

Table C10. Consumption and gross energy intensity by climate region for sum of major fuels, 2012

	Sum of major fuel consumption (trillion Btu)					Total floorspace of buildings (million square feet)					Energy intensity for sum of major fuels (thousand Btu/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
All buildings	2,746	2,270	804	947	197	31,898	27,873	12,037	12,831	2,454	86.1	81.4	66.8	73.8	80.2
Building floorspace (square feet)															
1,001 to 5,000	248	266	81	113	15	2,913	2,741	1,034	1,148	Q	85.0	97.0	78.2	98.8	72.5
5,001 to 10,000	236	206	103	84	17	3,193	2,637	1,630	1,222	218	73.8	78.2	63.2	68.8	78.8
10,001 to 25,000	361	248	104	125	38	5,437	3,870	2,439	1,929	429	66.4	64.1	42.5	65.0	89.0
25,001 to 50,000	325	239	107	126	Q	4,358	3,163	1,922	2,099	375	74.6	75.6	55.9	60.1	66.1
50,001 to 100,000	477	339	83	138	30	5,001	4,817	1,480	2,204	416	95.4	70.4	55.8	62.6	73.0
100,001 to 200,000	377	359	126	144	29	4,264	4,215	1,666	2,004	265	88.3	85.2	75.9	71.6	109.6
200,001 to 500,000	425	308	149	122	23	4,336	3,445	1,328	1,287	327	97.9	89.3	112.4	94.5	70.8
Over 500,000	299	304	50	95	Q	2,396	2,984	536	938	Q	124.7	101.9	94.0	100.9	Q
Principal building activity															
Education	354	306	60	111	Q	4,739	4,426	1,075	1,878	Q	74.7	69.1	55.4	59.2	Q
Food sales	114	75	Q	27	Q	540	326	Q	135	Q	211.6	229.3	Q	197.0	Q
Food service	162	205	64	72	Q	636	636	229	250	Q	254.1	322.4	277.8	288.9	Q
Health care	293	224	Q	106	19	1,754	1,218	398	686	100	166.8	183.9	193.2	153.9	185.6
Inpatient	200	188	Q	76	Q	878	790	268	364	Q	228.0	238.3	251.2	208.7	Q
Outpatient	92	36	10	30	Q	876	427	130	322	Q	105.5	83.2	74.0	91.9	Q
Lodging	230	185	66	72	Q	1,999	1,929	836	917	Q	115.0	96.1	79.1	78.2	Q
Mercantile	376	276	142	184	Q	3,920	3,444	1,652	1,979	335	95.9	80.1	86.1	92.8	89.7
Retail (other than mall)	147	94	46	67	Q	1,986	1,623	699	924	Q	74.2	58.0	65.3	72.2	Q
Enclosed and strip malls	229	182	97	117	Q	1,934	1,821	953	1,054	Q	118.3	99.7	101.4	110.9	Q
Office	515	426	110	128	62	6,033	5,496	1,873	1,776	774	85.3	77.6	58.8	72.0	80.1
Public assembly	194	131	69	68	Q	2,351	1,479	834	622	Q	82.4	88.6	82.8	109.4	Q
Public order and safety	39	61	Q	Q	Q	477	597	Q	Q	Q	82.8	102.5	Q	Q	Q
Religious worship	69	62	17	23	Q	1,623	1,698	461	674	Q	42.6	36.5	37.0	33.5	Q
Service	117	101	18	27	Q	1,957	1,503	582	512	Q	59.7	67.2	30.2	53.3	Q
Warehouse and storage	157	109	74	84	Q	4,121	3,740	2,932	2,066	Q	38.1	29.2	25.3	40.6	Q
Other	109	99	Q	Q	Q	793	677	249	Q	Q	136.9	146.4	194.5	Q	Q
Vacant	19	9	Q	Q	Q	956	705	540	953	Q	19.5	Q	Q	Q	Q
Year constructed															
Before 1920	127	100	Q	Q	Q	2,324	1,232	Q	Q	Q	54.5	80.9	Q	Q	Q
1920 to 1945	178	166	40	27	Q	2,562	2,193	669	478	Q	69.7	75.7	59.4	55.7	Q
1946 to 1959	274	151	56	49	Q	3,072	2,489	1,023	604	Q	89.2	60.5	54.7	80.3	Q
1960 to 1969	336	311	144	84	26	4,115	3,440	1,514	974	318	81.7	90.4	95.3	86.6	80.7
1970 to 1979	408	360	103	124	16	4,190	3,137	1,690	1,598	232	97.4	114.9	61.0	77.7	68.9
1980 to 1989	382	322	124	285	51	4,352	4,411	2,334	3,397	737	87.8	73.0	53.3	83.8	68.5
1990 to 1999	424	352	119	169	39	4,884	4,458	1,565	2,553	344	86.8	78.9	75.8	66.0	114.4
2000 to 2003	230	178	56	98	Q	2,397	2,313	954	1,390	Q	95.9	76.9	59.0	70.4	Q
2004 to 2007	212	152	73	67	Q	1,987	2,190	Q	876	Q	106.6	69.2	57.2	76.6	Q
2008 to 2012	175	178	Q	39	Q	2,016	2,011	908	724	Q	86.9	88.7	94.8	54.5	Q

