

Table C20. Electricity Consumption and Conditional Energy Intensity by Climate Zone^a for Non-Mall Buildings, 2003

	Total Electricity Consumption (billion kWh)					Total Floorspace of Buildings Using Electricity (million square feet)					Electricity Energy Intensity (kWh/square foot)				
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
All Buildings*	120	224	166	219	161	10,393	17,076	11,375	15,172	9,290	11.5	13.1	14.6	14.5	17.3
Building Floorspace (Square Feet)															
1,001 to 5,000	19	26	14	31	23	1,204	1,595	918	1,759	871	15.7	16.5	14.9	17.8	26.3
5,001 to 10,000	11	17	12	24	13	1,124	1,547	950	1,738	839	9.9	10.9	12.8	13.7	15.3
10,001 to 25,000	18	29	23	25	24	2,183	3,140	1,402	2,822	1,823	8.3	9.2	16.1	9.0	13.3
25,001 to 50,000	18	24	15	25	22	1,451	2,199	1,272	2,027	1,435	12.2	10.8	11.6	12.3	15.1
50,001 to 100,000	15	32	24	28	19	1,295	2,549	1,823	2,037	1,327	11.8	12.6	13.2	13.8	14.3
100,001 to 200,000	15	40	24	41	22	1,206	2,641	1,752	2,259	1,160	12.4	15.3	13.5	17.9	18.8
200,001 to 500,000	14	27	21	25	19	1,115	1,943	1,619	1,432	942	12.3	13.7	13.1	17.8	20.0
Over 500,000	Q	29	34	20	20	Q	1,463	1,639	1,098	893	12.0	19.8	20.9	17.9	22.1
Principal Building Activity															
Education	13	23	16	31	27	1,537	2,800	1,401	2,435	1,698	8.2	8.0	11.1	12.7	16.0
Food Sales	12	Q	Q	Q	Q	271	Q	Q	Q	Q	43.0	Q	Q	Q	Q
Food Service	7	12	Q	20	17	227	400	Q	440	366	29.3	30.6	Q	45.7	46.3
Health Care	10	18	11	20	14	475	784	564	844	496	20.6	23.3	19.2	23.7	27.6
Inpatient	6	12	8	17	9	262	450	323	592	278	23.7	27.7	23.3	28.2	34.0
Outpatient	4	6	3	3	Q	213	334	240	252	Q	16.7	17.4	13.7	13.4	Q
Lodging	8	21	12	18	10	768	1,314	1,132	1,275	608	10.1	15.9	Q	14.0	16.7
Retail (Other Than Mall).....	10	10	10	16	15	710	865	695	1,454	592	14.2	11.0	14.8	11.3	25.9
Office	22	58	53	39	38	1,593	3,165	3,125	2,341	1,985	13.9	18.2	17.1	16.8	19.2
Public Assembly	8	8	6	18	9	876	818	806	906	529	9.1	9.5	Q	19.7	17.0
Public Order and Safety	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Religious Worship	1	5	2	5	5	408	1,320	499	1,039	488	3.0	3.5	4.9	4.8	10.1
Service	10	11	Q	7	Q	911	1,179	639	946	Q	10.6	9.6	Q	7.6	Q
Warehouse and Storage	11	24	11	16	9	1,564	2,539	1,426	2,186	1,710	7.0	9.6	7.9	7.5	5.0
Other	Q	11	Q	Q	Q	Q	467	Q	Q	Q	Q	24.6	Q	Q	Q
Vacant	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Year Constructed															
Before 1920	6	8	Q	2	Q	1,212	1,387	731	277	Q	5.2	5.6	Q	8.4	Q
1920 to 1945	8	23	16	9	Q	1,070	2,076	1,924	1,169	Q	7.8	11.0	8.4	7.5	Q
