

Table C13. Electricity Consumption and Conditional Energy Intensity, 1999

	Total Electricity Consumption (billion kWh)			Total Floorspace of Buildings Using Electricity (million square feet)			Electricity Energy Intensity (kWh/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
All Buildings	205	362	341	14,001	30,052	21,663	14.6	12.0	15.8
Principal Building Activity									
Education	6	44	25	782	4,831	3,038	8.1	9.1	8.3
Food Sales	27	19	Q	439	485	Q	60.4	39.8	Q
Food Service	52	Q	Q	1,296	Q	Q	40.5	Q	Q
Health Care	5	14	49	407	672	1,838	11.6	20.6	26.9
Inpatient	N	Q	46	N	Q	1,683	N	Q	27.3
Outpatient	5	9	Q	407	490	Q	11.6	18.7	Q
Lodging	7	31	20	405	2,336	1,780	17.5	13.1	11.1
Mercantile	29	68	56	1,971	4,630	3,797	14.8	14.6	14.7
Retail (Other Than Mall)	22	23	19	1,649	2,375	742	13.6	9.7	25.8
Enclosed and Strip Malls	Q	45	37	Q	2,255	3,055	Q	19.8	12.1
Office	31	79	114	2,275	4,628	5,140	13.8	17.1	22.2
Public Assembly	8	28	20	943	2,254	1,143	8.2	12.5	17.6
Public Order and Safety	Q	7	Q	Q	557	Q	Q	12.8	Q
Religious Worship	3	9	Q	1,003	2,353	Q	2.5	4.0	Q
Service	17	16	Q	1,756	1,265	Q	9.9	12.8	Q
Warehouse and Storage	Q	24	30	1,613	4,695	3,570	6.5	5.0	8.5
Other	Q	12	11	Q	445	390	Q	28.0	29.1
Vacant	Q	Q	Q	Q	416	Q	Q	2.3	Q
Year Constructed									
1919 or Before	8	10	Q	1,253	1,816	645	6.5	5.6	12.9
1920 to 1945	16	20	18	1,496	2,784	2,001	10.6	7.1	9.2
1946 to 1959	20	41	29	2,555	4,092	2,147	7.8	10.1	13.7
1960 to 1969	33	53	51	1,975	4,888	3,822	16.8	10.9	13.2
1970 to 1979	42	71	69	2,395	5,421	3,934	17.7	13.0	17.5
1980 to 1989	43	92	86	2,031	6,459	4,994	21.1	14.3	17.3
1990 to 1999	42	75	79	2,296	4,591	4,120	18.4	16.2	19.2
Census Region and Division									
Northeast	31	52	76	2,066	4,887	5,011	15.2	10.7	15.1
New England	7	14	18	489	1,750	1,376	13.6	8.1	13.0
Middle Atlantic	25	38	58	1,577	3,137	3,635	15.7	12.1	15.8
Midwest	38	70	86	3,615	6,987	5,786	10.6	10.0	14.9
East North Central	28	45	53	2,476	4,511	3,954	11.3	9.9	13.5
West North Central	10	25	33	1,140	2,477	1,832	8.9	10.1	18.0
South	89	154	123	5,273	10,981	6,822	16.8	14.0	18.0
South Atlantic	36	76	68	2,272	4,967	3,578	15.7	15.3	19.1
East South Central	22	38	20	1,094	2,865	1,190	20.0	13.2	16.6
West South Central	31	40	35	1,907	3,149	2,054	16.4	12.8	17.0
West	46	86	56	3,046	7,196	4,044	15.2	12.0	14.0
Mountain	12	24	16	916	2,216	1,160	13.0	10.8	13.5
Pacific	34	63	41	2,130	4,981	2,884	16.1	12.5	14.1
Climate Zone: 45-Year Average									
Under 2,000 CDD and --									
More than 7,000 HDD	19	22	24	1,535	2,787	1,428	12.1	7.9	16.9
5,500-7,000 HDD	34	74	89	2,724	7,292	6,690	12.6	10.1	13.2
4,000-5,499 HDD	53	78	100	3,643	6,119	6,031	14.5	12.8	16.7
Fewer than 4,000 HDD	55	110	77	3,099	8,273	4,549	17.6	13.4	17.0
2,000 CDD or More and --									
Fewer than 4,000 HDD	44	78	51	3,000	5,580	2,966	14.8	13.9	17.1

