

**Table C14. Electricity Consumption and Conditional Energy Intensity by Year Constructed, 1999**

	Total Electricity Consumption (billion kWh)			Total Floorspace of Buildings Using Electricity (million square feet)			Electricity Energy Intensity (kWh/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> .....	171	540	196	18,788	35,920	11,007	9.1	15.0	17.8
<b>Building Floorspace (Square Feet)</b>									
1,001 to 5,000 .....	24	71	26	2,222	2,944	1,114	10.9	24.1	23.7
5,001 to 10,000 .....	20	47	16	3,081	3,457	1,182	6.4	13.7	13.4
10,001 to 25,000 .....	30	65	14	3,835	5,916	1,091	7.7	11.1	12.4
25,001 to 50,000 .....	21	64	24	2,427	5,109	1,638	8.5	12.6	14.4
50,001 to 100,000 .....	21	86	37	2,430	5,743	1,862	8.6	15.1	20.1
100,001 to 200,000 .....	16	82	34	1,779	4,816	1,651	8.8	17.1	20.6
200,001 to 500,000 .....	17	59	24	1,695	3,756	1,338	10.2	15.7	17.6
Over 500,000 .....	23	65	22	1,318	4,179	1,131	17.5	15.5	19.2
<b>Principal Building Activity</b>									
Education .....	23	40	13	3,247	4,165	1,239	7.1	9.5	10.3
Food Sales .....	Q	22	19	Q	443	355	Q	50.6	53.9
Food Service .....	12	37	Q	608	952	Q	19.4	39.1	Q
Health Care .....	9	49	10	548	1,897	473	16.0	26.0	21.3
Inpatient .....	8	39	Q	434	1,277	Q	17.7	30.3	Q
Outpatient .....	Q	11	6	Q	620	319	Q	17.0	18.6
Lodging .....	8	40	10	808	2,996	716	10.1	13.3	13.3
Mercantile .....	23	89	41	2,582	5,786	2,030	8.9	15.4	20.1
Retail (Other Than Mall) .....	14	26	25	1,901	1,726	1,139	7.4	14.8	22.0
Enclosed and Strip Malls .....	9	63	16	681	4,060	891	13.3	15.6	17.6
Office .....	43	148	33	2,907	7,306	1,830	14.9	20.3	18.2
Public Assembly .....	13	30	13	1,395	2,209	736	9.7	13.4	17.5
Public Order and Safety .....	3	5	Q	392	411	Q	8.0	12.2	Q
Religious Worship .....	3	7	Q	1,301	1,748	Q	2.4	4.2	Q
Service .....	11	24	Q	1,253	1,768	Q	9.1	13.8	Q
Warehouse and Storage .....	9	36	19	2,509	5,342	2,028	3.7	6.7	9.6
Other .....	Q	12	Q	Q	603	Q	Q	19.9	Q
Vacant .....	Q	Q	Q	797	Q	Q	Q	Q	Q
<b>Census Region and Division</b>									
Northeast .....	46	85	28	4,798	5,790	1,376	9.6	14.7	20.2
New England .....	9	23	6	1,211	1,971	433	7.8	11.7	14.3
Middle Atlantic .....	36	62	22	3,587	3,819	943	10.2	16.3	22.9
Midwest .....	49	107	38	5,999	7,601	2,788	8.2	14.0	13.7
East North Central .....	32	68	26	4,377	4,697	1,866	7.3	14.4	14.1
West North Central .....	17	39	12	1,622	2,904	922	10.7	13.4	13.0
South .....	48	230	87	4,971	13,667	4,439	9.7	16.8	19.7
South Atlantic .....	18	115	46	1,989	6,525	2,303	9.3	17.7	19.9
East South Central .....	12	47	Q	1,038	3,067	1,044	11.8	15.4	19.1
West South Central .....	18	67	22	1,944	4,074	1,092	9.1	16.5	19.8
West .....	28	119	42	3,020	8,862	2,404	9.2	13.4	17.7
Mountain .....	10	31	11	1,074	2,519	698	8.9	12.3	15.5
Pacific .....	18	88	32	1,946	6,343	1,706	9.4	13.8	18.6
<b>Climate Zone: 45-Year Average</b>									
