

**Table C1. Total Energy Consumption by Major Fuel, 1999**

	All Buildings		Total Energy Consumption (trillion Btu)					Primary Electricity (trillion Btu)
	Number of Buildings (thousand)	Floorspace (million square feet)	Total of Major Fuels	Site Electricity	Natural Gas	Fuel Oil	District Heat	
<b>All Buildings</b> .....	4,657	67,338	5,733	3,098	2,023	179	433	9,352
<b>Building Floorspace (Square Feet)</b>								
1,001 to 5,000 .....	2,348	6,774	772	415	312	29	Q	1,254
5,001 to 10,000 .....	1,110	8,238	608	283	292	Q	Q	853
10,001 to 25,000 .....	708	11,153	743	370	319	24	Q	1,118
25,001 to 50,000 .....	257	9,311	692	371	234	25	61	1,121
50,001 to 100,000 .....	145	10,112	865	494	250	24	97	1,491
100,001 to 200,000 .....	59	8,271	772	451	230	19	72	1,361
200,001 to 500,000 .....	23	6,851	660	340	237	25	57	1,028
Over 500,000 .....	7	6,628	621	373	149	16	84	1,127
<b>Principal Building Activity</b>								
Education .....	327	8,651	649	257	227	48	117	777
Food Sales .....	174	994	201	165	31	Q	Q	498
Food Service .....	349	1,851	447	216	216	Q	Q	653
Health Care .....	127	2,918	515	232	217	19	46	701
Inpatient .....	11	1,865	427	172	195	18	Q	520
Outpatient .....	116	1,053	88	60	22	Q	Q	181
Lodging .....	153	4,521	450	196	181	Q	68	591
Mercantile .....	667	10,398	724	521	186	Q	Q	1,573
Retail (Other Than Mall) .....	534	4,766	344	221	110	Q	Q	666
Enclosed and Strip Malls .....	133	5,631	380	301	76	Q	N	907
Office .....	739	12,044	1,089	767	219	29	74	2,314
Public Assembly .....	305	4,393	359	191	96	Q	59	577
Public Order and Safety .....	72	1,168	102	40	33	7	Q	122
Religious Worship .....	307	3,405	110	42	62	Q	Q	126
Service .....	478	3,388	421	138	260	18	Q	417
Warehouse and Storage .....	603	10,477	461	220	230	8	Q	664
Other .....	102	1,222	176	101	45	Q	Q	306
Vacant .....	253	1,908	31	10	19	Q	Q	31
<b>Year Constructed</b>								
1919 or Before .....	419	4,034	275	91	120	26	Q	275
1920 to 1945 .....	499	6,445	461	184	195	22	60	556
1946 to 1959 .....	763	9,127	674	310	256	33	76	934
1960 to 1969 .....	665	10,866	975	468	372	36	100	1,413
1970 to 1979 .....	774	11,840	1,044	621	326	29	69	1,875
1980 to 1989 .....	846	13,931	1,214	755	391	21	47	2,280
1990 to 1999 .....	690	11,094	1,090	669	364	13	Q	2,020
<b>Floors</b>								
One .....	2,879	26,800	2,003	1,174	750	48	Q	3,545
Two .....	1,168	16,985	1,330	707	530	39	Q	2,136
Three .....	420	8,928	733	355	274	39	66	1,071
Four to Nine .....	178	10,180	1,217	599	377	43	198	1,810
Ten or More .....	11	4,445	449	262	92	10	86	790
<b>Census Region and Division</b>								
Northeast .....	686	12,360	1,116	543	299	138	136	1,638
New England .....	208	3,735	279	132	59	73	Q	399
Middle Atlantic .....	479	8,625	837	411	240	65	121	1,239
Midwest .....	1,188	16,761	1,509	662	709	5	132	2,000
East North Central .....	782	11,205	1,009	429	497	Q	80	1,296
West North Central .....	406	5,556	500	233	212	2	52	704
South .....	1,762	23,485	1,961	1,247	618	29	67	3,766
South Atlantic .....	748	11,001	916	613	249	26	Q	1,851
East South Central .....	396	5,220	473	271	186	Q	Q	817
West South Central .....	618	7,264	573	364	183	1	Q	1,098
West .....	1,021	14,731	1,147	645	396	8	98	1,948
Mountain .....	315	4,579	356	175	145	1	Q	530
Pacific .....	705	10,152	791	470	252	Q	Q	1,418

**Table C1. Total Energy Consumption by Major Fuel, 1999**

	All Buildings		Total Energy Consumption (trillion Btu)					Primary Electricity (trillion Btu)
	Number of Buildings (thousand)	Floorspace (million square feet)	Total of Major Fuels	Site Electricity	Natural Gas	Fuel Oil	District Heat	
<b>Climate Zone: 45-Year Average</b>								
Under 2,000 CDD and --								
More than 7,000 HDD .....	525	5,890	510	220	228	41	Q	665
5,500-7,000 HDD .....	986	17,083	1,535	671	642	62	160	2,027
4,000-5,499 HDD .....	1,085	16,243	1,545	790	520	69	166	2,385
Fewer than 4,000 HDD .....	1,134	16,333	1,291	827	425	Q	34	2,496
2,000 CDD or More and --								
Fewer than 4,000 HDD .....	926	11,788	853	589	208	2	Q	1,779
<b>Workers (main shift)</b>								
Fewer than 5 .....	2,376	14,321	677	334	280	20	Q	1,009
5 to 9 .....	807	6,325	465	217	194	23	Q	654
10 to 19 .....	683	8,028	691	350	281	Q	Q	1,055
20 to 49 .....	487	10,814	1,016	507	435	29	45	1,530
50 to 99 .....	174	8,898	730	418	222	33	57	1,260
100 to 249 .....	90	8,356	865	508	252	27	79	1,534
250 or More .....	39	10,595	1,289	765	359	28	138	2,309
<b>Weekly Operating Hours</b>								
39 or Fewer .....	978	6,596	164	68	82	11	Q	205
40 to 48 .....	1,156	13,105	746	387	269	35	55	1,169
49 to 60 .....	986	14,200	1,068	581	387	43	57	1,754
61 to 84 .....	664	12,458	1,050	588	358	31	73	1,776
85 to 167 .....	474	9,116	1,057	607	348	28	73	1,833
Open Continuously .....	398	11,863	1,648	866	577	32	173	2,614
<b>Ownership and Occupancy</b>								
Nongovernment Owned .....								
Owner Occupied .....	4,135	54,994	4,565	2,534	1,659	121	250	7,651
Nonowner Occupied .....	2,801	37,785	3,340	1,807	1,202	105	226	5,455
Unoccupied .....	1,099	15,596	1,207	720	447	16	Q	2,173
Government Owned .....								
Federal .....	236	1,613	17	Q	Q	Q	N	Q
State .....	521	12,343	1,169	563	364	58	184	1,701
Local .....	63	1,797	218	123	37	3	55	370
	83	3,391	376	160	114	6	96	484
	375	7,156	574	280	212	49	Q	846
<b>Vacancy Status</b>								
Completely Vacant .....	140	953	Q	Q	Q	N	N	Q
Mostly Vacant .....	113	956	Q	4	Q	Q	Q	13
Partially Vacant .....	697	15,520	1,049	648	306	24	71	1,955
Not At All Vacant .....	3,707	49,910	4,654	2,440	1,698	154	362	7,366
<b>Number of Establishments</b>								
One .....	3,528	43,343	4,047	2,021	1,542	136	347	6,102
2 to 5 .....	688	10,582	761	429	273	26	33	1,294
6 to 10 .....	114	3,574	304	202	86	Q	Q	611
11 to 20 .....	48	3,260	251	184	50	10	Q	555
More than 20 .....	27	4,811	350	253	60	4	33	764
Currently Unoccupied .....	251	1,769	21	9	12	Q	N	26
<b>Energy Sources (more than one may apply)</b>								
Electricity .....	4,395	65,716	5,733	3,098	2,023	179	433	9,352
Natural Gas .....	2,670	45,525	4,455	2,191	2,023	59	182	6,616
Fuel Oil .....	434	13,285	1,487	772	428	179	107	2,331
District Heat .....	117	5,891	905	359	108	Q	433	1,083
District Chilled Water .....	50	2,750	428	189	53	Q	185	571
Propane .....	451	6,290	430	262	Q	51	Q	791
Other .....	153	2,322	203	113	75	9	Q	341

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	All Buildings		Total Energy Consumption (trillion Btu)					Primary Electricity (trillion Btu)
	Number of Buildings (thousand)	Floorspace (million square feet)	Total of Major Fuels	Site Electricity	Natural Gas	Fuel Oil	District Heat	
<b>Space-Heating Energy Sources</b> (more than one may apply)								
Electricity .....	1,880	32,291	2,634	1,701	780	43	109	5,135
Natural Gas .....	2,380	37,902	3,554	1,736	1,764	24	Q	5,241
Fuel Oil .....	377	5,611	521	204	140	172	Q	617
District Heat .....	96	5,534	834	339	80	Q	412	1,022
Propane .....	307	2,728	119	99	Q	9	Q	299
Other .....	94	945	63	43	Q	Q	Q	130
<b>Primary Space-Heating Energy Source</b>								
Electricity .....	1,128	17,627	1,346	1,031	282	10	Q	3,114
Natural Gas .....	2,189	32,729	3,063	1,442	1,602	13	Q	4,353
Fuel Oil .....	302	3,719	271	101	17	153	Q	305
District Heat .....	77	5,077	759	308	48	1	402	928
Propane .....	282	2,107	73	72	Q	Q	N	216
Other .....	38	343	Q	Q	Q	Q	N	Q
<b>Cooling Energy Sources</b> (more than one may apply)								
Electricity .....	3,450	55,545	4,938	2,816	1,756	144	222	8,503
Natural Gas .....	142	1,914	212	107	102	Q	Q	323
District Chilled Water .....	50	2,750	428	189	53	Q	185	571
<b>Water-Heating Energy Sources</b> (more than one may apply)								
Electricity .....	1,546	24,171	1,835	1,290	445	47	54	3,896
Natural Gas .....	1,520	29,196	2,961	1,444	1,451	32	Q	4,358
Fuel Oil .....	110	2,218	233	86	53	92	Q	259
District Heat .....	62	4,182	677	255	78	3	341	769
Propane .....	130	1,371	87	73	Q	Q	Q	220
<b>Cooking Energy Sources</b> (more than one may apply)								
Electricity .....	437	13,733	1,520	931	462	40	87	2,811
Natural Gas .....	505	16,785	1,928	982	823	39	84	2,963
Propane .....	118	1,754	162	123	Q	28	Q	370
<b>Energy End Uses (more than one may apply)</b>								
Buildings with Space Heating .....	4,016	61,602	5,529	2,965	1,954	179	431	8,950
Buildings with Cooling .....	3,560	58,474	5,344	2,996	1,834	145	369	9,046
Buildings with Water Heating .....	3,239	56,115	5,262	2,844	1,864	163	392	8,585
Buildings with Cooking .....	857	24,681	2,679	1,504	941	86	149	4,540
Buildings with Manufacturing .....	151	3,126	277	149	114	7	Q	449
Buildings with Electricity Generation .....	172	11,882	1,494	836	470	48	139	2,525
<b>Percent of Floorspace Heated</b>								
Not Heated .....	641	5,736	205	133	Q	Q	Q	402
1 to 50 .....	576	7,593	333	191	130	9	Q	576
51 to 99 .....	627	10,745	979	557	344	20	57	1,683
100 .....	2,813	43,264	4,216	2,216	1,480	150	371	6,691
<b>Percent of Floorspace Cooled</b>								
Not Cooled .....	1,097	8,864	389	101	189	34	Q	306
1 to 50 .....	1,012	16,846	1,122	436	561	76	50	1,315
51 to 99 .....	751	16,966	1,743	1,002	589	40	112	3,026
100 .....	1,796	24,662	2,479	1,559	684	29	207	4,705

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	Number of Buildings (thousand)	Floorspace (million square feet)	Total of Major Fuels	Site Electricity	Natural Gas	Fuel Oil	District Heat	
<b>Percent Lit When Open</b>								
Zero .....	34	173	Q	Q	Q	Q	N	Q
1 to 50 .....	835	9,187	452	223	185	16	Q	672
51 to 99 .....	1,228	20,665	1,993	1,005	760	69	159	3,034
100 .....	2,096	34,233	3,255	1,853	1,062	94	246	5,594
Building Never Open/ Electricity Not Used.....	464	3,080	29	14	14	Q	N	41
<b>Percent Lit When Closed</b>								
Zero .....	2,174	20,771	1,170	587	458	47	78	1,772
1 to 50 .....	1,688	30,950	2,604	1,462	879	96	167	4,413
51 to 100 .....	143	2,160	310	183	108	Q	Q	553
Building Never Closed/ Electricity Not Used.....	652	13,457	1,649	866	578	32	173	2,614
<b>Heating Equipment (more than one may apply)</b>								
Heat Pumps .....	492	8,923	862	516	292	9	Q	1,557
Furnaces .....	1,460	14,449	1,082	475	566	33	Q	1,435
Individual Space Heaters .....	894	17,349	1,374	734	530	32	79	2,215
District Heat .....	96	5,534	834	339	80	Q	412	1,022
Boilers .....	581	19,522	1,911	912	841	142	Q	2,755
Packaged Heating Units .....	1,347	25,743	2,369	1,469	826	25	49	4,435
Other .....	185	4,073	387	229	134	9	Q	691
<b>Cooling Equipment (more than one may apply)</b>								
Residential-Type Central								
Air Conditioners .....	676	8,329	672	343	295	14	Q	1,037
Heat Pumps .....	485	9,147	871	521	291	16	Q	1,574
Individual Air Conditioners .....	799	14,276	1,196	544	486	82	84	1,642
District Chilled Water .....	50	2,750	428	189	53	Q	185	571
Central Chillers .....	130	12,909	1,598	902	522	40	135	2,723
Packaged Air Conditioning								
Units .....	1,953	36,527	3,390	1,995	1,193	71	131	6,024
Swamp Coolers .....	136	2,219	215	102	102	Q	Q	308
Other .....	49	1,312	130	82	40	Q	Q	247
<b>Main Equipment Replaced Since 1995 (more than one may apply)</b>								
Heating .....	984	13,220	1,085	623	431	17	Q	1,880
Cooling .....	1,085	17,390	1,535	864	557	49	65	2,609
<b>Lighting Equipment Types (more than one may apply)</b>								
Incandescent .....	2,193	38,156	3,441	1,852	1,214	97	278	5,591
Standard Fluorescent .....	3,778	60,344	5,400	2,939	1,874	169	418	8,872
Compact Fluorescent .....	607	20,666	2,162	1,197	677	62	227	3,613
High Intensity Discharge .....	430	19,223	1,903	1,023	676	57	148	3,088
Halogen .....	572	17,926	1,805	998	647	38	121	3,014
Other .....	58	1,004	117	59	Q	Q	Q	179
<b>Water Heating Equipment</b>								
Centralized System .....	2,472	35,579	3,368	1,710	1,258	120	279	5,164
Distributed System .....	566	10,899	872	533	278	20	Q	1,610
Combination of Centralized and Distributed System .....	200	9,637	1,023	600	328	23	72	1,811

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	Number of Buildings (thousand)	Floorspace (million square feet)	Total of Major Fuels	Site Electricity	Natural Gas	Fuel Oil	District Heat	
<b>Commercial Refrigeration Equipment (more than one may apply)</b>								
Any Equipment .....	950	25,652	2,874	1,655	980	91	148	4,997
Walk-In Units .....	658	19,713	2,407	1,386	839	66	115	4,186
Cases or Cabinets .....	820	22,001	2,481	1,448	821	77	136	4,370
None .....	3,707	41,686	2,859	1,442	1,043	89	285	4,355
<b>Personal Computers</b>								
None .....	1,617	9,583	458	193	214	18	Q	584
1 to 4 .....	1,636	13,853	1,078	556	447	32	Q	1,678
5 to 9 .....	542	6,528	584	307	254	11	Q	927
10 to 19 .....	403	7,514	626	329	229	29	Q	992
20 to 49 .....	247	8,087	655	382	209	23	41	1,153
50 to 99 .....	105	5,867	532	266	200	19	46	803
100 to 249 .....	71	6,818	688	411	184	25	69	1,240
250 or More .....	36	9,088	1,113	654	286	22	151	1,974
<b>Photocopiers</b>								
None .....	2,825	21,631	1,522	743	644	51	84	2,242
One .....	1,114	12,928	1,037	577	362	26	Q	1,741
2 to 4 .....	540	15,620	1,304	682	483	48	90	2,059
5 to 9 .....	102	5,384	530	284	184	24	38	857
10 or More .....	75	11,774	1,341	813	350	30	148	2,453
<b>Other Electronic Equipment (more than one may apply)</b>								
Laser Printers .....	1,949	46,567	4,356	2,450	1,432	130	345	7,396
FAX Machines .....	2,807	54,764	5,044	2,817	1,706	154	367	8,505
Medical Diagnostic Equipment .....	86	2,493	468	211	205	16	Q	637
<b>Energy-Related Space Functions (more than one may apply)</b>								
Commercial Food Preparation .....	767	23,328	2,548	1,425	899	81	142	4,302
Activities with Large Amounts of Hot Water .....	698	21,793	2,539	1,234	1,020	74	212	3,724
<b>Building Shell Conservation Features (more than one may apply)</b>								
Multipaned Windows .....	2,130	38,193	3,583	1,929	1,275	113	266	5,823
Tinted, Reflective, or Shading Glass .....	1,283	29,915	2,835	1,716	845	57	217	5,180
<b>HVAC Conservation Features (more than one may apply)</b>								
Variable Air-Volume System .....	550	19,387	2,115	1,245	619	47	203	3,759
Economizer Cycle .....	567	21,256	2,387	1,369	748	42	228	4,133
HVAC Maintenance .....	2,786	53,395	5,064	2,781	1,706	165	413	8,395
Energy Management and Control System (EMCS) .....	460	21,613	2,391	1,343	704	54	290	4,055

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	Number of Buildings (thousand)	Floorspace (million square feet)	Total of Major Fuels	Site Electricity	Natural Gas	Fuel Oil	District Heat	
<b>Lighting Conservation Features (more than one may apply)</b>								
Specular Reflectors .....	843	19,994	1,917	1,139	585	69	124	3,440
Electronic Ballasts .....	2,167	42,035	3,901	2,205	1,269	125	302	6,658
Skylights or Atriums .....	580	18,286	1,619	898	572	47	102	2,710

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

N=No responding cases in sample.

