

**Table C9. Total Electricity Consumption and Expenditures, 1999**

	All Buildings Using Electricity			Electricity Consumption			Electricity Expenditures
	Number of Buildings (thousand)	Floorspace (million square feet)	Floorspace per Building (thousand square feet)	Primary	Site		Total (million dollars)
				Total (trillion Btu)	Total (trillion Btu)	Total (billion kWh)	
<b>All Buildings</b> .....	4,395	65,716	15.0	9,352	3,098	908	66,424
<b>Building Floorspace (Square Feet)</b>							
1,001 to 5,000 .....	2,186	6,280	2.9	1,254	415	122	10,262
5,001 to 10,000 .....	1,036	7,721	7.5	853	283	83	7,146
10,001 to 25,000 .....	688	10,843	15.8	1,118	370	109	8,663
25,001 to 50,000 .....	253	9,175	36.3	1,121	371	109	8,188
50,001 to 100,000 .....	143	10,034	70.0	1,491	494	145	10,023
100,001 to 200,000 .....	59	8,246	139.5	1,361	451	132	8,555
200,001 to 500,000 .....	23	6,790	296.0	1,028	340	100	6,432
Over 500,000 .....	7	6,628	929.0	1,127	373	109	7,155
<b>Principal Building Activity</b>							
Education .....	327	8,651	26.4	777	257	75	5,820
Food Sales .....	173	993	5.7	498	165	48	3,359
Food Service .....	349	1,851	5.3	653	216	63	5,082
Health Care .....	127	2,918	22.9	701	232	68	4,268
Inpatient .....	11	1,865	168.2	520	172	51	2,948
Outpatient .....	116	1,053	9.1	181	60	18	1,320
Lodging .....	153	4,521	29.5	591	196	57	4,266
Mercantile .....	667	10,398	15.6	1,573	521	153	11,851
Retail (Other Than Mall) .....	534	4,766	8.9	666	221	65	5,166
Enclosed and Strip Malls .....	133	5,631	42.2	907	301	88	6,685
Office .....	738	12,043	16.3	2,314	767	225	15,683
Public Assembly .....	299	4,340	14.5	577	191	56	3,983
Public Order and Safety .....	64	1,030	16.0	122	40	12	805
Religious Worship .....	307	3,405	11.1	126	42	12	1,041
Service .....	472	3,358	7.1	417	138	41	3,108
Warehouse and Storage .....	496	9,879	19.9	664	220	64	4,829
Other .....	98	1,217	12.4	306	101	30	2,063
Vacant .....	123	1,112	9.0	31	10	3	265
<b>Year Constructed</b>							
1919 or Before .....	363	3,714	10.2	275	91	27	2,170
1920 to 1945 .....	480	6,281	13.1	556	184	54	4,174
1946 to 1959 .....	716	8,794	12.3	934	310	91	6,989
1960 to 1969 .....	628	10,686	17.0	1,413	468	137	10,250
1970 to 1979 .....	758	11,750	15.5	1,875	621	182	13,461
1980 to 1989 .....	781	13,485	17.3	2,280	755	221	15,777
1990 to 1999 .....	669	11,007	16.5	2,020	669	196	13,604
<b>Census Region and Division</b>							
Northeast .....	639	11,964	18.7	1,638	543	159	15,133
New England .....	190	3,615	19.0	399	132	39	3,783
Middle Atlantic .....	449	8,349	18.6	1,239	411	120	11,351
Midwest .....	1,113	16,389	14.7	2,000	662	194	12,933
East North Central .....	730	10,940	15.0	1,296	429	126	8,798
West North Central .....	383	5,449	14.2	704	233	68	4,135
South .....	1,689	23,076	13.7	3,766	1,247	366	23,275
South Atlantic .....	711	10,817	15.2	1,851	613	180	11,968
East South Central .....	383	5,149	13.4	817	271	79	4,830
West South Central .....	595	7,110	11.9	1,098	364	107	6,476
West .....	954	14,287	15.0	1,948	645	189	15,083
Mountain .....	275	4,292	15.6	530	175	51	3,365
Pacific .....	679	9,995	14.7	1,418	470	138	11,718

