

**Table C1. Total energy consumption by major fuel, 2012**

	All buildings		Total energy consumption (trillion Btu)						
	Number of buildings (thousand)	Total floorspace (million square feet)	Electricity				Natural gas	Fuel oil	District heat
			Sum of major fuels	Primary	Site				
<b>All buildings</b>	5,557	87,093	6,963	12,934	4,241		2,248	134	341
<b>Building floorspace (square feet)</b>									
1,001 to 5,000	2,777	8,041	723	1,357	445		256	21	Q
5,001 to 10,000	1,229	8,900	646	1,179	386		248	10	Q
10,001 to 25,000	884	14,105	876	1,655	543		304	20	Q
25,001 to 50,000	332	11,917	823	1,549	508		284	14	17
50,001 to 100,000	199	13,918	1,067	1,996	654		338	23	52
100,001 to 200,000	90	12,415	1,035	1,974	647		290	20	77
200,001 to 500,000	38	10,724	1,026	1,876	615		310	14	88
Over 500,000	8	7,074	767	1,349	442		219	12	94
<b>Principal building activity</b>									
Education	389	12,239	842	1,396	458		291	28	65
Food sales	177	1,252	262	634	208		53	Q	N
Food service	380	1,819	514	850	279		227	Q	Q
Health care	157	4,155	718	1,114	365		265	20	68
Inpatient	10	2,374	549	766	251		219	16	62
Outpatient	147	1,781	169	348	114		46	Q	Q
Lodging	158	5,826	564	928	304		221	8	31
Mercantile	602	11,330	1,008	2,151	705		291	9	Q
Retail (other than mall)	438	5,439	364	857	281		74	7	Q
Enclosed and strip malls	164	5,890	644	1,293	424		217	Q	Q
Office	1,012	15,952	1,241	2,637	865		282	18	76
Public assembly	352	5,559	480	837	275		135	7	64
Public order and safety	84	1,440	133	223	73		41	2	Q
Religious worship	412	4,557	173	247	81		87	5	N
Service	619	4,630	272	389	127		122	16	Q
Warehouse and storage	796	13,077	429	866	284		139	5	Q
Other	125	2,002	286	581	191		81	10	Q
Vacant	296	3,256	41	80	26		13	Q	Q
<b>Year constructed</b>									
Before 1920	362	3,983	238	332	109		87	16	25
1920 to 1945	488	6,025	418	668	219		145	14	40
1946 to 1959	599	7,381	537	884	290		199	18	29
1960 to 1969	639	10,362	902	1,531	502		314	20	66
1970 to 1979	684	10,846	1,012	1,776	582		340	16	73
1980 to 1989	915	15,230	1,164	2,431	797		335	16	17
1990 to 1999	845	13,803	1,102	2,217	727		338	14	23
2000 to 2003	375	7,215	579	1,159	380		158	10	Q
2004 to 2007	347	6,524	528	1,008	330		172	3	23
2008 to 2012	303	5,723	484	926	304		159	6	Q

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<b>All buildings</b>	5,557	87,093	6,963	12,934	4,241		2,248	134	341
<b>Census region and division</b>									
Northeast	805	15,534	1,459	2,293	752	499	90	119	
New England	302	4,302	368	526	172	111	47		Q
Middle Atlantic	504	11,232	1,092	1,767	579	389	42		81
Midwest	1,237	18,919	1,566	2,595	851	642	15		58
East North Central	735	12,742	1,131	1,815	595	494	10		32
West North Central	502	6,178	435	780	256	149	5		Q
South	2,247	34,279	2,566	5,518	1,809	615	23		119
South Atlantic	1,091	17,981	1,358	2,983	978	305	16		59
East South Central	370	4,904	369	735	241	104	3		Q
West South Central	786	11,394	839	1,800	590	207	4		Q
West	1,267	18,360	1,372	2,528	829	491	7		45
Mountain	338	4,981	417	698	229	163	Q		23
Pacific	929	13,379	954	1,831	600	328	5		22
<b>Climate region<sup>1</sup></b>									
Very cold/Cold	2,031	31,898	2,746	4,363	1,430	1,097	81		137
Mixed-humid	1,743	27,873	2,270	4,324	1,418	657	43		152
Mixed-dry/Hot-dry	837	12,037	804	1,586	520	255	2		Q
Hot-humid	799	12,831	947	2,294	752	171	6		18
Marine	147	2,454	197	367	120	68	1		Q
<b>Number of floors</b>									
One	3,836	39,809	2,831	5,676	1,861	918	42		Q
Two	1,158	20,206	1,460	2,696	884	511	32		Q
Three	374	8,140	668	1,139	373	224	23		47
Four to nine	177	13,535	1,432	2,402	788	443	28		173
Ten or more	13	5,404	572	1,021	335	151	8		77
<b>Elevators and escalators (more than one may apply)</b>									
Any elevators	405	32,120	3,183	5,612	1,840	972	56		315
Number of elevators									
One	272	11,158	884	1,528	501	296	16		71
Two to five	118	12,817	1,242	2,315	759	353	26		104
Six or more	16	8,145	1,058	1,769	580	322	15		140
Any escalators	10	3,654	377	689	226	98	5		48
<b>Number of workers (main shift)</b>									
Fewer than 5	2,892	17,751	756	1,390	456	264	31		Q
5 to 9	1,085	8,973	598	1,163	381	202	9		Q
10 to 19	731	9,623	772	1,375	451	298	11		Q
20 to 49	513	14,514	1,188	2,287	750	379	17		43
50 to 99	206	13,476	1,150	2,228	730	360	21		38
100 to 249	93	10,941	1,058	1,928	632	337	22		67
250 or more	37	11,815	1,441	2,562	840	408	22		171

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<b>All buildings</b>	5,557	87,093	6,963	12,934	4,241		2,248	134	341
<b>Weekly operating hours</b>									
Fewer than 40	1,149	8,220	229	364	119	97	10	Q	
40 to 48	1,346	15,828	832	1,609	527	259	27	19	
49 to 60	1,244	20,529	1,258	2,482	814	369	25	50	
61 to 84	764	15,867	1,370	2,591	850	469	20	31	
85 to 167	479	9,395	1,098	2,081	682	349	9	58	
Open continuously	575	17,253	2,177	3,806	1,248	705	44	180	
<b>Ownership and occupancy</b>									
Nongovernment owned	4,781	67,550	5,375	10,278	3,370	1,747	91	168	
Owner occupied	2,466	30,637	2,615	4,739	1,554	890	56	115	
Leased to tenant(s)	1,745	26,115	2,041	4,143	1,358	634	23	25	
Owner occupied and leased	349	8,873	709	1,379	452	219	11	27	
Unoccupied	221	1,925	10	18	6	4	Q	Q	
Government owned	776	19,543	1,588	2,656	871	501	43	173	
Federal	33	1,573	137	236	77	30	Q	27	
State	185	5,539	555	839	275	169	5	105	
Local	558	12,431	896	1,580	518	302	34	41	
<b>Party responsible for operation and maintenance of energy systems</b>									
Building owner	4,715	73,702	5,808	10,710	3,512	1,852	121	324	
Business owner or tenant	724	11,309	983	1,892	620	343	10	Q	
Property management	54	1,250	96	192	63	27	1	Q	
Other	64	832	75	139	46	27	Q	Q	
<b>Provider of direct input on energy-related equipment purchases</b>									
Building owner	4,876	76,271	5,984	11,045	3,621	1,915	123	325	
Business owner or tenant	540	8,256	766	1,479	485	264	6	Q	
Property management	35	880	61	123	40	17	2	Q	
Other	106	1,686	153	287	94	52	3	Q	
<b>Number of establishments</b>									
One	4,205	54,994	4,485	8,087	2,651	1,527	98	208	
2 to 5	862	17,756	1,400	2,588	849	429	25	98	
6 to 10	147	4,425	364	733	240	107	5	11	
11 to 20	68	3,704	355	713	234	112	1	Q	
More than 20	27	3,821	347	794	260	67	4	15	
Currently unoccupied	248	2,393	13	19	6	6	Q	Q	