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	Very cold/cold	Mixed-cold/humid	Mixed-dry/hot-dry	Hot-humid	Marine	Very cold/cold	Mixed-cold/humid	Mixed-dry/hot-dry	Hot-humid	Marine	Very cold/cold	Mixed-cold/humid	Mixed-dry/hot-dry	Hot-humid	Marine
All buildings	2,746	2,270	804	947	197	31,898	27,873	12,037	12,831	2,454	86.1	81.4	66.8	73.8	80.2
Census region and division															
Northeast	933	526	N	N	N	10,510	5,024	N	N	N	88.8	104.7	N	N	N
New England	368	N	N	N	N	4,302	N	N	N	N	85.5	N	N	N	N
Middle Atlantic	565	526	N	N	N	6,208	5,024	N	N	N	91.1	104.7	N	N	N
Midwest	1,360	206	N	N	N	16,172	2,748	N	N	N	84.1	74.9	N	N	N
East North Central	1,041	Q	N	N	N	11,683	Q	N	N	N	89.1	Q	N	N	N
West North Central	319	116	N	N	N	4,488	1,689	N	N	N	71.1	68.5	N	N	N
South	N	1,537	Q	941	N	N	20,101	Q	12,632	N	N	76.5	56.7	74.5	N
South Atlantic	N	1,022	N	336	N	N	13,349	N	4,632	N	N	76.6	N	72.6	N
East South Central	N	279	N	Q	N	N	3,810	N	Q	N	N	73.2	N	82.6	N
West South Central	N	237	Q	515	N	N	2,942	Q	6,906	N	N	80.5	56.7	74.5	N
West	453	N	716	Q	197	5,217	N	10,490	Q	2,454	86.9	N	68.3	Q	80
Mountain	296	N	122	N	N	3,381	N	1,600	N	N	87.4	N	76.1	N	N
Pacific	158	N	594	Q	197	1,836	N	8,890	Q	2,454	85.8	N	66.9	Q	80
Number of floors															
One	975	867	388	523	77	12,175	12,382	6,815	7,485	952	80.1	70.1	57.0	69.9	81.0
Two	641	475	147	153	44	8,343	6,124	2,492	2,556	690	76.9	77.6	58.8	59.8	64.1
Three	378	190	45	45	Q	4,460	2,292	697	527	Q	84.7	82.8	64.5	85.3	Q
Four to nine	534	493	184	173	47	5,340	4,616	1,577	1,581	420	100.1	106.8	116.7	109.6	112.4
Ten or more	218	244	40	53	Q	1,580	2,459	455	682	Q	137.9	99.1	87.5	77.5	Q
Elevators and escalators (more than one may apply)															
Any elevators	1,331	1,078	327	349	98	12,877	10,763	3,357	4,030	1,093	103.4	100.2	97.3	86.7	89.4
Number of elevators															
One	423	287	55	93	26	4,970	3,463	1,052	1,322	351	85.0	83.0	52.1	70.6	73.0
Two to five	516	391	159	135	41	5,329	3,899	1,476	1,667	446	96.8	100.1	107.9	81.3	91.5
Six or more	393	401	113	121	31	2,578	3,400	829	1,042	296	152.3	117.8	135.9	115.8	105.6
Any escalators	159	139	27	43	Q	1,386	1,366	373	377	Q	114.4	102.0	73.1	113.8	Q
Number of workers (main shift)															
Fewer than 5	309	263	81	86	17	6,604	5,458	2,616	2,720	354	46.8	48.2	30.8	31.8	48.1
5 to 9	210	194	84	95	Q	3,165	2,519	1,537	1,505	Q	66.4	76.9	54.5	63.4	59.8
10 to 19	297	245	110	102	17	3,373	2,883	1,708	1,382	277	88.2	84.9	64.6	74.1	63.2
20 to 49	459	345	137	191	57	5,387	4,280	2,115	2,154	577	85.1	80.6	64.7	88.5	98.6
50 to 99	491	359	97	178	25	4,891	4,634	1,441	2,209	302	100.3	77.5	67.6	80.4	83.5
100 to 249	428	328	171	115	Q	4,203	3,744	1,554	1,211	Q	101.7	87.7	110.2	95.1	Q
250 or more	553	536	124	180	49	4,276	4,356	1,066	1,651	466	129.3	123.1	115.9	108.8	105.1
Weekly operating hours															
Fewer than 40	109	69	25	22	Q	3,055	2,381	1,208	1,461	Q	35.6	29.1	20.9	15.2	Q
40 to 48	322	236	132	115	27	5,337	5,121	2,617	2,295	459	60.4	46.1	50.4	50.1	58.2
49 to 60	531	426	99	152	49	7,436	6,972	2,481	2,845	796	71.4	61.1	39.8	53.6	62.1
61 to 84	550	418	173	194	34	6,211	4,709	2,305	2,189	453	88.6	88.8	75.3	88.6	75.3
85 to 167	483	347	97	133	38	4,106	2,684	1,278	1,045	282	117.7	129.1	75.9	127.6	134.9
Open continuously	751	773	277	330	45	5,754	6,007	2,148	2,997	348	130.5	128.8	129.1	110.1	129.9