Notes: \* Site electricity is the amount of electricity delivered to commercial buildings. Primary electricity, which is not included in the "Total of Major Fuels" category, is site electricity plus the conversion losses in the electric generation process at the utility plant. \* 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.

**Table C2. Total Energy Expenditures by Major Fuel, 1999**

	All Buildings		Total Energy Expenditures (million dollars)				
	Number of Buildings (thousand)	Floorspace (million square feet)	Total of Major Fuels	Electricity	Natural Gas	Fuel Oil	District Heat
<b>All Buildings</b> .....	4,657	67,338	81,552	66,424	10,609	956	3,564
<b>Building Floorspace (Square Feet)</b>							
1,001 to 5,000 .....	2,348	6,774	12,355	10,262	1,802	197	Q
5,001 to 10,000 .....	1,110	8,238	9,228	7,146	1,810	95	Q
10,001 to 25,000 .....	708	11,153	10,873	8,663	1,813	145	Q
25,001 to 50,000 .....	257	9,311	10,090	8,188	1,274	131	496
50,001 to 100,000 .....	145	10,112	12,057	10,023	1,253	114	667
100,001 to 200,000 .....	59	8,271	10,344	8,555	1,104	87	598
200,001 to 500,000 .....	23	6,851	8,015	6,432	958	120	504
Over 500,000 .....	7	6,628	8,592	7,155	594	68	775
<b>Principal Building Activity</b>							
Education .....	327	8,651	8,018	5,820	1,111	208	879
Food Sales .....	174	994	3,587	3,359	195	Q	Q
Food Service .....	349	1,851	6,380	5,082	1,185	Q	Q
Health Care .....	127	2,918	5,653	4,268	881	87	Q
Inpatient .....	11	1,865	4,151	2,948	757	79	Q
Outpatient .....	116	1,053	1,503	1,320	124	Q	Q
Lodging .....	153	4,521	5,716	4,266	943	26	482
Mercantile .....	667	10,398	13,085	11,851	1,126	Q	Q
Retail (Other Than Mall) .....	534	4,766	5,922	5,166	670	Q	Q
Enclosed and Strip Malls .....	133	5,631	7,164	6,685	456	Q	N
Office .....	739	12,044	17,775	15,683	1,215	168	709
Public Assembly .....	305	4,393	5,096	3,983	560	Q	487
Public Order and Safety .....	72	1,168	1,222	805	176	Q	Q
Religious Worship .....	307	3,405	1,494	1,041	409	Q	Q
Service .....	478	3,388	4,639	3,108	1,371	102	Q
Warehouse and Storage .....	603	10,477	6,029	4,829	1,124	55	Q
Other .....	102	1,222	2,498	2,063	224	Q	Q
Vacant .....	253	1,908	361	265	89	Q	Q
<b>Year Constructed</b>							
1919 or Before .....	419	4,034	3,271	2,170	684	149	268
1920 to 1945 .....	499	6,445	5,797	4,174	968	119	535
1946 to 1959 .....	763	9,127	9,216	6,989	1,390	184	652
1960 to 1969 .....	665	10,866	13,237	10,250	1,986	185	815
1970 to 1979 .....	774	11,840	15,858	13,461	1,726	132	538
1980 to 1989 .....	846	13,931	18,342	15,777	2,033	113	Q
1990 to 1999 .....	690	11,094	15,832	13,604	1,820	73	Q
<b>Floors</b>							
One .....	2,879	26,800	30,962	26,384	4,075	288	Q
Two .....	1,168	16,985	19,465	15,870	2,936	214	Q
Three .....	420	8,928	9,483	7,284	1,460	195	544
Four to Nine .....	178	10,180	14,974	11,438	1,766	216	1,553
Ten or More .....	11	4,445	6,670	5,448	372	43	806
<b>Census Region and Division</b>							
Northeast .....	686	12,360	18,996	15,133	1,895	704	1,264
New England .....	208	3,735	4,658	3,783	403	362	Q
Middle Atlantic .....	479	8,625	14,338	11,351	1,491	342	1,154
Midwest .....	1,188	16,761	17,258	12,933	3,277	27	1,021
East North Central .....	782	11,205	11,682	8,798	2,252	13	618
West North Central .....	406	5,556	5,577	4,135	1,024	14	Q
South .....	1,762	23,485	27,303	23,275	3,294	180	554
South Atlantic .....	748	11,001	13,771	11,968	1,397	157	Q
East South Central .....	396	5,220	5,943	4,830	999	Q	Q
West South Central .....	618	7,264	7,590	6,476	898	5	Q
West .....	1,021	14,731	17,995	15,083	2,144	45	724
Mountain .....	315	4,579	4,338	3,365	739	8	Q
Pacific .....	705	10,152	13,657	11,718	1,405	Q	Q

**Table C2. Total Energy Expenditures by Major Fuel, 1999**

	All Buildings		Total Energy Expenditures (million dollars)				
	Number of Buildings (thousand)	Floorspace (million square feet)	Total of Major Fuels	Electricity	Natural Gas	Fuel Oil	District Heat
<b>Climate Zone: 45-Year Average</b>							
Under 2,000 CDD and --							
More than 7,000 HDD .....	525	5,890	6,009	4,505	1,125	206	Q
5,500-7,000 HDD .....	986	17,083	19,809	15,163	3,108	319	1,219
4,000-5,499 HDD .....	1,085	16,243	21,900	17,164	2,874	369	1,492
Fewer than 4,000 HDD .....	1,134	16,333	20,548	17,847	2,341	Q	314
2,000 CDD or More and --							
Fewer than 4,000 HDD .....	926	11,788	13,286	11,745	1,160	15	Q
<b>Workers (main shift)</b>							
Fewer than 5 .....	2,376	14,321	10,245	8,046	1,747	132	Q
5 to 9 .....	807	6,325	6,930	5,462	1,111	147	Q
10 to 19 .....	683	8,028	10,426	8,439	1,509	Q	Q
20 to 49 .....	487	10,814	13,937	11,068	2,386	153	Q
50 to 99 .....	174	8,898	10,937	9,122	1,177	153	485
100 to 249 .....	90	8,356	11,684	9,683	1,210	120	671
250 or More .....	39	10,595	17,393	14,604	1,468	136	1,185
<b>Weekly Operating Hours</b>							
39 or Fewer .....	978	6,596	2,316	1,717	502	68	Q
40 to 48 .....	1,156	13,105	10,960	8,799	1,480	183	Q
49 to 60 .....	986	14,200	15,814	12,980	2,123	245	466
61 to 84 .....	664	12,458	15,896	13,082	2,045	164	605
85 to 167 .....	474	9,116	15,569	13,107	1,810	136	516
Open Continuously .....	398	11,863	20,997	16,739	2,650	160	1,449
<b>Ownership and Occupancy</b>							
Nongovernment Owned .....	4,135	54,994	66,801	55,086	8,913	693	2,110
Owner Occupied .....	2,801	37,785	47,362	38,540	6,383	591	1,848
Nonowner Occupied .....	1,099	15,596	19,195	16,358	2,474	101	Q
Unoccupied .....	236	1,613	244	Q	Q	Q	N
Government Owned .....	521	12,343	14,751	11,338	1,696	263	1,454
Federal .....	63	1,797	2,707	2,195	159	17	336
State .....	83	3,391	4,516	3,189	470	29	828
Local .....	375	7,156	7,529	5,955	1,067	217	Q
<b>Vacancy Status</b>							
Completely Vacant .....	140	953	Q	Q	Q	N	N
Mostly Vacant .....	113	956	191	121	Q	Q	Q
Partially Vacant .....	697	15,520	16,227	13,761	1,600	128	737
Not At All Vacant .....	3,707	49,910	64,965	52,397	8,920	823	2,824
<b>Number of Establishments</b>							
One .....	3,528	43,343	54,521	43,175	7,939	727	2,680
2 to 5 .....	688	10,582	11,256	9,297	1,524	137	Q
6 to 10 .....	114	3,574	5,148	4,492	511	18	Q
11 to 20 .....	48	3,260	4,247	3,846	275	47	Q
More than 20 .....	27	4,811	6,103	5,402	297	25	379
Currently Unoccupied .....	251	1,769	278	211	64	Q	N
<b>Energy Sources (more than one may apply)</b>							
Electricity .....	4,395	65,716	81,548	66,424	10,607	953	3,564
Natural Gas .....	2,670	45,525	58,798	46,431	10,609	297	1,461
Fuel Oil .....	434	13,285	18,854	15,165	1,786	956	948
District Heat .....	117	5,891	10,915	6,841	488	23	3,564
District Chilled Water .....	50	2,750	4,807	3,224	226	Q	1,349
Propane .....	451	6,290	7,054	6,286	433	272	Q
Other .....	153	2,322	3,001	2,512	381	55	Q



**Table C2. Total Energy Expenditures by Major Fuel, 1999**

	All Buildings		Total Energy Expenditures (million dollars)				
	Number of Buildings (thousand)	Floorspace (million square feet)	Total of Major Fuels	Electricity	Natural Gas	Fuel Oil	District Heat
<b>Space-Heating Energy Sources</b> (more than one may apply)							
Electricity .....	1,880	32,291	40,678	35,332	4,167	244	934
Natural Gas .....	2,380	37,902	46,471	36,918	9,122	130	Q
Fuel Oil .....	377	5,611	6,565	5,013	610	909	Q
District Heat .....	96	5,534	10,208	6,432	385	Q	3,371
Propane .....	307	2,728	2,690	2,583	Q	46	Q
Other .....	94	945	1,016	891	Q	Q	Q
<b>Primary Space-Heating Energy Source</b>							
Electricity .....	1,128	17,627	23,523	21,622	1,608	Q	Q
Natural Gas .....	2,189	32,729	38,998	30,654	8,225	71	Q
Fuel Oil .....	302	3,719	3,839	2,923	108	802	Q
District Heat .....	77	5,077	9,287	5,784	220	7	3,277
Propane .....	282	2,107	1,966	1,960	Q	Q	N
Other .....	38	343	Q	Q	Q	Q	N
<b>Cooling Energy Sources</b> (more than one may apply)							
Electricity .....	3,450	55,545	72,249	60,281	9,247	752	1,968
Natural Gas .....	142	1,914	3,034	2,487	518	Q	Q
District Chilled Water .....	50	2,750	4,807	3,224	226	Q	1,349
<b>Water-Heating Energy Sources</b> (more than one may apply)							
Electricity .....	1,546	24,171	30,746	27,581	2,441	262	462
Natural Gas .....	1,520	29,196	38,398	30,391	7,556	166	Q
Fuel Oil .....	110	2,218	2,747	2,089	188	454	Q
District Heat .....	62	4,182	7,911	4,710	319	14	2,868
Propane .....	130	1,371	2,147	2,075	Q	Q	Q
<b>Cooking Energy Sources</b> (more than one may apply)							
Electricity .....	437	13,733	21,428	18,252	2,274	183	719
Natural Gas .....	505	16,785	25,164	20,171	4,019	183	790
Propane .....	118	1,754	3,241	3,038	Q	140	Q
<b>Energy End Uses (more than one may apply)</b>							
Buildings with Space Heating .....	4,016	61,602	77,862	63,164	10,189	954	3,556
Buildings with Cooling .....	3,560	58,474	77,278	63,845	9,647	758	3,028
Buildings with Water Heating .....	3,239	56,115	74,711	60,875	9,705	849	3,283
Buildings with Cooking .....	857	24,681	37,233	30,873	4,672	409	1,279
Buildings with Manufacturing .....	151	3,126	3,811	3,060	634	39	Q
Buildings with Electricity Generation .....	172	11,882	18,991	15,509	2,080	243	1,159
<b>Percent of Floorspace Heated</b>							
Not Heated .....	641	5,736	3,690	3,261	Q	Q	Q
1 to 50 .....	576	7,593	5,293	4,533	679	49	Q
51 to 99 .....	627	10,745	13,939	11,384	1,896	125	534
100 .....	2,813	43,264	58,630	47,247	7,614	779	2,990
<b>Percent of Floorspace Cooled</b>							
Not Cooled .....	1,097	8,864	4,275	2,579	962	198	Q
1 to 50 .....	1,012	16,846	14,072	10,363	2,897	397	Q
51 to 99 .....	751	16,966	24,422	20,141	3,056	195	1,031
100 .....	1,796	24,662	38,784	33,342	3,694	166	1,582

**Table C2. Total Energy Expenditures by Major Fuel, 1999**

	All Buildings		Total Energy Expenditures (million dollars)				
	Number of Buildings (thousand)	Floorspace (million square feet)	Total of Major Fuels	Electricity	Natural Gas	Fuel Oil	District Heat
<b>Percent Lit When Open</b>							
Zero .....	34	173	Q	Q	Q	Q	N
1 to 50 .....	835	9,187	6,822	5,396	1,081	93	Q
51 to 99 .....	1,228	20,665	27,188	21,574	4,085	355	1,173
100 .....	2,096	34,233	47,058	39,065	5,354	502	2,138
Building Never Open/ Electricity Not Used.....	464	3,080	403	319	79	Q	N
<b>Percent Lit When Closed</b>							
Zero .....	2,174	20,771	17,327	14,034	2,565	264	464
1 to 50 .....	1,688	30,950	38,650	31,794	4,845	501	1,510
51 to 100 .....	143	2,160	4,575	3,857	548	Q	Q
Building Never Closed/ Electricity Not Used.....	652	13,457	21,001	16,739	2,651	163	1,449
<b>Heating Equipment (more than one may apply)</b>							
Heat Pumps .....	492	8,923	12,150	10,243	1,481	51	Q
Furnaces .....	1,460	14,449	14,052	10,722	3,054	212	Q
Individual Space Heaters .....	894	17,349	18,689	15,110	2,712	170	697
District Heat .....	96	5,534	10,208	6,432	385	Q	3,371
Boilers .....	581	19,522	23,671	18,848	3,974	705	Q
Packaged Heating Units .....	1,347	25,743	35,951	31,069	4,291	132	459
Other .....	185	4,073	5,151	4,400	559	48	Q
<b>Cooling Equipment (more than one may apply)</b>							
Residential-Type Central							
Air Conditioners .....	676	8,329	8,891	7,113	1,538	82	Q
Heat Pumps .....	485	9,147	12,330	10,416	1,477	89	Q
Individual Air Conditioners .....	799	14,276	15,537	11,793	2,519	421	803
District Chilled Water .....	50	2,750	4,807	3,224	226	Q	1,349
Central Chillers .....	130	12,909	20,759	17,041	2,301	190	1,227
Packaged Air Conditioning							
Units .....	1,953	36,527	50,789	43,059	6,277	360	1,094
Swamp Coolers .....	136	2,219	2,832	2,238	518	Q	Q
Other .....	49	1,312	1,821	1,580	172	Q	Q
<b>Main Equipment Replaced Since 1995 (more than one may apply)</b>							
Heating .....	984	13,220	16,100	13,421	2,431	102	Q
Cooling .....	1,085	17,390	22,162	18,381	2,949	249	583
<b>Lighting Equipment Types (more than one may apply)</b>							
Incandescent .....	2,193	38,156	48,515	39,345	6,273	493	2,404
Standard Fluorescent .....	3,778	60,344	76,738	62,616	9,788	891	3,443
Compact Fluorescent .....	607	20,666	29,689	24,269	3,255	313	1,852
High Intensity Discharge .....	430	19,223	24,549	19,743	3,203	269	1,334
Halogen .....	572	17,926	25,096	20,656	3,246	190	1,005
Other .....	58	1,004	1,506	1,235	Q	Q	Q
<b>Water Heating Equipment</b>							
Centralized System .....	2,472	35,579	47,665	38,010	6,762	631	2,261
Distributed System .....	566	10,899	13,260	11,383	1,409	111	Q
Combination of Centralized and Distributed System .....	200	9,637	13,786	11,481	1,533	108	665