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			Sum of major fuels	Primary	Site				
<b>All buildings</b>	5,557	87,093	6,963	12,934	4,241		2,248	134	341
<b>Predominant exterior wall material</b>									
Brick, stone, or stucco	2,312	40,463	3,457	6,206	2,035	1,160	59	203	
Concrete (block or poured)	1,121	20,726	1,720	3,357	1,101	535	28	56	
Concrete panels	210	8,693	664	1,254	411	208	7	38	
Siding or shingles	905	5,750	400	743	244	134	21		Q
Metal panels	933	8,673	428	823	270	126	13		Q
Window glass	17	1,340	170	326	107	48	2	13	
Other	37	856	79	143	47	Q	Q	Q	
No one major type	21	592	45	81	26	14	Q	Q	
<b>Predominant roof material</b>									
Metal surfacing	1,672	15,916	865	1,758	576	241	23		Q
Synthetic or rubber	911	25,817	2,442	4,391	1,440	850	40	112	
Built-up	836	21,835	1,862	3,508	1,150	582	31	98	
Slate or tile shingles	406	4,306	371	610	200	114	4		Q
Wooden materials (including shingles)	157	1,139	92	144	47	41	Q	Q	
Asphalt, fiberglass, or other shingles	1,483	15,104	1,105	2,045	670	368	27	40	
Concrete	51	1,642	132	311	102	24	3		Q
Other	24	678	58	111	36	18	Q	Q	
No one major type	18	657	35	55	18	10	Q	Q	
<b>Roof characteristics</b>									
<b>Roof tilt</b>									
Flat	1,960	49,623	4,476	8,320	2,728	1,455	68	225	
Shallow pitch	2,148	23,853	1,597	3,103	1,017	481	34	64	
Steeper pitch	1,449	13,617	890	1,511	495	312	32		Q
Cool roof	740	19,630	1,837	3,381	1,108	602	33	94	

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<b>All buildings</b>	5,557	87,093	6,963	12,934	4,241		2,248	134	341
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>									
Any type of renovation	2,094	42,216	3,762	6,747	2,212	1,230	80	240	
Addition or annex	444	13,022	1,292	2,129	698	468	34	91	
Reduction in floorspace	71	1,753	226	370	121	70	Q	Q	
Roof replacement	987	20,917	1,986	3,429	1,124	681	55	126	
Exterior wall replacement	194	4,230	399	731	240	129	11	18	
Interior wall reconfiguration	889	21,340	2,056	3,709	1,216	644	39	157	
Window replacement	560	12,265	1,090	1,832	601	387	35	68	
HVAC equipment upgrade	1,101	26,779	2,545	4,504	1,477	842	48	177	
Lighting upgrade	982	25,503	2,440	4,264	1,398	810	52	180	
Electrical upgrade	747	16,160	1,608	2,753	903	551	38	116	
Plumbing system upgrade	644	13,828	1,397	2,311	758	515	33	90	
Insulation upgrade	382	7,607	771	1,309	429	269	13	60	
Fire, safety, or security upgrade	616	17,196	1,685	2,936	963	569	39	115	
Structural upgrade	152	3,913	424	716	235	151	9	29	
Other	39	848	69	135	44	14	Q	Q	
No renovations	3,160	39,154	2,718	5,261	1,725	859	47	87	
Buildings constructed 2008 or later	303	5,723	484	926	304	159	6	Q	
<b>Energy sources (more than one may apply)</b>									
Electricity	5,234	84,869	6,963	12,934	4,241	2,248	134	341	
Natural gas	2,933	58,725	5,544	9,400	3,082	2,248	41	173	
Fuel oil	467	20,200	2,231	3,973	1,303	623	134	171	
District heat	48	5,964	808	1,076	353	108	6	341	
District chilled water	54	4,608	665	890	292	133	4	236	
Propane	510	7,706	583	1,148	376	146	43	Q	
Other	172	3,826	301	518	170	108	8	15	
<b>Space-heating energy sources (more than one may apply)</b>									
Electricity	2,858	49,030	3,898	8,057	2,642	1,123	43	90	
Natural gas	2,612	49,511	4,446	7,423	2,434	1,971	24	17	
Fuel oil	270	4,351	360	540	177	78	104	Q	
District heat	48	5,925	804	1,068	350	108	6	340	
Propane	342	3,067	151	358	117	21	13	Q	
Other	101	1,010	48	93	30	12	2	Q	
<b>Primary space-heating energy source</b>									
Electricity	1,819	26,205	1,846	4,573	1,499	335	10	Q	
Natural gas	2,322	42,988	3,871	6,359	2,085	1,769	16	Q	
Fuel oil	205	2,542	187	247	81	8	98	Q	
District heat	47	5,797	794	1,053	345	106	5	338	
Propane	261	1,948	63	186	61	Q	Q	N	
Other	67	598	21	48	16	Q	Q	N	

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<b>All buildings</b>	5,557	87,093	6,963	12,934	4,241	2,248	134	341	
<b>Cooling energy sources (more than one may apply)</b>									
Electricity	4,413	76,034	6,322	12,061	3,954	2,080	110	177	
Natural gas	12	732	97	115	38	58	1	Q	
District chilled water	54	4,608	665	890	292	133	4	236	
<b>Water-heating energy sources (more than one may apply)</b>									
Electricity	2,658	42,755	3,102	6,755	2,215	743	57	88	
Natural gas	1,758	39,523	4,029	6,665	2,185	1,771	24	49	
Fuel oil	77	1,911	174	234	77	37	60	Q	
District heat	25	4,551	652	858	281	88	4	279	
Propane	142	1,575	87	242	79	Q	5	Q	
<b>Cooking energy sources (more than one may apply)</b>									
Electricity	1,010	25,151	2,511	4,720	1,547	810	43	111	
Natural gas	740	24,770	3,015	5,033	1,650	1,238	24	103	
Propane	144	2,001	167	365	120	19	27	Q	
<b>Energy end uses (more than one may apply)</b>									
Buildings with space heating	4,722	80,078	6,782	12,464	4,086	2,223	132	341	
Buildings with cooling	4,461	79,294	6,774	12,648	4,147	2,178	112	337	
Buildings with water heating	4,423	79,015	6,798	12,587	4,127	2,210	125	336	
Buildings with cooking	1,589	38,546	4,079	7,289	2,390	1,443	76	171	
Buildings with manufacturing	259	5,078	360	695	228	123	6	Q	
Buildings with electricity generation	410	25,642	2,803	5,102	1,673	855	68	208	
<b>Percent of floorspace heated</b>									
Not heated	835	7,015	181	470	154	25	2	Q	
1 to 50	697	10,130	468	1,019	334	123	10	Q	
51 to 99	727	14,650	1,298	2,433	798	443	18	39	
100	3,298	55,298	5,016	9,011	2,955	1,657	104	300	
<b>Percent of floorspace cooled</b>									
Not cooled	1,096	7,799	189	285	94	70	22	Q	
1 to 50	1,173	18,891	989	1,592	522	418	34	15	
51 to 99	897	22,728	2,143	3,968	1,301	667	37	138	
100	2,391	37,676	3,642	7,089	2,324	1,093	41	184	
<b>Percent lit when open</b>									
Zero	70	322	4	11	3	Q	Q	Q	
1 to 50	1,099	12,628	642	1,184	388	215	16	23	
51 to 99	1,666	34,814	3,049	5,469	1,793	1,033	56	167	
100	2,222	35,726	3,244	6,237	2,045	990	59	151	
Building never open/electricity not used	501	3,603	24	33	11	10	Q	Q	

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<b>All buildings</b>	5,557	87,093	6,963	12,934	4,241		2,248	134	341
<b>Percent lit during off hours</b>									
Zero	2,489	24,746	1,293	2,412	791	439	42	23	
1 to 50	2,441	50,753	4,346	8,159	2,675	1,395	72	204	
51 to 100	202	6,926	1,018	1,715	562	342	15	99	
Building always open with no "off hours"	102	2,443	306	648	213	73	Q	15	
Electricity not used	323	2,225	N	N	N	N	N	N	
<b>Heating equipment (more than one may apply)</b>									
Heat pumps	628	11,846	899	1,870	613	247	12	27	
Furnaces	755	8,654	615	1,106	363	244	7	Q	
Individual space heaters	1,247	20,766	1,572	2,824	926	545	38	63	
District heat	48	5,925	804	1,068	350	108	6	340	
Boilers	544	22,443	2,262	3,640	1,193	984	80	Q	
Packaged heating units	2,802	49,188	4,083	8,028	2,632	1,360	46	45	
Other	62	1,574	191	399	131	54	Q	Q	
<b>Cooling equipment (more than one may apply)</b>									
Residential-type central air conditioners	1,546	14,765	1,086	1,941	636	416	15	Q	
Heat pumps	692	12,538	939	1,966	644	257	12	26	
Individual air conditioners	709	12,420	1,013	1,665	546	374	37	56	
District chilled water	54	4,608	665	890	292	133	4	236	
Central chillers	163	17,041	1,853	3,417	1,120	598	41	93	
Packaged air conditioning units	1,909	45,153	3,972	7,563	2,480	1,318	62	112	
Swamp coolers	109	1,918	176	299	98	71	1	Q	
Other	Q	328	45	98	32	10	Q	Q	
<b>Main equipment replaced since 1990 (more than one may apply)</b>									
Heating	1,874	27,558	2,164	4,035	1,323	790	51	Q	
Cooling	1,971	30,702	2,521	4,633	1,519	882	57	63	
<b>Water-heating equipment</b>									
Centralized system	3,348	47,534	4,210	7,577	2,484	1,414	85	227	
Distributed system	690	12,688	832	1,643	539	257	13	23	
Combination of centralized and distributed system	385	18,793	1,756	3,367	1,104	539	27	86	
<b>Lighting equipment types (more than one may apply)</b>									
Incandescent	1,826	38,406	3,540	6,366	2,087	1,199	71	183	
Standard fluorescent	4,649	80,081	6,714	12,461	4,085	2,166	127	336	
Compact fluorescent	2,302	53,816	5,094	9,254	3,034	1,672	89	299	
High-intensity discharge (HID)	525	23,396	2,187	3,976	1,303	706	50	128	
Halogen	905	28,059	2,695	4,977	1,632	884	42	136	
LED	473	22,071	2,363	4,318	1,416	762	29	156	
Other	10	446	59	99	33	15	Q	Q	

