	1.44	1.62	2.03	1.62	1.11	Q	0.46	9.13
5,001 to 10,000	1.11	1.18	1.37	1.14	1.11	1.46	Q	12.74
10,001 to 25,000	0.98	1.06	1.02	1.08	0.88	1.59	0.18	11.07
25,001 to 50,000	0.98	1.06	1.20	0.95	0.84	2.11	Q	16.68
50,001 to 100,000	1.05	1.07	1.10	1.07	0.73	1.52	Q	13.19
100,001 to 200,000	0.87	0.92	1.09	0.80	1.08	1.53	Q	16.35
200,001 to 500,000	1.07	1.10	0.75	1.03	1.10	1.67	Q	20.21
Over 500,000	1.09	1.11	Q	1.03	Q	2.14	Q	23.86
Principal Building Activity								
Education	0.87	0.88	0.90	0.86	0.80	1.19	Q	9.37
Food Sales	3.16	3.17	3.21	3.11	Q	Q	Q	18.34
Food Service	2.87	2.92	3.76	2.93	Q	Q	Q	19.06
Health Care	2.12	2.13	1.48	2.12	Q	2.49	Q	17.05
Lodging	1.89	1.85	1.92	1.93	Q	1.85	Q	24.68
Mercantile and Service	1.04	1.05	1.15	1.05	0.96	Q	Q	10.54
Office	1.47	1.47	1.40	1.38	1.24	2.09	Q	11.89
Parking Garage	0.49	Q	Q	Q	Q	Q	0.29	36.06
Public Assembly	0.91	0.92	Q	1.00	Q	1.36	Q	29.41
Public Order and Safety	1.22	1.22	Q	0.98	Q	Q	Q	31.33
Religious Worship	0.35	0.35	0.43	0.34	0.33	Q	Q	14.94
Warehouse and Storage	0.59	0.66	0.64	0.63	1.09	Q	0.36	15.72
Other	1.73	1.82	Q	1.80	Q	1.95	Q	23.79
Vacant	0.36	0.50	0.44	0.54	Q	Q	Q	30.63
Year Constructed								
1899 or Before	0.84	0.86	Q	0.80	0.78	Q	Q	23.47
1900 to 1919	0.70	0.74	1.22	0.57	1.03	1.27	Q	23.99
1920 to 1945	0.86	0.96	0.84	0.95	0.88	1.45	0.11	16.43
1946 to 1959	0.94	1.00	1.02	0.90	1.17	1.79	0.44	15.48
1960 to 1969	1.15	1.20	1.11	1.15	1.03	1.89	0.63	12.60
1970 to 1979	1.17	1.25	1.31	1.25	0.97	1.62	0.37	11.42
1980 to 1989	1.18	1.22	1.17	1.21	1.03	2.34	0.61	17.91
1990 to 1992	1.08	1.15	1.06	1.19	Q	1.60	0.31	17.92
Census Region and Division								
Northeast	1.21	1.25	1.29	1.20	1.08	1.87	0.32	12.99
New England	1.24	1.26	1.30	1.65	1.01	1.34	Q	13.84
Middle Atlantic	1.20	1.24	1.29	1.13	1.13	2.08	0.34	16.87
Midwest	0.98	1.02	0.97	0.97	0.66	1.70	Q	13.69
East North Central	1.03	1.08	1.05	1.01	0.46	1.89	0.19	13.37
West North Central	0.90	0.93	0.84	0.88	Q	1.44	Q	19.52
South	0.93	1.01	1.05	0.98	0.90	1.63	0.32	12.06
South Atlantic	1.03	1.10	1.09	1.15	0.96	1.90	0.43	13.91
East South Central	0.88	0.97	1.16	0.88	Q	1.52	0.41	11.69
West South Central	0.84	0.93	Q	0.90	Q	1.33	0.12	22.65
West	1.25	1.32	1.50	1.23	Q	1.82	0.71	16.37
Mountain	1.20	1.26	1.37	1.04	Q	Q	Q	27.94
Pacific	1.27	1.35	1.57	1.31	Q	1.49	0.78	14.36
Climate Zone: 45-Year Average								
Fewer than 2,000 CDD and --								
More than 7,000 HDD	0.85	0.88	1.17	0.82	0.84	1.05	Q	13.88
5,500-7,000 HDD	1.08	1.13	1.13	1.05	1.05	1.73	0.20	11.90
4,000-5,499 HDD	1.05	1.10	1.16	1.01	1.05	2.03	0.41	11.89
Fewer than 4,000 HDD	1.14	1.23	1.35	1.19	Q	1.67	0.45	12.85
More than 2,000 CDD and --								
Fewer than 4,000 HDD	1.02	1.11	1.04	1.11	Q	1.96	0.45	21.59