**Table C2. Total Energy Expenditures by Major Fuel, 1999**

	All Buildings		Total Energy Expenditures (million dollars)				
	Number of Buildings (thousand)	Floorspace (million square feet)	Total of Major Fuels	Electricity	Natural Gas	Fuel Oil	District Heat
<b>Commercial Refrigeration Equipment (more than one may apply)</b>							
Any Equipment .....	950	25,652	40,917	34,282	4,858	442	1,336
Walk-In Units .....	658	19,713	33,935	28,489	4,086	313	1,048
Cases or Cabinets .....	820	22,001	35,710	30,056	4,052	365	1,237
None .....	3,707	41,686	40,635	32,142	5,751	514	2,228
<b>Personal Computers</b>							
None .....	1,617	9,583	6,478	4,762	1,291	119	Q
1 to 4 .....	1,636	13,853	16,059	13,009	2,502	198	Q
5 to 9 .....	542	6,528	8,451	6,947	1,327	68	Q
10 to 19 .....	403	7,514	9,636	7,747	1,374	158	Q
20 to 49 .....	247	8,087	9,782	8,162	1,171	109	341
50 to 99 .....	105	5,867	6,928	5,601	903	98	326
100 to 249 .....	71	6,818	9,137	7,675	840	105	516
250 or More .....	36	9,088	15,083	12,521	1,202	101	1,260
<b>Photocopiers</b>							
None .....	2,825	21,631	22,207	17,615	3,624	321	647
One .....	1,114	12,928	15,654	12,840	2,079	144	Q
2 to 4 .....	540	15,620	17,906	14,526	2,514	240	626
5 to 9 .....	102	5,384	6,938	5,626	852	117	343
10 or More .....	75	11,774	18,847	15,816	1,540	134	1,357
<b>Other Electronic Equipment (more than one may apply)</b>							
Laser Printers .....	1,949	46,567	61,755	51,039	7,229	662	2,826
FAX Machines .....	2,807	54,764	72,276	59,661	8,864	798	2,954
Medical Diagnostic Equipment .....	86	2,493	4,977	3,775	813	69	Q
<b>Energy-Related Space Functions (more than one may apply)</b>							
Commercial Food Preparation .....	767	23,328	35,213	29,173	4,443	383	1,214
Activities with Large Amounts of Hot Water .....	698	21,793	32,545	25,383	4,972	353	1,838
<b>Building Shell Conservation Features (more than one may apply)</b>							
Multipaned Windows .....	2,130	38,193	49,189	39,911	6,557	585	2,136
Tinted, Reflective, or Shading Glass .....	1,283	29,915	41,475	35,125	4,359	272	1,718
<b>HVAC Conservation Features (more than one may apply)</b>							
Variable Air-Volume System .....	550	19,387	29,233	24,379	2,946	230	1,677
Economizer Cycle .....	567	21,256	33,194	27,641	3,563	194	1,795
HVAC Maintenance .....	2,786	53,395	71,785	58,705	8,812	861	3,406
Energy Management and Control System (EMCS) .....	460	21,613	31,814	26,143	3,177	246	2,248
<b>Lighting Conservation Features (more than one may apply)</b>							
Specular Reflectors .....	843	19,994	28,083	23,678	3,000	350	1,054
Electronic Ballasts .....	2,167	42,035	55,999	46,324	6,436	633	2,606
Skylights or Atriums .....	580	18,286	21,710	17,867	2,796	223	824

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

N=No responding cases in sample.

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.

**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)
<b>All Buildings</b> .....	4,657	67,338	14.5	5,733	1,231	85.1	70.0
<b>Building Floorspace (Square Feet)</b>							
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
<b>Principal Building Activity</b>							
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
<b>Year Constructed</b>							
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
<b>Floors</b>							
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
<b>Census Region and Division</b>							
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

**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)
<b>Climate Zone: 45-Year Average</b>							
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
<b>Workers (main shift)</b>							
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
<b>Weekly Operating Hours</b>							
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
<b>Ownership and Occupancy</b>							
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
<b>Vacancy Status</b>							
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
<b>Number of Establishments</b>							
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	.
<b>Energy Sources (more than one may apply)</b>							
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

**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)
<b>Space-Heating Energy Sources (more than one may apply)</b>							
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
<b>Primary Space-Heating Energy Source</b>							
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
<b>Cooling Energy Sources (more than one may apply)</b>							
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
<b>Water-Heating Energy Sources (more than one may apply)</b>							
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
<b>Cooking Energy Sources (more than one may apply)</b>							
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
<b>Energy End Uses (more than one may apply)</b>							
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
<b>Percent of Floorspace Heated</b>							
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
<b>Percent of Floorspace Cooled</b>							
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

**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)
<b>Percent Lit When Open</b>							
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
<b>Percent Lit When Closed</b>							
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
<b>Heating Equipment (more than one may apply)</b>							
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
<b>Cooling Equipment (more than one may apply)</b>							
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
<b>Main Equipment Replaced Since 1995 (more than one may apply)</b>							
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
<b>Lighting Equipment Types (more than one may apply)</b>							
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
<b>Water Heating Equipment</b>							
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

**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)
<b>Commercial Refrigeration Equipment (more than one may apply)</b>							
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
<b>Personal Computers</b>							
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
<b>Photocopiers</b>							
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
<b>Other Electronic Equipment (more than one may apply)</b>							
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
<b>Energy-Related Space Functions (more than one may apply)</b>							
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
<b>Building Shell Conservation Features (more than one may apply)</b>							
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
<b>HVAC Conservation Features (more than one may apply)</b>							
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
<b>Lighting Conservation Features (more than one may apply)</b>							
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.



**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

**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>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

**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>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

**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>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

**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>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.

**Table C5. Consumption and Gross Energy Intensity by Census Region for Sum of Major Fuels, 1999**

	Sum of Major Fuel Consumption (trillion Btu)				Total Floorspace of Buildings (million square feet)				Energy Intensity for Sum of Major Fuels (thousand Btu/square foot)			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
<b>All Buildings</b> .....	1,116	1,509	1,961	1,147	12,360	16,761	23,485	14,731	90.3	90.0	83.5	77.9
<b>Building Floorspace (Square Feet)</b>												
1,001 to 5,000 .....	123	197	296	156	901	1,835	2,536	1,503	137.0	107.2	116.9	103.8
5,001 to 10,000 .....	96	142	227	143	1,302	2,045	3,058	1,834	74.0	69.3	74.1	78.2
10,001 to 25,000 .....	151	177	304	111	1,954	2,881	4,194	2,124	77.2	61.3	72.6	52.3
25,001 to 50,000 .....	117	139	255	181	1,407	1,773	3,384	2,746	83.2	78.2	75.3	66.0
50,001 to 100,000 .....	150	216	270	229	1,771	2,436	3,450	2,455	84.7	88.9	78.3	93.1
100,001 to 200,000 .....	124	255	263	131	1,461	2,279	2,864	1,666	84.6	111.7	91.9	78.3
200,001 to 500,000 .....	127	217	207	108	1,362	1,993	2,273	1,222	93.1	109.0	91.1	88.8
Over 500,000 .....	228	167	139	88	2,202	1,519	1,726	1,180	103.4	109.9	80.4	74.5
<b>Principal Building Activity</b>												
Education .....	154	178	159	157	1,714	2,250	2,348	2,338	90.0	79.1	67.8	67.3
Food Sales .....	Q	Q	80	Q	Q	Q	392	208	Q	Q	204.9	Q
Food Service .....	Q	113	Q	Q	Q	558	676	396	Q	202.7	Q	Q
Health Care .....	97	125	189	104	448	750	1,085	635	215.8	167.0	174.2	163.4
Inpatient .....	92	103	Q	Q	377	512	630	346	244.6	202.1	Q	Q
Outpatient .....	Q	Q	37	Q	Q	239	454	289	Q	Q	80.7	Q
Lodging .....	66	96	163	125	484	940	1,595	1,501	135.8	102.7	101.9	83.1
Mercantile .....	141	177	267	138	1,885	2,591	4,080	1,842	75.0	68.5	65.4	75.1
Retail (Other Than Mall) .....	82	106	111	44	974	1,600	1,566	627	84.2	66.4	71.1	70.7
Enclosed and Strip Malls .....	Q	71	155	94	912	991	2,513	1,215	Q	71.8	61.8	77.3
Office .....	217	270	378	225	2,389	2,820	4,162	2,672	90.7	95.7	90.7	84.3
Public Assembly .....	92	91	103	73	882	1,142	1,511	859	104.4	79.4	68.2	85.5
Public Order and Safety .....	Q	Q	Q	Q	530	216	286	Q	Q	Q	Q	Q
Religious Worship .....	18	31	33	27	440	923	1,146	896	41.2	34.0	28.9	30.2
Service .....	Q	99	218	33	740	818	1,387	443	Q	121.2	157.0	75.0
Warehouse and Storage .....	77	201	130	53	1,743	2,764	3,957	2,012	44.4	72.7	32.9	26.2
Other .....	Q	Q	32	Q	Q	283	305	338	Q	Q	105.3	Q
Vacant .....	Q	Q	Q	Q	367	533	554	455	Q	Q	Q	Q
<b>Year Constructed</b>												
1919 or Before .....	97	121	22	34	1,392	1,576	549	518	70.0	77.0	39.9	66.1
1920 to 1945 .....	117	190	99	54	1,619	2,423	1,704	699	72.4	78.4	58.2	77.7
1946 to 1959 .....	217	166	160	131	2,030	2,152	2,910	2,035	106.8	77.4	55.0	64.3
1960 to 1969 .....	197	243	311	224	2,050	2,602	3,318	2,896	96.1	93.4	93.8	77.2
1970 to 1979 .....	167	215	392	271	1,823	2,347	4,278	3,391	91.4	91.6	91.6	79.9
1980 to 1989 .....	172	288	556	198	2,070	2,828	6,263	2,771	83.3	101.8	88.8	71.4
1990 to 1999 .....	148	285	421	235	1,376	2,834	4,464	2,420	107.8	100.6	94.4	97.3
<b>Floors</b>												
One .....	239	482	888	394	3,131	5,800	11,826	6,044	76.5	83.1	75.1	65.2
Two .....	254	310	458	308	2,944	4,405	5,687	3,948	86.2	70.5	80.5	78.1
Three .....	191	244	160	139	2,261	2,725	2,106	1,836	84.4	89.6	75.8	75.5
Four to Nine .....	269	383	330	236	2,598	3,080	2,540	1,962	103.5	124.4	129.9	120.1
Ten or More .....	163	89	127	71	1,426	752	1,327	940	114.1	118.8	95.5	75.2
<b>Climate Zone: 45-Year Average</b>												
Under 2,000 CDD and --												
More than 7,000 HDD .....	80	379	N	51	1,184	4,185	N	522	67.5	90.5	N	98.1
5,500-7,000 HDD .....	494	843	N	198	5,806	8,932	N	2,345	85.1	94.3	N	84.3
4,000-5,499 HDD .....	542	287	518	198	5,370	3,645	4,759	2,470	100.9	78.8	108.8	80.2
Fewer than 4,000 HDD .....	N	N	760	532	N	N	8,859	7,474	N	N	85.7	71.2
2,000 CDD or More and --												
Fewer than 4,000 HDD .....	N	N	684	168	N	N	9,867	1,920	N	N	69.4	87.7

**Table C5. Consumption and Gross Energy Intensity by Census Region for Sum of Major Fuels, 1999**

	Sum of Major Fuel Consumption (trillion Btu)				Total Floorspace of Buildings (million square feet)				Energy Intensity for Sum of Major Fuels (thousand Btu/square foot)			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
<b>Workers (main shift)</b>												
Fewer than 5 .....	90	192	260	135	1,906	4,033	5,579	2,802	47.0	47.7	46.6	48.3
5 to 9 .....	93	141	126	105	1,372	1,689	1,730	1,533	67.7	83.6	72.9	68.2
10 to 19 .....	141	171	256	123	1,472	1,930	2,935	1,690	96.0	88.7	87.2	72.6
20 to 49 .....	168	207	444	197	1,574	2,575	4,174	2,492	106.5	80.4	106.3	79.2
50 to 99 .....	164	173	225	168	1,814	1,876	2,876	2,332	90.3	92.4	78.1	72.1
100 to 249 .....	157	263	288	157	1,702	2,228	2,856	1,570	92.4	118.1	100.8	99.8
250 or More .....	303	360	363	262	2,519	2,430	3,335	2,312	120.3	148.3	108.9	113.6
<b>Weekly Operating Hours</b>												
39 or Fewer .....	25	48	55	36	900	1,851	2,532	1,313	28.3	25.8	21.8	27.2
40 to 48 .....	125	176	269	177	1,879	2,989	5,265	2,972	66.4	59.0	51.0	59.4
49 to 60 .....	189	268	400	211	2,792	3,577	4,617	3,214	67.8	74.8	86.7	65.6
61 to 84 .....	227	286	337	200	2,482	3,088	4,198	2,689	91.5	92.5	80.3	74.4
85 to 167 .....	176	305	367	209	1,813	2,531	2,978	1,794	96.9	120.7	123.2	116.5
Open Continuously .....	374	426	533	315	2,494	2,725	3,896	2,748	149.8	156.3	136.9	114.6
<b>Ownership and Occupancy</b>												
Nongovernment Owned .....	850	1,215	1,593	907	9,542	13,896	19,745	11,810	89.1	87.4	80.7	76.8
Owner Occupied .....	677	907	1,171	585	7,143	9,990	13,228	7,424	94.7	90.8	88.5	78.8
Nonowner Occupied .....	173	303	411	320	2,286	3,427	5,881	4,001	75.6	88.5	69.9	79.9
Unoccupied .....	Q	Q	Q	Q	Q	479	636	385	Q	Q	Q	Q
Government Owned .....	266	294	369	241	2,818	2,865	3,740	2,921	94.3	102.5	98.6	82.3
Federal .....	Q	Q	68	Q	394	318	549	537	Q	Q	124.2	114.7
State .....	78	113	117	68	683	961	919	828	114.6	117.7	127.3	82.4
Local .....	148	131	184	111	1,741	1,586	2,273	1,556	85.2	82.9	80.9	71.2
<b>Vacancy Status</b>												
Completely Vacant .....	N	Q	Q	Q	Q	298	Q	287	N	Q	Q	Q
Mostly Vacant .....	Q	Q	Q	Q	Q	235	Q	Q	Q	Q	Q	Q
Partially Vacant .....	224	292	340	192	2,693	4,031	5,548	3,248	83.1	72.5	61.3	59.3
Not At All Vacant .....	889	1,201	1,615	949	9,301	12,197	17,383	11,029	95.6	98.4	92.9	86.0
<b>Number of Establishments</b>												
One .....	749	1,094	1,390	814	7,665	11,299	14,723	9,655	97.7	96.8	94.4	84.4
2 to 5 .....	150	247	220	145	2,186	2,900	3,421	2,075	68.5	85.0	64.2	69.8
6 to 10 .....	Q	39	127	88	494	571	1,440	1,068	Q	67.5	88.1	82.5
11 to 20 .....	Q	53	100	43	705	579	1,239	738	Q	91.3	80.4	58.2
More than 20 .....	111	71	115	53	1,159	864	2,000	788	95.5	82.2	57.5	67.4
Currently Unoccupied .....	Q	Q	Q	Q	Q	548	662	407	Q	Q	Q	Q
<b>Energy Sources (more than one may apply)</b>												
Electricity .....	1,116	1,509	1,961	1,147	11,964	16,389	23,076	14,287	93.2	92.1	85.0	80.3
Natural Gas .....	753	1,311	1,489	902	7,305	13,506	14,199	10,515	103.1	97.1	104.9	85.8
Fuel Oil .....	484	358	443	202	5,414	2,423	3,749	1,699	89.3	147.6	118.2	119.1
District Heat .....	289	235	210	171	1,898	1,521	1,265	1,207	152.1	154.4	166.3	141.5
District Chilled Water .....	Q	132	119	Q	326	746	939	739	Q	177.5	126.3	Q
Propane .....	124	Q	137	45	1,706	1,405	2,389	790	72.6	88.3	57.4	56.6
Other .....	Q	58	56	45	580	606	579	557	Q	95.9	97.1	81.3
<b>Space-Heating Energy Sources (more than one may apply)</b>												
Electricity .....	433	573	1,123	504	4,625	6,429	13,862	7,375	93.7	89.2	81.0	68.3
Natural Gas .....	563	1,163	1,082	747	5,703	12,467	10,904	8,828	98.7	93.3	99.2	84.6
Fuel Oil .....	283	99	114	Q	3,612	619	1,128	252	78.4	160.3	101.2	Q
District Heat .....	287	230	162	155	1,876	1,514	1,022	1,121	153.0	152.2	158.2	138.1
Propane .....	59	17	34	Q	761	733	1,013	221	77.6	22.7	33.5	Q
Other .....	Q	Q	Q	Q	Q	281	260	Q	Q	Q	Q	Q