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<b>All buildings</b>	5,557	87,093	6,963	12,934	4,241		2,248	134	341
<b>Refrigeration equipment (more than one may apply)</b>									
Any refrigeration	3,984	73,645	6,471	11,964	3,923		2,105	118	325
Walk-in units	811	28,361	3,525	6,309	2,069		1,249	53	154
Cases or cabinets	915	28,719	3,316	6,061	1,987		1,117	48	163
Large cold storage areas	78	4,171	530	1,019	334		175	5	15
Commercial ice makers	846	32,734	3,731	6,796	2,228		1,239	51	213
Residential-type or compact units	3,388	62,381	5,183	9,482	3,109		1,688	106	279
Vending machines	960	43,936	4,178	7,723	2,532		1,295	71	280
No refrigeration	1,573	13,448	492	970	318		143	16	15
<b>Office equipment (more than one may apply)</b>									
Desktop computers	3,977	77,063	6,586	12,252	4,017		2,112	120	336
With flat screen monitors	3,847	76,160	6,523	12,130	3,977		2,090	119	336
With multiple monitors	911	30,946	2,942	5,445	1,785		887	49	221
Laptop computers	2,730	63,486	5,466	10,073	3,303		1,755	100	308
Dedicated servers	1,748	53,369	4,784	9,041	2,964		1,485	92	243
Laser printers	2,339	54,256	4,795	8,910	2,921		1,509	86	278
Inkjet printers	2,187	36,235	2,903	5,449	1,787		955	59	103
FAX machines	3,185	66,682	5,706	10,712	3,512		1,823	104	268
Photocopiers	2,163	59,277	5,110	9,451	3,099		1,597	101	312
<b>Number of desktop computers</b>									
None	1,581	10,030	377	681	223		136	13	Q
1 to 4	2,039	15,669	1,184	2,134	700		453	27	Q
5 to 9	821	9,422	738	1,391	456		267	11	Q
10 to 19	482	9,388	676	1,344	441		212	12	Q
20 to 49	355	13,094	1,121	2,185	716		346	16	42
50 to 99	143	8,284	645	1,244	408		204	13	21
100 to 249	92	9,728	961	1,663	545		274	16	125
250 or more	44	11,478	1,261	2,292	751		356	26	128
<b>Number of laptop computers</b>									
None	2,827	23,607	1,497	2,860	938		493	34	32
1 to 4	1,944	21,161	1,516	2,837	930		540	28	17
5 to 9	350	8,345	698	1,314	431		227	14	Q
10 to 19	181	8,343	719	1,358	445		242	8	24
20 to 49	144	9,643	907	1,603	525		287	16	78
50 to 99	58	5,234	506	889	292		161	14	40
100 to 249	35	5,217	525	939	308		141	12	64
250 or more	20	5,542	596	1,134	372		157	8	59

**Table C1. Total energy consumption by major fuel, 2012**

	All buildings		Total energy consumption (trillion Btu)						
	Number of buildings (thousand)	Total floorspace (million square feet)	Electricity				Natural gas	Fuel oil	District heat
			Sum of major fuels	Primary	Site				
<b>All buildings</b>	5,557	87,093	6,963	12,934	4,241		2,248	134	341
<b>Number of dedicated servers</b>									
None	3,809	33,724	2,179	3,893	1,276	763	42	98	
1 to 4	1,562	34,097	2,718	5,170	1,695	896	59	68	
5 to 9	97	6,241	565	1,048	343	190	5	26	
10 to 19	50	5,711	593	1,137	373	152	13	56	
20 to 49	25	3,758	396	730	239	122	7	28	
50 or more	13	3,562	512	956	313	125	9	65	
<b>Number of photocopiers</b>									
None	3,394	27,816	1,854	3,483	1,142	651	33	28	
One	1,325	17,080	1,202	2,233	732	420	29	Q	
2 to 4	648	20,312	1,596	3,044	998	516	30	52	
5 to 9	116	8,863	784	1,501	492	239	10	43	
10 or more	75	13,022	1,527	2,673	876	423	32	196	
<b>Number of TVs or video displays</b>									
None	2,718	24,339	1,214	2,328	763	395	36	20	
One	1,145	9,990	697	1,256	412	254	20	Q	
2 to 4	1,035	16,465	1,311	2,455	805	465	19	22	
5 to 9	314	8,148	777	1,562	512	223	10	Q	
10 to 19	154	8,168	810	1,526	500	234	11	65	
20 to 49	106	8,058	717	1,452	476	193	14	35	
50 to 99	48	4,378	432	805	264	104	10	54	
100 or more	37	7,547	1,006	1,550	508	380	16	102	
<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	1,112	1,986	651	364	16	81	
Fast food or small restaurant	173	9,787	1,206	2,334	765	372	8	61	
Cafeteria or large restaurant	130	15,222	1,624	2,714	890	587	42	105	
Commercial kitchen/food preparation area	282	16,150	1,798	3,038	996	673	33	97	
Small kitchen area	736	14,054	1,187	2,113	693	409	31	55	
<b>Separate computer areas (more than one may apply)</b>									
Data center or server farm	97	11,105	1,356	2,481	814	386	27	128	
Computer-based training room	244	17,723	1,696	3,119	1,022	515	36	122	
Student or public computer center	238	14,341	1,275	2,112	692	435	24	124	
<b>HVAC conservation features (more than one may apply)</b>									
Economizer cycle	601	30,749	3,142	5,609	1,839	1,015	43	245	
Regular HVAC maintenance	3,178	69,244	6,203	11,536	3,782	1,991	111	319	
Building automation system (BAS) <sup>2</sup>	781	37,051	3,709	6,971	2,285	1,100	58	266	

**Table C1. Total energy consumption by major fuel, 2012**

	All buildings		Total energy consumption (trillion Btu)							
	Number of buildings (thousand)	Total floorspace (million square feet)	Electricity					Natural gas	Fuel oil	District heat
			Sum of major fuels	Primary	Site					
<b>All buildings</b>	5,557	87,093	6,963	12,934	4,241		2,248	134	341	
<b>Window and interior lighting features (more than one may apply)</b>										
Multipaned windows	3,012	60,362	5,250	9,682	3,174	1,752	95	229		
Tinted window glass	1,875	45,025	3,973	7,476	2,451	1,290	48	184		
Reflective window glass	549	15,908	1,652	3,127	1,025	541	21	65		
External overhangs or awnings	1,867	32,188	3,089	5,716	1,874	1,030	41	143		
Skylights or atriums	591	22,261	2,010	3,450	1,131	681	39	159		
Light scheduling	918	30,263	2,930	5,632	1,847	927	37	119		
Occupancy sensors	813	35,871	3,434	6,333	2,076	1,067	59	231		
Multi-level lighting or dimming	349	14,534	1,618	2,834	929	573	16	100		
Daylight harvesting	125	6,114	619	1,133	371	197	7	44		
Demand responsive lighting	176	4,738	410	830	272	127	Q	Q		
Building automation system (BAS) for lighting <sup>2</sup>	208	12,068	1,201	2,488	816	335	10	40		
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>										
Heating	3,699	63,167	5,022	9,290	3,046	1,675	92	208		
Cooling	3,517	62,516	5,008	9,387	3,078	1,644	78	209		
Lighting	4,757	78,594	6,426	11,833	3,880	2,105	123	318		

<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 *Sum 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, Forma EIA-871A, C, D, E, and F of the 2012 Commercial Buildings Energy Consumption Survey.

