

**Table C4. Expenditures for Sum of Major Fuels, 1999**

	All Buildings			Sum of Major Fuel Expenditures			
	Number of Buildings (thousand)	Floorspace (million square feet)	Floorspace per Building (thousand square feet)	Total (million dollars)	per Building (thousand dollars)	per Square Foot (dollars)	per Million Btu (dollars)
<b>All Buildings</b> .....	4,657	67,338	14.5	81,552	17.5	1.21	14.22
<b>Building Floorspace (Square Feet)</b>							
1,001 to 5,000 .....	2,348	6,774	2.9	12,355	5.3	1.82	15.99
5,001 to 10,000 .....	1,110	8,238	7.4	9,228	8.3	1.12	15.17
10,001 to 25,000 .....	708	11,153	15.7	10,873	15.4	0.97	14.64
25,001 to 50,000 .....	257	9,311	36.2	10,090	39.3	1.08	14.58
50,001 to 100,000 .....	145	10,112	69.9	12,057	83.4	1.19	13.93
100,001 to 200,000 .....	59	8,271	139.4	10,344	174.3	1.25	13.40
200,001 to 500,000 .....	23	6,851	296.3	8,015	346.6	1.17	12.15
Over 500,000 .....	7	6,628	929.0	8,592	1204.3	1.30	13.83
<b>Principal Building Activity</b>							
Education .....	327	8,651	26.4	8,018	24.5	0.93	12.36
Food Sales .....	174	994	5.7	3,587	20.6	3.61	17.84
Food Service .....	349	1,851	5.3	6,380	18.3	3.45	14.29
Health Care .....	127	2,918	22.9	5,653	44.5	1.94	10.99
Inpatient .....	11	1,865	168.2	4,151	374.3	2.23	9.72
Outpatient .....	116	1,053	9.1	1,503	12.9	1.43	17.14
Lodging .....	153	4,521	29.5	5,716	37.3	1.26	12.71
Mercantile .....	667	10,398	15.6	13,085	19.6	1.26	18.08
Retail (Other Than Mall) .....	534	4,766	8.9	5,922	11.1	1.24	17.22
Enclosed and Strip Malls .....	133	5,631	42.2	7,164	53.7	1.27	18.85
Office .....	739	12,044	16.3	17,775	24.1	1.48	16.32
Public Assembly .....	305	4,393	14.4	5,096	16.7	1.16	14.19
Public Order and Safety .....	72	1,168	16.2	1,222	16.9	1.05	12.03
Religious Worship .....	307	3,405	11.1	1,494	4.9	0.44	13.61
Service .....	478	3,388	7.1	4,639	9.7	1.37	11.01
Warehouse and Storage .....	603	10,477	17.4	6,029	10.0	0.58	13.08
Other .....	102	1,222	12.0	2,498	24.5	2.05	14.20
Vacant .....	253	1,908	7.6	361	1.4	0.19	11.79
<b>Year Constructed</b>							
1919 or Before .....	419	4,034	9.6	3,271	7.8	0.81	11.90
1920 to 1945 .....	499	6,445	12.9	5,797	11.6	0.90	12.58
1946 to 1959 .....	763	9,127	12.0	9,216	12.1	1.01	13.67
1960 to 1969 .....	665	10,866	16.3	13,237	19.9	1.22	13.58
1970 to 1979 .....	774	11,840	15.3	15,858	20.5	1.34	15.18
1980 to 1989 .....	846	13,931	16.5	18,342	21.7	1.32	15.11
1990 to 1999 .....	690	11,094	16.1	15,832	22.9	1.43	14.52
<b>Floors</b>							
One .....	2,879	26,800	9.3	30,962	10.8	1.16	15.46
Two .....	1,168	16,985	14.5	19,465	16.7	1.15	14.63
Three .....	420	8,928	21.3	9,483	22.6	1.06	12.93
Four to Nine .....	178	10,180	57.2	14,974	84.2	1.47	12.30
Ten or More .....	11	4,445	386.9	6,670	580.5	1.50	14.84
<b>Census Region and Division</b>							
Northeast .....	686	12,360	18.0	18,996	27.7	1.54	17.02
New England .....	208	3,735	18.0	4,658	22.4	1.25	16.71
Middle Atlantic .....	479	8,625	18.0	14,338	30.0	1.66	17.13
Midwest .....	1,188	16,761	14.1	17,258	14.5	1.03	11.44
East North Central .....	782	11,205	14.3	11,682	14.9	1.04	11.58
West North Central .....	406	5,556	13.7	5,577	13.7	1.00	11.16
South .....	1,762	23,485	13.3	27,303	15.5	1.16	13.92
South Atlantic .....	748	11,001	14.7	13,771	18.4	1.25	15.03
East South Central .....	396	5,220	13.2	5,943	15.0	1.14	12.58
West South Central .....	618	7,264	11.8	7,590	12.3	1.04	13.25
West .....	1,021	14,731	14.4	17,995	17.6	1.22	15.69
Mountain .....	315	4,579	14.5	4,338	13.8	0.95	12.17
Pacific .....	705	10,152	14.4	13,657	19.4	1.35	17.27