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	Very cold/cold	Mixed-humid	Mixed-hot-dry	Hot-humid	Marine	Very cold/cold	Mixed-humid	Mixed-hot-dry	Hot-humid	Marine	Very cold/cold	Mixed-humid	Mixed-hot-dry	Hot-humid	Marine
All buildings	2,746	2,270	804	947	197	31,898	27,873	12,037	12,831	2,454	86.1	81.4	66.8	73.8	80.2
Roof characteristics															
Roof tilt															
Flat	1,737	1,445	557	603	135	18,184	15,185	7,385	7,336	1,533	95.5	95.2	75.4	82.1	87.8
Shallow pitch	584	543	182	240	48	7,711	8,183	3,505	3,804	649	75.7	66.3	51.9	63.1	73.9
Steeper pitch	425	281	65	104	14	6,003	4,505	1,146	1,692	272	70.9	62.4	57.0	61.7	51.8
Cool roof	628	592	270	286	61	6,532	6,115	3,102	3,274	607	96.1	96.8	87.1	87.4	100.6
Renovations in buildings constructed before 2008 (more than one may apply)															
Any type of renovation	1,615	1,218	327	490	112	17,148	13,955	4,178	5,570	1,364	94.2	87.3	78.2	88.0	81.9
Addition or annex	644	412	71	148	Q	6,116	4,451	798	1,501	Q	105.3	92.5	89.4	98.4	Q
Reduction in floorspace	49	Q	Q	Q	Q	411	905	Q	Q	Q	119.7	160.7	Q	Q	Q
Roof replacement	891	672	138	240	45	9,063	6,963	1,660	2,584	647	98.3	96.5	82.9	92.8	70.0
Exterior wall replacement	142	137	48	58	Q	1,548	1,382	564	593	Q	91.4	99.1	85.4	98.3	Q
Interior wall reconfiguration	918	622	180	260	76	9,328	6,574	2,165	2,421	854	98.4	94.6	83.1	107.5	89.2
Window replacement	503	369	57	131	29	5,604	4,202	822	1,180	457	89.8	87.9	69.5	111.4	63.8
HVAC equipment upgrade	1,076	862	202	337	68	11,032	9,024	2,268	3,688	768	97.5	95.5	88.9	91.5	88.7
Lighting upgrade	1,095	743	230	305	67	10,972	8,103	2,525	3,126	777	99.8	91.6	91.1	97.7	85.9
Electrical upgrade	724	519	127	188	50	7,063	5,181	1,326	2,072	519	102.5	100.2	96.0	90.6	96.3
Plumbing system upgrade	623	451	130	153	39	5,878	4,633	1,347	1,523	447	106.0	97.4	96.8	100.5	87.0
Insulation upgrade	366	228	55	100	Q	3,675	2,432	559	772	Q	99.7	93.9	98.5	129.3	Q
Fire, safety, or security upgrade	717	556	143	207	63	7,237	5,618	1,558	2,136	648	99.1	98.9	91.6	97.1	96.5
Structural upgrade	191	106	46	65	Q	1,736	1,091	464	440	Q	110.3	97.1	98.6	147.7	Q
Other	22	Q	Q	Q	Q	272	Q	Q	Q	Q	79.8	Q	Q	Q	Q
No renovations	956	873	391	417	80	12,734	11,907	6,951	6,537	1,025	75.1	73.3	56.2	63.8	78.3
Buildings constructed 2008 or later	175	178	Q	39	Q	2,016	2,011	908	724	Q	86.9	88.7	94.8	54.5	Q
Energy sources (more than one may apply)															
Electricity	2,746	2,270	804	947	197	31,286	27,422	11,743	12,002	2,416	87.8	82.8	68.4	78.9	81.4
Natural gas	2,356	1,796	648	565	179	24,511	19,361	7,520	5,300	2,033	96.1	92.7	86.2	106.6	88.0
Fuel oil	917	762	198	284	71	8,008	7,287	1,605	2,597	703	114.5	104.6	123.3	109.4	100.3
District heat	295	366	Q	56	Q	1,926	3,012	Q	374	Q	153.3	121.6	147.3	149.5	Q
District chilled water	206	295	Q	76	Q	1,227	2,027	Q	752	Q	167.5	145.7	147.1	100.9	Q
Propane	315	121	39	103	Q	3,594	2,183	842	998	Q	87.6	55.6	46.5	103.1	Q
Other	142	76	53	Q	Q	2,011	1,017	496	Q	Q	70.8	74.3	107.3	Q	Q
Space-heating energy sources (more than one may apply)															
Electricity	1,359	1,321	461	655	102	15,252	17,288	6,815	8,300	1,374	89.1	76.4	67.6	79.0	74.1
Natural gas	2,086	1,386	513	319	143	22,436	15,774	6,268	3,316	1,717	93.0	87.9	81.8	96.1	83.0
Fuel oil	184	156	Q	Q	Q	2,375	1,721	Q	Q	Q	77.3	90.7	Q	Q	Q
District heat	295	364	Q	55	Q	1,926	3,002	Q	362	Q	153.3	121.4	147.3	150.9	Q
Propane	75	52	15	Q	Q	1,520	1,056	389	Q	Q	49.3	49.1	39.3	Q	Q
Other	27	Q	Q	N	Q	677	Q	Q	N	Q	40.0	Q	Q	N	Q
Primary space-heating energy source															
Electricity	355	662	267	526	35	4,771	9,282	4,600	6,969	583	74.4	71.4	58.1	75.4	60.6
Natural gas	1,914	1,139	430	253	136	20,554	12,884	5,252	2,710	1,588	93.1	88.4	81.8	93.2	85.6
Fuel oil	122	65	N	N	N	1,623	919	N	N	N	75.0	71.2	N	N	N
District heat	290	360	Q	55	Q	1,884	2,916	Q	362	Q	153.8	123.6	147.3	150.9	Q
Propane	34	21	Q	Q	N	1,096	658	Q	Q	N	31.3	32.5	Q	Q	N
Other	19	Q	N	N	N	541	Q	N	N	N	34.8	Q	N	N	N