Table C13. Electricity Consumption and Conditional Energy Intensity, 1999

	Total Electricity Consumption (billion kWh)			Total Floorspace of Buildings Using Electricity (million square feet)			Electricity Energy Intensity (kWh/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
Workers (main shift)									
Fewer than 5	73	24	1	7,017	5,189	544	10.4	4.5	2.0
5 to 9	40	22	2	2,782	3,099	393	14.2	7.2	4.4
10 to 19	48	51	4	2,582	4,708	737	18.5	10.8	5.5
20 to 49	37	98	13	1,409	7,706	1,699	26.6	12.7	7.6
50 to 99	Q	82	35	Q	5,681	3,074	Q	14.5	11.3
100 to 249	Q	64	84	Q	2,832	5,457	Q	22.5	15.4
250 or More	N	21	203	N	837	9,759	N	25.7	20.8
Weekly Operating Hours									
39 or Fewer	10	8	Q	2,658	2,120	Q	3.7	3.8	Q
40 to 48	38	58	18	4,191	6,959	1,920	9.0	8.4	9.1
49 to 60	39	71	60	3,004	7,423	3,759	12.9	9.6	16.1
61 to 84	34	68	70	2,003	5,368	5,009	17.1	12.7	14.0
85 to 167	58	71	49	1,280	3,797	3,853	45.0	18.7	12.8
Open Continuously	27	85	142	864	4,385	6,586	30.7	19.4	21.6
Ownership and Occupancy									
Nongovernment Owned	188	292	263	12,693	24,179	16,767	14.8	12.1	15.7
Owner Occupied	131	190	208	9,010	15,971	12,525	14.6	11.9	16.6
Nonowner Occupied	55	100	55	3,402	7,886	4,153	16.2	12.7	13.4
Unoccupied	Q	Q	Q	Q	Q	Q	Q	Q	Q
Government Owned	17	70	78	1,307	5,872	4,897	12.8	12.0	15.9
Federal	Q	10	23	Q	548	1,007	Q	18.7	22.5
State	Q	21	23	Q	1,692	1,484	Q	12.3	15.8
Local	11	39	32	946	3,632	2,405	11.7	10.8	13.2
Vacancy Status									
Completely Vacant	Q	Q	Q	Q	Q	Q	Q	Q	Q
Mostly Vacant	Q	Q	Q	Q	Q	Q	Q	Q	Q
Partially Vacant	17	67	106	1,917	5,861	7,315	8.7	11.4	14.5
Not At All Vacant	186	294	234	11,575	23,775	14,161	16.1	12.4	16.6
Number of Establishments									
One	171	238	183	10,973	20,437	11,428	15.6	11.6	16.0
2 to 5	27	55	44	2,487	4,896	3,059	10.8	11.2	14.3
6 to 10	Q	36	19	Q	2,173	1,219	Q	16.5	15.6
11 to 20	Q	24	29	Q	1,591	1,661	Q	15.4	17.4
More than 20	Q	8	66	Q	590	4,163	Q	13.7	15.8
Currently Unoccupied	Q	Q	Q	Q	Q	Q	Q	Q	Q
Energy Sources (more than one may apply)									
Electricity	205	362	341	14,001	30,052	21,663	14.6	12.0	15.8
Natural Gas	132	253	258	8,625	20,570	16,301	15.3	12.3	15.8
Fuel Oil	9	53	165	1,203	3,570	8,503	7.4	14.7	19.4
District Heat	Q	30	71	Q	2,007	3,613	Q	15.1	19.7
District Chilled Water	Q	16	38	Q	927	1,730	Q	17.4	22.1
Propane	26	26	24	1,621	2,637	2,032	16.3	9.8	12.0
Other	Q	12	14	Q	890	963	Q	13.5	14.4
Space-Heating Energy Source									
Electricity	92	207	199	5,459	15,069	11,763	16.9	13.8	16.9
Electricity Main	64	139	100	3,062	8,667	5,898	20.9	16.0	16.9
Electricity Secondary	28	69	99	2,397	6,402	5,866	11.8	10.7	16.9
Other Excluding Electricity	97	139	135	7,286	12,949	9,040	13.3	10.7	14.9
Buildings without Heating	15	16	8	1,256	2,034	861	12.2	7.7	9.2

