

Table C3. Consumption and Gross Energy Intensity for Sum of Major Fuels, 1999

	All Buildings			Sum of Major Fuel Consumption			
	Number of Buildings (thousand)	Floorspace (million square feet)	Floorspace per Building (thousand square feet)	Total (trillion Btu)	per Building (million Btu)	per Square Foot (thousand Btu)	per Worker (million Btu)
All Buildings	4,657	67,338	14.5	5,733	1,231	85.1	70.0
Building Floorspace (Square Feet)							
1,001 to 5,000	2,348	6,774	2.9	772	329	114.0	69.4
5,001 to 10,000	1,110	8,238	7.4	608	548	73.8	55.4
10,001 to 25,000	708	11,153	15.7	743	1,049	66.6	65.3
25,001 to 50,000	257	9,311	36.2	692	2,693	74.3	74.9
50,001 to 100,000	145	10,112	69.9	865	5,985	85.6	67.7
100,001 to 200,000	59	8,271	139.4	772	13,008	93.3	87.1
200,001 to 500,000	23	6,851	296.3	660	28,531	96.3	75.0
Over 500,000	7	6,628	929.0	621	87,102	93.8	71.4
Principal Building Activity							
Education	327	8,651	26.4	649	1,982	75.0	72.7
Food Sales	174	994	5.7	201	1,156	202.2	205.1
Food Service	349	1,851	5.3	447	1,280	241.2	110.8
Health Care	127	2,918	22.9	515	4,047	176.4	82.8
Inpatient	11	1,865	168.2	427	38,499	228.9	127.4
Outpatient	116	1,053	9.1	88	755	83.3	30.6
Lodging	153	4,521	29.5	450	2,938	99.5	190.9
Mercantile	667	10,398	15.6	724	1,085	69.6	63.6
Retail (Other Than Mall)	534	4,766	8.9	344	644	72.1	73.7
Enclosed and Strip Malls	133	5,631	42.2	380	2,848	67.5	56.6
Office	739	12,044	16.3	1,089	1,475	90.5	37.6
Public Assembly	305	4,393	14.4	359	1,177	81.7	114.1
Public Order and Safety	72	1,168	16.2	102	1,407	86.9	59.6
Religious Worship	307	3,405	11.1	110	357	32.2	66.3
Service	478	3,388	7.1	421	881	124.4	92.5
Warehouse and Storage	603	10,477	17.4	461	764	44.0	74.2
Other	102	1,222	12.0	176	1,729	144.0	121.1
Vacant	253	1,908	7.6	31	121	16.0	Q
Year Constructed							
1919 or Before	419	4,034	9.6	275	656	68.1	70.3
1920 to 1945	499	6,445	12.9	461	923	71.5	77.8
1946 to 1959	763	9,127	12.0	674	884	73.9	68.6
1960 to 1969	665	10,866	16.3	975	1,465	89.7	75.7
1970 to 1979	774	11,840	15.3	1,044	1,349	88.2	65.9
1980 to 1989	846	13,931	16.5	1,214	1,435	87.2	61.2
1990 to 1999	690	11,094	16.1	1,090	1,579	98.3	80.0
Floors							
One	2,879	26,800	9.3	2,003	696	74.7	67.0
Two	1,168	16,985	14.5	1,330	1,139	78.3	71.0
Three	420	8,928	21.3	733	1,746	82.1	76.8
Four to Nine	178	10,180	57.2	1,217	6,845	119.6	80.8
Ten or More	11	4,445	386.9	449	39,120	101.1	52.4
Census Region and Division							
Northeast	686	12,360	18.0	1,116	1,626	90.3	77.5
New England	208	3,735	18.0	279	1,342	74.6	71.7
Middle Atlantic	479	8,625	18.0	837	1,749	97.1	79.6
Midwest	1,188	16,761	14.1	1,509	1,270	90.0	82.5
East North Central	782	11,205	14.3	1,009	1,291	90.1	86.5
West North Central	406	5,556	13.7	500	1,231	89.9	75.6
South	1,762	23,485	13.3	1,961	1,113	83.5	67.2
South Atlantic	748	11,001	14.7	916	1,225	83.3	65.2
East South Central	396	5,220	13.2	473	1,194	90.5	80.0
West South Central	618	7,264	11.8	573	927	78.9	62.1
West	1,021	14,731	14.4	1,147	1,124	77.9	57.4
Mountain	315	4,579	14.5	356	1,130	77.8	68.5
Pacific	705	10,152	14.4	791	1,122	77.9	53.5