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	Very cold/cold	Mixed-cold humid	Mixed-hot-dry/hot-dry humid	Hot-humid	Marine	Very cold/cold	Mixed-cold humid	Mixed-hot-dry/hot-dry	Hot-humid	Marine	Very cold/cold	Mixed-cold humid	Mixed-hot-dry/hot-dry	Hot-humid	Marine
All buildings	2,746	2,270	804	947	197	31,898	27,873	12,037	12,831	2,454	86.1	81.4	66.8	73.8	80.2
Cooling energy sources (more than one may apply)															
Electricity	2,494	2,031	747	880	170	27,377	24,968	10,490	11,043	2,157	91.1	81.3	71.2	79.7	78.9
Natural gas	49	37	Q	Q	Q	403	272	Q	Q	Q	122.8	135.9	Q	Q	Q
District chilled water	206	295	Q	76	Q	1,227	2,027	Q	752	Q	167.5	145.7	147.1	100.9	Q
Water-heating energy sources (more than one may apply)															
Electricity	1,072	1,011	344	591	84	13,252	14,954	5,678	7,690	1,180	80.9	67.6	60.7	76.8	71.1
Natural gas	1,726	1,276	526	382	119	16,960	11,896	5,927	3,447	1,294	101.8	107.2	88.8	110.7	91.9
Fuel oil	84	79	Q	Q	Q	1,111	711	Q	Q	Q	76.0	110.7	Q	Q	Q
District heat	244	301	Q	31	Q	1,515	2,304	Q	Q	Q	161.0	130.8	Q	125.4	Q
Propane	36	27	Q	Q	N	768	482	Q	Q	N	47.1	56.3	Q	Q	N
Cooking energy sources (more than one may apply)															
Electricity	983	854	265	342	68	9,761	9,042	2,299	3,437	612	100.7	94.4	115.2	99.5	110.9
Natural gas	1,168	1,030	381	343	92	9,670	8,466	3,055	2,873	706	120.8	121.7	124.8	119.5	129.7
Propane	98	33	Q	29	Q	1,008	503	Q	391	Q	97.0	65.1	Q	72.8	Q
Energy end uses (more than one may apply)															
Buildings with space heating	2,733	2,251	772	837	189	30,469	26,716	10,484	10,090	2,319	89.7	84.3	73.7	82.9	81.5
Buildings with cooling	2,636	2,230	792	941	175	28,228	26,365	10,887	11,624	2,190	93.4	84.6	72.7	81.0	80.1
Buildings with water heating	2,704	2,219	776	910	189	29,567	25,772	10,585	10,837	2,255	91.4	86.1	73.3	83.9	84.0
Buildings with cooking	1,597	1,402	451	518	113	14,975	13,469	4,029	5,098	975	106.6	104.1	111.9	101.5	115.5
Buildings with manufacturing	160	66	32	87	Q	2,133	1,273	786	684	Q	75.1	51.7	40.1	127.6	Q
Buildings with electricity generation	1,175	935	285	318	89	10,597	8,525	2,471	3,168	880	110.9	109.7	115.4	100.5	101.3
Percent of floorspace heated															
Not heated	13	18	32	110	Q	1,430	1,157	1,553	2,741	Q	Q	16.0	20.3	40.2	Q
1 to 50	101	118	138	84	26	2,315	2,485	3,165	1,752	414	43.8	47.7	43.7	48.0	61.7
51 to 99	392	438	212	210	46	4,050	5,425	2,434	2,146	595	96.8	80.8	87.2	97.8	77.2
100	2,240	1,694	422	543	117	24,104	18,806	4,885	6,193	1,310	92.9	90.1	86.3	87.7	89.6
Percent of floorspace cooled															
Not cooled	111	39	12	6	21	3,670	1,508	1,150	1,208	263	30.1	26.1	10.6	Q	81.0
1 to 50	507	242	138	77	25	7,561	5,220	3,505	2,191	415	67.1	46.4	39.3	35.2	59.8
51 to 99	873	743	240	227	60	8,314	8,333	2,734	2,562	785	105.0	89.1	87.9	88.5	76.7
100	1,255	1,245	414	637	90	12,354	12,812	4,648	6,871	990	101.6	97.2	89.0	92.8	91.2
Percent lit when open															
Zero	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
1 to 50	280	196	73	79	15	4,637	3,702	2,225	1,689	377	60.3	53.0	32.9	46.7	38.8
51 to 99	1,263	911	375	408	92	13,284	10,873	4,849	4,790	1,018	95.1	83.8	77.4	85.1	90.3
100	1,187	1,157	352	459	89	12,498	12,453	4,432	5,359	984	95.0	92.9	79.4	85.6	90.4
Building never open/electricity not used	17	3	Q	Q	Q	1,339	766	502	928	Q	12.5	Q	Q	Q	Q
Percent lit during off hours															
Zero	559	370	167	151	47	9,716	6,918	4,237	3,080	796	57.6	53.4	39.4	48.9	59.0
1 to 50	1,743	1,404	450	622	127	18,723	17,279	6,139	7,216	1,397	93.1	81.2	73.3	86.2	90.9
51 to 100	362	368	155	113	Q	2,252	2,373	1,009	1,102	Q	160.7	155.2	154.0	102.7	Q
Building always open with no "off hours"	82	128	32	61	Q	595	852	359	604	Q	137.3	150.3	88.8	100.7	Q
Electricity not used	N	N	N	N	N	612	451	294	830	Q	N	N	N	N	N