1946 to 1959	9	22	14	17	6	1,053	2,435	1,369	1,462	519	8.5	9.0	10.0	11.8	11.2
1960 to 1969	16	25	20	19	16	1,405	2,302	1,504	1,845	1,001	11.1	10.8	13.1	10.5	16.4
1970 to 1979	33	44	34	34	24	2,215	2,967	1,726	2,413	1,233	14.8	14.7	19.4	14.2	19.1
1980 to 1989	13	47	31	54	38	1,003	2,339	1,664	3,051	2,097	12.8	20.0	18.8	17.9	18.3
1990 to 1999	26	39	27	63	47	1,750	2,457	1,560	3,650	2,661	15.1	15.8	17.2	17.3	17.6
2000 to 2003	8	17	17	20	23	684	1,114	898	1,305	1,298	12.2	15.4	19.1	15.1	18.1
Census Region and Division															
Northeast	23	59	65	N	N	2,365	5,366	5,077	N	N	9.8	11.0	12.8	N	N
New England	7	25	N	N	N	Q	1,993	N	N	N	7.1	12.5	N	N	N
Middle Atlantic	Q	34	65	N	N	1,417	3,373	5,077	N	N	11.6	10.1	12.8	N	N
Midwest	62	134	19	N	N	5,488	9,655	1,558	N	N	11.4	13.9	12.4	N	N
East North Central	32	122	N	N	N	3,008	8,365	N	N	N	10.6	14.5	N	N	N
West North Central	31	Q	19	N	N	2,479	Q	1,558	N	N	12.4	9.6	12.4	N	N
South	N	N	72	156	146	N	N	4,047	9,985	8,734	N	N	17.8	15.7	16.7
South Atlantic	N	N	48	107	56	N	N	2,613	6,293	3,190	N	N	18.2	17.0	17.6
East South Central	N	N	Q	Q	Q	N	N	Q	Q	Q	N	N	19.0	12.6	19.6
West South Central	N	N	Q	27	82	N	N	Q	1,891	5,153	N	N	Q	14.3	16.0
West	34	31	Q	63	15	2,541	2,055	693	5,187	555	13.3	15.0	14.0	12.1	27.1
Mountain	27	16	N	N	13	2,081	1,075	N	N	476	13.1	14.8	N	N	26.8
Pacific	Q	Q	Q	63	Q	Q	Q	693	5,187	Q	14.7	15.1	14.0	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)				
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
All Buildings*	120	224	166	219	161	10,393	17,076	11,375	15,172	9,290	11.5	13.1	14.6	14.5	17.3
Number of Floors															
One	46	80	46	92	71	3,565	6,112	3,064	7,623	4,571	12.8	13.1	14.9	12.1	15.5
Two	33	50	36	50	34	3,122	4,845	2,592	3,244	2,177	10.5	10.3	13.8	15.3	15.5
Three	15	27	14	21	7	1,645	2,568	1,223	1,473	471	9.0	10.4	11.6	14.4	14.7
Four to Nine	20	44	40	43	27	1,731	2,505	2,744	1,982	1,103	11.8	17.5	14.6	21.5	24.8
Ten or More	6	23	31	14	22	330	1,047	1,752	850	968	18.1	22.4	17.6	16.1	22.6
Elevators and Escalators (more than one may apply)															
Any Elevators	48	107	96	94	71	4,029	6,378	5,728	4,954	3,406	11.8	16.8	16.8	19.0	20.9
Number of Elevators															
One	18	32	20	19	15	1,696	2,573	1,539	1,259	1,041	10.4	12.6	13.2	14.9	14.1
Two to Five	21	44	33	46	27	1,906	2,470	2,282	2,263	1,199	11.2	17.7	14.6	20.3	22.7
Six or More	9	31	42	29	29	427	1,336	1,908	1,431	1,166	20.5	23.5	22.2	20.5	25.0
Any Escalators	Q	Q	Q	Q	Q	Q	Q	788	Q	Q	Q	Q	23.3	Q	Q
Number of Workers (main shift)															