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	Number of Buildings (thousand)	Floorspace (million square feet)	Floorspace per Building (thousand square feet)	Primary	Site		Total (million dollars)
				Total (trillion Btu)	Total (trillion Btu)	Total (billion kWh)	
<b>Climate Zone: 45-Year Average</b>							
Under 2,000 CDD and --							
More than 7,000 HDD .....	491	5,750	11.7	665	220	65	4,505
5,500-7,000 HDD .....	924	16,706	18.1	2,027	671	197	15,163
4,000-5,499 HDD .....	1,029	15,792	15.4	2,385	790	232	17,164
Fewer than 4,000 HDD .....	1,070	15,922	14.9	2,496	827	242	17,847
2,000 CDD or More and --							
Fewer than 4,000 HDD .....	882	11,546	13.1	1,779	589	173	11,745
<b>Workers (main shift)</b>							
Fewer than 5 .....	2,121	12,750	6.0	1,009	334	98	8,046
5 to 9 .....	800	6,274	7.8	654	217	64	5,462
10 to 19 .....	683	8,028	11.8	1,055	350	102	8,439
20 to 49 .....	487	10,814	22.2	1,530	507	149	11,068
50 to 99 .....	174	8,898	51.1	1,260	418	122	9,122
100 to 249 .....	90	8,356	92.4	1,534	508	149	9,683
250 or More .....	39	10,595	270.0	2,309	765	224	14,604
<b>Weekly Operating Hours</b>							
39 or Fewer .....	770	5,314	6.9	205	68	20	1,717
40 to 48 .....	1,147	13,070	11.4	1,169	387	114	8,799
49 to 60 .....	980	14,186	14.5	1,754	581	170	12,980
61 to 84 .....	649	12,381	19.1	1,776	588	172	13,082
85 to 167 .....	459	8,930	19.5	1,833	607	178	13,107
Open Continuously .....	390	11,835	30.3	2,614	866	254	16,739
<b>Ownership and Occupancy</b>							
Nongovernment Owned .....	3,898	53,640	13.8	7,651	2,534	743	55,086
Owner Occupied .....	2,747	37,506	13.7	5,455	1,807	530	38,540
Nonowner Occupied .....	1,069	15,441	14.4	2,173	720	211	16,358
Unoccupied .....	Q	693	Q	Q	Q	Q	Q
Government Owned .....	498	12,076	24.3	1,701	563	165	11,338
Federal .....	54	1,711	31.9	370	123	36	2,195
State .....	83	3,382	40.8	484	160	47	3,189
Local .....	361	6,983	19.3	846	280	82	5,955
<b>Vacancy Status</b>							
Completely Vacant .....	Q	Q	Q	Q	Q	Q	Q
Mostly Vacant .....	79	756	9.5	13	4	1	121
Partially Vacant .....	636	15,093	23.7	1,955	648	190	13,761
Not At All Vacant .....	3,636	49,511	13.6	7,366	2,440	715	52,397
<b>Number of Establishments</b>							
One .....	3,437	42,839	12.5	6,102	2,021	592	43,175
2 to 5 .....	680	10,442	15.3	1,294	429	126	9,297
6 to 10 .....	113	3,568	31.5	611	202	59	4,492
11 to 20 .....	48	3,260	68.0	555	184	54	3,846
More than 20 .....	27	4,809	178.1	764	253	74	5,402
Currently Unoccupied .....	90	797	8.9	26	9	3	211
<b>Energy Sources (more than one may apply)</b>							
Electricity .....	4,395	65,716	15.0	9,352	3,098	908	66,424
Natural Gas .....	2,663	45,496	17.1	6,616	2,191	642	46,431
Fuel Oil .....	434	13,277	30.6	2,331	772	226	15,165
District Heat .....	117	5,891	50.2	1,083	359	105	6,841
District Chilled Water .....	50	2,750	55.4	571	189	55	3,224
Propane .....	451	6,290	14.0	791	262	77	6,286
Other .....	153	2,322	15.2	341	113	33	2,512