**Table C5. Consumption and Gross Energy Intensity by Census Region for Sum of Major Fuels, 1999**

	Sum of Major Fuel Consumption (trillion Btu)				Total Floorspace of Buildings (million square feet)				Energy Intensity for Sum of Major Fuels (thousand Btu/square foot)			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
<b>Primary Space-Heating</b>												
<b>Energy Source</b>												
Electricity .....	142	208	713	283	1,645	2,355	9,259	4,368	86.3	88.3	77.0	64.8
Natural Gas .....	473	1,056	897	638	4,913	11,348	8,815	7,653	96.3	93.0	101.8	83.3
Fuel Oil .....	205	Q	52	Q	2,803	Q	718	Q	73.0	Q	71.7	Q
District Heat .....	250	218	143	148	1,709	1,411	904	1,053	146.2	154.5	157.9	140.5
Propane .....	Q	8	22	Q	505	626	819	157	Q	12.9	27.2	Q
Other .....	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Cooling Energy Sources (more than one may apply)</b>												
Electricity .....	966	1,260	1,798	914	9,766	13,474	20,908	11,396	98.9	93.5	86.0	80.2
Natural Gas .....	Q	70	Q	65	446	550	266	652	Q	127.7	Q	99.2
District Chilled Water .....	Q	132	119	Q	326	746	939	739	Q	177.5	126.3	Q
<b>Water-Heating Energy Sources (more than one may apply)</b>												
Electricity .....	374	419	764	278	4,485	4,633	10,480	4,574	83.4	90.5	72.9	60.7
Natural Gas .....	421	823	1,010	707	4,074	8,323	8,943	7,856	103.4	98.8	113.0	90.0
Fuel Oil .....	151	Q	63	Q	1,678	Q	328	Q	90.2	Q	190.9	Q
District Heat .....	205	188	168	Q	1,300	1,219	863	799	157.4	154.2	194.8	145.2
Propane .....	Q	Q	Q	Q	561	428	Q	Q	Q	Q	Q	Q
<b>Cooking Energy Sources (more than one may apply)</b>												
Electricity .....	287	365	616	252	2,680	3,335	5,166	2,551	107.2	109.5	119.2	98.8
Natural Gas .....	388	495	665	379	3,380	4,445	5,345	3,614	114.9	111.4	124.3	105.0
Propane .....	63	Q	Q	Q	523	Q	789	Q	119.7	Q	76.6	Q
<b>Energy End Uses (more than one may apply)</b>												
Buildings with Space Heating .....	1,109	1,499	1,831	1,090	11,667	15,916	20,598	13,421	95.1	94.2	88.9	81.2
Buildings with Cooling .....	1,035	1,406	1,873	1,030	10,311	14,371	21,549	12,243	100.3	97.8	86.9	84.1
Buildings with Water Heating .....	1,055	1,339	1,804	1,063	10,577	13,702	19,014	12,822	99.8	97.7	94.9	82.9
Buildings with Cooking .....	583	660	974	461	5,245	6,042	8,569	4,825	111.2	109.3	113.7	95.6
Buildings with Manufacturing .....	Q	109	77	41	568	818	1,035	706	Q	132.8	74.5	57.6
Buildings with Electricity Generation .....	348	407	495	244	3,108	2,782	4,062	1,930	112.1	146.1	121.8	126.3
<b>Percent of Floorspace Heated</b>												
Not Heated .....	Q	Q	131	57	693	846	2,887	1,310	Q	Q	45.3	43.8
1 to 50 .....	44	64	118	108	1,053	1,571	2,538	2,432	41.8	40.6	46.3	44.2
51 to 99 .....	148	177	465	189	1,688	2,323	4,335	2,399	87.7	76.2	107.4	78.7
100 .....	917	1,258	1,248	794	8,927	12,022	13,725	8,590	102.7	104.6	90.9	92.4
<b>Percent of Floorspace Cooled</b>												
Not Cooled .....	81	103	Q	117	2,049	2,390	1,936	2,489	39.7	43.0	Q	47.1
1 to 50 .....	282	416	272	152	3,914	5,068	4,618	3,246	72.0	82.1	58.8	46.8
51 to 99 .....	361	475	591	317	3,196	4,741	5,801	3,229	112.9	100.2	101.8	98.1
100 .....	392	515	1,011	562	3,202	4,562	11,130	5,768	122.4	112.8	90.9	97.4
<b>Percent Lit When Open</b>												
Zero .....	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
1 to 50 .....	70	144	148	90	1,620	2,486	3,013	2,068	43.4	57.9	49.1	43.4
51 to 99 .....	440	571	635	347	4,081	5,814	6,392	4,378	107.8	98.2	99.4	79.2
100 .....	604	785	1,160	706	6,077	7,668	12,817	7,671	99.5	102.4	90.5	92.0
Building Never Open/ Electricity Not Used.....	Q	Q	Q	Q	555	780	1,162	582	Q	Q	Q	Q



**Table C5. Consumption and Gross Energy Intensity by Census Region for Sum of Major Fuels, 1999**

	Sum of Major Fuel Consumption (trillion Btu)				Total Floorspace of Buildings (million square feet)				Energy Intensity for Sum of Major Fuels (thousand Btu/square foot)			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
<b>Percent Lit When Closed</b>												
Zero .....	185	309	364	313	3,390	5,264	7,296	4,821	54.4	58.6	49.8	65.0
1 to 50 .....	514	740	893	457	5,766	8,047	10,912	6,226	89.1	92.0	81.8	73.4
51 to 100 .....	Q	Q	172	62	318	353	992	497	Q	Q	172.8	124.0
Building Never Closed/ Electricity Not Used.....	374	426	533	315	2,887	3,097	4,285	3,188	129.6	137.5	124.5	98.9
<b>Heating Equipment (more than one may apply)</b>												
Heat Pumps .....	124	109	477	152	1,193	1,015	4,580	2,135	104.1	107.1	104.2	71.0
Furnaces .....	170	464	300	148	2,257	5,767	3,949	2,476	75.3	80.4	76.0	59.8
Individual Space Heaters .....	295	416	406	257	3,555	4,667	5,471	3,657	82.9	89.2	74.2	70.3
District Heat .....	287	230	162	155	1,876	1,514	1,022	1,121	153.0	152.2	158.2	138.1
Boilers .....	467	584	487	372	5,469	5,961	4,209	3,883	85.4	98.0	115.8	95.8
Packaged Heating Units .....	401	568	911	488	4,033	5,081	10,455	6,175	99.4	111.8	87.1	79.1
Other .....	65	Q	111	66	769	1,113	1,391	800	84.9	129.5	79.8	82.8
<b>Cooling Equipment (more than one may apply)</b>												
Residential-Type Central												
Air Conditioners .....	87	231	274	79	950	2,951	3,272	1,156	91.8	78.3	83.7	68.8
Heat Pumps .....	111	112	481	167	1,215	1,063	4,604	2,265	91.6	105.5	104.4	73.6
Individual Air Conditioners .....	359	334	351	152	3,897	3,724	4,526	2,130	92.2	89.6	77.5	71.5
District Chilled Water .....	Q	132	119	Q	326	746	939	739	Q	177.5	126.3	Q
Central Chillers .....	342	424	523	310	2,782	3,149	4,328	2,651	122.8	134.6	120.9	116.8
Packaged Air Conditioning												
Units .....	695	877	1,173	645	6,641	8,198	13,915	7,773	104.7	106.9	84.3	83.0
Swamp Coolers .....	Q	Q	Q	139	Q	Q	339	1,624	Q	Q	Q	85.7
Other .....	Q	Q	Q	Q	Q	328	343	324	Q	Q	Q	Q
<b>Main Equipment Replaced Since 1995 (more than one may apply)</b>												
Heating .....	158	278	413	235	1,829	3,244	5,080	3,068	86.4	85.8	81.3	76.6
Cooling .....	294	376	597	268	3,080	3,808	7,088	3,414	95.4	98.8	84.2	78.5
<b>Lighting Equipment Types (more than one may apply)</b>												
Incandescent .....	691	858	1,155	736	7,047	9,903	12,970	8,236	98.1	86.7	89.1	89.3
Standard Fluorescent .....	1,058	1,422	1,828	1,092	11,348	14,840	20,850	13,305	93.3	95.8	87.7	82.1
Compact Fluorescent .....	443	623	645	451	3,939	5,518	6,427	4,781	112.6	112.9	100.3	94.3
High Intensity Discharge .....	390	617	625	271	4,382	5,513	5,874	3,454	89.1	111.8	106.4	78.4
Halogen .....	423	472	554	355	3,625	4,405	5,847	4,049	116.8	107.3	94.8	87.6
Other .....	Q	Q	Q	Q	Q	Q	441	180	Q	Q	Q	Q
<b>Water Heating Equipment</b>												
Centralized System .....	727	804	1,129	707	6,941	9,037	11,500	8,102	104.8	88.9	98.2	87.3
Distributed System .....	126	224	329	193	1,823	2,328	4,120	2,628	68.9	96.3	79.7	73.6
Combination of Centralized and Distributed System .....	203	311	346	162	1,813	2,336	3,395	2,093	111.7	133.3	102.0	77.6
<b>Commercial Refrigeration Equipment (more than one may apply)</b>												
Any Equipment .....	619	734	983	538	5,536	6,252	8,734	5,130	111.8	117.3	112.6	105.0
Walk-In Units .....	506	592	848	461	4,335	4,580	6,809	3,988	116.7	129.3	124.6	115.5
Cases or Cabinets .....	528	632	857	464	4,723	5,429	7,512	4,337	111.9	116.4	114.1	106.9
None .....	497	775	978	609	6,824	10,509	14,751	9,601	72.8	73.8	66.3	63.4

**Table C5. Consumption and Gross Energy Intensity by Census Region for Sum of Major Fuels, 1999**

	Sum of Major Fuel Consumption (trillion Btu)				Total Floorspace of Buildings (million square feet)				Energy Intensity for Sum of Major Fuels (thousand Btu/square foot)			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
<b>Personal Computers</b>												
None .....	52	131	158	116	1,524	2,653	3,722	1,684	34.0	49.5	42.6	69.1
1 to 4 .....	184	318	382	194	2,293	3,758	4,755	3,045	80.3	84.5	80.4	63.6
5 to 9 .....	66	105	304	109	811	1,308	2,870	1,539	81.6	80.3	105.8	71.0
10 to 19 .....	169	111	237	109	1,749	1,570	2,707	1,488	96.9	70.4	87.5	73.1
20 to 49 .....	138	177	216	124	1,395	1,935	2,588	2,168	98.6	91.3	83.5	57.3
50 to 99 .....	91	177	147	116	903	1,638	1,893	1,432	101.2	107.8	77.8	81.3
100 to 249 .....	149	216	192	131	1,599	1,829	2,174	1,216	92.9	118.3	88.5	107.5
250 or More .....	267	275	324	247	2,085	2,069	2,776	2,158	127.9	132.7	116.8	114.7
<b>Photocopiers</b>												
None .....	237	375	572	338	3,696	5,185	8,044	4,706	64.2	72.2	71.1	71.7
One .....	166	262	402	207	1,633	3,164	5,040	3,091	101.6	82.7	79.9	67.1
2 to 4 .....	256	343	458	246	2,976	4,227	5,109	3,308	86.0	81.2	89.7	74.4
5 to 9 .....	87	208	131	104	986	1,577	1,586	1,234	87.9	132.2	82.5	84.5
10 or More .....	370	321	398	252	3,069	2,607	3,705	2,393	120.6	123.1	107.3	105.3
<b>Other Electronic Equipment (more than one may apply)</b>												
Laser Printers .....	907	1,126	1,467	855	9,112	11,161	15,628	10,666	99.6	100.9	93.9	80.2
FAX Machines .....	1,015	1,332	1,707	990	10,496	13,369	18,804	12,095	96.7	99.6	90.8	81.8
Medical Diagnostic Equipment .....	82	110	179	98	365	586	953	588	223.6	187.3	187.6	165.9
<b>Energy-Related Space Functions (more than one may apply)</b>												
Commercial Food Preparation .....	543	628	933	444	4,890	5,709	8,126	4,603	111.0	110.0	114.8	96.4
Activities with Large Amounts of Hot Water .....	504	632	899	504	4,268	5,335	7,199	4,990	118.1	118.5	124.8	101.0
<b>Building Shell Conservation Features (more than one may apply)</b>												
Multipaned Windows .....	757	1,067	1,154	605	7,564	11,546	11,981	7,103	100.1	92.4	96.3	85.2
Tinted, Reflective, or Shading Glass .....	477	686	1,006	666	4,525	6,364	11,246	7,780	105.5	107.7	89.4	85.6
<b>HVAC Conservation Features (more than one may apply)</b>												
Variable Air-Volume System .....	406	578	650	482	3,643	4,858	6,121	4,765	111.5	119.0	106.1	101.0
Economizer Cycle .....	498	734	614	541	4,634	5,688	5,858	5,075	107.4	129.0	104.9	106.6
HVAC Maintenance .....	1,050	1,294	1,699	1,022	10,640	13,025	17,981	11,749	98.6	99.3	94.5	87.0
Energy Management and Control System (EMCS) .....	466	698	718	510	4,211	5,296	7,108	4,998	110.8	131.8	101.0	101.9
<b>Lighting Conservation Features (more than one may apply)</b>												
Specular Reflectors .....	516	466	570	365	4,874	4,296	6,400	4,424	105.9	108.5	89.1	82.5
Electronic Ballasts .....	822	1,091	1,211	777	8,480	10,287	13,745	9,523	96.9	106.0	88.1	81.6
Skylights or Atriums .....	337	477	533	271	3,697	4,491	6,116	3,982	91.3	106.3	87.1	68.1

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

N=No responding cases in sample.

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.

**Table C6. Expenditures by Census Region for Sum of Major Fuels, 1999**

	Sum of Major Fuel Expenditures (million dollars)				Sum of Major Fuel Expenditures (dollars)							
					per Million Btu				per Square Foot			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
<b>All Buildings</b> .....	18,996	17,258	27,303	17,995	17.02	11.44	13.92	15.69	1.54	1.03	1.16	1.22
<b>Building Floorspace (Square Feet)</b>												
1,001 to 5,000 .....	2,753	2,312	4,637	2,654	22.31	11.75	15.64	17.01	3.06	1.26	1.83	1.77
5,001 to 10,000 .....	1,634	1,883	3,193	2,517	16.96	13.29	14.09	17.56	1.26	0.92	1.04	1.37
10,001 to 25,000 .....	2,500	2,145	4,187	2,041	16.57	12.15	13.76	18.37	1.28	0.74	1.00	0.96
25,001 to 50,000 .....	1,990	1,580	3,589	2,931	16.98	11.40	14.08	16.18	1.41	0.89	1.06	1.07
50,001 to 100,000 .....	2,430	2,594	3,755	3,277	16.20	11.98	13.90	14.33	1.37	1.06	1.09	1.33
100,001 to 200,000 .....	2,090	2,670	3,639	1,945	16.92	10.49	13.83	14.90	1.43	1.17	1.27	1.17
200,001 to 500,000 .....	1,805	2,133	2,609	1,468	14.23	9.82	12.60	13.53	1.32	1.07	1.15	1.20
Over 500,000 .....	3,793	1,943	1,694	1,161	16.66	11.64	12.21	13.21	1.72	1.28	0.98	0.98
<b>Principal Building Activity</b>												
Education .....	2,045	1,802	2,098	2,073	13.25	10.13	13.17	13.18	1.19	0.80	0.89	0.89
Food Sales .....	Q	Q	1,409	704	Q	Q	17.57	Q	Q	Q	3.60	3.39
Food Service .....	Q	1,450	2,219	1,453	Q	12.83	Q	Q	Q	2.60	3.28	3.67
Health Care .....	1,029	1,243	2,152	1,229	10.65	9.92	11.39	11.85	2.30	1.66	1.98	1.94
Inpatient .....	944	913	1,490	Q	10.23	8.83	Q	Q	2.50	1.78	2.36	Q
Outpatient .....	Q	330	662	425	Q	Q	18.04	Q	Q	1.38	1.46	1.47
Lodging .....	818	1,053	2,029	1,817	12.44	10.91	12.47	14.56	1.69	1.12	1.27	1.21
Mercantile .....	3,138	2,421	4,370	3,156	22.20	13.64	16.38	22.82	1.66	0.93	1.07	1.71
Retail (Other Than Mall) .....	1,769	1,410	1,785	957	21.59	13.27	16.03	21.58	1.82	0.88	1.14	1.53
Enclosed and Strip Malls .....	1,369	1,011	2,584	2,199	Q	14.19	16.63	23.41	1.50	1.02	1.03	1.81
Office .....	4,338	3,674	5,962	3,801	20.02	13.62	15.79	16.87	1.82	1.30	1.43	1.42
Public Assembly .....	1,565	1,195	1,532	804	17.01	13.19	14.86	10.96	1.77	1.05	1.01	0.94
Public Order and Safety .....	Q	Q	324	Q	Q	Q	Q	Q	Q	Q	1.13	Q
Religious Worship .....	224	357	569	344	12.35	11.36	17.16	Q	0.51	0.39	0.50	0.38
Service .....	1,047	996	2,141	455	Q	10.04	9.83	13.70	1.42	1.22	1.54	1.03
Warehouse and Storage .....	1,370	1,747	1,911	1,001	17.71	8.69	14.69	19.00	0.79	0.63	0.48	0.50
Other .....	Q	Q	487	Q	Q	Q	15.14	Q	Q	Q	1.59	Q
Vacant .....	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Year Constructed</b>												
1919 or Before .....	1,319	1,245	330	377	13.55	10.26	15.05	10.99	0.95	0.79	0.60	0.73
1920 to 1945 .....	1,680	2,109	1,318	689	14.32	11.10	13.30	12.68	1.04	0.87	0.77	0.99
1946 to 1959 .....	3,195	1,794	2,397	1,830	14.73	10.78	14.98	13.99	1.57	0.83	0.82	0.90
1960 to 1969 .....	3,418	2,658	3,883	3,278	17.34	10.94	12.48	14.65	1.67	1.02	1.17	1.13
1970 to 1979 .....	3,027	2,611	5,613	4,606	18.16	12.14	14.32	17.01	1.66	1.11	1.31	1.36
1980 to 1989 .....	3,566	3,660	7,525	3,592	20.69	12.71	13.53	18.15	1.72	1.29	1.20	1.30
1990 to 1999 .....	2,791	3,181	6,236	3,624	18.82	11.15	14.81	15.39	2.03	1.12	1.40	1.50
<b>Floors</b>												
One .....	4,791	5,784	13,093	7,295	20.01	12.00	14.75	18.52	1.53	1.00	1.11	1.21
Two .....	4,762	3,605	6,165	4,932	18.75	11.62	13.47	16.00	1.62	0.82	1.08	1.25
Three .....	2,814	2,670	2,161	1,838	14.74	10.94	13.54	13.25	1.24	0.98	1.03	1.00
Four to Nine .....	3,950	4,139	4,035	2,850	14.69	10.81	12.23	12.10	1.52	1.34	1.59	1.45
Ten or More .....	2,680	1,060	1,850	1,080	16.48	11.86	14.60	15.26	1.88	1.41	1.39	1.15
<b>Climate Zone: 45-Year Average</b>												
Under 2,000 CDD and --												
More than 7,000 HDD .....	1,510	3,967	N	531	18.91	10.47	N	10.37	1.28	0.95	N	1.02
5,500-7,000 HDD .....	8,420	9,548	N	1,841	17.03	11.33	N	9.31	1.45	1.07	N	0.78
4,000-5,499 HDD .....	9,065	3,743	6,706	2,386	16.73	13.03	12.95	12.05	1.69	1.03	1.41	0.97
Fewer than 4,000 HDD .....	N	N	10,217	10,331	N	N	13.45	19.42	N	N	1.15	1.38
2,000 CDD or More and --												
Fewer than 4,000 HDD .....	N	N	10,380	2,906	N	N	15.17	17.26	N	N	1.05	1.51