Fewer than 5	15	37	13	26	18	2,470	4,599	1,626	3,554	1,811	6.2	7.9	8.1	7.3	10.0
5 to 9	11	19	11	18	14	1,035	1,529	1,013	1,627	944	10.2	12.7	11.2	10.8	14.6
10 to 19	15	21	13	21	19	1,374	2,155	1,359	1,599	1,317	11.1	9.8	9.5	13.0	14.3
20 to 49	27	31	30	37	27	2,014	2,709	2,132	2,472	1,635	13.6	11.6	14.1	15.1	16.7
50 to 99	19	31	21	31	16	1,673	2,166	1,316	1,812	966	11.5	14.2	16.1	17.2	16.6
100 to 249	15	32	22	45	21	996	1,561	1,434	2,109	771	14.9	20.6	15.2	21.6	26.7
250 or More	17	53	56	41	46	832	2,357	2,495	1,999	1,845	20.2	22.3	22.5	20.6	25.2
Weekly Operating Hours															
Fewer than 40	3	7	3	7	6	877	2,116	592	1,539	776	3.2	3.1	5.5	4.7	8.4
40 to 48	12	34	17	30	24	1,505	3,142	1,983	3,014	1,926	8.0	10.7	8.4	9.9	12.6
49 to 60	26	48	28	39	34	3,094	4,105	2,377	3,589	2,537	8.4	11.8	11.8	10.8	13.4
61 to 84	20	32	29	39	26	1,578	2,887	1,897	2,544	1,405	12.9	11.0	15.2	15.2	18.7
85 to 167	27	36	29	36	26	1,517	1,665	1,386	1,334	1,040	17.7	21.6	21.0	26.7	24.7
Open Continuously	32	67	60	69	44	1,822	3,162	3,140	3,151	1,605	17.4	21.3	19.2	22.0	27.6
Ownership and Occupancy															
Nongovernment Owned	93	163	129	169	120	7,846	12,091	9,079	11,859	7,136	11.8	13.5	14.2	14.3	16.8
Owner Occupied	41	82	64	78	54	3,884	6,481	4,791	5,434	2,865	10.5	12.7	13.4	14.3	18.8
Nonowner Occupied	52	80	64	91	66	3,797	4,937	4,179	6,208	4,137	13.7	16.2	15.4	14.7	15.8
Unoccupied	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Government Owned	27	61	37	50	41	2,547	4,985	2,296	3,313	2,154	10.5	12.2	16.2	15.1	19.2
Federal	2	Q	Q	Q	Q	167	Q	Q	Q	Q	12.3	17.8	28.5	Q	Q
State	9	10	10	20	Q	696	709	692	1,247	Q	12.8	14.1	14.4	16.1	Q
Local	16	30	15	28	29	1,683	3,141	1,178	1,921	1,634	9.3	9.7	12.9	14.3	17.7
Vacancy Status															
Completely Vacant	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Mostly Vacant	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	11.5
Partially Vacant	24	45	37	27	35	2,275	3,247	2,576	2,104	1,997	10.6	14.0	14.4	12.8	17.4
Not At All Vacant	94	177	128	192	126	7,621	13,116	8,575	12,806	7,144	12.4	13.5	14.9	15.0	17.6
Number of Establishments															
One	83	169	111	161	103	6,955	12,392	7,648	11,322	6,061	12.0	13.6	14.5	14.2	16.9
2 to 5	26	32	28	38	22	2,257	2,774	1,887	2,422	1,582	11.7	11.6	14.9	15.9	14.1
6 to 10	5	9	5	Q	Q	401	540	341	Q	Q	12.7	16.5	14.7	Q	Q
11 to 20	Q	Q	Q	7	Q	Q	Q	Q	387	Q	Q	Q	Q	17.3	Q
More than 20	Q	Q	15	Q	19	Q	Q	812	Q	760	Q	Q	18.2	Q	24.4
Currently Unoccupied	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q