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<b>Climate Zone: 45-Year Average</b>							
Under 2,000 CDD and --							
More than 7,000 HDD .....	525	5,890	11.2	6,009	11.4	1.02	11.78
5,500-7,000 HDD .....	986	17,083	17.3	19,809	20.1	1.16	12.91
4,000-5,499 HDD .....	1,085	16,243	15.0	21,900	20.2	1.35	14.18
Fewer than 4,000 HDD .....	1,134	16,333	14.4	20,548	18.1	1.26	15.91
2,000 CDD or More and --							
Fewer than 4,000 HDD .....	926	11,788	12.7	13,286	14.3	1.13	15.58
<b>Workers (main shift)</b>							
Fewer than 5 .....	2,376	14,321	6.0	10,245	4.3	0.72	15.12
5 to 9 .....	807	6,325	7.8	6,930	8.6	1.10	14.91
10 to 19 .....	683	8,028	11.8	10,426	15.3	1.30	15.08
20 to 49 .....	487	10,814	22.2	13,937	28.6	1.29	13.72
50 to 99 .....	174	8,898	51.1	10,937	62.9	1.23	14.99
100 to 249 .....	90	8,356	92.4	11,684	129.1	1.40	13.51
250 or More .....	39	10,595	270.0	17,393	443.2	1.64	13.49
<b>Weekly Operating Hours</b>							
39 or Fewer .....	978	6,596	6.7	2,316	2.4	0.35	14.12
40 to 48 .....	1,156	13,105	11.3	10,960	9.5	0.84	14.68
49 to 60 .....	986	14,200	14.4	15,814	16.0	1.11	14.81
61 to 84 .....	664	12,458	18.7	15,896	23.9	1.28	15.14
85 to 167 .....	474	9,116	19.2	15,569	32.8	1.71	14.73
Open Continuously .....	398	11,863	29.8	20,997	52.7	1.77	12.74
<b>Ownership and Occupancy</b>							
Nongovernment Owned .....	4,135	54,994	13.3	66,801	16.2	1.21	14.63
Owner Occupied .....	2,801	37,785	13.5	47,362	16.9	1.25	14.18
Nonowner Occupied .....	1,099	15,596	14.2	19,195	17.5	1.23	15.90
Unoccupied .....	236	1,613	6.8	244	1.0	0.15	14.01
Government Owned .....	521	12,343	23.7	14,751	28.3	1.20	12.62
Federal .....	63	1,797	28.5	2,707	42.9	1.51	12.42
State .....	83	3,391	40.7	4,516	54.3	1.33	12.00
Local .....	375	7,156	19.1	7,529	20.1	1.05	13.11
<b>Vacancy Status</b>							
Completely Vacant .....	140	953	6.8	170	1.2	0.18	Q
Mostly Vacant .....	113	956	8.5	191	1.7	0.20	Q
Partially Vacant .....	697	15,520	22.3	16,227	23.3	1.05	15.47
Not At All Vacant .....	3,707	49,910	13.5	64,965	17.5	1.30	13.96
<b>Number of Establishments</b>							
One .....	3,528	43,343	12.3	54,521	15.5	1.26	13.47
2 to 5 .....	688	10,582	15.4	11,256	16.3	1.06	14.79
6 to 10 .....	114	3,574	31.4	5,148	45.3	1.44	16.96
11 to 20 .....	48	3,260	68.0	4,247	88.6	1.30	16.90
More than 20 .....	27	4,811	175.2	6,103	222.2	1.27	17.45
Currently Unoccupied .....	251	1,769	7.0	278	1.1	0.16	13.39
<b>Energy Sources (more than one may apply)</b>							
Electricity .....	4,395	65,716	15.0	81,548	18.6	1.24	14.23
Natural Gas .....	2,670	45,525	17.1	58,798	22.0	1.29	13.20
Fuel Oil .....	434	13,285	30.6	18,854	43.5	1.42	12.68
District Heat .....	117	5,891	50.2	10,915	93.0	1.85	12.07
District Chilled Water .....	50	2,750	55.4	4,807	96.8	1.75	11.22
Propane .....	451	6,290	14.0	7,054	15.6	1.12	16.41
Other .....	153	2,322	15.2	3,001	19.7	1.29	14.79

