

**Table C13. Total electricity consumption and expenditures, 2012**

	All buildings using electricity			Electricity consumption		Electricity expenditures	
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Primary	Site	Total (billion kWh)	Total (million dollars)
				Total (trillion Btu)	Total (trillion Btu)		
<b>All buildings</b>	5,234	84,869	16.2	12,934	4,241	1,243	121,875
<b>Building floorspace (square feet)</b>							
1,001 to 5,000	2,556	7,492	2.9	1,357	445	130	13,633
5,001 to 10,000	1,171	8,489	7.3	1,179	386	113	11,977
10,001 to 25,000	852	13,565	15.9	1,655	543	159	16,682
25,001 to 50,000	326	11,672	35.8	1,549	508	149	14,549
50,001 to 100,000	195	13,604	69.9	1,996	654	192	18,473
100,001 to 200,000	90	12,362	137.8	1,974	647	190	17,507
200,001 to 500,000	37	10,652	284.1	1,876	615	180	16,706
Over 500,000	8	7,033	887.8	1,349	442	130	12,347
<b>Principal building activity</b>							
Education	389	12,239	31.5	1,396	458	134	12,893
Food sales	177	1,252	7.1	634	208	61	5,719
Food service	380	1,819	4.8	850	279	82	8,070
Health care	157	4,155	26.5	1,114	365	107	9,585
Inpatient	10	2,374	247.8	766	251	74	6,435
Outpatient	147	1,781	12.1	348	114	33	3,150
Lodging	158	5,826	36.9	928	304	89	8,498
Mercantile	599	11,320	18.9	2,151	705	207	20,016
Retail (other than mall)	435	5,430	12.5	857	281	82	8,144
Enclosed and strip malls	164	5,890	35.9	1,293	424	124	11,872
Office	1,012	15,952	15.8	2,637	865	253	26,240
Public assembly	352	5,559	15.8	837	275	80	7,889
Public order and safety	84	1,440	17.2	223	73	21	2,038
Religious worship	412	4,557	11.1	247	81	24	2,513
Service	602	4,512	7.5	389	127	37	4,121
Warehouse and storage	675	12,568	18.6	866	284	83	8,442
Other	123	1,972	16.1	581	191	56	5,041
Vacant	116	1,699	14.6	80	26	8	809
<b>Year constructed</b>							
Before 1920	337	3,800	11.3	332	109	32	3,515
1920 to 1945	458	5,866	12.8	668	219	64	7,279
1946 to 1959	554	7,208	13.0	884	290	85	8,455
1960 to 1969	609	10,198	16.7	1,531	502	147	14,326
1970 to 1979	651	10,556	16.2	1,776	582	171	16,021
1980 to 1989	856	14,791	17.3	2,431	797	234	22,843
1990 to 1999	762	13,118	17.2	2,217	727	213	20,479
2000 to 2003	370	7,193	19.4	1,159	380	111	10,673
2004 to 2007	341	6,485	19.0	1,008	330	97	9,561
2008 to 2012	296	5,653	19.1	926	304	89	8,723

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<b>All buildings</b>	5,234	84,869	16.2	12,934	4,241	1,243	121,875
<b>Census region and division</b>							
Northeast	770	15,291	19.9	2,293	752	220	25,123
New England	285	4,192	14.7	526	172	51	6,501
Middle Atlantic	485	11,099	22.9	1,767	579	170	18,622
Midwest	1,171	18,560	15.8	2,595	851	249	21,717
East North Central	706	12,544	17.8	1,815	595	174	15,676
West North Central	466	6,016	12.9	780	256	75	6,040
South	2,086	33,026	15.8	5,518	1,809	530	47,473
South Atlantic	1,020	17,608	17.3	2,983	978	287	27,244
East South Central	354	4,824	13.6	735	241	71	6,225
West South Central	712	10,594	14.9	1,800	590	173	14,004
West	1,207	17,992	14.9	2,528	829	243	27,563
Mountain	316	4,812	15.2	698	229	67	6,224
Pacific	891	13,180	14.8	1,831	600	176	21,339
<b>Climate region<sup>1</sup></b>							
Very cold/Cold	1,929	31,286	16.2	4,363	1,430	419	40,072
Mixed-humid	1,637	27,422	16.8	4,324	1,418	415	39,376
Mixed-dry/Hot-dry	791	11,743	14.9	1,586	520	152	18,349
Hot-humid	740	12,002	16.2	2,294	752	220	20,169
Marine	138	2,416	17.5	367	120	35	3,910
<b>Number of floors</b>							
One	3,555	38,053	10.7	5,676	1,861	545	53,981
Two	1,128	19,928	17.7	2,696	884	259	25,383
Three	365	8,102	22.2	1,139	373	109	11,014
Four to nine	175	13,417	76.8	2,402	788	231	21,425
Ten or more	12	5,368	429.7	1,021	335	98	10,072
<b>Elevators and escalators (more than one may apply)</b>							
Any elevators	401	31,942	79.6	5,612	1,840	539	51,427
Number of elevators							
One	269	11,120	41.4	1,528	501	147	13,724
Two to five	117	12,712	108.9	2,315	759	222	21,044
Six or more	16	8,109	507.6	1,769	580	170	16,659
Any escalators	10	3,641	377.0	689	226	66	6,294
<b>Number of workers (main shift)</b>							
Fewer than 5	2,570	15,530	6.0	1,390	456	134	13,812
5 to 9	1,084	8,970	8.3	1,163	381	112	11,619
10 to 19	731	9,623	13.2	1,375	451	132	13,555
20 to 49	513	14,514	28.3	2,287	750	220	21,239
50 to 99	206	13,476	65.6	2,228	730	214	20,070
100 to 249	93	10,941	117.1	1,928	632	185	17,630
250 or more	37	11,815	318.3	2,562	840	246	23,951

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				Total (trillion Btu)	Total (trillion Btu)		
<b>All buildings</b>	5,234	84,869	16.2	12,934	4,241	1,243	121,875
<b>Weekly operating hours</b>							
Fewer than 40	941	6,548	7.0	364	119	35	3,740
40 to 48	1,325	15,737	11.9	1,609	527	155	16,051
49 to 60	1,229	20,425	16.6	2,482	814	238	24,484
61 to 84	744	15,800	21.2	2,591	850	249	25,240
85 to 167	466	9,364	20.1	2,081	682	200	18,906
Open continuously	529	16,994	32.1	3,806	1,248	366	33,454
<b>Ownership and occupancy</b>							
Nongovernment owned	4,480	65,620	14.6	10,278	3,370	988	97,696
Owner occupied	2,395	30,321	12.7	4,739	1,554	455	43,284
Leased to tenant(s)	1,675	25,809	15.4	4,143	1,358	398	41,062
Owner occupied and leased	344	8,820	25.7	1,379	452	132	13,162
Unoccupied	66	670	10.2	18	6	2	189
Government owned	755	19,248	25.5	2,656	871	255	24,179
Federal	33	1,573	47.7	236	77	23	2,246
State	183	5,522	30.2	839	275	81	7,242
Local	538	12,153	22.6	1,580	518	152	14,691
<b>Party responsible for operation and maintenance of energy systems</b>							
Building owner	4,414	71,663	16.2	10,710	3,512	1,029	99,912
Business owner or tenant	705	11,134	15.8	1,892	620	182	18,634
Property management	53	1,245	23.7	192	63	18	1,892
Other	63	827	13.1	139	46	13	1,437
<b>Provider of direct input on energy-related equipment purchases</b>							
Building owner	4,566	74,147	16.2	11,045	3,621	1,061	103,452
Business owner or tenant	529	8,161	15.4	1,479	485	142	14,356
Property management	35	880	25.5	123	40	12	1,306
Other	105	1,681	16.0	287	94	28	2,762
<b>Number of establishments</b>							
One	4,079	54,485	13.4	8,087	2,651	777	75,573
2 to 5	862	17,756	20.6	2,588	849	249	24,651
6 to 10	136	4,313	31.8	733	240	70	6,963
11 to 20	66	3,675	55.4	713	234	69	6,982
More than 20	19	3,795	203.0	794	260	76	7,499
Currently unoccupied	72	845	11.8	19	6	2	208

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				Total (trillion Btu)	Total (trillion Btu)		
<b>All buildings</b>	5,234	84,869	16.2	12,934	4,241	1,243	121,875
<b>Predominant exterior wall material</b>							
Brick, stone, or stucco	2,215	39,609	17.9	6,206	2,035	596	58,369
Concrete (block or poured)	1,076	20,404	19.0	3,357	1,101	323	31,422
Concrete panels	200	8,447	42.2	1,254	411	121	11,673
Siding or shingles	845	5,565	6.6	743	244	71	7,747
Metal panels	823	8,055	9.8	823	270	79	7,509
Window glass	17	1,340	78.6	326	107	31	2,997
Other	37	856	23.0	143	47	14	1,384
No one major type	21	592	27.6	81	26	8	774
<b>Predominant roof material</b>							
Metal surfacing	1,511	15,024	9.9	1,758	576	169	16,412
Synthetic or rubber	891	25,614	28.8	4,391	1,440	422	40,442
Built-up	790	21,306	27.0	3,508	1,150	337	32,582
Slate or tile shingles	382	4,222	11.1	610	200	59	6,335
Wooden materials (including shingles)	147	1,105	7.5	144	47	14	1,508
Asphalt, fiberglass, or other shingles	1,422	14,679	10.3	2,045	670	196	20,026
Concrete	50	1,584	31.5	311	102	30	2,971
Other	24	678	28.6	111	36	11	1,042
No one major type	18	657	36.4	55	18	5	557
<b>Roof characteristics</b>							
Roof tilt							
Flat	1,872	48,745	26.0	8,320	2,728	799	77,289
Shallow pitch	1,993	23,019	11.5	3,103	1,017	298	29,573
Steeper pitch	1,369	13,104	9.6	1,511	495	145	15,013
Cool roof	718	19,379	27.0	3,381	1,108	325	31,151

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<b>All buildings</b>	5,234	84,869	16.2	12,934	4,241	1,243	121,875
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>							
Any type of renovation	2,045	41,912	20.5	6,747	2,212	648	62,883
Addition or annex	439	12,969	29.5	2,129	698	205	18,928
Reduction in floorspace	66	1,733	26.4	370	121	36	3,164
Roof replacement	956	20,766	21.7	3,429	1,124	329	31,469
Exterior wall replacement	188	4,221	22.5	731	240	70	6,509
Interior wall reconfiguration	877	21,250	24.2	3,709	1,216	356	34,504
Window replacement	557	12,251	22.0	1,832	601	176	17,416
HVAC equipment upgrade	1,085	26,648	24.6	4,504	1,477	433	41,872
Lighting upgrade	969	25,414	26.2	4,264	1,398	410	39,493
Electrical upgrade	737	16,087	21.8	2,753	903	265	25,680
Plumbing system upgrade	634	13,807	21.8	2,311	758	222	22,025
Insulation upgrade	378	7,553	20.0	1,309	429	126	11,754
Fire, safety, or security upgrade	610	17,163	28.1	2,936	963	282	27,572
Structural upgrade	150	3,911	26.0	716	235	69	6,435
Other	39	848	21.7	135	44	13	1,332
No renovations	2,894	37,304	12.9	5,261	1,725	506	50,269
Buildings constructed 2008 or later	296	5,653	19.1	926	304	89	8,723
<b>Energy sources (more than one may apply)</b>							
Electricity	5,234	84,869	16.2	12,934	4,241	1,243	121,875
Natural gas	2,933	58,725	20.0	9,400	3,082	903	87,843
Fuel oil	467	20,200	43.3	3,973	1,303	382	36,349
District heat	48	5,964	124.9	1,076	353	103	9,745
District chilled water	54	4,608	85.4	890	292	86	7,279
Propane	507	7,686	15.2	1,148	376	110	10,822
Other	167	3,801	22.7	518	170	50	5,171
<b>Space-heating energy sources</b>							
Electricity	2,858	49,030	17.2	8,057	2,642	774	74,674
Electricity main	1,819	26,205	14.4	4,573	1,499	439	42,062
Electricity secondary	1,039	22,826	22.0	3,484	1,142	335	32,612
Other excluding electricity	1,859	31,022	16.7	4,407	1,445	423	42,010
Buildings without heating	517	4,816	9.3	470	154	45	5,191
<b>Primary space-heating energy source</b>							
Electricity	1,819	26,205	14.4	4,573	1,499	439	42,062
Natural gas	2,322	42,988	18.5	6,359	2,085	611	60,323
Fuel oil	205	2,542	12.4	247	81	24	2,588
District heat	47	5,797	122.9	1,053	345	101	9,569
Propane	261	1,948	7.5	186	61	18	1,629
Other	62	573	9.2	48	16	5	515

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				Total (trillion Btu)	Total (trillion Btu)		
<b>All buildings</b>	5,234	84,869	16.2	12,934	4,241	1,243	121,875
<b>Cooling energy sources</b>							
Electricity	4,413	76,034	17.2	12,061	3,954	1,159	114,058
Other excluding electricity	48	3,260	67.6	587	193	56	4,721
Buildings without cooling	773	5,575	7.2	285	94	27	3,097
<b>Water-heating energy sources</b>							
Electricity	2,658	42,755	16.1	6,755	2,215	649	63,203
Other excluding electricity	1,765	36,261	20.5	5,832	1,912	560	54,880
Buildings without water heating	811	5,853	7.2	347	114	33	3,793
<b>Cooking energy sources</b>							
Electricity	1,010	25,151	24.9	4,720	1,547	454	43,196
Other excluding electricity	579	13,395	23.2	2,569	842	247	24,055
Buildings without cooking	3,645	46,322	12.7	5,645	1,851	542	54,624
<b>Energy end uses (more than one may apply)</b>							
Buildings with space heating	4,717	80,053	17.0	12,464	4,086	1,198	116,684
Buildings with cooling	4,461	79,294	17.8	12,648	4,147	1,215	118,778
Buildings with water heating	4,423	79,015	17.9	12,587	4,127	1,209	118,083
Buildings with cooking	1,589	38,546	24.3	7,289	2,390	700	67,252
Buildings with manufacturing	259	5,078	19.6	695	228	67	6,660
Buildings with electricity generation	410	25,642	62.5	5,102	1,673	490	46,125
<b>Percent of floorspace heated</b>							
Not heated	517	4,816	9.3	470	154	45	5,191
1 to 50	696	10,114	14.5	1,019	334	98	10,362
51 to 99	725	14,645	20.2	2,433	798	234	23,586
100	3,297	55,293	16.8	9,011	2,955	866	82,737
<b>Percent of floorspace cooled</b>							
Not cooled	773	5,575	7.2	285	94	27	3,097
1 to 50	1,173	18,891	16.1	1,592	522	153	16,076
51 to 99	897	22,728	25.3	3,968	1,301	381	37,758
100	2,391	37,676	15.8	7,089	2,324	681	64,944
<b>Percent lit when open</b>							
Zero	70	322	4.6	11	3	1	118
1 to 50	1,099	12,628	11.5	1,184	388	114	11,323
51 to 99	1,666	34,814	20.9	5,469	1,793	526	51,668
100	2,222	35,726	16.1	6,237	2,045	599	58,426
Building never open/electricity not used	178	1,378	7.8	33	11	3	341

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<b>All buildings</b>	5,234	84,869	16.2	12,934	4,241	1,243	121,875
<b>Percent lit during off hours</b>							
Zero	2,489	24,746	9.9	2,412	791	232	25,350
1 to 50	2,441	50,753	20.8	8,159	2,675	784	75,923
51 to 100	202	6,926	34.3	1,715	562	165	14,834
Building always open with no "off hours"	102	2,443	23.9	648	213	62	5,768
Electricity not used	N	N	N	N	N	N	N
<b>Heating equipment (more than one may apply)</b>							
Heat pumps	628	11,846	18.9	1,870	613	180	17,577
Furnaces	755	8,654	11.5	1,106	363	106	10,424
Individual space heaters	1,246	20,751	16.7	2,824	926	271	26,694
District heat	48	5,925	124.3	1,068	350	103	9,679
Boilers	543	22,438	41.3	3,640	1,193	350	34,078
Packaged heating units	2,802	49,188	17.6	8,028	2,632	771	74,368
Other	60	1,570	26.2	399	131	38	3,363
<b>Cooling equipment (more than one may apply)</b>							
Residential-type central air conditioners	1,546	14,765	9.5	1,941	636	186	19,238
Heat pumps	692	12,538	18.1	1,966	644	189	18,431
Individual air conditioners	709	12,420	17.5	1,665	546	160	16,454
District chilled water	54	4,608	85.4	890	292	86	7,279
Central chillers	163	17,041	104.6	3,417	1,120	328	30,834
Packaged air conditioning units	1,909	45,153	23.6	7,563	2,480	727	71,017
Swamp coolers	109	1,918	17.5	299	98	29	2,961
Other	Q	328	Q	98	32	9	887
<b>Main equipment replaced since 1990 (more than one may apply)</b>							
Heating	1,874	27,558	14.7	4,035	1,323	388	38,203
Cooling	1,971	30,702	15.6	4,633	1,519	445	44,610
<b>Water-heating equipment</b>							
Centralized system	3,348	47,534	14.2	7,577	2,484	728	70,903
Distributed system	690	12,688	18.4	1,643	539	158	16,481
Combination of centralized and distributed system	385	18,793	48.8	3,367	1,104	324	30,698

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<b>All buildings</b>	5,234	84,869	16.2	12,934	4,241	1,243	121,875
<b>Lighting equipment types (more than one may apply)</b>							
Incandescent	1,826	38,406	21.0	6,366	2,087	612	58,067
Standard fluorescent	4,649	80,081	17.2	12,461	4,085	1,197	116,985
Compact fluorescent	2,302	53,816	23.4	9,254	3,034	889	85,737
High-intensity discharge (HID)	525	23,396	44.5	3,976	1,303	382	36,217
Halogen	905	28,059	31.0	4,977	1,632	478	45,983
LED	473	22,071	46.6	4,318	1,416	415	40,018
Other	10	446	45.2	99	33	10	878
<b>Refrigeration equipment (more than one may apply)</b>							
Any refrigeration	3,984	73,645	18.5	11,964	3,923	1,150	111,805
Walk-in units	811	28,361	35.0	6,309	2,069	606	57,455
Cases or cabinets	915	28,719	31.4	6,061	1,987	582	55,957
Large cold storage areas	78	4,171	53.4	1,019	334	98	9,056
Commercial ice makers	846	32,734	38.7	6,796	2,228	653	61,035
Residential-type or compact units	3,388	62,381	18.4	9,482	3,109	911	88,731
Vending machines	960	43,936	45.8	7,723	2,532	742	70,214
No refrigeration	1,250	11,224	9.0	970	318	93	10,070
<b>Office equipment (more than one may apply)</b>							
Desktop computers	3,977	77,063	19.4	12,252	4,017	1,177	114,933
With flat screen monitors	3,847	76,160	19.8	12,130	3,977	1,166	113,832
With multiple monitors	911	30,946	34.0	5,445	1,785	523	50,411
Laptop computers	2,730	63,486	23.3	10,073	3,303	968	94,088
Dedicated servers	1,748	53,369	30.5	9,041	2,964	869	84,019
Laser printers	2,339	54,256	23.2	8,910	2,921	856	83,064
Inkjet printers	2,187	36,235	16.6	5,449	1,787	524	52,214
FAX machines	3,185	66,682	20.9	10,712	3,512	1,029	100,207
Photocopiers	2,163	59,277	27.4	9,451	3,099	908	88,288
<b>Number of desktop computers</b>							
None	1,258	7,806	6.2	681	223	65	6,943
1 to 4	2,039	15,669	7.7	2,134	700	205	20,849
5 to 9	821	9,422	11.5	1,391	456	134	13,152
10 to 19	482	9,388	19.5	1,344	441	129	13,203
20 to 49	355	13,094	36.9	2,185	716	210	20,062
50 to 99	143	8,284	57.8	1,244	408	120	11,748
100 to 249	92	9,728	105.6	1,663	545	160	14,675
250 or more	44	11,478	258.3	2,292	751	220	21,243



**Table C13. Total electricity consumption and expenditures, 2012**

	All buildings using electricity			Electricity consumption		Electricity expenditures	
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Primary	Site	Total (billion kWh)	Total (million dollars)
				Total (trillion Btu)	Total (trillion Btu)		
<b>All buildings</b>	5,234	84,869	16.2	12,934	4,241	1,243	121,875
<b>Number of laptop computers</b>							
None	2,504	21,382	8.5	2,860	938	275	27,787
1 to 4	1,944	21,161	10.9	2,837	930	273	27,026
5 to 9	350	8,345	23.9	1,314	431	126	12,044
10 to 19	181	8,343	46.0	1,358	445	131	12,884
20 to 49	144	9,643	67.2	1,603	525	154	14,733
50 to 99	58	5,234	91.0	889	292	85	8,429
100 to 249	35	5,217	150.9	939	308	90	8,261
250 or more	20	5,542	280.8	1,134	372	109	10,710
<b>Number of dedicated servers</b>							
None	3,486	31,499	9.0	3,893	1,276	374	37,856
1 to 4	1,562	34,097	21.8	5,170	1,695	497	48,512
5 to 9	97	6,241	64.3	1,048	343	101	9,574
10 to 19	50	5,711	113.6	1,137	373	109	10,592
20 to 49	25	3,758	147.4	730	239	70	6,538
50 or more	13	3,562	271.4	956	313	92	8,803
<b>Number of photocopiers</b>							
None	3,071	25,592	8.3	3,483	1,142	335	33,587
One	1,325	17,080	12.9	2,233	732	215	21,199
2 to 4	648	20,312	31.4	3,044	998	293	28,580
5 to 9	116	8,863	76.7	1,501	492	144	13,456
10 or more	75	13,022	174.7	2,673	876	257	25,054
<b>Number of TVs or video displays</b>							
None	2,395	22,115	9.2	2,328	763	224	23,257
One	1,145	9,990	8.7	1,256	412	121	11,897
2 to 4	1,035	16,465	15.9	2,455	805	236	24,096
5 to 9	314	8,148	25.9	1,562	512	150	14,468
10 to 19	154	8,168	53.1	1,526	500	147	13,430
20 to 49	106	8,058	76.1	1,452	476	140	13,521
50 to 99	48	4,378	90.9	805	264	77	7,071
100 or more	37	7,547	201.5	1,550	508	149	14,136
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>							
Snack bar or concession stand	153	9,884	64.6	1,986	651	191	18,136
Fast food or small restaurant	173	9,787	56.5	2,334	765	224	21,235
Cafeteria or large restaurant	130	15,222	117.1	2,714	890	261	24,625
Commercial kitchen/food preparation area	282	16,150	57.2	3,038	996	292	27,221
Small kitchen area	736	14,054	19.1	2,113	693	203	19,739

**Table C13. Total electricity consumption and expenditures, 2012**

	All buildings using electricity			Electricity consumption		Electricity expenditures	
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Primary	Site	Total (billion kWh)	Total (million dollars)
				Total (trillion Btu)	Total (trillion Btu)		
<b>All buildings</b>	5,234	84,869	16.2	12,934	4,241	1,243	121,875
<b>Separate computer areas (more than one may apply)</b>							
Data center or server farm	97	11,105	115.1	2,481	814	238	22,702
Computer-based training room	244	17,723	72.7	3,119	1,022	300	28,326
Student or public computer center	238	14,341	60.1	2,112	692	203	18,779
<b>HVAC conservation features (more than one may apply)</b>							
Economizer cycle	601	30,749	51.2	5,609	1,839	539	51,308
Regular HVAC maintenance	3,178	69,244	21.8	11,536	3,782	1,108	107,543
Building automation system (BAS) <sup>2</sup>	781	37,051	47.5	6,971	2,285	670	63,815
<b>Window and interior lighting features (more than one may apply)</b>							
Multipaned windows	2,959	59,730	20.2	9,682	3,174	930	89,208
Tinted window glass	1,843	44,399	24.1	7,476	2,451	718	68,961
Reflective window glass	543	15,837	29.1	3,127	1,025	300	28,594
External overhangs or awnings	1,845	32,062	17.4	5,716	1,874	549	52,842
Skylights or atriums	581	22,076	38.0	3,450	1,131	332	31,935
Light scheduling	918	30,263	33.0	5,632	1,847	541	53,018
Occupancy sensors	813	35,871	44.1	6,333	2,076	609	58,844
Multi-level lighting or dimming	349	14,534	41.7	2,834	929	272	26,331
Daylight harvesting	125	6,114	48.8	1,133	371	109	10,563
Demand responsive lighting	176	4,738	26.9	830	272	80	8,365
Building automation system (BAS) for lighting <sup>2</sup>	208	12,068	57.9	2,488	816	239	23,034
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>							
Heating	3,696	63,147	17.1	9,290	3,046	893	88,705
Cooling	3,517	62,516	17.8	9,387	3,078	902	89,825
Lighting	4,757	78,594	16.5	11,833	3,880	1,137	111,970
<b>Annual consumption (kilowatthours)</b>							
10,000 or less	773	3,084	4.0	42	14	4	574
10,001 to 50,000	1,881	10,502	5.6	519	170	50	6,062
50,001 to 100,000	865	7,602	8.8	648	213	62	6,932
100,001 to 500,000	1,261	21,313	16.9	2,942	964	283	29,318
500,001 to 1,000,000	238	10,050	42.2	1,714	562	165	16,029
1,000,001 to 5,000,000	188	20,739	110.1	3,944	1,293	379	35,863
Over 5,000,000	28	11,578	411.7	3,124	1,024	300	27,099

**Table C13. Total electricity consumption and expenditures, 2012**

	All buildings using electricity			Electricity consumption		Electricity expenditures	
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Primary	Site	Total (billion kWh)	Total (million dollars)
				Total (trillion Btu)	Total (trillion Btu)		
<b>All buildings</b>	5,234	84,869	16.2	12,934	4,241	1,243	121,875

<sup>1</sup>These climate regions were created by the Building America program, sponsored by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE).

<sup>2</sup>In earlier CBECS publications, BAS was referred to as *Energy Management and Control System (EMCS)*.

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

N = No cases in reporting sample.

Notes: • Because of rounding, data may not sum to totals. • See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from <http://www.eia.gov/consumption/commercial/data/2012/> • 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 generation, transmission, and distribution processes. • 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.

Source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Forms EIA-871A and E of the 2012 Commercial Buildings Energy Consumption Survey.

**Table C14. Electricity consumption and expenditure intensities, 2012**

	Electricity consumption			Distribution of building-level intensities (kWh/square foot)			Electricity expenditures		
	per building (thousand kWh)	per square foot (kWh)	per worker (thousand kWh)	25th percentile	Median	75th percentile	per building (thousand dollars)	per square foot (dollars)	per kWh (dollars)
	<b>All buildings</b>	237	14.6	14.1	3.8	8.7	17.2	23.3	1.44
<b>Building floorspace (square feet)</b>									
1,001 to 5,000	51	17.4	12.8	4.0	9.0	19.4	5.3	1.82	0.105
5,001 to 10,000	97	13.3	12.3	3.7	7.8	14.9	10.2	1.41	0.106
10,001 to 25,000	187	11.7	11.2	3.2	7.7	16.0	19.6	1.23	0.105
25,001 to 50,000	457	12.8	13.1	4.2	9.6	16.7	44.7	1.25	0.098
50,001 to 100,000	985	14.1	15.5	6.0	10.7	16.6	94.9	1.36	0.096
100,001 to 200,000	2,115	15.3	16.8	6.9	13.7	19.6	195.2	1.42	0.092
200,001 to 500,000	4,808	16.9	17.4	7.7	13.6	22.1	445.6	1.57	0.093
Over 500,000	16,362	18.4	14.1	10.1	15.1	22.6	1558.7	1.76	0.095
<b>Principal building activity</b>									
Education	345	11.0	12.3	5.6	9.0	13.7	33.2	1.05	0.096
Food sales	345	48.7	52.0	35.0	54.8	81.4	32.4	4.57	0.094
Food service	215	44.9	23.8	18.9	38.4	73.2	21.3	4.44	0.099
Health care	683	25.8	14.1	7.0	13.1	19.2	61.2	2.31	0.090
Inpatient	7,687	31.0	17.2	20.5	32.7	43.9	671.8	2.71	0.087
Outpatient	227	18.7	10.0	6.3	12.8	19.0	21.4	1.77	0.094
Lodging	565	15.3	29.1	8.4	13.5	19.5	53.8	1.46	0.095
Mercantile	345	18.3	22.7	6.2	13.0	21.8	33.4	1.77	0.097
Retail (other than mall)	189	15.2	20.5	4.9	9.7	18.8	18.7	1.50	0.099
Enclosed and strip malls	757	21.1	24.4	13.8	19.5	27.8	72.4	2.02	0.096
Office	250	15.9	7.5	6.0	9.9	15.8	25.9	1.64	0.104
Public assembly	229	14.5	25.9	3.5	7.7	14.6	22.4	1.42	0.098
Public order and safety	255	14.9	11.5	3.9	9.1	16.2	24.3	1.42	0.095
Religious worship	58	5.2	12.2	2.2	3.5	5.7	6.1	0.55	0.106
Service	62	8.3	9.3	3.4	6.5	12.0	6.8	0.91	0.110
Warehouse and storage	123	6.6	13.2	1.6	3.7	7.5	12.5	0.67	0.101
Other	455	28.3	34.7	2.6	6.6	25.1	41.1	2.56	0.090
Vacant	66	4.5	32.7	0.8	1.6	3.6	7.0	0.48	0.105
<b>Year constructed</b>									
Before 1920	95	8.4	9.6	2.1	4.6	12.2	10.4	0.92	0.110
1920 to 1945	140	10.9	10.7	2.7	6.3	13.0	15.9	1.24	0.113
1946 to 1959	153	11.8	12.9	3.5	8.2	15.6	15.3	1.17	0.100
1960 to 1969	241	14.4	15.0	4.6	9.0	16.8	23.5	1.40	0.097
1970 to 1979	262	16.2	13.6	4.2	9.0	18.5	24.6	1.52	0.094
1980 to 1989	273	15.8	13.4	4.3	9.1	17.9	26.7	1.54	0.098
1990 to 1999	279	16.2	15.9	4.4	9.6	19.6	26.9	1.56	0.096
2000 to 2003	301	15.5	14.9	4.3	10.3	18.6	28.8	1.48	0.096
2004 to 2007	284	14.9	16.2	4.7	10.1	19.5	28.1	1.47	0.099
2008 to 2012	301	15.7	16.1	4.1	8.2	16.8	29.5	1.54	0.098

**Table C14. Electricity consumption and expenditure intensities, 2012**

	Electricity consumption			Distribution of building-level intensities (kWh/square foot)			Electricity expenditures		
	per building (thousand kWh)	per square foot (kWh)	per worker (thousand kWh)	25th percentile	Median	75th percentile	per building (thousand dollars)	per square foot (dollars)	per kWh (dollars)
	<b>All buildings</b>	237	14.6	14.1	3.8	8.7	17.2	23.3	1.44
<b>Census region and division</b>									
Northeast	286	14.4	12.4	3.2	7.4	16.0	32.6	1.64	0.114
New England	177	12.1	12.1	2.9	6.5	15.0	22.8	1.55	0.129
Middle Atlantic	350	15.3	12.5	3.4	8.0	16.7	38.4	1.68	0.110
Midwest	213	13.4	14.5	3.2	7.8	14.8	18.5	1.17	0.087
East North Central	247	13.9	14.6	3.6	8.4	16.7	22.2	1.25	0.090
West North Central	161	12.5	14.1	2.5	6.4	13.0	13.0	1.00	0.081
South	254	16.1	16.3	4.7	10.1	19.4	22.8	1.44	0.090
South Atlantic	281	16.3	15.9	5.0	10.7	21.4	26.7	1.55	0.095
East South Central	200	14.6	16.4	4.8	10.3	18.9	17.6	1.29	0.088
West South Central	243	16.3	16.9	4.3	9.7	17.7	19.7	1.32	0.081
West	201	13.5	11.9	4.1	7.9	15.9	22.8	1.53	0.113
Mountain	212	13.9	14.6	3.9	7.3	17.2	19.7	1.29	0.093
Pacific	197	13.3	11.1	4.2	8.2	15.5	23.9	1.62	0.121
<b>Climate region<sup>1</sup></b>									
Very cold/Cold	217	13.4	13.6	3.1	7.5	15.0	20.8	1.28	0.096
Mixed-humid	254	15.2	14.5	4.1	9.5	17.7	24.1	1.44	0.095
Mixed-dry/Hot-dry	193	13.0	11.7	4.0	7.4	14.5	23.2	1.56	0.120
Hot-humid	298	18.4	17.6	5.7	13.3	22.6	27.2	1.68	0.091
Marine	256	14.6	11.2	4.7	9.1	17.3	28.4	1.62	0.111
<b>Number of floors</b>									
One	153	14.3	15.6	3.9	8.7	18.1	15.2	1.42	0.099
Two	230	13.0	13.1	3.7	8.2	15.1	22.5	1.27	0.098
Three	300	13.5	14.0	3.6	8.9	16.1	30.2	1.36	0.101
Four to nine	1,321	17.2	14.2	5.1	11.4	16.8	122.6	1.60	0.093
Ten or more	7,851	18.3	10.5	11.6	15.7	21.8	806.2	1.88	0.103
<b>Elevators and escalators (more than one may apply)</b>									
Any elevators	1,343	16.9	13.5	7.4	13.1	19.6	128.1	1.61	0.095
Number of elevators									
One	546	13.2	12.9	5.7	11.7	17.6	51.1	1.23	0.093
Two to five	1,906	17.5	14.4	9.2	14.6	22.0	180.3	1.66	0.095
Six or more	10,641	21.0	12.9	13.0	18.9	26.3	1042.8	2.05	0.098
Any escalators	6,854	18.2	13.7	10.8	19.1	20.7	651.8	1.73	0.095
<b>Number of workers (main shift)</b>									
Fewer than 5	52	8.6	26.7	2.6	5.9	13.2	5.4	0.89	0.103
5 to 9	103	12.5	16.0	5.0	9.5	17.5	10.7	1.30	0.104
10 to 19	181	13.7	14.0	6.3	12.0	22.0	18.5	1.41	0.103
20 to 49	429	15.1	14.8	6.7	12.1	21.3	41.4	1.46	0.097
50 to 99	1,042	15.9	15.9	8.7	14.4	21.4	97.7	1.49	0.094
100 to 249	1,984	16.9	13.9	10.5	15.7	24.3	188.7	1.61	0.095
250 or more	6,634	20.8	9.9	12.9	18.3	27.4	645.3	2.03	0.097

**Table C14. Electricity consumption and expenditure intensities, 2012**

	Electricity consumption								
				Distribution of building-level intensities (kWh/square foot)			Electricity expenditures		
	per building (thousand kWh)	per square foot (kWh)	per worker (thousand kWh)	25th percentile	Median	75th percentile	per building (thousand dollars)	per square foot (dollars)	per kWh (dollars)
<b>All buildings</b>	237	14.6	14.1	3.8	8.7	17.2	23.3	1.44	0.098
<b>Weekly operating hours</b>									
Fewer than 40	37	5.3	10.6	1.5	3.3	7.3	4.0	0.57	0.107
40 to 48	117	9.8	8.8	4.2	7.5	12.6	12.1	1.02	0.104
49 to 60	194	11.7	9.6	4.7	8.7	14.7	19.9	1.20	0.103
61 to 84	335	15.8	14.9	7.4	14.9	26.6	33.9	1.60	0.101
85 to 167	429	21.4	24.7	13.0	28.8	56.5	40.6	2.02	0.095
Open continuously	691	21.5	20.6	4.8	13.4	26.8	63.2	1.97	0.091
<b>Ownership and occupancy</b>									
Nongovernment owned	220	15.1	14.4	3.6	8.5	17.6	21.8	1.49	0.099
Owner occupied	190	15.0	17.6	3.4	7.9	16.4	18.1	1.43	0.095
Leased to tenant(s)	238	15.4	12.4	4.4	10.0	20.0	24.5	1.59	0.103
Owner occupied and leased	385	15.0	12.5	4.3	8.7	15.7	38.3	1.49	0.099
Unoccupied	26	2.5	N	0.8	1.7	2.3	2.9	0.28	0.112
Government owned	338	13.3	13.0	5.6	9.7	15.5	32.0	1.26	0.095
Federal	689	14.4	10.6	6.4	11.6	17.1	68.1	1.43	0.099
State	440	14.6	14.5	6.3	10.3	17.0	39.5	1.31	0.090
Local	282	12.5	12.7	5.5	9.5	15.3	27.3	1.21	0.097
<b>Party responsible for operation and maintenance of energy systems</b>									
Building owner	233	14.4	13.8	3.7	8.3	16.0	22.6	1.39	0.097
Business owner or tenant	258	16.3	16.3	5.1	11.5	22.7	26.4	1.67	0.102
Property management	350	14.8	10.5	3.9	8.5	20.2	35.9	1.52	0.103
Other	213	16.2	15.5	5.5	10.8	19.8	22.8	1.74	0.107
<b>Provider of direct input on energy-related equipment purchases</b>									
Building owner	232	14.3	13.8	3.7	8.4	16.1	22.7	1.40	0.097
Business owner or tenant	269	17.4	16.5	5.2	11.7	25.9	27.2	1.76	0.101
Property management	344	13.5	12.4	4.7	13.9	25.1	37.8	1.48	0.110
Other	262	16.4	15.5	5.1	10.7	20.0	26.3	1.64	0.100
<b>Number of establishments</b>									
One	190	14.3	14.9	3.8	8.6	17.1	18.5	1.39	0.097
2 to 5	288	14.0	13.1	4.4	9.2	17.3	28.6	1.39	0.099
6 to 10	520	16.3	12.0	5.4	12.8	18.2	51.4	1.61	0.099
11 to 20	1,033	18.6	13.0	7.4	13.6	19.3	105.3	1.90	0.102
More than 20	4,079	20.1	12.6	12.2	16.9	20.2	401.1	1.98	0.098
Currently unoccupied	26	2.2	N	0.8	1.5	2.3	2.9	0.25	0.111