**Table C2. Total energy expenditures by major fuel, 2012**

	All buildings	Total energy expenditures (million dollars)					
	Total Number of buildings (thousand)	floorspace (million square feet)	Sum of major fuels	Electricity	Natural gas	Fuel oil	District heat
<b>All buildings</b>	<b>5,557</b>	<b>87,093</b>	<b>149,059</b>	<b>121,875</b>	<b>17,279</b>	<b>3,230</b>	<b>6,675</b>
<b>Building floorspace (square feet)</b>							
1,001 to 5,000	2,777	8,041	16,343	13,633	2,157	522	Q
5,001 to 10,000	1,229	8,900	14,230	11,977	1,957	253	Q
10,001 to 25,000	884	14,105	19,921	16,682	2,549	494	Q
25,001 to 50,000	332	11,917	17,299	14,549	2,101	329	320
50,001 to 100,000	199	13,918	22,523	18,473	2,621	559	870
100,001 to 200,000	90	12,415	21,907	17,507	2,261	461	1,678
200,001 to 500,000	38	10,724	20,880	16,706	2,161	329	1,683
Over 500,000	8	7,074	15,956	12,347	1,473	284	1,852
<b>Principal building activity</b>							
Education	389	12,239	16,819	12,893	2,200	658	1,068
Food sales	177	1,252	6,167	5,719	420	Q	N
Food service	380	1,819	9,956	8,070	1,700	Q	Q
Health care	157	4,155	13,072	9,585	1,818	444	1,225
Inpatient	10	2,374	9,373	6,435	1,441	362	1,136
Outpatient	147	1,781	3,699	3,150	377	Q	Q
Lodging	158	5,826	10,997	8,498	1,628	204	667
Mercantile	602	11,330	22,704	20,016	2,392	241	Q
Retail (other than mall)	438	5,439	8,982	8,144	607	188	Q
Enclosed and strip malls	164	5,890	13,722	11,872	1,785	Q	Q
Office	1,012	15,952	30,781	26,240	2,306	449	1,787
Public assembly	352	5,559	10,217	7,889	1,063	160	1,106
Public order and safety	84	1,440	2,766	2,038	310	59	Q
Religious worship	412	4,557	3,338	2,513	691	134	N
Service	619	4,630	5,614	4,121	950	394	Q
Warehouse and storage	796	13,077	9,696	8,442	1,120	129	Q
Other	125	2,002	5,958	5,041	571	243	Q
Vacant	296	3,256	974	809	108	Q	Q
<b>Year constructed</b>							
Before 1920	362	3,983	5,194	3,515	757	398	523
1920 to 1945	488	6,025	9,699	7,279	1,167	355	898
1946 to 1959	599	7,381	11,016	8,455	1,595	428	538
1960 to 1969	639	10,362	18,387	14,326	2,398	478	1,185
1970 to 1979	684	10,846	20,601	16,021	2,542	383	1,655
1980 to 1989	915	15,230	26,174	22,843	2,624	385	321
1990 to 1999	845	13,803	23,763	20,479	2,535	330	420
2000 to 2003	375	7,215	12,599	10,673	1,198	253	Q
2004 to 2007	347	6,524	11,308	9,561	1,284	74	Q
2008 to 2012	303	5,723	10,318	8,723	1,180	145	Q

**Table C2. Total energy expenditures by major fuel, 2012**

	All buildings	Total energy expenditures (million dollars)					
	Number of buildings (thousand)	Total floorspace (million square feet)	Sum of major fuels	Electricity	Natural gas	Fuel oil	District heat
<b>All buildings</b>	5,557	87,093	149,059	121,875	17,279	3,230	6,675
<b>Census region and division</b>							
Northeast	805	15,534	34,917	25,123	4,599	2,146	3,049
New England	302	4,302	9,321	6,501	1,067	1,119	Q
Middle Atlantic	504	11,232	25,596	18,622	3,533	1,027	2,414
Midwest	1,237	18,919	27,379	21,717	4,383	367	912
East North Central	735	12,742	19,718	15,676	3,344	237	461
West North Central	502	6,178	7,661	6,040	1,039	130	Q
South	2,247	34,279	54,780	47,473	4,793	553	1,960
South Atlantic	1,091	17,981	31,285	27,244	2,641	387	1,013
East South Central	370	4,904	7,478	6,225	790	73	Q
West South Central	786	11,394	16,017	14,004	1,362	94	557
West	1,267	18,360	31,983	27,563	3,503	164	753
Mountain	338	4,981	7,695	6,224	1,075	Q	Q
Pacific	929	13,379	24,288	21,339	2,428	117	404
<b>Climate region<sup>1</sup></b>							
Very cold/Cold	2,031	31,898	52,579	40,072	8,269	1,967	2,271
Mixed-humid	1,743	27,873	49,440	39,376	5,432	1,043	3,589
Mixed-dry/Hot-dry	837	12,037	20,480	18,349	1,723	62	Q
Hot-humid	799	12,831	21,883	20,169	1,262	133	319
Marine	147	2,454	4,677	3,910	593	26	Q
<b>Number of floors</b>							
One	3,836	39,809	62,436	53,981	7,305	1,009	Q
Two	1,158	20,206	31,065	25,383	3,956	783	Q
Three	374	8,140	14,050	11,014	1,700	553	784
Four to nine	177	13,535	28,310	21,425	3,233	679	2,973
Ten or more	13	5,404	13,198	10,072	1,085	207	1,834
<b>Elevators and escalators (more than one may apply)</b>							
Any elevators	405	32,120	66,070	51,427	7,059	1,348	6,236
<b>Number of elevators</b>							
One	272	11,158	17,859	13,724	2,282	388	Q
Two to five	118	12,817	26,106	21,044	2,612	595	1,855
Six or more	16	8,145	22,105	16,659	2,164	365	2,917
Any escalators	10	3,654	8,114	6,294	652	123	1,046
<b>Number of workers (main shift)</b>							
Fewer than 5	2,892	17,751	16,883	13,812	2,221	767	Q
5 to 9	1,085	8,973	13,631	11,619	1,678	222	Q
10 to 19	731	9,623	16,355	13,555	2,296	270	Q
20 to 49	513	14,514	25,414	21,239	2,954	409	813
50 to 99	206	13,476	23,977	20,070	2,808	514	585
100 to 249	93	10,941	21,742	17,630	2,546	526	1,040
250 or more	37	11,815	31,057	23,951	2,775	523	3,808

**Table C2. Total energy expenditures by major fuel, 2012**

	All buildings	Total energy expenditures (million dollars)					
	Number of buildings (thousand)	Total floorspace (million square feet)	Sum of major fuels	Electricity	Natural gas	Fuel oil	District heat
<b>All buildings</b>	5,557	87,093	149,059	121,875	17,279	3,230	6,675
<b>Weekly operating hours</b>							
Fewer than 40	1,149	8,220	4,800	3,740	783	241	Q
40 to 48	1,346	15,828	19,174	16,051	2,118	635	369
49 to 60	1,244	20,529	28,917	24,484	2,960	604	869
61 to 84	764	15,867	30,071	25,240	3,747	477	607
85 to 167	479	9,395	22,874	18,906	2,684	211	1,072
Open continuously	575	17,253	43,224	33,454	4,986	1,062	3,722
<b>Ownership and occupancy</b>							
Nongovernment owned	4,781	67,550	116,648	97,696	13,484	2,224	3,244
Owner occupied	2,466	30,637	53,282	43,284	6,629	1,372	1,997
Leased to tenant(s)	1,745	26,115	47,461	41,062	5,172	578	649
Owner occupied and leased	349	8,873	15,672	13,162	1,647	267	597
Unoccupied	221	1,925	233	189	37	Q	Q
Government owned	776	19,543	32,411	24,179	3,794	1,007	3,431
Federal	33	1,573	3,098	2,246	228	Q	550
State	185	5,539	10,649	7,242	1,259	125	2,023
Local	558	12,431	18,664	14,691	2,307	808	858
<b>Party responsible for operation and maintenance of energy systems</b>							
Building owner	4,715	73,702	123,188	99,912	14,092	2,911	6,273
Business owner or tenant	724	11,309	21,926	18,634	2,776	233	Q
Property management	54	1,250	2,229	1,892	206	24	Q
Other	64	832	1,715	1,437	204	Q	Q
<b>Provider of direct input on energy-related equipment purchases</b>							
Building owner	4,876	76,271	127,298	103,452	14,619	2,964	6,263
Business owner or tenant	540	8,256	16,900	14,356	2,101	156	Q
Property management	35	880	1,499	1,306	121	41	Q
Other	106	1,686	3,361	2,762	438	69	Q
<b>Number of establishments</b>							
One	4,205	54,994	93,466	75,573	11,567	2,368	3,958
2 to 5	862	17,756	30,532	24,651	3,352	589	1,940
6 to 10	147	4,425	8,231	6,963	877	124	267
11 to 20	68	3,704	8,081	6,982	880	26	Q
More than 20	27	3,821	8,483	7,499	553	116	315
Currently unoccupied	248	2,393	266	208	49	Q	Q