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<b>Space-Heating Energy Sources</b> (more than one may apply)							
Electricity .....	1,880	32,291	17.2	40,678	21.6	1.26	15.44
Natural Gas .....	2,380	37,902	15.9	46,471	19.5	1.23	13.08
Fuel Oil .....	377	5,611	14.9	6,565	17.4	1.17	12.60
District Heat .....	96	5,534	57.7	10,208	106.4	1.84	12.24
Propane .....	307	2,728	8.9	2,690	8.8	0.99	22.67
Other .....	94	945	10.0	1,016	10.8	1.08	16.17
<b>Primary Space-Heating Energy Source</b>							
Electricity .....	1,128	17,627	15.6	23,523	20.8	1.33	17.48
Natural Gas .....	2,189	32,729	15.0	38,998	17.8	1.19	12.73
Fuel Oil .....	302	3,719	12.3	3,839	12.7	1.03	14.14
District Heat .....	77	5,077	66.0	9,287	120.8	1.83	12.24
Propane .....	282	2,107	7.5	1,966	7.0	0.93	27.09
Other .....	38	343	9.1	249	6.6	0.73	Q
<b>Cooling Energy Sources</b> (more than one may apply)							
Electricity .....	3,450	55,545	16.1	72,249	20.9	1.30	14.63
Natural Gas .....	142	1,914	13.5	3,034	21.4	1.59	14.29
District Chilled Water .....	50	2,750	55.4	4,807	96.8	1.75	11.22
<b>Water-Heating Energy Sources</b> (more than one may apply)							
Electricity .....	1,546	24,171	15.6	30,746	19.9	1.27	16.75
Natural Gas .....	1,520	29,196	19.2	38,398	25.3	1.32	12.97
Fuel Oil .....	110	2,218	20.2	2,747	25.1	1.24	11.82
District Heat .....	62	4,182	67.5	7,911	127.6	1.89	11.69
Propane .....	130	1,371	10.5	2,147	16.5	1.57	24.56
<b>Cooking Energy Sources</b> (more than one may apply)							
Electricity .....	437	13,733	31.4	21,428	49.0	1.56	14.10
Natural Gas .....	505	16,785	33.2	25,164	49.8	1.50	13.05
Propane .....	118	1,754	14.9	3,241	27.6	1.85	19.95
<b>Energy End Uses (more than one may apply)</b>							
Buildings with Space Heating .....	4,016	61,602	15.3	77,862	19.4	1.26	14.08
Buildings with Cooling .....	3,560	58,474	16.4	77,278	21.7	1.32	14.46
Buildings with Water Heating .....	3,239	56,115	17.3	74,711	23.1	1.33	14.20
Buildings with Cooking .....	857	24,681	28.8	37,233	43.4	1.51	13.90
Buildings with Manufacturing .....	151	3,126	20.7	3,811	25.2	1.22	13.74
Buildings with Electricity Generation .....	172	11,882	69.3	18,991	110.7	1.60	12.72
<b>Percent of Floorspace Heated</b>							
Not Heated .....	641	5,736	8.9	3,690	5.8	0.64	18.02
1 to 50 .....	576	7,593	13.2	5,293	9.2	0.70	15.90
51 to 99 .....	627	10,745	17.1	13,939	22.2	1.30	14.23
100 .....	2,813	43,264	15.4	58,630	20.8	1.36	13.91
<b>Percent of Floorspace Cooled</b>							
Not Cooled .....	1,097	8,864	8.1	4,275	3.9	0.48	10.98
1 to 50 .....	1,012	16,846	16.6	14,072	13.9	0.84	12.55
51 to 99 .....	751	16,966	22.6	24,422	32.5	1.44	14.01
100 .....	1,796	24,662	13.7	38,784	21.6	1.57	15.64