Table C10. Consumption and gross energy intensity by climate region for sum of major fuels, 2012

	Sum of major fuel consumption (trillion Btu)					Total floorspace of buildings (million square feet)					Energy intensity for sum of major fuels (thousand Btu/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
All buildings	2,746	2,270	804	947	197	31,898	27,873	12,037	12,831	2,454	86.1	81.4	66.8	73.8	80.2
Heating equipment (more than one may apply)															
Heat pumps	187	435	126	119	32	2,150	6,182	1,669	1,387	458	87.1	70.4	75.4	85.4	69.8
Furnaces	262	221	69	55	Q	3,558	3,009	995	937	Q	73.5	73.5	69.4	59.1	Q
Individual space heaters	813	456	109	142	52	10,128	6,697	1,703	1,607	631	80.2	68.1	64.0	88.1	82.2
District heat	295	364	Q	55	Q	1,926	3,002	Q	362	Q	153.3	121.4	147.3	150.9	Q
Boilers	1,128	704	214	162	55	11,556	7,029	1,777	1,499	581	97.6	100.1	120.3	108.2	94.1
Packaged heating units	1,586	1,259	527	592	119	17,640	15,485	7,351	7,217	1,495	89.9	81.3	71.7	82.0	79.3
Other	97	55	Q	Q	Q	824	487	Q	Q	Q	117.3	112.2	Q	Q	Q
Cooling equipment (more than one may apply)															
Residential-type central air conditioners	442	320	170	146	Q	5,468	4,620	2,250	2,319	Q	80.8	69.3	75.7	63.1	Q
Heat pumps	207	452	113	123	45	2,457	6,173	1,876	1,451	581	84.4	73.2	60.0	84.6	76.9
Individual air conditioners	443	395	67	88	20	5,046	4,683	1,025	1,344	322	87.7	84.4	65.3	65.6	61.8
District chilled water	206	295	Q	76	Q	1,227	2,027	Q	752	Q	167.5	145.7	147.1	100.9	Q
Central chillers	759	633	156	243	61	6,757	5,913	1,348	2,474	549	112.3	107.1	115.4	98.4	111.7
Packaged air conditioning units	1,576	1,256	474	563	103	16,452	14,627	6,306	6,449	1,318	95.8	85.9	75.2	87.3	78.5
Swamp coolers	66	Q	61	Q	Q	680	Q	710	Q	Q	97.6	Q	86.1	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Main equipment replaced since 1990 (more than one may apply)															
Heating	896	723	217	271	56	10,930	8,958	3,528	3,255	887	82.0	80.8	61.6	83.3	63.0
Cooling	1,019	852	243	349	57	11,402	10,471	3,633	4,345	850	89.4	81.3	66.9	80.4	67.6
Water-heating equipment															
Centralized system	1,744	1,413	447	515	91	18,894	15,231	6,259	5,983	1,168	92.3	92.8	71.4	86.1	77.8
Distributed system	314	212	141	149	16	4,184	3,619	2,221	2,298	366	74.9	58.6	63.6	64.7	45.1
Combination of centralized and distributed system	646	594	187	246	82	6,489	6,922	2,105	2,556	721	99.6	85.8	89.1	96.3	113.7
Lighting equipment types (more than one may apply)															
Incandescent	1,471	1,216	325	440	88	14,837	13,429	4,139	4,769	1,232	99.1	90.6	78.5	92.3	71.7
Standard fluorescent	2,660	2,205	777	889	184	29,315	26,407	11,018	11,096	2,246	90.7	83.5	70.5	80.1	81.9
Compact fluorescent	2,061	1,659	570	649	155	20,485	17,410	6,692	7,285	1,944	100.6	95.3	85.2	89.1	79.7
High-intensity discharge (HID)	925	770	189	262	41	8,734	8,547	2,661	3,035	420	105.9	90.1	71.0	86.2	98.8
Halogen	1,069	886	280	380	79	10,366	9,391	3,257	4,152	893	103.2	94.4	86.0	91.6	87.9
LED	1,040	726	234	299	64	9,156	6,936	2,514	2,733	732	113.6	104.7	92.9	109.3	87.5
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Refrigeration equipment (more than one may apply)															
Any refrigeration	2,553	2,137	732	876	174	27,633	24,268	9,429	10,299	2,015	92.4	88.1	77.7	85.0	86.2
Walk-in units	1,356	1,232	368	473	95	10,742	10,079	2,842	3,922	775	126.3	122.2	129.6	120.7	122.8
Cases or cabinets	1,323	1,112	389	398	93	11,215	9,694	3,232	3,856	722	118.0	114.7	120.2	103.2	129.3
Large cold storage areas	191	168	74	78	Q	1,531	1,297	554	701	Q	125.0	129.4	134.1	111.3	Q
Commercial ice makers	1,409	1,308	381	524	110	11,045	12,168	3,441	5,199	881	127.6	107.5	110.6	100.7	125.0
Residential-type or compact units	2,120	1,685	583	640	154	23,817	20,411	8,210	8,180	1,762	89.0	82.5	71.0	78.3	87.6
Vending machines	1,681	1,382	439	561	116	16,400	15,132	5,131	6,115	1,157	102.5	91.3	85.5	91.7	100.0
No refrigeration	194	133	71	71	23	4,265	3,605	2,607	2,533	439	45.4	36.8	27.3	28.2	52.2

Table C10. Consumption and gross energy intensity by climate region for sum of major fuels, 2012