**Table C2. Total energy expenditures by major fuel, 2012**

	All buildings		Total energy expenditures (million dollars)				
	Number of buildings (thousand)	Total floorspace (million square feet)	Sum of major fuels	Electricity	Natural gas	Fuel oil	District heat
<b>All buildings</b>	5,557	87,093	149,059	121,875	17,279	3,230	6,675
<b>Predominant exterior wall material</b>							
Brick, stone, or stucco	2,312	40,463	72,280	58,369	8,924	1,418	3,569
Concrete (block or poured)	1,121	20,726	37,773	31,422	4,166	678	1,506
Concrete panels	210	8,693	14,004	11,673	1,420	163	747
Siding or shingles	905	5,750	9,387	7,747	1,094	525	Q
Metal panels	933	8,673	9,203	7,509	1,028	330	Q
Window glass	17	1,340	3,634	2,997	385	53	199
Other	37	856	1,813	1,384	Q	Q	Q
No one major type	21	592	965	774	111	Q	Q
<b>Predominant roof material</b>							
Metal surfacing	1,672	15,916	19,379	16,412	1,968	562	Q
Synthetic or rubber	911	25,817	49,992	40,442	6,488	958	2,104
Built-up	836	21,835	39,989	32,582	4,301	748	2,357
Slate or tile shingles	406	4,306	8,128	6,335	901	117	775
Wooden materials (including shingles)	157	1,139	1,885	1,508	289	Q	Q
Asphalt, fiberglass, or other shingles	1,483	15,104	24,366	20,026	2,916	655	768
Concrete	51	1,642	3,275	2,971	177	60	Q
Other	24	678	1,259	1,042	146	Q	Q
No one major type	18	657	787	557	92	Q	Q
<b>Roof characteristics</b>							
<b>Roof tilt</b>							
Flat	1,960	49,623	94,637	77,289	10,950	1,644	4,754
Shallow pitch	2,148	23,853	35,264	29,573	3,811	822	1,057
Steeper pitch	1,449	13,617	19,158	15,013	2,518	764	863
Cool roof	740	19,630	38,636	31,151	4,507	791	2,187

**Table C2. Total energy expenditures by major fuel, 2012**

	All buildings	Total energy expenditures (million dollars)					
	Total Number of buildings (thousand)	floorspace (million square feet)	Sum of major fuels	Electricity	Natural gas	Fuel oil	District heat
<b>All buildings</b>	<b>5,557</b>	<b>87,093</b>	<b>149,059</b>	<b>121,875</b>	<b>17,279</b>	<b>3,230</b>	<b>6,675</b>
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>							
Any type of renovation	2,094	42,216	79,130	62,883	9,407	1,934	4,905
Addition or annex	444	13,022	24,824	18,928	3,376	795	1,725
Reduction in floorspace	71	1,753	4,708	3,164	497	Q	Q
Roof replacement	987	20,917	40,812	31,469	5,201	1,313	2,829
Exterior wall replacement	194	4,230	8,144	6,509	974	263	397
Interior wall reconfiguration	889	21,340	43,350	34,504	4,851	920	3,075
Window replacement	560	12,265	22,649	17,416	2,926	824	1,483
HVAC equipment upgrade	1,101	26,779	53,298	41,872	6,341	1,151	3,934
Lighting upgrade	982	25,503	50,024	39,493	6,007	1,245	3,279
Electrical upgrade	747	16,160	33,090	25,680	4,139	911	2,361
Plumbing system upgrade	644	13,828	28,545	22,025	3,849	818	1,852
Insulation upgrade	382	7,607	15,243	11,754	2,036	320	1,132
Fire, safety, or security upgrade	616	17,196	35,026	27,572	4,234	932	2,288
Structural upgrade	152	3,913	8,258	6,435	1,070	226	528
Other	39	848	1,701	1,332	107	Q	Q
No renovations	3,160	39,154	59,611	50,269	6,692	1,151	1,499
Buildings constructed 2008 or later	303	5,723	10,318	8,723	1,180	145	Q
<b>Energy sources (more than one may apply)</b>							
Electricity	5,234	84,869	149,059	121,875	17,279	3,230	6,675
Natural gas	2,933	58,725	109,664	87,843	17,279	1,002	3,541
Fuel oil	467	20,200	47,354	36,349	4,456	3,230	3,319
District heat	48	5,964	17,326	9,745	748	159	6,675
District chilled water	54	4,608	12,725	7,279	921	108	4,417
Propane	510	7,706	13,179	10,822	1,035	1,008	Q
Other	172	3,826	6,452	5,171	821	201	259
<b>Space-heating energy sources (more than one may apply)</b>							
Electricity	2,858	49,030	86,351	74,674	8,773	1,037	1,867
Natural gas	2,612	49,511	85,944	70,020	15,055	580	288
Fuel oil	270	4,351	8,473	5,358	609	2,484	Q
District heat	48	5,925	17,232	9,679	746	150	6,656
Propane	342	3,067	3,604	3,156	145	301	Q
Other	101	1,010	1,162	948	101	45	Q
<b>Primary space-heating energy source</b>							
Electricity	1,819	26,205	45,007	42,062	2,700	226	Q
Natural gas	2,322	42,988	74,273	60,323	13,530	396	Q
Fuel oil	205	2,542	5,022	2,588	75	2,357	Q
District heat	47	5,797	17,056	9,569	730	130	6,627
Propane	261	1,948	1,663	1,629	Q	Q	N
Other	67	598	583	515	Q	Q	N

**Table C2. Total energy expenditures by major fuel, 2012**

	All buildings		Total energy expenditures (million dollars)				
	Total Number of buildings (thousand)	floorspace (million square feet)	Sum of major fuels	Electricity	Natural gas	Fuel oil	District heat
All buildings	5,557	87,093	149,059	121,875	17,279	3,230	6,675
<b>Cooling energy sources (more than one may apply)</b>							
Electricity	4,413	76,034	136,319	114,058	15,988	2,645	3,629
Natural gas	12	732	1,627	1,170	423	21	Q
District chilled water	54	4,608	12,725	7,279	921	108	4,417
<b>Water-heating energy sources (more than one may apply)</b>							
Electricity	2,658	42,755	72,423	63,203	6,010	1,389	1,822
Natural gas	1,758	39,523	77,507	62,383	13,379	587	Q
Fuel oil	77	1,911	4,349	2,648	280	1,401	Q
District heat	25	4,551	13,755	7,601	611	106	5,437
Propane	142	1,575	2,562	2,414	Q	127	Q
<b>Cooking energy sources (more than one may apply)</b>							
Electricity	1,010	25,151	52,305	43,196	5,971	1,035	2,102
Natural gas	740	24,770	58,012	45,887	9,283	596	2,246
Propane	144	2,001	4,512	3,723	142	628	Q
<b>Energy end uses (more than one may apply)</b>							
Buildings with space heating	4,722	80,078	143,605	116,684	17,071	3,176	6,673
Buildings with cooling	4,461	79,294	144,768	118,778	16,667	2,689	6,634
Buildings with water heating	4,423	79,015	144,637	118,083	16,986	3,032	6,537
Buildings with cooking	1,589	38,546	83,495	67,252	10,861	1,808	3,574
Buildings with manufacturing	259	5,078	7,891	6,660	1,020	152	Q
Buildings with electricity generation	410	25,642	57,892	46,125	6,275	1,613	3,879
<b>Percent of floorspace heated</b>							
Not heated	835	7,015	5,454	5,191	208	54	Q
1 to 50	697	10,130	11,572	10,362	978	218	Q
51 to 99	727	14,650	28,357	23,586	3,431	439	901
100	3,298	55,298	103,676	82,737	12,661	2,519	5,758
<b>Percent of floorspace cooled</b>							
Not cooled	1,096	7,799	4,291	3,097	612	541	Q
1 to 50	1,173	18,891	20,397	16,076	3,257	801	263
51 to 99	897	22,728	46,520	37,758	5,161	896	2,704
100	2,391	37,676	77,851	64,944	8,248	992	3,666
<b>Percent lit when open</b>							
Zero	70	322	135	118	Q	Q	Q
1 to 50	1,099	12,628	13,891	11,323	1,761	403	404
51 to 99	1,666	34,814	63,760	51,668	7,898	1,335	2,859
100	2,222	35,726	70,791	58,426	7,537	1,430	3,398
Building never open/electricity not used	501	3,603	482	341	79	Q	Q