See footnotes at end of table.

Table 3.6. Gross Expenditures Intensities for Sum of Major Fuels by Main Heating Fuel, 1992 (Continued)
(Dollars per Square Foot)

Building Characteristics	Buildings with Heat						Buildings Without Heat	RSE Row Factor
	All Buildings	All Heated Buildings	Main Heat					
			Electricity	Natural Gas	Fuel Oil	District Heat		
RSE Column Factor:	0.6	0.6	1.1	0.7	1.2	1.4	2.3	
Energy Sources (more than one may apply)								
Electricity	1.08	1.12	1.16	1.06	1.01	1.76	0.54	6.17
Natural Gas	1.15	1.15	1.42	1.06	1.22	1.94	Q	8.76
Fuel Oil	1.34	1.35	1.41	1.54	1.01	1.98	Q	9.87
District Heat	1.74	1.74	Q	Q	Q	1.76	Q	12.09
District Chilled Water	1.65	1.64	1.58	Q	Q	1.74	Q	22.02
Propane	1.05	1.05	1.28	1.31	1.02	Q	Q	15.75
Any Other	0.64	0.63	Q	0.95	Q	Q	Q	28.97
Energy End Uses (more than one may apply)								
Heated Buildings	1.12	1.12	1.16	1.06	1.01	1.76	Q	7.28
Buildings with A/C	1.16	1.17	1.20	1.10	1.07	1.83	1.02	7.95
Buildings with Water Heating	1.16	1.16	1.20	1.09	1.06	1.78	1.38	8.57
Buildings with Cooking	1.34	1.34	1.35	1.29	1.17	1.88	Q	10.80
Buildings with Manufacturing	1.18	1.17	1.32	1.11	1.70	1.14	Q	24.03
Workers (main shift)								
Less than 5	0.64	0.78	0.88	0.72	0.66	2.48	0.21	16.37
5 to 9	0.99	1.03	1.03	1.01	1.08	1.37	Q	10.84
10 to 19	1.07	1.08	1.14	1.05	1.11	1.32	Q	14.20
20 to 49	1.17	1.16	1.44	1.05	1.19	1.67	Q	13.60
50 to 99	1.10	1.08	1.33	1.02	0.94	1.31	Q	14.49
100 or More	1.46	1.46	1.32	1.40	1.25	1.95	Q	12.15
Weekly Operating Hours								
39 or Fewer	0.39	0.50	0.51	0.50	0.51	Q	0.12	12.38
40 to 48	0.90	0.94	0.99	0.87	0.86	1.69	0.48	9.35
49 to 60	0.90	0.94	1.03	0.83	1.09	1.68	0.34	11.41
61 to 84	1.12	1.15	1.04	1.15	1.22	1.83	0.55	12.36
85 to 167	1.42	1.42	1.72	1.36	Q	1.69	Q	15.66
Open Continuously	1.68	1.75	Q	1.94	1.66	1.93	Q	20.68
Ownership and Occupancy								
Nongovernment Owned	1.07	1.14	1.20	1.09	1.00	1.89	0.43	8.97
Owner Occupied	1.14	1.19	1.34	1.11	1.06	1.87	0.54	8.27
Single Establishment	1.16	1.22	1.42	1.15	1.01	1.92	0.53	9.42
Multiple Establishment	1.05	1.07	1.11	0.96	1.29	1.71	Q	13.89
Nonowner Occupied	0.99	1.03	0.94	1.06	0.88	2.05	0.45	18.50
Single Establishment	1.01	1.06	Q	1.22	0.92	Q	0.48	27.17
Multiple Establishment	0.96	1.00	0.96	0.95	Q	2.33	0.41	16.12
Vacant	0.24	0.43	Q	0.47	Q	Q	0.12	42.39
Government Owned	1.03	1.06	0.90	0.99	1.03	1.60	0.34	11.43
Predominant Exterior Wall Material								
Masonry	1.06	1.11	1.15	1.06	1.02	1.66	0.36	9.61
Siding or Shingles	1.03	1.12	1.32	1.08	1.06	Q	0.56	17.02
Metal Panels	0.79	0.90	0.88	0.88	0.81	Q	0.43	14.72
Concrete Panels	1.18	1.24	1.18	1.14	Q	1.74	0.25	23.08
Window Glass	1.65	1.73	1.50	1.59	Q	2.51	Q	21.34
Other	1.32	1.32	1.49	1.22	Q	Q	Q	36.21
Predominant Roof Material								
Built-Up	1.15	1.18	1.18	1.13	1.09	1.84	0.60	10.88
Shingles (Not Wood)	0.93	0.98	1.20	0.87	0.87	1.93	0.29	13.65
Metal Surfacing	0.71	0.83	0.88	0.82	0.77	1.48	0.26	14.08
Synthetic or Rubber	1.25	1.27	1.35	1.23	1.23	1.58	Q	12.38
Other	0.99	1.09	1.15	0.92	0.64	1.77	0.47	21.19