Energy Information Administration

2003 Commercial Buildings Energy Consumption Survey: Consumption and Expenditures Tables

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	Total Electricity Consumption (billion kWh)					Total Floorspace of Buildings Using Electricity (million square feet)					Electricity Energy Intensity (kWh/square foot)				
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
All Buildings*	120	224	166	219	161	10,393	17,076	11,375	15,172	9,290	11.5	13.1	14.6	14.5	17.3
Predominant Exterior Wall Material															
Brick, Stone or Stucco	49	127	75	116	75	4,456	9,758	6,013	8,064	4,003	11.0	13.0	12.5	14.4	18.6
Concrete (Block or Poured)	27	29	33	33	33	2,001	2,589	1,831	2,402	1,914	13.7	11.4	17.9	13.7	17.0
Concrete Panels	15	23	24	23	32	895	1,252	1,219	1,357	1,660	16.8	18.5	20.1	16.9	19.0
Siding or Shingles	10	11	4	14	Q	1,221	1,266	432	841	Q	8.5	8.8	9.2	16.9	Q
Metal Panels	15	20	17	28	7	1,552	1,444	1,233	2,169	978	9.9	13.5	13.7	13.0	7.2
Window Glass	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
No One Major Type	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Predominant Roof Material															
Built-Up	42	72	55	73	64	3,271	5,072	3,848	5,178	3,412	12.9	14.1	14.3	14.0	18.7
Shingles (Not Wood)	16	31	26	35	14	1,735	3,254	1,478	2,461	943	9.5	9.5	17.4	14.1	14.3
Metal Surfacing	20	22	18	34	21	2,263	1,989	1,539	3,158	2,284	8.8	11.0	11.9	10.7	9.1
Synthetic or Rubber	34	79	56	49	42	2,528	5,225	2,838	2,556	1,564	13.5	15.2	19.9	19.0	27.1
Slate or Tile	2	4	5	13	7	145	478	447	952	416	13.8	8.5	10.3	13.1	17.3
Wooden Materials	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Concrete	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
No One Major Type	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Renovations in Buildings Constructed Before 1980 (more than one may apply)															
Any Type of Renovation															
Since 1980	42	67	54	41	25	3,792	5,370	4,011	3,157	1,308	11.1	12.5	13.4	13.0	19.0
Addition or Annex	24	27	18	14	10	1,800	1,798	1,489	930	533	13.5	14.8	11.9	14.9	18.6
Reduction In Floorspace	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Cosmetic Improvements	34	50	41	31	19	2,780	3,719	3,110	2,449	944	12.3	13.6	13.3	12.8	19.6
Wall or Roof Replacement	20	27	27	17	11	1,722	2,178	2,280	1,316	560	11.5	12.4	11.7	13.2	19.0
Interior Wall															
Re-Configuration	26	34	27	20	11	1,983	2,300	2,282	1,388	548	13.1	14.8	11.9	14.1	19.9
HVAC Equipment Upgrade	31	43	39	28	14	2,415	3,076	2,660	1,879	736	12.7	14.0	14.8	14.7	19.0
Lighting Upgrade	32	41	33	23	12	2,492	3,124	2,353	1,707	598	13.0	13.0	13.8	13.3	19.7
Window Replacement	15	26	20	8	Q	1,384	2,067	1,938	650	Q	10.8	12.4	10.5	12.2	Q
Plumbing System Upgrade	20	27	21	16	Q	1,616	1,939	1,948	1,204	Q	12.7	13.7	10.9	13.0	Q
Insulation Upgrade	10	14	14	8	Q	907	1,181	1,079	583	Q	10.9	12.1	13.0	13.8	Q
Other Renovation	Q	Q	Q	Q	N	Q	Q	Q	Q	N	Q	Q	Q	Q	N
No Renovations Since 1980	30	54	38	41	28	3,163	5,796	3,242	4,010	1,925	9.4	9.3	11.6	10.2	14.3
Building Newer than 1980	48	103	75	137	109	3,438	5,910	4,122	8,005	6,057	13.9	17.4	18.2	17.2	17.9
Energy Sources (more than one may apply)															
Electricity	120	224	166	219	161	10,393	17,076	11,375	15,172	9,290	11.5	13.1	14.6	14.5	17.3
Natural Gas	94	175	118	155	91	7,644	12,850	8,113	10,509	4,345	12.3	13.6	14.6	14.7	20.9
Fuel Oil	30	65	70	45	40	2,499	4,037	4,628	2,337	1,642	12.1	16.0	15.2	19.3	24.2
District Heat	11	32	23	23	Q	825	1,784	1,349	1,025	Q	13.3	17.7	17.0	22.0	Q
District Chilled Water	6	14	9	13	Q	350	698	514	659	633	17.3	20.2	17.8	19.2	22.7
Propane	18	28	13	26	14	1,598	2,036	1,102	1,403	928	11.2	13.8	11.8	18.5	15.4
Other	7	Q	Q	Q	Q	483	363	Q	Q	Q	13.6	12.5	Q	Q	23.3