**Table C2. Total energy expenditures by major fuel, 2012**

	All buildings	Total energy expenditures (million dollars)					
	Number of buildings (thousand)	Total floorspace (million square feet)	Sum of major fuels	Electricity	Natural gas	Fuel oil	District heat
<b>All buildings</b>	5,557	87,093	149,059	121,875	17,279	3,230	6,675
<b>Percent lit during off hours</b>							
Zero	2,489	24,746	30,433	25,350	3,615	1,024	444
1 to 50	2,441	50,753	91,998	75,923	10,723	1,717	3,635
51 to 100	202	6,926	19,923	14,834	2,402	356	2,331
Building always open with no "off hours"	102	2,443	6,705	5,768	538	Q	Q
Electricity not used	323	2,225	N	N	N	N	N
<b>Heating equipment (more than one may apply)</b>							
Heat pumps	628	11,846	20,389	17,577	1,984	292	536
Furnaces	755	8,654	12,617	10,424	1,993	184	Q
Individual space heaters	1,247	20,766	33,023	26,694	4,209	912	1,207
District heat	48	5,925	17,232	9,679	746	150	6,656
Boilers	544	22,443	43,404	34,078	7,351	1,897	Q
Packaged heating units	2,802	49,188	86,846	74,368	10,488	1,126	865
Other	62	1,574	3,924	3,363	451	Q	Q
<b>Cooling equipment (more than one may apply)</b>							
Residential-type central air conditioners	1,546	14,765	23,162	19,238	3,330	363	Q
Heat pumps	692	12,538	21,321	18,431	2,067	282	541
Individual air conditioners	709	12,420	21,552	16,454	2,992	896	1,210
District chilled water	54	4,608	12,725	7,279	921	108	4,417
Central chillers	163	17,041	38,074	30,834	4,259	964	2,017
Packaged air conditioning units	1,909	45,153	84,882	71,017	9,995	1,512	2,357
Swamp coolers	109	1,918	3,620	2,961	519	19	Q
Other	Q	328	1,009	887	86	Q	Q
<b>Main equipment replaced since 1990 (more than one may apply)</b>							
Heating	1,874	27,558	45,544	38,203	6,149	1,189	Q
Cooling	1,971	30,702	54,227	44,610	6,880	1,368	1,369
<b>Water-heating equipment</b>							
Centralized system	3,348	47,534	88,167	70,903	10,835	2,072	4,357
Distributed system	690	12,688	19,356	16,481	2,012	324	539
Combination of centralized and distributed system	385	18,793	37,115	30,698	4,139	636	1,641

**Table C2. Total energy expenditures by major fuel, 2012**

	All buildings		Total energy expenditures (million dollars)				
	Number of buildings (thousand)	Total floorspace (million square feet)	Sum of major fuels		Natural gas	Fuel oil	District heat
			Electricity	Gasoline			
<b>All buildings</b>	5,557	87,093	149,059	121,875	17,279	3,230	6,675
<b>Lighting equipment types (more than one may apply)</b>							
Incandescent	1,826	38,406	72,871	58,067	9,116	1,711	3,977
Standard fluorescent	4,649	80,081	143,245	116,985	16,667	3,054	6,539
Compact fluorescent	2,302	53,816	106,552	85,737	12,698	2,131	5,985
High-intensity discharge (HID)	525	23,396	45,359	36,217	5,202	1,183	2,756
Halogen	905	28,059	56,323	45,983	6,549	1,004	2,787
LED	473	22,071	49,526	40,018	5,745	682	3,081
Other	10	446	1,288	878	109	Q	Q
<b>Refrigeration equipment (more than one may apply)</b>							
Any refrigeration	3,984	73,645	137,069	111,805	16,099	2,838	6,327
Walk-in units	811	28,361	71,295	57,455	9,275	1,259	3,306
Cases or cabinets	915	28,719	68,861	55,957	8,371	1,135	3,398
Large cold storage areas	78	4,171	10,736	9,056	1,293	129	257
Commercial ice makers	846	32,734	75,848	61,035	9,216	1,206	4,391
Residential-type or compact units	3,388	62,381	109,536	88,731	12,924	2,549	5,332
Vending machines	960	43,936	87,026	70,214	9,624	1,679	5,510
No refrigeration	1,573	13,448	11,990	10,070	1,180	392	348
<b>Office equipment (more than one may apply)</b>							
Desktop computers	3,977	77,063	140,644	114,933	16,203	2,903	6,605
With flat screen monitors	3,847	76,160	139,323	113,832	16,013	2,874	6,604
With multiple monitors	911	30,946	62,497	50,411	6,505	1,159	4,423
Laptop computers	2,730	63,486	116,037	94,088	13,410	2,396	6,143
Dedicated servers	1,748	53,369	102,388	84,019	11,172	2,199	4,998
Laser printers	2,339	54,256	101,943	83,064	11,427	2,091	5,361
Inkjet printers	2,187	36,235	63,200	52,214	7,470	1,425	2,090
FAX machines	3,185	66,682	122,287	100,207	14,017	2,479	5,584
Photocopiers	2,163	59,277	108,985	88,288	12,116	2,414	6,167
<b>Number of desktop computers</b>							
None	1,581	10,030	8,415	6,943	1,075	328	Q
1 to 4	2,039	15,669	25,282	20,849	3,668	660	Q
5 to 9	821	9,422	15,649	13,152	2,121	284	Q
10 to 19	482	9,388	15,507	13,203	1,766	298	Q
20 to 49	355	13,094	23,764	20,062	2,633	368	701
50 to 99	143	8,284	13,985	11,748	1,581	308	349
100 to 249	92	9,728	19,760	14,675	1,958	383	2,743
250 or more	44	11,478	26,697	21,243	2,478	602	2,374

**Table C2. Total energy expenditures by major fuel, 2012**

	All buildings		Total energy expenditures (million dollars)				
	Number of buildings (thousand)	Total floorspace (million square feet)	Sum of major fuels		Natural gas	Fuel oil	District heat
			Electricity	Q			
<b>All buildings</b>	5,557	87,093	149,059	121,875	17,279	3,230	6,675
<b>Number of laptop computers</b>							
None	2,827	23,607	33,022	27,787	3,869	834	532
1 to 4	1,944	21,161	32,556	27,026	4,432	700	398
5 to 9	350	8,345	14,898	12,044	1,780	308	Q
10 to 19	181	8,343	15,453	12,884	1,868	186	514
20 to 49	144	9,643	18,640	14,733	2,057	383	1,467
50 to 99	58	5,234	10,692	8,429	1,175	331	758
100 to 249	35	5,217	10,633	8,261	999	282	1,091
250 or more	20	5,542	13,165	10,710	1,099	207	1,150
<b>Number of dedicated servers</b>							
None	3,809	33,724	46,671	37,856	6,106	1,031	1,677
1 to 4	1,562	34,097	58,557	48,512	6,943	1,427	1,675
5 to 9	97	6,241	11,694	9,574	1,491	126	503
10 to 19	50	5,711	13,085	10,592	1,093	300	1,101
20 to 49	25	3,758	8,074	6,538	789	163	584
50 or more	13	3,562	10,978	8,803	857	183	1,135
<b>Number of photocopiers</b>							
None	3,394	27,816	40,074	33,587	5,163	817	508
One	1,325	17,080	25,620	21,199	3,301	712	Q
2 to 4	648	20,312	34,204	28,580	4,038	720	866
5 to 9	116	8,863	16,569	13,456	1,830	242	Q
10 or more	75	13,022	32,592	25,054	2,946	739	3,853
<b>Number of TVs or video displays</b>							
None	2,718	24,339	27,735	23,257	3,214	861	402
One	1,145	9,990	14,677	11,897	2,071	494	Q
2 to 4	1,035	16,465	28,609	24,096	3,639	469	404
5 to 9	314	8,148	17,015	14,468	1,723	232	593
10 to 19	154	8,168	16,990	13,430	1,778	262	Q
20 to 49	106	8,058	16,023	13,521	1,488	327	687
50 to 99	48	4,378	8,966	7,071	789	203	902
100 or more	37	7,547	19,044	14,136	2,576	381	1,952
<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	22,669	18,136	2,660	384	1,489
Fast food or small restaurant	173	9,787	25,388	21,235	2,811	200	1,142
Cafeteria or large restaurant	130	15,222	32,102	24,625	4,206	1,002	2,269
Commercial kitchen/ food preparation area	282	16,150	35,118	27,221	4,943	783	2,170
Small kitchen area	736	14,054	24,674	19,739	3,190	745	1,001