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Climate Zone: 45-Year Average							
Under 2,000 CDD and --							
More than 7,000 HDD	525	5,890	11.2	510	971	86.6	87.1
5,500-7,000 HDD	986	17,083	17.3	1,535	1,557	89.8	83.8
4,000-5,499 HDD	1,085	16,243	15.0	1,545	1,423	95.1	69.8
Fewer than 4,000 HDD	1,134	16,333	14.4	1,291	1,139	79.1	61.1
2,000 CDD or More and --							
Fewer than 4,000 HDD	926	11,788	12.7	853	920	72.3	59.2
Workers (main shift)							
Fewer than 5	2,376	14,321	6.0	677	285	47.3	159.7
5 to 9	807	6,325	7.8	465	576	73.5	87.5
10 to 19	683	8,028	11.8	691	1,012	86.1	80.5
20 to 49	487	10,814	22.2	1,016	2,085	93.9	72.1
50 to 99	174	8,898	51.1	730	4,195	82.0	63.9
100 to 249	90	8,356	92.4	865	9,560	103.5	68.6
250 or More	39	10,595	270.0	1,289	32,847	121.7	50.4
Weekly Operating Hours							
39 or Fewer	978	6,596	6.7	164	168	24.9	46.7
40 to 48	1,156	13,105	11.3	746	646	57.0	47.8
49 to 60	986	14,200	14.4	1,068	1,083	75.2	51.6
61 to 84	664	12,458	18.7	1,050	1,581	84.3	65.0
85 to 167	474	9,116	19.2	1,057	2,229	115.9	97.9
Open Continuously	398	11,863	29.8	1,648	4,136	138.9	109.4
Ownership and Occupancy							
Nongovernment Owned							
Owner Occupied	4,135	54,994	13.3	4,565	1,104	83.0	67.3
Nonowner Occupied	2,801	37,785	13.5	3,340	1,193	88.4	71.7
Unoccupied	1,099	15,596	14.2	1,207	1,098	77.4	56.8
Government Owned							
Federal	236	1,613	6.8	17	74	10.8	.
State	521	12,343	23.7	1,169	2,242	94.7	83.1
Local	63	1,797	28.5	218	3,457	121.3	75.7
	83	3,391	40.7	376	4,522	111.0	105.5
	375	7,156	19.1	574	1,531	80.3	75.4
Vacancy Status							
Completely Vacant	140	953	6.8	Q	Q	Q	.
Mostly Vacant	113	956	8.5	Q	Q	Q	Q
Partially Vacant	697	15,520	22.3	1,049	1,505	67.6	51.1
Not At All Vacant	3,707	49,910	13.5	4,654	1,255	93.2	76.2
Number of Establishments							
One	3,528	43,343	12.3	4,047	1,147	93.4	83.1
2 to 5	688	10,582	15.4	761	1,105	71.9	61.5
6 to 10	114	3,574	31.4	304	2,669	85.0	46.1
11 to 20	48	3,260	68.0	251	5,240	77.1	42.1
More than 20	27	4,811	175.2	350	12,732	72.7	42.4
Currently Unoccupied	251	1,769	7.0	21	83	11.7	.
Energy Sources (more than one may apply)							
Electricity	4,395	65,716	15.0	5,733	1,304	87.2	70.1
Natural Gas	2,670	45,525	17.1	4,455	1,669	97.9	79.2
Fuel Oil	434	13,285	30.6	1,487	3,426	111.9	75.9
District Heat	117	5,891	50.2	905	7,707	153.6	104.5
District Chilled Water	50	2,750	55.4	428	8,630	155.7	92.4
Propane	451	6,290	14.0	430	953	68.3	67.7
Other	153	2,322	15.2	203	1,330	87.4	59.7