**Table C14. Electricity consumption and expenditure intensities, 2012**

	Electricity consumption								
				Distribution of building-level intensities (kWh/square foot)			Electricity expenditures		
	per building (thousand kWh)	per square foot (kWh)	per worker (thousand kWh)	25th percentile	Median	75th percentile	per building (thousand dollars)	per square foot (dollars)	per kWh (dollars)
<b>All buildings</b>	237	14.6	14.1	3.8	8.7	17.2	23.3	1.44	0.098
<b>Predominant exterior wall material</b>									
Brick, stone, or stucco	269	15.1	14.3	4.6	10.0	19.6	26.4	1.47	0.098
Concrete (block or poured)	300	15.8	16.0	4.8	9.6	19.8	29.2	1.54	0.097
Concrete panels	601	14.3	12.7	4.0	8.9	15.9	58.3	1.38	0.097
Siding or shingles	85	12.8	11.9	3.4	8.3	16.4	9.2	1.39	0.109
Metal panels	96	9.8	13.8	2.4	5.3	10.5	9.1	0.93	0.095
Window glass	1,838	23.4	11.8	7.4	15.2	28.8	175.8	2.24	0.096
Other	369	16.0	16.3	2.9	9.5	17.2	37.1	1.62	0.101
No one major type	362	13.1	Q	3.0	7.2	16.4	36.1	1.31	0.100
<b>Predominant roof material</b>									
Metal surfacing	112	11.2	14.1	2.8	6.5	13.8	10.9	1.09	0.097
Synthetic or rubber	474	16.5	15.3	5.1	10.3	21.3	45.4	1.58	0.096
Built-up	427	15.8	14.0	5.2	10.0	19.1	41.2	1.53	0.097
Slate or tile shingles	154	13.9	13.9	4.4	10.0	20.4	16.6	1.50	0.108
Wooden materials (including shingles)	94	12.5	13.9	3.4	10.1	25.2	10.3	1.36	0.109
Asphalt, fiberglass, or other shingles	138	13.4	12.1	4.1	8.8	16.4	14.1	1.36	0.102
Concrete	595	18.9	14.4	6.5	15.7	26.0	59.1	1.88	0.099
Other	451	15.8	18.8	5.1	13.2	16.4	44.0	1.54	0.098
No one major type	292	8.0	15.8	1.7	4.0	13.2	30.9	0.85	0.106
<b>Roof characteristics</b>									
Roof tilt									
Flat	427	16.4	14.0	5.3	11.2	22.0	41.3	1.59	0.097
Shallow pitch	150	13.0	15.3	3.5	7.7	15.4	14.8	1.28	0.099
Steeper pitch	106	11.1	12.7	3.1	7.2	14.2	11.0	1.15	0.103
Cool roof	452	16.8	15.0	5.2	10.2	21.1	43.4	1.61	0.096

Table C14. Electricity consumption and expenditure intensities, 2012

	Electricity consumption			Distribution of building-level intensities (kWh/square foot)			Electricity expenditures		
	per building (thousand kWh)	per square foot (kWh)	per worker (thousand kWh)	25th percentile	Median	75th percentile	per building (thousand dollars)	per square foot (dollars)	per kWh (dollars)
	<b>All buildings</b>	237	14.6	14.1	3.8	8.7	17.2	23.3	1.44
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>									
Any type of renovation	317	15.5	14.0	4.4	9.5	17.8	30.8	1.50	0.097
Addition or annex	466	15.8	16.4	5.1	9.8	18.5	43.1	1.46	0.093
Reduction in floorspace	542	20.5	13.8	4.9	13.1	23.0	48.2	1.83	0.089
Roof replacement	345	15.9	14.4	4.2	9.0	17.2	32.9	1.52	0.096
Exterior wall replacement	374	16.6	15.4	3.7	8.5	17.4	34.7	1.54	0.093
Interior wall reconfiguration	406	16.8	12.9	5.0	9.8	17.9	39.3	1.62	0.097
Window replacement	316	14.4	12.5	4.0	8.8	15.8	31.3	1.42	0.099
HVAC equipment upgrade	399	16.2	14.4	4.5	9.8	18.2	38.6	1.57	0.097
Lighting upgrade	423	16.1	14.5	5.0	10.2	19.5	40.8	1.55	0.096
Electrical upgrade	359	16.4	14.9	4.4	8.8	17.9	34.8	1.60	0.097
Plumbing system upgrade	350	16.1	13.8	4.6	9.7	18.1	34.7	1.60	0.099
Insulation upgrade	332	16.6	15.0	3.9	8.5	16.0	31.1	1.56	0.093
Fire, safety, or security upgrade	462	16.4	14.1	5.4	10.0	19.0	45.2	1.61	0.098
Structural upgrade	458	17.6	18.5	4.2	9.4	16.5	42.8	1.65	0.094
Other	331	15.3	12.8	2.5	9.1	25.1	34.1	1.57	0.103
No renovations	175	13.6	14.0	3.6	8.1	16.7	17.4	1.35	0.099
Buildings constructed 2008 or later	301	15.7	16.1	4.1	8.2	16.8	29.5	1.54	0.098
<b>Energy sources (more than one may apply)</b>									
Electricity	237	14.6	14.1	3.8	8.7	17.2	23.3	1.44	0.098
Natural gas	308	15.4	14.5	4.6	9.5	18.5	30.0	1.50	0.097
Fuel oil	818	18.9	14.9	3.6	9.4	20.2	77.9	1.80	0.095
District heat	2,165	17.3	12.6	7.7	14.1	20.2	204.1	1.63	0.094
District chilled water	1,585	18.6	14.9	7.8	12.9	16.5	134.9	1.58	0.085
Propane	218	14.4	18.7	3.0	6.4	15.0	21.3	1.41	0.098
Other	298	13.1	13.2	3.6	7.2	13.1	30.9	1.36	0.104
<b>Space-heating energy sources</b>									
Electricity	271	15.8	14.4	5.2	10.2	19.6	26.1	1.52	0.096
Electricity main	242	16.8	15.2	5.6	10.8	21.3	23.1	1.61	0.096
Electricity secondary	322	14.7	13.4	4.7	9.3	16.7	31.4	1.43	0.097
Other excluding electricity	228	13.7	13.3	3.4	7.5	14.7	22.6	1.35	0.099
Buildings without heating	87	9.4	18.1	1.1	3.7	11.7	10.0	1.08	0.115
<b>Primary space-heating energy source</b>									
Electricity	242	16.8	15.2	5.6	10.8	21.3	23.1	1.61	0.096
Natural gas	263	14.2	13.7	4.2	8.8	16.4	26.0	1.40	0.099
Fuel oil	115	9.3	11.8	2.7	4.7	12.9	12.6	1.02	0.109
District heat	2,144	17.4	12.6	7.7	14.1	20.2	202.8	1.65	0.095
Propane	68	9.2	12.1	2.2	4.6	9.7	6.2	0.84	0.091
Other	73	8.0	9.0	4.0	5.9	12.7	8.3	0.90	0.113



**Table C14. Electricity consumption and expenditure intensities, 2012**

	Electricity consumption								
	per building (thousand kWh)	per square foot (kWh)	per worker (thousand kWh)	Distribution of building-level intensities (kWh/square foot)			Electricity expenditures		
				25th percentile	Median	75th percentile	per building (thousand dollars)	per square foot (dollars)	per kWh (dollars)
<b>All buildings</b>	237	14.6	14.1	3.8	8.7	17.2	23.3	1.44	0.098
<b>Cooling energy sources</b>									
Electricity	263	15.2	14.1	4.9	9.9	19.0	25.8	1.50	0.098
Other excluding electricity	1,170	17.3	16.1	7.4	10.9	15.6	97.8	1.45	0.084
Buildings without cooling	35	4.9	11.7	0.9	2.7	6.2	4.0	0.56	0.113
<b>Water-heating energy sources</b>									
Electricity	244	15.2	13.9	4.7	9.8	18.4	23.8	1.48	0.097
Other excluding electricity	318	15.5	14.5	4.7	9.8	19.8	31.1	1.51	0.098
Buildings without water heating	41	5.7	12.5	1.2	3.7	9.0	4.7	0.65	0.114
<b>Cooking energy sources</b>									
Electricity	449	18.0	16.6	5.0	12.3	28.0	42.8	1.72	0.095
Other excluding electricity	427	18.4	17.8	5.4	14.8	34.0	41.6	1.80	0.097
Buildings without cooking	149	11.7	11.6	3.5	7.5	14.1	15.0	1.18	0.101
<b>Energy end uses (more than one may apply)</b>									
Buildings with space heating	254	15.0	14.0	4.4	9.2	17.5	24.7	1.46	0.097
Buildings with cooling	272	15.3	14.2	4.9	9.9	18.8	26.6	1.50	0.098
Buildings with water heating	273	15.3	14.2	4.7	9.8	18.9	26.7	1.49	0.098
Buildings with cooking	441	18.2	17.0	5.1	13.2	30.9	42.3	1.74	0.096
Buildings with manufacturing	258	13.2	13.3	3.4	6.3	16.4	25.7	1.31	0.100
Buildings with electricity generation	1,195	19.1	15.8	7.2	14.0	24.5	112.4	1.80	0.094
<b>Percent of floorspace heated</b>									
Not heated	87	9.4	18.1	1.1	3.7	11.7	10.0	1.08	0.115
1 to 50	141	9.7	15.3	2.7	5.1	10.4	14.9	1.02	0.106
51 to 99	323	16.0	15.0	4.4	9.2	18.4	32.5	1.61	0.101
100	263	15.7	13.6	5.0	10.0	18.6	25.1	1.50	0.096
<b>Percent of floorspace cooled</b>									
Not cooled	35	4.9	11.7	0.9	2.7	6.2	4.0	0.56	0.113
1 to 50	130	8.1	12.1	3.3	6.1	11.3	13.7	0.85	0.105
51 to 99	425	16.8	15.1	5.8	11.3	20.7	42.1	1.66	0.099
100	285	18.1	14.2	6.0	12.0	22.0	27.2	1.72	0.095
<b>Percent lit when open</b>									
Zero	15	3.1	Q	0.6	2.4	3.7	1.7	0.37	0.116
1 to 50	104	9.0	16.9	2.7	5.7	11.9	10.3	0.90	0.100
51 to 99	315	15.1	14.4	5.0	10.2	18.4	31.0	1.48	0.098
100	270	16.8	13.4	5.1	10.2	20.8	26.3	1.64	0.097
Building never open/electricity not used	18	2.3	Q	0.3	1.0	2.3	1.9	0.25	0.108

**Table C14. Electricity consumption and expenditure intensities, 2012**

	Electricity consumption			Distribution of building-level intensities (kWh/square foot)			Electricity expenditures		
	per building (thousand kWh)	per square foot (kWh)	per worker (thousand kWh)	25th percentile	Median	75th percentile	per building (thousand dollars)	per square foot (dollars)	per kWh (dollars)
	<b>All buildings</b>	237	14.6	14.1	3.8	8.7	17.2	23.3	1.44
<b>Percent lit during off hours</b>									
Zero	93	9.4	10.0	2.6	5.9	11.8	10.2	1.02	0.109
1 to 50	321	15.4	14.4	5.7	11.1	20.8	31.1	1.50	0.097
51 to 100	817	23.8	21.1	10.8	16.4	42.6	73.5	2.14	0.090
Building always open with no "off hours"	610	25.5	24.2	3.7	19.3	64.5	56.4	2.36	0.093
Electricity not used	N	N	N	N	N	N	N	N	N
<b>Heating equipment (more than one may apply)</b>									
Heat pumps	286	15.2	13.5	5.9	10.3	18.8	28.0	1.48	0.098
Furnaces	141	12.3	12.4	4.2	8.8	15.7	13.8	1.20	0.098
Individual space heaters	218	13.1	14.0	3.5	7.3	13.1	21.4	1.29	0.098
District heat	2,152	17.3	12.6	7.7	14.1	20.2	203.0	1.63	0.094
Boilers	645	15.6	13.9	4.0	9.1	16.0	62.8	1.52	0.097
Packaged heating units	275	15.7	15.1	4.7	10.0	19.6	26.5	1.51	0.096
Other	640	24.4	31.9	5.1	12.4	34.1	56.2	2.14	0.088
<b>Cooling equipment (more than one may apply)</b>									
Residential-type central air conditioners	121	12.6	12.3	4.3	8.9	17.0	12.4	1.30	0.103
Heat pumps	273	15.1	13.2	6.1	10.3	19.2	26.6	1.47	0.098
Individual air conditioners	226	12.9	13.0	3.8	8.0	14.8	23.2	1.32	0.103
District chilled water	1,585	18.6	14.9	7.8	12.9	16.5	134.9	1.58	0.085
Central chillers	2,016	19.3	15.0	9.0	15.0	23.0	189.3	1.81	0.094
Packaged air conditioning units	381	16.1	15.5	5.6	12.0	22.6	37.2	1.57	0.098
Swamp coolers	262	15.0	16.4	5.2	9.5	30.5	27.1	1.54	0.103
Other	Q	28.7	19.8	2.7	5.7	14.2	Q	2.70	0.094
<b>Main equipment replaced since 1990 (more than one may apply)</b>									
Heating	207	14.1	13.5	4.4	9.1	17.5	20.4	1.39	0.099
Cooling	226	14.5	13.3	4.8	9.8	18.7	22.6	1.45	0.100
<b>Water-heating equipment</b>									
Centralized system	217	15.3	14.5	4.6	9.7	19.0	21.2	1.49	0.097
Distributed system	229	12.4	11.1	4.4	8.3	15.0	23.9	1.30	0.104
Combination of centralized and distributed system	841	17.2	15.4	6.6	13.7	22.6	79.8	1.63	0.095

Table C14. Electricity consumption and expenditure intensities, 2012

	Electricity consumption			Distribution of building-level intensities (kWh/square foot)			Electricity expenditures		
	per building (thousand kWh)	per square foot (kWh)	per worker (thousand kWh)	25th percentile	Median	75th percentile	per building (thousand dollars)	per square foot (dollars)	per kWh (dollars)
	<b>All buildings</b>	237	14.6	14.1	3.8	8.7	17.2	23.3	1.44
<b>Lighting equipment types (more than one may apply)</b>									
Incandescent	335	15.9	14.7	4.1	9.4	18.5	31.8	1.51	0.095
Standard fluorescent	258	15.0	14.0	4.5	9.3	18.0	25.2	1.46	0.098
Compact fluorescent	386	16.5	14.8	5.0	10.6	20.5	37.2	1.59	0.096
High-intensity discharge (HID)	727	16.3	16.0	5.3	10.8	20.0	69.0	1.55	0.095
Halogen	529	17.0	15.7	5.5	11.1	20.8	50.8	1.64	0.096
LED	877	18.8	16.0	8.1	14.7	26.0	84.6	1.81	0.096
Other	965	21.4	17.2	18.4	24.6	42.7	88.9	1.97	0.092
<b>Refrigeration equipment (more than one may apply)</b>									
Any refrigeration	289	15.6	14.6	4.7	10.0	19.5	28.1	1.52	0.097
Walk-in units	747	21.4	19.5	14.5	28.5	57.4	70.8	2.03	0.095
Cases or cabinets	636	20.3	18.5	10.3	22.4	43.6	61.1	1.95	0.096
Large cold storage areas	1,253	23.5	26.5	16.4	27.8	52.6	115.9	2.17	0.092
Commercial ice makers	772	19.9	17.9	11.0	20.8	43.2	72.2	1.86	0.093
Residential-type or compact units	269	14.6	13.5	4.4	9.1	16.3	26.2	1.42	0.097
Vending machines	773	16.9	14.9	7.4	13.0	21.5	73.2	1.60	0.095
No refrigeration	75	8.3	10.2	2.0	5.1	11.0	8.1	0.90	0.108
<b>Office equipment (more than one may apply)</b>									
Desktop computers	296	15.3	14.0	5.1	10.0	18.7	28.9	1.49	0.098
With flat screen monitors	303	15.3	13.9	5.2	10.0	18.8	29.6	1.49	0.098
With multiple monitors	574	16.9	12.1	6.1	11.1	19.4	55.3	1.63	0.096
Laptop computers	355	15.2	13.2	5.1	9.7	17.5	34.5	1.48	0.097
Dedicated servers	497	16.3	13.7	6.3	11.5	19.9	48.1	1.57	0.097
Laser printers	366	15.8	13.5	5.5	10.4	19.0	35.5	1.53	0.097
Inkjet printers	239	14.5	13.9	4.8	9.4	18.3	23.9	1.44	0.100
FAX machines	323	15.4	14.0	5.2	10.1	18.7	31.5	1.50	0.097
Photocopiers	420	15.3	13.3	5.3	10.0	17.1	40.8	1.49	0.097
<b>Number of desktop computers</b>									
None	52	8.4	17.3	1.5	4.2	11.5	5.5	0.89	0.106
1 to 4	101	13.1	18.1	4.0	8.1	18.6	10.2	1.33	0.102
5 to 9	163	14.2	13.9	5.7	9.8	17.4	16.0	1.40	0.098
10 to 19	268	13.8	14.9	6.6	11.1	17.6	27.4	1.41	0.102
20 to 49	592	16.0	16.4	8.2	14.2	21.2	56.6	1.53	0.096
50 to 99	834	14.4	12.9	6.9	11.9	19.3	82.0	1.42	0.098
100 to 249	1,734	16.4	12.8	8.1	13.2	19.0	159.3	1.51	0.092
250 or more	4,957	19.2	10.9	10.2	14.8	23.0	478.1	1.85	0.096

**Table C14. Electricity consumption and expenditure intensities, 2012**

	Electricity consumption			Distribution of building-level intensities (kWh/square foot)			Electricity expenditures		
	per building (thousand kWh)	per square foot (kWh)	per worker (thousand kWh)	25th percentile	Median	75th percentile	per building (thousand dollars)	per square foot (dollars)	per kWh (dollars)
	<b>All buildings</b>	237	14.6	14.1	3.8	8.7	17.2	23.3	1.44
<b>Number of laptop computers</b>									
None	110	12.9	18.6	2.7	7.1	16.6	11.1	1.30	0.101
1 to 4	140	12.9	15.4	4.6	8.7	16.7	13.9	1.28	0.099
5 to 9	361	15.1	14.2	6.7	10.7	17.5	34.4	1.44	0.095
10 to 19	720	15.6	14.1	8.0	12.5	18.8	71.1	1.54	0.099
20 to 49	1,072	16.0	13.2	7.4	13.1	19.3	102.6	1.53	0.096
50 to 99	1,485	16.3	10.4	8.3	12.5	17.7	146.5	1.61	0.099
100 to 249	2,610	17.3	13.7	7.0	10.8	16.7	239.0	1.58	0.092
250 or more	5,521	19.7	10.0	11.0	16.1	25.0	542.6	1.93	0.098
<b>Number of dedicated servers</b>									
None	107	11.9	15.2	3.0	7.1	15.0	10.9	1.20	0.101
1 to 4	318	14.6	14.5	6.1	11.1	19.2	31.1	1.42	0.098
5 to 9	1,037	16.1	12.8	6.6	13.1	23.3	98.7	1.53	0.095
10 to 19	2,174	19.1	14.5	9.9	17.0	25.3	210.7	1.85	0.097
20 to 49	2,752	18.7	10.5	10.8	17.1	26.8	256.4	1.74	0.093
50 or more	6,996	25.8	13.1	13.5	20.5	34.1	670.6	2.47	0.096
<b>Number of photocopiers</b>									
None	109	13.1	17.1	3.1	7.4	17.2	10.9	1.31	0.100
One	162	12.6	16.1	4.5	8.8	15.0	16.0	1.24	0.099
2 to 4	452	14.4	13.6	7.1	11.4	19.6	44.1	1.41	0.098
5 to 9	1,248	16.3	13.7	7.4	13.0	20.4	116.4	1.52	0.093
10 or more	3,446	19.7	11.1	11.1	14.9	23.3	336.1	1.92	0.098
<b>Number of TVs or video displays</b>									
None	93	10.1	12.6	2.6	6.0	12.8	9.7	1.05	0.104
One	105	12.1	12.0	4.1	9.1	16.7	10.4	1.19	0.099
2 to 4	228	14.3	13.3	5.6	10.7	20.8	23.3	1.46	0.102
5 to 9	477	18.4	14.9	8.5	15.0	28.1	46.0	1.78	0.096
10 to 19	953	18.0	14.2	9.9	16.2	28.5	87.3	1.64	0.092
20 to 49	1,318	17.3	15.6	9.4	15.5	22.6	127.8	1.68	0.097
50 to 99	1,606	17.7	17.6	10.4	14.9	24.5	146.8	1.61	0.091
100 or more	3,977	19.7	16.7	10.4	14.5	20.9	377.5	1.87	0.095
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>									
Snack bar or concession stand	1,246	19.3	18.6	9.5	18.8	42.3	118.5	1.83	0.095
Fast food or small restaurant	1,294	22.9	20.5	16.7	24.6	41.5	122.5	2.17	0.095
Cafeteria or large restaurant	2,006	17.1	14.8	7.3	12.0	20.2	189.4	1.62	0.094
Commercial kitchen/food preparation area	1,034	18.1	19.0	5.2	10.7	21.3	96.4	1.69	0.093
Small kitchen area	276	14.5	14.9	3.2	6.7	14.9	26.8	1.40	0.097

**Table C14. Electricity consumption and expenditure intensities, 2012**

	Electricity consumption								
				Distribution of building-level intensities (kWh/square foot)			Electricity expenditures		
	per building (thousand kWh)	per square foot (kWh)	per worker (thousand kWh)	25th percentile	Median	75th percentile	per building (thousand dollars)	per square foot (dollars)	per kWh (dollars)
<b>All buildings</b>	237	14.6	14.1	3.8	8.7	17.2	23.3	1.44	0.098
<b>Separate computer areas (more than one may apply)</b>									
Data center or server farm	2,471	21.5	13.2	10.5	17.1	26.4	235.2	2.04	0.095
Computer-based training room	1,229	16.9	13.5	7.5	13.5	21.5	116.2	1.60	0.095
Student or public computer center	851	14.1	16.2	6.6	10.7	15.5	78.7	1.31	0.093
<b>HVAC conservation features (more than one may apply)</b>									
Economizer cycle	897	17.5	15.2	6.8	12.9	21.6	85.4	1.67	0.095
Regular HVAC maintenance	349	16.0	14.2	5.4	10.8	20.4	33.8	1.55	0.097
Building automation system (BAS) <sup>2</sup>	858	18.1	15.8	7.2	12.9	20.9	81.7	1.72	0.095
<b>Window and interior lighting features (more than one may apply)</b>									
Multipaned windows	314	15.6	14.9	4.6	9.6	18.4	30.1	1.49	0.096
Tinted window glass	390	16.2	14.1	5.2	10.8	20.7	37.4	1.55	0.096
Reflective window glass	553	19.0	15.8	5.3	11.3	20.8	52.6	1.81	0.095
External overhangs or awnings	298	17.1	16.3	5.4	11.4	22.0	28.6	1.65	0.096
Skylights or atriums	570	15.0	15.1	4.4	9.0	16.4	54.9	1.45	0.096
Light scheduling	590	17.9	15.5	6.7	12.9	22.8	57.8	1.75	0.098
Occupancy sensors	749	17.0	14.9	6.3	13.2	22.5	72.4	1.64	0.097
Multi-level lighting or dimming	780	18.7	16.9	7.5	14.9	25.6	75.5	1.81	0.097
Daylight harvesting	869	17.8	14.2	3.9	10.0	20.0	84.3	1.73	0.097
Demand responsive lighting	453	16.8	16.3	4.9	12.3	21.0	47.5	1.77	0.105
Building automation system (BAS) for lighting <sup>2</sup>	1,148	19.8	18.1	10.3	16.3	25.6	110.6	1.91	0.096
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>									
Heating	242	14.1	13.0	4.3	9.0	16.9	24.0	1.40	0.099
Cooling	257	14.4	13.2	4.7	9.5	17.8	25.5	1.44	0.100
Lighting	239	14.5	13.6	4.3	9.1	17.3	23.5	1.42	0.098
<b>Annual consumption (kilowatthours)</b>									
10,000 or less	5	1.3	2.4	0.7	1.6	3.0	0.7	0.19	0.142
10,001 to 50,000	27	4.8	5.5	3.6	6.1	9.9	3.2	0.58	0.122
50,001 to 100,000	72	8.2	8.2	7.3	11.9	19.8	8.0	0.91	0.111
100,001 to 500,000	224	13.3	13.2	10.3	17.6	36.7	23.3	1.38	0.104
500,001 to 1,000,000	692	16.4	14.5	11.9	19.2	40.3	67.3	1.59	0.097
1,000,001 to 5,000,000	2,012	18.3	18.6	14.1	19.6	33.1	190.4	1.73	0.095
Over 5,000,000	10,676	25.9	18.0	19.0	26.8	39.5	963.6	2.34	0.090

**Table C14. Electricity consumption and expenditure intensities, 2012**

	Electricity consumption								
				Distribution of building-level intensities (kWh/square foot)			Electricity expenditures		
	per building (thousand kWh)	per square foot (kWh)	per worker (thousand kWh)	25th percentile	Median	75th percentile	per building (thousand dollars)	per square foot (dollars)	per kWh (dollars)
<b>All buildings</b>	237	14.6	14.1	3.8	8.7	17.2	23.3	1.44	0.098

<sup>1</sup>These climate regions were created by the Building America program, sponsored by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE).

<sup>2</sup>In earlier CBECS publications, BAS was referred to as *Energy Management and Control System (EMCS)*.

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

N = No cases in reporting sample.

Notes: • Because of rounding, data may not sum to totals. • See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from <http://www.eia.gov/consumption/commercial/data/2012/> • 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 generation, transmission, and distribution processes. • 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.

Source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Forms EIA-871A and E of the 2012 Commercial Buildings Energy Consumption Survey.

**Table C15. Electricity consumption and conditional energy intensity by Census region, 2012**

	Total electricity consumption (billion kWh)				Total floorspace of buildings using electricity (million square feet)				Electricity energy intensity (kwh/square foot)			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
<b>All buildings</b>	220	249	530	243	15,291	18,560	33,026	17,992	14.4	13.4	16.1	13.5
<b>Building floorspace (square feet)</b>												
1,001 to 5,000	15	25	66	25	996	1,714	3,165	1,616	15.0	14.6	20.7	15.3
5,001 to 10,000	14	22	48	30	1,184	1,816	3,295	2,195	11.7	11.9	14.5	13.8
10,001 to 25,000	24	31	68	36	2,329	2,850	4,965	3,421	10.5	10.8	13.6	10.6
25,001 to 50,000	18	33	69	29	1,628	2,997	4,330	2,716	11.2	11.1	15.8	10.6
50,001 to 100,000	37	40	88	28	2,676	2,688	5,879	2,361	13.8	14.7	14.9	11.7
100,001 to 200,000	44	34	73	38	2,519	2,400	5,122	2,321	17.6	14.2	14.3	16.4
200,001 to 500,000	37	40	70	33	2,232	2,676	3,659	2,084	16.8	14.8	19.1	16.0
Over 500,000	30	25	50	24	1,727	1,418	2,611	1,277	17.5	17.9	19.2	18.6
<b>Principal building activity</b>												
Education	18	33	65	18	2,056	3,173	5,162	1,848	8.7	10.3	12.6	10.0
Food sales	14	9	22	15	316	174	399	363	45.0	50.5	56.2	42.7
Food service	12	16	38	16	292	369	771	387	39.7	43.1	49.7	41.1
Health care	23	22	43	19	1,067	862	1,441	786	22.0	25.1	29.5	24.6
Inpatient	14	14	31	15	538	496	894	447	26.3	28.9	34.3	32.5
Outpatient	9	7	12	5	529	366	548	339	17.6	20.1	21.7	14.3
Lodging	14	16	38	21	1,007	1,058	2,302	1,459	14.0	15.4	16.6	14.1
Mercantile	27	37	93	49	1,644	2,132	4,729	2,815	16.3	17.5	19.7	17.6
Retail (other than mall)	11	16	35	21	825	1,142	2,126	1,336	12.8	14.1	16.3	15.8
Enclosed and strip malls	16	21	58	28	818	990	2,603	1,478	19.9	21.4	22.5	19.1
Office	63	51	88	51	3,703	3,334	5,501	3,414	17.1	15.3	16.0	14.9
Public assembly	13	21	33	13	953	1,585	2,003	1,018	14.1	13.2	16.3	13.2
Public order and safety	5	3	11	Q	345	334	576	Q	15.1	10.3	18.3	Q
Religious worship	4	4	12	3	897	925	2,011	725	4.5	4.5	6.1	4.7
Service	5	11	15	6	813	1,448	1,557	694	6.6	7.3	9.8	8.8
Warehouse and storage	8	16	43	16	1,699	2,395	5,063	3,411	4.9	6.6	8.4	4.8
Other	12	9	26	9	273	433	827	439	43.2	20.2	32.0	20.3
Vacant	Q	2	3	3	Q	336	686	450	Q	5.3	4.0	5.6
<b>Year constructed</b>												
Before 1920	12	6	11	3	1,577	965	949	308	7.9	6.4	11.4	8.1
1920 to 1945	21	16	18	10	1,929	1,724	1,435	778	10.9	9.2	12.4	12.3
1946 to 1959	17	20	31	17	1,581	1,651	2,495	1,480	10.9	12.2	12.4	11.2
1960 to 1969	29	32	58	29	2,229	2,667	3,398	1,904	13.0	11.8	16.9	15.3
1970 to 1979	37	44	59	30	1,900	2,565	3,557	2,535	19.7	17.1	16.7	11.8
1980 to 1989	27	37	124	46	1,713	2,560	6,720	3,797	15.5	14.5	18.4	12.2
1990 to 1999	40	36	95	42	2,014	2,720	5,678	2,706	19.7	13.3	16.7	15.6
2000 to 2003	17	24	52	19	974	1,495	3,298	1,426	17.2	16.0	15.7	13.2
2004 to 2007	8	18	41	30	476	1,236	2,825	1,948	16.5	14.4	14.5	15.6
2008 to 2012	12	17	42	Q	898	976	2,669	1,110	13.6	17.1	15.9	15.9
<b>Climate region<sup>1</sup></b>												
Very cold/Cold	142	210	N	67	10,283	15,875	N	5,128	13.8	13.3	N	13.1
Mixed-humid	79	39	298	N	5,008	2,685	19,729	N	15.7	14.5	15.1	N
Mixed-dry/Hot-dry	N	N	Q	139	N	N	Q	10,248	N	N	8.9	13.6
Hot-humid	N	N	219	Q	N	N	11,802	Q	N	N	18.6	Q
Marine	N	N	N	35	N	N	N	2,416	N	N	N	14.6

**Table C15. Electricity consumption and conditional energy intensity by Census region, 2012**

	Total electricity consumption (billion kWh)				Total floorspace of buildings using electricity (million square feet)				Electricity energy intensity (kwh/square foot)			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
<b>All buildings</b>	220	249	530	243	15,291	18,560	33,026	17,992	14.4	13.4	16.1	13.5
<b>Number of floors</b>												
One	58	99	269	119	3,693	7,453	17,493	9,414	15.6	13.3	15.4	12.7
Two	52	56	100	51	4,067	4,789	6,803	4,269	12.8	11.8	14.7	11.9
Three	30	31	35	13	2,409	2,590	2,028	1,075	12.6	12.0	17.1	12.3
Four to nine	50	46	95	40	3,380	2,850	5,002	2,185	14.7	16.1	19.0	18.5
Ten or more	31	17	31	19	1,742	879	1,698	1,049	17.7	19.0	18.4	18.4
<b>Elevators and escalators (more than one may apply)</b>												
Any elevators	129	115	202	94	7,892	7,487	10,943	5,620	16.3	15.3	18.4	16.8
<b>Number of elevators</b>												
One	34	39	55	19	2,560	3,201	3,665	1,693	13.1	12.2	15.0	11.2
Two to five	52	43	89	39	3,146	2,731	4,568	2,268	16.4	15.7	19.4	17.4
Six or more	43	33	58	36	2,186	1,554	2,711	1,658	19.8	21.1	21.3	21.7
Any escalators	15	15	21	16	798	880	1,057	905	18.2	17.1	19.8	17.3
<b>Number of workers (main shift)</b>												
Fewer than 5	16	31	61	25	2,449	3,926	6,086	3,070	6.7	7.8	10.1	8.2
5 to 9	14	23	51	25	1,282	1,910	3,550	2,227	10.5	11.9	14.3	11.0
10 to 19	14	26	63	30	1,390	1,880	3,814	2,538	9.8	13.6	16.5	11.8
20 to 49	32	45	94	49	1,903	3,372	5,611	3,628	16.7	13.2	16.8	13.5
50 to 99	34	43	106	31	2,385	2,761	6,076	2,254	14.4	15.4	17.5	13.8
100 to 249	40	37	74	34	2,530	2,314	4,163	1,934	15.8	16.1	17.8	17.7
250 or more	71	46	81	49	3,352	2,397	3,726	2,341	21.1	19.3	21.6	20.8
<b>Weekly operating hours</b>												
Fewer than 40	4	11	13	7	976	1,771	2,508	1,293	4.4	6.1	5.2	5.3
40 to 48	21	26	71	36	2,343	3,027	6,737	3,631	9.0	8.5	10.6	10.0
49 to 60	42	50	103	44	3,332	4,356	8,480	4,257	12.6	11.4	12.1	10.4
61 to 84	45	53	99	52	3,313	3,628	5,248	3,611	13.7	14.6	18.8	14.4
85 to 167	36	47	80	37	1,881	2,411	3,133	1,939	19.0	19.6	25.6	19.0
Open continuously	72	63	165	66	3,447	3,366	6,920	3,262	20.9	18.7	23.8	20.3
<b>Ownership and occupancy</b>												
Nongovernment owned	174	192	421	201	11,670	13,852	25,397	14,701	14.9	13.8	16.6	13.7
Owner occupied	72	95	205	84	5,385	7,258	12,013	5,665	13.5	13.0	17.1	14.8
Leased to tenant(s)	76	69	164	89	4,415	4,660	9,931	6,803	17.1	14.9	16.5	13.1
Owner occupied and leased	26	27	52	27	1,786	1,743	3,242	2,050	14.5	15.6	16.1	13.3
Unoccupied	Q	Q	(*)	Q	Q	Q	211	Q	Q	Q	2.2	Q
Government owned	46	58	109	42	3,621	4,708	7,629	3,291	12.8	12.3	14.3	12.8
Federal	Q	5	13	3	Q	275	835	204	Q	16.4	15.8	12.7
State	21	16	29	14	1,149	1,142	2,110	1,122	18.0	14.3	13.8	12.9
Local	23	37	67	25	2,213	3,291	4,684	1,965	10.5	11.2	14.2	12.8
<b>Party responsible for operation and maintenance of energy systems</b>												
Building owner	180	219	435	195	13,066	16,466	27,680	14,450	13.8	13.3	15.7	13.5
Business owner or tenant	34	26	78	44	1,814	1,712	4,384	3,223	18.8	15.0	17.9	13.5
Property management	Q	Q	11	Q	Q	Q	652	Q	Q	Q	16.8	Q
Other	Q	Q	6	Q	Q	Q	309	Q	Q	Q	18.5	Q



**Table C15. Electricity consumption and conditional energy intensity by Census region, 2012**

	Total electricity consumption (billion kWh)				Total floorspace of buildings using electricity (million square feet)				Electricity energy intensity (kwh/square foot)			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
<b>All buildings</b>	220	249	530	243	15,291	18,560	33,026	17,992	14.4	13.4	16.1	13.5
<b>Provider of direct input on energy-related equipment purchases</b>												
Building owner	183	222	449	207	13,324	16,800	28,647	15,376	13.7	13.2	15.7	13.5
Business owner or tenant	28	20	61	32	1,393	1,274	3,233	2,261	20.3	15.9	19.0	14.2
Property management	Q	Q	4	Q	Q	Q	345	Q	Q	Q	12.4	Q
Other	6	Q	15	2	314	345	801	221	18.3	12.8	18.9	10.0
<b>Number of establishments</b>												
One	131	156	339	151	9,443	12,361	21,551	11,129	13.9	12.6	15.7	13.6
2 to 5	47	62	95	45	3,305	4,207	6,503	3,742	14.1	14.7	14.7	12.1
6 to 10	12	12	31	16	775	774	1,661	1,103	14.9	15.8	18.6	14.3
11 to 20	14	9	32	13	833	493	1,560	789	16.8	18.5	20.8	16.5
More than 20	17	10	32	17	832	532	1,419	1,011	20.4	18.3	22.6	17.3
Currently unoccupied	Q	Q	1	Q	Q	Q	332	218	Q	Q	1.7	3.5
<b>Predominant exterior wall material</b>												
Brick, stone, or stucco	104	123	275	94	7,562	8,925	16,216	6,905	13.8	13.8	17.0	13.6
Concrete (block or poured)	57	54	140	72	3,574	3,937	7,974	4,920	15.9	13.8	17.6	14.6
Concrete panels	16	29	39	36	804	1,667	2,994	2,982	20.0	17.3	13.2	12.1
Siding or shingles	17	18	17	19	1,533	1,351	1,365	1,316	11.1	13.6	12.8	14.2
Metal panels	10	16	43	11	954	2,061	3,821	1,219	10.4	7.5	11.2	8.8
Window glass	12	Q	8	7	432	Q	360	323	27.3	Q	23.5	20.9
Other	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
<b>Predominant roof material</b>												
Metal surfacing	16	28	95	29	1,541	3,128	7,804	2,551	10.3	9.1	12.2	11.5
Synthetic or rubber	90	110	148	75	5,860	7,413	7,664	4,676	15.3	14.8	19.3	16.0
Built-up	64	56	148	69	3,711	3,923	8,576	5,096	17.2	14.3	17.3	13.6
Slate or tile shingles	8	4	29	18	826	390	1,824	1,182	9.1	10.9	15.7	15.3
Wooden materials (including shingles)	2	Q	6	5	149	Q	375	469	13.0	Q	15.3	9.7
Asphalt, fiberglass, or other shingles	34	44	82	37	2,630	3,221	5,579	3,249	12.8	13.6	14.7	11.4
Concrete	5	Q	16	6	298	Q	802	403	18.2	Q	20.2	15.8
Other	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
<b>Roof characteristics</b>												
Roof tilt												
Flat	164	159	320	157	9,995	10,449	17,606	10,695	16.4	15.2	18.2	14.6
Shallow pitch	29	58	147	64	2,422	4,880	10,607	5,110	12.0	11.9	13.9	12.5
Steeper pitch	28	32	63	22	2,874	3,230	4,812	2,187	9.6	10.0	13.1	10.2
Cool roof	55	60	131	79	3,379	3,666	7,443	4,892	16.3	16.4	17.6	16.2