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	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
All Buildings*	120	224	166	219	161	10,393	17,076	11,375	15,172	9,290	11.5	13.1	14.6	14.5	17.3
Space-Heating Energy Sources															
Electricity	52	97	92	106	109	3,945	6,180	5,080	7,343	6,052	13.1	15.7	18.0	14.5	18.0
Electricity Main	23	47	40	66	91	1,375	2,603	2,210	4,580	5,228	16.4	18.0	17.9	14.3	17.5
Electricity Secondary	29	50	52	41	18	2,570	3,577	2,870	2,763	824	11.3	14.1	18.1	14.7	21.7
Other Excluding Electricity	67	124	74	104	38	6,153	10,525	6,154	6,622	1,938	10.9	11.8	12.0	15.7	19.5
Buildings without Heating	Q	Q	Q	9	14	Q	372	Q	1,207	1,300	Q	6.6	Q	7.5	10.9
Primary Space-Heating Energy Source															
Electricity	23	47	40	66	91	1,375	2,603	2,210	4,580	5,228	16.4	18.0	17.9	14.3	17.5
Natural Gas	76	132	90	116	45	6,513	10,640	5,617	7,965	2,228	11.6	12.4	16.0	14.6	20.3
Fuel Oil	6	7	8	Q	Q	962	1,211	Q	Q	Q	6.0	5.9	Q	Q	11.8
District Heat	10	31	21	20	Q	752	1,638	1,231	883	Q	13.0	18.7	17.3	22.9	Q
Propane	3	4	Q	Q	Q	Q	492	Q	423	Q	8.6	8.4	10.1	Q	Q
Other	Q	Q	Q	Q	N	Q	Q	Q	Q	N	Q	Q	Q	Q	N
Cooling Energy Sources															
Electricity	107	197	154	206	150	8,205	13,843	10,319	13,508	8,446	13.0	14.2	14.9	15.2	17.8
Other Excluding Electricity	Q	11	11	8	Q	Q	667	626	468	Q	Q	15.9	17.7	18.0	Q
Buildings without Cooling	7	Q	1	5	Q	1,843	2,567	430	1,195	Q	4.0	6.3	3.0	4.1	Q
Water-Heating Energy Sources															
Electricity	43	88	77	104	91	3,941	6,525	5,147	6,685	5,192	10.8	13.5	15.0	15.6	17.5
Other Excluding Electricity	74	118	87	104	61	5,533	8,621	5,637	6,507	2,675	13.4	13.7	15.5	16.0	22.8
Bldgs without Water Heating	3	Q	2	11	9	919	1,931	591	1,980	1,423	3.2	9.1	3.1	5.4	6.5
Cooking Energy Sources															
Electricity	32	70	45	52	50	2,123	4,210	2,235	2,472	2,120	14.9	16.7	19.9	21.0	23.8
Other Excluding Electricity	17	32	39	40	27	1,179	2,160	2,501	2,149	1,088	14.7	14.9	Q	18.4	24.4
Buildings without Cooking	71	121	82	128	84	7,091	10,707	6,639	10,550	6,082	10.0	11.3	12.4	12.1	13.8
Energy End Uses (more than one may apply)															
Buildings with Space Heating	119	221	165	210	147	10,098	16,705	11,234	13,965	7,990	11.8	13.2	14.7	15.1	18.4
Buildings with Cooling	112	208	165	214	160	8,550	14,509	10,946	13,977	8,943	13.1	14.3	15.1	15.3	17.9
Buildings with Water Heating	117	206	164	209	152	9,474	15,145	10,785	13,192	7,867	12.3	13.6	15.3	15.8	19.3
Buildings with Cooking	49	102	84	91	77	3,302	6,369	4,736	4,621	3,208	14.9	16.1	17.7	19.8	24.0
Buildings with Manufacturing	9	12	11	8	Q	855	729	772	608	Q	10.2	17.0	14.1	13.3	Q
Buildings with Electricity Generation	29	78	62	52	40	1,764	3,862	2,973	2,583	1,639	16.4	20.2	20.9	20.0	24.6
Percent of Floorspace Heated															
Not Heated	Q	Q	Q	9	14	Q	372	Q	1,207	1,300	Q	6.6	Q	7.5	10.9
1 to 50	5	10	12	18	10	1,111	1,094	1,325	1,845	1,455	4.4	8.9	9.4	9.6	6.9
51 to 99	17	21	24	33	22	1,377	1,735	1,713	2,349	932	12.1	12.0	13.8	14.1	23.1
100	97	191	129	159	115	7,609	13,876	8,196	9,772	5,602	12.8	13.7	15.8	16.3	20.6
Percent of Floorspace Cooled															
Not Cooled	7	Q	1	5	Q	1,843	2,567	430	1,195	Q	4.0	6.3	3.0	4.1	Q
1 to 50	29	35	24	32	11	3,133	4,642	3,422	3,480	1,906	9.2	7.5	7.0	9.2	5.7
51 to 99	33	58	55	42	29	2,327	3,568	3,297	2,803	1,215	14.1	16.4	16.8	15.2	24.2
100	51	114	86	140	120	3,089	6,300	4,227	7,693	5,822	16.4	18.2	20.3	18.2	20.6