**Table C2. Total energy expenditures by major fuel, 2012**

	All buildings		Total energy expenditures (million dollars)				
	Total Number of buildings (thousand)	floorspace (million square feet)	Sum of major fuels	Electricity	Natural gas	Fuel oil	District heat
All buildings	5,557	87,093	149,059	121,875	17,279	3,230	6,675
<b>Separate computer areas (more than one may apply)</b>							
Data center or server farm	97	11,105	28,418	22,702	2,619	637	2,459
Computer-based training room	244	17,723	35,069	28,326	3,710	833	2,200
Student or public computer center	238	14,341	24,649	18,779	3,256	580	2,033
<b>HVAC conservation features (more than one may apply)</b>							
Economizer cycle	601	30,749	64,942	51,308	7,520	1,026	5,088
Regular HVAC maintenance	3,178	69,244	131,733	107,543	15,133	2,681	6,375
Building automation system (BAS) <sup>2</sup>	781	37,051	78,304	63,815	8,094	1,371	5,023
<b>Window and interior lighting features (more than one may apply)</b>							
Multipaned windows	3,012	60,362	109,145	89,208	13,407	2,271	4,259
Tinted window glass	1,875	45,025	83,408	68,961	9,673	1,155	3,619
Reflective window glass	549	15,908	34,327	28,594	4,030	484	1,220
External overhangs or awnings	1,867	32,188	64,414	52,842	7,857	974	2,741
Skylights or atriums	591	22,261	41,021	31,935	5,111	938	3,037
Light scheduling	918	30,263	63,371	53,018	7,031	884	2,438
Occupancy sensors	813	35,871	72,679	58,844	8,061	1,403	4,372
Multi-level lighting or dimming	349	14,534	32,911	26,331	4,218	377	1,986
Daylight harvesting	125	6,114	13,036	10,563	1,516	165	791
Demand responsive lighting	176	4,738	9,636	8,365	1,051	72	Q
Building automation system (BAS) for lighting <sup>2</sup>	208	12,068	26,570	23,034	2,536	228	771
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>							
Heating	3,699	63,167	108,440	88,705	13,009	2,233	4,494
Cooling	3,517	62,516	108,878	89,825	12,753	1,880	4,419
Lighting	4,757	78,594	137,435.0	111,970	16,253	2,971	6,240

<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/>. • 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, Form EIA-871A, C, D, E, and F of the 2012 Commercial Buildings Energy Consumption Survey.

**Table C3. Sum of major fuel consumption and expenditures, 2012**

	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Sum of major fuel consumption	Sum of major fuel expenditures
				All buildings	Total (trillion Btu)
				Total (million dollars)	
<b>All buildings</b>	5,557	87,093	15.7	6,963	149,059
<b>Building floorspace (square feet)</b>					
1,001 to 5,000	2,777	8,041	2.9	723	16,343
5,001 to 10,000	1,229	8,900	7.2	646	14,230
10,001 to 25,000	884	14,105	16.0	876	19,921
25,001 to 50,000	332	11,917	35.9	823	17,299
50,001 to 100,000	199	13,918	69.9	1,067	22,523
100,001 to 200,000	90	12,415	137.9	1,035	21,907
200,001 to 500,000	38	10,724	284.2	1,026	20,880
Over 500,000	8	7,074	885.0	767	15,956
<b>Principal building activity</b>					
Education	389	12,239	31.5	842	16,819
Food sales	177	1,252	7.1	262	6,167
Food service	380	1,819	4.8	514	9,956
Health care	157	4,155	26.5	718	13,072
Inpatient	10	2,374	247.8	549	9,373
Outpatient	147	1,781	12.1	169	3,699
Lodging	158	5,826	36.9	564	10,997
Mercantile	602	11,330	18.8	1,008	22,704
Retail (other than mall)	438	5,439	12.4	364	8,982
Enclosed and strip malls	164	5,890	35.9	644	13,722
Office	1,012	15,952	15.8	1,241	30,781
Public assembly	352	5,559	15.8	480	10,217
Public order and safety	84	1,440	17.2	133	2,766
Religious worship	412	4,557	11.1	173	3,338
Service	619	4,630	7.5	272	5,614
Warehouse and storage	796	13,077	16.4	429	9,696
Other	125	2,002	16.0	286	5,958
Vacant	296	3,256	11.0	41	974
<b>Year constructed</b>					
Before 1920	362	3,983	11.0	238	5,194
1920 to 1945	488	6,025	12.3	418	9,699
1946 to 1959	599	7,381	12.3	537	11,016
1960 to 1969	639	10,362	16.2	902	18,387
1970 to 1979	684	10,846	15.9	1,012	20,601
1980 to 1989	915	15,230	16.6	1,164	26,174
1990 to 1999	845	13,803	16.3	1,102	23,763
2000 to 2003	375	7,215	19.2	579	12,599
2004 to 2007	347	6,524	18.8	528	11,308
2008 to 2012	303	5,723	18.9	484	10,318

**Table C3. Sum of major fuel consumption and expenditures, 2012**

			Sum of major fuel consumption	Sum of major fuel expenditures	
	All buildings				
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (million dollars)
<b>All buildings</b>	<b>5,557</b>	<b>87,093</b>	<b>15.7</b>	<b>6,963</b>	<b>149,059</b>
<b>Census region and division</b>					
Northeast	805	15,534	19.3	1,459	34,917
New England	302	4,302	14.3	368	9,321
Middle Atlantic	504	11,232	22.3	1,092	25,596
Midwest	1,237	18,919	15.3	1,566	27,379
East North Central	735	12,742	17.3	1,131	19,718
West North Central	502	6,178	12.3	435	7,661
South	2,247	34,279	15.3	2,566	54,780
South Atlantic	1,091	17,981	16.5	1,358	31,285
East South Central	370	4,904	13.3	369	7,478
West South Central	786	11,394	14.5	839	16,017
West	1,267	18,360	14.5	1,372	31,983
Mountain	338	4,981	14.7	417	7,695
Pacific	929	13,379	14.4	954	24,288
<b>Climate region<sup>1</sup></b>					
Very cold/Cold	2,031	31,898	15.7	2,746	52,579
Mixed-humid	1,743	27,873	16.0	2,270	49,440
Mixed-dry/Hot-dry	837	12,037	14.4	804	20,480
Hot-humid	799	12,831	16.1	947	21,883
Marine	147	2,454	16.7	197	4,677
<b>Number of floors</b>					
One	3,836	39,809	10.4	2,831	62,436
Two	1,158	20,206	17.5	1,460	31,065
Three	374	8,140	21.8	668	14,050
Four to nine	177	13,535	76.6	1,432	28,310
Ten or more	13	5,404	429.2	572	13,198
<b>Elevators and escalators (more than one may apply)</b>					
Any elevators	405	32,120	79.3	3,183	66,070
Number of elevators					
One	272	11,158	41.1	884	17,859
Two to five	118	12,817	109.0	1,242	26,106
Six or more	16	8,145	506.8	1,058	22,105
Any escalators	10	3,654	377.5	377	8,114
<b>Number of workers (main shift)</b>					
Fewer than 5	2,892	17,751	6.1	756	16,883
5 to 9	1,085	8,973	8.3	598	13,631
10 to 19	731	9,623	13.2	772	16,355
20 to 49	513	14,514	28.3	1,188	25,414
50 to 99	206	13,476	65.6	1,150	23,977
100 to 249	93	10,941	117.1	1,058	21,742
250 or more	37	11,815	318.3	1,441	31,057

**Table C3. Sum of major fuel consumption and expenditures, 2012**

	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	All buildings	Sum of major fuel consumption	Sum of major fuel expenditures
				Total (trillion Btu)	Total (million dollars)	
<b>All buildings</b>	<b>5,557</b>	<b>87,093</b>	<b>15.7</b>	<b>6,963</b>	<b>149,059</b>	
<b>Weekly operating hours</b>						
Fewer than 40	1,149	8,220	7.2	229	4,800	
40 to 48	1,346	15,828	11.8	832	19,174	
49 to 60	1,244	20,529	16.5	1,258	28,917	
61 to 84	764	15,867	20.8	1,370	30,071	
85 to 167	479	9,395	19.6	1,098	22,874	
Open continuously	575	17,253	30.0	2,177	43,224	
<b>Ownership and occupancy</b>						
Nongovernment owned	4,781	67,550	14.1	5,375	116,648	
Owner occupied	2,466	30,637	12.4	2,615	53,282	
Leased to tenant(s)	1,745	26,115	15.0	2,041	47,461	
Owner occupied and leased	349	8,873	25.4	709	15,672	
Unoccupied	221	1,925	8.7	10	233	
Government owned	776	19,543	25.2	1,588	32,411	
Federal	33	1,573	47.7	137	3,098	
State	185	5,539	30.0	555	10,649	
Local	558	12,431	22.3	896	18,664	
<b>Party responsible for operation and maintenance of energy systems</b>						
Building owner	4,715	73,702	15.6	5,808	123,188	
Business owner or tenant	724	11,309	15.6	983	21,926	
Property management	54	1,250	23.0	96	2,229	
Other	64	832	12.9	75	1,715	
<b>Provider of direct input on energy-related equipment purchases</b>						
Building owner	4,876	76,271	15.6	5,984	127,298	
Business owner or tenant	540	8,256	15.3	766	16,900	
Property management	35	880	25.5	61	1,499	
Other	106	1,686	15.9	153	3,361	
<b>Number of establishments</b>						
One	4,205	54,994	13.1	4,485	93,466	
2 to 5	862	17,756	20.6	1,400	30,532	
6 to 10	147	4,425	30.1	364	8,231	
11 to 20	68	3,704	54.8	355	8,081	
More than 20	27	3,821	140.9	347	8,483	
Currently unoccupied	248	2,393	9.6	13	266	