**Table C15. Electricity consumption and conditional energy intensity by Census region, 2012**

	Total electricity consumption (billion kWh)				Total floorspace of buildings using electricity (million square feet)				Electricity energy intensity (kwh/square foot)			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
<b>All buildings</b>	220	249	530	243	15,291	18,560	33,026	17,992	14.4	13.4	16.1	13.5
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>												
Any type of renovation	142	142	258	107	9,260	10,056	15,145	7,451	15.3	14.1	17.0	14.4
Addition or annex	38	61	78	28	2,574	4,082	4,556	1,757	14.7	15.0	17.0	15.9
Reduction in floorspace	Q	5	13	4	584	253	626	270	22.8	20.7	21.3	13.7
Roof replacement	82	80	125	42	5,457	5,375	6,838	3,097	15.1	14.9	18.4	13.5
Exterior wall replacement	11	17	30	12	910	1,072	1,435	805	11.8	16.2	21.1	14.8
Interior wall reconfiguration	80	78	133	65	5,019	5,182	6,794	4,255	15.9	15.1	19.6	15.4
Window replacement	41	37	71	27	3,404	3,039	3,761	2,048	12.2	12.0	18.8	13.3
HVAC equipment upgrade	107	93	164	69	6,477	6,539	9,234	4,398	16.5	14.3	17.8	15.6
Lighting upgrade	92	89	159	70	6,009	6,102	8,749	4,554	15.2	14.6	18.2	15.3
Electrical upgrade	62	58	101	44	3,968	4,002	5,411	2,707	15.6	14.5	18.7	16.2
Plumbing system upgrade	53	50	80	39	3,378	3,445	4,609	2,375	15.6	14.7	17.3	16.4
Insulation upgrade	26	31	46	23	1,749	2,195	2,305	1,304	14.9	14.3	19.8	17.5
Fire, safety, or security upgrade	71	63	105	43	4,602	3,812	5,850	2,899	15.4	16.4	18.0	14.9
Structural upgrade	9	14	27	19	732	885	1,201	1,094	12.2	16.1	22.6	17.0
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
No renovations	66	90	230	118	5,133	7,527	15,212	9,431	12.9	12.0	15.1	12.6
Buildings constructed 2008 or later	12	17	42	Q	898	976	2,669	1,110	13.6	17.1	15.9	15.9
<b>Energy sources (more than one may apply)</b>												
Electricity	220	249	530	243	15,291	18,560	33,026	17,992	14.4	13.4	16.1	13.5
Natural gas	172	205	335	191	11,068	15,025	19,900	12,732	15.5	13.6	16.9	15.0
Fuel oil	95	73	153	60	6,079	3,935	7,051	3,135	15.7	18.7	21.7	19.2
District heat	37	15	35	16	1,981	906	2,191	886	18.7	16.3	16.1	18.4
District chilled water	22	10	39	14	794	585	2,479	749	27.4	17.6	15.9	18.8
Propane	24	26	42	19	1,741	1,893	2,567	1,484	13.6	13.6	16.4	12.7
Other	12	8	16	14	1,078	783	907	1,034	10.8	9.9	17.8	13.8
<b>Space-heating energy sources</b>												
Electricity	115	130	384	146	7,276	8,638	22,558	10,559	15.7	15.0	17.0	13.9
Electricity main	40	49	269	81	2,188	2,982	15,118	5,917	18.5	16.4	17.8	13.7
Electricity secondary	74	81	114	65	5,088	5,655	7,440	4,642	14.6	14.3	15.4	14.1
Other excluding electricity	103	118	116	87	7,768	9,402	7,941	5,912	13.2	12.5	14.6	14.7
Buildings without heating	Q	2	31	10	247	520	2,527	1,521	Q	3.2	12.2	6.5
<b>Primary space-heating energy source</b>												
Electricity	40	49	269	81	2,188	2,982	15,118	5,917	18.5	16.4	17.8	13.7
Natural gas	120	173	186	133	8,366	13,084	12,312	9,226	14.3	13.2	15.1	14.4
Fuel oil	17	Q	3	Q	1,988	Q	299	Q	8.4	Q	8.9	Q
District heat	37	14	34	16	1,954	864	2,112	867	18.7	16.4	16.3	18.4
Propane	3	7	7	2	377	723	613	235	7.6	9.1	11.1	6.8
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	8.1
<b>Cooling energy sources</b>												
Electricity	197	239	499	224	13,303	16,826	29,950	15,955	14.8	14.2	16.7	14.1
Other excluding electricity	Q	5	25	Q	646	317	1,784	512	26.2	14.6	14.3	18.4
Buildings without cooling	7	6	6	9	1,342	1,416	1,292	1,525	4.9	4.0	4.6	6.1



**Table C15. Electricity consumption and conditional energy intensity by Census region, 2012**

	Total electricity consumption (billion kWh)				Total floorspace of buildings using electricity (million square feet)				Electricity energy intensity (kwh/square foot)			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
<b>All buildings</b>	220	249	530	243	15,291	18,560	33,026	17,992	14.4	13.4	16.1	13.5
<b>Heating equipment (more than one may apply)</b>												
Heat pumps	21	16	109	33	1,397	1,068	6,927	2,453	15.2	15.3	15.7	13.4
Furnaces	15	29	45	18	1,244	2,511	3,363	1,536	11.8	11.6	13.3	11.5
Individual space heaters	71	71	86	44	4,918	5,719	6,519	3,594	14.5	12.4	13.1	12.2
District heat	37	15	35	16	1,981	906	2,171	867	18.7	16.3	16.1	18.4
Boilers	87	96	107	59	6,442	6,666	5,784	3,545	13.6	14.4	18.5	16.8
Packaged heating units	110	156	344	161	7,186	10,894	20,049	11,059	15.3	14.4	17.2	14.5
Other	Q	7	15	8	Q	370	550	339	Q	19.3	27.3	22.7
<b>Cooling equipment (more than one may apply)</b>												
Residential-type central air conditioners	23	45	81	38	1,695	4,347	5,895	2,828	13.7	10.3	13.7	13.3
Heat pumps	22	17	112	38	1,490	1,024	7,108	2,916	14.5	16.4	15.8	13.1
Individual air conditioners	47	37	56	20	3,845	2,585	4,263	1,727	12.1	14.4	13.2	11.5
District chilled water	22	10	39	14	794	585	2,479	749	27.4	17.6	15.9	18.8
Central chillers	63	79	137	49	3,489	4,475	6,460	2,617	18.2	17.6	21.2	18.8
Packaged air conditioning units	133	148	306	140	8,697	9,816	17,185	9,455	15.3	15.1	17.8	14.8
Swamp coolers	Q	Q	8	18	Q	Q	469	1,340	Q	Q	17.2	13.3
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Main equipment replaced since 1990 (more than one may apply)</b>												
Heating	69	93	162	64	5,356	6,886	10,048	5,268	12.9	13.6	16.1	12.1
Cooling	87	97	191	70	6,314	7,210	11,668	5,510	13.8	13.5	16.3	12.8
<b>Water-heating equipment</b>												
Centralized system	137	158	302	132	9,128	11,316	17,460	9,631	15.0	13.9	17.3	13.7
Distributed system	30	26	69	33	2,383	2,335	4,938	3,032	12.4	11.3	13.9	11.0
Combination of centralized and distributed system	52	61	142	69	3,122	3,942	7,863	3,866	16.6	15.4	18.1	17.8
<b>Lighting equipment types (more than one may apply)</b>												
Incandescent	117	137	248	109	7,565	9,038	14,581	7,222	15.5	15.2	17.0	15.1
Standard fluorescent	214	242	509	232	14,473	17,514	31,363	16,732	14.8	13.8	16.2	13.9
Compact fluorescent	174	179	365	170	10,771	11,841	20,042	11,163	16.2	15.1	18.2	15.3
High-intensity discharge (HID)	76	87	158	61	4,510	5,357	9,347	4,182	16.8	16.2	16.9	14.7
Halogen	78	101	206	93	5,267	6,169	10,970	5,653	14.9	16.5	18.7	16.5
LED	90	89	159	77	4,752	5,148	7,559	4,612	18.9	17.3	21.1	16.6
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Refrigeration equipment (more than one may apply)</b>												
Any refrigeration	207	233	491	219	13,612	16,570	28,755	14,709	15.2	14.1	17.1	14.9
Walk-in units	124	118	250	115	5,870	6,331	10,777	5,384	21.1	18.6	23.2	21.3
Cases or cabinets	120	122	222	118	6,066	6,803	10,386	5,464	19.9	17.9	21.4	21.6
Large cold storage areas	13	18	44	23	569	972	1,700	930	23.4	18.6	25.8	24.3
Commercial ice makers	116	126	290	122	5,573	6,598	14,516	6,048	20.7	19.2	19.9	20.1
Residential-type or compact units	169	193	377	172	11,436	14,257	24,189	12,499	14.8	13.5	15.6	13.8
Vending machines	144	149	315	133	8,448	9,673	17,627	8,188	17.1	15.4	17.9	16.3
No refrigeration	14	16	39	24	1,679	1,990	4,271	3,283	8.1	8.3	9.1	7.3

**Table C15. Electricity consumption and conditional energy intensity by Census region, 2012**

	Total electricity consumption (billion kWh)				Total floorspace of buildings using electricity (million square feet)				Electricity energy intensity (kwh/square foot)			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
<b>All buildings</b>	220	249	530	243	15,291	18,560	33,026	17,992	14.4	13.4	16.1	13.5
<b>Office equipment (more than one may apply)</b>												
Desktop computers	210	238	500	229	14,116	16,861	29,686	16,400	14.9	14.1	16.9	14.0
With flat screen monitors	209	236	493	228	13,956	16,628	29,347	16,229	14.9	14.2	16.8	14.1
With multiple monitors	94	104	214	111	5,289	6,407	12,095	7,155	17.7	16.2	17.7	15.6
Laptop computers	179	196	412	181	11,774	13,895	24,921	12,896	15.2	14.1	16.5	14.0
Dedicated servers	162	173	359	175	10,087	11,271	20,565	11,447	16.1	15.3	17.4	15.3
Laser printers	162	174	357	162	10,317	12,158	20,460	11,320	15.7	14.3	17.5	14.3
Inkjet printers	88	104	226	106	6,559	7,682	14,297	7,697	13.4	13.6	15.8	13.8
FAX machines	189	206	443	191	12,733	14,439	25,795	13,715	14.8	14.3	17.2	13.9
Photocopiers	178	185	371	175	11,654	13,053	22,099	12,471	15.2	14.1	16.8	14.0
<b>Number of desktop computers</b>												
None	11	11	30	13	1,175	1,698	3,340	1,592	9.0	6.8	9.0	8.4
1 to 4	26	41	98	41	2,457	3,582	6,273	3,356	10.4	11.4	15.7	12.1
5 to 9	20	28	60	26	1,392	2,120	3,528	2,381	14.2	13.1	16.9	11.1
10 to 19	22	24	52	31	1,644	1,826	3,531	2,388	13.7	13.1	14.6	13.1
20 to 49	31	41	97	40	2,327	2,591	5,347	2,830	13.5	15.8	18.2	14.3
50 to 99	20	28	48	23	1,365	1,984	3,243	1,692	14.9	14.3	14.8	13.5
100 to 249	39	31	60	30	2,303	2,202	3,391	1,832	17.1	14.0	17.6	16.5
250 or more	51	45	86	38	2,628	2,556	4,373	1,921	19.4	17.7	19.7	19.6
<b>Number of laptop computers</b>												
None	41	53	119	62	3,517	4,665	8,104	5,096	11.7	11.3	14.6	12.2
1 to 4	38	60	121	53	3,350	5,045	8,080	4,687	11.3	11.9	15.0	11.4
5 to 9	25	23	56	22	1,406	1,478	3,568	1,894	18.1	15.8	15.6	11.4
10 to 19	22	20	56	32	1,500	1,473	3,386	1,984	14.4	13.8	16.7	16.2
20 to 49	22	32	61	38	1,471	2,195	3,794	2,183	15.0	14.8	16.2	17.5
50 to 99	17	21	34	14	1,218	1,312	1,827	877	13.9	15.7	18.5	16.1
100 to 249	24	16	39	11	1,414	1,022	2,108	673	17.3	15.4	18.6	16.0
250 or more	31	24	44	11	1,415	1,370	2,159	598	21.8	17.4	20.2	17.9
<b>Number of dedicated servers</b>												
None	58	76	172	68	5,205	7,288	12,461	6,545	11.2	10.5	13.8	10.3
1 to 4	82	102	217	96	6,193	7,200	13,500	7,203	13.3	14.1	16.1	13.3
5 to 9	18	23	37	22	1,092	1,435	2,226	1,487	16.6	16.1	16.8	14.8
10 to 19	25	16	44	24	1,117	1,006	2,325	1,263	22.8	16.4	18.7	18.9
20 to 49	11	17	29	13	688	982	1,309	779	16.4	17.0	22.3	16.7
50 or more	25	15	32	20	996	649	1,204	714	24.9	23.0	26.4	28.5
<b>Number of photocopiers</b>												
None	43	65	159	68	3,637	5,507	10,927	5,521	11.8	11.8	14.6	12.3
One	31	48	88	48	2,604	3,942	6,129	4,405	12.0	12.0	14.3	10.9
2 to 4	43	61	132	56	3,581	4,583	8,063	4,085	12.1	13.3	16.4	13.7
5 to 9	35	30	56	23	1,946	2,167	3,203	1,547	17.9	14.0	17.4	15.0
10 or more	68	46	96	47	3,523	2,361	4,704	2,434	19.3	19.3	20.3	19.5

**Table C15. Electricity consumption and conditional energy intensity by Census region, 2012**

	Total electricity consumption (billion kWh)				Total floorspace of buildings using electricity (million square feet)				Electricity energy intensity (kwh/square foot)			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
<b>All buildings</b>	220	249	530	243	15,291	18,560	33,026	17,992	14.4	13.4	16.1	13.5
<b>Number of TVs or video displays</b>												
None	40	46	89	49	3,811	4,731	8,229	5,343	10.4	9.7	10.8	9.1
One	17	26	55	23	1,416	2,292	4,276	2,006	12.0	11.2	12.9	11.4
2 to 4	36	52	111	38	2,930	4,056	6,314	3,165	12.2	12.8	17.5	11.9
5 to 9	33	21	63	33	1,824	1,450	3,162	1,711	17.8	14.6	19.9	19.4
10 to 19	33	35	57	22	1,799	1,893	3,051	1,424	18.6	18.4	18.6	15.2
20 to 49	24	25	60	31	1,443	1,668	3,188	1,759	16.5	14.8	18.7	17.9
50 to 99	7	15	38	17	382	929	2,036	1,031	18.2	16.3	18.8	16.4
100 or more	31	30	58	30	1,685	1,541	2,769	1,552	18.4	19.4	20.8	19.6
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>												
Snack bar or concession stand	36	37	78	40	1,924	2,262	3,763	1,934	18.7	16.5	20.6	20.7
Fast food or small restaurant	37	39	97	51	1,751	1,774	3,797	2,464	20.9	21.9	25.6	20.9
Cafeteria or large restaurant	62	52	103	43	3,585	3,455	5,947	2,236	17.4	15.0	17.3	19.5
Commercial kitchen/food preparation area	58	60	117	57	3,254	3,952	6,092	2,852	17.8	15.3	19.2	19.9
Small kitchen area	41	42	83	37	3,105	3,413	5,121	2,414	13.1	12.4	16.2	15.5
<b>Separate computer areas (more than one may apply)</b>												
Data center or server farm	54	49	82	54	2,377	2,488	3,873	2,366	22.5	19.6	21.3	22.7
Computer-based training room	51	65	128	56	3,341	3,950	7,121	3,311	15.2	16.4	17.9	17.0
Student or public computer center	32	41	94	37	2,710	3,338	5,999	2,293	11.7	12.2	15.6	16.0
<b>HVAC conservation features (more than one may apply)</b>												
Economizer cycle	125	128	173	112	6,911	7,916	9,051	6,870	18.1	16.2	19.1	16.3
Regular HVAC maintenance	203	223	470	212	12,982	15,173	26,573	14,517	15.6	14.7	17.7	14.6
Building automation system (BAS) <sup>2</sup>	126	133	279	132	6,934	7,996	14,578	7,542	18.2	16.7	19.1	17.4
<b>Window and interior lighting features (more than one may apply)</b>												
Multipaned windows	170	213	387	160	11,389	15,143	22,263	10,935	15.0	14.1	17.4	14.7
Tinted window glass	109	140	320	150	6,309	9,002	18,538	10,550	17.3	15.6	17.2	14.2
Reflective window glass	44	65	122	70	2,344	3,771	5,426	4,296	18.6	17.3	22.4	16.3
External overhangs or awnings	81	102	250	117	4,290	6,476	13,763	7,533	18.8	15.8	18.1	15.5
Skylights or atriums	64	57	136	74	4,035	4,089	8,064	5,889	15.7	14.0	16.9	12.6
Light scheduling	107	107	207	121	5,838	6,651	10,737	7,038	18.3	16.1	19.2	17.2
Occupancy sensors	124	124	236	124	7,732	7,916	11,922	8,300	16.0	15.7	19.8	14.9
Multi-level lighting or dimming	44	55	109	64	2,335	3,177	5,424	3,598	18.9	17.3	20.1	17.8
Daylight harvesting	18	27	36	28	1,032	1,522	1,996	1,564	17.5	18.0	17.8	17.8
Demand responsive lighting	10	15	34	21	648	912	1,692	1,487	14.8	16.7	20.2	14.0
Building automation system (BAS) for lighting <sup>2</sup>	47	45	91	57	2,159	2,448	4,507	2,953	21.6	18.2	20.1	19.3
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>												
Heating	173	185	354	181	12,285	14,110	23,309	13,442	14.1	13.1	15.2	13.4
Cooling	167	180	375	180	11,450	13,442	24,448	13,176	14.6	13.4	15.3	13.6
Lighting	200	230	482	225	14,259	17,263	30,541	16,531	14.1	13.3	15.8	13.6

**Table C15. Electricity consumption and conditional energy intensity by Census region, 2012**

	Total electricity consumption (billion kWh)				Total floorspace of buildings using electricity (million square feet)				Electricity energy intensity (kwh/square foot)			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
<b>All buildings</b>	220	249	530	243	15,291	18,560	33,026	17,992	14.4	13.4	16.1	13.5
<b>Annual consumption (kilowatthours)</b>												
10,000 or less	1	1	1	1	558	858	978	689	1.2	1.4	1.3	1.3
10,001 to 50,000	7	11	18	13	1,818	2,506	3,555	2,623	4.0	4.5	5.1	5.0
50,001 to 100,000	8	13	27	14	960	1,663	3,130	1,849	8.4	7.9	8.6	7.7
100,001 to 500,000	40	53	125	65	3,346	4,271	8,470	5,226	11.9	12.3	14.8	12.5
500,001 to 1,000,000	23	37	78	27	1,805	2,205	4,202	1,838	12.9	16.6	18.6	14.6
1,000,001 to 5,000,000	68	84	160	67	4,070	4,815	8,197	3,657	16.7	17.4	19.5	18.4
Over 5,000,000	73	51	121	55	2,733	2,242	4,494	2,109	26.8	22.6	26.9	26.2

<sup>1</sup>These climate regions were created by the Building America program, sponsored by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE).

<sup>2</sup>In earlier CBECS publications, BAS was referred to as *Energy Management and Control System (EMCS)*.

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

N = No cases in reporting sample.

(\*) = Value rounds to zero in the units displayed.

Notes: ● Because of rounding, data may not sum to totals. ● See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from <http://www.eia.gov/consumption/commercial/data/2012/>  
● 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 generation, transmission, and distribution processes. ● 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.

Source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Forms EIA-871A and E of the 2012 Commercial Buildings Energy Consumption Survey.

**Table C16. Electricity expenditures by Census region, 2012**

	Total electricity expenditures (million dollars)				Electricity expenditures (dollars)							
					per kWh				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>	25,123	21,717	47,473	27,563	0.11	0.09	0.09	0.11	1.64	1.17	1.44	1.53
<b>Building floorspace (square feet)</b>												
1,001 to 5,000	1,901	2,425	6,304	3,003	0.13	0.10	0.10	0.12	1.91	1.41	1.99	1.86
5,001 to 10,000	1,688	1,967	4,610	3,712	0.12	0.09	0.10	0.12	1.43	1.08	1.40	1.69
10,001 to 25,000	3,214	2,811	6,313	4,343	0.13	0.09	0.09	0.12	1.38	0.99	1.27	1.27
25,001 to 50,000	2,110	2,999	6,083	3,357	0.12	0.09	0.09	0.12	1.30	1.00	1.40	1.24
50,001 to 100,000	3,969	3,449	8,064	2,991	0.11	0.09	0.09	0.11	1.48	1.28	1.37	1.27
100,001 to 200,000	4,249	2,907	6,272	4,079	0.10	0.09	0.09	0.11	1.69	1.21	1.22	1.76
200,001 to 500,000	4,328	3,167	5,671	3,541	0.12	0.08	0.08	0.11	1.94	1.18	1.55	1.70
Over 500,000	3,665	1,991	4,156	2,537	0.12	0.08	0.08	0.11	2.12	1.40	1.59	1.99
<b>Principal building activity</b>												
Education	2,038	2,824	5,914	2,116	0.11	0.09	0.09	0.12	0.99	0.89	1.15	1.15
Food sales	1,477	756	1,970	1,516	0.10	0.09	0.09	0.10	4.67	4.34	4.94	4.18
Food service	1,341	1,363	3,396	1,970	0.12	0.09	0.09	0.12	4.59	3.69	4.40	5.10
Health care	2,495	1,607	3,491	1,992	0.11	0.07	0.08	0.10	2.34	1.86	2.42	2.53
Inpatient	1,541	1,007	2,421	1,466	0.11	0.07	0.08	0.10	2.87	2.03	2.71	3.28
Outpatient	954	600	1,070	526	0.10	0.08	0.09	0.11	1.80	1.64	1.95	1.55
Lodging	1,424	1,324	3,344	2,407	0.10	0.08	0.09	0.12	1.41	1.25	1.45	1.65
Mercantile	3,140	3,263	8,507	5,106	0.12	0.09	0.09	0.10	1.91	1.53	1.80	1.81
Retail (other than mall)	1,333	1,461	3,094	2,257	0.13	0.09	0.09	0.11	1.61	1.28	1.46	1.69
Enclosed and strip malls	1,807	1,802	5,413	2,850	0.11	0.08	0.09	0.10	2.21	1.82	2.08	1.93
Office	7,357	4,592	8,459	5,833	0.12	0.09	0.10	0.11	1.99	1.38	1.54	1.71
Public assembly	1,530	1,908	2,872	1,578	0.11	0.09	0.09	0.12	1.61	1.20	1.43	1.55
Public order and safety	660	275	798	Q	0.13	0.08	0.08	Q	1.91	0.82	1.39	Q
Religious worship	430	393	1,245	446	0.11	0.09	0.10	0.13	0.48	0.42	0.62	0.62
Service	665	1,078	1,559	819	0.12	0.10	0.10	0.13	0.82	0.74	1.00	1.18
Warehouse and storage	1,059	1,429	3,727	2,228	0.13	0.09	0.09	0.14	0.62	0.60	0.74	0.65
Other	1,416	752	1,917	957	0.12	0.09	0.07	0.11	5.19	1.74	2.32	2.18
Vacant	Q	153	276	290	Q	0.09	0.10	0.11	Q	0.46	0.40	0.64
<b>Year constructed</b>												
Before 1920	1,561	594	1,097	263	0.13	0.10	0.10	0.10	0.99	0.62	1.16	0.85
1920 to 1945	2,856	1,388	1,787	1,248	0.14	0.09	0.10	0.13	1.48	0.81	1.25	1.60
1946 to 1959	2,173	1,759	2,734	1,789	0.13	0.09	0.09	0.11	1.37	1.07	1.10	1.21
1960 to 1969	3,500	2,627	4,730	3,469	0.12	0.08	0.08	0.12	1.57	0.98	1.39	1.82
1970 to 1979	3,657	3,931	5,207	3,226	0.10	0.09	0.09	0.11	1.93	1.53	1.46	1.27
1980 to 1989	3,066	3,264	10,821	5,692	0.12	0.09	0.09	0.12	1.79	1.27	1.61	1.50
1990 to 1999	4,227	3,200	8,594	4,458	0.11	0.09	0.09	0.11	2.10	1.18	1.51	1.65
2000 to 2003	1,860	2,153	4,650	2,010	0.11	0.09	0.09	0.11	1.91	1.44	1.41	1.41
2004 to 2007	873	1,558	3,821	3,309	0.11	0.09	0.09	0.11	1.84	1.26	1.35	1.70
2008 to 2012	1,349	1,243	4,032	Q	0.11	0.07	0.10	0.12	1.50	1.27	1.51	1.89
<b>Climate region<sup>1</sup></b>												
Very cold/Cold	15,980	18,390	N	5,702	0.11	0.09	N	0.09	1.55	1.16	N	1.11
Mixed-humid	9,142	3,327	26,907	N	0.12	0.09	0.09	N	1.83	1.24	1.36	N
Mixed-dry/Hot-dry	N	N	Q	17,386	N	N	0.07	0.12	N	N	0.64	1.70
Hot-humid	N	N	19,604	Q	N	N	0.09	Q	N	N	1.66	Q
Marine	N	N	N	3,910	N	N	N	0.11	N	N	N	1.62



**Table C16. Electricity expenditures by Census region, 2012**

	Total electricity expenditures (million dollars)				Electricity expenditures (dollars)							
					per kWh				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>	25,123	21,717	47,473	27,563	0.11	0.09	0.09	0.11	1.64	1.17	1.44	1.53
<b>Number of floors</b>												
One	6,488	8,881	24,763	13,850	0.11	0.09	0.09	0.12	1.76	1.19	1.42	1.47
Two	5,648	5,103	9,009	5,624	0.11	0.09	0.09	0.11	1.39	1.07	1.32	1.32
Three	3,715	2,740	2,999	1,560	0.12	0.09	0.09	0.12	1.54	1.06	1.48	1.45
Four to nine	5,262	3,680	7,937	4,547	0.11	0.08	0.08	0.11	1.56	1.29	1.59	2.08
Ten or more	4,011	1,313	2,766	1,982	0.13	0.08	0.09	0.10	2.30	1.49	1.63	1.89
<b>Elevators and escalators (more than one may apply)</b>												
Any elevators	14,315	9,452	17,324	10,337	0.11	0.08	0.09	0.11	1.81	1.26	1.58	1.84
Number of elevators												
One	3,286	3,384	4,972	2,083	0.10	0.09	0.09	0.11	1.28	1.06	1.36	1.23
Two to five	5,821	3,526	7,349	4,347	0.11	0.08	0.08	0.11	1.85	1.29	1.61	1.92
Six or more	5,207	2,542	5,003	3,907	0.12	0.08	0.09	0.11	2.38	1.64	1.85	2.36
Any escalators	1,752	1,206	1,779	1,558	0.12	0.08	0.08	0.10	2.20	1.37	1.68	1.72
<b>Number of workers (main shift)</b>												
Fewer than 5	2,129	2,832	5,768	3,083	0.13	0.09	0.09	0.12	0.87	0.72	0.95	1.00
5 to 9	1,683	2,248	4,822	2,866	0.12	0.10	0.09	0.12	1.31	1.18	1.36	1.29
10 to 19	1,693	2,339	5,789	3,734	0.12	0.09	0.09	0.12	1.22	1.24	1.52	1.47
20 to 49	3,549	3,805	8,419	5,466	0.11	0.09	0.09	0.11	1.86	1.13	1.50	1.51
50 to 99	3,737	3,678	9,163	3,492	0.11	0.09	0.09	0.11	1.57	1.33	1.51	1.55
100 to 249	4,430	3,090	6,366	3,743	0.11	0.08	0.09	0.11	1.75	1.34	1.53	1.94
250 or more	7,901	3,725	7,147	5,178	0.11	0.08	0.09	0.11	2.36	1.55	1.92	2.21
<b>Weekly operating hours</b>												
Fewer than 40	515	1,052	1,258	915	0.12	0.10	0.10	0.13	0.53	0.59	0.50	0.71
40 to 48	2,452	2,462	6,602	4,535	0.12	0.10	0.09	0.12	1.05	0.81	0.98	1.25
49 to 60	5,100	4,500	9,782	5,103	0.12	0.09	0.10	0.12	1.53	1.03	1.15	1.20
61 to 84	5,164	4,859	9,150	6,066	0.11	0.09	0.09	0.12	1.56	1.34	1.74	1.68
85 to 167	4,201	3,776	7,007	3,921	0.12	0.08	0.09	0.11	2.23	1.57	2.24	2.02
Open continuously	7,690	5,068	13,674	7,023	0.11	0.08	0.08	0.11	2.23	1.51	1.98	2.15
<b>Ownership and occupancy</b>												
Nongovernment owned	20,111	16,836	37,870	22,879	0.12	0.09	0.09	0.11	1.72	1.22	1.49	1.56
Owner occupied	7,979	8,183	17,896	9,226	0.11	0.09	0.09	0.11	1.48	1.13	1.49	1.63
Leased to tenant(s)	9,213	6,307	15,265	10,277	0.12	0.09	0.09	0.12	2.09	1.35	1.54	1.51
Owner occupied and leased	2,904	2,309	4,650	3,299	0.11	0.08	0.09	0.12	1.63	1.33	1.43	1.61
Unoccupied	Q	Q	59	Q	Q	Q	0.13	Q	Q	Q	0.28	Q
Government owned	5,012	4,880	9,603	4,683	0.11	0.08	0.09	0.11	1.38	1.04	1.26	1.42
Federal	Q	Q	1,285	266	Q	0.09	0.10	0.10	Q	1.45	1.54	1.30
State	1,964	1,327	2,382	1,570	0.10	0.08	0.08	0.11	1.71	1.16	1.13	1.40
Local	2,753	3,153	5,937	2,848	0.12	0.09	0.09	0.11	1.24	0.96	1.27	1.45
<b>Party responsible for operation and maintenance of energy systems</b>												
Building owner	20,516	18,864	38,721	21,811	0.11	0.09	0.09	0.11	1.57	1.15	1.40	1.51
Business owner or tenant	3,952	2,392	7,239	5,051	0.12	0.09	0.09	0.12	2.18	1.40	1.65	1.57
Property management	Q	Q	973	Q	Q	Q	0.09	Q	Q	Q	1.49	Q
Other	Q	Q	539	Q	Q	Q	0.09	Q	Q	Q	1.74	Q

**Table C16. Electricity expenditures by Census region, 2012**

	Total electricity expenditures (million dollars)				Electricity expenditures (dollars)							
					per kWh				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>	25,123	21,717	47,473	27,563	0.11	0.09	0.09	0.11	1.64	1.17	1.44	1.53
<b>Provider of direct input on energy-related equipment purchases</b>												
Building owner	20,885	19,231	40,015	23,321	0.11	0.09	0.09	0.11	1.57	1.14	1.40	1.52
Business owner or tenant	3,269	1,885	5,613	3,589	0.12	0.09	0.09	0.11	2.35	1.48	1.74	1.59
Property management	Q	Q	413	Q	Q	Q	0.10	Q	Q	Q	1.20	Q
Other	650	392	1,433	287	0.11	0.09	0.09	0.13	2.07	1.14	1.79	1.30
<b>Number of establishments</b>												
One	14,459	13,761	30,239	17,114	0.11	0.09	0.09	0.11	1.53	1.11	1.40	1.54
2 to 5	5,376	5,323	8,529	5,422	0.12	0.09	0.09	0.12	1.63	1.27	1.31	1.45
6 to 10	1,480	1,025	2,808	1,651	0.13	0.08	0.09	0.10	1.91	1.32	1.69	1.50
11 to 20	1,689	814	3,132	1,347	0.12	0.09	0.10	0.10	2.03	1.65	2.01	1.71
More than 20	2,104	757	2,696	1,942	0.12	0.08	0.08	0.11	2.53	1.42	1.90	1.92
Currently unoccupied	Q	Q	69	Q	Q	Q	0.12	0.11	Q	Q	0.21	0.40
<b>Predominant exterior wall material</b>												
Brick, stone, or stucco	12,393	10,613	24,453	10,910	0.12	0.09	0.09	0.12	1.64	1.19	1.51	1.58
Concrete (block or poured)	5,942	4,880	12,737	7,863	0.10	0.09	0.09	0.11	1.66	1.24	1.60	1.60
Concrete panels	1,560	2,311	3,601	4,202	0.10	0.08	0.09	0.12	1.94	1.39	1.20	1.41
Siding or shingles	2,220	1,659	1,667	2,201	0.13	0.09	0.10	0.12	1.45	1.23	1.22	1.67
Metal panels	1,242	1,453	3,664	1,150	0.12	0.09	0.09	0.11	1.30	0.70	0.96	0.94
Window glass	1,248	Q	759	691	0.11	Q	0.09	0.10	2.89	Q	2.11	2.14
Other	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
<b>Predominant roof material</b>												
Metal surfacing	1,831	2,691	8,689	3,202	0.11	0.09	0.09	0.11	1.19	0.86	1.11	1.26
Synthetic or rubber	10,349	9,429	13,047	7,616	0.12	0.09	0.09	0.10	1.77	1.27	1.70	1.63
Built-up	6,724	4,678	13,130	8,050	0.11	0.08	0.09	0.12	1.81	1.19	1.53	1.58
Slate or tile shingles	878	401	2,501	2,555	0.12	0.09	0.09	0.14	1.06	1.03	1.37	2.16
Wooden materials (including shingles)	222	Q	534	589	0.11	Q	0.09	0.13	1.49	Q	1.42	1.26
Asphalt, fiberglass, or other shingles	4,327	3,904	7,490	4,306	0.13	0.09	0.09	0.12	1.65	1.21	1.34	1.33
Concrete	552	Q	1,498	774	0.10	Q	0.09	0.12	1.85	Q	1.87	1.92
Other	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
<b>Roof characteristics</b>												
Roof tilt												
Flat	18,467	13,519	28,006	17,298	0.11	0.09	0.09	0.11	1.85	1.29	1.59	1.62
Shallow pitch	3,243	5,290	13,555	7,485	0.11	0.09	0.09	0.12	1.34	1.08	1.28	1.46
Steeper pitch	3,414	2,907	5,912	2,780	0.12	0.09	0.09	0.12	1.19	0.90	1.23	1.27
Cool roof	5,780	4,927	11,910	8,533	0.10	0.08	0.09	0.11	1.71	1.34	1.60	1.74