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Space-Heating Energy Sources (more than one may apply)							
Electricity	1,880	32,291	17.2	2,634	1,401	81.6	60.9
Natural Gas	2,380	37,902	15.9	3,554	1,493	93.8	77.3
Fuel Oil	377	5,611	14.9	521	1,383	92.8	79.6
District Heat	96	5,534	57.7	834	8,693	150.7	102.8
Propane	307	2,728	8.9	119	387	43.5	48.9
Other	94	945	10.0	63	667	66.5	49.4
Primary Space-Heating Energy Source							
Electricity	1,128	17,627	15.6	1,346	1,193	76.4	52.9
Natural Gas	2,189	32,729	15.0	3,063	1,399	93.6	78.2
Fuel Oil	302	3,719	12.3	271	898	73.0	63.9
District Heat	77	5,077	66.0	759	9,867	149.4	108.2
Propane	282	2,107	7.5	73	258	34.4	38.1
Other	38	343	9.1	Q	Q	Q	50.5
Cooling Energy Sources (more than one may apply)							
Electricity	3,450	55,545	16.1	4,938	1,431	88.9	67.9
Natural Gas	142	1,914	13.5	212	1,497	111.0	74.6
District Chilled Water	50	2,750	55.4	428	8,630	155.7	92.4
Water-Heating Energy Sources (more than one may apply)							
Electricity	1,546	24,171	15.6	1,835	1,187	75.9	54.8
Natural Gas	1,520	29,196	19.2	2,961	1,948	101.4	82.4
Fuel Oil	110	2,218	20.2	233	2,123	104.9	80.0
District Heat	62	4,182	67.5	677	10,918	161.9	115.3
Propane	130	1,371	10.5	87	670	63.7	59.7
Cooking Energy Sources (more than one may apply)							
Electricity	437	13,733	31.4	1,520	3,476	110.7	82.8
Natural Gas	505	16,785	33.2	1,928	3,817	114.8	90.3
Propane	118	1,754	14.9	162	1,381	92.6	74.3
Energy End Uses (more than one may apply)							
Buildings with Space Heating	4,016	61,602	15.3	5,529	1,377	89.7	70.8
Buildings with Cooling	3,560	58,474	16.4	5,344	1,501	91.4	69.1
Buildings with Water Heating	3,239	56,115	17.3	5,262	1,625	93.8	71.7
Buildings with Cooking	857	24,681	28.8	2,679	3,124	108.5	84.8
Buildings with Manufacturing	151	3,126	20.7	277	1,834	88.7	63.7
Buildings with Electricity Generation	172	11,882	69.3	1,494	8,706	125.7	79.0
Percent of Floorspace Heated							
Not Heated	641	5,736	8.9	205	319	35.7	54.3
1 to 50	576	7,593	13.2	333	578	43.8	63.5
51 to 99	627	10,745	17.1	979	1,563	91.1	75.0
100	2,813	43,264	15.4	4,216	1,499	97.5	70.5
Percent of Floorspace Cooled							
Not Cooled	1,097	8,864	8.1	389	355	43.9	86.8
1 to 50	1,012	16,846	16.6	1,122	1,108	66.6	79.3
51 to 99	751	16,966	22.6	1,743	2,320	102.7	73.1
100	1,796	24,662	13.7	2,479	1,381	100.5	62.9

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Percent Lit When Open							
Zero	34	173	5.1	Q	Q	Q	Q
1 to 50	835	9,187	11.0	452	541	49.2	91.9
51 to 99	1,228	20,665	16.8	1,993	1,622	96.4	69.5
100	2,096	34,233	16.3	3,255	1,553	95.1	67.9
Building Never Open/ Electricity Not Used.....	464	3,080	6.6	29	62	9.3	Q
Percent Lit When Closed							
Zero	2,174	20,771	9.6	1,170	538	56.3	54.0
1 to 50	1,688	30,950	18.3	2,604	1,543	84.1	62.1
51 to 100	143	2,160	15.1	310	2,163	143.7	100.2
Building Never Closed/ Electricity Not Used.....	652	13,457	20.7	1,649	2,530	122.5	108.9
Heating Equipment (more than one may apply)							
Heat Pumps	492	8,923	18.1	862	1,752	96.6	68.3
Furnaces	1,460	14,449	9.9	1,082	741	74.9	68.3
Individual Space Heaters	894	17,349	19.4	1,374	1,538	79.2	71.8
District Heat	96	5,534	57.7	834	8,693	150.7	102.8
Boilers	581	19,522	33.6	1,911	3,289	97.9	78.4
Packaged Heating Units	1,347	25,743	19.1	2,369	1,759	92.0	73.5
Other	185	4,073	22.1	387	2,094	94.9	55.2
Cooling Equipment (more than one may apply)							
Residential-Type Central Air Conditioners	676	8,329	12.3	672	993	80.6	66.3
Heat Pumps	485	9,147	18.8	871	1,794	95.2	64.7
Individual Air Conditioners	799	14,276	17.9	1,196	1,497	83.8	71.8
District Chilled Water	50	2,750	55.4	428	8,630	155.7	92.4
Central Chillers	130	12,909	99.7	1,598	12,341	123.8	74.0
Packaged Air Conditioning Units	1,953	36,527	18.7	3,390	1,736	92.8	70.2
Swamp Coolers	136	2,219	16.3	215	1,582	96.9	88.7
Other	49	1,312	26.7	130	2,640	99.0	70.6
Main Equipment Replaced Since 1995 (more than one may apply)							
Heating	984	13,220	13.4	1,085	1,102	82.0	64.1
Cooling	1,085	17,390	16.0	1,535	1,415	88.3	66.3
Lighting Equipment Types (more than one may apply)							
Incandescent	2,193	38,156	17.4	3,441	1,569	90.2	69.3
Standard Fluorescent	3,778	60,344	16.0	5,400	1,430	89.5	69.4
Compact Fluorescent	607	20,666	34.1	2,162	3,564	104.6	71.9
High Intensity Discharge	430	19,223	44.8	1,903	4,430	99.0	87.9
Halogen	572	17,926	31.3	1,805	3,153	100.7	70.3
Other	58	1,004	17.5	117	2,033	116.5	83.9
Water Heating Equipment							
Centralized System	2,472	35,579	14.4	3,368	1,362	94.6	74.6
Distributed System	566	10,899	19.3	872	1,540	80.0	60.8
Combination of Centralized and Distributed System	200	9,637	48.1	1,023	5,108	106.1	73.6