**Table C6. Expenditures by Census Region for Sum of Major Fuels, 1999**

	Sum of Major Fuel Expenditures (million dollars)				Sum of Major Fuel Expenditures (dollars)							
					per Million Btu				per Square Foot			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
<b>Workers (main shift)</b>												
Fewer than 5 .....	1,528	2,335	4,182	2,199	17.06	12.14	16.08	16.23	0.80	0.58	0.75	0.78
5 to 9 .....	1,725	1,655	1,977	1,572	18.55	11.72	15.68	15.03	1.26	0.98	1.14	1.03
10 to 19 .....	2,597	1,938	3,556	2,336	18.36	11.32	13.90	19.02	1.76	1.00	1.21	1.38
20 to 49 .....	2,927	2,425	5,683	2,902	17.45	11.71	12.81	14.71	1.86	0.94	1.36	1.16
50 to 99 .....	2,685	2,008	3,235	3,010	16.39	11.58	14.40	17.91	1.48	1.07	1.13	1.29
100 to 249 .....	2,625	2,917	3,927	2,216	16.69	11.08	13.64	14.15	1.54	1.31	1.37	1.41
250 or More .....	4,909	3,980	4,742	3,761	16.20	11.04	13.06	14.33	1.95	1.64	1.42	1.63
<b>Weekly Operating Hours</b>												
39 or Fewer .....	298	577	908	532	11.71	12.08	16.46	14.92	0.33	0.31	0.36	0.41
40 to 48 .....	2,060	2,070	4,127	2,703	16.52	11.73	15.36	15.30	1.10	0.69	0.78	0.91
49 to 60 .....	3,574	2,983	5,633	3,624	18.89	11.14	14.08	17.18	1.28	0.83	1.22	1.13
61 to 84 .....	3,853	3,786	4,786	3,471	16.96	13.26	14.19	17.34	1.55	1.23	1.14	1.29
85 to 167 .....	3,272	3,676	5,198	3,422	18.64	12.03	14.17	16.38	1.81	1.45	1.75	1.91
Open Continuously .....	5,938	4,167	6,650	4,243	15.89	9.78	12.47	13.47	2.38	1.53	1.71	1.54
<b>Ownership and Occupancy</b>												
Nongovernment Owned .....	15,121	14,300	22,523	14,857	17.79	11.77	14.14	16.39	1.58	1.03	1.14	1.26
Owner Occupied .....	11,600	10,743	16,021	8,999	17.14	11.84	13.68	15.38	1.62	1.08	1.21	1.21
Nonowner Occupied .....	3,514	3,499	6,362	5,820	20.34	11.54	15.47	18.21	1.54	1.02	1.08	1.45
Unoccupied .....	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Government Owned .....	3,875	2,958	4,780	3,138	14.58	10.08	12.96	13.05	1.38	1.03	1.28	1.07
Federal .....	Q	Q	930	606	Q	Q	13.65	9.85	Q	Q	1.70	1.13
State .....	1,169	1,126	1,202	1,019	14.95	9.96	10.28	14.94	1.71	1.17	1.31	1.23
Local .....	1,987	1,381	2,649	1,512	13.39	10.50	14.41	13.66	1.14	0.87	1.17	0.97
<b>Vacancy Status</b>												
Completely Vacant .....	N	Q	Q	Q	N	Q	Q	Q	N	Q	Q	Q
Mostly Vacant .....	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Partially Vacant .....	3,996	3,726	5,076	3,430	17.86	12.74	14.92	17.82	1.48	0.92	0.91	1.06
Not At All Vacant .....	14,957	13,402	22,126	14,480	16.82	11.16	13.70	15.26	1.61	1.10	1.27	1.31
<b>Number of Establishments</b>												
One .....	12,261	11,935	18,411	11,914	16.38	10.91	13.24	14.63	1.60	1.06	1.25	1.23
2 to 5 .....	2,477	3,001	3,373	2,406	16.54	12.17	15.35	16.60	1.13	1.03	0.99	1.16
6 to 10 .....	838	550	1,889	1,871	Q	14.25	14.90	21.22	1.70	0.96	1.31	1.75
11 to 20 .....	1,141	679	1,585	841	Q	12.86	15.93	19.59	1.62	1.17	1.28	1.14
More than 20 .....	2,268	1,019	1,905	911	20.50	14.34	16.58	17.15	1.96	1.18	0.95	1.16
Currently Unoccupied .....	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Energy Sources (more than one may apply)</b>												
Electricity .....	18,993	17,258	27,303	17,993	17.03	11.44	13.92	15.69	1.59	1.05	1.18	1.26
Natural Gas .....	12,191	14,468	18,667	13,472	16.19	11.04	12.54	14.93	1.67	1.07	1.31	1.28
Fuel Oil .....	7,225	3,461	5,609	2,559	14.94	9.68	12.66	12.65	1.33	1.43	1.50	1.51
District Heat .....	4,421	2,543	2,097	1,855	15.32	10.83	9.96	10.86	2.33	1.67	1.66	1.54
District Chilled Water .....	Q	1,326	1,272	1,283	Q	10.01	10.72	Q	Q	1.78	1.35	1.74
Propane .....	2,584	1,332	2,182	956	20.86	10.74	15.90	21.38	1.51	0.95	0.91	1.21
Other .....	Q	595	888	861	Q	10.25	15.78	19.01	Q	0.98	1.53	1.55
<b>Space-Heating Energy Sources (more than one may apply)</b>												
Electricity .....	7,893	7,392	16,989	8,404	18.22	12.89	15.12	16.68	1.71	1.15	1.23	1.14
Natural Gas .....	9,294	12,745	13,556	10,876	16.51	10.96	12.53	14.57	1.63	1.02	1.24	1.23
Fuel Oil .....	3,994	816	1,505	Q	14.10	8.23	13.18	Q	1.11	1.32	1.33	Q
District Heat .....	4,390	2,478	1,711	1,629	15.30	10.76	10.58	Q	2.34	1.64	1.67	1.45
Propane .....	1,566	272	659	193	26.51	16.39	19.39	Q	2.06	0.37	0.65	0.88
Other .....	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q

**Table C6. Expenditures by Census Region for Sum of Major Fuels, 1999**

	Sum of Major Fuel Expenditures (million dollars)				Sum of Major Fuel Expenditures (dollars)							
					per Million Btu				per Square Foot			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
<b>Primary Space-Heating</b>												
<b>Energy Source</b>												
Electricity .....	3,100	3,201	11,664	5,557	21.85	15.40	16.36	19.62	1.88	1.36	1.26	1.27
Natural Gas .....	7,717	11,274	10,903	9,103	16.32	10.68	12.15	14.28	1.57	0.99	1.24	1.19
Fuel Oil .....	2,894	Q	769	Q	14.15	Q	14.93	Q	1.03	Q	1.07	Q
District Heat .....	3,924	2,349	1,490	1,524	15.70	10.77	10.44	Q	2.30	1.66	1.65	1.45
Propane .....	1,161	184	465	Q	Q	22.90	20.89	Q	2.30	0.29	0.57	Q
Other .....	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Cooling Energy Sources (more than one may apply)</b>												
Electricity .....	16,860	14,750	25,718	14,921	17.46	11.71	14.30	16.32	1.73	1.09	1.23	1.31
Natural Gas .....	Q	769	Q	1,260	Q	10.95	Q	19.49	Q	1.40	Q	1.93
District Chilled Water .....	Q	1,326	1,272	1,283	Q	10.01	10.72	Q	Q	1.78	1.35	1.74
<b>Water-Heating Energy Sources (more than one may apply)</b>												
Electricity .....	7,522	5,197	12,655	5,371	20.10	12.40	16.56	19.35	1.68	1.12	1.21	1.17
Natural Gas .....	6,468	9,152	12,280	10,498	15.35	11.13	12.15	14.86	1.59	1.10	1.37	1.34
Fuel Oil .....	2,055	Q	527	Q	13.58	Q	8.43	Q	1.22	Q	1.61	Q
District Heat .....	3,042	2,070	1,529	1,270	14.87	11.01	9.09	10.94	2.34	1.70	1.77	1.59
Propane .....	Q	Q	Q	Q	Q	Q	Q	Q	Q	0.97	Q	Q
<b>Cooking Energy Sources (more than one may apply)</b>												
Electricity .....	4,974	4,410	8,483	3,561	17.31	12.07	13.78	14.14	1.86	1.32	1.64	1.40
Natural Gas .....	6,025	5,428	8,362	5,350	15.51	10.96	12.58	14.10	1.78	1.22	1.56	1.48
Propane .....	1,392	Q	994	Q	22.23	Q	16.44	Q	2.66	Q	1.26	Q
<b>Energy End Uses (more than one may apply)</b>												
Buildings with Space Heating .....	18,843	17,125	25,360	16,534	16.99	11.43	13.85	15.17	1.62	1.08	1.23	1.23
Buildings with Cooling .....	17,982	16,295	26,560	16,441	17.38	11.59	14.18	15.96	1.74	1.13	1.23	1.34
Buildings with Water Heating .....	17,894	15,455	24,625	16,737	16.95	11.54	13.65	15.74	1.69	1.13	1.30	1.31
Buildings with Cooking .....	9,590	7,627	13,249	6,766	16.44	11.55	13.60	14.67	1.83	1.26	1.55	1.40
Buildings with Manufacturing .....	Q	1,130	1,061	672	Q	10.40	13.77	16.51	1.67	1.38	1.03	0.95
Buildings with Electricity Generation .....	5,348	4,122	6,452	3,069	15.35	10.14	13.04	12.59	1.72	1.48	1.59	1.59
<b>Percent of Floorspace Heated</b>												
Not Heated .....	Q	Q	1,944	1,460	Q	Q	14.88	25.47	Q	Q	0.67	1.11
1 to 50 .....	803	868	1,577	2,046	18.23	13.61	13.41	19.03	0.76	0.55	0.62	0.84
51 to 99 .....	2,793	2,257	5,889	3,001	18.88	12.74	12.65	15.89	1.65	0.97	1.36	1.25
100 .....	15,248	14,000	17,894	11,488	16.63	11.13	14.34	14.48	1.71	1.16	1.30	1.34
<b>Percent of Floorspace Cooled</b>												
Not Cooled .....	1,014	964	Q	1,554	12.48	9.38	8.44	13.26	0.49	0.40	Q	0.62
1 to 50 .....	4,143	3,970	3,478	2,481	14.70	9.54	12.80	16.34	1.06	0.78	0.75	0.76
51 to 99 .....	6,119	5,654	8,031	4,618	16.96	11.90	13.60	14.58	1.91	1.19	1.38	1.43
100 .....	7,720	6,671	15,051	9,342	19.69	12.96	14.88	16.64	2.41	1.46	1.35	1.62
<b>Percent Lit When Open</b>												
Zero .....	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
1 to 50 .....	1,294	1,693	2,148	1,687	18.42	11.76	14.51	18.82	0.80	0.68	0.71	0.82
51 to 99 .....	6,917	6,559	8,402	5,311	15.73	11.49	13.23	15.32	1.69	1.13	1.31	1.21
100 .....	10,762	8,905	16,463	10,927	17.81	11.34	14.19	15.49	1.77	1.16	1.28	1.42
Building Never Open/ Electricity Not Used.....	Q	100	Q	Q	Q	Q	Q	Q	Q	0.13	Q	Q

**Table C6. Expenditures by Census Region for Sum of Major Fuels, 1999**

	Sum of Major Fuel Expenditures (million dollars)				Sum of Major Fuel Expenditures (dollars)							
					per Million Btu				per Square Foot			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
<b>Percent Lit When Closed</b>												
Zero .....	3,138	3,684	5,509	4,997	17.00	11.93	15.15	15.94	0.93	0.70	0.76	1.04
1 to 50 .....	9,116	8,965	12,891	7,678	17.74	12.11	14.44	16.80	1.58	1.11	1.18	1.23
51 to 100 .....	Q	443	2,254	1,076	Q	Q	13.14	17.47	Q	1.25	2.27	2.17
Building Never Closed/ Electricity Not Used.....												
	5,941	4,167	6,650	4,244	15.88	9.78	12.47	13.46	2.06	1.35	1.55	1.33
<b>Heating Equipment (more than one may apply)</b>												
Heat Pumps .....	1,885	1,232	6,435	2,598	15.17	11.34	13.48	17.14	1.58	1.21	1.41	1.22
Furnaces .....	2,795	5,291	3,971	1,995	16.45	11.41	13.23	13.46	1.24	0.92	1.01	0.81
Individual Space Heaters .....	4,991	4,621	5,660	3,417	16.94	11.11	13.94	13.28	1.40	0.99	1.03	0.93
District Heat .....	4,390	2,478	1,711	1,629	15.30	10.76	10.58	Q	2.34	1.64	1.67	1.45
Boilers .....	6,983	5,972	6,009	4,707	14.94	10.23	12.33	12.65	1.28	1.00	1.43	1.21
Packaged Heating Units .....	7,873	6,708	12,999	8,371	19.63	11.81	14.27	17.14	1.95	1.32	1.24	1.36
Other .....	1,029	1,505	1,706	912	15.74	10.44	15.38	13.77	1.34	1.35	1.23	1.14
<b>Cooling Equipment (more than one may apply)</b>												
Residential-Type Central												
Air Conditioners .....	1,344	2,782	3,669	1,096	15.40	12.04	13.40	13.78	1.41	0.94	1.12	0.95
Heat Pumps .....	1,665	1,302	6,453	2,910	14.95	11.60	13.43	17.47	1.37	1.22	1.40	1.29
Individual Air Conditioners .....	5,188	3,475	4,730	2,144	14.44	10.41	13.48	14.09	1.33	0.93	1.05	1.01
District Chilled Water .....	Q	1,326	1,272	1,283	Q	10.01	10.72	Q	Q	1.78	1.35	1.74
Central Chillers .....	5,207	4,606	6,813	4,134	15.24	10.87	13.02	13.35	1.87	1.46	1.57	1.56
Packaged Air Conditioning												
Units .....	12,746	10,164	16,955	10,924	18.33	11.60	14.45	16.94	1.92	1.24	1.22	1.41
Swamp Coolers .....	Q	Q	Q	1,939	Q	Q	Q	13.94	Q	Q	Q	1.19
Other .....	Q	Q	447	529	Q	Q	Q	Q	Q	Q	1.30	1.63
<b>Main Equipment Replaced Since 1995 (more than one may apply)</b>												
Heating .....	2,861	3,300	6,060	3,879	18.11	11.85	14.67	16.51	1.56	1.02	1.19	1.26
Cooling .....	4,813	4,297	8,570	4,481	16.38	11.42	14.35	16.72	1.56	1.13	1.21	1.31
<b>Lighting Equipment Types (more than one may apply)</b>												
Incandescent .....	11,356	9,913	16,245	11,000	16.43	11.55	14.06	14.95	1.61	1.00	1.25	1.34
Standard Fluorescent .....	17,853	16,321	25,482	17,081	16.87	11.48	13.94	15.65	1.57	1.10	1.22	1.28
Compact Fluorescent .....	7,248	7,208	8,764	6,470	16.34	11.56	13.59	14.35	1.84	1.31	1.36	1.35
High Intensity Discharge .....	6,331	6,378	8,004	3,836	16.22	10.34	12.81	14.17	1.44	1.16	1.36	1.11
Halogen .....	6,980	5,483	7,462	5,170	16.49	11.61	13.46	14.57	1.93	1.24	1.28	1.28
Other .....	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Water Heating Equipment</b>												
Centralized System .....	12,168	9,309	15,136	11,052	16.73	11.58	13.40	15.62	1.75	1.03	1.32	1.36
Distributed System .....	2,500	2,431	4,831	3,499	19.90	10.85	14.70	18.09	1.37	1.04	1.17	1.33
Combination of Centralized and Distributed System .....	3,226	3,716	4,658	2,187	15.93	11.93	13.45	13.47	1.78	1.59	1.37	1.04
<b>Commercial Refrigeration Equipment (more than one may apply)</b>												
Any Equipment .....	10,666	8,607	13,348	8,296	17.23	11.73	13.58	15.41	1.93	1.38	1.53	1.62
Walk-In Units .....	8,783	6,839	11,272	7,041	17.37	11.55	13.29	15.29	2.03	1.49	1.66	1.77
Cases or Cabinets .....	9,262	7,415	11,661	7,372	17.53	11.74	13.60	15.90	1.96	1.37	1.55	1.70
None .....	8,330	8,651	13,956	9,698	16.76	11.16	14.26	15.93	1.22	0.82	0.95	1.01