**Table C16. Electricity expenditures by Census region, 2012**

	Total electricity expenditures (million dollars)				Electricity expenditures (dollars)							
					per kWh				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>	25,123	21,717	47,473	27,563	0.11	0.09	0.09	0.11	1.64	1.17	1.44	1.53
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>												
Any type of renovation	16,223	12,161	22,853	11,646	0.11	0.09	0.09	0.11	1.75	1.21	1.51	1.56
Addition or annex	4,249	5,060	6,833	2,786	0.11	0.08	0.09	0.10	1.65	1.24	1.50	1.59
Reduction in floorspace	1,091	447	1,224	402	Q	0.09	0.09	0.11	1.87	1.76	1.95	1.49
Roof replacement	9,276	6,776	10,987	4,429	0.11	0.08	0.09	0.11	1.70	1.26	1.61	1.43
Exterior wall replacement	1,357	1,379	2,483	1,290	0.13	0.08	0.08	0.11	1.49	1.29	1.73	1.60
Interior wall reconfiguration	9,660	6,656	11,384	6,804	0.12	0.09	0.09	0.10	1.92	1.28	1.68	1.60
Window replacement	5,138	3,095	6,288	2,895	0.12	0.08	0.09	0.11	1.51	1.02	1.67	1.41
HVAC equipment upgrade	12,150	7,886	14,436	7,399	0.11	0.08	0.09	0.11	1.88	1.21	1.56	1.68
Lighting upgrade	10,851	7,524	13,780	7,339	0.12	0.08	0.09	0.10	1.81	1.23	1.57	1.61
Electrical upgrade	7,666	4,765	8,714	4,535	0.12	0.08	0.09	0.10	1.93	1.19	1.61	1.68
Plumbing system upgrade	6,548	4,235	7,146	4,097	0.12	0.08	0.09	0.11	1.94	1.23	1.55	1.72
Insulation upgrade	3,030	2,601	3,867	2,256	0.12	0.08	0.08	0.10	1.73	1.19	1.68	1.73
Fire, safety, or security upgrade	8,557	5,155	9,157	4,703	0.12	0.08	0.09	0.11	1.86	1.35	1.57	1.62
Structural upgrade	1,161	1,181	2,194	1,898	0.13	0.08	0.08	0.10	1.59	1.33	1.83	1.73
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
No renovations	7,550	8,313	20,588	13,818	0.11	0.09	0.09	0.12	1.47	1.10	1.35	1.47
Buildings constructed 2008 or later	1,349	1,243	4,032	Q	0.11	0.07	0.10	0.12	1.50	1.27	1.51	1.89
<b>Energy sources (more than one may apply)</b>												
Electricity	25,123	21,717	47,473	27,563	0.11	0.09	0.09	0.11	1.64	1.17	1.44	1.53
Natural gas	19,110	18,019	29,542	21,172	0.11	0.09	0.09	0.11	1.73	1.20	1.48	1.66
Fuel oil	11,045	5,849	12,953	6,501	0.12	0.08	0.08	0.11	1.82	1.49	1.84	2.07
District heat	4,224	1,056	2,903	1,562	0.11	0.07	0.08	0.10	2.13	1.17	1.32	1.76
District chilled water	1,959	750	3,203	1,366	0.09	0.07	0.08	0.10	2.47	1.28	1.29	1.82
Propane	2,637	2,148	3,736	2,302	0.11	0.08	0.09	0.12	1.51	1.13	1.46	1.55
Other	1,388	769	1,542	1,472	0.12	0.10	0.10	0.10	1.29	0.98	1.70	1.42
<b>Space-heating energy sources</b>												
Electricity	12,909	10,944	34,700	16,121	0.11	0.08	0.09	0.11	1.77	1.27	1.54	1.53
Electricity main	4,372	4,066	24,469	9,155	0.11	0.08	0.09	0.11	2.00	1.36	1.62	1.55
Electricity secondary	8,537	6,878	10,232	6,966	0.12	0.08	0.09	0.11	1.68	1.22	1.38	1.50
Other excluding electricity	11,856	10,586	9,872	9,695	0.12	0.09	0.09	0.11	1.53	1.13	1.24	1.64
Buildings without heating	Q	186	2,901	1,746	0.12	0.11	0.09	0.18	Q	0.36	1.15	1.15
<b>Primary space-heating energy source</b>												
Electricity	4,372	4,066	24,469	9,155	0.11	0.08	0.09	0.11	2.00	1.36	1.62	1.55
Natural gas	13,707	15,425	16,424	14,766	0.11	0.09	0.09	0.11	1.64	1.18	1.33	1.60
Fuel oil	2,001	Q	246	Q	0.12	Q	0.09	Q	1.01	Q	0.82	Q
District heat	4,191	1,010	2,837	1,531	0.11	0.07	0.08	0.10	2.15	1.17	1.34	1.77
Propane	358	534	562	174	0.13	0.08	0.08	0.11	0.95	0.74	0.92	0.74
Other	Q	Q	Q	Q	Q	Q	Q	0.10	Q	Q	Q	0.79
<b>Cooling energy sources</b>												
Electricity	22,836	20,841	44,836	25,544	0.12	0.09	0.09	0.11	1.72	1.24	1.50	1.60
Other excluding electricity	1,470	319	2,031	Q	0.09	0.07	0.08	0.10	2.28	1.01	1.14	1.76
Buildings without cooling	816	556	606	1,118	0.13	0.10	0.10	0.12	0.61	0.39	0.47	0.73



**Table C16. Electricity expenditures by Census region, 2012**

	Total electricity expenditures (million dollars)				Electricity expenditures (dollars)							
					per kWh				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>	25,123	21,717	47,473	27,563	0.11	0.09	0.09	0.11	1.64	1.17	1.44	1.53
<b>Heating equipment (more than one may apply)</b>												
Heat pumps	2,344	1,324	10,311	3,599	0.11	0.08	0.09	0.11	1.68	1.24	1.49	1.47
Furnaces	1,712	2,614	4,090	2,009	0.12	0.09	0.09	0.11	1.38	1.04	1.22	1.31
Individual space heaters	8,257	5,992	7,927	4,519	0.12	0.08	0.09	0.10	1.68	1.05	1.22	1.26
District heat	4,224	1,056	2,867	1,531	0.11	0.07	0.08	0.10	2.13	1.17	1.32	1.77
Boilers	9,853	8,268	9,247	6,709	0.11	0.09	0.09	0.11	1.53	1.24	1.60	1.89
Packaged heating units	12,453	13,505	30,543	17,868	0.11	0.09	0.09	0.11	1.73	1.24	1.52	1.62
Other	Q	580	1,380	595	Q	0.08	0.09	0.08	Q	1.57	2.51	1.76
<b>Cooling equipment (more than one may apply)</b>												
Residential-type central air conditioners	2,784	4,281	7,639	4,533	0.12	0.10	0.09	0.12	1.64	0.98	1.30	1.60
Heat pumps	2,333	1,378	10,678	4,042	0.11	0.08	0.10	0.11	1.57	1.35	1.50	1.39
Individual air conditioners	5,548	3,181	5,347	2,378	0.12	0.09	0.09	0.12	1.44	1.23	1.25	1.38
District chilled water	1,959	750	3,203	1,366	0.09	0.07	0.08	0.10	2.47	1.28	1.29	1.82
Central chillers	7,482	6,346	11,497	5,508	0.12	0.08	0.08	0.11	2.14	1.42	1.78	2.11
Packaged air conditioning units	15,404	12,764	27,008	15,841	0.12	0.09	0.09	0.11	1.77	1.30	1.57	1.68
Swamp coolers	Q	Q	704	1,946	Q	Q	0.09	0.11	Q	Q	1.50	1.45
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Main equipment replaced since 1990 (more than one may apply)</b>												
Heating	8,264	8,171	14,491	7,277	0.12	0.09	0.09	0.11	1.54	1.19	1.44	1.38
Cooling	10,765	8,474	17,177	8,195	0.12	0.09	0.09	0.12	1.70	1.18	1.47	1.49
<b>Water-heating equipment</b>												
Centralized system	15,322	13,861	26,676	15,044	0.11	0.09	0.09	0.11	1.68	1.22	1.53	1.56
Distributed system	3,426	2,348	6,451	4,256	0.12	0.09	0.09	0.13	1.44	1.01	1.31	1.40
Combination of centralized and distributed system	6,048	5,058	12,475	7,118	0.12	0.08	0.09	0.10	1.94	1.28	1.59	1.84
<b>Lighting equipment types (more than one may apply)</b>												
Incandescent	12,883	11,798	21,693	11,693	0.11	0.09	0.09	0.11	1.70	1.31	1.49	1.62
Standard fluorescent	24,408	21,031	45,395	26,150	0.11	0.09	0.09	0.11	1.69	1.20	1.45	1.56
Compact fluorescent	19,492	15,452	32,029	18,764	0.11	0.09	0.09	0.11	1.81	1.30	1.60	1.68
High-intensity discharge (HID)	8,102	7,419	13,901	6,795	0.11	0.09	0.09	0.11	1.80	1.38	1.49	1.62
Halogen	9,156	8,540	18,249	10,038	0.12	0.08	0.09	0.11	1.74	1.38	1.66	1.78
LED	10,313	7,349	13,896	8,459	0.11	0.08	0.09	0.11	2.17	1.43	1.84	1.83
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Refrigeration equipment (more than one may apply)</b>												
Any refrigeration	23,403	20,272	43,597	24,533	0.11	0.09	0.09	0.11	1.72	1.22	1.52	1.67
Walk-in units	13,442	9,709	21,978	12,325	0.11	0.08	0.09	0.11	2.29	1.53	2.04	2.29
Cases or cabinets	13,268	10,299	19,871	12,519	0.11	0.08	0.09	0.11	2.19	1.51	1.91	2.29
Large cold storage areas	1,570	1,469	3,811	2,206	0.12	0.08	0.09	0.10	2.76	1.51	2.24	2.37
Commercial ice makers	12,602	10,447	25,335	12,651	0.11	0.08	0.09	0.10	2.26	1.58	1.75	2.09
Residential-type or compact units	19,085	16,863	33,453	19,331	0.11	0.09	0.09	0.11	1.67	1.18	1.38	1.55
Vending machines	15,877	12,704	27,423	14,209	0.11	0.09	0.09	0.11	1.88	1.31	1.56	1.74
No refrigeration	1,720	1,444	3,877	3,030	0.13	0.09	0.10	0.13	1.02	0.73	0.91	0.92

**Table C16. Electricity expenditures by Census region, 2012**

	Total electricity expenditures (million dollars)				Electricity expenditures (dollars)							
					per kWh				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>	25,123	21,717	47,473	27,563	0.11	0.09	0.09	0.11	1.64	1.17	1.44	1.53
<b>Office equipment (more than one may apply)</b>												
Desktop computers	23,786	20,602	44,541	26,005	0.11	0.09	0.09	0.11	1.68	1.22	1.50	1.59
With flat screen monitors	23,666	20,416	43,975	25,774	0.11	0.09	0.09	0.11	1.70	1.23	1.50	1.59
With multiple monitors	10,777	8,692	18,749	12,193	0.12	0.08	0.09	0.11	2.04	1.36	1.55	1.70
Laptop computers	20,436	16,982	36,369	20,301	0.11	0.09	0.09	0.11	1.74	1.22	1.46	1.57
Dedicated servers	18,350	14,693	31,745	19,231	0.11	0.08	0.09	0.11	1.82	1.30	1.54	1.68
Laser printers	18,187	14,876	31,895	18,106	0.11	0.09	0.09	0.11	1.76	1.22	1.56	1.60
Inkjet printers	10,488	9,118	20,175	12,433	0.12	0.09	0.09	0.12	1.60	1.19	1.41	1.62
FAX machines	21,581	17,892	39,289	21,444	0.11	0.09	0.09	0.11	1.69	1.24	1.52	1.56
Photocopiers	20,039	15,852	32,979	19,418	0.11	0.09	0.09	0.11	1.72	1.21	1.49	1.56
<b>Number of desktop computers</b>												
None	1,337	1,115	2,933	1,558	0.13	0.10	0.10	0.12	1.14	0.66	0.88	0.98
1 to 4	3,291	3,783	8,808	4,967	0.13	0.09	0.09	0.12	1.34	1.06	1.40	1.48
5 to 9	2,037	2,424	5,670	3,022	0.10	0.09	0.10	0.11	1.46	1.14	1.61	1.27
10 to 19	2,607	2,105	4,894	3,598	0.12	0.09	0.09	0.11	1.59	1.15	1.39	1.51
20 to 49	3,454	3,627	8,514	4,467	0.11	0.09	0.09	0.11	1.48	1.40	1.59	1.58
50 to 99	2,195	2,496	4,183	2,873	0.11	0.09	0.09	0.13	1.61	1.26	1.29	1.70
100 to 249	4,028	2,637	4,979	3,032	0.10	0.09	0.08	0.10	1.75	1.20	1.47	1.65
250 or more	6,174	3,530	7,493	4,047	0.12	0.08	0.09	0.11	2.35	1.38	1.71	2.11
<b>Number of laptop computers</b>												
None	4,686	4,735	11,105	7,261	0.11	0.09	0.09	0.12	1.33	1.02	1.37	1.42
1 to 4	4,647	5,473	10,706	6,199	0.12	0.09	0.09	0.12	1.39	1.08	1.33	1.32
5 to 9	2,468	2,020	5,096	2,460	0.10	0.09	0.09	0.11	1.76	1.37	1.43	1.30
10 to 19	2,269	1,819	5,109	3,686	0.11	0.09	0.09	0.11	1.51	1.23	1.51	1.86
20 to 49	2,617	2,789	5,386	3,941	0.12	0.09	0.09	0.10	1.78	1.27	1.42	1.80
50 to 99	1,902	1,807	2,966	1,754	0.11	0.09	0.09	0.12	1.56	1.38	1.62	2.00
100 to 249	2,779	1,219	3,136	1,127	0.11	0.08	0.08	0.10	1.97	1.19	1.49	1.67
250 or more	3,754	1,855	3,968	1,133	0.12	0.08	0.09	0.11	2.65	1.35	1.84	1.90
<b>Number of dedicated servers</b>												
None	6,772	7,024	15,729	8,331	0.12	0.09	0.09	0.12	1.30	0.96	1.26	1.27
1 to 4	9,144	8,888	19,734	10,746	0.11	0.09	0.09	0.11	1.48	1.23	1.46	1.49
5 to 9	1,905	2,027	3,200	2,443	0.11	0.09	0.09	0.11	1.74	1.41	1.44	1.64
10 to 19	2,943	1,275	3,757	2,618	0.12	0.08	0.09	0.11	2.63	1.27	1.62	2.07
20 to 49	1,399	1,354	2,456	1,329	0.12	0.08	0.08	0.10	2.03	1.38	1.88	1.71
50 or more	2,960	1,150	2,597	2,096	0.12	0.08	0.08	0.10	2.97	1.77	2.16	2.94
<b>Number of photocopiers</b>												
None	5,083	5,865	14,494	8,145	0.12	0.09	0.09	0.12	1.40	1.07	1.33	1.48
One	3,421	4,178	8,148	5,451	0.11	0.09	0.09	0.11	1.31	1.06	1.33	1.24
2 to 4	4,972	5,381	12,020	6,206	0.11	0.09	0.09	0.11	1.39	1.17	1.49	1.52
5 to 9	3,581	2,666	4,636	2,572	0.10	0.09	0.08	0.11	1.84	1.23	1.45	1.66
10 or more	8,065	3,626	8,175	5,189	0.12	0.08	0.09	0.11	2.29	1.54	1.74	2.13

**Table C16. Electricity expenditures by Census region, 2012**

	Total electricity expenditures (million dollars)				Electricity expenditures (dollars)							
					per kWh				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>	25,123	21,717	47,473	27,563	0.11	0.09	0.09	0.11	1.64	1.17	1.44	1.53
<b>Number of TVs or video displays</b>												
None	4,554	4,292	8,491	5,920	0.11	0.09	0.10	0.12	1.19	0.91	1.03	1.11
One	1,928	2,297	5,021	2,652	0.11	0.09	0.09	0.12	1.36	1.00	1.17	1.32
2 to 4	4,421	4,850	10,282	4,543	0.12	0.09	0.09	0.12	1.51	1.20	1.63	1.44
5 to 9	3,793	1,817	5,296	3,561	0.12	0.09	0.08	0.11	2.08	1.25	1.67	2.08
10 to 19	3,212	2,873	4,982	2,363	0.10	0.08	0.09	0.11	1.79	1.52	1.63	1.66
20 to 49	2,676	2,033	5,501	3,310	0.11	0.08	0.09	0.11	1.85	1.22	1.73	1.88
50 to 99	964	1,227	3,042	1,837	0.14	0.08	0.08	0.11	2.52	1.32	1.49	1.78
100 or more	3,574	2,327	4,859	3,376	0.12	0.08	0.08	0.11	2.12	1.51	1.75	2.18
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>												
Snack bar or concession stand	3,977	3,013	6,868	4,279	0.11	0.08	0.09	0.11	2.07	1.33	1.82	2.21
Fast food or small restaurant	4,109	3,137	8,522	5,467	0.11	0.08	0.09	0.11	2.35	1.77	2.24	2.22
Cafeteria or large restaurant	6,602	4,099	9,201	4,722	0.11	0.08	0.09	0.11	1.84	1.19	1.55	2.11
Commercial kitchen/food preparation area	5,919	4,830	10,479	5,993	0.10	0.08	0.09	0.11	1.82	1.22	1.72	2.10
Small kitchen area	4,593	3,646	7,446	4,054	0.11	0.09	0.09	0.11	1.48	1.07	1.45	1.68
<b>Separate computer areas (more than one may apply)</b>												
Data center or server farm	6,341	3,888	6,923	5,551	0.12	0.08	0.08	0.10	2.67	1.56	1.79	2.35
Computer-based training room	5,838	5,306	11,327	5,854	0.11	0.08	0.09	0.10	1.75	1.34	1.59	1.77
Student or public computer center	3,588	3,286	8,178	3,727	0.11	0.08	0.09	0.10	1.32	0.98	1.36	1.62
<b>HVAC conservation features (more than one may apply)</b>												
Economizer cycle	13,579	10,647	15,027	12,054	0.11	0.08	0.09	0.11	1.96	1.34	1.66	1.75
Regular HVAC maintenance	22,862	19,137	41,713	23,832	0.11	0.09	0.09	0.11	1.76	1.26	1.57	1.64
Building automation system (BAS) <sup>2</sup>	14,307	11,063	24,125	14,319	0.11	0.08	0.09	0.11	2.06	1.38	1.65	1.90
<b>Window and interior lighting features (more than one may apply)</b>												
Multipaned windows	19,735	18,467	34,017	16,989	0.12	0.09	0.09	0.11	1.73	1.22	1.53	1.55
Tinted window glass	11,902	11,880	28,409	16,771	0.11	0.08	0.09	0.11	1.89	1.32	1.53	1.59
Reflective window glass	5,101	5,437	10,278	7,778	0.12	0.08	0.08	0.11	2.18	1.44	1.89	1.81
External overhangs or awnings	8,741	8,794	22,584	12,723	0.11	0.09	0.09	0.11	2.04	1.36	1.64	1.69
Skylights or atriums	6,978	4,713	12,063	8,181	0.11	0.08	0.09	0.11	1.73	1.15	1.50	1.39
Light scheduling	12,409	9,072	18,369	13,168	0.12	0.08	0.09	0.11	2.13	1.36	1.71	1.87
Occupancy sensors	14,504	10,398	20,393	13,548	0.12	0.08	0.09	0.11	1.88	1.31	1.71	1.63
Multi-level lighting or dimming	5,034	4,467	9,798	7,032	0.11	0.08	0.09	0.11	2.16	1.41	1.81	1.95
Daylight harvesting	2,185	2,249	3,154	2,975	0.12	0.08	0.09	0.11	2.12	1.48	1.58	1.90
Demand responsive lighting	1,158	1,328	3,284	2,595	0.12	0.09	0.10	0.12	1.79	1.46	1.94	1.75
Building automation system (BAS) for lighting <sup>2</sup>	5,032	3,758	8,269	5,975	0.11	0.08	0.09	0.10	2.33	1.54	1.83	2.02

**Table C16. Electricity expenditures by Census region, 2012**

	Total electricity expenditures (million dollars)				Electricity expenditures (dollars)							
					per kWh				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>	25,123	21,717	47,473	27,563	0.11	0.09	0.09	0.11	1.64	1.17	1.44	1.53
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>												
Heating	19,541	16,336	32,430	20,398	0.11	0.09	0.09	0.11	1.59	1.16	1.39	1.52
Cooling	18,871	15,979	34,323	20,653	0.11	0.09	0.09	0.12	1.65	1.19	1.40	1.57
Lighting	22,913	20,056	43,475	25,526	0.11	0.09	0.09	0.11	1.61	1.16	1.42	1.54
<b>Annual consumption (kilowatthours)</b>												
10,000 or less	103	153	183	136	0.16	0.13	0.14	0.15	0.18	0.18	0.19	0.20
10,001 to 50,000	993	1,194	2,034	1,840	0.14	0.11	0.11	0.14	0.55	0.48	0.57	0.70
50,001 to 100,000	999	1,355	2,703	1,875	0.12	0.10	0.10	0.13	1.04	0.81	0.86	1.01
100,001 to 500,000	4,932	4,929	11,728	7,730	0.12	0.09	0.09	0.12	1.47	1.15	1.38	1.48
500,001 to 1,000,000	2,852	3,160	7,043	2,974	0.12	0.09	0.09	0.11	1.58	1.43	1.68	1.62
1,000,001 to 5,000,000	7,445	7,040	14,055	7,324	0.11	0.08	0.09	0.11	1.83	1.46	1.71	2.00
Over 5,000,000	7,800	3,886	9,728	5,685	0.11	0.08	0.08	0.10	2.85	1.73	2.16	2.70

<sup>1</sup>These climate regions were created by the Building America program, sponsored by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE).

<sup>2</sup>In earlier CBECS publications, BAS was referred to as *Energy Management and Control System (EMCS)*.

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

N = No cases in reporting sample.

Notes: • Because of rounding, data may not sum to totals. • See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from <http://www.eia.gov/consumption/commercial/data/2012/>

• 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 generation, transmission, and distribution processes. • 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.

Source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Forms EIA-871A and E of the 2012 Commercial Buildings Energy Consumption Survey.



**Table C17. Electricity consumption and conditional energy intensity by Census division (part 1), 2012**

	Total electricity consumption (billion kWh)			Total floorspace of buildings using electricity (million square feet)			Electricity energy intensity (kWh/square foot)		
	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central
<b>All buildings</b>	51	170	174	4,192	11,099	12,544	12.1	15.3	13.9
<b>Building floorspace (square feet)</b>									
1,001 to 5,000	5	10	16	368	628	995	14.4	15.4	16.3
5,001 to 10,000	5	9	15	527	657	1,048	9.7	13.3	14.1
10,001 to 25,000	8	16	20	858	1,470	1,799	9.7	10.9	11.4
25,001 to 50,000	8	10	23	626	1,002	2,040	12.5	10.5	11.4
50,001 to 100,000	6	31	25	598	2,078	1,768	9.8	14.9	13.9
100,001 to 200,000	6	38	26	418	2,101	1,771	14.5	18.2	14.6
200,001 to 500,000	9	29	30	597	1,636	2,079	14.8	17.5	14.3
Over 500,000	Q	27	20	Q	1,526	1,042	Q	17.7	18.9
<b>Principal building activity</b>									
Education	4	14	20	642	1,414	2,205	6.7	9.6	9.2
Food sales	Q	Q	Q	Q	Q	Q	Q	Q	Q
Food service	Q	7	10	Q	162	217	Q	45.6	48.0
Health care	6	17	14	274	792	549	21.7	22.1	25.4
Inpatient	4	10	10	169	369	359	26.5	26.1	28.7
Outpatient	Q	8	4	Q	423	190	Q	18.6	18.9
Lodging	Q	10	10	Q	800	673	Q	12.9	14.5
Mercantile	6	21	30	458	1,186	1,488	13.3	17.5	20.0
Retail (other than mall)	Q	9	13	Q	667	748	Q	12.9	17.6
Enclosed and strip malls	Q	12	17	Q	518	740	Q	23.4	22.4
Office	9	55	38	738	2,965	2,430	11.6	18.5	15.8
Public assembly	4	9	16	350	603	1,196	11.5	15.6	13.2
Public order and safety	Q	Q	Q	Q	Q	Q	Q	Q	Q
Religious worship	Q	3	3	Q	613	547	Q	5.5	5.1
Service	2	4	6	245	568	836	Q	6.4	7.7
Warehouse and storage	2	6	10	488	1,211	1,504	4.0	5.3	6.7
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
Vacant	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Year constructed</b>									
Before 1920	5	7	4	674	904	585	7.9	7.8	6.6
1920 to 1945	3	18	13	404	1,525	1,354	7.7	11.8	9.4
1946 to 1959	4	14	14	349	1,233	1,149	10.3	11.1	12.2
1960 to 1969	6	23	18	481	1,748	1,481	12.0	13.3	12.1
1970 to 1979	9	28	33	473	1,427	1,841	18.8	20.0	17.7
1980 to 1989	6	21	26	554	1,159	1,614	10.7	17.8	16.1
1990 to 1999	5	34	25	476	1,539	1,904	11.3	22.3	13.3
2000 to 2003	5	11	18	337	637	1,090	16.2	17.7	16.7
2004 to 2007	Q	4	13	Q	243	860	Q	14.5	15.0
2008 to 2012	3	10	11	213	685	666	Q	13.9	16.7

**Table C17. Electricity consumption and conditional energy intensity by Census division (part 1), 2012**

	Total electricity consumption (billion kWh)			Total floorspace of buildings using electricity (million square feet)			Electricity energy intensity (kWh/square foot)		
	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central
<b>All buildings</b>	51	170	174	4,192	11,099	12,544	12.1	15.3	13.9
<b>Climate region<sup>1</sup></b>									
Very cold/Cold	51	91	158	4,192	6,091	11,506	12.1	15.0	13.7
Mixed-humid	N	79	Q	N	5,008	Q	N	15.7	Q
Mixed-dry/Hot-dry	N	N	N	N	N	N	N	N	N
Hot-humid	N	N	N	N	N	N	N	N	N
Marine	N	N	N	N	N	N	N	N	N
<b>Number of floors</b>									
One	12	45	72	1,011	2,682	4,898	12.1	16.9	14.7
Two	13	39	38	1,270	2,797	3,135	9.9	14.1	12.0
Three	10	20	19	953	1,456	1,708	10.8	13.8	11.1
Four to nine	11	38	31	767	2,613	2,036	14.6	14.7	15.3
Ten or more	Q	27	15	Q	1,552	767	Q	17.1	19.2
<b>Elevators and escalators (more than one may apply)</b>									
Any elevators	26	103	80	1,857	6,034	5,390	13.8	17.1	14.9
Number of elevators									
One	9	25	26	944	1,616	2,252	9.5	15.2	11.6
Two to five	11	41	29	713	2,432	1,943	15.3	16.7	15.0
Six or more	6	38	25	200	1,986	1,195	28.7	18.9	20.9
Any escalators	Q	14	13	Q	785	731	Q	18.1	17.2
<b>Number of workers (main shift)</b>									
Fewer than 5	6	11	20	907	1,542	2,465	6.3	6.9	8.2
5 to 9	7	7	14	496	786	1,110	13.7	8.6	12.7
10 to 19	5	9	17	439	951	1,232	11.0	9.3	13.9
20 to 49	8	23	31	546	1,358	2,270	15.3	17.3	13.8
50 to 99	6	28	33	657	1,728	2,147	9.0	16.5	15.2
100 to 249	9	31	25	686	1,843	1,548	13.4	16.7	16.0
250 or more	10	61	34	460	2,892	1,771	21.2	21.1	19.4
<b>Weekly operating hours</b>									
Fewer than 40	1	4	7	310	666	1,171	2.0	5.5	6.2
40 to 48	6	15	18	812	1,531	1,976	7.6	9.7	9.0
49 to 60	10	32	32	901	2,431	2,736	11.1	13.1	11.7
61 to 84	12	34	39	984	2,329	2,591	11.7	14.5	14.9
85 to 167	9	26	31	530	1,351	1,593	17.6	19.5	19.7
Open continuously	13	59	47	655	2,792	2,476	19.7	21.2	19.1



**Table C17. Electricity consumption and conditional energy intensity by Census division (part 1), 2012**

	Total electricity consumption (billion kWh)			Total floorspace of buildings using electricity (million square feet)			Electricity energy intensity (kWh/square foot)		
	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central
<b>All buildings</b>	51	170	174	4,192	11,099	12,544	12.1	15.3	13.9
<b>Predominant roof material</b>									
Metal surfacing	3	13	16	510	1,030	1,586	6.6	12.2	9.9
Synthetic or rubber	24	66	81	1,755	4,105	5,293	13.4	16.1	15.3
Built-up	9	55	38	655	3,056	2,840	13.5	18.0	13.5
Slate or tile shingles	Q	6	3	Q	591	288	Q	9.9	11.2
Wooden materials (including shingles)	Q	Q	Q	Q	Q	Q	Q	Q	Q
Asphalt, fiberglass, or other shingles	12	22	30	850	1,780	2,173	13.5	12.5	13.8
Concrete	Q	5	Q	Q	288	Q	Q	18.2	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
No one major type	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Roof characteristics</b>									
Roof tilt									
Flat	31	133	114	2,128	7,867	7,403	14.5	16.9	15.4
Shallow pitch	9	20	38	966	1,456	3,061	9.0	13.9	12.3
Steeper pitch	11	17	23	1,099	1,776	2,080	10.0	9.3	11.0
Cool roof	9	46	42	742	2,636	2,545	11.9	17.5	16.5
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>									
Any type of renovation	33	109	99	2,625	6,635	6,625	12.4	16.4	14.9
Addition or annex	10	28	40	815	1,759	2,501	12.0	15.9	15.9
Reduction in floorspace	Q	Q	Q	Q	Q	Q	Q	24.8	Q
Roof replacement	18	65	51	1,388	4,069	3,256	12.7	15.9	15.7
Exterior wall replacement	4	7	10	264	646	603	15.0	10.5	16.1
Interior wall reconfiguration	17	63	55	1,431	3,589	3,557	11.9	17.5	15.5
Window replacement	13	29	24	1,095	2,308	2,026	11.6	12.4	11.9
HVAC equipment upgrade	22	85	66	1,570	4,908	4,572	13.8	17.3	14.4
Lighting upgrade	23	69	60	1,666	4,343	4,113	13.7	15.8	14.7
Electrical upgrade	15	47	37	1,172	2,796	2,623	12.9	16.7	14.2
Plumbing system upgrade	12	40	33	1,023	2,355	2,292	12.0	17.2	14.5
Insulation upgrade	8	18	17	581	1,168	1,266	13.6	15.5	13.7
Fire, safety, or security upgrade	17	54	43	1,368	3,234	2,611	12.2	16.7	16.3
Structural upgrade	5	4	9	300	432	626	16.0	9.5	14.2
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
No renovations	15	51	64	1,355	3,779	5,252	11.3	13.5	12.2
Buildings constructed 2008 or later	3	10	11	213	685	666	Q	13.9	16.7

**Table C17. Electricity consumption and conditional energy intensity by Census division (part 1), 2012**

	Total electricity consumption (billion kWh)			Total floorspace of buildings using electricity (million square feet)			Electricity energy intensity (kWh/square foot)		
	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central
<b>All buildings</b>	51	170	174	4,192	11,099	12,544	12.1	15.3	13.9
<b>Energy sources (more than one may apply)</b>									
Electricity	51	170	174	4,192	11,099	12,544	12.1	15.3	13.9
Natural gas	30	142	151	2,241	8,827	10,790	13.5	16.1	14.0
Fuel oil	25	71	51	1,866	4,213	2,619	13.3	16.7	19.6
District heat	6	31	8	Q	1,628	574	17.3	19.0	14.5
District chilled water	Q	Q	7	Q	656	420	Q	29.0	17.8
Propane	11	13	13	857	885	829	12.7	14.4	15.6
Other	4	8	5	392	686	532	9.6	11.4	10.1
<b>Space-heating energy sources</b>									
Electricity	28	87	90	1,848	5,428	5,687	15.2	15.9	15.7
Electricity main	8	32	31	468	1,720	1,702	17.1	18.9	17.9
Electricity secondary	20	54	59	1,380	3,708	3,985	14.5	14.6	14.8
Other excluding electricity	22	81	84	2,237	5,531	6,553	9.8	14.7	12.8
Buildings without heating	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Primary space-heating energy source</b>									
Electricity	8	32	31	468	1,720	1,702	17.1	18.9	17.9
Natural gas	23	96	130	1,811	6,555	9,587	12.8	14.7	13.6
Fuel oil	10	7	Q	1,099	889	Q	8.9	7.9	Q
District heat	6	30	8	Q	1,601	532	17.3	19.0	14.4
Propane	2	Q	Q	204	Q	Q	8.9	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Cooling energy sources</b>									
Electricity	45	152	168	3,317	9,986	11,474	13.5	15.2	14.7
Other excluding electricity	Q	Q	Q	Q	Q	Q	Q	29.6	Q
Buildings without cooling	3	3	4	Q	632	869	4.3	5.5	4.1
<b>Water-heating energy sources</b>									
Electricity	24	73	74	1,939	4,622	4,914	12.3	15.7	15.2
Other excluding electricity	26	95	98	1,976	6,096	7,168	13.1	15.6	13.7
Buildings without water heating	1	Q	2	277	382	462	2.5	4.5	4.1
<b>Cooking energy sources</b>									
Electricity	17	63	66	1,143	3,534	4,211	15.0	17.7	15.7
Other excluding electricity	12	47	29	910	2,591	1,965	13.3	18.2	14.5
Buildings without cooking	21	60	80	2,139	4,975	6,368	10.0	12.1	12.5
<b>Energy end uses (more than one may apply)</b>									
Buildings with space heating	50	168	173	4,085	10,959	12,240	12.2	15.3	14.2
Buildings with cooling	47	166	171	3,482	10,467	11,675	13.6	15.9	14.6
Buildings with water heating	50	168	173	3,915	10,718	12,082	12.7	15.7	14.3
Buildings with cooking	29	110	95	2,053	6,124	6,175	14.2	17.9	15.3
Buildings with manufacturing	6	9	8	391	669	807	14.3	14.0	10.4
Buildings with electricity generation	24	88	63	1,456	4,767	3,912	16.3	18.5	16.2



**Table C17. Electricity consumption and conditional energy intensity by Census division (part 1), 2012**

	Total electricity consumption (billion kWh)			Total floorspace of buildings using electricity (million square feet)			Electricity energy intensity (kWh/square foot)		
	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central
<b>All buildings</b>	51	170	174	4,192	11,099	12,544	12.1	15.3	13.9
<b>Main equipment replaced since 1990 (more than one may apply)</b>									
Heating	19	50	65	1,646	3,709	4,404	11.6	13.5	14.8
Cooling	20	67	66	1,516	4,798	4,620	13.5	13.9	14.2
<b>Water-heating equipment</b>									
Centralized system	30	107	110	2,487	6,641	7,606	11.9	16.1	14.5
Distributed system	7	23	20	586	1,797	1,671	11.7	12.7	11.8
Combination of centralized and distributed system	13	38	42	843	2,279	2,804	15.8	16.9	15.2
<b>Lighting equipment types (more than one may apply)</b>									
Incandescent	24	94	96	2,046	5,520	6,180	11.7	17.0	15.5
Standard fluorescent	48	166	171	3,771	10,702	11,880	12.8	15.5	14.4
Compact fluorescent	39	135	126	2,886	7,886	8,336	13.7	17.1	15.1
High-intensity discharge (HID)	15	61	64	1,161	3,349	4,102	12.9	18.2	15.7
Halogen	22	57	78	1,494	3,774	4,590	14.5	15.0	17.0
LED	23	67	66	1,363	3,388	3,759	17.1	19.7	17.6
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Refrigeration equipment (more than one may apply)</b>									
Any refrigeration	46	160	163	3,568	10,044	11,374	13.0	16.0	14.3
Walk-in units	28	96	82	1,424	4,445	4,481	19.3	21.7	18.3
Cases or cabinets	28	93	85	1,524	4,542	4,820	18.1	20.5	17.7
Large cold storage areas	Q	10	13	Q	430	695	Q	23.7	18.3
Commercial ice makers	24	91	87	1,240	4,333	4,666	19.5	21.1	18.7
Residential-type or compact units	40	129	136	3,081	8,354	9,850	12.8	15.5	13.8
Vending machines	29	116	105	1,902	6,546	6,685	15.2	17.6	15.7
No refrigeration	4	9	12	624	1,055	1,170	6.8	8.9	10.0
<b>Office equipment (more than one may apply)</b>									
Desktop computers	47	162	166	3,686	10,430	11,561	12.8	15.6	14.4
With flat screen monitors	47	162	165	3,645	10,310	11,436	12.9	15.7	14.4
With multiple monitors	18	75	70	1,158	4,132	4,244	15.9	18.2	16.4
Laptop computers	42	137	137	3,093	8,681	9,507	13.5	15.8	14.4
Dedicated servers	34	128	123	2,511	7,575	7,894	13.4	16.9	15.6
Laser printers	35	127	123	2,696	7,622	8,535	12.9	16.7	14.4
Inkjet printers	24	64	74	1,899	4,660	5,161	12.6	13.8	14.3
FAX machines	41	148	145	3,164	9,569	9,955	12.9	15.5	14.6
Photocopiers	38	140	130	2,989	8,665	9,111	12.5	16.2	14.3

**Table C17. Electricity consumption and conditional energy intensity by Census division (part 1), 2012**

	Total electricity consumption (billion kWh)			Total floorspace of buildings using electricity (million square feet)			Electricity energy intensity (kWh/square foot)		
	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central
<b>All buildings</b>	51	170	174	4,192	11,099	12,544	12.1	15.3	13.9
<b>Number of desktop computers</b>									
None	3	Q	8	Q	669	983	Q	Q	8.3
1 to 4	9	16	28	846	1,611	2,283	11.2	10.0	12.1
5 to 9	Q	17	19	Q	1,142	1,390	Q	15.0	14.0
10 to 19	6	17	17	494	1,150	1,304	12.1	14.4	13.2
20 to 49	9	22	28	717	1,610	1,633	12.6	13.8	17.1
50 to 99	6	15	22	430	936	1,532	13.4	15.6	14.6
100 to 249	6	34	19	432	1,870	1,569	13.4	17.9	11.9
250 or more	9	42	33	518	2,110	1,850	16.7	20.1	17.9
<b>Number of laptop computers</b>									
None	9	32	38	1,099	2,418	3,037	8.0	13.4	12.4
1 to 4	12	26	42	1,083	2,267	3,260	11.0	11.4	12.9
5 to 9	5	20	17	323	1,082	1,063	16.8	18.5	16.5
10 to 19	8	14	14	521	979	1,060	15.0	14.0	13.4
20 to 49	4	18	19	348	1,123	1,384	11.0	16.2	13.9
50 to 99	4	13	15	242	976	978	18.1	12.8	15.5
100 to 249	3	21	11	346	1,068	711	9.2	20.0	15.9
250 or more	Q	26	17	Q	1,185	1,051	Q	21.7	16.6
<b>Number of dedicated servers</b>									
None	17	42	51	1,681	3,524	4,650	10.0	11.8	11.0
1 to 4	19	64	75	1,582	4,611	5,055	11.8	13.8	14.8
5 to 9	4	14	15	338	755	931	11.0	19.1	16.4
10 to 19	6	19	10	340	777	663	18.7	24.5	14.8
20 to 49	Q	10	11	Q	566	714	Q	16.9	16.0
50 or more	Q	22	12	Q	867	530	Q	24.9	22.5
<b>Number of photocopiers</b>									
None	13	30	44	1,203	2,434	3,432	10.8	12.2	12.9
One	10	21	32	912	1,692	2,726	11.2	12.4	11.6
2 to 4	10	33	43	1,017	2,564	3,003	9.8	13.0	14.3
5 to 9	8	27	23	599	1,347	1,644	13.7	19.8	13.9
10 or more	9	59	32	461	3,062	1,739	19.7	19.2	18.7
<b>Number of TVs or video displays</b>									
None	13	27	31	1,403	2,408	3,032	9.3	11.1	10.3
One	5	12	19	435	981	1,485	11.6	12.2	13.0
2 to 4	10	25	39	833	2,097	2,889	12.4	12.2	13.6
5 to 9	5	28	12	441	1,383	839	11.2	20.0	14.9
10 to 19	6	28	21	391	1,408	1,134	14.7	19.7	18.9
20 to 49	4	20	17	375	1,069	1,198	11.4	18.3	14.3
50 to 99	Q	5	11	Q	270	783	Q	16.9	14.7
100 or more	5	26	22	202	1,483	1,184	23.6	17.7	18.7



**Table C17. Electricity consumption and conditional energy intensity by Census division (part 1), 2012**

	Total electricity consumption (billion kWh)			Total floorspace of buildings using electricity (million square feet)			Electricity energy intensity (kWh/square foot)		
	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central
<b>All buildings</b>	51	170	174	4,192	11,099	12,544	12.1	15.3	13.9
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>									
Snack bar or concession stand	Q	31	26	Q	1,710	1,632	Q	18.0	16.0
Fast food or small restaurant	6	31	27	335	1,416	1,299	17.8	21.6	20.7
Cafeteria or large restaurant	11	52	34	829	2,756	2,452	13.1	18.7	13.9
Commercial kitchen/food preparation area	12	46	43	915	2,339	2,960	13.4	19.5	14.5
Small kitchen area	10	30	30	776	2,329	2,282	13.4	12.9	13.0
<b>Separate computer areas (more than one may apply)</b>									
Data center or server farm	11	43	34	491	1,887	1,743	21.6	22.8	19.3
Computer-based training room	9	42	43	747	2,594	2,728	11.4	16.3	15.9
Student or public computer center	8	24	24	834	1,877	2,236	9.1	12.9	10.9
<b>HVAC conservation features (more than one may apply)</b>									
Economizer cycle	23	102	89	1,412	5,498	5,550	16.4	18.6	16.0
Regular HVAC maintenance	44	159	159	3,324	9,658	10,660	13.3	16.5	15.0
Building automation system (BAS) <sup>2</sup>	28	98	94	1,734	5,199	5,646	16.1	18.9	16.7
<b>Window and interior lighting features (more than one may apply)</b>									
Multipaned windows	43	127	145	3,387	8,002	10,013	12.8	15.9	14.5
Tinted window glass	21	88	99	1,420	4,888	6,262	14.8	18.0	15.8
Reflective window glass	8	35	44	495	1,849	2,627	17.1	19.0	16.8
External overhangs or awnings	14	66	72	1,106	3,183	4,169	13.1	20.8	17.2
Skylights or atriums	17	47	40	1,376	2,658	2,815	12.2	17.6	14.4
Light scheduling	22	84	80	1,454	4,384	5,033	15.3	19.2	15.9
Occupancy sensors	33	91	92	2,302	5,430	5,927	14.3	16.8	15.6
Multi-level lighting or dimming	12	33	40	663	1,672	2,275	17.4	19.5	17.7
Daylight harvesting	5	13	20	303	729	1,147	15.4	18.3	17.6
Demand responsive lighting	Q	7	9	Q	448	506	Q	16.4	17.4
Building automation system (BAS) for lighting <sup>2</sup>	11	36	31	526	1,633	1,680	20.1	22.1	18.2
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>									
Heating	37	136	132	3,310	8,975	9,790	11.2	15.2	13.5
Cooling	37	131	127	2,931	8,520	9,321	12.5	15.4	13.7
Lighting	49	151	159	3,987	10,272	11,570	12.4	14.7	13.7

**Table C17. Electricity consumption and conditional energy intensity by Census division (part 1), 2012**

	Total electricity consumption (billion kWh)			Total floorspace of buildings using electricity (million square feet)			Electricity energy intensity (kWh/square foot)		
	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central
<b>All buildings</b>	51	170	174	4,192	11,099	12,544	12.1	15.3	13.9
<b>Annual consumption (kilowatthours)</b>									
10,000 or less	(*)	(*)	1	Q	292	445	1.2	1.1	1.5
10,001 to 50,000	2	5	7	622	1,196	1,538	3.8	4.1	4.5
50,001 to 100,000	3	5	8	330	631	1,092	8.8	8.2	7.5
100,001 to 500,000	15	25	34	1,192	2,154	2,829	12.3	11.6	12.1
500,001 to 1,000,000	6	17	26	420	1,385	1,483	15.1	12.3	17.4
1,000,001 to 5,000,000	15	54	60	1,022	3,048	3,493	14.2	17.6	17.3
Over 5,000,000	9	64	38	340	2,393	1,664	27.7	26.6	23.0

<sup>1</sup>These climate regions were created by the Building America program, sponsored by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE).