	Sum of major fuel consumption (trillion Btu)					Total floorspace of buildings (million square feet)					Energy intensity for sum of major fuels (thousand Btu/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
All buildings	2,746	2,270	804	947	197	31,898	27,873	12,037	12,831	2,454	86.1	81.4	66.8	73.8	80.2
Office equipment (more than one may apply)															
Desktop computers	2,590	2,158	754	896	187	28,233	25,161	10,487	10,929	2,252	91.7	85.8	71.9	82.0	83.1
With flat screen monitors	2,566	2,132	751	888	186	27,828	24,907	10,407	10,799	2,220	92.2	85.6	72.2	82.2	84.0
With multiple monitors	1,134	978	347	392	91	11,074	10,043	4,291	4,365	1,173	102.4	97.3	80.9	89.9	77.5
Laptop computers	2,188	1,787	602	741	149	23,554	21,132	8,003	8,961	1,836	92.9	84.5	75.2	82.6	81.3
Dedicated servers	1,865	1,578	568	634	139	19,394	17,637	7,303	7,388	1,648	96.1	89.5	77.8	85.8	84.3
Laser printers	1,960	1,562	539	612	122	20,318	17,516	7,372	7,492	1,558	96.5	89.2	73.1	81.7	78.4
Inkjet printers	1,109	957	341	407	88	13,171	12,084	4,887	5,087	1,006	84.2	79.2	69.8	80.1	87.8
FAX machines	2,274	1,911	556	799	165	24,671	22,169	8,441	9,504	1,897	92.2	86.2	65.9	84.1	87.2
Photocopiers	2,088	1,660	563	653	146	22,559	19,141	7,727	8,118	1,732	92.5	86.7	72.9	80.5	84.2
Number of desktop computers															
None	156	111	50	51	10	3,665	2,712	1,549	1,903	202	42.6	41.0	32.0	26.6	47.6
1 to 4	414	425	142	171	32	5,646	5,258	2,339	2,070	355	73.4	80.8	60.6	82.8	90.7
5 to 9	296	224	77	108	33	3,424	2,748	1,522	1,332	396	86.6	81.6	50.3	81.0	82.6
10 to 19	297	167	97	89	Q	3,387	2,625	1,707	1,369	300	87.6	63.6	56.9	65.1	86.9
20 to 49	441	344	125	191	20	4,627	4,189	1,675	2,254	349	95.4	82.1	74.4	84.8	56.4
50 to 99	271	174	98	96	Q	3,047	2,542	1,181	1,371	Q	88.8	68.3	83.1	69.9	Q
100 to 249	420	360	69	84	28	4,104	3,474	785	1,041	324	102.4	103.5	87.5	80.7	87.9
250 or more	451	466	147	157	41	3,998	4,326	1,278	1,491	384	112.7	107.6	115.3	105.2	106.1
Number of laptop computers															
None	559	483	202	206	47	8,345	6,741	4,033	3,871	617	67.0	71.6	50.0	53.3	76.9
1 to 4	611	459	168	228	49	8,025	6,735	3,030	2,736	636	76.2	68.2	55.5	83.4	77.8
5 to 9	244	257	76	113	Q	2,577	2,712	1,332	1,555	Q	94.9	95.0	56.7	72.7	Q
10 to 19	261	221	138	83	Q	2,950	2,525	1,426	1,289	Q	88.4	87.3	96.9	64.5	Q
20 to 49	427	259	89	109	23	3,880	2,992	925	1,505	341	110.0	86.6	95.8	72.7	68.1
50 to 99	212	146	56	79	Q	2,116	1,753	511	710	Q	100.3	83.5	109.1	111.8	Q
100 to 249	187	215	Q	47	27	1,978	1,979	Q	508	234	94.4	108.9	94.4	91.7	116.7
250 or more	245	229	27	81	Q	2,028	2,436	261	657	Q	120.9	93.9	102.2	123.1	Q
Number of dedicated servers															
None	882	691	235	313	58	12,504	10,236	4,734	5,444	806	70.5	67.5	49.7	57.5	71.7
1 to 4	1,049	916	314	375	64	12,362	11,333	4,780	4,808	814	84.8	80.8	65.8	77.9	79.2
5 to 9	236	152	90	73	Q	2,387	1,795	1,008	872	Q	99.1	84.9	89.7	83.8	Q
10 to 19	270	187	42	77	Q	2,098	1,914	506	901	Q	128.8	97.5	82.2	85.6	Q
20 to 49	160	125	30	70	Q	1,509	1,172	418	530	Q	105.9	107.0	70.9	132.2	Q
50 or more	149	198	Q	39	33	1,039	1,422	591	277	234	143.8	139.4	156.4	140.2	140.2
Number of photocopiers															
None	659	610	241	294	51	9,339	8,732	4,310	4,714	721	70.5	69.9	55.9	62.3	70.6
One	518	348	154	142	41	6,535	4,855	2,974	2,181	535	79.2	71.6	51.8	65.0	76.4
2 to 4	692	449	165	257	33	8,011	6,177	2,444	3,211	469	86.4	72.8	67.3	79.9	71.2
5 to 9	332	278	72	81	Q	3,691	2,880	932	1,146	Q	90.0	96.4	77.8	70.9	Q
10 or more	546	585	172	174	51	4,322	5,230	1,377	1,579	514	126.3	111.9	124.9	109.9	99.0

Table C10. Consumption and gross energy intensity by climate region for sum of major fuels, 2012