**Table C6. Expenditures by Census Region for Sum of Major Fuels, 1999**

	Sum of Major Fuel Expenditures (million dollars)				Sum of Major Fuel Expenditures (dollars)							
					per Million Btu				per Square Foot			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
<b>Personal Computers</b>												
None .....	856	1,565	2,413	1,643	16.53	11.92	15.24	14.11	0.56	0.59	0.65	0.98
1 to 4 .....	3,535	3,733	5,502	3,289	19.20	11.76	14.39	16.97	1.54	0.99	1.16	1.08
5 to 9 .....	1,356	1,314	3,886	1,895	20.50	12.50	12.79	17.33	1.67	1.00	1.35	1.23
10 to 19 .....	2,718	1,345	3,416	2,156	16.04	12.16	14.42	19.82	1.55	0.86	1.26	1.45
20 to 49 .....	2,582	1,879	3,175	2,146	18.77	10.64	14.69	17.27	1.85	0.97	1.23	0.99
50 to 99 .....	1,320	1,814	2,004	1,789	14.43	10.28	13.60	15.36	1.46	1.11	1.06	1.25
100 to 249 .....	2,350	2,460	2,626	1,701	15.81	11.37	13.65	13.01	1.47	1.35	1.21	1.40
250 or More .....	4,278	3,147	4,280	3,376	16.04	11.46	13.20	13.64	2.05	1.52	1.54	1.56
<b>Photocopiers</b>												
None .....	4,046	4,401	8,070	5,690	17.04	11.75	14.11	16.85	1.09	0.85	1.00	1.21
One .....	3,005	3,132	6,056	3,461	18.12	11.97	15.05	16.70	1.84	0.99	1.20	1.12
2 to 4 .....	4,441	3,775	6,114	3,577	17.35	11.00	13.34	14.53	1.49	0.89	1.20	1.08
5 to 9 .....	1,341	2,230	1,773	1,594	15.46	10.70	13.54	15.29	1.36	1.41	1.12	1.29
10 or More .....	6,163	3,721	5,292	3,672	16.66	11.59	13.31	14.58	2.01	1.43	1.43	1.53
<b>Other Electronic Equipment (more than one may apply)</b>												
Laser Printers .....	15,295	12,789	20,181	13,489	16.86	11.36	13.75	15.77	1.68	1.15	1.29	1.26
FAX Machines .....	17,569	15,211	23,897	15,599	17.31	11.42	14.00	15.76	1.67	1.14	1.27	1.29
Medical Diagnostic Equipment .....	820	1,049	1,956	1,153	10.04	9.56	10.94	11.82	2.24	1.79	2.05	1.96
<b>Energy-Related Space Functions (more than one may apply)</b>												
Commercial Food Preparation .....	8,892	7,237	12,582	6,502	16.38	11.52	13.49	14.65	1.82	1.27	1.55	1.41
Activities with Large Amounts of Hot Water .....	7,911	6,853	10,845	6,937	15.69	10.84	12.07	13.76	1.85	1.28	1.51	1.39
<b>Building Shell Conservation Features (more than one may apply)</b>												
Multipaned Windows .....	12,913	12,226	15,592	8,458	17.05	11.46	13.51	13.99	1.71	1.06	1.30	1.19
Tinted, Reflective, or Shading Glass .....	8,146	8,147	14,504	10,678	17.06	11.88	14.42	16.03	1.80	1.28	1.29	1.37
<b>HVAC Conservation Features (more than one may apply)</b>												
Variable Air-Volume System .....	6,824	6,656	8,907	6,845	16.80	11.52	13.71	14.22	1.87	1.37	1.46	1.44
Economizer Cycle .....	9,135	8,151	8,203	7,705	18.35	11.11	13.35	14.24	1.97	1.43	1.40	1.52
HVAC Maintenance .....	17,995	14,748	23,580	15,463	17.14	11.40	13.88	15.13	1.69	1.13	1.31	1.32
Energy Management and Control System (EMCS) .....	7,522	7,446	9,836	7,010	16.12	10.67	13.71	13.76	1.79	1.41	1.38	1.40
<b>Lighting Conservation Features (more than one may apply)</b>												
Specular Reflectors .....	8,708	5,277	8,127	5,970	16.87	11.32	14.26	16.37	1.79	1.23	1.27	1.35
Electronic Ballasts .....	13,871	12,392	17,368	12,368	16.88	11.36	14.34	15.91	1.64	1.20	1.26	1.30
Skylights or Atriums .....	5,476	5,375	6,723	4,135	16.23	11.26	12.62	15.25	1.48	1.20	1.10	1.04

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

N=No responding cases in sample.

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.

**Table C7. Consumption and Gross Energy Intensity by Building Size for Sum of Major Fuels, 1999**

	Sum of Major Fuel Consumption (trillion Btu)			Total Floorspace of Buildings (million square feet)			Energy Intensity for Sum of Major Fuels (thousand Btu/square foot)		
	1,001 to 10,000 Square Feet	10,001 to 100,000 Square Feet	Over 100,000 Square Feet	1,001 to 10,000 Square Feet	10,001 to 100,000 Square Feet	Over 100,000 Square Feet	1,001 to 10,000 Square Feet	10,001 to 100,000 Square Feet	Over 100,000 Square Feet
<b>All Buildings</b> .....	1,381	2,300	2,053	15,013	30,575	21,750	92.0	75.2	94.4
<b>Principal Building Activity</b>									
Education .....	53	366	230	782	4,831	3,038	68.0	75.7	75.8
Food Sales .....	Q	88	Q	441	485	Q	Q	180.6	Q
Food Service .....	364	Q	Q	1,296	483	Q	281.0	Q	Q
Health Care .....	24	92	398	407	672	1,838	59.8	136.6	216.8
Inpatient .....	N	Q	379	N	Q	1,683	N	Q	225.1
Outpatient .....	24	44	Q	407	490	155	59.8	89.2	Q
Lodging .....	Q	243	145	405	2,336	1,780	152.4	104.2	81.2
Mercantile .....	171	328	225	1,971	4,630	3,797	86.5	70.9	59.3
Retail (Other Than Mall) .....	134	137	73	1,649	2,375	742	81.4	57.5	98.4
Enclosed and Strip Malls .....	Q	191	152	322	2,255	3,055	Q	84.9	49.8
Office .....	170	384	535	2,276	4,628	5,140	74.7	83.1	104.1
Public Assembly .....	65	176	118	983	2,267	1,143	66.5	77.5	103.2
Public Order and Safety .....	Q	57	Q	220	695	Q	Q	81.5	Q
Religious Worship .....	33	75	Q	1,003	2,353	Q	32.7	31.8	Q
Service .....	206	Q	Q	1,786	1,265	Q	115.4	140.7	Q
Warehouse and Storage .....	76	150	235	2,032	4,865	3,579	37.4	30.9	65.6
Other .....	Q	79	Q	386	445	390	Q	178.2	Q
Vacant .....	Q	Q	Q	1,024	619	265	Q	Q	Q
<b>Year Constructed</b>									
1919 or Before .....	104	114	Q	1,446	1,944	645	71.6	58.5	Q
1920 to 1945 .....	142	168	150	1,574	2,815	2,056	90.4	59.8	73.0
1946 to 1959 .....	153	314	207	2,802	4,175	2,150	54.7	75.3	96.1
1960 to 1969 .....	266	358	351	2,093	4,951	3,822	127.1	72.4	91.7
1970 to 1979 .....	249	398	397	2,448	5,447	3,945	101.9	73.1	100.6
1980 to 1989 .....	219	542	453	2,303	6,634	4,994	95.3	81.7	90.6
1990 to 1999 .....	247	405	439	2,347	4,610	4,137	105.2	87.8	106.1
<b>Floors</b>									
One .....	913	781	309	9,624	12,194	4,982	94.8	64.0	62.1
Two .....	329	721	281	3,791	9,410	3,785	86.7	76.6	74.1
Three .....	94	391	248	1,220	5,157	2,551	77.2	75.9	97.2
Four to Nine .....	45	384	788	378	3,661	6,141	119.1	105.0	128.3
Ten or More .....	N	Q	427	N	Q	4,291	N	Q	99.5
<b>Census Region and Division</b>									
Northeast .....	220	418	478	2,203	5,132	5,026	99.8	81.5	95.1
New England .....	41	120	118	575	1,784	1,376	70.7	67.4	85.7
Middle Atlantic .....	179	298	360	1,628	3,348	3,649	110.0	89.0	98.7
Midwest .....	338	532	639	3,880	7,090	5,792	87.2	75.0	110.3
East North Central .....	253	342	414	2,666	4,580	3,959	95.1	74.6	104.6
West North Central .....	85	190	225	1,214	2,510	1,832	70.0	75.6	122.7
South .....	523	829	609	5,594	11,028	6,864	93.5	75.2	88.7
South Atlantic .....	236	347	333	2,436	4,983	3,581	96.7	69.6	93.1
East South Central .....	106	268	98	1,159	2,872	1,190	91.7	93.4	82.2
West South Central .....	181	214	178	1,999	3,173	2,093	90.7	67.5	84.9
West .....	299	521	327	3,337	7,326	4,069	89.7	71.1	80.3
Mountain .....	104	153	100	1,105	2,314	1,160	93.7	66.2	85.9
Pacific .....	196	368	227	2,231	5,012	2,908	87.8	73.4	78.1
<b>Climate Zone: 45-Year Average</b>									
Under 2,000 CDD and --									
More than 7,000 HDD .....	147	194	168	1,643	2,819	1,428	89.5	69.0	117.9
5,500-7,000 HDD .....	291	571	673	2,955	7,433	6,695	98.3	76.8	100.5
4,000-5,499 HDD .....	392	567	585	3,826	6,365	6,053	102.5	89.1	96.7
Fewer than 4,000 HDD .....	290	599	402	3,377	8,355	4,601	85.9	71.7	87.5
2,000 CDD or More and --									
Fewer than 4,000 HDD .....	261	368	224	3,211	5,604	2,972	81.2	65.7	75.3



**Table C7. Consumption and Gross Energy Intensity by Building Size for Sum of Major Fuels, 1999**

	Sum of Major Fuel Consumption (trillion Btu)			Total Floorspace of Buildings (million square feet)			Energy Intensity for Sum of Major Fuels (thousand Btu/square foot)		
	1,001 to 10,000 Square Feet	10,001 to 100,000 Square Feet	Over 100,000 Square Feet	1,001 to 10,000 Square Feet	10,001 to 100,000 Square Feet	Over 100,000 Square Feet	1,001 to 10,000 Square Feet	10,001 to 100,000 Square Feet	Over 100,000 Square Feet
<b>Workers (main shift)</b>									
Fewer than 5 .....	495	174	Q	7,978	5,713	630	62.0	30.4	Q
5 to 9 .....	278	170	Q	2,833	3,099	393	98.2	54.8	Q
10 to 19 .....	302	362	Q	2,582	4,708	737	116.9	76.9	Q
20 to 49 .....	269	657	90	1,409	7,706	1,699	190.8	85.3	52.8
50 to 99 .....	Q	490	210	Q	5,681	3,074	Q	86.3	68.2
100 to 249 .....	Q	335	523	Q	2,832	5,457	Q	118.2	95.9
250 or More .....	N	112	1,177	N	837	9,759	N	133.7	120.6
<b>Weekly Operating Hours</b>									
39 or Fewer .....	81	64	Q	3,502	2,472	622	23.1	26.0	Q
40 to 48 .....	265	378	104	4,216	6,969	1,920	62.8	54.2	54.0
49 to 60 .....	253	510	305	3,017	7,423	3,759	83.8	68.8	81.0
61 to 84 .....	270	415	365	2,072	5,376	5,009	130.5	77.1	72.9
85 to 167 .....	361	393	303	1,320	3,943	3,853	273.3	99.8	78.6
Open Continuously .....	151	539	958	886	4,392	6,586	170.5	122.8	145.4
<b>Ownership and Occupancy</b>									
Nongovernment Owned .....	1,252	1,780	1,533	13,655	24,490	16,850	91.7	72.7	91.0
Owner Occupied .....	864	1,253	1,223	9,219	16,036	12,531	93.7	78.1	97.6
Nonowner Occupied .....	382	515	309	3,513	7,926	4,156	108.8	65.0	74.4
Unoccupied .....	Q	Q	Q	923	527	Q	Q	Q	Q
Government Owned .....	129	520	520	1,357	6,086	4,900	95.0	85.5	106.1
Federal .....	Q	61	139	Q	614	1,007	Q	99.7	137.7
State .....	Q	186	164	Q	1,697	1,488	Q	109.5	110.2
Local .....	84	273	217	977	3,775	2,405	86.2	72.4	90.2
<b>Vacancy Status</b>									
Completely Vacant .....	Q	Q	Q	574	290	Q	Q	Q	Q
Mostly Vacant .....	Q	Q	Q	451	329	Q	Q	Q	Q
Partially Vacant .....	108	379	563	2,214	5,983	7,323	48.6	63.3	76.8
Not At All Vacant .....	1,259	1,911	1,484	11,775	23,974	14,161	106.9	79.7	104.8
<b>Number of Establishments</b>									
One .....	1,151	1,634	1,262	11,310	20,595	11,437	101.8	79.3	110.4
2 to 5 .....	192	319	250	2,488	5,035	3,059	77.0	63.4	81.9
6 to 10 .....	Q	185	97	176	2,179	1,219	Q	84.8	79.7
11 to 20 .....	Q	108	141	Q	1,591	1,661	Q	67.9	85.1
More than 20 .....	Q	42	301	Q	590	4,163	Q	71.0	72.2
Currently Unoccupied .....	Q	Q	Q	972	586	Q	Q	Q	Q
<b>Energy Sources (more than one may apply)</b>									
Electricity .....	1,380	2,300	2,053	14,001	30,052	21,663	98.6	76.5	94.8
Natural Gas .....	1,073	1,760	1,622	8,654	20,570	16,301	124.0	85.6	99.5
Fuel Oil .....	80	362	1,045	1,203	3,579	8,503	66.4	101.1	122.9
District Heat .....	Q	347	505	Q	2,007	3,613	Q	172.9	139.9
District Chilled Water .....	Q	150	259	Q	927	1,730	Q	162.0	149.6
Propane .....	105	134	191	1,621	2,637	2,032	64.7	50.9	93.8
Other .....	Q	65	98	469	890	963	Q	73.3	101.5
<b>Space-Heating Energy Sources (more than one may apply)</b>									
Electricity .....	542	1,074	1,018	5,459	15,069	11,763	99.3	71.3	86.5
Natural Gas .....	874	1,433	1,247	7,863	17,494	12,546	111.2	81.9	99.4
Fuel Oil .....	78	148	294	1,171	2,095	2,345	67.0	70.8	125.4
District Heat .....	Q	311	498	Q	1,828	3,545	Q	170.1	140.6
Propane .....	57	45	Q	1,157	1,295	Q	49.1	35.0	Q
Other .....	Q	26	Q	285	452	Q	Q	57.4	Q