Under 2,000 CDD and --									
More than 7,000 HDD .....	12	40	13	1,886	2,947	918	6.2	13.5	14.1
5,500-7,000 HDD .....	49	104	43	6,010	8,107	2,589	8.2	12.9	16.7
4,000-5,499 HDD .....	55	131	46	5,304	7,973	2,516	10.3	16.4	18.3
Fewer than 4,000 HDD .....	31	150	61	3,070	9,643	3,209	10.1	15.6	19.1
2,000 CDD or More and --									
Fewer than 4,000 HDD .....	25	115	33	2,519	7,251	1,776	9.8	15.9	18.3

**Table C14. Electricity Consumption and Conditional Energy Intensity by Year Constructed, 1999**

	Total Electricity Consumption (billion kWh)			Total Floorspace of Buildings Using Electricity (million square feet)			Electricity Energy Intensity (kWh/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 .....	26	53	19	5,752	5,372	1,626	4.5	9.8	11.9
5 to 9 .....	15	40	9	2,026	3,419	829	7.4	11.7	10.4
10 to 19 .....	25	57	21	2,781	4,093	1,153	9.0	13.9	17.9
20 to 49 .....	29	86	34	2,953	5,772	2,089	9.8	14.8	16.4
50 to 99 .....	16	77	29	1,638	5,660	1,601	10.0	13.7	17.9
100 to 249 .....	19	90	40	1,580	4,990	1,786	12.3	17.9	22.4
250 or More .....	41	139	45	2,057	6,614	1,925	19.9	21.0	23.2
<b>Weekly Operating Hours</b>									
39 or Fewer .....	6	12	Q	2,499	2,384	Q	2.5	5.1	Q
40 to 48 .....	30	66	17	4,927	6,373	1,771	6.2	10.4	9.5
49 to 60 .....	40	97	34	4,248	7,646	2,292	9.3	12.6	14.8
61 to 84 .....	32	110	30	2,837	7,363	2,180	11.3	14.9	13.9
85 to 167 .....	27	104	48	1,819	5,129	1,981	14.6	20.2	24.0
Open Continuously .....	36	152	66	2,458	7,025	2,352	14.7	21.6	28.1
<b>Ownership and Occupancy</b>									
Nongovernment Owned .....	125	454	163	14,624	29,964	9,052	8.6	15.2	18.0
Owner Occupied .....	94	318	117	10,865	20,448	6,193	8.7	15.6	18.9
Nonowner Occupied .....	30	135	46	3,440	9,199	2,802	8.8	14.7	16.3
Unoccupied .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
Government Owned .....	46	86	33	4,164	5,956	1,956	11.0	14.5	16.9
Federal .....	15	14	7	826	642	243	18.7	21.8	26.7
State .....	13	25	9	1,177	1,650	554	11.3	15.1	16.1
Local .....	17	47	18	2,161	3,664	1,158	7.9	12.9	15.3
<b>Vacancy Status</b>									
Completely Vacant .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
Mostly Vacant .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
Partially Vacant .....	33	119	38	3,749	8,571	2,773	8.7	13.9	13.8
Not At All Vacant .....	137	420	158	14,242	27,055	8,213	9.6	15.5	19.2
<b>Number of Establishments</b>									
One .....	118	334	141	13,129	22,103	7,607	9.0	15.1	18.5
2 to 5 .....	25	75	26	3,372	5,326	1,745	7.3	14.1	14.7
6 to 10 .....	9	43	8	679	2,410	479	12.9	17.8	16.0
11 to 20 .....	Q	37	9	Q	2,256	498	Q	16.5	18.9
More than 20 .....	11	50	13	709	3,479	621	16.1	14.4	20.4
Currently Unoccupied .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Energy Sources (more than one may apply)</b>									
Electricity .....	171	540	196	18,788	35,920	11,007	9.1	15.0	17.8