See footnotes at end of table.

Table 3.6. Gross Expenditures Intensities for Sum of Major Fuels by Main Heating Fuel, 1992 (Continued)
(Dollars per Square Foot)

Building Characteristics	Buildings with Heat						Buildings Without Heat	RSE Row Factor
	All Buildings	All Heated Buildings	Main Heat					
			Electricity	Natural Gas	Fuel Oil	District Heat		
RSE Column Factor:	0.6	0.6	1.1	0.7	1.2	1.4	2.3	
Floors								
One	0.95	1.04	1.07	1.03	1.07	1.59	0.33	13.21
Two	1.00	1.03	1.22	1.00	0.83	1.36	0.45	11.49
Three	1.08	1.11	1.57	0.99	1.00	1.61	Q	12.05
Four to Nine	1.22	1.28	1.04	1.30	0.95	1.60	0.57	14.95
Ten or More	1.53	1.58	1.13	1.46	Q	2.35	Q	13.09
Percent Window Glass								
25 or Less	0.97	1.04	1.06	1.00	1.02	1.63	0.39	9.27
26 to 50	1.25	1.26	1.38	1.21	0.91	1.77	Q	12.47
51 to 75	1.43	1.43	1.69	1.21	1.16	1.88	Q	14.42
76 to 100	1.74	1.75	1.32	1.77	Q	2.66	Q	20.07
Building Shape								
Square	1.05	1.20	1.76	1.02	Q	1.69	0.30	18.26
Rectangle	1.05	1.14	1.18	1.07	1.09	1.76	0.36	8.32
Right Angle	0.90	0.93	1.04	0.83	1.18	1.53	Q	16.52
Other	1.13	1.13	1.05	1.13	0.83	1.82	Q	13.05
Energy-Related Space Functions (more than one may apply)								
Commercial Food Preparation	1.36	1.37	1.48	1.29	1.17	1.88	Q	7.96
Computer Room	1.44	1.44	1.45	1.41	1.13	1.93	Q	10.98
Rooms with Special Ventilation	1.45	1.45	1.63	1.31	1.03	1.95	Q	10.82
Activities with Large Amounts of Hot Water	1.47	1.47	1.49	1.41	1.31	1.83	Q	13.40
Space-Heating Energy Sources (more than one may apply)								
Electricity	1.15	1.15	1.16	1.12	0.99	2.13	Q	11.63
Natural Gas	1.07	1.07	1.12	1.06	1.05	1.98	Q	8.55
Fuel Oil	1.18	1.18	Q	1.54	1.01	Q	Q	10.85
District Heat	1.72	1.72	Q	Q	Q	1.76	Q	14.11
Propane	0.83	0.83	Q	Q	Q	Q	Q	21.43
Wood	0.52	0.52	Q	Q	Q	Q	Q	21.65
Any Other	0.35	0.35	Q	Q	Q	Q	Q	44.18
Cooling Energy Sources (more than one may apply)								
Electricity	1.15	1.16	1.19	1.11	1.08	1.79	1.00	8.11
Natural Gas	1.57	1.57	Q	1.51	Q	Q	Q	35.56
District Chilled Water	1.65	1.64	1.58	Q	Q	1.74	Q	22.02
Water-Heating Energy Sources (more than one may apply)								
Electricity	1.04	1.04	1.09	0.99	1.00	1.20	Q	10.29
Natural Gas	1.20	1.19	1.61	1.13	1.03	2.05	Q	10.29
Fuel Oil	1.18	1.18	Q	Q	1.07	Q	Q	19.67
District Heat	1.82	1.82	Q	Q	Q	1.83	Q	16.29
Propane	1.09	1.10	Q	Q	Q	Q	Q	32.95
Cooking Energy Sources (more than one may apply)								
Electricity	1.35	1.34	1.30	1.33	1.19	1.85	Q	17.87
Natural Gas	1.36	1.37	1.45	1.30	1.18	2.03	Q	10.33
Propane	1.28	1.29	1.45	Q	1.18	Q	Q	22.85