**Table C7. Consumption and Gross Energy Intensity by Building Size for Sum of Major Fuels, 1999**

	Sum of Major Fuel Consumption (trillion Btu)			Total Floorspace of Buildings (million square feet)			Energy Intensity for Sum of Major Fuels (thousand Btu/square foot)		
	1,001 to 10,000 Square Feet	10,001 to 100,000 Square Feet	Over 100,000 Square Feet	1,001 to 10,000 Square Feet	10,001 to 100,000 Square Feet	Over 100,000 Square Feet	1,001 to 10,000 Square Feet	10,001 to 100,000 Square Feet	Over 100,000 Square Feet
<b>Primary Space-Heating</b>									
<b>Energy Source</b>									
Electricity .....	312	627	407	3,062	8,667	5,898	101.7	72.3	69.1
Natural Gas .....	821	1,184	1,058	7,373	14,997	10,360	111.3	79.0	102.1
Fuel Oil .....	67	108	96	1,038	1,567	1,113	64.9	69.0	86.1
District Heat .....	Q	277	458	Q	1,645	3,301	Q	168.4	138.8
Propane .....	Q	20	Q	1,084	980	Q	Q	20.1	Q
Other .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Cooling Energy Sources (more than one may apply)</b>									
Electricity .....	1,136	1,997	1,805	10,723	25,930	18,893	106.0	77.0	95.5
Natural Gas .....	Q	61	68	537	907	469	Q	67.1	145.1
District Chilled Water .....	Q	150	259	Q	927	1,730	Q	162.0	149.6
<b>Water-Heating Energy Sources (more than one may apply)</b>									
Electricity .....	442	721	672	4,593	10,985	8,593	96.2	65.6	78.3
Natural Gas .....	729	1,180	1,052	4,923	13,747	10,526	148.1	85.9	99.9
Fuel Oil .....	Q	90	112	333	880	1,005	Q	102.6	111.1
District Heat .....	Q	239	404	Q	1,249	2,786	Q	191.3	144.9
Propane .....	Q	29	Q	436	777	Q	Q	37.6	Q
<b>Cooking Energy Sources (more than one may apply)</b>									
Electricity .....	280	434	806	1,148	4,838	7,747	244.1	89.7	104.0
Natural Gas .....	351	554	1,023	1,479	5,412	9,893	237.0	102.3	103.4
Propane .....	Q	54	50	371	735	648	Q	72.9	77.7
<b>Energy End Uses (more than one may apply)</b>									
Buildings with Space Heating .....	1,277	2,227	2,024	12,774	28,026	20,803	100.0	79.5	97.3
Buildings with Cooling .....	1,201	2,150	1,994	11,092	27,047	20,335	108.3	79.5	98.0
Buildings with Water Heating .....	1,214	2,088	1,960	10,028	25,974	20,112	121.0	80.4	97.5
Buildings with Cooking .....	499	834	1,346	2,367	8,947	13,367	210.6	93.2	100.7
Buildings with Manufacturing .....	26	100	151	553	1,509	1,064	46.8	66.5	142.1
Buildings with Electricity Generation .....	Q	401	1,021	378	3,166	8,339	Q	126.7	122.4
<b>Percent of Floorspace Heated</b>									
Not Heated .....	Q	73	28	2,239	2,550	947	Q	28.5	29.9
1 to 50 .....	82	149	102	2,210	3,567	1,816	37.1	41.8	56.2
51 to 99 .....	245	398	336	1,927	5,033	3,785	127.3	79.1	88.7
100 .....	950	1,680	1,587	8,636	19,426	15,202	109.9	86.5	104.4
<b>Percent of Floorspace Cooled</b>									
Not Cooled .....	180	150	Q	3,921	3,528	1,415	45.8	42.6	41.9
1 to 50 .....	243	522	356	3,318	8,920	4,608	73.3	58.6	77.3
51 to 99 .....	312	606	825	2,273	7,021	7,673	137.3	86.3	107.6
100 .....	646	1,022	812	5,501	11,106	8,054	117.4	92.0	100.8
<b>Percent Lit When Open</b>									
Zero .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
1 to 50 .....	204	208	40	3,075	4,719	1,392	66.5	44.0	28.4
51 to 99 .....	500	765	728	4,113	9,755	6,797	121.6	78.4	107.0
100 .....	660	1,311	1,284	6,092	14,839	13,302	108.4	88.4	96.5
Building Never Open/ Electricity Not Used.....	Q	Q	Q	1,660	1,182	Q	Q	Q	Q

**Table C7. Consumption and Gross Energy Intensity by Building Size for Sum of Major Fuels, 1999**

	Sum of Major Fuel Consumption (trillion Btu)			Total Floorspace of Buildings (million square feet)			Energy Intensity for Sum of Major Fuels (thousand Btu/square foot)		
	1,001 to 10,000 Square Feet	10,001 to 100,000 Square Feet	Over 100,000 Square Feet	1,001 to 10,000 Square Feet	10,001 to 100,000 Square Feet	Over 100,000 Square Feet	1,001 to 10,000 Square Feet	10,001 to 100,000 Square Feet	Over 100,000 Square Feet
<b>Percent Lit When Closed</b>									
Zero .....	451	563	156	7,199	10,435	3,137	62.6	53.9	49.8
1 to 50 .....	641	1,100	863	5,406	14,482	11,062	118.6	76.0	78.0
51 to 100 .....	Q	97	76	532	750	878	Q	130.0	86.4
Building Never Closed/ Electricity Not Used.....									
	151	540	958	1,876	4,909	6,672	80.7	109.9	143.5
<b>Heating Equipment (more than one may apply)</b>									
Heat Pumps .....	145	357	360	1,424	4,158	3,341	101.8	85.8	107.9
Furnaces .....	388	423	271	5,118	6,438	2,892	75.8	65.7	93.7
Individual Space Heaters .....	218	538	618	2,533	7,732	7,084	86.1	69.6	87.2
District Heat .....	Q	311	498	Q	1,828	3,545	Q	170.1	140.6
Boilers .....	175	702	1,033	1,504	8,336	9,683	116.1	84.3	106.7
Packaged Heating Units .....	529	927	913	4,080	11,951	9,713	129.6	77.5	94.0
Other .....	Q	105	246	515	1,422	2,135	Q	73.7	115.2
<b>Cooling Equipment (more than one may apply)</b>									
Residential-Type Central									
Air Conditioners .....	186	222	263	2,496	3,501	2,333	74.7	63.4	112.8
Heat Pumps .....	Q	358	367	1,406	4,167	3,574	103.6	85.9	102.8
Individual Air Conditioners .....	208	474	515	2,358	6,679	5,239	88.0	70.9	98.2
District Chilled Water .....	Q	150	259	Q	927	1,730	Q	162.0	149.6
Central Chillers .....	Q	385	1,176	Q	3,215	9,517	Q	119.7	123.5
Packaged Air Conditioning									
Units .....	739	1,356	1,295	5,810	17,315	13,402	127.2	78.3	96.6
Swamp Coolers .....	Q	80	77	435	1,009	775	Q	79.3	99.6
Other .....	Q	41	Q	Q	452	707	Q	90.8	Q
<b>Main Equipment Replaced Since 1995 (more than one may apply)</b>									
Heating .....	326	514	245	3,082	6,831	3,307	105.8	75.2	74.1
Cooling .....	351	659	525	3,037	8,726	5,628	115.6	75.5	93.3
<b>Lighting Equipment Types (more than one may apply)</b>									
Incandescent .....	752	1,305	1,384	6,993	16,939	14,223	107.5	77.1	97.3
Standard Fluorescent .....	1,195	2,201	2,005	11,876	27,684	20,784	100.6	79.5	96.5
Compact Fluorescent .....	262	699	1,201	1,846	7,480	11,340	141.9	93.4	105.9
High Intensity Discharge .....	113	632	1,158	908	7,026	11,290	124.5	89.9	102.6
Halogen .....	250	596	959	1,590	6,536	9,800	157.3	91.2	97.8
Other .....	Q	Q	Q	Q	394	464	Q	Q	Q
<b>Water Heating Equipment</b>									
Centralized System .....	980	1,414	974	7,891	17,503	10,186	124.2	80.8	95.6
Distributed System .....	153	329	390	1,781	4,667	4,450	86.1	70.4	87.6
Combination of Centralized and Distributed System .....	Q	345	597	356	3,805	5,476	Q	90.7	109.0
<b>Commercial Refrigeration Equipment (more than one may apply)</b>									
Any Equipment .....	544	867	1,463	2,505	9,110	14,036	217.0	95.2	104.2
Walk-In Units .....	486	643	1,278	1,794	5,926	11,992	270.6	108.4	106.6
Cases or Cabinets .....	506	715	1,260	2,290	7,409	12,302	221.0	96.5	102.4
None .....	837	1,433	590	12,507	21,465	7,714	66.9	66.7	76.4

**Table C7. Consumption and Gross Energy Intensity by Building Size for Sum of Major Fuels, 1999**

	Sum of Major Fuel Consumption (trillion Btu)			Total Floorspace of Buildings (million square feet)			Energy Intensity for Sum of Major Fuels (thousand Btu/square foot)		
	1,001 to 10,000 Square Feet	10,001 to 100,000 Square Feet	Over 100,000 Square Feet	1,001 to 10,000 Square Feet	10,001 to 100,000 Square Feet	Over 100,000 Square Feet	1,001 to 10,000 Square Feet	10,001 to 100,000 Square Feet	Over 100,000 Square Feet
<b>Personal Computers</b>									
None .....	363	89	6	5,970	2,974	640	60.7	30.0	Q
1 to 4 .....	580	446	52	5,315	7,464	1,074	109.1	59.7	48.5
5 to 9 .....	198	345	41	1,688	4,200	641	117.5	82.1	64.3
10 to 19 .....	182	347	96	1,534	4,084	1,896	118.9	85.0	50.7
20 to 49 .....	Q	370	233	476	4,721	2,890	Q	78.3	80.6
50 to 99 .....	Q	291	238	Q	3,514	2,327	Q	82.8	102.1
100 to 249 .....	Q	309	377	Q	2,878	3,936	Q	107.2	95.8
250 or More .....	N	103	1,010	N	741	8,347	N	139.7	120.9
<b>Photocopiers</b>									
None .....	882	556	83	9,913	9,692	2,025	89.0	57.4	41.1
One .....	375	558	104	3,724	7,537	1,667	100.7	74.1	62.4
2 to 4 .....	110	760	434	1,165	8,936	5,519	94.5	85.0	78.6
5 to 9 .....	Q	206	311	Q	2,236	2,937	Q	92.0	105.9
10 or More .....	N	220	1,121	N	2,173	9,601	N	101.2	116.7
<b>Other Electronic Equipment (more than one may apply)</b>									
Laser Printers .....	595	1,797	1,964	5,396	21,598	19,573	110.2	83.2	100.3
FAX Machines .....	973	2,047	2,024	8,525	25,429	20,810	114.1	80.5	97.2
Medical Diagnostic Equipment .....	Q	70	384	265	527	1,700	Q	133.2	225.5
<b>Energy-Related Space Functions (more than one may apply)</b>									
Commercial Food Preparation .....	464	766	1,317	2,134	8,202	12,992	217.5	93.4	101.4
Activities with Large Amounts of Hot Water .....	456	898	1,185	1,823	8,834	11,136	250.3	101.6	106.4
<b>Building Shell Conservation Features (more than one may apply)</b>									
Multipaned Windows .....	741	1,364	1,479	6,858	16,743	14,593	108.0	81.5	101.3
Tinted, Reflective, or Shading Glass .....	467	1,023	1,346	3,954	12,244	13,717	118.1	83.5	98.1
<b>HVAC Conservation Features (more than one may apply)</b>									
Variable Air-Volume System .....	211	699	1,205	1,691	6,854	10,841	124.8	102.0	111.2
Economizer Cycle .....	238	746	1,403	1,438	7,290	12,528	165.4	102.4	112.0
HVAC Maintenance .....	966	2,096	2,002	8,361	24,704	20,330	115.6	84.8	98.5
Energy Management and Control System (EMCS) .....	123	791	1,477	987	7,643	12,983	124.3	103.5	113.8
<b>Lighting Conservation Features (more than one may apply)</b>									
Specular Reflectors .....	298	657	963	2,560	7,640	9,794	116.4	85.9	98.3
Electronic Ballasts .....	696	1,451	1,754	6,780	17,991	17,264	102.7	80.6	101.6
Skylights or Atriums .....	133	537	948	1,533	6,945	9,808	86.8	77.4	96.7

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

N=No responding cases in sample.

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.

**Table C8. Consumption and Gross Energy Intensity by Year Constructed for Sum of Major Fuels, 1999**

	Sum of Major Fuel Consumption (trillion Btu)			Total Floorspace of Buildings (million square feet)			Energy Intensity for Sum of Major Fuels (thousand Btu/square foot)		
	1959 or Before	1960 to 1989	1990 to 1999	1959 or Before	1960 to 1989	1990 to 1999	1959 or Before	1960 to 1989	1990 to 1999
<b>All Buildings</b> .....	1,410	3,234	1,090	19,606	36,638	11,094	71.9	88.3	98.3
<b>Building Floorspace (Square Feet)</b>									
1,001 to 5,000 .....	218	406	148	2,478	3,137	1,159	88.0	129.4	128.0
5,001 to 10,000 .....	181	329	98	3,344	3,706	1,188	54.1	88.7	82.8
10,001 to 25,000 .....	243	423	77	3,965	6,079	1,110	61.3	69.5	69.5
25,001 to 50,000 .....	188	372	132	2,505	5,167	1,638	75.0	72.0	80.6
50,001 to 100,000 .....	166	504	195	2,463	5,786	1,862	67.3	87.2	104.9
100,001 to 200,000 .....	126	477	169	1,782	4,827	1,662	70.4	98.8	102.0
200,001 to 500,000 .....	125	371	Q	1,751	3,756	1,344	71.6	98.8	121.5
Over 500,000 .....	163	352	106	1,318	4,179	1,131	123.8	84.3	93.8
<b>Principal Building Activity</b>									
Education .....	250	307	92	3,247	4,165	1,239	77.0	73.7	74.1
Food Sales .....	Q	87	80	196	443	355	Q	196.9	224.3
Food Service .....	Q	229	Q	608	952	Q	Q	240.3	Q
Health Care .....	101	356	58	548	1,897	473	183.7	187.7	122.7
Inpatient .....	Q	307	Q	434	1,277	Q	Q	240.4	Q
Outpatient .....	Q	49	Q	Q	620	319	Q	79.0	Q
Lodging .....	85	300	65	808	2,996	716	104.9	100.2	90.3
Mercantile .....	165	391	169	2,582	5,786	2,030	63.8	67.5	83.1
Retail (Other Than Mall) .....	113	130	101	1,901	1,726	1,139	59.5	75.2	88.7
Enclosed and Strip Malls .....	52	261	68	681	4,060	891	75.7	64.2	76.0
Office .....	254	693	143	2,907	7,307	1,830	87.2	94.8	78.0
Public Assembly .....	108	180	72	1,395	2,262	736	77.4	79.4	97.2
Public Order and Safety .....	Q	38	Q	392	550	227	Q	68.5	Q
Religious Worship .....	42	57	Q	1,301	1,748	357	32.6	32.5	Q
Service .....	109	286	Q	1,283	1,768	336	84.8	161.9	Q
Warehouse and Storage .....	63	231	Q	2,738	5,660	2,079	22.9	40.8	Q
Other .....	Q	69	Q	247	607	367	Q	112.8	Q
Vacant .....	19	Q	Q	1,354	497	Q	14.2	Q	Q
<b>Floors</b>									
One .....	311	1,130	562	5,601	15,567	5,632	55.6	72.6	99.7
Two .....	335	763	233	5,218	9,110	2,657	64.2	83.7	87.6
Three .....	288	365	81	4,143	3,810	974	69.5	95.7	82.7
Four to Nine .....	335	706	176	3,520	5,341	1,319	95.2	132.3	133.4
Ten or More .....	140	270	39	1,124	2,809	512	124.8	96.1	76.7
<b>Census Region and Division</b>									
Northeast .....	432	536	148	5,041	5,944	1,376	85.6	90.2	107.8
New England .....	93	150	Q	1,316	1,986	433	71.0	75.4	Q
Middle Atlantic .....	338	386	113	3,725	3,957	943	90.8	97.6	119.5
Midwest .....	478	746	285	6,150	7,778	2,834	77.7	95.9	100.6
East North Central .....	338	456	215	4,481	4,842	1,882	75.4	94.3	114.1
West North Central .....	140	289	71	1,669	2,936	952	83.7	98.6	74.1
South .....	281	1,259	421	5,163	13,858	4,464	54.4	90.9	94.4
South Atlantic .....	113	581	222	2,055	6,639	2,306	55.1	87.5	96.1
East South Central .....	74	313	85	1,038	3,132	1,050	71.7	99.9	81.2
West South Central .....	93	365	114	2,070	4,087	1,107	45.1	89.4	103.3
West .....	219	692	235	3,252	9,059	2,420	67.5	76.4	97.3
Mountain .....	90	209	57	1,267	2,609	704	71.1	80.1	81.3
Pacific .....	129	483	178	1,986	6,450	1,716	65.1	74.9	103.8
<b>Climate Zone: 45-Year Average</b>									
Under 2,000 CDD and --									
More than 7,000 HDD .....	135	283	93	1,936	3,007	948	69.5	94.1	97.6
5,500-7,000 HDD .....	508	736	291	6,196	8,277	2,610	82.0	88.9	111.3
4,000-5,499 HDD .....	458	839	248	5,491	8,220	2,532	83.3	102.1	97.8
Fewer than 4,000 HDD .....	180	807	304	3,303	9,822	3,209	54.5	82.2	94.8
2,000 CDD or More and --									
Fewer than 4,000 HDD .....	129	568	155	2,680	7,313	1,794	48.3	77.7	86.5