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<b>Percent Lit When Open</b>							
Zero .....	34	173	5.1	Q	Q	Q	Q
1 to 50 .....	835	9,187	11.0	6,822	8.2	0.74	15.10
51 to 99 .....	1,228	20,665	16.8	27,188	22.1	1.32	13.64
100 .....	2,096	34,233	16.3	47,058	22.5	1.37	14.46
Building Never Open/ Electricity Not Used.....	464	3,080	6.6	403	0.9	0.13	14.04
<b>Percent Lit When Closed</b>							
Zero .....	2,174	20,771	9.6	17,327	8.0	0.83	14.81
1 to 50 .....	1,688	30,950	18.3	38,650	22.9	1.25	14.84
51 to 100 .....	143	2,160	15.1	4,575	31.9	2.12	14.74
Building Never Closed/ Electricity Not Used.....	652	13,457	20.7	21,001	32.2	1.56	12.74
<b>Heating Equipment (more than one may apply)</b>							
Heat Pumps .....	492	8,923	18.1	12,150	24.7	1.36	14.10
Furnaces .....	1,460	14,449	9.9	14,052	9.6	0.97	12.99
Individual Space Heaters .....	894	17,349	19.4	18,689	20.9	1.08	13.60
District Heat .....	96	5,534	57.7	10,208	106.4	1.84	12.24
Boilers .....	581	19,522	33.6	23,671	40.7	1.21	12.39
Packaged Heating Units .....	1,347	25,743	19.1	35,951	26.7	1.40	15.18
Other .....	185	4,073	22.1	5,151	27.9	1.26	13.32
<b>Cooling Equipment (more than one may apply)</b>							
Residential-Type Central							
Air Conditioners .....	676	8,329	12.3	8,891	13.1	1.07	13.24
Heat Pumps .....	485	9,147	18.8	12,330	25.4	1.35	14.16
Individual Air Conditioners .....	799	14,276	17.9	15,537	19.5	1.09	12.99
District Chilled Water .....	50	2,750	55.4	4,807	96.8	1.75	11.22
Central Chillers .....	130	12,909	99.7	20,759	160.3	1.61	12.99
Packaged Air Conditioning							
Units .....	1,953	36,527	18.7	50,789	26.0	1.39	14.98
Swamp Coolers .....	136	2,219	16.3	2,832	20.8	1.28	13.17
Other .....	49	1,312	26.7	1,821	37.0	1.39	14.03
<b>Main Equipment Replaced Since 1995 (more than one may apply)</b>							
Heating .....	984	13,220	13.4	16,100	16.4	1.22	14.84
Cooling .....	1,085	17,390	16.0	22,162	20.4	1.27	14.43
<b>Lighting Equipment Types (more than one may apply)</b>							
Incandescent .....	2,193	38,156	17.4	48,515	22.1	1.27	14.10
Standard Fluorescent .....	3,778	60,344	16.0	76,738	20.3	1.27	14.21
Compact Fluorescent .....	607	20,666	34.1	29,689	48.9	1.44	13.73
High Intensity Discharge .....	430	19,223	44.8	24,549	57.2	1.28	12.90
Halogen .....	572	17,926	31.3	25,096	43.9	1.40	13.91
Other .....	58	1,004	17.5	1,506	26.2	1.50	12.88
<b>Water Heating Equipment</b>							
Centralized System .....	2,472	35,579	14.4	47,665	19.3	1.34	14.15
Distributed System .....	566	10,899	19.3	13,260	23.4	1.22	15.21
Combination of Centralized and Distributed System .....	200	9,637	48.1	13,786	68.9	1.43	13.48