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Commercial Refrigeration Equipment (more than one may apply)							
Any Equipment	950	25,652	27.0	2,874	3,025	112.0	85.8
Walk-In Units	658	19,713	29.9	2,407	3,656	122.1	92.3
Cases or Cabinets	820	22,001	26.8	2,481	3,026	112.8	84.4
None	3,707	41,686	11.2	2,859	771	68.6	59.1
Personal Computers							
None	1,617	9,583	5.9	458	283	47.8	95.7
1 to 4	1,636	13,853	8.5	1,078	659	77.8	84.8
5 to 9	542	6,528	12.0	584	1,078	89.5	78.1
10 to 19	403	7,514	18.7	626	1,554	83.3	68.0
20 to 49	247	8,087	32.7	655	2,649	81.0	67.7
50 to 99	105	5,867	55.9	532	5,064	90.6	73.2
100 to 249	71	6,818	96.0	688	9,687	100.9	71.9
250 or More	36	9,088	252.4	1,113	30,907	122.5	52.6
Photocopiers							
None	2,825	21,631	7.7	1,522	539	70.3	80.5
One	1,114	12,928	11.6	1,037	932	80.2	80.0
2 to 4	540	15,620	28.9	1,304	2,413	83.5	77.7
5 to 9	102	5,384	52.6	530	5,180	98.5	64.5
10 or More	75	11,774	156.7	1,341	17,835	113.9	53.6
Other Electronic Equipment (more than one may apply)							
Laser Printers	1,949	46,567	23.9	4,356	2,235	93.5	65.0
FAX Machines	2,807	54,764	19.5	5,044	1,797	92.1	67.5
Medical Diagnostic Equipment	86	2,493	29.1	468	5,460	187.7	83.2
Energy-Related Space Functions (more than one may apply)							
Commercial Food Preparation	767	23,328	30.4	2,548	3,320	109.2	83.9
Activities with Large Amounts of Hot Water	698	21,793	31.2	2,539	3,638	116.5	98.2
Building Shell Conservation Features (more than one may apply)							
Multipaned Windows	2,130	38,193	17.9	3,583	1,683	93.8	71.8
Tinted, Reflective, or Shading Glass	1,283	29,915	23.3	2,835	2,209	94.8	65.7
HVAC Conservation Features (more than one may apply)							
Variable Air-Volume System	550	19,387	35.3	2,115	3,849	109.1	69.3
Economizer Cycle	567	21,256	37.5	2,387	4,210	112.3	72.5
HVAC Maintenance	2,786	53,395	19.2	5,064	1,818	94.8	71.0
Energy Management and Control System (EMCS)	460	21,613	47.0	2,391	5,196	110.7	75.3
Lighting Conservation Features (more than one may apply)							
Specular Reflectors	843	19,994	23.7	1,917	2,275	95.9	66.6
Electronic Ballasts	2,167	42,035	19.4	3,901	1,800	92.8	69.8
Skylights or Atriums	580	18,286	31.5	1,619	2,793	88.5	76.5

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.