Table C13. Electricity Consumption and Conditional Energy Intensity, 1999

	Total Electricity Consumption (billion kWh)			Total Floorspace of Buildings Using Electricity (million square feet)			Electricity Energy Intensity (kWh/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
Primary Space-Heating									
Energy Source									
Electricity	64	139	100	3,062	8,667	5,898	20.9	16.0	16.9
Natural Gas	101	165	156	7,344	14,997	10,360	13.8	11.0	15.1
Fuel Oil	7	10	12	1,038	1,559	1,113	7.2	6.4	10.9
District Heat	Q	25	64	Q	1,645	3,301	Q	15.2	19.4
Propane	Q	6	Q	1,084	980	Q	14.1	5.6	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
Cooling Energy Source									
Electricity	183	334	309	10,723	25,930	18,893	17.1	12.9	16.3
Other Excluding Electricity	Q	17	27	Q	1,117	1,443	Q	15.0	18.9
Buildings without Cooling	13	11	5	2,909	3,004	1,328	4.4	3.8	4.1
Water-Heating Energy Source									
Electricity	85	151	142	4,593	10,985	8,593	18.6	13.7	16.5
Other Excluding Electricity	96	179	180	5,434	14,990	11,519	17.7	11.9	15.7
Buildings without Water Heating	23	33	19	3,973	4,077	1,551	5.8	8.0	12.3
Cooking Energy Source									
Electricity	51	78	144	1,148	4,838	7,747	44.7	16.1	18.5
Other Excluding Electricity	26	58	84	1,220	4,109	5,620	21.7	14.1	14.9
Buildings without Cooking	127	226	114	11,633	21,105	8,297	10.9	10.7	13.7
Energy End Uses (more than one may apply)									
Buildings with Space Heating	189	346	333	12,745	28,018	20,803	14.8	12.4	16.0
Buildings with Cooling	192	351	336	11,092	27,047	20,335	17.3	13.0	16.5
Buildings with Water Heating	182	330	322	10,028	25,974	20,112	18.1	12.7	16.0
Buildings with Cooking	78	136	227	2,367	8,947	13,367	32.8	15.2	17.0
Buildings with Manufacturing	4	15	24	553	1,509	1,064	7.9	10.1	22.5
Buildings with Electricity Generation	Q	69	169	Q	3,166	8,339	Q	21.7	20.3
Percent of Floorspace Heated									
Not Heated	15	16	8	1,256	2,034	861	12.2	7.7	9.2
1 to 50	12	24	20	2,182	3,567	1,816	5.6	6.7	11.0
51 to 99	39	61	64	1,927	5,025	3,785	20.0	12.1	16.9
100	138	262	249	8,636	19,426	15,202	16.0	13.5	16.4
Percent of Floorspace Cooled									
Not Cooled	13	11	5	2,909	3,004	1,328	4.4	3.8	4.1
1 to 50	29	58	41	3,318	8,920	4,608	8.8	6.5	8.8
51 to 99	46	107	141	2,273	7,021	7,673	20.4	15.2	18.3
100	116	186	154	5,501	11,106	8,054	21.2	16.8	19.2
Percent Lit When Open									
Zero	Q	Q	Q	Q	Q	Q	Q	Q	Q
1 to 50	29	30	7	3,075	4,719	1,392	9.4	6.3	4.7
51 to 99	65	114	115	4,113	9,755	6,797	15.9	11.7	16.9
100	108	216	219	6,092	14,839	13,302	17.7	14.6	16.5
Building Never Open/ Electricity Not Used	Q	Q	Q	Q	Q	Q	Q	Q	Q
Percent Lit When Closed									
Zero	62	84	26	7,199	10,435	3,137	8.6	8.1	8.4
1 to 50	99	173	156	5,406	14,482	11,062	18.4	11.9	14.1
51 to 100	Q	20	17	Q	750	878	Q	27.0	18.8
Building Never Closed/ Electricity Not Used	27	85	142	864	4,385	6,586	30.7	19.4	21.6