<sup>2</sup>In earlier CBECS publications, BAS was referred to as *Energy Management and Control System (EMCS)*.

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

N = No cases in reporting sample.

(\*) = Value rounds to zero in the units displayed.

Notes: • Because of rounding, data may not sum to totals. • See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from

<http://www.eia.gov/consumption/commercial/data/2012/> • 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 generation, transmission, and distribution processes. • 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.

Source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Forms EIA-871A and E of the 2012 Commercial Buildings Energy Consumption Survey.

**Table C18. Electricity consumption and conditional energy intensity by Census division (part 2), 2012**

	Total electricity consumption (billion kWh)			Total floorspace of buildings using electricity (million square feet)			Electricity energy intensity (kWh/square foot)		
	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central
<b>All buildings</b>	75	287	71	6,016	17,608	4,824	12.5	16.3	14.6
<b>Building floorspace (square feet)</b>									
1,001 to 5,000	9	35	11	718	1,450	589	12.3	24.3	19.5
5,001 to 10,000	7	24	7	767	1,666	594	8.8	14.3	11.5
10,001 to 25,000	10	34	13	1,051	2,577	769	9.8	13.3	16.8
25,001 to 50,000	10	36	8	958	2,257	490	10.5	15.8	16.6
50,001 to 100,000	15	48	10	920	3,049	985	16.3	15.8	10.3
100,001 to 200,000	8	40	8	628	2,817	577	13.1	14.1	13.4
200,001 to 500,000	10	38	8	597	2,089	503	16.8	18.0	16.4
Over 500,000	6	32	5	376	1,702	Q	15.3	19.0	16.4
<b>Principal building activity</b>									
Education	13	36	7	968	2,840	469	13.0	12.5	14.2
Food sales	Q	11	Q	Q	188	Q	Q	56.5	Q
Food service	6	20	6	153	396	150	36.2	50.9	40.5
Health care	8	19	8	313	662	271	24.8	28.3	28.7
Inpatient	4	13	6	137	405	184	29.2	31.7	34.3
Outpatient	Q	6	Q	176	257	Q	21.3	23.1	Q
Lodging	7	22	7	384	1,217	486	17.0	18.3	15.0
Mercantile	7	56	13	644	2,746	736	11.6	20.3	18.0
Retail (other than mall)	3	16	Q	394	1,052	Q	7.3	15.0	Q
Enclosed and strip malls	5	40	Q	250	1,694	Q	18.5	23.5	Q
Office	13	48	12	904	3,183	694	14.1	15.1	16.9
Public assembly	5	16	3	390	904	330	13.3	18.2	10.0
Public order and safety	Q	Q	Q	Q	Q	Q	Q	Q	Q
Religious worship	1	6	3	378	857	614	3.6	6.9	5.2
Service	4	9	3	613	741	318	6.7	11.7	8.9
Warehouse and storage	6	19	3	891	2,706	Q	6.5	7.1	6.0
Other	Q	18	Q	Q	568	Q	Q	32.3	Q
Vacant	Q	2	Q	Q	299	Q	Q	5.6	Q
<b>Year constructed</b>									
Before 1920	2	6	3	380	425	Q	6.1	14.9	9.6
1920 to 1945	3	8	4	370	650	215	8.5	12.2	17.8
1946 to 1959	6	16	4	502	1,424	265	12.4	11.4	16.2
1960 to 1969	14	34	7	1,186	1,675	682	11.5	20.2	10.6
1970 to 1979	11	27	9	724	1,671	555	15.8	16.3	16.6
1980 to 1989	11	60	18	947	3,535	938	11.9	17.1	19.1
1990 to 1999	11	47	16	817	2,689	1,182	13.2	17.4	13.9
2000 to 2003	6	29	3	405	1,919	208	14.2	15.3	13.2
2004 to 2007	5	29	4	375	1,909	312	12.9	15.3	12.1
2008 to 2012	6	Q	Q	310	1,711	Q	17.9	17.2	Q

**Table C18. Electricity consumption and conditional energy intensity by Census division (part 2), 2012**

	Total electricity consumption (billion kWh)			Total floorspace of buildings using electricity (million square feet)			Electricity energy intensity (kWh/square foot)		
	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central
<b>All buildings</b>	75	287	71	6,016	17,608	4,824	12.5	16.3	14.6
<b>Climate region<sup>1</sup></b>									
Very cold/Cold	53	N	N	4,369	N	N	12.1	N	N
Mixed-humid	22	203	51	1,647	13,073	3,761	13.5	15.6	13.6
Mixed-dry/Hot-dry	N	N	N	N	N	N	N	N	N
Hot-humid	N	83	Q	N	4,534	Q	N	18.3	18.4
Marine	N	N	N	N	N	N	N	N	N
<b>Number of floors</b>									
One	27	133	40	2,555	8,880	2,588	10.6	15.0	15.5
Two	19	59	12	1,654	3,762	1,066	11.3	15.7	11.6
Three	12	19	5	881	992	344	13.8	19.5	14.9
Four to nine	15	56	10	814	2,913	694	18.4	19.4	14.6
Ten or more	Q	18	Q	Q	1,061	Q	Q	17.3	Q
<b>Elevators and escalators (more than one may apply)</b>									
Any elevators	34	119	21	2,097	6,471	1,206	16.4	18.4	17.1
Number of elevators									
One	13	28	7	949	1,948	440	13.8	14.6	15.7
Two to five	14	57	6	788	2,825	447	17.2	20.2	14.3
Six or more	8	34	7	359	1,697	320	21.7	19.8	22.8
Any escalators	Q	14	Q	Q	646	Q	Q	20.9	Q
<b>Number of workers (main shift)</b>									
Fewer than 5	10	32	11	1,461	2,660	1,186	7.1	12.0	9.4
5 to 9	9	24	6	800	1,751	491	10.8	13.7	11.9
10 to 19	8	32	11	648	1,935	573	13.0	16.8	19.5
20 to 49	13	48	11	1,102	3,001	964	12.1	16.1	11.6
50 to 99	10	62	14	614	3,490	764	16.2	17.9	18.1
100 to 249	12	44	9	766	2,622	447	16.1	16.9	19.5
250 or more	12	43	9	626	2,150	399	18.9	20.2	21.8
<b>Weekly operating hours</b>									
Fewer than 40	4	4	3	600	897	618	6.0	4.9	5.4
40 to 48	8	29	12	1,051	2,852	1,269	7.7	10.3	9.7
49 to 60	17	60	11	1,620	5,083	876	10.8	11.9	12.3
61 to 84	14	62	10	1,037	3,440	476	13.9	17.9	20.2
85 to 167	16	48	11	818	1,846	503	19.4	25.7	21.0
Open continuously	15	83	24	890	3,490	1,082	17.3	23.8	22.2



**Table C18. Electricity consumption and conditional energy intensity by Census division (part 2), 2012**

	Total electricity consumption (billion kWh)			Total floorspace of buildings using electricity (million square feet)			Electricity energy intensity (kWh/square foot)		
	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central
<b>All buildings</b>	75	287	71	6,016	17,608	4,824	12.5	16.3	14.6
<b>Predominant roof material</b>									
Metal surfacing	13	44	15	1,542	3,650	1,344	8.3	12.0	11.1
Synthetic or rubber	28	84	24	2,120	4,367	1,352	13.4	19.3	17.4
Built-up	18	77	15	1,083	4,659	865	16.4	16.6	17.4
Slate or tile shingles	Q	16	Q	Q	1,046	Q	Q	15.2	Q
Wooden materials (including shingles)	Q	5	Q	Q	268	Q	Q	17.4	Q
Asphalt, fiberglass, or other shingles	14	47	12	1,049	2,941	986	13.1	15.9	12.5
Concrete	Q	11	Q	Q	490	Q	Q	23.0	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
No one major type	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Roof characteristics</b>									
Roof tilt									
Flat	45	179	34	3,047	9,914	2,015	14.7	18.0	16.9
Shallow pitch	20	72	28	1,819	5,205	1,773	11.3	13.9	15.6
Steeper pitch	10	36	9	1,150	2,488	1,036	8.3	14.3	8.6
Cool roof	18	68	19	1,121	3,858	1,331	16.2	17.6	14.3
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>									
Any type of renovation	43	118	43	3,431	7,183	2,728	12.6	16.4	15.9
Addition or annex	22	39	12	1,580	2,328	778	13.6	16.7	15.9
Reduction in floorspace	Q	9	Q	Q	344	Q	Q	26.1	Q
Roof replacement	29	50	29	2,118	2,842	1,638	13.6	17.5	17.5
Exterior wall replacement	8	17	5	468	767	299	16.3	21.7	16.3
Interior wall reconfiguration	23	64	22	1,625	3,316	1,214	14.2	19.2	18.5
Window replacement	12	37	10	1,013	2,079	583	12.3	17.8	17.3
HVAC equipment upgrade	28	78	25	1,967	4,547	1,431	14.0	17.2	17.5
Lighting upgrade	29	70	25	1,989	4,135	1,440	14.5	17.0	17.2
Electrical upgrade	20	49	16	1,378	2,555	979	14.9	19.3	16.8
Plumbing system upgrade	17	42	11	1,153	2,355	821	15.0	17.8	13.8
Insulation upgrade	14	24	5	929	1,150	409	15.2	21.2	11.9
Fire, safety, or security upgrade	20	53	14	1,201	2,773	899	16.7	19.0	15.8
Structural upgrade	5	16	Q	258	695	Q	20.8	23.5	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
No renovations	26	139	25	2,275	8,714	1,895	11.5	16.0	12.9
Buildings constructed 2008 or later	6	Q	Q	310	1,711	Q	17.9	17.2	Q

**Table C18. Electricity consumption and conditional energy intensity by Census division (part 2), 2012**

	Total electricity consumption (billion kWh)			Total floorspace of buildings using electricity (million square feet)			Electricity energy intensity (kWh/square foot)		
	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central
<b>All buildings</b>	75	287	71	6,016	17,608	4,824	12.5	16.3	14.6
<b>Energy sources (more than one may apply)</b>									
Electricity	75	287	71	6,016	17,608	4,824	12.5	16.3	14.6
Natural gas	54	176	51	4,236	9,984	3,436	12.7	17.6	14.9
Fuel oil	22	92	16	1,316	4,419	797	16.8	20.7	19.8
District heat	6	18	5	332	1,159	Q	19.5	15.8	Q
District chilled water	Q	19	6	Q	1,202	Q	Q	15.8	Q
Propane	13	20	6	1,064	1,476	470	12.2	13.8	12.3
Other	2	9	Q	251	554	Q	9.5	15.9	Q
<b>Space-heating energy sources</b>									
Electricity	40	214	48	2,951	12,514	3,170	13.7	17.1	15.0
Electricity main	18	152	31	1,281	8,533	1,982	14.3	17.8	15.6
Electricity secondary	22	62	17	1,670	3,982	1,188	13.1	15.7	14.2
Other excluding electricity	34	47	22	2,849	3,369	1,523	11.9	14.0	14.3
Buildings without heating	1	25	Q	217	1,724	Q	3.3	14.6	Q
<b>Primary space-heating energy source</b>									
Electricity	18	152	31	1,281	8,533	1,982	14.3	17.8	15.6
Natural gas	42	87	32	3,497	5,694	2,067	12.1	15.4	15.3
Fuel oil	Q	2	Q	Q	245	Q	Q	9.6	Q
District heat	6	18	5	332	1,089	Q	19.5	16.1	Q
Propane	6	2	Q	517	307	193	11.3	7.0	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Cooling energy sources</b>									
Electricity	71	274	66	5,352	16,368	4,307	13.2	16.7	15.3
Other excluding electricity	Q	10	Q	Q	726	Q	Q	14.4	Q
Buildings without cooling	2	3	Q	548	514	Q	3.8	5.0	Q
<b>Water-heating energy sources</b>									
Electricity	36	182	41	3,020	11,163	2,900	12.1	16.3	14.0
Other excluding electricity	36	94	28	2,490	4,981	1,698	14.4	18.9	16.6
Buildings without water heating	3	10	2	506	1,463	226	5.0	7.0	8.1
<b>Cooking energy sources</b>									
Electricity	33	102	28	1,949	5,446	1,544	16.8	18.7	18.0
Other excluding electricity	10	59	12	602	2,479	711	16.1	23.6	17.5
Buildings without cooking	33	126	30	3,465	9,683	2,569	9.4	13.1	11.8
<b>Energy end uses (more than one may apply)</b>									
Buildings with space heating	74	261	70	5,800	15,883	4,692	12.8	16.5	14.8
Buildings with cooling	73	284	70	5,469	17,094	4,710	13.3	16.6	14.8
Buildings with water heating	72	276	69	5,510	16,144	4,598	13.1	17.1	15.0
Buildings with cooking	42	160	40	2,551	7,925	2,255	16.6	20.2	17.8
Buildings with manufacturing	3	7	Q	365	821	Q	7.8	8.2	Q
Buildings with electricity generation	25	125	22	1,445	5,901	1,075	17.2	21.1	20.4

**Table C18. Electricity consumption and conditional energy intensity by Census division (part 2), 2012**

	Total electricity consumption (billion kWh)		Total floorspace of buildings using electricity (million square feet)			Electricity energy intensity (kWh/square foot)			
	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central
<b>All buildings</b>	75	287	71	6,016	17,608	4,824	12.5	16.3	14.6
<b>Percent of floorspace heated</b>									
Not heated	1	25	Q	217	1,724	Q	3.3	14.6	Q
1 to 50	Q	26	4	560	2,193	469	7.3	11.9	8.3
51 to 99	8	53	17	694	3,098	1,236	11.7	17.1	13.6
100	62	182	49	4,545	10,592	2,987	13.6	17.2	16.3
<b>Percent of floorspace cooled</b>									
Not cooled	2	3	Q	548	514	Q	3.8	5.0	Q
1 to 50	11	27	6	1,451	3,237	969	7.9	8.3	6.7
51 to 99	19	85	23	1,289	4,695	1,642	14.4	18.2	13.9
100	43	172	41	2,728	9,162	2,098	15.7	18.8	19.3
<b>Percent lit when open</b>									
Zero	Q	Q	Q	Q	Q	Q	Q	Q	Q
1 to 50	11	27	7	1,030	2,375	817	10.4	11.5	8.3
51 to 99	33	123	25	2,315	7,284	1,665	14.2	16.9	15.1
100	30	136	39	2,472	7,734	2,233	12.3	17.6	17.3
Building never open/electricity not used	Q	(*)	Q	Q	154	Q	Q	2.1	Q
<b>Percent lit during off hours</b>									
Zero	17	48	12	2,183	4,457	1,460	7.9	10.7	8.1
1 to 50	49	192	43	3,534	11,570	2,771	14.0	16.6	15.4
51 to 100	6	35	10	234	1,118	381	24.6	30.9	26.2
Building always open with no "off hours"	Q	12	Q	Q	462	Q	Q	26.5	Q
Electricity not used	N	N	N	N	N	N	N	N	N
<b>Heating equipment (more than one may apply)</b>									
Heat pumps	6	77	12	436	4,909	844	12.7	15.6	14.4
Furnaces	8	17	8	755	1,234	530	11.0	14.1	15.5
Individual space heaters	24	43	15	2,051	3,328	1,295	11.8	13.0	11.3
District heat	6	18	5	332	1,148	Q	19.5	15.6	Q
Boilers	23	58	18	1,583	3,247	1,077	14.8	17.8	16.9
Packaged heating units	45	178	48	3,547	10,168	3,136	12.8	17.5	15.2
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Cooling equipment (more than one may apply)</b>									
Residential-type central air conditioners	14	39	13	1,493	2,574	891	9.3	15.0	14.6
Heat pumps	6	79	11	421	4,925	839	14.7	16.0	13.5
Individual air conditioners	10	34	11	779	2,484	808	12.7	13.9	13.2
District chilled water	Q	19	6	Q	1,202	Q	Q	15.8	Q
Central chillers	21	82	15	991	3,884	831	21.3	21.0	18.2
Packaged air conditioning units	41	162	43	2,977	9,119	2,686	13.7	17.8	15.8
Swamp coolers	N	5	N	N	226	N	N	23.1	N
Other	Q	Q	N	Q	Q	N	Q	Q	N



**Table C18. Electricity consumption and conditional energy intensity by Census division (part 2), 2012**

	Total electricity consumption (billion kWh)			Total floorspace of buildings using electricity (million square feet)			Electricity energy intensity (kWh/square foot)		
	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central
<b>All buildings</b>	75	287	71	6,016	17,608	4,824	12.5	16.3	14.6
<b>Main equipment replaced since 1990 (more than one may apply)</b>									
Heating	28	84	26	2,482	5,204	1,616	11.3	16.1	16.1
Cooling	32	102	30	2,591	6,455	1,755	12.3	15.8	16.9
<b>Water-heating equipment</b>									
Centralized system	47	158	44	3,710	8,889	2,745	12.8	17.7	15.9
Distributed system	7	40	4	663	3,030	437	10.1	13.3	9.9
Combination of centralized and distributed system	18	79	21	1,137	4,226	1,416	16.0	18.6	14.6
<b>Lighting equipment types (more than one may apply)</b>									
Incandescent	41	138	35	2,858	7,828	2,468	14.4	17.7	14.2
Standard fluorescent	72	274	69	5,634	16,888	4,573	12.8	16.2	15.0
Compact fluorescent	53	206	46	3,505	10,855	2,923	15.2	18.9	15.6
High-intensity discharge (HID)	22	93	20	1,255	5,325	1,182	17.7	17.5	17.0
Halogen	23	121	24	1,578	6,161	1,349	14.8	19.6	17.4
LED	23	98	21	1,389	4,553	1,232	16.3	21.6	17.4
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Refrigeration equipment (more than one may apply)</b>									
Any refrigeration	70	265	68	5,196	15,268	4,498	13.5	17.3	15.1
Walk-in units	36	146	31	1,850	6,399	1,199	19.3	22.9	26.2
Cases or cabinets	37	125	31	1,983	5,711	1,596	18.5	21.9	19.6
Large cold storage areas	Q	27	Q	Q	1,049	Q	Q	25.7	Q
Commercial ice makers	39	163	43	1,932	7,957	2,457	20.3	20.5	17.3
Residential-type or compact units	57	213	48	4,407	13,129	3,747	12.9	16.2	12.9
Vending machines	45	169	45	2,988	9,706	2,702	14.9	17.4	16.6
No refrigeration	5	22	3	820	2,340	326	5.8	9.4	Q
<b>Office equipment (more than one may apply)</b>									
Desktop computers	72	274	65	5,301	16,255	4,236	13.5	16.8	15.4
With flat screen monitors	71	267	65	5,192	16,079	4,156	13.7	16.6	15.6
With multiple monitors	34	124	23	2,164	6,888	1,498	15.8	18.0	15.4
Laptop computers	60	230	51	4,389	13,950	3,421	13.6	16.5	14.9
Dedicated servers	50	201	45	3,378	11,468	2,897	14.7	17.5	15.6
Laser printers	51	205	45	3,624	11,789	2,681	14.1	17.3	16.8
Inkjet printers	30	120	27	2,521	7,724	1,954	12.0	15.6	13.9
FAX machines	62	243	55	4,484	14,307	3,404	13.7	17.0	16.1
Photocopiers	55	207	47	3,942	12,279	3,057	13.9	16.9	15.5

**Table C18. Electricity consumption and conditional energy intensity by Census division (part 2), 2012**

	Total electricity consumption (billion kWh)			Total floorspace of buildings using electricity (million square feet)			Electricity energy intensity (kWh/square foot)		
	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central
<b>All buildings</b>	75	287	71	6,016	17,608	4,824	12.5	16.3	14.6
<b>Number of desktop computers</b>									
None	3	13	5	715	1,352	588	4.7	9.7	8.9
1 to 4	13	52	13	1,299	3,318	911	10.0	15.5	14.7
5 to 9	8	32	8	730	1,723	649	11.6	18.4	12.1
10 to 19	7	29	8	522	1,903	649	12.8	15.1	12.6
20 to 49	13	50	13	958	2,966	758	13.7	16.8	16.8
50 to 99	6	25	8	452	1,713	456	13.6	14.6	18.1
100 to 249	12	41	6	634	2,156	410	19.0	18.8	15.5
250 or more	12	46	9	706	2,476	403	17.1	18.7	21.4
<b>Number of laptop computers</b>									
None	15	56	19	1,628	3,657	1,402	9.4	15.4	13.9
1 to 4	18	63	17	1,785	4,218	1,281	10.2	14.9	13.0
5 to 9	6	34	6	415	2,003	452	14.2	16.9	12.7
10 to 19	6	32	10	414	1,994	489	14.9	15.9	21.1
20 to 49	13	39	7	811	2,362	505	16.2	16.5	13.8
50 to 99	5	13	5	334	809	244	16.4	15.5	19.1
100 to 249	Q	22	Q	Q	1,078	Q	Q	20.2	Q
250 or more	6	29	Q	319	1,487	Q	20.1	19.4	Q
<b>Number of dedicated servers</b>									
None	25	86	26	2,639	6,139	1,926	9.6	13.9	13.3
1 to 4	27	129	23	2,145	7,735	1,785	12.6	16.6	13.2
5 to 9	8	18	6	504	1,063	414	15.5	16.9	14.6
10 to 19	7	21	Q	343	1,286	Q	19.4	16.2	Q
20 to 49	Q	14	Q	Q	696	Q	Q	19.4	Q
50 or more	Q	20	Q	Q	688	Q	Q	29.5	Q
<b>Number of photocopiers</b>									
None	20	79	23	2,075	5,329	1,767	9.8	14.9	13.1
One	16	49	11	1,216	3,397	816	13.0	14.4	13.0
2 to 4	18	67	17	1,581	4,073	1,247	11.4	16.5	14.0
5 to 9	8	34	9	523	1,943	456	14.5	17.6	18.8
10 or more	13	57	11	621	2,865	538	21.3	20.0	20.1
<b>Number of TVs or video displays</b>									
None	15	47	12	1,699	4,343	1,052	8.7	10.8	11.7
One	6	28	8	806	2,162	740	7.9	12.8	10.3
2 to 4	13	58	16	1,167	3,192	964	10.8	18.0	16.3
5 to 9	9	28	8	611	1,524	637	14.3	18.5	13.2
10 to 19	13	31	7	760	1,558	435	17.6	19.8	16.0
20 to 49	8	37	9	470	1,973	401	16.0	19.0	22.1
50 to 99	Q	24	Q	Q	1,213	Q	Q	19.8	Q
100 or more	8	34	8	357	1,643	Q	21.8	20.7	18.7

**Table C18. Electricity consumption and conditional energy intensity by Census division (part 2), 2012**

	Total electricity consumption (billion kWh)			Total floorspace of buildings using electricity (million square feet)			Electricity energy intensity (kWh/square foot)		
	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central
<b>All buildings</b>	75	287	71	6,016	17,608	4,824	12.5	16.3	14.6
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>									
Snack bar or concession stand	11	53	6	630	2,550	329	17.8	20.9	17.7
Fast food or small restaurant	12	55	15	476	2,135	609	25.3	25.6	24.4
Cafeteria or large restaurant	18	65	12	1,003	3,709	613	17.7	17.6	19.3
Commercial kitchen/food preparation area	17	72	16	993	3,867	722	17.4	18.7	21.7
Small kitchen area	13	48	12	1,130	2,551	1,072	11.2	18.7	11.6
<b>Separate computer areas (more than one may apply)</b>									
Data center or server farm	15	47	9	745	2,296	456	20.3	20.6	20.2
Computer-based training room	21	70	17	1,222	3,895	879	17.5	17.9	19.6
Student or public computer center	16	50	13	1,102	3,187	761	14.7	15.6	17.6
<b>HVAC conservation features (more than one may apply)</b>									
Economizer cycle	39	97	21	2,366	5,286	1,059	16.7	18.4	19.8
Regular HVAC maintenance	63	258	58	4,513	14,891	3,362	14.0	17.3	17.1
Building automation system (BAS) <sup>2</sup>	39	160	32	2,350	8,070	1,880	16.6	19.8	16.9
<b>Window and interior lighting features (more than one may apply)</b>									
Multipaned windows	68	215	55	5,130	12,533	3,334	13.2	17.2	16.6
Tinted window glass	42	164	41	2,740	9,692	2,469	15.1	17.0	16.5
Reflective window glass	21	70	14	1,144	2,966	696	18.3	23.4	19.6
External overhangs or awnings	31	147	32	2,307	7,718	2,073	13.2	19.1	15.6
Skylights or atriums	17	79	13	1,275	4,768	904	13.3	16.6	14.3
Light scheduling	27	123	23	1,617	6,195	1,217	16.8	19.9	18.7
Occupancy sensors	32	140	25	1,990	7,130	1,429	16.0	19.7	17.8
Multi-level lighting or dimming	15	71	18	902	3,452	886	16.3	20.5	19.8
Daylight harvesting	7	21	Q	375	999	Q	19.2	21.0	Q
Demand responsive lighting	6	28	Q	406	1,315	Q	15.7	21.0	Q
Building automation system (BAS) for lighting <sup>2</sup>	14	58	9	768	2,714	495	18.2	21.5	17.6
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>									
Heating	53	191	44	4,320	12,357	3,581	12.2	15.5	12.4
Cooling	53	210	46	4,121	13,458	3,675	12.8	15.6	12.5
Lighting	71	260	64	5,693	16,417	4,478	12.4	15.8	14.3

**Table C18. Electricity consumption and conditional energy intensity by Census division (part 2), 2012**

	Total electricity consumption (billion kWh)			Total floorspace of buildings using electricity (million square feet)			Electricity energy intensity (kWh/square foot)		
	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central
<b>All buildings</b>	75	287	71	6,016	17,608	4,824	12.5	16.3	14.6
<b>Annual consumption (kilowatthours)</b>									
10,000 or less	1	1	(*)	413	354	193	1.3	1.4	1.2
10,001 to 50,000	4	8	3	968	1,712	545	4.6	4.8	5.6
50,001 to 100,000	5	14	4	572	1,576	506	8.5	8.9	8.7
100,001 to 500,000	19	68	22	1,442	4,498	1,599	12.9	15.2	13.7
500,001 to 1,000,000	11	38	10	722	2,047	508	14.7	18.4	19.9
1,000,001 to 5,000,000	23	92	19	1,322	4,825	985	17.7	19.1	19.4
Over 5,000,000	12	66	12	578	2,596	488	21.6	25.3	24.1

<sup>1</sup>These climate regions were created by the Building America program, sponsored by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE).

<sup>2</sup>In earlier CBECS publications, BAS was referred to as *Energy Management and Control System (EMCS)*.

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

N = No cases in reporting sample.

(\*) = Value rounds to zero in the units displayed.

Notes: • Because of rounding, data may not sum to totals. • See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from

<http://www.eia.gov/consumption/commercial/data/2012/> • 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 generation, transmission, and distribution processes. • 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.

Source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Forms EIA-871A and E of the 2012 Commercial Buildings Energy Consumption Survey.

**Table C19. Electricity consumption and conditional energy intensity by Census division (part 3), 2012**

	Total electricity consumption (billion kWh)			Total floorspace of buildings using electricity (million square feet)			Electricity energy intensity (kWh/square foot)		
	West South Central	Mountain	Pacific	West South Central	Mountain	Pacific	West South Central	Mountain	Pacific
<b>All buildings</b>	173	67	176	10,594	4,812	13,180	16.3	13.9	13.3
<b>Building floorspace (square feet)</b>									
1,001 to 5,000	19	7	17	1,127	488	1,129	16.8	15.0	15.5
5,001 to 10,000	17	9	22	1,035	495	1,700	16.4	17.5	12.7
10,001 to 25,000	20	8	28	1,620	870	2,551	12.6	9.4	11.0
25,001 to 50,000	25	5	24	1,584	467	2,249	15.7	10.2	10.7
50,001 to 100,000	29	10	18	1,844	725	1,636	15.9	13.1	11.1
100,001 to 200,000	26	6	32	1,727	447	1,875	14.9	13.8	17.0
200,001 to 500,000	24	11	22	1,067	774	1,310	22.4	14.9	16.7
Over 500,000	13	Q	13	591	546	731	21.5	20.1	17.6
<b>Principal building activity</b>									
Education	23	8	10	1,853	783	1,065	12.3	10.1	9.8
Food sales	Q	Q	12	Q	Q	304	Q	Q	39.3
Food service	12	4	12	225	104	282	53.7	35.3	43.2
Health care	16	6	13	508	289	497	31.5	20.4	27.1
Inpatient	12	4	11	304	132	315	38.0	27.8	34.4
Outpatient	Q	2	3	204	157	182	21.9	14.1	14.5
Lodging	9	Q	11	599	519	940	14.5	18.2	11.9
Mercantile	24	13	36	1,247	727	2,088	19.4	18.4	17.2
Retail (other than mall)	11	6	15	693	307	1,030	16.6	18.7	14.9
Enclosed and strip malls	13	8	21	554	420	1,058	23.0	18.3	19.5
Office	28	10	40	1,625	852	2,562	17.4	12.2	15.8
Public assembly	13	5	8	769	321	697	16.8	16.2	11.8
Public order and safety	Q	Q	Q	Q	Q	Q	Q	Q	Q
Religious worship	3	1	2	540	214	511	5.6	4.4	4.8
Service	4	Q	5	498	Q	578	7.6	Q	9.5
Warehouse and storage	20	2	14	1,850	582	2,829	11.0	4.1	5.0
Other	Q	Q	7	Q	Q	345	Q	Q	19.5
Vacant	Q	Q	1	Q	Q	306	Q	Q	3.9
<b>Year constructed</b>									
Before 1920	2	Q	2	259	Q	205	7.6	Q	7.5
1920 to 1945	6	Q	8	570	Q	648	10.5	Q	13.1
1946 to 1959	11	3	14	806	314	1,167	13.1	9.0	11.8
1960 to 1969	16	5	24	1,041	406	1,498	15.7	12.3	16.1
1970 to 1979	23	11	19	1,332	785	1,750	17.2	14.4	10.6
1980 to 1989	45	11	35	2,247	885	2,912	20.2	12.8	12.0
1990 to 1999	32	11	31	1,807	776	1,930	17.5	14.0	16.3
2000 to 2003	20	6	13	1,170	419	1,007	16.9	14.8	12.5
2004 to 2007	8	14	16	605	667	Q	13.2	20.9	12.8
2008 to 2012	10	3	Q	757	327	782	13.7	10.6	18.1

**Table C19. Electricity consumption and conditional energy intensity by Census division (part 3), 2012**

	Total electricity consumption (billion kWh)			Total floorspace of buildings using electricity (million square feet)			Electricity energy intensity (kWh/square foot)		
	West South Central	Mountain	Pacific	West South Central	Mountain	Pacific	West South Central	Mountain	Pacific
<b>All buildings</b>	173	67	176	10,594	4,812	13,180	16.3	13.9	13.3
<b>Climate region<sup>1</sup></b>									
Very cold/Cold	N	41	26	N	3,318	1,811	N	12.2	14.6
Mixed-humid	44	N	N	2,895	N	N	15.0	N	N
Mixed-dry/Hot-dry	Q	27	113	Q	1,494	8,753	8.9	17.7	12.9
Hot-humid	116	N	Q	6,204	N	Q	18.7	N	Q
Marine	N	N	35	N	N	2,416	N	N	14.6
<b>Number of floors</b>									
One	96	30	89	6,025	2,415	6,999	15.9	12.5	12.7
Two	28	16	35	1,975	1,153	3,116	14.3	13.6	11.3
Three	10	3	10	692	265	809	15.0	11.4	12.6
Four to nine	28	8	32	1,396	498	1,687	20.3	16.8	19.0
Ten or more	10	Q	10	506	Q	568	19.8	20.4	16.7
<b>Elevators and escalators (more than one may apply)</b>									
Any elevators	62	29	66	3,266	1,700	3,920	18.9	17.0	16.7
Number of elevators									
One	20	6	13	1,277	486	1,207	15.4	11.8	11.0
Two to five	25	10	29	1,295	563	1,705	19.5	17.6	17.3
Six or more	17	Q	23	694	651	1,007	24.4	20.3	22.6
Any escalators	Q	Q	7	Q	Q	461	Q	Q	14.6
<b>Number of workers (main shift)</b>									
Fewer than 5	19	9	17	2,240	799	2,271	8.3	10.8	7.3
5 to 9	21	7	17	1,308	565	1,662	16.1	12.9	10.4
10 to 19	19	7	23	1,307	560	1,978	14.8	13.0	11.4
20 to 49	35	9	40	1,646	858	2,771	21.1	10.9	14.3
50 to 99	30	7	24	1,821	597	1,657	16.4	11.8	14.5
100 to 249	21	13	22	1,094	689	1,246	19.2	18.2	17.5
250 or more	28	15	34	1,178	745	1,595	24.2	19.9	21.2
<b>Weekly operating hours</b>									
Fewer than 40	5	2	5	994	433	860	5.2	5.3	5.3
40 to 48	30	8	29	2,615	896	2,734	11.3	8.8	10.5
49 to 60	32	13	31	2,522	1,161	3,096	12.5	11.3	10.1
61 to 84	27	13	39	1,331	807	2,804	20.4	15.9	14.0
85 to 167	22	8	29	784	400	1,539	28.2	19.8	18.8
Open continuously	57	23	43	2,348	1,115	2,147	24.4	20.7	20.1