	Sum of major fuel consumption (trillion Btu)					Total floorspace of buildings (million square feet)					Energy intensity for sum of major fuels (thousand Btu/square foot)				
	Very cold/cold	Mixed-cold humid	Mixed-hot-dry/hot-dry humid	Hot-humid	Marine	Very cold/cold	Mixed-cold humid	Mixed-hot-dry/hot-dry	Hot-humid	Marine	Very cold/cold	Mixed-cold humid	Mixed-hot-dry/hot-dry	Hot-humid	Marine
All buildings	2,746	2,270	804	947	197	31,898	27,873	12,037	12,831	2,454	86.1	81.4	66.8	73.8	80.2
Number of TVs or video displays															
None	530	367	125	146	45	9,031	6,956	3,927	3,718	706	58.7	52.8	31.9	39.4	63.7
One	284	234	75	82	Q	3,519	3,628	1,380	1,241	223	80.8	64.5	54.4	66.4	95.3
2 to 4	548	373	135	219	36	6,455	4,739	1,934	2,811	527	84.9	78.7	70.0	77.8	67.8
5 to 9	304	226	96	131	Q	3,076	2,532	1,031	1,266	Q	98.8	89.3	93.5	103.8	Q
10 to 19	297	296	82	109	Q	2,949	2,763	923	1,269	Q	100.5	107.2	89.2	86.2	Q
20 to 49	248	243	110	94	Q	2,788	2,778	1,200	1,066	Q	89.0	87.3	91.3	88.5	Q
50 to 99	153	156	Q	44	Q	1,479	1,507	Q	504	Q	103.5	103.8	89.6	86.6	Q
100 or more	382	374	106	121	24	2,601	2,970	815	957	203	147.0	125.8	129.7	126.1	117.6
Food preparation or serving areas in non-food service buildings (more than one may apply)															
Snack bar or concession stand	464	355	110	147	36	3,820	3,535	914	1,321	294	121.6	100.5	120.3	111.2	121.4
Fast food or small restaurant	434	362	154	219	37	3,257	2,893	1,425	1,867	345	133.3	125.1	107.7	117.3	108.4
Cafeteria or large restaurant	633	624	147	180	40	5,691	6,145	1,161	1,894	331	111.3	101.6	126.3	95.0	121.8
Commercial kitchen/food preparation area	738	629	174	210	48	6,504	5,737	1,478	2,066	365	113.4	109.6	117.9	101.6	131.7
Small kitchen area	537	362	101	162	25	5,783	4,646	1,313	2,027	286	92.8	77.8	77.0	80.1	89.2
Separate computer areas (more than one may apply)															
Data center or server farm	556	425	184	136	55	4,065	3,890	1,414	1,230	505	136.7	109.3	130.3	110.5	108.1
Computer-based training room	673	540	192	256	35	6,406	6,036	2,207	2,756	318	105.1	89.5	86.9	92.9	109.3
Student or public computer center	545	438	Q	146	Q	5,892	5,069	1,359	1,892	Q	92.4	86.4	98.2	76.9	Q
HVAC conservation features (more than one may apply)															
Economizer cycle	1,429	994	364	249	107	13,546	9,729	3,821	2,347	1,305	105.5	102.2	95.3	106.0	81.6
Regular HVAC maintenance	2,480	1,998	705	855	166	25,864	22,200	9,200	10,031	1,949	95.9	90.0	76.6	85.2	85.0