Natural Gas .....	123	369	151	13,034	24,386	8,076	9.4	15.1	18.7
Fuel Oil .....	42	142	43	3,579	7,590	2,108	11.7	18.7	20.2
District Heat .....	34	54	Q	2,338	2,876	677	14.3	18.7	26.3
District Chilled Water .....	14	29	13	794	1,550	407	17.1	18.4	32.8
Propane .....	10	49	17	1,410	3,586	1,295	7.4	13.8	13.1
Other .....	9	18	6	765	1,204	353	12.1	14.6	18.0
<b>Space-Heating Energy Source</b>									
Electricity .....	83	304	111	7,313	19,045	5,933	11.4	16.0	18.7
Electricity Main .....	35	190	77	2,769	11,150	3,708	12.6	17.0	20.9
Electricity Secondary .....	49	114	34	4,544	7,896	2,225	10.7	14.4	15.2
Other Excluding Electricity .....	85	206	79	10,205	14,403	4,667	8.3	14.3	17.0
Buildings without Heating .....	3	30	Q	1,271	2,473	Q	2.6	12.1	Q

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	Total Electricity Consumption (billion kWh)			Total Floorspace of Buildings Using Electricity (million square feet)			Electricity Energy Intensity (kWh/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 .....	35	190	77	2,769	11,150	3,708	12.6	17.0	20.9
Natural Gas .....	89	241	93	10,176	16,847	5,677	8.7	14.3	16.3
Fuel Oil .....	10	18	Q	1,745	1,707	Q	5.6	10.3	Q
District Heat .....	30	45	15	2,151	2,497	428	14.0	18.2	34.1
Propane .....	4	14	Q	519	1,074	Q	6.8	13.0	Q
Other .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Cooling Energy Source</b>									
Electricity .....	148	501	177	14,026	31,749	9,770	10.5	15.8	18.1
Other Excluding Electricity .....	12	25	16	869	1,474	585	13.3	17.2	27.1
Buildings without Cooling .....	12	14	Q	3,893	2,697	Q	3.1	5.3	Q
<b>Water-Heating Energy Source</b>									
Electricity .....	49	242	87	4,820	14,952	4,399	10.2	16.2	19.7
Other Excluding Electricity .....	101	259	95	10,108	16,788	5,047	10.0	15.4	18.8
Buildings without Water Heating .....	21	39	15	3,859	4,180	1,561	5.4	9.3	9.4
<b>Cooking Energy Source</b>									
Electricity .....	47	171	56	3,024	8,251	2,458	15.4	20.7	22.6
Other Excluding Electricity .....	38	86	44	3,495	5,509	1,945	10.8	15.6	22.6
Buildings without Cooking .....	87	284	97	12,269	22,161	6,605	7.1	12.8	14.6
<b>Energy End Uses (more than one may apply)</b>									
Buildings with Space Heating .....	168	510	190	17,517	33,448	10,600	9.6	15.3	18.0
Buildings with Cooling .....	159	526	193	14,895	33,224	10,355	10.7	15.8	18.6
Buildings with Water Heating .....	150	501	181	14,928	31,740	9,446	10.1	15.8	19.2
Buildings with Cooking .....	84	257	100	6,519	13,759	4,403	13.0	18.7	22.6
Buildings with Manufacturing .....	10	25	9	933	1,709	485	10.5	14.6	18.3
Buildings with Electricity Generation .....	35	151	59	1,992	7,149	2,741	17.8	21.1	21.6
<b>Percent of Floorspace Heated</b>									
Not Heated .....	3	30	Q	1,271	2,473	Q	2.6	12.1	Q
1 to 50 .....	14	32	9	2,617	3,749	1,198	5.5	8.6	7.7