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Table C20. Electricity Consumption and Conditional Energy Intensity by Climate Zone^a for Non-Mall Buildings, 2003

	Total Electricity Consumption (billion kWh)					Total Floorspace of Buildings Using Electricity (million square feet)					Electricity Energy Intensity (kWh/square foot)				
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
All Buildings*	120	224	166	219	161	10,393	17,076	11,375	15,172	9,290	11.5	13.1	14.6	14.5	17.3
Percent Lit When Open															
Zero	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
1 to 50	12	14	13	13	13	1,956	2,667	2,132	2,066	1,382	5.9	5.4	6.3	6.4	9.6
51 to 99	40	62	54	54	52	3,666	4,929	3,133	3,804	2,756	10.8	12.7	17.2	14.1	19.0
100	68	145	98	151	95	4,362	8,654	5,924	8,979	4,870	15.5	16.8	16.6	16.9	19.4
Building Never Open/ Electricity Not Used	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Percent Lit When Closed															
Zero	25	45	22	38	29	3,536	4,589	2,252	4,370	2,637	7.2	9.8	9.7	8.6	11.2
1 to 50	56	103	74	105	75	4,772	8,916	5,541	7,172	4,546	11.8	11.5	13.4	14.6	16.4
51 to 100	Q	Q	Q	7	13	Q	Q	Q	478	501	Q	Q	Q	15.5	25.4
Building Never Closed/ Electricity Not Used	32	67	60	69	44	1,822	3,162	3,140	3,151	1,605	17.4	21.3	19.2	22.0	27.6
Heating Equipment (more than one may apply)															
Heat Pumps	10	29	40	46	29	727	1,471	1,971	3,283	1,361	14.2	19.6	20.1	14.0	21.0
Packaged Heat Pumps	7	20	30	26	23	433	995	1,267	1,749	997	15.0	19.8	24.0	14.7	23.0
Split-System Heat Pumps	Q	Q	Q	14	6	Q	Q	686	1,140	419	Q	Q	20.6	12.3	15.5
Individual Room Heat Pumps	Q	10	10	14	Q	Q	497	537	1,021	Q	Q	20.0	18.1	13.3	Q
Furnaces	50	70	32	48	25	4,576	6,411	2,648	4,313	1,658	10.8	10.9	11.9	11.1	14.9
Individual Space Heaters	31	48	45	30	12	3,014	3,582	2,524	2,569	851	10.2	13.3	17.8	11.5	14.3
District Heat	10	31	21	20	Q	801	1,749	1,266	918	Q	12.9	17.9	16.9	22.3	Q
Boilers	47	86	69	63	31	4,060	6,835	4,693	3,334	1,500	11.6	12.5	14.8	18.7	20.6
Packaged Heating Units	32	68	57	86	67	2,126	3,708	3,204	5,619	3,365	15.3	18.2	17.7	15.3	20.0
Other	13	11	Q	5	13	816	659	Q	525	750	15.6	16.1	Q	10.5	17.3
Cooling Equipment (more than one may apply)															
Residential-Type Central															
Air Conditioners	22	37	27	28	19	1,971	3,078	2,207	2,056	1,723	11.2	12.2	12.2	13.7	10.8
Heat Pumps	10	29	42	49	30	739	1,542	1,998	3,398	1,365	14.0	18.7	20.9	14.5	22.2
Packaged Heat Pumps	7	19	33	24	22	453	1,033	1,337	1,679	924	14.6	18.9	24.6	14.6	23.8
Split-System Heat Pumps	Q	Q	Q	15	7	Q	Q	703	1,127	458	Q	Q	20.6	13.0	15.5
Individual Room Heat Pumps	Q	10	10	17	Q	Q	510	523	1,190	Q	Q	19.7	19.0	14.5	Q
Individual Air Conditioners	24	36	26	35	20	2,321	3,633	2,786	2,565	1,253	10.2	10.0	9.2	13.8	15.6
District Chilled Water	6	14	9	13	Q	350	698	514	659	633	17.3	20.2	17.8	19.2	22.7
Central Chillers	24	57	55	58	51	1,604	2,658	2,473	2,695	2,205	15.1	21.3	22.2	21.6	23.1
Packaged Air Conditioning															
Units	69	122	87	111	72	4,565	7,740	6,076	7,703	3,884	15.1	15.8	14.4	14.5	18.6
Swamp Coolers	7	5	Q	6	Q	515	468	Q	346	Q	14.2	11.1	Q	16.8	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Main Equipment Replaced Since 1990 (more than one may apply)															
Heating	34	67	43	39	28	3,262	4,981	3,202	3,195	1,754	10.3	13.4	13.3	12.3	15.7
Cooling	41	85	69	49	43	3,555	5,895	4,827	4,112	2,606	11.5	14.4	14.3	11.8	16.4
Water Heating Equipment															
Centralized System	79	124	100	124	90	6,315	9,538	6,774	7,444	4,585	12.5	12.9	14.7	16.6	19.6
Distributed System	14	33	26	35	34	1,468	2,954	2,015	3,009	2,094	9.8	11.0	12.8	11.6	16.1
Combination of Centralized and Distributed System	23	50	39	50	28	1,691	2,654	1,996	2,739	1,187	13.8	18.9	19.5	18.3	23.8