**Table C8. Consumption and Gross Energy Intensity by Year Constructed for Sum of Major Fuels, 1999**

	Sum of Major Fuel Consumption (trillion Btu)			Total Floorspace of Buildings (million square feet)			Energy Intensity for Sum of Major Fuels (thousand Btu/square foot)		
	1959 or Before	1960 to 1989	1990 to 1999	1959 or Before	1960 to 1989	1990 to 1999	1959 or Before	1960 to 1989	1990 to 1999
<b>Workers (main shift)</b>									
Fewer than 5 .....	246	331	100	6,570	6,039	1,712	37.5	54.8	58.5
5 to 9 .....	148	256	61	2,027	3,470	829	72.9	73.8	73.8
10 to 19 .....	231	343	117	2,781	4,093	1,153	83.2	83.7	101.5
20 to 49 .....	233	584	200	2,953	5,772	2,089	78.7	101.1	95.6
50 to 99 .....	141	444	145	1,638	5,660	1,601	86.2	78.5	90.3
100 to 249 .....	157	502	205	1,580	4,990	1,786	99.6	100.6	115.0
250 or More .....	253	774	262	2,057	6,614	1,925	123.1	117.0	136.1
<b>Weekly Operating Hours</b>									
39 or Fewer .....	64	91	Q	3,277	2,809	511	19.7	32.4	Q
40 to 48 .....	263	385	98	4,942	6,392	1,771	53.3	60.2	55.4
49 to 60 .....	297	582	189	4,259	7,649	2,292	69.7	76.1	82.4
61 to 84 .....	276	631	143	2,850	7,422	2,186	97.0	85.0	65.5
85 to 167 .....	197	595	265	1,819	5,315	1,981	108.3	111.9	133.9
Open Continuously .....	312	950	386	2,460	7,051	2,352	126.7	134.8	164.1
<b>Ownership and Occupancy</b>									
Nongovernment Owned .....	1,026	2,655	884	15,321	30,535	9,138	67.0	86.9	96.7
Owner Occupied .....	795	1,936	609	10,934	20,654	6,198	72.7	93.8	98.3
Nonowner Occupied .....	225	707	275	3,546	9,233	2,817	63.5	76.6	97.5
Unoccupied .....	Q	Q	Q	842	649	Q	Q	Q	Q
Government Owned .....	384	579	206	4,285	6,102	1,956	89.6	94.8	105.4
Federal .....	102	86	Q	909	644	243	112.2	133.2	Q
State .....	123	190	64	1,181	1,655	554	103.8	114.5	116.0
Local .....	159	303	112	2,196	3,803	1,158	72.6	79.8	96.5
<b>Vacancy Status</b>									
Completely Vacant .....	Q	Q	Q	665	247	Q	Q	Q	Q
Mostly Vacant .....	Q	Q	Q	689	250	Q	Q	Q	Q
Partially Vacant .....	259	597	193	3,874	8,829	2,817	66.8	67.6	68.6
Not At All Vacant .....	1,132	2,626	896	14,378	27,312	8,219	78.7	96.1	109.0
<b>Number of Establishments</b>									
One .....	1,017	2,202	828	13,375	22,346	7,622	76.0	98.5	108.6
2 to 5 .....	209	428	125	3,372	5,464	1,745	61.9	78.2	71.5
6 to 10 .....	69	199	35	679	2,410	485	102.1	82.7	72.2
11 to 20 .....	Q	166	46	506	2,256	498	Q	73.6	92.3
More than 20 .....	68	225	Q	711	3,479	621	95.8	64.8	Q
Currently Unoccupied .....	Q	Q	Q	963	683	Q	Q	Q	Q
<b>Energy Sources (more than one may apply)</b>									
Electricity .....	1,409	3,234	1,090	18,788	35,920	11,007	75.0	90.0	99.0
Natural Gas .....	1,077	2,464	914	13,063	24,386	8,076	82.5	101.0	113.2
Fuel Oil .....	332	890	265	3,588	7,590	2,108	92.4	117.2	125.8
District Heat .....	320	467	Q	2,338	2,876	677	136.9	162.3	Q
District Chilled Water .....	107	246	Q	794	1,550	407	134.5	158.6	Q
Propane .....	63	246	Q	1,410	3,586	1,295	44.5	68.7	Q
Other .....	74	95	Q	765	1,204	353	96.6	78.7	Q
<b>Space-Heating Energy Sources (more than one may apply)</b>									
Electricity .....	550	1,531	552	7,313	19,045	5,933	75.2	80.4	93.1
Natural Gas .....	877	1,968	709	11,297	19,947	6,658	77.6	98.7	106.5
Fuel Oil .....	172	311	38	2,309	2,870	432	74.6	108.3	87.4
District Heat .....	317	420	Q	2,309	2,726	499	137.4	154.2	Q
Propane .....	24	75	Q	706	1,414	608	34.0	53.0	Q
Other .....	Q	Q	Q	382	474	Q	Q	Q	Q

**Table C8. Consumption and Gross Energy Intensity by Year Constructed for Sum of Major Fuels, 1999**

	Sum of Major Fuel Consumption (trillion Btu)			Total Floorspace of Buildings (million square feet)			Energy Intensity for Sum of Major Fuels (thousand Btu/square foot)		
	1959 or Before	1960 to 1989	1990 to 1999	1959 or Before	1960 to 1989	1990 to 1999	1959 or Before	1960 to 1989	1990 to 1999
<b>Primary Space-Heating</b>									
<b>Energy Source</b>									
Electricity .....	187	809	350	2,769	11,150	3,708	67.4	72.6	94.5
Natural Gas .....	791	1,675	597	10,205	16,847	5,677	77.5	99.4	105.2
Fuel Oil .....	114	137	Q	1,753	1,707	Q	65.2	80.5	Q
District Heat .....	283	385	Q	2,151	2,497	428	131.3	154.4	Q
Propane .....	12	48	Q	519	1,074	514	23.4	44.7	Q
Other .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Cooling Energy Sources (more than one may apply)</b>									
Electricity .....	1,133	2,832	973	14,026	31,749	9,770	80.8	89.2	99.6
Natural Gas .....	Q	118	Q	470	1,028	416	Q	114.8	Q
District Chilled Water .....	107	246	Q	794	1,550	407	134.5	158.6	Q
<b>Water-Heating Energy Sources (more than one may apply)</b>									
Electricity .....	324	1,093	418	4,820	14,952	4,399	67.1	73.1	95.1
Natural Gas .....	713	1,657	591	8,411	15,573	5,211	84.7	106.4	113.4
Fuel Oil .....	77	135	Q	971	1,049	Q	79.3	128.3	Q
District Heat .....	229	366	Q	1,696	2,109	377	134.8	173.6	Q
Propane .....	Q	67	Q	Q	863	Q	Q	77.7	Q
<b>Cooking Energy Sources (more than one may apply)</b>									
Electricity .....	326	915	279	3,024	8,251	2,458	107.8	110.9	113.5
Natural Gas .....	499	1,035	394	4,690	9,030	3,065	106.3	114.6	128.6
Propane .....	Q	116	Q	287	1,137	330	Q	102.2	Q
<b>Energy End Uses (more than one may apply)</b>									
Buildings with Space Heating .....	1,393	3,065	1,070	17,554	33,448	10,600	79.4	91.6	101.0
Buildings with Cooling .....	1,230	3,053	1,061	14,895	33,224	10,355	82.6	91.9	102.5
Buildings with Water Heating .....	1,243	3,005	1,014	14,928	31,740	9,446	83.3	94.7	107.3
Buildings with Cooking .....	682	1,476	521	6,519	13,759	4,403	104.7	107.2	118.4
Buildings with Manufacturing .....	72	154	51	933	1,709	485	77.1	90.2	105.9
Buildings with Electricity Generation .....	254	890	349	1,992	7,149	2,741	127.7	124.4	127.5
<b>Percent of Floorspace Heated</b>									
Not Heated .....	17	168	Q	2,052	3,190	493	8.2	52.7	Q
1 to 50 .....	95	184	55	2,645	3,749	1,198	35.8	48.9	45.6
51 to 99 .....	235	547	197	3,226	5,742	1,777	72.9	95.3	110.8
100 .....	1,063	2,335	819	11,683	23,957	7,625	91.0	97.5	107.4
<b>Percent of Floorspace Cooled</b>									
Not Cooled .....	179	181	Q	4,711	3,414	739	38.1	52.9	Q
1 to 50 .....	379	528	215	6,241	8,052	2,553	60.7	65.6	84.2
51 to 99 .....	429	978	336	4,052	9,818	3,096	105.9	99.7	108.4
100 .....	423	1,547	510	4,603	15,354	4,706	91.8	100.7	108.4
<b>Percent Lit When Open</b>									
Zero .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
1 to 50 .....	184	183	Q	4,301	3,928	957	42.8	46.7	Q
51 to 99 .....	564	1,162	266	6,025	11,398	3,242	93.6	101.9	82.2
100 .....	652	1,865	738	7,583	19,981	6,670	86.0	93.3	110.7
Building Never Open/ Electricity Not Used.....	9	Q	Q	1,681	1,220	Q	5.3	Q	Q

**Table C8. Consumption and Gross Energy Intensity by Year Constructed for Sum of Major Fuels, 1999**

	Sum of Major Fuel Consumption (trillion Btu)			Total Floorspace of Buildings (million square feet)			Energy Intensity for Sum of Major Fuels (thousand Btu/square foot)		
	1959 or Before	1960 to 1989	1990 to 1999	1959 or Before	1960 to 1989	1990 to 1999	1959 or Before	1960 to 1989	1990 to 1999
<b>Percent Lit When Closed</b>									
Zero .....	319	642	209	6,811	10,503	3,458	46.8	61.1	60.6
1 to 50 .....	727	1,512	365	9,247	17,259	4,444	78.6	87.6	82.2
51 to 100 .....	Q	129	129	272	1,134	753	Q	114.0	171.7
Building Never Closed/ Electricity Not Used.....	312	950	386	3,277	7,742	2,438	95.3	122.8	158.3
<b>Heating Equipment (more than one may apply)</b>									
Heat Pumps .....	148	527	187	1,764	5,363	1,796	83.8	98.3	104.2
Furnaces .....	294	569	218	4,847	7,215	2,387	60.7	78.9	91.5
Individual Space Heaters .....	375	766	233	5,366	9,268	2,715	70.0	82.6	85.8
District Heat .....	317	420	Q	2,309	2,726	499	137.4	154.2	Q
Boilers .....	533	1,083	295	6,424	10,620	2,479	83.0	102.0	118.9
Packaged Heating Units .....	358	1,404	606	4,820	15,239	5,684	74.4	92.1	106.6
Other .....	88	189	Q	1,030	2,257	786	85.3	83.6	Q
<b>Cooling Equipment (more than one may apply)</b>									
Residential-Type Central Air Conditioners .....	188	381	103	2,573	4,483	1,274	72.9	85.1	80.5
Heat Pumps .....	153	544	174	1,818	5,624	1,705	84.3	96.7	101.8
Individual Air Conditioners .....	489	572	135	6,113	6,687	1,476	80.1	85.5	91.5
District Chilled Water .....	107	246	Q	794	1,550	407	134.5	158.6	Q
Central Chillers .....	326	951	322	2,567	8,114	2,229	127.0	117.2	144.3
Packaged Air Conditioning Units .....	679	2,009	702	8,037	21,665	6,825	84.5	92.7	102.9
Swamp Coolers .....	Q	141	Q	509	1,371	339	Q	102.5	Q
Other .....	Q	89	Q	254	951	Q	Q	93.4	Q
<b>Main Equipment Replaced Since 1995 (more than one may apply)</b>									
Heating .....	306	702	76	4,160	8,266	794	73.7	85.0	95.5
Cooling .....	464	970	101	5,340	11,107	943	86.9	87.4	106.9
<b>Lighting Equipment Types (more than one may apply)</b>									
Incandescent .....	938	1,975	528	11,393	21,385	5,377	82.3	92.3	98.2
Standard Fluorescent .....	1,319	3,094	988	16,693	33,658	9,993	79.0	91.9	98.9
Compact Fluorescent .....	449	1,292	421	4,483	12,023	4,160	100.2	107.5	101.2
High Intensity Discharge .....	405	1,025	473	4,193	10,566	4,464	96.6	97.0	105.9
Halogen .....	378	1,058	368	3,653	10,699	3,574	103.6	98.9	103.0
Other .....	Q	Q	Q	Q	460	392	Q	Q	Q
<b>Water Heating Equipment</b>									
Centralized System .....	831	1,930	606	10,284	19,732	5,564	80.8	97.8	108.9
Distributed System .....	160	492	Q	2,269	6,505	2,125	70.4	75.6	103.7
Combination of Centralized and Distributed System .....	252	583	187	2,376	5,503	1,758	106.2	105.9	106.6
<b>Commercial Refrigeration Equipment (more than one may apply)</b>									
Any Equipment .....	643	1,645	586	6,180	14,877	4,595	104.1	110.6	127.5
Walk-In Units .....	496	1,407	503	4,071	11,957	3,685	121.9	117.7	136.5
Cases or Cabinets .....	573	1,415	493	5,580	12,458	3,963	102.7	113.6	124.4
None .....	766	1,589	504	13,427	21,761	6,498	57.1	73.0	77.6



**Table C8. Consumption and Gross Energy Intensity by Year Constructed for Sum of Major Fuels, 1999**

	Sum of Major Fuel Consumption (trillion Btu)			Total Floorspace of Buildings (million square feet)			Energy Intensity for Sum of Major Fuels (thousand Btu/square foot)		
	1959 or Before	1960 to 1989	1990 to 1999	1959 or Before	1960 to 1989	1990 to 1999	1959 or Before	1960 to 1989	1990 to 1999
<b>Personal Computers</b>									
None .....	166	233	Q	4,415	4,071	1,098	37.6	57.4	Q
1 to 4 .....	353	571	154	5,294	6,989	1,569	66.6	81.7	98.3
5 to 9 .....	101	335	148	1,534	3,803	1,191	65.9	88.1	124.4
10 to 19 .....	134	359	134	1,615	4,251	1,647	82.7	84.4	81.0
20 to 49 .....	156	353	145	2,103	4,183	1,801	74.4	84.5	80.4
50 to 99 .....	116	257	Q	1,349	3,243	1,276	86.0	79.2	124.7
100 to 249 .....	121	430	138	1,216	4,356	1,245	99.3	98.7	110.5
250 or More .....	263	695	154	2,079	5,741	1,267	126.7	121.1	121.6
<b>Photocopiers</b>									
None .....	420	834	268	8,278	10,663	2,690	50.8	78.2	99.5
One .....	308	512	217	3,928	6,643	2,358	78.5	77.1	92.1
2 to 4 .....	279	780	245	4,033	8,666	2,921	69.2	90.0	83.7
5 to 9 .....	59	315	157	620	3,390	1,373	95.2	92.8	114.1
10 or More .....	343	793	204	2,747	7,275	1,752	124.9	109.1	116.5
<b>Other Electronic Equipment (more than one may apply)</b>									
Laser Printers .....	983	2,472	901	11,145	26,657	8,765	88.2	92.8	102.8
FAX Machines .....	1,169	2,850	1,024	14,063	30,817	9,883	83.1	92.5	103.7
Medical Diagnostic Equipment .....	76	340	Q	374	1,731	388	202.7	196.4	Q
<b>Energy-Related Space Functions (more than one may apply)</b>									
Commercial Food Preparation .....	642	1,413	492	6,145	13,063	4,120	104.5	108.2	119.5
Activities with Large Amounts of Hot Water .....	578	1,510	452	5,274	12,776	3,743	109.6	118.1	120.8
<b>Building Shell Conservation Features (more than one may apply)</b>									
Multipaned Windows .....	787	2,030	765	9,567	20,611	8,016	82.3	98.5	95.5
Tinted, Reflective, or Shading Glass .....	456	1,772	608	5,252	18,328	6,335	86.7	96.7	95.9
<b>HVAC Conservation Features (more than one may apply)</b>									
Variable Air-Volume System .....	344	1,234	538	3,092	11,623	4,672	111.1	106.1	115.2
Economizer Cycle .....	392	1,439	556	3,541	13,151	4,563	110.6	109.5	121.9
HVAC Maintenance .....	1,167	2,889	1,008	13,569	30,161	9,665	86.0	95.8	104.3
Energy Management and Control System (EMCS) .....	479	1,332	580	4,318	12,221	5,074	111.0	109.0	114.4
<b>Lighting Conservation Features (more than one may apply)</b>									
Specular Reflectors .....	412	1,120	385	4,447	11,436	4,111	92.7	98.0	93.6
Electronic Ballasts .....	904	2,190	807	10,536	23,685	7,815	85.8	92.4	103.3
Skylights or Atriums .....	294	956	369	3,758	10,865	3,664	78.1	88.0	100.8

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.