51 to 99 .....	33	94	37	3,218	5,742	1,777	10.3	16.3	20.6
100 .....	121	384	145	11,683	23,957	7,625	10.3	16.0	19.0
<b>Percent of Floorspace Cooled</b>									
Not Cooled .....	12	14	Q	3,893	2,697	Q	3.1	5.3	Q
1 to 50 .....	37	64	27	6,241	8,052	2,553	6.0	7.9	10.4
51 to 99 .....	57	175	62	4,052	9,818	3,096	14.1	17.8	20.0
100 .....	65	288	104	4,603	15,354	4,706	14.0	18.8	22.1
<b>Percent Lit When Open</b>									
Zero .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
1 to 50 .....	19	31	15	4,301	3,928	957	4.5	7.8	15.7
51 to 99 .....	66	183	46	6,025	11,398	3,242	10.9	16.1	14.0
100 .....	85	323	135	7,583	19,981	6,670	11.2	16.2	20.3
Building Never Open/ Electricity Not Used .....	Q	Q	Q	863	Q	Q	Q	Q	Q
<b>Percent Lit When Closed</b>									
Zero .....	36	101	35	6,811	10,503	3,458	5.3	9.6	10.1
1 to 50 .....	92	264	72	9,247	17,259	4,444	10.0	15.3	16.2
51 to 100 .....	Q	23	23	Q	1,134	753	Q	20.6	31.1
Building Never Closed/ Electricity Not Used .....	36	152	66	2,458	7,025	2,352	14.7	21.6	28.1

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	Total Electricity Consumption (billion kWh)			Total Floorspace of Buildings Using Electricity (million square feet)			Electricity Energy Intensity (kWh/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>Heating Equipment (more than one may apply)</b>									
Heat Pumps .....	25	90	36	1,764	5,363	1,796	14.2	16.8	20.1
Furnaces .....	35	76	28	4,847	7,215	2,387	7.2	10.5	11.9
Individual Space Heaters .....	53	120	43	5,337	9,268	2,715	9.9	12.9	15.7
District Heat .....	33	51	16	2,309	2,726	499	14.2	18.5	31.9
Boilers .....	55	165	47	6,415	10,620	2,479	8.6	15.5	19.1
Packaged Heating Units .....	54	262	114	4,820	15,239	5,684	11.3	17.2	20.1
Other .....	14	38	14	1,030	2,257	786	14.0	17.0	18.2
<b>Cooling Equipment (more than one may apply)</b>									
Residential-Type Central									
Air Conditioners .....	27	58	16	2,573	4,483	1,274	10.3	13.0	12.2
Heat Pumps .....	25	95	33	1,818	5,624	1,705	14.0	16.8	19.1
Individual Air Conditioners .....	54	81	25	6,113	6,687	1,476	8.8	12.1	16.8
District Chilled Water .....	14	29	13	794	1,550	407	17.1	18.4	32.8
Central Chillers .....	48	167	49	2,567	8,114	2,229	18.8	20.6	21.9
Packaged Air Conditioning									
Units .....	92	362	131	8,037	21,665	6,825	11.5	16.7	19.2
Swamp Coolers .....	5	19	Q	509	1,371	339	10.4	13.9	16.3
Other .....	Q	17	Q	Q	951	Q	Q	17.9	Q
<b>Main Equipment Replaced Since 1995 (more than one may apply)</b>									
Heating .....	41	129	13	4,160	8,266	794	9.9	15.6	15.8
Cooling .....	59	177	18	5,340	11,107	943	11.0	15.9	18.8
<b>Lighting Equipment Types (more than one may apply)</b>									
Incandescent .....	112	333	97	11,393	21,385	5,377	9.9	15.6	18.1
Standard Fluorescent .....	162	517	182	16,693	33,658	9,993	9.7	15.4	18.2
Compact Fluorescent .....	55	220	76	4,483	12,023	4,160	12.3	18.3	18.3