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				Total (trillion Btu)	Total (trillion Btu)	Total (billion kWh)	
<b>Space-Heating Energy Source</b>							
Electricity .....	1,880	32,291	17.2	5,135	1,701	499	35,332
Electricity Main .....	1,128	17,627	15.6	3,114	1,031	302	21,622
Electricity Secondary .....	752	14,664	19.5	2,021	670	196	13,710
Other Excluding Electricity .....	2,128	29,274	13.8	3,815	1,264	370	27,832
Buildings without Heating .....	387	4,151	10.7	402	133	39	3,261
<b>Primary Space-Heating Energy Source</b>							
Electricity .....	1,128	17,627	15.6	3,114	1,031	302	21,622
Natural Gas .....	2,182	32,701	15.0	4,353	1,442	423	30,654
Fuel Oil .....	302	3,711	12.3	305	101	30	2,923
District Heat .....	77	5,077	66.0	928	308	90	5,784
Propane .....	282	2,107	7.5	216	72	21	1,960
Other .....	Q	Q	Q	Q	Q	Q	Q
<b>Cooling Energy Source</b>							
Electricity .....	3,450	55,545	16.1	8,503	2,816	825	60,281
Other Excluding Electricity .....	109	2,929	26.8	543	180	53	3,564
Buildings without Cooling .....	836	7,242	8.7	306	101	30	2,579
<b>Water-Heating Energy Source</b>							
Electricity .....	1,546	24,171	15.6	3,896	1,290	378	27,581
Other Excluding Electricity .....	1,693	31,943	18.9	4,689	1,553	455	33,293
Buildings without Water Heating .....	1,157	9,601	8.3	767	254	74	5,550
<b>Cooking Energy Source</b>							
Electricity .....	437	13,733	31.4	2,811	931	273	18,252
Other Excluding Electricity .....	420	10,948	26.1	1,729	573	168	12,621
Buildings without Cooking .....	3,538	41,035	11.6	4,812	1,594	467	35,551
<b>Energy End Uses (more than one may apply)</b>							
Buildings with Space Heating .....	4,008	61,565	15.4	8,950	2,965	869	63,164
Buildings with Cooling .....	3,560	58,474	16.4	9,046	2,996	878	63,845
Buildings with Water Heating .....	3,239	56,115	17.3	8,585	2,844	833	60,875
Buildings with Cooking .....	857	24,681	28.8	4,540	1,504	441	30,873
Buildings with Manufacturing .....	151	3,126	20.7	449	149	44	3,060
Buildings with Electricity Generation .....	172	11,882	69.3	2,525	836	245	15,509
<b>Percent of Floorspace Heated</b>							
Not Heated .....	387	4,151	10.7	402	133	39	3,261
1 to 50 .....	569	7,564	13.3	576	191	56	4,533
51 to 99 .....	626	10,737	17.1	1,683	557	163	11,384
100 .....	2,813	43,264	15.4	6,691	2,216	650	47,247
<b>Percent of Floorspace Cooled</b>							
Not Cooled .....	836	7,242	8.7	306	101	30	2,579
1 to 50 .....	1,012	16,846	16.6	1,315	436	128	10,363
51 to 99 .....	751	16,966	22.6	3,026	1,002	294	20,141
100 .....	1,796	24,662	13.7	4,705	1,559	457	33,342
<b>Percent Lit When Open</b>							
Zero .....	Q	Q	Q	Q	Q	Q	Q
1 to 50 .....	835	9,187	11.0	672	223	65	5,396
51 to 99 .....	1,228	20,665	16.8	3,034	1,005	295	21,574
100 .....	2,096	34,233	16.3	5,594	1,853	543	39,065
Building Never Open/ Electricity Not Used .....	202	1,458	7.2	41	14	4	319