**Table C19. Electricity consumption and conditional energy intensity by Census division (part 3), 2012**

	Total electricity consumption (billion kWh)			Total floorspace of buildings using electricity (million square feet)			Electricity energy intensity (kWh/square foot)		
	West South Central	Mountain	Pacific	West South Central	Mountain	Pacific	West South Central	Mountain	Pacific
<b>All buildings</b>	173	67	176	10,594	4,812	13,180	16.3	13.9	13.3
<b>Predominant roof material</b>									
Metal surfacing	37	11	19	2,810	822	1,729	13.0	12.8	10.8
Synthetic or rubber	40	28	47	1,946	1,839	2,837	20.6	15.3	16.4
Built-up	56	15	54	3,051	1,161	3,935	18.2	13.0	13.7
Slate or tile shingles	12	3	15	Q	167	1,015	16.4	18.3	14.8
Wooden materials (including shingles)	Q	Q	4	Q	Q	428	Q	Q	9.4
Asphalt, fiberglass, or other shingles	23	8	29	1,652	677	2,572	14.0	11.4	11.4
Concrete	Q	Q	5	Q	Q	332	Q	Q	15.4
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
No one major type	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Roof characteristics</b>									
Roof tilt									
Flat	107	39	118	5,677	2,669	8,025	18.9	14.6	14.7
Shallow pitch	47	22	42	3,629	1,526	3,584	13.0	14.2	11.8
Steeper pitch	18	6	16	1,288	616	1,571	14.3	10.3	10.2
Cool roof	44	19	60	2,254	1,426	3,465	19.5	13.5	17.2
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>									
Any type of renovation	96	33	74	5,234	2,245	5,206	18.4	14.5	14.3
Addition or annex	26	15	13	1,451	855	902	18.3	17.0	14.8
Reduction in floorspace	Q	Q	Q	Q	Q	Q	Q	Q	Q
Roof replacement	47	13	28	2,358	1,063	2,034	19.9	12.5	13.9
Exterior wall replacement	9	Q	9	369	Q	647	23.7	Q	14.6
Interior wall reconfiguration	47	23	42	2,264	1,418	2,836	20.7	16.3	14.9
Window replacement	24	Q	15	1,098	770	1,278	21.6	15.3	12.1
HVAC equipment upgrade	61	24	45	3,256	1,561	2,837	18.7	15.4	15.7
Lighting upgrade	64	23	47	3,174	1,496	3,058	20.2	15.3	15.4
Electrical upgrade	35	16	28	1,877	986	1,721	18.9	16.4	16.1
Plumbing system upgrade	27	14	25	1,433	782	1,593	18.6	17.7	15.8
Insulation upgrade	16	Q	13	746	Q	821	21.9	19.5	16.2
Fire, safety, or security upgrade	39	13	31	2,178	912	1,987	17.7	13.9	15.4
Structural upgrade	Q	Q	11	Q	Q	717	Q	19.3	15.7
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
No renovations	66	31	87	4,603	2,239	7,192	14.4	13.8	12.2
Buildings constructed 2008 or later	10	3	Q	757	327	782	13.7	10.6	18.1



**Table C19. Electricity consumption and conditional energy intensity by Census division (part 3), 2012**

	Total electricity consumption (billion kWh)			Total floorspace of buildings using electricity (million square feet)			Electricity energy intensity (kWh/square foot)		
	West South Central	Mountain	Pacific	West South Central	Mountain	Pacific	West South Central	Mountain	Pacific
<b>All buildings</b>	173	67	176	10,594	4,812	13,180	16.3	13.9	13.3
<b>Energy sources (more than one may apply)</b>									
Electricity	173	67	176	10,594	4,812	13,180	16.3	13.9	13.3
Natural gas	108	54	138	6,480	3,766	8,966	16.7	14.2	15.4
Fuel oil	45	19	41	1,835	1,092	2,043	24.8	17.4	20.2
District heat	12	Q	7	646	482	404	19.1	19.2	17.3
District chilled water	14	Q	6	773	Q	329	18.5	20.3	17.0
Propane	16	Q	11	621	503	982	25.5	15.3	11.4
Other	Q	6	8	Q	403	631	Q	14.7	13.2
<b>Space-heating energy sources</b>									
Electricity	121	39	108	6,874	2,791	7,768	17.7	13.8	13.9
Electricity main	86	18	63	4,604	1,122	4,794	18.8	15.9	13.1
Electricity secondary	35	21	45	2,270	1,668	2,974	15.4	12.4	15.0
Other excluding electricity	47	28	59	3,050	1,913	3,999	15.4	14.6	14.7
Buildings without heating	4	Q	9	671	Q	1,413	6.6	Q	6.6
<b>Primary space-heating energy source</b>									
Electricity	86	18	63	4,604	1,122	4,794	18.8	15.9	13.1
Natural gas	67	38	95	4,551	2,893	6,333	14.7	13.0	15.0
Fuel oil	Q	Q	Q	Q	Q	Q	Q	Q	Q
District heat	12	Q	7	637	482	385	19.2	19.2	17.4
Propane	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Cooling energy sources</b>									
Electricity	159	59	165	9,275	4,205	11,749	17.2	14.1	14.0
Other excluding electricity	11	Q	3	655	Q	228	17.1	Q	14.5
Buildings without cooling	3	2	8	663	323	1,202	3.9	4.9	6.5
<b>Water-heating energy sources</b>									
Electricity	98	29	92	5,386	2,000	6,810	18.1	14.3	13.5
Other excluding electricity	69	36	78	4,133	2,440	5,279	16.8	14.8	14.7
Buildings without water heating	6	2	6	1,075	372	1,091	5.6	6.3	5.6
<b>Cooking energy sources</b>									
Electricity	59	26	61	2,822	1,522	2,981	21.1	16.8	20.4
Other excluding electricity	26	17	35	1,379	898	1,861	18.8	19.4	18.9
Buildings without cooking	88	24	80	6,393	2,392	8,338	13.7	10.0	9.6
<b>Energy end uses (more than one may apply)</b>									
Buildings with space heating	169	67	167	9,923	4,704	11,767	17.0	14.1	14.2
Buildings with cooling	170	65	168	9,931	4,489	11,978	17.2	14.6	14.0
Buildings with water heating	167	65	170	9,519	4,440	12,089	17.5	14.6	14.0
Buildings with cooking	85	43	96	4,201	2,420	4,842	20.3	17.8	19.8
Buildings with manufacturing	19	Q	10	705	Q	999	27.4	Q	9.5
Buildings with electricity generation	56	29	59	2,401	1,635	3,049	23.2	17.7	19.3



**Table C19. Electricity consumption and conditional energy intensity by Census division (part 3), 2012**

	Total electricity consumption (billion kWh)			Total floorspace of buildings using electricity (million square feet)			Electricity energy intensity (kWh/square foot)		
	West South Central	Mountain	Pacific	West South Central	Mountain	Pacific	West South Central	Mountain	Pacific
<b>All buildings</b>	173	67	176	10,594	4,812	13,180	16.3	13.9	13.3
<b>Main equipment replaced since 1990 (more than one may apply)</b>									
Heating	52	16	47	3,228	1,365	3,903	16.0	11.9	12.1
Cooling	59	18	52	3,458	1,440	4,070	17.0	12.5	12.9
<b>Water-heating equipment</b>									
Centralized system	100	39	93	5,826	2,573	7,058	17.2	15.1	13.2
Distributed system	24	7	27	1,471	699	2,333	16.3	9.4	11.5
Combination of centralized and distributed system	43	19	50	2,222	1,168	2,698	19.2	16.5	18.4
<b>Lighting equipment types (more than one may apply)</b>									
Incandescent	75	36	73	4,286	2,253	4,969	17.5	16.0	14.7
Standard fluorescent	166	65	167	9,901	4,529	12,203	16.8	14.4	13.7
Compact fluorescent	114	47	123	6,263	3,007	8,156	18.2	15.7	15.1
High-intensity discharge (HID)	45	22	40	2,841	1,314	2,868	15.7	16.5	13.9
Halogen	61	26	67	3,459	1,663	3,990	17.7	15.7	16.8
LED	40	29	48	1,774	1,513	3,099	22.4	19.0	15.5
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Refrigeration equipment (more than one may apply)</b>									
Any refrigeration	159	63	156	8,989	4,179	10,530	17.7	15.1	14.8
Walk-in units	72	38	77	3,179	1,898	3,486	22.6	20.0	22.1
Cases or cabinets	65	35	83	3,079	1,740	3,725	21.2	20.3	22.2
Large cold storage areas	8	Q	18	316	Q	676	26.2	Q	25.9
Commercial ice makers	84	40	81	4,102	2,093	3,955	20.5	19.3	20.5
Residential-type or compact units	116	46	126	7,312	3,323	9,176	15.9	14.0	13.7
Vending machines	101	40	94	5,219	2,529	5,659	19.3	15.7	16.6
No refrigeration	14	4	20	1,605	633	2,650	8.8	6.4	7.6
<b>Office equipment (more than one may apply)</b>									
Desktop computers	161	63	166	9,194	4,338	12,062	17.5	14.6	13.8
With flat screen monitors	161	63	165	9,111	4,261	11,968	17.7	14.8	13.8
With multiple monitors	67	32	80	3,708	1,992	5,163	18.1	15.9	15.4
Laptop computers	130	51	129	7,550	3,614	9,282	17.3	14.2	13.9
Dedicated servers	112	51	125	6,199	3,189	8,258	18.1	15.9	15.1
Laser printers	108	45	117	5,990	2,952	8,367	18.0	15.3	14.0
Inkjet printers	78	29	77	4,619	2,056	5,641	16.9	14.3	13.6
FAX machines	145	54	137	8,084	3,708	10,007	17.9	14.5	13.7
Photocopiers	116	47	128	6,763	3,360	9,111	17.2	13.9	14.1

**Table C19. Electricity consumption and conditional energy intensity by Census division (part 3), 2012**

	Total electricity consumption (billion kWh)			Total floorspace of buildings using electricity (million square feet)			Electricity energy intensity (kWh/square foot)		
	West Central	West South Mountain	West South Pacific	West Central	West South Mountain	West South Pacific	West Central	West South Mountain	West South Pacific
<b>All buildings</b>	173	67	176	10,594	4,812	13,180	16.3	13.9	13.3
<b>Number of desktop computers</b>									
None	12	4	10	1,400	474	1,118	8.3	7.7	8.8
1 to 4	33	10	31	2,044	782	2,575	16.3	12.7	11.9
5 to 9	20	6	20	1,156	515	1,866	17.4	11.5	11.0
10 to 19	15	6	26	979	429	1,958	14.9	13.4	13.1
20 to 49	35	13	28	1,623	873	1,957	21.3	14.7	14.1
50 to 99	15	7	16	1,074	434	1,259	13.7	15.9	12.7
100 to 249	13	12	18	826	653	1,179	15.3	18.5	15.3
250 or more	31	10	28	1,493	653	1,268	21.0	15.3	21.9
<b>Number of laptop computers</b>									
None	43	16	47	3,044	1,198	3,898	14.0	13.2	11.9
1 to 4	42	14	39	2,580	1,163	3,524	16.3	11.9	11.2
5 to 9	16	8	14	1,113	509	1,384	14.5	15.6	9.9
10 to 19	15	5	27	904	405	1,579	16.1	12.3	17.2
20 to 49	15	13	25	927	740	1,444	16.7	18.0	17.2
50 to 99	17	4	10	774	309	568	21.5	13.9	17.3
100 to 249	13	4	7	766	285	388	17.3	12.7	18.5
250 or more	12	3	7	486	202	395	25.2	16.0	18.9
<b>Number of dedicated servers</b>									
None	60	16	51	4,395	1,623	4,922	13.8	10.1	10.4
1 to 4	65	29	67	3,980	2,061	5,143	16.3	13.9	13.1
5 to 9	13	5	17	749	357	1,131	17.8	15.1	14.8
10 to 19	14	Q	16	622	Q	899	22.4	22.1	17.6
20 to 49	12	5	8	455	282	497	25.6	18.3	15.8
50 or more	Q	Q	17	Q	Q	589	22.3	Q	28.9
<b>Number of photocopiers</b>									
None	56	20	48	3,831	1,452	4,069	14.7	14.0	11.7
One	28	12	36	1,915	1,003	3,402	14.8	12.0	10.6
2 to 4	47	13	43	2,743	1,137	2,948	17.3	11.2	14.7
5 to 9	13	6	17	804	399	1,148	16.1	15.4	14.9
10 or more	28	16	32	1,300	821	1,613	21.3	19.2	19.7
<b>Number of TVs or video displays</b>									
None	30	14	35	2,835	1,279	4,064	10.5	11.1	8.5
One	20	4	19	1,374	524	1,482	14.4	8.3	12.5
2 to 4	38	7	30	2,158	688	2,477	17.4	10.7	12.2
5 to 9	27	6	27	1,001	292	1,419	26.5	20.2	19.3
10 to 19	19	7	15	1,058	488	936	17.9	13.4	16.2
20 to 49	13	11	20	814	620	1,139	16.3	18.1	17.8
50 to 99	12	6	Q	Q	409	622	17.4	14.9	17.3
100 or more	15	Q	19	672	Q	1,039	22.7	22.3	18.2

**Table C19. Electricity consumption and conditional energy intensity by Census division (part 3), 2012**

	Total electricity consumption (billion kWh)			Total floorspace of buildings using electricity (million square feet)			Electricity energy intensity (kWh/square foot)		
	West South Central	Mountain	Pacific	West South Central	Mountain	Pacific	West South Central	Mountain	Pacific
<b>All buildings</b>	173	67	176	10,594	4,812	13,180	16.3	13.9	13.3
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>									
Snack bar or concession stand	18	16	24	884	723	1,211	20.8	21.5	20.1
Fast food or small restaurant	28	20	31	1,053	871	1,593	26.5	23.1	19.7
Cafeteria or large restaurant	26	17	26	1,625	916	1,320	16.0	19.0	19.7
Commercial kitchen/food preparation area	29	19	38	1,503	992	1,859	19.4	18.9	20.4
Small kitchen area	23	15	23	1,498	840	1,574	15.2	17.5	14.4
<b>Separate computer areas (more than one may apply)</b>									
Data center or server farm	26	15	39	1,120	662	1,704	22.9	23.1	22.6
Computer-based training room	41	24	32	2,347	1,364	1,947	17.4	17.7	16.5
Student or public computer center	31	14	22	2,051	1,010	1,283	14.9	14.1	17.5
<b>HVAC conservation features (more than one may apply)</b>									
Economizer cycle	55	33	79	2,706	2,022	4,849	20.4	16.3	16.4
Regular HVAC maintenance	155	59	153	8,319	3,991	10,526	18.6	14.9	14.5
Building automation system (BAS) <sup>2</sup>	87	39	93	4,628	2,310	5,233	18.9	16.9	17.7
<b>Window and interior lighting features (more than one may apply)</b>									
Multipaned windows	116	51	109	6,396	3,728	7,206	18.2	13.8	15.1
Tinted window glass	115	42	108	6,377	2,626	7,925	18.0	15.8	13.7
Reflective window glass	39	20	50	1,763	1,264	3,032	21.9	16.1	16.4
External overhangs or awnings	70	34	82	3,972	2,235	5,299	17.6	15.4	15.5
Skylights or atriums	44	21	54	2,391	1,426	4,462	18.4	14.4	12.1
Light scheduling	61	27	93	3,324	1,650	5,388	18.3	16.6	17.3
Occupancy sensors	71	32	92	3,364	2,027	6,273	21.0	15.7	14.7
Multi-level lighting or dimming	21	20	44	1,086	1,200	2,398	19.1	16.4	18.5
Daylight harvesting	9	9	19	666	461	1,103	13.7	19.1	17.3
Demand responsive lighting	Q	Q	18	Q	Q	1,332	Q	Q	13.8
Building automation system (BAS) for lighting <sup>2</sup>	24	14	43	1,298	807	2,146	18.3	17.7	20.0
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>									
Heating	119	50	131	7,371	3,738	9,704	16.1	13.4	13.5
Cooling	119	47	132	7,315	3,479	9,697	16.3	13.5	13.7
Lighting	158	62	163	9,645	4,497	12,034	16.4	13.9	13.5

**Table C19. Electricity consumption and conditional energy intensity by Census division (part 3), 2012**

	Total electricity consumption (billion kWh)			Total floorspace of buildings using electricity (million square feet)			Electricity energy intensity (kWh/square foot)		
	West South		Pacific	West South		Pacific	West South		Pacific
	Central	Mountain		Central	Mountain		Central	Mountain	
<b>All buildings</b>	173	67	176	10,594	4,812	13,180	16.3	13.9	13.3
<b>Annual consumption (kilowatthours)</b>									
10,000 or less	1	(*)	1	432	191	498	1.3	1.1	1.4
10,001 to 50,000	7	3	10	1,298	679	1,944	5.3	5.1	5.0
50,001 to 100,000	8	3	12	1,048	282	1,566	8.1	9.1	7.5
100,001 to 500,000	35	20	46	2,373	1,400	3,825	14.6	14.0	11.9
500,001 to 1,000,000	30	6	21	1,647	432	1,406	18.4	13.1	15.1
1,000,001 to 5,000,000	48	15	52	2,387	956	2,701	20.3	16.2	19.1
Over 5,000,000	44	20	35	1,410	871	1,238	31.0	23.1	28.4

<sup>1</sup>These climate regions were created by the Building America program, sponsored by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE).

<sup>2</sup>In earlier CBECS publications, BAS was referred to as *Energy Management and Control System (EMCS)*.

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

N = No cases in reporting sample.

(\*) = Value rounds to zero in the units displayed.

Notes: • Because of rounding, data may not sum to totals. • See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from <http://www.eia.gov/consumption/commercial/data/2012/> • 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 generation, transmission, and distribution processes. • 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.

Source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Forms EIA-871A and E of the 2012 Commercial Buildings Energy Consumption Survey.

Table C20. Electricity consumption and conditional energy intensity by climate region, 2012

	Total electricity consumption (billion kWh)					Total floorspace of buildings using electricity (million square feet)					Electricity energy intensity (kWh/square foot)				
	Very cold/Cold	Mixed-humid	Mixed-dry/Hot-dry	Hot-humid	Marine	Very cold/Cold	Mixed-humid	Mixed-dry/Hot-dry	Hot-humid	Marine	Very cold/Cold	Mixed-humid	Mixed-dry/Hot-dry	Hot-humid	Marine
<b>All buildings</b>	419	415	152	220	35	31,286	27,422	11,743	12,002	2,416	13.4	15.2	13.0	18.4	14.6
<b>Building floorspace (square feet)</b>															
1,001 to 5,000	40	48	15	26	Q	2,712	2,545	958	1,096	Q	14.6	18.8	15.2	23.7	14.0
5,001 to 10,000	33	37	21	19	3	3,075	2,534	1,561	1,102	218	10.8	14.5	13.6	17.4	13.5
10,001 to 25,000	56	47	20	29	6	5,304	3,734	2,291	1,808	429	10.6	12.7	8.9	15.9	14.7
25,001 to 50,000	47	47	20	30	Q	4,311	3,163	1,922	1,900	375	10.9	14.9	10.6	15.8	11.1
50,001 to 100,000	72	65	17	33	5	4,960	4,817	1,480	1,943	403	14.5	13.4	11.5	16.9	12.9
100,001 to 200,000	62	59	25	36	7	4,241	4,214	1,666	1,975	265	14.7	14.1	14.9	18.4	25.8
200,001 to 500,000	65	59	24	29	4	4,287	3,445	1,328	1,265	327	15.2	17.0	18.0	22.7	11.3
Over 500,000	43	54	10	19	Q	2,396	2,970	536	912	Q	18.1	18.1	18.9	20.5	Q
<b>Principal building activity</b>															
Education	43	51	11	27	Q	4,739	4,426	1,075	1,878	Q	9.1	11.6	10.3	14.3	Q
Food sales	25	18	Q	7	Q	540	326	Q	135	Q	45.8	55.7	Q	54.6	Q
Food service	23	34	11	13	Q	636	636	229	250	Q	35.8	52.7	47.4	51.8	Q
Health care	39	32	12	22	2	1,754	1,218	398	686	100	22.3	26.1	29.8	32.0	22.9
Inpatient	23	25	Q	14	Q	878	790	268	364	Q	26.7	31.2	37.3	37.5	Q
Outpatient	16	7	2	8	Q	876	427	130	322	Q	18.0	16.7	14.2	25.7	Q
Lodging	31	31	10	15	Q	1,999	1,929	836	917	Q	15.4	16.1	12.3	16.9	Q
Mercantile	67	62	28	44	6	3,911	3,444	1,652	1,979	335	17.1	17.9	17.1	22.2	18.0
Retail (other than mall)	27	22	12	19	Q	1,977	1,623	699	924	Q	13.5	13.7	17.2	20.5	Q
Enclosed and strip malls	40	39	16	25	Q	1,934	1,821	953	1,054	Q	20.7	21.6	17.1	23.7	Q
Office	93	87	27	34	13	6,033	5,496	1,873	1,776	774	15.4	15.8	14.3	19.1	17.3
Public assembly	29	22	12	15	Q	2,351	1,479	834	622	Q	12.4	14.6	14.4	24.2	Q
Public order and safety	5	10	Q	Q	Q	477	597	Q	Q	Q	9.7	17.2	Q	Q	Q
Religious worship	7	9	2	5	Q	1,623	1,698	461	674	Q	4.6	5.1	4.2	7.8	Q
Service	14	14	4	4	Q	1,924	1,503	580	429	Q	7.1	9.5	7.4	9.1	Q
Warehouse and storage	22	22	14	23	Q	3,910	3,584	2,858	2,023	Q	5.7	6.3	4.9	11.5	Q
Other	19	23	8	Q	Q	763	677	249	Q	Q	24.9	33.7	32.8	Q	Q
Vacant	3	2	Q	Q	Q	627	410	323	Q	Q	4.5	3.7	Q	Q	Q
<b>Year constructed</b>															
Before 1920	15	14	Q	Q	Q	2,198	1,217	Q	Q	Q	6.9	11.6	Q	Q	Q
1920 to 1945	23	26	8	7	Q	2,484	2,173	667	420	Q	9.4	11.8	11.4	15.6	Q
1946 to 1959	37	25	11	11	Q	3,066	2,407	964	577	Q	12.0	10.4	10.9	19.5	Q
1960 to 1969	47	55	24	17	4	4,095	3,375	1,490	931	306	11.4	16.4	15.9	18.7	12.5
1970 to 1979	64	59	18	26	3	4,055	3,099	1,674	1,497	232	15.8	19.1	11.0	17.2	13.1
1980 to 1989	62	67	26	69	9	4,277	4,365	2,228	3,208	712	14.6	15.4	11.5	21.4	13.2
1990 to 1999	73	69	23	40	7	4,769	4,288	1,518	2,200	344	15.3	16.2	15.3	18.4	21.6
2000 to 2003	39	33	11	25	Q	2,392	2,313	952	1,376	Q	16.2	14.3	11.7	18.1	Q
2004 to 2007	31	31	Q	14	Q	1,962	2,176	Q	876	Q	15.8	14.1	13.3	16.0	Q
2008 to 2012	28	36	Q	10	Q	1,988	2,011	890	700	Q	13.9	17.8	16.7	14.6	Q

**Table C20. Electricity consumption and conditional energy intensity by climate region, 2012**

	Total electricity consumption (billion kWh)					Total floorspace of buildings using electricity (million square feet)					Electricity energy intensity (kWh/square foot)				
	Very cold/ Cold	Mixed-humid	Mixed-dry/ Hot-dry	Hot-humid	Marine	Very cold/ Cold	Mixed-humid	Mixed-dry/ Hot-dry	Hot-humid	Marine	Very cold/ Cold	Mixed-humid	Mixed-dry/ Hot-dry	Hot-humid	Marine
<b>All buildings</b>	419	415	152	220	35	31,286	27,422	11,743	12,002	2,416	13.4	15.2	13.0	18.4	14.6
<b>Census region and division</b>															
Northeast	142	79	N	N	N	10,283	5,008	N	N	N	13.8	15.7	N	N	N
New England	51	N	N	N	N	4,192	N	N	N	N	12.1	N	N	N	N
Middle Atlantic	91	79	N	N	N	6,091	5,008	N	N	N	15.0	15.7	N	N	N
Midwest	210	39	N	N	N	15,875	2,685	N	N	N	13.3	14.5	N	N	N
East North Central	158	Q	N	N	N	11,506	Q	N	N	N	13.7	Q	N	N	N
West North Central	53	22	N	N	N	4,369	1,647	N	N	N	12.1	13.5	N	N	N
South	N	298	13	219	N	N	19,729	1,495	11,802	N	N	15.1	8.9	18.6	N
South Atlantic	N	203	N	83	N	N	13,073	N	4,534	N	N	15.6	N	18.3	N
East South Central	N	51	N	20	N	N	3,761	N	1,063	N	N	13.6	N	18.4	N
West South Central	N	44	13	116	N	N	2,895	1,495	6,204	N	N	15.0	8.9	18.7	N
West	67	N	139	Q	35	5,128	N	10,248	Q	2,416	13.1	N	13.6	Q	14.6
Mountain	41	N	27	N	N	3,318	N	1,494	N	N	12.2	N	17.7	N	N
Pacific	26	N	113	Q	35	1,811	N	8,753	Q	2,416	14.6	N	12.9	Q	14.6
<b>Number of floors</b>															
One	158	171	77	126	14	11,779	11,970	6,521	6,855	927	13.4	14.3	11.8	18.4	14.9
Two	97	87	30	38	7	8,256	6,088	2,492	2,403	690	11.7	14.3	12.0	15.8	10.7
Three	55	36	8	9	Q	4,425	2,289	697	527	Q	12.3	15.7	11.6	16.6	Q
Four to nine	80	78	29	35	9	5,246	4,616	1,577	1,570	408	15.2	17.0	18.2	22.6	21.8
Ten or more	31	43	9	12	Q	1,580	2,459	455	647	Q	19.6	17.6	19.3	18.4	Q
<b>Elevators and escalators (more than one may apply)</b>															
Any elevators	197	188	57	78	18	12,793	10,758	3,357	3,953	1,081	15.4	17.5	17.0	19.8	16.9
Number of elevators															
One	59	50	11	23	5	4,935	3,460	1,052	1,322	351	11.9	14.3	10.0	17.6	13.0
Two to five	82	74	27	32	8	5,279	3,898	1,476	1,625	434	15.5	18.9	18.2	19.4	19.1
Six or more	57	65	20	23	5	2,578	3,400	829	1,006	296	21.9	19.1	24.0	23.1	18.4
Any escalators	26	25	6	8	Q	1,386	1,366	373	363	Q	18.5	18.0	15.4	22.5	Q
<b>Number of workers (main shift)</b>															
Fewer than 5	45	47	16	22	Q	5,991	5,006	2,326	1,890	316	7.5	9.4	7.0	11.7	9.3
5 to 9	34	36	17	23	Q	3,165	2,519	1,533	1,505	Q	10.7	14.3	10.9	15.2	8.3
10 to 19	42	46	20	22	3	3,373	2,883	1,708	1,382	277	12.3	15.9	11.7	15.9	9.8
20 to 49	71	66	28	44	10	5,387	4,280	2,115	2,154	577	13.2	15.4	13.1	20.6	18.1
50 to 99	73	71	21	44	5	4,891	4,634	1,441	2,209	302	15.0	15.3	14.4	20.0	15.2
100 to 249	67	61	28	26	Q	4,203	3,744	1,554	1,211	Q	16.0	16.4	17.7	21.2	Q
250 or more	87	88	23	39	9	4,276	4,356	1,066	1,651	466	20.3	20.2	21.8	23.7	19.5
<b>Weekly operating hours</b>															
Fewer than 40	14	11	5	5	Q	2,642	2,065	987	752	Q	5.2	5.3	5.1	6.5	Q
40 to 48	48	45	26	31	5	5,297	5,072	2,614	2,295	459	9.0	8.8	9.9	13.5	11.5
49 to 60	86	82	23	38	9	7,407	6,958	2,419	2,845	796	11.7	11.8	9.6	13.4	11.1
61 to 84	86	78	34	45	6	6,188	4,682	2,305	2,189	437	13.9	16.7	14.7	20.6	14.6
85 to 167	75	66	22	30	7	4,080	2,679	1,278	1,045	282	18.5	24.6	17.0	28.4	25.3
Open continuously	110	134	43	72	7	5,672	5,966	2,140	2,876	339	19.4	22.4	20.0	25.0	21.4





**Table C20. Electricity consumption and conditional energy intensity by climate region, 2012**

	Total electricity consumption (billion kWh)					Total floorspace of buildings using electricity (million square feet)					Electricity energy intensity (kWh/square foot)				
	Very cold/ Cold	Mixed-humid	Mixed-dry/ Hot-dry	Hot-humid	Marine	Very cold/ Cold	Mixed-humid	Mixed-dry/ Hot-dry	Hot-humid	Marine	Very cold/ Cold	Mixed-humid	Mixed-dry/ Hot-dry	Hot-humid	Marine
<b>All buildings</b>	419	415	152	220	35	31,286	27,422	11,743	12,002	2,416	13.4	15.2	13.0	18.4	14.6
<b>Roof characteristics</b>															
Roof tilt															
Flat	273	259	102	140	25	17,994	15,064	7,227	6,941	1,520	15.2	17.2	14.2	20.1	16.4
Shallow pitch	89	106	39	57	8	7,415	8,052	3,373	3,555	624	11.9	13.2	11.4	16.1	12.2
Steeper pitch	58	50	11	24	3	5,878	4,305	1,143	1,506	272	9.8	11.6	10.0	15.7	9.8
Cool roof	98	101	49	66	11	6,506	6,074	2,961	3,231	607	15.1	16.6	16.5	20.6	17.6
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>															
Any type of renovation	244	216	56	112	21	17,122	13,851	4,137	5,438	1,364	14.2	15.6	13.5	20.6	15.3
Addition or annex	90	70	12	30	Q	6,116	4,426	798	1,473	Q	14.7	15.8	14.7	20.7	Q
Reduction in floorspace	8	20	Q	Q	Q	409	888	Q	Q	Q	19.3	22.8	Q	Q	Q
Roof replacement	132	114	21	54	8	9,036	6,937	1,631	2,514	647	14.6	16.5	12.8	21.5	12.0
Exterior wall replacement	23	25	8	13	Q	1,546	1,381	564	587	Q	14.7	18.0	13.7	21.8	Q
Interior wall reconfiguration	140	113	30	58	15	9,326	6,512	2,151	2,407	854	15.1	17.4	14.0	24.0	17.4
Window replacement	68	66	9	28	5	5,602	4,201	820	1,171	457	12.1	15.8	11.4	23.5	11.5
HVAC equipment upgrade	164	148	33	76	12	11,030	8,981	2,268	3,601	768	14.8	16.5	14.5	21.1	16.2
Lighting upgrade	158	134	37	69	12	10,970	8,087	2,519	3,062	777	14.4	16.6	14.7	22.4	15.0
Electrical upgrade	102	94	19	41	10	7,061	5,165	1,324	2,019	519	14.4	18.1	14.0	20.3	18.4
Plumbing system upgrade	87	78	20	31	7	5,876	4,613	1,347	1,523	447	14.7	16.9	14.6	20.5	15.1
Insulation upgrade	51	42	9	20	Q	3,674	2,423	559	728	Q	13.9	17.2	16.8	27.1	Q
Fire, safety, or security upgrade	107	99	22	44	11	7,235	5,608	1,550	2,122	648	14.8	17.6	14.0	20.7	16.8
Structural upgrade	28	19	7	13	Q	1,734	1,091	464	440	Q	16.0	17.3	15.7	28.7	Q
Other	3	Q	Q	Q	Q	272	Q	Q	Q	Q	11.6	Q	Q	Q	Q
No renovations	148	164	82	98	14	12,176	11,560	6,717	5,863	988	12.1	14.2	12.2	16.7	14.0
Buildings constructed 2008 or later	28	36	Q	10	Q	1,988	2,011	890	700	Q	13.9	17.8	16.7	14.6	Q
<b>Energy sources (more than one may apply)</b>															
Electricity	419	415	152	220	35	31,286	27,422	11,743	12,002	2,416	13.4	15.2	13.0	18.4	14.6
Natural gas	344	302	113	113	31	24,511	19,361	7,520	5,300	2,033	14.0	15.6	15.1	21.3	15.1
Fuel oil	139	134	32	63	13	8,008	7,287	1,605	2,597	703	17.4	18.4	20.1	24.1	19.1
District heat	33	51	Q	8	Q	1,926	3,012	Q	374	Q	16.9	17.0	17.6	22.0	Q
District chilled water	23	38	10	14	Q	1,227	2,027	Q	752	Q	18.9	18.7	16.9	18.9	Q
Propane	52	24	9	25	Q	3,574	2,183	842	998	Q	14.5	11.1	10.1	25.0	Q
Other	21	14	9	Q	Q	1,986	1,017	496	Q	Q	10.4	13.4	18.0	Q	Q
<b>Space-heating energy sources</b>															
Electricity	231	274	92	157	19	15,252	17,288	6,815	8,300	1,374	15.1	15.9	13.5	18.9	14.2
Electricity main	80	159	59	132	9	4,771	9,282	4,600	6,969	583	16.8	17.1	12.9	19.0	15.2
Electricity secondary	151	116	33	25	11	10,481	8,006	2,215	1,331	792	14.4	14.4	14.9	18.6	13.4
Other excluding electricity	185	136	53	35	15	15,192	9,428	3,669	1,790	944	12.2	14.5	14.5	19.3	15.5
Buildings without heating	3	5	7	29	Q	842	706	1,259	1,912	Q	4.1	7.0	5.6	15.0	Q
<b>Primary space-heating energy source</b>															
Electricity	80	159	59	132	9	4,771	9,282	4,600	6,969	583	16.8	17.1	12.9	19.0	15.2
Natural gas	275	187	77	50	23	20,554	12,884	5,252	2,710	1,588	13.4	14.5	14.6	18.5	14.4
Fuel oil	15	8	N	N	N	1,623	919	N	N	N	9.5	9.0	N	N	N
District heat	32	50	Q	8	Q	1,884	2,916	Q	362	Q	16.9	17.2	17.6	22.4	Q
Propane	10	6	Q	Q	N	1,096	658	Q	Q	N	8.8	9.4	Q	Q	N
Other	4	Q	N	N	N	516	Q	N	N	N	8.0	Q	N	N	N



**Table C20. Electricity consumption and conditional energy intensity by climate region, 2012**

	Total electricity consumption (billion kWh)					Total floorspace of buildings using electricity (million square feet)					Electricity energy intensity (kWh/square foot)				
	Very cold/ Cold	Mixed-humid	Mixed-dry/ Hot-dry	Hot-humid	Marine	Very cold/ Cold	Mixed-humid	Mixed-dry/ Hot-dry	Hot-humid	Marine	Very cold/ Cold	Mixed-humid	Mixed-dry/ Hot-dry	Hot-humid	Marine
<b>All buildings</b>	419	415	152	220	35	31,286	27,422	11,743	12,002	2,416	13.4	15.2	13.0	18.4	14.6
<b>Heating equipment (more than one may apply)</b>															
Heat pumps	31	92	22	29	6	2,150	6,182	1,669	1,387	458	14.6	14.8	12.9	21.1	12.5
Furnaces	39	43	11	12	Q	3,558	3,009	995	937	Q	10.9	14.3	11.2	12.4	Q
Individual space heaters	130	81	21	29	10	10,112	6,697	1,703	1,607	631	12.9	12.1	12.3	18.1	15.6
District heat	33	51	Q	8	Q	1,926	3,002	Q	362	Q	16.9	17.0	17.6	22.4	Q
Boilers	158	114	36	32	9	11,551	7,029	1,777	1,499	581	13.7	16.3	20.1	21.3	16.2
Packaged heating units	255	250	104	140	22	17,640	15,485	7,351	7,217	1,495	14.5	16.1	14.2	19.4	14.6
Other	18	12	Q	Q	Q	819	487	Q	Q	Q	22.1	23.7	Q	Q	Q
<b>Cooling equipment (more than one may apply)</b>															
Residential-type central air conditioners	62	59	29	34	Q	5,468	4,620	2,250	2,319	Q	11.4	12.9	13.1	14.6	Q
Heat pumps	36	94	22	29	8	2,457	6,173	1,876	1,451	581	14.5	15.2	11.6	20.1	14.5
Individual air conditioners	63	62	12	20	3	5,046	4,683	1,025	1,344	322	12.5	13.1	11.5	15.0	10.5
District chilled water	23	38	10	14	Q	1,227	2,027	Q	752	Q	18.9	18.7	16.9	18.9	Q
Central chillers	117	117	28	55	11	6,757	5,913	1,348	2,474	549	17.3	19.8	21.1	22.1	20.8
Packaged air conditioning units	248	238	90	133	18	16,452	14,627	6,306	6,449	1,318	15.1	16.3	14.3	20.6	13.5
Swamp coolers	9	Q	10	Q	Q	680	Q	710	Q	Q	13.5	Q	14.2	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Main equipment replaced since 1990 (more than one may apply)</b>															
Heating	141	133	42	62	10	10,930	8,958	3,528	3,255	887	12.9	14.9	11.8	19.1	11.0
Cooling	153	156	46	81	10	11,402	10,471	3,633	4,345	850	13.4	14.9	12.7	18.5	11.7
<b>Water-heating equipment</b>															
Centralized system	260	251	85	117	15	18,894	15,231	6,259	5,983	1,168	13.8	16.5	13.6	19.5	12.4
Distributed system	48	45	25	37	3	4,184	3,619	2,221	2,298	366	11.4	12.4	11.4	16.0	9.4
Combination of centralized and distributed system	105	111	35	57	16	6,489	6,922	2,105	2,556	721	16.2	16.0	16.5	22.3	22.0
<b>Lighting equipment types (more than one may apply)</b>															
Incandescent	221	216	63	97	15	14,837	13,429	4,139	4,769	1,232	14.9	16.1	15.2	20.3	12.2
Standard fluorescent	406	404	146	207	34	29,315	26,407	11,018	11,096	2,246	13.9	15.3	13.3	18.7	14.9
Compact fluorescent	313	297	103	149	27	20,485	17,410	6,692	7,285	1,944	15.3	17.1	15.4	20.5	13.8
High-intensity discharge (HID)	139	142	35	60	7	8,734	8,547	2,661	3,035	420	15.9	16.6	13.0	19.7	16.5
Halogen	162	166	52	83	15	10,366	9,391	3,257	4,152	893	15.6	17.6	16.1	20.1	16.8
LED	164	134	40	66	11	9,156	6,936	2,514	2,733	732	17.9	19.2	16.1	24.0	15.4
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Refrigeration equipment (more than one may apply)</b>															
Any refrigeration	390	390	137	202	32	27,633	24,268	9,429	10,299	2,015	14.1	16.1	14.5	19.6	15.7
Walk-in units	207	220	64	100	16	10,742	10,079	2,842	3,922	775	19.3	21.8	22.4	25.4	21.1
Cases or cabinets	206	202	70	88	17	11,215	9,694	3,232	3,856	722	18.4	20.8	21.6	22.8	23.4
Large cold storage areas	32	33	13	17	Q	1,531	1,297	554	701	Q	20.9	25.6	23.6	24.1	Q
Commercial ice makers	213	234	67	119	20	11,045	12,168	3,441	5,199	881	19.3	19.2	19.5	23.0	22.2
Residential-type or compact units	322	304	108	149	28	23,817	20,411	8,210	8,180	1,762	13.5	14.9	13.2	18.2	15.9
Vending machines	259	252	81	129	21	16,400	15,132	5,131	6,115	1,157	15.8	16.7	15.7	21.1	18.4
No refrigeration	30	26	15	19	4	3,653	3,153	2,314	1,703	401	8.1	8.2	6.7	10.9	9.0