See footnotes at end of table.

Table 3.6. Gross Expenditures Intensities for Sum of Major Fuels by Main Heating Fuel, 1992 (Continued)
(Dollars per Square Foot)

Building Characteristics	Buildings with Heat						Buildings Without Heat	RSE Row Factor
	All Buildings	All Heated Buildings	Main Heat					
			Electricity	Natural Gas	Fuel Oil	District Heat		
RSE Column Factor:	0.6	0.6	1.1	0.7	1.2	1.4	2.3	
Manufacturing Energy Sources (more than one may apply)								
Electricity	1.19	1.19	1.37	1.13	Q	Q	Q	26.44
Natural Gas	1.20	1.19	Q	1.21	Q	Q	Q	36.57
Other	1.39	1.42	Q	Q	Q	Q	Q	49.28
Percent of Floorspace Heated								
Not Heated	0.42	Q	Q	Q	Q	Q	0.42	18.38
1 to 50	0.62	0.62	0.62	0.62	0.68	Q	Q	14.43
51 to 99	1.19	1.19	1.39	1.08	1.07	1.73	Q	14.95
100	1.24	1.24	1.34	1.17	1.05	1.84	Q	7.80
Percent of Floorspace Cooled								
Not Cooled	0.50	0.66	0.56	0.63	0.75	1.19	0.30	14.32
1 to 50	0.72	0.72	0.61	0.69	0.90	1.40	0.64	10.51
51 to 99	1.40	1.40	1.44	1.31	1.36	1.87	Q	13.98
100	1.46	1.46	1.42	1.41	1.21	2.11	Q	11.05
Heating Equipment (more than one may apply)								
Heat Pumps	1.25	1.25	1.27	1.22	1.11	2.29	Q	13.34
Furnaces	0.94	0.94	1.13	0.91	0.95	Q	Q	8.55
Individual Space Heaters	1.00	1.00	1.08	0.95	0.99	1.82	Q	9.52
District Heat	1.72	1.72	Q	Q	Q	1.76	Q	13.53
Boilers	1.10	1.10	Q	1.15	1.08	Q	Q	9.90
Packaged Heating Units	1.25	1.25	1.32	1.21	Q	2.10	Q	12.63
Other	2.27	2.27	1.81	2.63	Q	Q	Q	35.23
Heating Distribution Equipment (more than one may apply)								
Radiators or Baseboards	1.12	1.12	1.20	1.00	1.03	1.71	Q	11.32
Ducts for Heating	1.18	1.18	1.18	1.12	1.03	1.93	Q	8.24
VAV System Used	1.42	1.42	1.19	1.38	1.28	2.03	Q	18.99
Individual Space Heaters	1.00	1.00	1.08	0.95	0.99	1.82	Q	9.52
Fan Coil Units or Other	1.32	1.32	1.44	1.18	1.32	1.78	Q	13.77
Cooling Equipment (more than one may apply)								
Residential-Type Central A/C	1.09	1.08	1.15	1.02	1.09	1.66	Q	13.18
Heat Pumps	1.28	1.28	1.30	1.24	1.04	2.41	Q	13.28
Individual A/C	0.98	0.99	1.03	0.89	1.04	1.65	0.76	13.80
District Chilled Water	1.56	1.55	1.58	Q	Q	1.74	Q	23.18
Central Chillers	1.43	1.45	1.06	1.48	1.59	2.00	Q	15.57
Packaged A/C Units	1.26	1.25	1.36	1.20	1.16	1.80	1.28	9.27
Swamp Coolers	1.36	1.38	1.20	1.46	Q	Q	Q	20.63
Other	0.93	0.93	Q	Q	Q	Q	Q	79.61
Cooling Distribution Equipment (more than one may apply)								
Ducts for Cooling	1.21	1.21	1.24	1.14	1.13	1.89	1.20	8.82
VAV System Used	1.48	1.48	1.35	1.43	1.27	1.95	Q	15.13
Individual A/C	0.98	0.99	1.03	0.89	1.04	1.65	0.76	13.80
Fan Coil Units or Other	1.34	1.36	1.01	1.38	1.38	1.78	Q	15.60
Water-Heating Equipment (more than one may apply)								
Centralized System	1.24	1.24	1.25	1.16	1.11	1.87	Q	10.38
Distributed System	1.08	1.07	1.12	1.02	0.99	1.58	1.99	11.90