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				Total (trillion Btu)	Total (trillion Btu)	Total (billion kWh)	
<b>Percent Lit When Closed</b>							
Zero .....	2,174	20,771	9.6	1,772	587	172	14,034
1 to 50 .....	1,688	30,950	18.3	4,413	1,462	428	31,794
51 to 100 .....	143	2,160	15.1	553	183	54	3,857
Building Never Closed/ Electricity Not Used .....	390	11,835	30.3	2,614	866	254	16,739
<b>Heating Equipment (more than one may apply)</b>							
Heat Pumps .....	492	8,923	18.1	1,557	516	151	10,243
Furnaces .....	1,460	14,449	9.9	1,435	475	139	10,722
Individual Space Heaters .....	886	17,321	19.5	2,215	734	215	15,110
District Heat .....	96	5,534	57.7	1,022	339	99	6,432
Boilers .....	581	19,514	33.6	2,755	912	267	18,848
Packaged Heating Units .....	1,347	25,743	19.1	4,435	1,469	431	31,069
Other .....	185	4,073	22.1	691	229	67	4,400
<b>Cooling Equipment (more than one may apply)</b>							
Residential-Type Central							
Air Conditioners .....	676	8,329	12.3	1,037	343	101	7,113
Heat Pumps .....	485	9,147	18.8	1,574	521	153	10,416
Individual Air Conditioners .....	799	14,276	17.9	1,642	544	159	11,793
District Chilled Water .....	50	2,750	55.4	571	189	55	3,224
Central Chillers .....	130	12,909	99.7	2,723	902	264	17,041
Packaged Air Conditioning							
Units .....	1,953	36,527	18.7	6,024	1,995	585	43,059
Swamp Coolers .....	136	2,219	16.3	308	102	30	2,238
Other .....	49	1,312	26.7	247	82	24	1,580
<b>Main Equipment Replaced Since 1995 (more than one may apply)</b>							
Heating .....	984	13,220	13.4	1,880	623	182	13,421
Cooling .....	1,085	17,390	16.0	2,609	864	253	18,381
<b>Lighting Equipment Types (more than one may apply)</b>							
Incandescent .....	2,193	38,156	17.4	5,591	1,852	543	39,345
Standard Fluorescent .....	3,778	60,344	16.0	8,872	2,939	861	62,616
Compact Fluorescent .....	607	20,666	34.1	3,613	1,197	351	24,269
High Intensity Discharge .....	430	19,223	44.8	3,088	1,023	300	19,743
Halogen .....	572	17,926	31.3	3,014	998	293	20,656
Other .....	58	1,004	17.5	179	59	17	1,235
<b>Water Heating Equipment</b>							
Centralized System .....	2,472	35,579	14.4	5,164	1,710	501	38,010
Distributed System .....	566	10,899	19.3	1,610	533	156	11,383
Combination of Centralized and Distributed System .....	200	9,637	48.1	1,811	600	176	11,481
<b>Commercial Refrigeration Equipment (more than one may apply)</b>							
Any Equipment .....	950	25,652	27.0	4,997	1,655	485	34,282
Walk-In Units .....	658	19,713	29.9	4,186	1,386	406	28,489
Cases or Cabinets .....	820	22,001	26.8	4,370	1,448	424	30,056
None .....	3,445	40,064	11.6	4,355	1,442	423	32,142

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<b>Personal Computers</b>							
None .....	1,355	7,961	5.9	584	193	57	4,762
1 to 4 .....	1,636	13,853	8.5	1,678	556	163	13,009
5 to 9 .....	542	6,528	12.0	927	307	90	6,947
10 to 19 .....	403	7,514	18.7	992	329	96	7,747
20 to 49 .....	247	8,087	32.7	1,153	382	112	8,162
50 to 99 .....	105	5,867	55.9	803	266	78	5,601
100 to 249 .....	71	6,818	96.0	1,240	411	120	7,675
250 or More .....	36	9,088	252.4	1,974	654	192	12,521
<b>Photocopiers</b>							
None .....	2,564	20,009	7.8	2,242	743	218	17,615
One .....	1,114	12,928	11.6	1,741	577	169	12,840
2 to 4 .....	540	15,620	28.9	2,059	682	200	14,526
5 to 9 .....	102	5,384	52.6	857	284	83	5,626
10 or More .....	75	11,774	156.7	2,453	813	238	15,816
<b>Other Electronic Equipment (more than one may apply)</b>							
Laser Printers .....	1,949	46,567	23.9	7,396	2,450	718	51,039
FAX Machines .....	2,807	54,764	19.5	8,505	2,817	826	59,661
Medical Diagnostic Equipment .....	86	2,493	29.1	637	211	62	3,775
<b>Annual Consumption (kilowatthours)</b>							
10,000 or Less .....	747	3,216	4.3	38	13	4	426
10,001 to 50,000 .....	1,578	9,239	5.9	418	138	41	3,856
50,001 to 100,000 .....	743	7,001	9.4	560	185	54	4,920
100,001 to 500,000 .....	1,042	16,811	16.1	2,408	798	234	18,923
500,001 to 1,000,000 .....	141	6,966	49.4	1,024	339	99	7,526
1,000,001 to 5,000,000 .....	125	13,661	109.2	2,650	878	257	17,233
Over 5,000,000 .....	19	8,823	475.8	2,254	747	219	13,542
<b>Provider of Purchased Electricity (more than one may apply)</b>							
Local Utility .....	4,224	62,043	14.7	8,687	2,877	843	61,536
Some Other Provider .....	140	3,101	22.1	525	174	51	4,024

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

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. \* 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.