**Table C20. Electricity consumption and conditional energy intensity by climate region, 2012**

	Total electricity consumption (billion kWh)					Total floorspace of buildings using electricity (million square feet)					Electricity energy intensity (kWh/square foot)				
	Very cold/Cold	Mixed-humid	Mixed-dry/Hot-dry	Hot-humid	Marine	Very cold/Cold	Mixed-humid	Mixed-dry/Hot-dry	Hot-humid	Marine	Very cold/Cold	Mixed-humid	Mixed-dry/Hot-dry	Hot-humid	Marine
<b>All buildings</b>	419	415	152	220	35	31,286	27,422	11,743	12,002	2,416	13.4	15.2	13.0	18.4	14.6
<b>Office equipment (more than one may apply)</b>															
Desktop computers	395	397	143	209	33	28,233	25,161	10,487	10,929	2,252	14.0	15.8	13.7	19.1	14.8
With flat screen monitors	391	391	143	207	33	27,828	24,907	10,407	10,799	2,220	14.1	15.7	13.7	19.2	15.0
With multiple monitors	174	176	66	90	18	11,074	10,043	4,291	4,365	1,173	15.7	17.5	15.4	20.6	15.2
Laptop computers	330	325	112	173	28	23,554	21,132	8,003	8,961	1,836	14.0	15.4	14.0	19.3	15.0
Dedicated servers	294	292	109	148	26	19,394	17,637	7,303	7,388	1,648	15.2	16.5	14.9	20.0	16.0
Laser printers	297	287	105	144	24	20,318	17,516	7,372	7,492	1,558	14.6	16.4	14.2	19.3	15.1
Inkjet printers	172	179	65	93	15	13,171	12,084	4,887	5,087	1,006	13.1	14.8	13.3	18.3	14.5
FAX machines	350	354	111	185	30	24,671	22,169	8,441	9,504	1,897	14.2	16.0	13.1	19.5	15.8
Photocopiers	320	301	105	156	27	22,559	19,141	7,727	8,118	1,732	14.2	15.7	13.6	19.2	15.9
<b>Number of desktop computers</b>															
None	25	18	9	12	Q	3,053	2,260	1,255	1,073	164	8.0	8.1	7.2	10.9	11.4
1 to 4	62	76	26	37	4	5,646	5,258	2,339	2,070	355	11.0	14.4	11.1	17.7	12.6
5 to 9	44	44	15	24	6	3,424	2,748	1,522	1,332	396	12.7	16.1	10.0	18.3	15.5
10 to 19	46	35	22	22	Q	3,387	2,625	1,707	1,369	300	13.6	13.2	12.7	16.0	15.8
20 to 49	67	66	25	49	4	4,627	4,189	1,675	2,254	349	14.4	15.7	14.8	21.8	10.8
50 to 99	44	33	18	24	Q	3,047	2,542	1,181	1,371	Q	14.5	12.8	15.0	17.2	Q
100 to 249	62	61	12	20	5	4,104	3,474	785	1,041	324	15.1	17.5	15.8	19.1	15.1
250 or more	70	83	26	33	8	3,998	4,326	1,278	1,491	384	17.6	19.2	20.0	22.3	20.4
<b>Number of laptop computers</b>															
None	89	90	40	48	8	7,732	6,290	3,739	3,041	580	11.5	14.3	10.8	15.7	13.2
1 to 4	88	88	34	54	9	8,025	6,735	3,030	2,736	636	11.0	13.0	11.3	19.7	13.7
5 to 9	38	44	15	28	Q	2,577	2,712	1,332	1,555	Q	14.9	16.1	11.2	18.0	Q
10 to 19	41	42	25	19	Q	2,950	2,525	1,426	1,289	Q	14.0	16.8	17.7	14.9	Q
20 to 49	60	45	17	27	5	3,880	2,992	925	1,505	341	15.6	15.1	17.9	17.7	15.4
50 to 99	33	25	9	17	Q	2,116	1,753	511	710	Q	15.4	14.1	16.8	24.2	Q
100 to 249	30	39	Q	10	4	1,978	1,979	Q	508	234	14.9	19.5	15.1	19.8	18.1
250 or more	40	43	5	17	Q	2,028	2,436	261	657	Q	19.8	17.8	18.3	26.4	Q
<b>Number of dedicated servers</b>															
None	125	124	43	73	9	11,892	9,785	4,440	4,614	768	10.5	12.6	9.8	15.8	11.7
1 to 4	164	171	62	88	11	12,362	11,333	4,780	4,808	814	13.3	15.1	13.0	18.4	13.7
5 to 9	38	28	15	17	Q	2,387	1,795	1,008	872	Q	16.0	15.6	15.0	19.1	Q
10 to 19	41	34	10	20	Q	2,098	1,914	506	901	Q	19.6	18.0	19.3	22.4	Q
20 to 49	26	23	6	13	Q	1,509	1,172	418	530	Q	16.9	19.3	14.9	25.3	Q
50 or more	25	36	16	9	6	1,039	1,422	591	277	234	23.8	25.0	27.2	33.1	27.3
<b>Number of photocopiers</b>															
None	99	115	48	65	8	8,727	8,281	4,016	3,884	684	11.4	13.9	11.9	16.7	11.4
One	78	63	30	36	8	6,535	4,855	2,974	2,181	535	11.9	13.0	10.1	16.3	14.8
2 to 4	103	87	33	63	7	8,011	6,177	2,444	3,211	469	12.8	14.1	13.5	19.6	14.2
5 to 9	54	52	14	21	Q	3,691	2,880	932	1,146	Q	14.7	18.0	14.6	18.0	Q
10 or more	85	99	28	37	9	4,322	5,230	1,377	1,579	514	19.6	18.9	20.3	23.2	17.3

**Table C20. Electricity consumption and conditional energy intensity by climate region, 2012**

	Total electricity consumption (billion kWh)					Total floorspace of buildings using electricity (million square feet)					Electricity energy intensity (kWh/square foot)				
	Very cold/ Cold	Mixed-humid	Mixed-dry/ Hot-dry	Hot-humid	Marine	Very cold/ Cold	Mixed-humid	Mixed-dry/ Hot-dry	Hot-humid	Marine	Very cold/ Cold	Mixed-humid	Mixed-dry/ Hot-dry	Hot-humid	Marine
<b>All buildings</b>	419	415	152	220	35	31,286	27,422	11,743	12,002	2,416	13.4	15.2	13.0	18.4	14.6
<b>Number of TVs or video displays</b>															
None	83	68	27	38	8	8,419	6,505	3,634	2,888	669	9.9	10.4	7.5	13.0	11.7
One	43	41	14	19	Q	3,519	3,628	1,380	1,241	223	12.3	11.2	9.8	15.2	19.0
2 to 4	78	75	24	52	7	6,455	4,739	1,934	2,811	527	12.1	15.8	12.6	18.4	12.7
5 to 9	51	44	21	30	Q	3,076	2,532	1,031	1,266	Q	16.5	17.3	20.5	23.9	Q
10 to 19	49	53	14	27	Q	2,949	2,763	923	1,269	Q	16.5	19.0	15.0	21.5	Q
20 to 49	42	49	22	22	Q	2,788	2,778	1,200	1,066	Q	15.0	17.7	18.7	20.7	Q
50 to 99	24	29	Q	10	Q	1,479	1,507	Q	504	Q	16.1	19.4	15.8	20.4	Q
100 or more	49	57	17	22	3	2,601	2,970	815	957	203	19.0	19.4	20.6	23.2	15.5
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>															
Snack bar or concession stand	68	65	20	31	6	3,820	3,535	914	1,321	294	17.9	18.3	22.1	23.6	21.4
Fast food or small restaurant	70	69	29	48	7	3,257	2,893	1,425	1,867	345	21.5	23.9	20.7	25.7	21.5
Cafeteria or large restaurant	88	104	24	37	6	5,691	6,145	1,161	1,894	331	15.5	17.0	21.0	19.8	19.4
Commercial kitchen/ food preparation area	104	105	30	45	8	6,504	5,737	1,478	2,066	365	16.0	18.4	20.3	21.8	21.7
Small kitchen area	76	64	20	38	5	5,783	4,646	1,313	2,027	286	13.1	13.8	15.2	18.9	17.2
<b>Separate computer areas (more than one may apply)</b>															
Data center or server farm	86	79	33	30	11	4,065	3,890	1,414	1,230	505	21.3	20.3	23.1	24.1	21.6
Computer-based training room	100	100	37	57	6	6,406	6,036	2,207	2,756	318	15.5	16.6	16.6	20.7	19.8
Student or public computer center	71	75	22	33	Q	5,892	5,069	1,359	1,892	Q	12.1	14.7	16.3	17.3	Q
<b>HVAC conservation features (more than one may apply)</b>															
Economizer cycle	225	177	63	54	20	13,546	9,729	3,821	2,347	1,305	16.6	18.2	16.4	22.9	15.5
Regular HVAC maintenance	381	367	132	199	30	25,864	22,200	9,200	10,031	1,949	14.7	16.5	14.3	19.8	15.2
Building automation system (BAS) <sup>2</sup>	238	217	78	116	22	14,019	11,822	4,473	5,501	1,235	17.0	18.3	17.4	21.0	17.5
<b>Window and interior lighting features (more than one may apply)</b>															
Multipaned windows	355	325	86	141	24	25,363	20,416	5,878	6,632	1,440	14.0	15.9	14.7	21.2	16.6
Tinted window glass	224	230	94	145	26	14,273	14,413	7,170	6,933	1,611	15.7	15.9	13.1	20.9	15.9
Reflective window glass	105	89	42	54	9	6,088	4,283	2,554	2,412	500	17.3	20.9	16.6	22.5	18.4
External overhangs or awnings	167	189	66	107	21	10,662	10,362	4,492	5,386	1,160	15.7	18.2	14.7	19.8	17.9
Skylights or atriums	109	113	42	55	13	7,645	7,033	3,687	2,770	941	14.3	16.0	11.3	20.0	13.4
Light scheduling	193	164	69	94	21	11,334	8,922	4,291	4,597	1,119	17.1	18.4	16.0	20.3	18.8
Occupancy sensors	226	186	66	106	24	14,604	10,406	4,733	4,672	1,456	15.5	17.9	13.9	22.6	16.8
Multi-level lighting or dimming	96	90	36	41	9	5,507	4,562	1,887	2,006	571	17.5	19.6	19.2	20.4	16.3
Daylight harvesting	43	27	16	18	4	2,472	1,596	891	918	237	17.6	16.8	18.5	19.7	16.8
Demand responsive lighting	22	27	16	14	Q	1,402	1,379	1,167	693	Q	15.4	19.4	13.3	19.7	Q
Building automation system (BAS) for lighting <sup>2</sup>	91	66	31	41	11	4,581	3,376	1,711	1,922	477	19.8	19.4	17.9	21.4	23.2
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>															
Heating	319	297	113	138	26	24,165	21,130	8,546	7,448	1,858	13.2	14.0	13.2	18.5	14.0
Cooling	310	292	114	162	24	22,653	20,659	8,665	8,847	1,692	13.7	14.1	13.2	18.3	14.4
Lighting	388	375	138	201	34	29,198	25,547	10,596	10,933	2,319	13.3	14.7	13.1	18.4	14.7

**Table C20. Electricity consumption and conditional energy intensity by climate region, 2012**

	Total electricity consumption (billion kWh)					Total floorspace of buildings using electricity (million square feet)					Electricity energy intensity (kWh/square foot)				
	Very cold/ Cold	Mixed-humid	Mixed-dry/ Hot-dry	Hot-humid	Marine	Very cold/ Cold	Mixed-humid	Mixed-dry/ Hot-dry	Hot-humid	Marine	Very cold/ Cold	Mixed-humid	Mixed-dry/ Hot-dry	Hot-humid	Marine
<b>All buildings</b>	419	415	152	220	35	31,286	27,422	11,743	12,002	2,416	13.4	15.2	13.0	18.4	14.6
<b>Annual consumption (kilowatthours)</b>															
10,000 or less	2	1	1	(*)	Q	1,444	900	478	161	Q	1.3	1.4	1.2	1.7	Q
10,001 to 50,000	18	15	9	6	Q	4,191	3,106	1,911	1,128	166	4.3	4.9	4.9	5.4	7.6
50,001 to 100,000	22	19	9	11	Q	2,661	2,024	1,506	1,205	Q	8.2	9.2	6.2	8.8	Q
100,001 to 500,000	95	93	37	49	9	7,644	6,936	3,032	2,879	823	12.4	13.4	12.2	16.9	11.3
500,001 to 1,000,000	54	57	17	34	Q	3,574	3,340	1,235	1,723	Q	15.0	17.0	13.8	20.0	Q
1,000,001 to 5,000,000	137	120	46	65	11	8,125	6,552	2,323	3,124	616	16.9	18.4	19.6	20.7	18.0
Over 5,000,000	92	111	34	56	9	3,648	4,564	1,258	1,783	326	25.1	24.2	26.8	31.2	27.2

<sup>1</sup>These climate regions were created by the Building America program, sponsored by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE).

<sup>2</sup>In earlier CBECS publications, BAS was referred to as *Energy Management and Control System (EMCS)*.

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

N = No cases in reporting sample.

(\*) = Value rounds to zero in the units displayed.

Notes: • Because of rounding, data may not sum to totals. • See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from <http://www.eia.gov/consumption/commercial/data/2012/> • 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 generation, transmission, and distribution processes. • 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.

Source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Forms EIA-871A and E of the 2012 Commercial Buildings Energy Consumption Survey.

**Table C21. Electricity consumption and conditional energy intensity by building size, 2012**

	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
<b>All buildings</b>	244	500	500	15,981	38,841	30,046	15.2	12.9	16.6
<b>Principal building activity</b>									
Education	8	68	59	744	6,067	5,427	10.5	11.1	10.8
Food sales	31	27	Q	557	562	Q	55.3	47.5	Q
Food service	70	12	N	1,429	390	N	48.7	31.0	N
Health care	7	29	71	510	1,209	2,437	14.0	24.1	29.1
Inpatient	N	10	64	N	282	2,092	N	35.5	30.4
Outpatient	7	19	7	510	927	345	14.0	20.6	20.8
Lodging	4	43	42	299	2,739	2,788	14.2	15.7	15.0
Mercantile	28	92	86	1,773	5,379	4,168	16.0	17.1	20.7
Retail (other than mall)	16	30	36	1,336	2,435	1,659	12.1	12.3	21.9
Enclosed and strip malls	12	62	50	436	2,944	2,510	27.8	21.2	19.9
Office	37	96	120	3,183	6,547	6,221	11.7	14.6	19.4
Public assembly	10	34	36	1,034	2,596	1,929	10.0	13.1	18.7
Public order and safety	4	9	9	331	557	552	10.7	16.4	15.8
Religious worship	7	14	Q	1,362	2,953	Q	5.1	4.8	Q
Service	17	17	Q	2,047	2,185	Q	8.5	7.9	Q
Warehouse and storage	14	30	40	2,034	5,690	4,845	6.8	5.2	8.2
Other	5	26	25	391	913	667	13.1	28.2	37.5
Vacant	1	3	3	288	1,054	356	4.2	3.1	9.0
<b>Year constructed</b>									
Before 1920	11	11	10	1,073	1,717	1,011	10.2	6.5	9.8
1920 to 1945	16	22	26	1,325	2,530	2,012	11.9	8.7	13.1
1946 to 1959	19	36	30	1,614	3,395	2,199	11.7	10.7	13.6
1960 to 1969	29	62	55	1,860	4,945	3,394	15.7	12.6	16.4
1970 to 1979	32	70	68	1,960	4,828	3,768	16.6	14.5	18.1
1980 to 1989	43	89	102	2,739	6,350	5,701	15.6	14.0	17.9
1990 to 1999	43	84	86	2,459	5,843	4,816	17.7	14.3	17.8
2000 to 2003	16	45	50	1,017	3,116	3,060	16.2	14.5	16.2
2004 to 2007	16	42	39	999	3,363	2,124	15.9	12.4	18.5
2008 to 2012	18	38	33	935	2,755	1,963	19.3	13.8	16.8



**Table C21. Electricity consumption and conditional energy intensity by building size, 2012**

	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
<b>All buildings</b>	244	500	500	15,981	38,841	30,046	15.2	12.9	16.6
<b>Census region and division</b>									
Northeast	29	80	112	2,180	6,634	6,478	13.2	12.0	17.3
New England	10	22	18	894	2,083	1,215	11.6	10.6	14.9
Middle Atlantic	18	57	94	1,285	4,551	5,263	14.3	12.6	17.8
Midwest	47	104	99	3,530	8,536	6,494	13.2	12.1	15.3
East North Central	31	68	75	2,044	5,607	4,892	15.2	12.2	15.4
West North Central	16	35	24	1,486	2,928	1,602	10.5	12.1	15.0
South	113	224	193	6,460	15,174	11,392	17.5	14.8	17.0
South Atlantic	59	118	109	3,116	7,883	6,608	19.0	15.0	16.6
East South Central	18	31	21	1,182	2,243	1,398	15.4	13.9	15.1
West South Central	36	75	62	2,161	5,048	3,385	16.6	14.8	18.5
West	55	93	95	3,812	8,498	5,682	14.4	10.9	16.8
Mountain	16	22	29	983	2,062	1,766	16.2	10.9	16.2
Pacific	39	70	67	2,828	6,436	3,916	13.8	10.9	17.0
<b>Climate region<sup>1</sup></b>									
Very cold/Cold	73	175	171	5,787	14,575	10,924	12.6	12.0	15.7
Mixed-humid	84	159	172	5,079	11,714	10,629	16.6	13.6	16.2
Mixed-dry/Hot-dry	36	58	59	2,518	5,694	3,531	14.2	10.1	16.7
Hot-humid	45	92	84	2,199	5,652	4,151	20.5	16.2	20.2
Marine	5	16	14	398	1,207	811	13.8	13.0	17.4
<b>Number of floors</b>									
One	187	244	114	11,454	18,676	7,923	16.3	13.1	14.4
Two	43	138	77	3,406	11,454	5,068	12.8	12.1	15.3
Three	11	57	42	915	4,512	2,675	11.8	12.6	15.6
Four to nine	2	58	170	206	4,127	9,085	10.8	14.2	18.7
Ten or more	N	Q	97	N	Q	5,296	N	Q	18.3
<b>Elevators and escalators (more than one may apply)</b>									
Any elevators	5	161	373	357	10,752	20,832	14.4	15.0	17.9
Number of elevators									
One	5	93	49	334	6,794	3,992	13.9	13.7	12.3
Two to five	Q	68	154	Q	3,936	8,753	Q	17.2	17.6
Six or more	N	Q	170	N	Q	8,087	N	Q	21.0
Any escalators	N	2	64	N	98	3,543	N	18.6	18.2
<b>Number of workers (main shift)</b>									
Fewer than 5	91	40	3	8,248	6,359	922	11.0	6.2	3.5
5 to 9	67	42	2	4,154	4,337	478	16.2	9.7	5.1
10 to 19	59	68	6	2,586	6,203	834	22.7	10.9	6.8
20 to 49	27	153	40	986	10,964	2,564	27.1	14.0	15.6
50 to 99	Q	122	91	Q	7,445	6,024	Q	16.4	15.2
100 to 249	N	66	119	N	3,157	7,784	N	20.9	15.3
250 or more	N	9	237	N	376	11,439	N	23.4	20.8

**Table C21. Electricity consumption and conditional energy intensity by building size, 2012**

	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
<b>All buildings</b>	244	500	500	15,981	38,841	30,046	15.2	12.9	16.6
<b>Weekly operating hours</b>									
Fewer than 40	16	15	4	2,908	3,080	560	5.5	4.9	7.0
40 to 48	43	72	40	4,277	7,962	3,498	10.0	9.0	11.5
49 to 60	48	110	81	3,927	10,571	5,927	12.2	10.4	13.6
61 to 84	48	108	93	2,058	7,725	6,017	23.5	14.0	15.4
85 to 167	54	84	62	1,297	3,882	4,185	41.5	21.7	14.8
Open continuously	34	111	220	1,514	5,621	9,859	22.7	19.8	22.3
<b>Ownership and occupancy</b>									
Nongovernment owned	221	383	384	14,147	29,692	21,781	15.6	12.9	17.6
Owner occupied	114	173	169	7,732	13,765	8,824	14.7	12.6	19.1
Leased to tenant(s)	92	169	137	5,264	11,745	8,800	17.4	14.4	15.6
Owner occupied and leased	15	40	78	993	3,736	4,091	14.9	10.7	19.0
Unoccupied	(*)	1	Q	158	445	Q	2.6	2.0	Q
Government owned	23	117	116	1,834	9,150	8,265	12.5	12.8	14.0
Federal	Q	Q	16	Q	Q	1,074	Q	Q	14.5
State	4	37	39	330	2,581	2,611	13.0	14.3	15.1
Local	18	74	61	1,402	6,171	4,580	12.5	12.0	13.2
<b>Party responsible for operation and maintenance of energy systems</b>									
Building owner	194	401	434	13,474	32,440	25,749	14.4	12.3	16.9
Business owner or tenant	43	85	54	2,169	5,417	3,548	19.9	15.7	15.2
Property management	2	7	9	118	529	598	18.6	12.8	15.8
Other	4	7	Q	220	456	Q	17.9	16.3	Q
<b>Provider of direct input on energy-related equipment purchases</b>									
Building owner	200	419	443	13,867	33,997	26,282	14.4	12.3	16.8
Business owner or tenant	35	65	41	1,698	3,728	2,735	20.7	17.6	15.2
Property management	2	3	7	82	315	483	23.2	10.2	13.9
Other	7	12	9	333	801	546	20.7	15.0	15.8
<b>Number of establishments</b>									
One	196	325	256	12,685	25,597	16,202	15.4	12.7	15.8
2 to 5	42	95	112	2,788	7,655	7,312	15.1	12.4	15.3
6 to 10	5	38	28	293	2,582	1,437	16.9	14.6	19.3
11 to 20	Q	31	37	Q	1,819	1,815	Q	17.1	20.5
More than 20	N	10	66	N	659	3,136	N	15.3	21.1
Currently unoccupied	(*)	1	Q	172	529	Q	2.4	2.0	Q

**Table C21. Electricity consumption and conditional energy intensity by building size, 2012**

	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
<b>All buildings</b>	244	500	500	15,981	38,841	30,046	15.2	12.9	16.6
<b>Predominant exterior wall material</b>									
Brick, stone, or stucco	122	259	215	6,493	19,763	13,353	18.8	13.1	16.1
Concrete (block or poured)	51	134	137	3,147	9,185	8,072	16.2	14.6	17.0
Concrete panels	6	39	75	490	2,973	4,984	12.2	13.2	15.1
Siding or shingles	37	24	Q	2,743	2,285	536	13.4	10.5	20.1
Metal panels	24	33	22	2,922	3,858	1,275	8.4	8.4	17.4
Window glass	Q	4	26	Q	250	1,062	Q	16.3	24.9
Other	Q	Q	7	Q	Q	407	Q	Q	18.2
No one major type	Q	Q	6	Q	Q	358	Q	Q	15.6
<b>Predominant roof material</b>									
Metal surfacing	61	71	37	5,204	7,247	2,573	11.7	9.8	14.5
Synthetic or rubber	48	159	214	2,290	11,290	12,034	21.2	14.1	17.8
Built-up	37	130	170	2,002	9,472	9,832	18.7	13.7	17.2
Slate or tile shingles	24	20	15	1,264	1,858	1,100	18.6	10.8	13.6
Wooden materials (including shingles)	8	4	Q	523	435	Q	15.6	9.2	Q
Asphalt, fiberglass, or other shingles	62	98	37	4,477	7,476	2,726	13.8	13.1	13.4
Concrete	Q	11	16	Q	537	914	Q	21.0	17.8
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
No one major type	Q	Q	4	Q	Q	449	Q	Q	8.6
<b>Roof characteristics</b>									
Roof tilt									
Flat	102	316	381	4,932	21,893	21,920	20.8	14.4	17.4
Shallow pitch	Q	Q	Q	Q	Q	Q	Q	Q	Q
Steeper pitch	Q	Q	Q	Q	Q	Q	Q	Q	Q
Cool roof	41	105	179	1,937	7,164	10,278	21.2	14.6	17.4

**Table C21. Electricity consumption and conditional energy intensity by building size, 2012**

	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
<b>All buildings</b>	244	500	500	15,981	38,841	30,046	15.2	12.9	16.6
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>									
Any type of renovation	96	244	308	6,027	17,927	17,959	15.9	13.6	17.2
Addition or annex	18	74	112	1,223	5,242	6,505	15.0	14.2	17.2
Reduction in floorspace	6	6	24	254	437	1,042	21.8	14.7	22.7
Roof replacement	42	113	174	2,832	8,303	9,631	14.9	13.6	18.1
Exterior wall replacement	8	21	41	558	1,546	2,117	14.4	13.9	19.2
Interior wall reconfiguration	41	119	197	2,512	8,620	10,118	16.3	13.8	19.5
Window replacement	24	65	88	1,598	5,389	5,264	14.8	12.0	16.6
HVAC equipment upgrade	51	145	236	3,060	10,777	12,812	16.7	13.5	18.4
Lighting upgrade	52	140	217	2,760	9,742	12,912	18.8	14.4	16.8
Electrical upgrade	36	80	149	2,167	6,145	7,776	16.6	13.0	19.1
Plumbing system upgrade	35	73	115	1,897	5,556	6,354	18.3	13.1	18.0
Insulation upgrade	20	43	64	1,111	3,245	3,196	17.6	13.1	19.9
Fire, safety, or security upgrade	32	89	161	1,752	6,452	8,959	18.3	13.8	18.0
Structural upgrade	7	22	40	429	1,574	1,909	16.6	13.8	20.9
Other	Q	Q	8	Q	Q	442	Q	Q	17.0
No renovations	130	217	159	9,019	18,160	10,125	14.4	12.0	15.7
Buildings constructed 2008 or later	18	38	33	935	2,755	1,963	19.3	13.8	16.8
<b>Energy sources (more than one may apply)</b>									
Electricity	244	500	500	15,981	38,841	30,046	15.2	12.9	16.6
Natural gas	148	365	390	8,575	26,906	23,244	17.3	13.6	16.8
Fuel oil	14	103	265	1,163	5,435	13,602	11.7	19.0	19.5
District heat	Q	16	86	Q	1,048	4,878	Q	15.0	17.6
District chilled water	Q	13	71	Q	901	3,643	Q	14.4	19.4
Propane	20	46	44	1,700	3,086	2,899	11.8	15.0	15.1
Other	5	20	25	471	1,572	1,758	10.9	12.6	14.1
<b>Space-heating energy sources</b>									
Electricity	149	334	291	8,569	23,280	17,181	17.4	14.4	16.9
Electricity main	106	191	142	5,631	13,195	7,378	18.9	14.4	19.3
Electricity secondary	43	144	149	2,938	10,085	9,803	14.5	14.2	15.2
Other excluding electricity	78	151	194	5,695	13,489	11,838	13.7	11.2	16.4
Buildings without heating	17	14	15	1,717	2,072	1,027	9.6	6.7	14.3
<b>Primary space-heating energy source</b>									
Electricity	106	191	142	5,631	13,195	7,378	18.9	14.4	19.3
Natural gas	105	257	250	6,851	19,975	16,161	15.3	12.9	15.5
Fuel oil	5	11	7	609	1,257	676	8.2	9.0	10.9
District heat	Q	16	84	Q	1,048	4,711	Q	15.0	17.8
Propane	8	8	Q	937	933	Q	8.4	9.1	Q
Other	2	3	Q	197	361	Q	8.2	7.7	Q

**Table C21. Electricity consumption and conditional energy intensity by building size, 2012**

	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
<b>All buildings</b>	244	500	500	15,981	38,841	30,046	15.2	12.9	16.6
<b>Cooling energy sources</b>									
Electricity	228	477	454	13,359	35,444	27,231	17.0	13.5	16.7
Other excluding electricity	Q	11	44	Q	795	2,397	Q	13.7	18.3
Buildings without cooling	14	11	2	2,553	2,603	419	5.6	4.4	4.5
<b>Water-heating energy sources</b>									
Electricity	128	269	252	8,230	19,572	14,953	15.6	13.7	16.8
Other excluding electricity	97	220	243	5,109	16,899	14,253	19.0	13.0	17.0
Buildings without water heating	18	11	5	2,643	2,370	841	6.8	4.6	5.5
<b>Cooking energy sources</b>									
Electricity	75	148	230	2,976	9,460	12,715	25.3	15.7	18.1
Other excluding electricity	49	82	116	1,830	5,402	6,163	27.0	15.1	18.8
Buildings without cooking	119	270	154	11,175	23,979	11,168	10.6	11.3	13.8
<b>Energy end uses (more than one may apply)</b>									
Buildings with space heating	227	486	485	14,264	36,770	29,019	15.9	13.2	16.7
Buildings with cooling	229	488	498	13,428	36,239	29,627	17.1	13.5	16.8
Buildings with water heating	226	489	495	13,338	36,472	29,205	16.9	13.4	16.9
Buildings with cooking	125	230	346	4,806	14,862	18,878	26.0	15.5	18.3
Buildings with manufacturing	12	33	22	826	2,638	1,614	14.2	12.4	13.8
Buildings with electricity generation	16	149	324	917	7,180	17,545	17.8	20.8	18.5
<b>Percent of floorspace heated</b>									
Not heated	17	14	15	1,717	2,072	1,027	9.6	6.7	14.3
1 to 50	24	38	36	2,323	5,016	2,776	10.4	7.5	13.1
51 to 99	37	88	109	2,248	6,174	6,224	16.6	14.2	17.5
100	166	361	340	9,694	25,580	20,019	17.1	14.1	17.0
<b>Percent of floorspace cooled</b>									
Not cooled	14	11	2	2,553	2,603	419	5.6	4.4	4.5
1 to 50	37	70	47	3,679	9,554	5,657	10.0	7.3	8.2
51 to 99	47	147	188	2,673	9,522	10,532	17.4	15.4	17.8
100	146	272	263	7,076	17,162	13,438	20.6	15.8	19.6
<b>Percent lit when open</b>									
Zero	1	Q	Q	240	Q	Q	2.8	Q	Q
1 to 50	34	55	24	3,559	6,665	2,405	9.5	8.3	10.1
51 to 99	82	223	221	4,984	16,289	13,541	16.4	13.7	16.3
100	126	220	253	6,625	15,184	13,917	19.0	14.5	18.2
Building never open/electricity not used	1	1	Q	573	639	Q	2.0	1.9	Q

**Table C21. Electricity consumption and conditional energy intensity by building size, 2012**

	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
<b>All buildings</b>	244	500	500	15,981	38,841	30,046	15.2	12.9	16.6
<b>Percent lit during off hours</b>									
Zero	85	95	52	8,255	11,757	4,734	10.2	8.1	11.0
1 to 50	131	338	315	6,866	24,296	19,591	19.0	13.9	16.1
51 to 100	18	50	97	600	2,041	4,285	30.4	24.5	22.5
Building always open with no "off hours"	10	16	36	260	748	1,435	39.5	21.3	25.1
Electricity not used	N	N	N	N	N	N	N	N	N
<b>Heating equipment (more than one may apply)</b>									
Heat pumps	32	80	68	1,906	5,784	4,155	16.6	13.8	16.4
Furnaces	34	53	19	2,508	4,714	1,433	13.6	11.3	13.2
Individual space heaters	39	107	125	3,757	8,898	8,096	10.3	12.1	15.5
District heat	Q	16	85	Q	1,048	4,839	Q	15.0	17.6
Boilers	16	130	204	1,129	9,652	11,657	13.8	13.4	17.5
Packaged heating units	155	335	282	8,431	23,972	16,785	18.3	14.0	16.8
Other	3	23	12	159	886	525	20.3	26.3	22.4
<b>Cooling equipment (more than one may apply)</b>									
Residential-type central air conditioners	75	87	24	5,318	7,804	1,643	14.2	11.2	14.5
Heat pumps	37	83	68	2,177	6,148	4,214	17.2	13.6	16.2
Individual air conditioners	23	64	73	1,999	5,416	5,005	11.5	11.8	14.6
District chilled water	Q	13	71	Q	901	3,643	Q	14.4	19.4
Central chillers	Q	87	240	Q	4,449	12,484	Q	19.5	19.2
Packaged air conditioning units	119	308	299	5,236	21,729	18,188	22.7	14.2	16.4
Swamp coolers	5	11	12	292	864	763	18.7	13.0	15.7
Other	Q	Q	7	Q	Q	265	Q	Q	27.4
<b>Main equipment replaced since 1990 (more than one may apply)</b>									
Heating	88	172	128	5,739	13,465	8,353	15.3	12.7	15.3
Cooling	98	183	164	6,043	14,166	10,493	16.2	12.9	15.6
<b>Water-heating equipment</b>									
Centralized system	181	303	244	10,637	22,855	14,043	17.0	13.3	17.3
Distributed system	24	74	60	1,901	6,205	4,581	12.6	12.0	13.0
Combination of centralized and distributed system	21	111	192	800	7,412	10,581	25.6	15.0	18.1

**Table C21. Electricity consumption and conditional energy intensity by building size, 2012**

	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
<b>All buildings</b>	244	500	500	15,981	38,841	30,046	15.2	12.9	16.6
<b>Lighting equipment types (more than one may apply)</b>									
Incandescent	86	221	305	5,370	15,993	17,044	16.0	13.8	17.9
Standard fluorescent	227	483	487	14,055	36,814	29,212	16.2	13.1	16.7
Compact fluorescent	120	334	435	6,555	23,389	23,873	18.4	14.3	18.2
High-intensity discharge (HID)	20	133	230	1,109	8,653	13,635	17.6	15.3	16.9
Halogen	44	174	261	2,431	11,448	14,179	17.9	15.2	18.4
LED	28	125	262	1,061	7,613	13,397	26.8	16.4	19.6
Other	Q	Q	6	Q	Q	293	Q	Q	19.3
<b>Refrigeration equipment (more than one may apply)</b>									
Any refrigeration	212	454	483	12,013	33,246	28,386	17.6	13.7	17.0
Walk-in units	105	186	316	2,142	9,277	16,942	49.0	20.0	18.6
Cases or cabinets	94	184	305	2,483	9,809	16,427	37.8	18.7	18.6
Large cold storage areas	8	32	58	156	1,248	2,767	52.2	25.4	21.0
Commercial ice makers	85	215	353	2,100	11,717	18,918	40.4	18.4	18.6
Residential-type or compact units	135	371	405	10,311	28,259	23,811	13.1	13.1	17.0
Vending machines	33	287	423	1,784	17,672	24,480	18.3	16.2	17.3
No refrigeration	32	45	16	3,968	5,596	1,660	8.0	8.1	9.8
<b>Office equipment (more than one may apply)</b>									
Desktop computers	204	482	491	11,924	35,779	29,360	17.1	13.5	16.7
With flat screen monitors	199	476	491	11,435	35,422	29,303	17.4	13.4	16.8
With multiple monitors	44	179	299	2,424	12,296	16,226	18.4	14.6	18.5
Laptop computers	118	393	456	7,905	28,847	26,734	15.0	13.6	17.1
Dedicated servers	86	347	436	4,641	23,333	25,395	18.5	14.9	17.2
Laser printers	115	349	393	6,677	24,644	22,934	17.2	14.1	17.1
Inkjet printers	119	209	196	6,979	16,716	12,540	17.0	12.5	15.7
FAX machines	154	427	449	9,355	30,661	26,667	16.4	13.9	16.8
Photocopiers	77	375	456	5,688	27,050	26,539	13.5	13.9	17.2
<b>Number of desktop computers</b>									
None	40	17	Q	4,057	3,062	686	9.9	5.6	Q
1 to 4	121	76	8	6,942	7,402	1,324	17.4	10.3	6.0
5 to 9	50	70	13	2,966	5,430	1,026	17.0	12.8	13.1
10 to 19	19	81	30	1,346	6,179	1,863	13.9	13.1	15.9
20 to 49	11	124	75	636	7,902	4,556	17.8	15.7	16.4
50 to 99	Q	64	55	Q	4,563	3,694	Q	13.9	14.9
100 to 249	Q	53	105	Q	3,571	6,152	Q	15.0	17.1
250 or more	N	15	206	N	732	10,745	N	20.0	19.1