Table C13. Electricity Consumption and Conditional Energy Intensity, 1999

	Total Electricity Consumption (billion kWh)			Total Floorspace of Buildings Using Electricity (million square feet)			Electricity Energy Intensity (kWh/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
Heating Equipment (more than one may apply)									
Heat Pumps	28	62	61	1,424	4,158	3,341	19.5	15.0	18.3
Furnaces	46	57	36	5,118	6,438	2,892	8.9	8.9	12.6
Individual Space Heaters	24	87	103	2,505	7,732	7,084	9.8	11.3	14.6
District Heat	Q	28	70	Q	1,828	3,545	Q	15.4	19.7
Boilers	18	91	158	1,504	8,327	9,683	12.1	11.0	16.3
Packaged Heating Units	95	177	159	4,080	11,951	9,713	23.2	14.8	16.4
Other	7	19	41	515	1,422	2,135	14.0	13.4	19.1
Cooling Equipment (more than one may apply)									
Residential-Type Central									
Air Conditioners	28	35	37	2,496	3,501	2,333	11.3	10.0	15.9
Heat Pumps	28	62	62	1,406	4,167	3,574	20.1	15.0	17.4
Individual Air Conditioners	25	62	72	2,358	6,679	5,239	10.7	9.3	13.8
District Chilled Water	Q	16	38	Q	927	1,730	Q	17.4	22.1
Central Chillers	Q	63	196	Q	3,215	9,517	Q	19.7	20.5
Packaged Air Conditioning									
Units	124	244	217	5,810	17,315	13,402	21.3	14.1	16.2
Swamp Coolers	Q	13	10	435	1,009	775	Q	12.6	13.3
Other	Q	7	15	Q	452	707	Q	16.4	20.5
Main Equipment Replaced Since 1995 (more than one may apply)									
Heating	47	89	47	3,082	6,831	3,307	15.4	13.0	14.1
Cooling	54	111	88	3,037	8,726	5,628	17.9	12.7	15.6
Lighting Equipment Types (more than one may apply)									
Incandescent	111	207	225	6,993	16,939	14,223	15.8	12.2	15.8
Standard Fluorescent	182	348	332	11,876	27,684	20,784	15.3	12.6	16.0
Compact Fluorescent	38	110	203	1,846	7,480	11,340	20.6	14.6	17.9
High Intensity Discharge	14	95	191	908	7,026	11,290	15.1	13.6	16.9
Halogen	34	89	170	1,590	6,536	9,800	21.6	13.5	17.3
Other	Q	4	7	Q	394	464	Q	10.4	15.3
Water Heating Equipment									
Centralized System	139	207	155	7,891	17,503	10,186	17.6	11.8	15.3
Distributed System	27	63	66	1,781	4,667	4,450	15.4	13.5	14.8
Combination of Centralized and Distributed System	15	59	101	356	3,805	5,476	43.3	15.6	18.4
Commercial Refrigeration Equipment (more than one may apply)									
Any Equipment	93	145	247	2,505	9,110	14,036	37.1	15.9	17.6
Walk-In Units	85	113	208	1,794	5,926	11,992	47.4	19.1	17.4
Cases or Cabinets	86	124	215	2,290	7,409	12,302	37.3	16.8	17.4
None	112	217	94	11,496	20,941	7,627	9.7	10.4	12.4
Personal Computers									
None	45	11	1	4,958	2,450	553	9.1	4.4	Q
1 to 4	86	69	8	5,315	7,464	1,074	16.2	9.2	7.5
5 to 9	36	48	7	1,688	4,200	641	21.2	11.3	10.3
10 to 19	26	52	18	1,534	4,084	1,896	17.2	12.7	9.4
20 to 49	10	62	40	476	4,721	2,890	21.5	13.1	13.8
50 to 99	Q	46	32	Q	3,514	2,327	Q	13.0	13.7
100 to 249	Q	56	63	Q	2,878	3,936	Q	19.6	16.1
250 or More	N	19	172	N	741	8,347	N	25.9	20.7

Table C13. Electricity Consumption and Conditional Energy Intensity, 1999

	Total Electricity Consumption (billion kWh)			Total Floorspace of Buildings Using Electricity (million square feet)			Electricity Energy Intensity (kWh/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
Photocopiers									
None	120	82	15	8,902	9,168	1,939	13.5	9.0	7.8
One	64	87	18	3,724	7,537	1,667	17.1	11.6	10.9
2 to 4	18	113	69	1,165	8,936	5,519	15.6	12.6	12.5
5 to 9	Q	39	42	Q	2,236	2,937	Q	17.2	14.4
10 or More	N	42	197	N	2,173	9,601	N	19.1	20.5
Other Electronic Equipment (more than one may apply)									
Laser Printers	94	296	328	5,396	21,598	19,573	17.4	13.7	16.8
FAX Machines	155	333	338	8,525	25,429	20,810	18.1	13.1	16.3
Medical Diagnostic Equipment	Q	11	48	Q	527	1,700	Q	21.0	28.2
Annual Consumption (kilowatthours)									
10,000 or Less	4	Q	Q	2,504	669	Q	1.4	0.3	Q
10,001 to 50,000	35	6	Q	5,798	3,247	Q	6.0	1.8	Q
50,001 to 100,000	40	15	Q	2,706	4,052	Q	14.6	3.6	Q
100,001 to 500,000	115	116	3	2,873	12,539	1,398	40.2	9.2	2.0
500,001 to 1,000,000	Q	79	9	Q	4,782	2,066	Q	16.6	4.4
1,000,001 to 5,000,000	Q	140	116	Q	4,707	8,951	Q	29.8	13.0
Over 5,000,000	N	Q	213	N	Q	8,767	N	Q	24.3
Provider of Purchased Electricity (more than one may apply)									
Local Utility	192	342	310	13,378	28,799	19,866	14.3	11.9	15.6
Some Other Provider	Q	15	28	Q	1,110	1,510	Q	13.8	18.9

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. * 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.