High Intensity Discharge .....	51	167	81	4,193	10,566	4,464	12.3	15.8	18.2
Halogen .....	48	179	66	3,653	10,699	3,574	13.2	16.7	18.4
Other .....	Q	7	9	Q	460	392	Q	15.7	22.6
<b>Water Heating Equipment</b>									
Centralized System .....	93	302	107	10,284	19,732	5,564	9.0	15.3	19.3
Distributed System .....	22	97	38	2,269	6,505	2,125	9.5	14.9	17.8
Combination of Centralized and Distributed System .....	36	103	37	2,376	5,503	1,758	15.3	18.7	20.8
<b>Commercial Refrigeration Equipment (more than one may apply)</b>									
Any Equipment .....	84	290	111	6,180	14,877	4,595	13.6	19.5	24.2
Walk-In Units .....	65	248	94	4,071	11,957	3,685	15.9	20.7	25.4
Cases or Cabinets .....	77	251	97	5,580	12,458	3,963	13.7	20.1	24.4
None .....	88	250	85	12,608	21,043	6,412	6.9	11.9	13.2
<b>Personal Computers</b>									
None .....	17	30	10	3,596	3,353	1,012	4.7	8.9	9.9
1 to 4 .....	38	98	28	5,294	6,989	1,569	7.1	14.0	17.5
5 to 9 .....	14	50	26	1,534	3,803	1,191	8.9	13.1	22.2
10 to 19 .....	14	57	25	1,615	4,251	1,647	8.9	13.3	15.4
20 to 49 .....	21	61	31	2,103	4,183	1,801	9.8	14.5	17.1
50 to 99 .....	13	45	21	1,349	3,243	1,276	9.5	13.7	16.1
100 to 249 .....	17	79	24	1,216	4,356	1,245	14.2	18.2	19.1
250 or More .....	38	122	32	2,079	5,741	1,267	18.3	21.2	25.0

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	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>Photocopiers</b>									
None .....	47	125	45	7,460	9,945	2,604	6.3	12.6	17.3
One .....	32	93	44	3,928	6,643	2,358	8.2	14.0	18.6
2 to 4 .....	34	119	47	4,033	8,666	2,921	8.4	13.7	16.0
5 to 9 .....	8	55	21	620	3,390	1,373	13.0	16.1	14.9
10 or More .....	50	148	40	2,747	7,275	1,752	18.2	20.4	22.7
<b>Other Electronic Equipment (more than one may apply)</b>									
Laser Printers .....	125	426	167	11,145	26,657	8,765	11.2	16.0	19.1
FAX Machines .....	148	490	188	14,063	30,817	9,883	10.5	15.9	19.0
Medical Diagnostic Equipment .....	7	46	9	374	1,731	388	19.2	26.6	22.0
<b>Annual Consumption (kilowatthours)</b>									
10,000 or Less .....	2	1	Q	1,936	983	Q	1.0	1.4	Q
10,001 to 50,000 .....	16	20	5	4,095	3,913	1,231	3.8	5.1	4.1
50,001 to 100,000 .....	17	29	8	2,397	3,737	867	7.2	7.9	8.8
100,001 to 500,000 .....	49	142	43	4,969	9,301	2,540	9.9	15.3	16.8
500,001 to 1,000,000 .....	18	60	22	1,574	4,138	1,255	11.3	14.4	17.6
1,000,001 to 5,000,000 .....	35	158	64	2,323	8,379	2,958	15.2	18.9	21.7
Over 5,000,000 .....	34	130	54	1,494	5,469	1,860	22.9	23.8	29.2
<b>Provider of Purchased Electricity (more than one may apply)</b>									
Local Utility .....	157	510	176	17,640	34,242	10,161	8.9	14.9	17.3
Some Other Provider .....	12	27	12	880	1,620	601	13.8	16.7	19.6

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. \* 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.