Building automation system (BAS) ²	1,501	1,134	447	514	114	14,019	11,822	4,473	5,501	1,235	107.1	95.9	99.9	93.4	92.1
Window and interior lighting features (more than one may apply)															
Multipaned windows	2,323	1,713	465	611	137	25,545	20,529	5,963	6,872	1,452	90.9	83.4	78.0	89.0	94.6
Tinted window glass	1,434	1,258	505	633	144	14,326	14,451	7,261	7,364	1,623	100.1	87.1	69.5	85.9	88.4
Reflective window glass	678	464	228	228	54	6,109	4,317	2,556	2,426	500	111.1	107.5	89.0	94.1	108.2
External overhangs or awnings	1,094	1,038	379	463	116	10,679	10,394	4,503	5,453	1,160	102.4	99.8	84.1	84.8	100.0
Skylights or atriums	769	657	246	259	79	7,671	7,033	3,828	2,788	941	100.3	93.4	64.3	93.0	83.6
Light scheduling	1,219	833	355	411	113	11,334	8,922	4,291	4,597	1,119	107.5	93.3	82.7	89.4	101.0
Occupancy sensors	1,495	988	353	465	133	14,604	10,406	4,733	4,672	1,456	102.4	94.9	74.6	99.6	91.5
Multi-level lighting or dimming	648	504	231	180	55	5,507	4,562	1,887	2,006	571	117.7	110.5	122.4	89.8	95.8
Daylight harvesting	277	142	96	81	22	2,472	1,596	891	918	237	112.1	89.2	108.2	88.7	92.1
Demand responsive lighting	128	135	77	58	Q	1,402	1,379	1,167	693	Q	91.5	97.8	66.4	83.0	Q
Building automation system (BAS) for lighting ²	522	302	154	169	53	4,581	3,376	1,711	1,922	477	114.0	89.4	90.3	87.8	111.2

Table C10. Consumption and gross energy intensity by climate region for sum of major fuels, 2012

	Sum of major fuel consumption (trillion Btu)					Total floorspace of buildings (million square feet)					Energy intensity for sum of major fuels (thousand Btu/square foot)				
	Very cold/cold		Mixed-hot-dry/hot-humid		Marine	Very cold/cold		Mixed-hot-dry/hot-humid		Marine	Very cold/cold		Mixed-hot-dry/hot-humid		Marine
All buildings	2,746	2,270	804	947	197	31,898	27,873	12,037	12,831	2,454	86.1	81.4	66.8	73.8	80.2
Equipment usage reduced when building not in full use (more than one may apply)															
Heating	2,066	1,646	580	588	142	24,186	21,130	8,546	7,448	1,858	85.4	77.9	67.8	79.0	76.4
Cooling	1,993	1,610	588	684	133	22,653	20,659	8,665	8,847	1,692	88.0	77.9	67.9	77.3	78.4
Lighting	2,573	2,068	736	862	187	29,198	25,547	10,596	10,933	2,319	88.1	80.9	69.4	78.8	80.8

¹These 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).

²In 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, C, D, E and F of the 2012 Commercial Buildings Energy Consumption Survey.