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Table C20. Electricity Consumption and Conditional Energy Intensity by Climate Zone^a for Non-Mall Buildings, 2003

	Total Electricity Consumption (billion kWh)					Total Floorspace of Buildings Using Electricity (million square feet)					Electricity Energy Intensity (kWh/square foot)				
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
All Buildings*	120	224	166	219	161	10,393	17,076	11,375	15,172	9,290	11.5	13.1	14.6	14.5	17.3
Lighting Equipment Types (more than one may apply)															
Incandescent	80	150	123	135	101	7,016	10,308	8,192	7,939	5,073	11.4	14.5	15.0	17.0	19.9
Standard Fluorescent	117	218	163	212	155	9,783	16,090	10,871	14,316	8,627	11.9	13.5	15.0	14.8	18.0
Compact Fluorescent	66	114	109	122	77	4,667	6,835	6,292	6,439	3,339	14.2	16.7	17.3	19.0	23.1
High Intensity Discharge	45	95	75	66	49	3,955	6,149	4,385	3,863	2,292	11.5	15.4	17.0	17.1	21.4
Halogen	44	74	68	77	50	2,762	4,485	3,903	4,117	2,435	15.9	16.5	17.4	18.7	20.5
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	22.4	25.6	Q
Refrigeration Equipment (more than one may apply)^b															
Any Refrigeration.....	109	202	156	198	148	8,673	14,438	9,893	12,329	7,640	12.6	14.0	15.7	16.1	19.3
Commercial Refrigeration	65	131	104	128	96	4,106	7,355	5,702	5,784	3,821	15.9	17.8	18.3	22.1	25.0
Walk-In Units	54	106	86	112	79	3,188	5,353	4,341	4,490	2,882	16.8	19.8	19.7	25.0	27.5
Cases or Cabinets	51	105	86	100	81	2,950	5,523	4,191	4,586	3,174	17.3	19.0	20.4	21.7	25.5
Residential-Type Units	75	135	99	115	94	6,713	10,957	7,367	8,479	5,369	11.1	12.3	13.5	13.6	17.6
Vending Machines	76	146	113	140	107	5,824	9,186	6,729	8,220	5,375	13.1	15.9	16.8	17.0	19.9
No Refrigeration	10	22	11	21	13	1,720	2,638	1,482	2,843	1,649	6.1	8.4	7.2	7.4	8.2
Office Equipment (more than one may apply)															
Computers	111	208	160	202	152	8,976	14,756	10,556	13,086	8,253	12.4	14.1	15.2	15.4	18.4
With Flat Screen Monitors	52	112	109	107	85	3,629	6,548	6,204	6,118	3,919	14.4	17.1	17.6	17.4	21.7
Dedicated Servers	76	148	129	143	100	5,673	9,426	7,813	8,157	5,269	13.4	15.7	16.5	17.5	19.1
Laser Printers	67	113	84	109	82	5,811	8,950	5,910	7,675	4,666	11.6	12.6	14.2	14.2	17.5
Inkjet Printers	74	120	108	131	99	5,523	7,781	6,220	7,556	5,130	13.5	15.5	17.4	17.4	19.4
FAX Machines	105	191	156	195	145	8,446	13,443	10,336	12,438	7,710	12.4	14.2	15.1	15.7	18.8
Photocopiers	91	169	136	170	125	7,181	12,244	9,222	10,780	6,828	12.7	13.8	14.8	15.7	18.3
Number of Computers															
None	9	16	6	18	9	1,417	2,320	819	2,086	1,037	6.1	7.0	7.8	8.5	9.0
1 to 4	24	41	20	38	31	2,242	3,537	1,801	3,206	1,608	10.6	11.5	10.9	12.0	19.0
5 to 9	14	21	12	16	17	1,392	1,946	1,206	1,572	1,063	9.9	10.8	10.3	10.0	16.3
10 to 19	12	21	14	21	15	1,057	1,724	1,032	1,568	1,228	11.7	12.1	14.0	13.3	12.1
20 to 49	18	25	24	36	17	1,239	2,045	1,441	1,729	960	14.2	12.1	16.8	20.7	18.0
50 to 99	9	15	12	24	15	740	1,124	1,078	1,547	887	12.4	13.7	Q	15.6	17.1
100 to 249	17	24	21	28	18	1,266	1,554	1,389	1,626	855	13.3	15.7	14.8	17.4	20.8
250 or More	17	60	57	38	39	1,040	2,825	2,610	1,837	1,652	16.7	21.3	21.7	20.9	23.5
Number of Dedicated Servers															
None	43	75	38	77	61	4,720	7,651	3,563	7,015	4,021	9.2	9.8	10.6	10.9	15.1
1 to 4	55	82	62	88	55	4,305	6,249	4,591	5,624	3,346	12.9	13.1	13.4	15.7	16.4
5 to 9	5	17	Q	19	Q	516	980	1,078	884	Q	9.0	16.9	21.7	21.5	Q
10 to 19	7	18	9	17	Q	412	965	455	724	472	17.3	18.5	19.0	23.2	27.5
20 to 49	Q	Q	11	11	Q	Q	Q	586	604	Q	Q	Q	18.4	18.9	Q
50 or More	Q	21	24	Q	Q	Q	804	1,102	Q	Q	Q	26.6	22.0	Q	Q
Number of Photocopiers															
None	28	54	30	50	36	3,212	4,832	2,153	4,392	2,462	8.8	11.3	13.9	11.3	14.6
One	30	44	24	46	29	2,653	4,546	2,337	3,806	2,133	11.4	9.6	10.3	12.2	13.8
2 to 4	30	48	35	54	40	2,655	3,694	2,833	3,554	2,345	11.3	13.1	12.4	15.1	17.0
5 to 9	11	23	17	27	17	863	1,386	1,219	1,326	721	13.0	16.7	Q	20.1	23.4
10 or More	20	54	60	43	39	1,010	2,619	2,833	2,093	1,629	19.5	20.6	21.3	20.7	24.0

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Table C20. Electricity Consumption and Conditional Energy Intensity by Climate Zone^a for Non-Mall Buildings, 2003