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<b>Commercial Refrigeration</b>							
<b>Equipment (more than one may apply)</b>							
Any Equipment .....	950	25,652	27.0	40,917	43.1	1.60	14.24
Walk-In Units .....	658	19,713	29.9	33,935	51.5	1.72	14.10
Cases or Cabinets .....	820	22,001	26.8	35,710	43.6	1.62	14.39
None .....	3,707	41,686	11.2	40,635	11.0	0.97	14.21
<b>Personal Computers</b>							
None .....	1,617	9,583	5.9	6,478	4.0	0.68	14.14
1 to 4 .....	1,636	13,853	8.5	16,059	9.8	1.16	14.90
5 to 9 .....	542	6,528	12.0	8,451	15.6	1.29	14.46
10 to 19 .....	403	7,514	18.7	9,636	23.9	1.28	15.40
20 to 49 .....	247	8,087	32.7	9,782	39.6	1.21	14.94
50 to 99 .....	105	5,867	55.9	6,928	66.0	1.18	13.03
100 to 249 .....	71	6,818	96.0	9,137	128.6	1.34	13.28
250 or More .....	36	9,088	252.4	15,083	418.8	1.66	13.55
<b>Photocopiers</b>							
None .....	2,825	21,631	7.7	22,207	7.9	1.03	14.60
One .....	1,114	12,928	11.6	15,654	14.1	1.21	15.09
2 to 4 .....	540	15,620	28.9	17,906	33.1	1.15	13.74
5 to 9 .....	102	5,384	52.6	6,938	67.8	1.29	13.08
10 or More .....	75	11,774	156.7	18,847	250.8	1.60	14.06
<b>Other Electronic Equipment (more than one may apply)</b>							
Laser Printers .....	1,949	46,567	23.9	61,755	31.7	1.33	14.18
FAX Machines .....	2,807	54,764	19.5	72,276	25.8	1.32	14.33
Medical Diagnostic Equipment .....	86	2,493	29.1	4,977	58.1	2.00	10.64
<b>Energy-Related Space Functions (more than one may apply)</b>							
Commercial Food Preparation .....	767	23,328	30.4	35,213	45.9	1.51	13.82
Activities with Large Amounts of Hot Water .....	698	21,793	31.2	32,545	46.6	1.49	12.82
<b>Building Shell Conservation Features (more than one may apply)</b>							
Multipaned Windows .....	2,130	38,193	17.9	49,189	23.1	1.29	13.73
Tinted, Reflective, or Shading Glass .....	1,283	29,915	23.3	41,475	32.3	1.39	14.63
<b>HVAC Conservation Features (more than one may apply)</b>							
Variable Air-Volume System .....	550	19,387	35.3	29,233	53.2	1.51	13.82
Economizer Cycle .....	567	21,256	37.5	33,194	58.5	1.56	13.91
HVAC Maintenance .....	2,786	53,395	19.2	71,785	25.8	1.34	14.17
Energy Management and Control System (EMCS) .....	460	21,613	47.0	31,814	69.1	1.47	13.30
<b>Lighting Conservation Features (more than one may apply)</b>							
Specular Reflectors .....	843	19,994	23.7	28,083	33.3	1.40	14.65
Electronic Ballasts .....	2,167	42,035	19.4	55,999	25.8	1.33	14.36
Skylights or Atriums .....	580	18,286	31.5	21,710	37.5	1.19	13.41

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

Notes: \* Statistics for the "energy end uses" represent consumption in buildings that have the end use, not consumption for a particular fuel for a particular end use. \* HVAC=Heating, Ventilation, and Air Conditioning. \* Due to rounding, data may not sum to totals.

Source: Energy Information Administration, Office of Energy Markets and End Use, Form EIA-871A of the 1999 Commercial Buildings Energy Consumption Survey.