See footnotes at end of table.

Table 3.6. Gross Expenditures Intensities for Sum of Major Fuels by Main Heating Fuel, 1992 (Continued)

(Dollars per Square Foot)

Building Characteristics	Buildings with Heat						Buildings Without Heat	RSE Row Factor
	All Buildings	All Heated Buildings	Main Heat					
			Electricity	Natural Gas	Fuel Oil	District Heat		
RSE Column Factor:	0.6	0.6	1.1	0.7	1.2	1.4	2.3	
Energy Conservation Features (more than one may apply)								
Any Conservation Features	1.10	1.13	1.18	1.07	1.01	1.77	0.61	7.38
Building Shell	1.11	1.13	1.19	1.07	1.01	1.79	0.63	7.61
HVAC	1.21	1.21	1.25	1.15	1.05	1.78	1.13	8.23
Lighting	1.28	1.29	1.27	1.21	1.10	2.00	0.89	12.13
Other	1.16	1.19	1.24	1.12	1.21	1.55	Q	12.87
Energy Management Practices (more than one may apply)								
Energy Management and Control System	1.38	1.38	1.19	1.36	1.44	1.77	Q	14.89
Demand-Side Management ¹ Participation	1.37	1.37	1.41	1.30	1.19	1.75	Q	10.02
Energy Audit	1.31	1.33	1.35	1.25	1.15	1.89	Q	11.57
Building Energy Manager	1.37	1.37	1.46	1.50	Q	1.37	Q	22.80

¹ These Demand-Side Management (DSM) data, which include utility-sponsored programs, in-house programs, and third-party sponsored programs, were reported by the building respondent on the Building Questionnaire (Form EIA-871A). The electric utility-sponsored DSM data reported by the electricity suppliers (Form EIA-871E-1b) are presented in the "At a Glance" section and Table 3.49 of this section. See Appendix B, "Nonsampling and Sampling Errors," for a discussion of the differences between the energy supplier-reported data and building respondent-reported data.

Q = Data withheld because the Relative Standard Error (RSE) was greater than 50 percent, or data were reported for fewer than 20 buildings.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding RSE column and RSE row factors. • See Glossary for explanation of abbreviations and definitions of terms used in this report. • Statistics for the "energy end uses" represent consumption in buildings that have end use, not consumption for a particular fuel for a particular end use. • A/C = Air Conditioning. • HVAC = Heating, Ventilation, and Air Conditioning. • VAV = Variable Air Volume. • Because of rounding, data may not sum to totals.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-871A through F of the 1992 Commercial Buildings Energy Consumption Survey.