	Total Electricity Consumption (billion kWh)					Total Floorspace of Buildings Using Electricity (million square feet)					Electricity Energy Intensity (kWh/square foot)				
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
All Buildings*	120	224	166	219	161	10,393	17,076	11,375	15,172	9,290	11.5	13.1	14.6	14.5	17.3
Energy-Related Space Functions (more than one may apply)															
Commercial Food Preparation	49	102	84	91	77	3,302	6,358	4,736	4,620	3,208	14.9	16.1	17.7	19.8	24.0
Activities with Large Amounts of Hot Water	48	88	68	90	48	3,451	5,260	4,091	4,479	2,200	13.9	16.7	16.7	20.0	21.9
Separate Computer Area	56	113	102	110	74	3,713	7,143	5,988	6,266	3,763	15.1	15.8	17.0	17.6	19.6
HVAC Conservation Features (more than one may apply)															
Variable Air-Volume System	44	91	81	84	71	2,985	4,852	4,086	4,201	3,473	14.9	18.7	19.8	20.0	20.5
Economizer Cycle	59	112	96	89	57	3,804	5,533	4,736	4,630	2,406	15.5	20.2	20.3	19.2	23.5
HVAC Maintenance	101	204	149	190	148	8,035	14,309	9,595	11,542	7,670	12.6	14.2	15.6	16.5	19.3
Energy Management and Control System (EMCS)	34	64	67	59	55	2,438	3,834	3,284	3,546	2,528	14.0	16.7	20.4	16.8	21.8
Window and Interior Lighting Features (more than one may apply)															
Multipaned Windows	100	173	115	128	77	8,065	11,659	7,843	7,244	3,916	12.4	14.8	14.7	17.7	19.6
Tinted Window Glass	52	124	98	121	99	3,628	7,501	5,333	7,836	5,328	14.2	16.5	18.3	15.4	18.6
Reflective Window Glass	17	38	36	32	30	1,259	2,139	1,733	2,051	1,347	13.7	17.5	20.5	15.8	22.6
External Overhangs or Awnings	37	73	47	73	52	2,639	4,497	2,985	4,416	2,637	13.9	16.2	15.8	16.5	19.8
Skylights or Atriums	29	52	36	41	30	2,163	3,557	2,573	2,575	1,640	13.6	14.7	14.2	15.9	18.3
Daylighting Sensors	9	18	10	13	11	574	837	413	618	426	15.5	21.8	24.2	20.6	24.9
Specular Reflectors	57	125	88	101	65	4,446	7,579	5,238	5,892	2,961	12.8	16.4	16.9	17.1	22.1
Electronic Ballasts	104	177	143	176	133	8,390	11,771	8,922	10,876	6,923	12.3	15.0	16.0	16.2	19.3
Energy Management and Control System (EMCS) For Lighting	12	22	21	15	21	756	1,249	881	899	997	16.0	17.4	23.5	17.0	21.5
Equipment Usage Reduced When Building Not In Full Use (more than one may apply)^b															
Heating	75	137	124	137	93	6,995	11,636	8,469	10,227	5,380	10.7	11.7	14.6	13.4	17.4
Cooling	74	136	125	145	116	6,309	10,730	8,843	10,627	6,681	11.8	12.7	14.1	13.6	17.3
Lighting	83	153	99	143	110	7,959	12,889	7,802	11,312	7,025	10.4	11.9	12.7	12.7	15.6
Office Equipment	32	56	33	46	43	3,401	5,473	3,238	4,319	2,966	9.5	10.3	10.3	10.8	14.4
Annual Consumption (kilowatthours)															
10,000 or Less	1	1	1	1	Q	636	1,052	306	622	Q	1.3	1.1	1.7	1.7	Q
10,001 to 50,000	7	12	7	12	7	1,589	2,594	1,270	2,624	1,150	4.6	4.5	5.6	4.6	5.8
50,001 to 100,000	10	11	7	16	8	1,081	1,506	1,340	1,672	862	9.1	7.3	5.6	9.4	8.8
100,001 to 500,000	38	54	26	52	39	3,073	4,313	2,698	3,648	2,380	12.5	12.5	9.7	14.3	16.3
500,001 to 1,000,000	10	21	20	23	23	1,022	1,715	1,261	1,456	1,282	10.2	12.0	15.8	15.9	17.8
1,000,001 to 5,000,000	36	69	50	67	46	2,225	3,545	2,269	3,319	1,851	16.3	19.5	22.2	20.3	24.7
Over 5,000,000	17	56	55	48	39	768	2,351	2,231	1,831	1,518	21.7	23.9	24.5	26.1	25.8

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Table C20. Electricity Consumption and Conditional Energy Intensity by Climate Zone^a for Non-Mall Buildings, 2003

	Total Electricity Consumption (billion kWh)					Total Floorspace of Buildings Using Electricity (million square feet)					Electricity Energy Intensity (kWh/square foot)				
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
All Buildings*	120	224	166	219	161	10,393	17,076	11,375	15,172	9,290	11.5	13.1	14.6	14.5	17.3
Provider of Purchased Electricity (more than one may apply)															
Local Utility	109	198	140	210	134	9,635	15,515	10,370	14,626	7,707	11.3	12.8	13.5	14.4	17.4
Some Other Provider	Q	25	27	Q	23	784	1,500	987	Q	1,341	14.2	16.5	26.9	Q	17.1

See "Guide to the Tables" or "Glossary" for further explanations of the terms used in this table. Both can be accessed from the CBECS web site - <http://www.eia.doe.gov/emeu/cbecs>.

* Figures in this table do not include enclosed malls and strip malls. Mall buildings add an estimated 213 thousand buildings comprising 6.9 billion square feet. In the 1999 CBECS, malls represented 9.7 percent of total electricity consumption.

^a Climate zone (30-year average) definitions: Zone 1 = Under 2,000 CDD and more than 7,000 HDD; Zone 2 = Under 2,000 CDD and 5,500-7,000 HDD; Zone 3 = Under 2,000 CDD and 4,000-5,499 HDD; Zone 4 = Under 2,000 CDD and fewer than 4,000 HDD; Zone 5 = 2,000 CDD or more and fewer than 4,000 HDD. (See "Glossary" for definitions of CDD and HDD.)

^b The definition for one or more of these row items has changed and may not be directly comparable with past CBECS estimates. See "Guide to the Tables" for discussion of the differences.

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 that use electricity.

Notes: ● Statistics for the "Energy End Uses" category represent total consumption in buildings that have the end use, not consumption specifically for that 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, Forms EIA-871A, C, and E of the 2003 Commercial Buildings Energy Consumption Survey.