**Table C21. Electricity consumption and conditional energy intensity by building size, 2012**

	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
<b>All buildings</b>	244	500	500	15,981	38,841	30,046	15.2	12.9	16.6
<b>Number of laptop computers</b>									
None	125	106	43	8,075	9,995	3,312	15.5	10.7	13.1
1 to 4	99	132	42	6,543	11,397	3,221	15.1	11.6	13.1
5 to 9	13	73	40	994	5,079	2,273	13.5	14.4	17.4
10 to 19	6	67	58	297	4,518	3,528	19.0	14.8	16.5
20 to 49	Q	69	84	Q	4,587	4,985	Q	15.0	16.9
50 to 99	N	33	52	N	1,937	3,297	N	17.3	15.8
100 to 249	N	11	79	N	982	4,235	N	11.2	18.7
250 or more	N	Q	101	N	Q	5,197	N	Q	19.4
<b>Number of dedicated servers</b>									
None	158	153	63	11,339	15,509	4,651	13.9	9.9	13.6
1 to 4	82	263	152	4,525	18,595	10,976	18.1	14.2	13.8
5 to 9	Q	41	58	Q	2,446	3,712	Q	16.8	15.5
10 to 19	Q	22	87	Q	1,266	4,425	Q	17.2	19.7
20 to 49	Q	17	53	Q	822	2,928	Q	20.7	18.1
50 or more	Q	Q	87	Q	Q	3,354	Q	Q	25.9
<b>Number of photocopiers</b>									
None	167	124	44	10,293	11,792	3,507	16.2	10.5	12.5
One	53	118	44	4,197	9,634	3,250	12.5	12.2	13.6
2 to 4	23	169	101	1,380	12,031	6,902	16.3	14.0	14.6
5 to 9	Q	56	87	Q	3,485	5,312	Q	16.1	16.4
10 or more	Q	32	224	Q	1,900	11,075	Q	17.0	20.2
<b>Number of TVs or video displays</b>									
None	91	99	34	7,722	10,674	3,718	11.7	9.3	9.1
One	56	51	13	3,854	4,899	1,237	14.5	10.5	10.7
2 to 4	62	126	48	3,217	9,910	3,338	19.3	12.7	14.3
5 to 9	26	67	57	908	4,218	3,021	28.6	16.0	18.8
10 to 19	6	65	75	180	3,919	4,069	33.9	16.7	18.5
20 to 49	Q	50	88	Q	2,983	5,010	Q	16.7	17.5
50 to 99	Q	22	55	Q	1,169	3,177	Q	18.8	17.2
100 or more	N	19	130	N	1,070	6,477	N	17.4	20.1
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>									
Snack bar or concession stand	14	37	140	378	1,958	7,549	37.3	19.0	18.5
Fast food or small restaurant	18	64	142	438	2,666	6,684	41.9	24.1	21.2
Cafeteria or large restaurant	Q	58	201	Q	4,268	10,913	Q	13.6	18.4
Commercial kitchen/food preparation area	8	101	182	536	5,763	9,850	15.3	17.6	18.5
Small kitchen area	28	71	105	2,297	5,931	5,826	12.0	12.0	17.9



**Table C21. Electricity consumption and conditional energy intensity by building size, 2012**

	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
<b>All buildings</b>	244	500	500	15,981	38,841	30,046	15.2	12.9	16.6
<b>Separate computer areas (more than one may apply)</b>									
Data center or server farm	Q	43	192	Q	1,941	9,058	Q	22.1	21.2
Computer-based training room	6	91	203	325	5,568	11,831	18.5	16.3	17.2
Student or public computer center	4	72	127	356	5,710	8,276	10.7	12.7	15.3
<b>HVAC conservation features (more than one may apply)</b>									
Economizer cycle	27	178	334	1,118	11,110	18,521	24.0	16.0	18.0
Regular HVAC maintenance	174	445	490	9,050	31,653	28,541	19.2	14.0	17.2
Building automation system (BAS) <sup>2</sup>	31	225	413	1,601	13,348	22,101	19.6	16.9	18.7
<b>Window and interior lighting features (more than one may apply)</b>									
Multipaned windows	150	373	407	8,864	27,482	23,384	16.9	13.6	17.4
Tinted window glass	96	282	340	5,153	19,825	19,421	18.7	14.2	17.5
Reflective window glass	25	107	169	1,519	6,598	7,720	16.5	16.2	21.9
External overhangs or awnings	115	218	217	5,723	14,634	11,705	20.1	14.9	18.5
Skylights or atriums	19	105	208	1,527	8,212	12,337	12.6	12.7	16.8
Light scheduling	52	193	296	2,401	12,227	15,635	21.7	15.8	18.9
Occupancy sensors	35	227	347	1,699	14,108	20,064	20.7	16.1	17.3
Multi-level lighting or dimming	19	99	155	813	5,480	8,240	23.0	18.1	18.8
Daylight harvesting	4	32	74	225	1,963	3,927	15.9	16.1	18.7
Demand responsive lighting	8	32	39	494	1,997	2,246	16.8	16.0	17.6
Building automation system (BAS) for lighting <sup>2</sup>	10	82	147	423	4,003	7,641	23.8	20.4	19.3
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>									
Heating	165	360	367	11,219	28,994	22,935	14.7	12.4	16.0
Cooling	165	363	375	10,666	28,578	23,272	15.5	12.7	16.1
Lighting	223	466	447	14,552	36,182	27,860	15.3	12.9	16.1

**Table C21. Electricity consumption and conditional energy intensity by building size, 2012**

	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
<b>All buildings</b>	244	500	500	15,981	38,841	30,046	15.2	12.9	16.6
<b>Annual consumption (kilowatthours)</b>									
10,000 or less	4	(*)	Q	2,289	787	Q	1.7	0.3	Q
10,001 to 50,000	43	6	Q	6,754	3,589	Q	6.4	1.8	Q
50,001 to 100,000	48	14	Q	3,399	3,880	Q	14.1	3.6	Q
100,001 to 500,000	122	157	4	3,294	16,126	1,892	37.1	9.7	2.1
500,001 to 1,000,000	21	135	9	210	8,065	1,775	98.3	16.8	4.9
1,000,001 to 5,000,000	Q	175	198	Q	6,259	14,446	Q	28.0	13.7
Over 5,000,000	N	Q	289	N	Q	11,442	N	Q	25.2

<sup>1</sup>These climate regions were created by the Building America program, sponsored by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE).

<sup>2</sup>In earlier CBECS publications, BAS was referred to as *Energy Management and Control System (EMCS)*.

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

N = No cases in reporting sample.

(\*) = Value rounds to zero in the units displayed.

Notes: • Because of rounding, data may not sum to totals. • See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from

<http://www.eia.gov/consumption/commercial/data/2012/> • 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 generation, transmission, and distribution processes. • 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.

Source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Forms EIA-871A and E of the 2012 Commercial Buildings Energy Consumption Survey.

**Table C22. Electricity consumption and conditional energy intensity by year constructed, 2012**

	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 2012	1959 or before	1960 to 1989	1990 to 2012	1959 or before	1960 to 1989	1990 to 2012
<b>All buildings</b>	181	551	510	16,874	35,545	32,449	10.7	15.5	15.7
<b>Building floorspace (square feet)</b>									
1,001 to 5,000	26	52	52	2,154	2,814	2,524	12.2	18.4	20.8
5,001 to 10,000	19	53	41	1,858	3,745	2,886	10.4	14.1	14.3
10,001 to 25,000	28	72	59	3,102	5,844	4,620	9.0	12.3	12.8
25,001 to 50,000	17	80	52	2,205	5,227	4,240	7.9	15.3	12.2
50,001 to 100,000	24	70	98	2,336	5,052	6,217	10.3	13.8	15.8
100,001 to 200,000	21	75	94	2,089	4,639	5,634	9.9	16.2	16.7
200,001 to 500,000	24	86	71	1,795	5,135	3,722	13.5	16.7	19.0
Over 500,000	21	65	44	1,338	3,089	2,606	15.8	21.0	16.7
<b>Principal building activity</b>									
Education	24	53	57	2,829	4,625	4,784	8.4	11.5	11.9
Food sales	Q	23	31	Q	485	609	Q	47.9	51.7
Food service	16	33	33	501	716	603	31.1	46.1	55.0
Health care	11	47	49	553	1,846	1,757	19.9	25.6	27.8
Inpatient	8	35	31	307	1,161	906	25.8	30.2	33.8
Outpatient	3	12	18	246	685	851	12.5	17.7	21.4
Lodging	10	41	38	738	2,768	2,319	13.4	14.8	16.5
Mercantile	16	90	100	1,296	4,877	5,147	12.4	18.5	19.5
Retail (other than mall)	9	24	50	935	1,689	2,807	9.5	13.9	17.8
Enclosed and strip malls	7	67	50	361	3,189	2,340	20.0	21.0	21.5
Office	49	132	73	3,760	7,521	4,671	12.9	17.5	15.6
Public assembly	16	32	32	1,541	2,051	1,968	10.7	15.7	16.2
Public order and safety	Q	8	10	Q	503	671	Q	16.2	14.5
Religious worship	5	9	9	1,316	1,629	1,613	3.8	5.8	5.7
Service	7	17	14	1,001	1,999	1,512	6.7	8.3	9.3
Warehouse and storage	11	34	39	1,825	5,012	5,731	6.0	6.7	6.7
Other	6	27	23	511	774	686	11.7	34.5	33.8
Vacant	1	4	2	581	740	378	2.5	5.9	5.0
<b>Census region and division</b>									
Northeast	51	93	77	5,088	5,841	4,362	10.0	15.9	17.6
New England	12	21	18	1,426	1,507	1,259	8.4	13.7	14.2
Middle Atlantic	39	72	59	3,662	4,334	3,103	10.6	16.7	18.9
Midwest	42	113	94	4,340	7,792	6,428	9.7	14.5	14.7
East North Central	31	76	68	3,088	4,935	4,520	9.9	15.5	14.9
West North Central	12	36	27	1,252	2,857	1,907	9.3	12.7	14.1
South	60	240	230	4,879	13,676	14,470	12.2	17.6	15.9
South Atlantic	30	121	135	2,499	6,881	8,228	12.2	17.6	16.4
East South Central	11	34	26	746	2,176	1,902	14.3	15.8	13.5
West South Central	18	85	70	1,635	4,620	4,340	11.3	18.3	16.1
West	29	105	109	2,567	8,236	7,189	11.1	12.8	15.2
Mountain	5	28	35	548	2,076	2,189	8.9	13.3	15.8
Pacific	24	78	75	2,019	6,160	5,000	11.8	12.6	14.9

**Table C22. Electricity consumption and conditional energy intensity by year constructed, 2012**

	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 2012	1959 or before	1960 to 1989	1990 to 2012	1959 or before	1960 to 1989	1990 to 2012
<b>All buildings</b>	181	551	510	16,874	35,545	32,449	10.7	15.5	15.7
<b>Climate region<sup>1</sup></b>									
Very cold/Cold	76	174	170	7,748	12,427	11,111	9.7	14.0	15.3
Mixed-humid	65	182	169	5,796	10,839	10,787	11.2	16.8	15.6
Mixed-dry/Hot-dry	19	68	66	1,718	5,392	4,633	10.8	12.6	14.3
Hot-humid	19	112	89	1,214	5,637	5,151	15.7	19.9	17.4
Marine	3	16	16	398	1,250	768	8.1	13.0	20.5
<b>Number of floors</b>									
One	51	235	259	4,986	16,099	16,968	10.2	14.6	15.3
Two	35	126	98	3,517	9,227	7,184	9.9	13.7	13.6
Three	26	46	38	2,759	2,757	2,585	9.3	16.8	14.5
Four to nine	52	89	90	4,409	4,582	4,426	11.8	19.4	20.3
Ten or more	18	55	25	1,203	2,879	1,286	14.8	19.0	19.8
<b>Elevators and escalators (more than one may apply)</b>									
Any elevators	86	235	218	6,991	12,835	12,116	12.3	18.3	18.0
Number of elevators									
One	27	57	63	2,918	3,781	4,422	9.1	15.1	14.3
Two to five	31	97	95	2,485	5,194	5,033	12.4	18.6	18.9
Six or more	28	82	60	1,589	3,860	2,660	17.7	21.1	22.6
Any escalators	15	30	21	866	1,660	1,115	17.6	18.1	18.8
<b>Number of workers (main shift)</b>									
Fewer than 5	31	58	44	4,713	5,996	4,821	6.5	9.7	9.2
5 to 9	17	50	45	1,844	3,800	3,326	9.3	13.1	13.4
10 to 19	20	54	59	1,598	4,158	3,866	12.2	13.0	15.2
20 to 49	25	104	91	2,109	6,493	5,912	11.9	16.0	15.4
50 to 99	29	85	100	2,766	5,152	5,558	10.6	16.4	18.0
100 to 249	21	76	88	1,624	4,308	5,010	13.0	17.7	17.6
250 or more	38	124	84	2,221	5,638	3,956	17.2	22.0	21.2
<b>Weekly operating hours</b>									
Fewer than 40	9	15	11	2,267	2,413	1,868	4.0	6.2	5.9
40 to 48	36	69	49	4,201	6,203	5,332	8.7	11.1	9.2
49 to 60	36	106	96	3,647	9,110	7,668	9.8	11.7	12.6
61 to 84	28	121	100	2,631	7,049	6,120	10.6	17.2	16.4
85 to 167	29	69	102	1,627	3,238	4,499	17.7	21.4	22.7
Open continuously	43	171	152	2,501	7,532	6,961	17.3	22.7	21.8

**Table C22. Electricity consumption and conditional energy intensity by year constructed, 2012**

	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 2012	1959 or before	1960 to 1989	1990 to 2012	1959 or before	1960 to 1989	1990 to 2012
<b>All buildings</b>	181	551	510	16,874	35,545	32,449	10.7	15.5	15.7
<b>Ownership and occupancy</b>									
Nongovernment owned	129	443	416	12,014	27,842	25,764	10.8	15.9	16.1
Owner occupied	67	183	206	6,268	11,374	12,679	10.7	16.1	16.2
Leased to tenant(s)	47	188	164	3,820	11,996	9,993	12.2	15.6	16.4
Owner occupied and leased	15	71	46	1,682	4,236	2,903	9.1	16.8	15.9
Unoccupied	(*)	Q	Q	245	237	Q	1.4	2.9	Q
Government owned	52	109	94	4,860	7,703	6,685	10.7	14.1	14.1
Federal	8	7	9	624	436	513	12.0	15.3	16.6
State	18	38	25	1,440	2,451	1,631	12.2	15.5	15.5
Local	27	64	61	2,795	4,816	4,541	9.6	13.4	13.3
<b>Party responsible for operation and maintenance of energy systems</b>									
Building owner	159	454	417	15,176	29,392	27,095	10.5	15.4	15.4
Business owner or tenant	18	81	82	1,458	5,191	4,485	12.6	15.6	18.3
Property management	Q	11	5	Q	652	499	Q	17.3	10.5
Other	Q	5	6	Q	310	370	Q	17.4	17.0
<b>Provider of direct input on energy-related equipment purchases</b>									
Building owner	161	472	428	15,390	30,852	27,905	10.5	15.3	15.3
Business owner or tenant	16	62	65	1,129	3,526	3,506	14.1	17.5	18.4
Property management	Q	6	4	Q	472	317	Q	12.3	13.4
Other	2	12	14	264	695	722	7.8	16.7	19.2
<b>Number of establishments</b>									
One	117	327	333	10,982	21,621	21,881	10.6	15.1	15.2
2 to 5	41	105	103	4,016	7,196	6,545	10.1	14.6	15.8
6 to 10	10	36	25	708	2,180	1,425	13.7	16.5	17.3
11 to 20	4	33	32	294	1,816	1,565	13.6	18.0	20.3
More than 20	10	50	17	550	2,401	844	17.7	20.8	19.7
Currently unoccupied	(*)	1	Q	325	331	Q	1.2	2.4	Q
<b>Predominant exterior wall material</b>									
Brick, stone, or stucco	118	262	216	10,871	15,508	13,231	10.9	16.9	16.3
Concrete (block or poured)	40	160	122	3,462	9,851	7,091	11.6	16.2	17.3
Concrete panels	4	46	70	323	3,547	4,578	13.4	13.0	15.3
Siding or shingles	12	27	32	1,490	1,971	2,103	7.9	13.8	15.3
Metal panels	Q	34	41	374	3,559	4,121	10.0	9.6	10.0
Window glass	Q	14	16	Q	641	642	Q	22.5	24.3
Other	Q	4	8	Q	264	411	Q	16.8	20.1
No one major type	Q	Q	4	Q	Q	272	Q	Q	15.9

**Table C22. Electricity consumption and conditional energy intensity by year constructed, 2012**

	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 2012	1959 or before	1960 to 1989	1990 to 2012	1959 or before	1960 to 1989	1990 to 2012
<b>All buildings</b>	181	551	510	16,874	35,545	32,449	10.7	15.5	15.7
<b>Predominant roof material</b>									
Metal surfacing	17	58	94	1,885	4,923	8,216	9.1	11.7	11.4
Synthetic or rubber	58	174	190	5,239	10,511	9,864	11.0	16.5	19.3
Built-up	45	181	111	3,886	10,690	6,730	11.7	16.9	16.4
Slate or tile shingles	18	21	20	1,571	1,416	1,235	11.3	14.5	16.4
Wooden materials (including shingles)	3	6	5	211	524	370	12.5	12.1	13.2
Asphalt, fiberglass, or other shingles	35	88	74	3,423	6,129	5,127	10.2	14.3	14.4
Concrete	3	14	13	292	686	605	9.8	21.1	20.8
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
No one major type	Q	3	Q	Q	321	Q	Q	8.1	Q
<b>Roof characteristics</b>									
Roof tilt									
Flat	115	398	286	9,546	23,107	16,092	12.1	17.2	17.8
Shallow pitch	35	105	158	3,700	8,556	10,763	9.5	12.2	14.7
Steeper pitch	31	49	65	3,629	3,881	5,594	8.5	12.6	11.7
Cool roof	36	136	152	2,866	7,912	8,601	12.6	17.2	17.7
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>									
Any type of renovation	128	359	161	11,303	21,563	9,046	11.4	16.6	17.8
Addition or annex	43	98	64	2,996	6,369	3,604	14.2	15.3	17.8
Reduction in floorspace	7	24	5	370	1,122	242	19.0	21.3	19.4
Roof replacement	70	203	57	5,818	11,878	3,070	12.0	17.1	18.4
Exterior wall replacement	19	34	18	1,444	1,886	891	12.9	18.0	19.8
Interior wall reconfiguration	74	195	88	5,648	11,022	4,580	13.1	17.7	19.2
Window replacement	55	95	25	5,001	5,800	1,450	11.1	16.4	17.5
HVAC equipment upgrade	94	248	91	7,466	14,502	4,681	12.6	17.1	19.4
Lighting upgrade	86	233	91	7,222	13,482	4,710	12.0	17.3	19.2
Electrical upgrade	74	137	53	5,699	7,712	2,677	13.0	17.8	19.9
Plumbing system upgrade	55	117	50	4,553	6,604	2,650	12.0	17.7	19.1
Insulation upgrade	30	67	29	2,325	3,554	1,674	12.8	18.8	17.4
Fire, safety, or security upgrade	65	160	57	5,027	9,177	2,959	13.0	17.4	19.3
Structural upgrade	14	34	20	1,061	1,737	1,113	13.5	19.6	18.4
Other	Q	8	Q	Q	484	Q	Q	17.2	Q
No renovations	53	193	260	5,572	13,982	17,750	9.5	13.8	14.7
Buildings constructed 2008 or later	N	N	89	N	N	5,653	N	N	15.7
<b>Energy sources (more than one may apply)</b>									
Electricity	181	551	510	16,874	35,545	32,449	10.7	15.5	15.7
Natural gas	130	407	366	11,504	25,420	21,801	11.3	16.0	16.8
Fuel oil	54	174	154	4,076	8,826	7,298	13.1	19.7	21.2
District heat	26	47	31	1,874	2,380	1,710	13.7	19.6	18.1
District chilled water	12	42	31	804	2,044	1,759	15.0	20.6	17.8
Propane	12	44	54	1,095	3,015	3,576	11.2	14.5	15.2
Other	10	22	17	855	1,581	1,366	11.7	14.2	12.7

**Table C22. Electricity consumption and conditional energy intensity by year constructed, 2012**

	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 2012	1959 or before	1960 to 1989	1990 to 2012	1959 or before	1960 to 1989	1990 to 2012
<b>All buildings</b>	181	551	510	16,874	35,545	32,449	10.7	15.5	15.7
<b>Space-heating energy sources</b>									
Electricity	102	349	324	8,447	20,696	19,888	12.0	16.8	16.3
Electricity main	42	205	192	3,200	11,143	11,862	13.2	18.4	16.2
Electricity secondary	59	143	132	5,247	9,553	8,026	11.3	15.0	16.5
Other excluding electricity	72	184	168	7,543	12,803	10,676	9.6	14.4	15.7
Buildings without heating	7	19	19	884	2,046	1,885	8.4	9.4	9.9
<b>Primary space-heating energy source</b>									
Electricity	42	205	192	3,200	11,143	11,862	13.2	18.4	16.2
Natural gas	95	264	252	9,209	18,153	15,625	10.3	14.5	16.2
Fuel oil	9	8	7	1,248	797	497	6.9	10.0	14.4
District heat	25	46	29	1,850	2,365	1,582	13.7	19.6	18.6
Propane	2	6	10	345	704	898	5.4	8.0	11.5
Other	Q	3	Q	Q	336	Q	Q	9.3	Q
<b>Cooling energy sources</b>									
Electricity	169	514	476	14,558	32,233	29,243	11.6	16.0	16.3
Other excluding electricity	5	27	24	423	1,443	1,394	12.3	18.9	17.2
Buildings without cooling	7	10	10	1,893	1,870	1,812	3.8	5.3	5.7
<b>Water-heating energy sources</b>									
Electricity	77	297	276	7,044	18,122	17,589	10.9	16.4	15.7
Other excluding electricity	96	243	221	8,069	15,566	12,626	11.9	15.6	17.5
Buildings without water heating	8	11	14	1,762	1,857	2,234	4.6	6.2	6.2
<b>Cooking energy sources</b>									
Electricity	61	195	198	4,764	10,195	10,192	12.8	19.1	19.4
Other excluding electricity	37	112	97	2,850	5,831	4,714	13.1	19.3	20.6
Buildings without cooking	83	244	215	9,260	19,519	17,543	8.9	12.5	12.3
<b>Energy end uses (more than one may apply)</b>									
Buildings with space heating	174	532	492	15,990	33,499	30,564	10.9	15.9	16.1
Buildings with cooling	174	541	500	14,981	33,675	30,637	11.6	16.1	16.3
Buildings with water heating	173	540	496	15,112	33,688	30,215	11.5	16.0	16.4
Buildings with cooking	98	307	295	7,614	16,026	14,906	12.9	19.2	19.8
Buildings with manufacturing	9	38	20	1,246	2,294	1,539	7.2	16.5	13.0
Buildings with electricity generation	53	210	227	3,328	10,918	11,395	15.9	19.2	19.9
<b>Percent of floorspace heated</b>									
Not heated	7	19	19	884	2,046	1,885	8.4	9.4	9.9
1 to 50	15	39	44	2,124	4,564	3,427	7.0	8.6	12.9
51 to 99	35	108	91	3,449	5,872	5,324	10.1	18.4	17.1
100	124	385	357	10,417	23,062	21,813	11.9	16.7	16.4

**Table C22. Electricity consumption and conditional energy intensity by year constructed, 2012**

	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 2012	1959 or before	1960 to 1989	1990 to 2012	1959 or before	1960 to 1989	1990 to 2012
<b>All buildings</b>	181	551	510	16,874	35,545	32,449	10.7	15.5	15.7
<b>Percent of floorspace cooled</b>									
Not cooled	7	10	10	1,893	1,870	1,812	3.8	5.3	5.7
1 to 50	31	65	57	4,311	8,396	6,184	7.2	7.8	9.2
51 to 99	62	167	152	5,149	9,200	8,378	12.1	18.1	18.2
100	81	310	291	5,521	16,080	16,075	14.6	19.3	18.1
<b>Percent lit when open</b>									
Zero	Q	Q	Q	Q	Q	Q	Q	Q	Q
1 to 50	25	47	41	3,513	4,801	4,315	7.2	9.8	9.6
51 to 99	79	236	211	6,938	15,190	12,687	11.3	15.5	16.6
100	76	267	256	5,907	15,017	14,801	12.9	17.8	17.3
Building never open/electricity not used	1	1	1	495	487	396	1.6	3.0	2.3
<b>Percent lit during off hours</b>									
Zero	40	95	97	5,584	9,684	9,478	7.1	9.8	10.2
1 to 50	122	349	313	9,964	21,827	18,962	12.2	16.0	16.5
51 to 100	16	82	67	1,154	3,047	2,725	13.6	26.9	24.7
Building always open with no "off hours"	Q	25	33	Q	987	1,284	Q	25.6	25.7
Electricity not used	N	N	N	N	N	N	N	N	N
<b>Heating equipment (more than one may apply)</b>									
Heat pumps	25	81	74	2,021	4,880	4,945	12.1	16.7	14.9
Furnaces	18	52	36	1,603	4,277	2,775	11.2	12.2	13.1
Individual space heaters	49	130	93	5,421	8,933	6,397	9.0	14.6	14.5
District heat	25	47	30	1,857	2,378	1,690	13.7	19.6	18.0
Boilers	64	155	131	5,896	9,242	7,300	10.8	16.8	17.9
Packaged heating units	89	337	346	7,683	20,863	20,642	11.5	16.1	16.8
Other	Q	16	19	Q	620	752	Q	26.4	25.4
<b>Cooling equipment (more than one may apply)</b>									
Residential-type central air conditioners	32	88	66	3,062	6,623	5,079	10.4	13.4	13.0
Heat pumps	27	85	77	2,204	5,185	5,148	12.2	16.5	14.9
Individual air conditioners	39	77	43	3,978	5,157	3,285	9.9	15.0	13.2
District chilled water	12	42	31	804	2,044	1,759	15.0	20.6	17.8
Central chillers	55	153	121	3,529	7,633	5,879	15.5	20.0	20.6
Packaged air conditioning units	94	323	309	7,815	19,583	17,755	12.0	16.5	17.4
Swamp coolers	5	13	11	360	773	785	12.8	17.2	13.8
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Main equipment replaced since 1990 (more than one may apply)</b>									
Heating	91	297	N	8,694	18,863	N	10.5	15.7	N
Cooling	110	335	N	9,732	20,970	N	11.4	16.0	N



**Table C22. Electricity consumption and conditional energy intensity by year constructed, 2012**

	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 2012	1959 or before	1960 to 1989	1990 to 2012	1959 or before	1960 to 1989	1990 to 2012
<b>All buildings</b>	181	551	510	16,874	35,545	32,449	10.7	15.5	15.7
<b>Water-heating equipment</b>									
Centralized system	107	322	299	9,510	19,888	18,136	11.2	16.2	16.5
Distributed system	23	75	60	2,213	5,666	4,809	10.3	13.2	12.6
Combination of centralized and distributed system	43	143	137	3,390	8,134	7,270	12.8	17.6	18.8
<b>Lighting equipment types (more than one may apply)</b>									
Incandescent	96	296	219	8,536	17,161	12,708	11.3	17.3	17.3
Standard fluorescent	172	540	486	15,612	34,113	30,356	11.0	15.8	16.0
Compact fluorescent	120	392	377	10,400	22,575	20,842	11.5	17.4	18.1
High-intensity discharge (HID)	45	177	160	3,884	10,426	9,086	11.7	17.0	17.6
Halogen	70	198	210	5,184	11,489	11,386	13.4	17.3	18.5
LED	53	182	179	3,578	9,230	9,263	14.9	19.8	19.3
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Refrigeration equipment (more than one may apply)</b>									
Any refrigeration	161	512	476	14,123	30,838	28,684	11.4	16.6	16.6
Walk-in units	72	271	263	4,362	12,772	11,227	16.6	21.2	23.4
Cases or cabinets	71	254	258	4,627	12,078	12,013	15.4	21.0	21.5
Large cold storage areas	10	39	48	554	1,713	1,904	18.9	22.9	25.3
Commercial ice makers	77	295	281	4,686	13,981	14,067	16.5	21.1	20.0
Residential-type or compact units	130	418	363	11,908	26,467	24,006	10.9	15.8	15.1
Vending machines	93	339	310	6,931	18,916	18,089	13.4	17.9	17.2
No refrigeration	20	39	34	2,751	4,708	3,765	7.2	8.4	9.0
<b>Office equipment (more than one may apply)</b>									
Desktop computers	168	521	488	14,509	32,652	29,902	11.6	16.0	16.3
With flat screen monitors	167	513	485	14,222	32,261	29,677	11.7	15.9	16.4
With multiple monitors	68	236	219	4,825	13,279	12,842	14.0	17.8	17.1
Laptop computers	140	444	384	11,877	27,542	24,067	11.8	16.1	15.9
Dedicated servers	113	390	365	9,080	23,038	21,251	12.5	16.9	17.2
Laser printers	122	372	362	9,908	22,701	21,646	12.3	16.4	16.7
Inkjet printers	78	238	208	7,215	15,507	13,513	10.8	15.4	15.4
FAX machines	141	463	425	12,128	28,379	26,175	11.7	16.3	16.2
Photocopiers	126	405	377	10,859	25,382	23,036	11.6	16.0	16.4
<b>Number of desktop computers</b>									
None	13	30	22	2,365	2,893	2,547	5.4	10.5	8.8
1 to 4	41	88	76	4,241	6,160	5,268	9.6	14.3	14.5
5 to 9	18	54	62	1,361	4,235	3,825	12.9	12.8	16.1
10 to 19	12	49	69	1,230	3,728	4,431	9.7	13.0	15.5
20 to 49	21	96	93	1,852	5,630	5,612	11.2	17.1	16.6
50 to 99	22	53	44	1,797	3,397	3,090	12.1	15.7	14.4
100 to 249	21	73	65	1,826	3,948	3,953	11.6	18.5	16.6
250 or more	35	107	78	2,201	5,554	3,723	15.8	19.3	21.0

**Table C22. Electricity consumption and conditional energy intensity by year constructed, 2012**

	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 2012	1959 or before	1960 to 1989	1990 to 2012	1959 or before	1960 to 1989	1990 to 2012
<b>All buildings</b>	181	551	510	16,874	35,545	32,449	10.7	15.5	15.7
<b>Number of laptop computers</b>									
None	41	107	127	4,997	8,003	8,382	8.2	13.4	15.1
1 to 4	42	124	106	4,318	8,926	7,918	9.8	13.9	13.4
5 to 9	13	65	49	1,210	3,945	3,191	10.9	16.4	15.2
10 to 19	17	53	60	1,315	3,424	3,604	13.2	15.5	16.7
20 to 49	24	65	65	1,836	4,121	3,686	13.2	15.8	17.6
50 to 99	15	38	33	1,173	2,109	1,951	12.5	17.9	16.9
100 to 249	10	47	33	858	2,557	1,802	12.1	18.2	18.4
250 or more	18	53	38	1,167	2,459	1,916	15.5	21.6	19.7
<b>Number of dedicated servers</b>									
None	68	161	145	7,795	12,507	11,198	8.7	12.9	12.9
1 to 4	66	213	218	6,037	14,100	13,960	11.0	15.1	15.6
5 to 9	11	47	43	871	2,894	2,476	12.8	16.3	17.2
10 to 19	14	50	46	972	2,476	2,262	14.2	20.1	20.3
20 to 49	6	36	28	456	1,898	1,404	13.8	18.7	20.2
50 or more	16	45	31	744	1,671	1,148	21.3	27.1	26.8
<b>Number of photocopiers</b>									
None	55	146	134	6,016	10,163	9,414	9.2	14.4	14.2
One	28	88	98	3,284	7,278	6,518	8.6	12.1	15.0
2 to 4	36	128	129	3,383	8,374	8,555	10.5	15.3	15.0
5 to 9	23	69	53	1,567	3,740	3,556	14.4	18.5	14.8
10 or more	40	120	97	2,625	5,990	4,406	15.1	20.0	22.1
<b>Number of TVs or video displays</b>									
None	41	98	85	5,432	9,030	7,654	7.5	10.8	11.1
One	17	55	48	2,275	3,965	3,751	7.4	13.9	12.9
2 to 4	38	96	101	3,303	6,650	6,511	11.6	14.4	15.6
5 to 9	25	60	66	1,651	2,895	3,602	15.0	20.7	18.2
10 to 19	17	74	55	1,513	3,931	2,724	11.4	18.9	20.2
20 to 49	14	65	61	1,078	3,618	3,362	12.9	17.9	18.1
50 to 99	11	33	33	723	1,633	2,022	15.5	20.5	16.2
100 or more	18	70	61	900	3,823	2,824	19.8	18.3	21.7
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>									
Snack bar or concession stand	24	87	80	1,571	4,371	3,943	15.2	19.8	20.4
Fast food or small restaurant	19	98	107	973	4,522	4,292	19.8	21.7	24.9
Cafeteria or large restaurant	35	124	102	2,763	6,865	5,594	12.6	18.1	18.2
Commercial kitchen/food preparation area	36	133	123	2,882	6,932	6,336	12.5	19.2	19.4
Small kitchen area	37	89	77	3,432	5,626	4,996	10.8	15.8	15.5

**Table C22. Electricity consumption and conditional energy intensity by year constructed, 2012**

	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 2012	1959 or before	1960 to 1989	1990 to 2012	1959 or before	1960 to 1989	1990 to 2012
<b>All buildings</b>	181	551	510	16,874	35,545	32,449	10.7	15.5	15.7
<b>Separate computer areas (more than one may apply)</b>									
Data center or server farm	27	116	96	1,582	5,332	4,192	16.8	21.7	22.9
Computer-based training room	41	121	137	3,192	6,743	7,789	12.9	17.9	17.6
Student or public computer center	30	91	82	2,719	6,200	5,422	11.0	14.7	15.1
<b>HVAC conservation features (more than one may apply)</b>									
Economizer cycle	70	231	238	5,107	12,760	12,881	13.7	18.1	18.5
Regular HVAC maintenance	150	492	467	12,116	29,468	27,660	12.4	16.7	16.9
Building automation system (BAS) <sup>2</sup>	78	273	318	5,489	14,738	16,823	14.2	18.5	18.9
<b>Window and interior lighting features (more than one may apply)</b>									
Multipaned windows	115	387	428	10,323	23,505	25,902	11.1	16.5	16.5
Tinted window glass	76	331	312	6,055	20,075	18,269	12.5	16.5	17.1
Reflective window glass	26	138	137	2,050	6,633	7,154	12.5	20.8	19.1
External overhangs or awnings	67	248	234	4,870	14,329	12,863	13.9	17.3	18.2
Skylights or atriums	41	157	134	3,028	10,446	8,603	13.5	15.0	15.6
Light scheduling	57	223	262	4,203	12,411	13,649	13.5	18.0	19.2
Occupancy sensors	83	255	270	5,917	14,314	15,640	14.1	17.8	17.3
Multi-level lighting or dimming	28	110	135	2,057	5,860	6,617	13.4	18.8	20.4
Daylight harvesting	9	45	54	802	2,393	2,919	11.8	18.9	18.5
Demand responsive lighting	6	38	36	536	2,236	1,966	10.3	17.2	18.2
Building automation system (BAS) for lighting <sup>2</sup>	22	86	131	1,140	4,512	6,416	19.2	19.0	20.5
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>									
Heating	132	386	375	12,595	26,348	24,203	10.4	14.7	15.5
Cooling	133	392	377	11,857	26,347	24,312	11.2	14.9	15.5
Lighting	173	506	458	15,895	33,301	29,398	10.9	15.2	15.6
<b>Annual consumption (kilowatthours)</b>									
10,000 or less	1	1	1	1,062	1,077	945	1.4	1.3	1.3
10,001 to 50,000	15	20	15	3,333	4,152	3,017	4.4	4.8	5.1
50,001 to 100,000	16	26	21	1,904	3,170	2,528	8.2	8.1	8.3
100,001 to 500,000	48	118	117	4,271	8,810	8,231	11.2	13.4	14.2
500,001 to 1,000,000	18	80	67	1,411	4,392	4,247	12.8	18.1	15.8
1,000,001 to 5,000,000	50	154	176	3,210	8,186	9,343	15.5	18.8	18.8
Over 5,000,000	34	153	113	1,683	5,758	4,138	20.2	26.6	27.4

**Table C22. Electricity consumption and conditional energy intensity by year constructed, 2012**

	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 2012	1959 or before	1960 to 1989	1990 to 2012	1959 or before	1960 to 1989	1990 to 2012
<b>All buildings</b>	181	551	510	16,874	35,545	32,449	10.7	15.5	15.7

<sup>1</sup>These climate regions were created by the Building America program, sponsored by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE).

<sup>2</sup>In earlier CBECS publications, BAS was referred to as *Energy Management and Control System (EMCS)*.

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

N = No cases in reporting sample.

(\*) = Value rounds to zero in the units displayed.

Notes: • Because of rounding, data may not sum to totals. • See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from <http://www.eia.gov/consumption/commercial/data/2012/> • 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 generation, transmission, and distribution processes. • 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.

Source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Forms EIA-871A and E of the 2012 Commercial Buildings Energy Consumption Survey.