**Table C3. Sum of major fuel consumption and expenditures, 2012**

	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	All buildings	Sum of major fuel consumption	Sum of major fuel expenditures
				Total (trillion Btu)	Total (million dollars)	
<b>All buildings</b>	<b>5,557</b>	<b>87,093</b>	<b>15.7</b>	<b>6,963</b>	<b>149,059</b>	
<b>Predominant exterior wall material</b>						
Brick, stone, or stucco	2,312	40,463	17.5	3,457	72,280	
Concrete (block or poured)	1,121	20,726	18.5	1,720	37,773	
Concrete panels	210	8,693	41.4	664	14,004	
Siding or shingles	905	5,750	6.4	400	9,387	
Metal panels	933	8,673	9.3	428	9,203	
Window glass	17	1,340	78.6	170	3,634	
Other	37	856	23.0	79	1,813	
No one major type	21	592	27.6	45	965	
<b>Predominant roof material</b>						
Metal surfacing	1,672	15,916	9.5	865	19,379	
Synthetic or rubber	911	25,817	28.3	2,442	49,992	
Built-up	836	21,835	26.1	1,862	39,989	
Slate or tile shingles	406	4,306	10.6	371	8,128	
Wooden materials (including shingles)	157	1,139	7.3	92	1,885	
Asphalt, fiberglass, or other shingles	1,483	15,104	10.2	1,105	24,366	
Concrete	51	1,642	32.2	132	3,275	
Other	24	678	28.6	58	1,259	
No one major type	18	657	36.4	35	787	
<b>Roof characteristics</b>						
<b>Roof tilt</b>						
Flat	1,960	49,623	25.3	4,476	94,637	
Shallow pitch	2,148	23,853	11.1	1,597	35,264	
Steeper pitch	1,449	13,617	9.4	890	19,158	
Cool roof	740	19,630	26.5	1,837	38,636	

**Table C3. Sum of major fuel consumption and expenditures, 2012**

	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	All buildings	Sum of major fuel consumption	Sum of major fuel expenditures
					Total (trillion Btu)	Total (million dollars)
<b>All buildings</b>	<b>5,557</b>	<b>87,093</b>	<b>15.7</b>	<b>6,963</b>	<b>149,059</b>	
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>						
Any type of renovation	2,094	42,216	20.2	3,762	79,130	
Addition or annex	444	13,022	29.3	1,292	24,824	
Reduction in floorspace	71	1,753	24.6	226	4,708	
Roof replacement	987	20,917	21.2	1,986	40,812	
Exterior wall replacement	194	4,230	21.8	399	8,144	
Interior wall reconfiguration	889	21,340	24.0	2,056	43,350	
Window replacement	560	12,265	21.9	1,090	22,649	
HVAC equipment upgrade	1,101	26,779	24.3	2,545	53,298	
Lighting upgrade	982	25,503	26.0	2,440	50,024	
Electrical upgrade	747	16,160	21.6	1,608	33,090	
Plumbing system upgrade	644	13,828	21.5	1,397	28,545	
Insulation upgrade	382	7,607	19.9	771	15,243	
Fire, safety, or security upgrade	616	17,196	27.9	1,685	35,026	
Structural upgrade	152	3,913	25.8	424	8,258	
Other	39	848	21.7	69	1,701	
No renovations	3,160	39,154	12.4	2,718	59,611	
Buildings constructed 2008 or later	303	5,723	18.9	484	10,318	
<b>Energy sources (more than one may apply)</b>						
Electricity	5,234	84,869	16.2	6,963	149,059	
Natural gas	2,933	58,725	20.0	5,544	109,664	
Fuel oil	467	20,200	43.3	2,231	47,354	
District heat	48	5,964	124.9	808	17,326	
District chilled water	54	4,608	85.4	665	12,725	
Propane	510	7,706	15.1	583	13,179	
Other	172	3,826	22.2	301	6,452	
<b>Space-heating energy sources (more than one may apply)</b>						
Electricity	2,858	49,030	17.2	3,898	86,351	
Natural gas	2,612	49,511	19.0	4,446	85,944	
Fuel oil	270	4,351	16.1	360	8,473	
District heat	48	5,925	124.3	804	17,232	
Propane	342	3,067	9.0	151	3,604	
Other	101	1,010	10.0	48	1,162	
<b>Primary space-heating energy source</b>						
Electricity	1,819	26,205	14.4	1,846	45,007	
Natural gas	2,322	42,988	18.5	3,871	74,273	
Fuel oil	205	2,542	12.4	187	5,022	
District heat	47	5,797	122.9	794	17,056	
Propane	261	1,948	7.5	63	1,663	
Other	67	598	8.9	21	583	

**Table C3. Sum of major fuel consumption and expenditures, 2012**

	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	All buildings	Sum of major fuel consumption	Sum of major fuel expenditures
				Total (trillion Btu)	Total (million dollars)	
<b>All buildings</b>	<b>5,557</b>	<b>87,093</b>	<b>15.7</b>	<b>6,963</b>	<b>149,059</b>	
<b>Cooling energy sources (more than one may apply)</b>						
Electricity	4,413	76,034	17.2	6,322	136,319	
Natural gas	12	732	61.5	97	1,627	
District chilled water	54	4,608	85.4	665	12,725	
<b>Water-heating energy sources (more than one may apply)</b>						
Electricity	2,658	42,755	16.1	3,102	72,423	
Natural gas	1,758	39,523	22.5	4,029	77,507	
Fuel oil	77	1,911	24.7	174	4,349	
District heat	25	4,551	179.7	652	13,755	
Propane	142	1,575	11.1	87	2,562	
<b>Cooking energy sources (more than one may apply)</b>						
Electricity	1,010	25,151	24.9	2,511	52,305	
Natural gas	740	24,770	33.5	3,015	58,012	
Propane	144	2,001	13.9	167	4,512	
<b>Energy end uses (more than one may apply)</b>						
Buildings with space heating	4,722	80,078	17.0	6,782	143,605	
Buildings with cooling	4,461	79,294	17.8	6,774	144,768	
Buildings with water heating	4,423	79,015	17.9	6,798	144,637	
Buildings with cooking	1,589	38,546	24.3	4,079	83,495	
Buildings with manufacturing	259	5,078	19.6	360	7,891	
Buildings with electricity generation	410	25,642	62.5	2,803	57,892	
<b>Percent of floorspace heated</b>						
Not heated	835	7,015	8.4	181	5,454	
1 to 50	697	10,130	14.5	468	11,572	
51 to 99	727	14,650	20.2	1,298	28,357	
100	3,298	55,298	16.8	5,016	103,676	
<b>Percent of floorspace cooled</b>						
Not cooled	1,096	7,799	7.1	189	4,291	
1 to 50	1,173	18,891	16.1	989	20,397	
51 to 99	897	22,728	25.3	2,143	46,520	
100	2,391	37,676	15.8	3,642	77,851	
<b>Percent lit when open</b>						
Zero	70	322	4.6	4	135	
1 to 50	1,099	12,628	11.5	642	13,891	
51 to 99	1,666	34,814	20.9	3,049	63,760	
100	2,222	35,726	16.1	3,244	70,791	
Building never open/electricity not used	501	3,603	7.2	24	482	

**Table C3. Sum of major fuel consumption and expenditures, 2012**

	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	All buildings	Sum of major fuel consumption	Sum of major fuel expenditures
				Total (trillion Btu)	Total (million dollars)	
<b>All buildings</b>	<b>5,557</b>	<b>87,093</b>	<b>15.7</b>	<b>6,963</b>	<b>149,059</b>	
<b>Percent lit during off hours</b>						
Zero	2,489	24,746	9.9	1,293	30,433	
1 to 50	2,441	50,753	20.8	4,346	91,998	
51 to 100	202	6,926	34.3	1,018	19,923	
Building always open with no "off hours"	102	2,443	23.9	306	6,705	
Electricity not used	323	2,225	6.9	N	N	
<b>Heating equipment (more than one may apply)</b>						
Heat pumps	628	11,846	18.9	899	20,389	
Furnaces	755	8,654	11.5	615	12,617	
Individual space heaters	1,247	20,766	16.6	1,572	33,023	
District heat	48	5,925	124.3	804	17,232	
Boilers	544	22,443	41.3	2,262	43,404	
Packaged heating units	2,802	49,188	17.6	4,083	86,846	
Other	62	1,574	25.5	191	3,924	
<b>Cooling equipment (more than one may apply)</b>						
Residential-type central air conditioners	1,546	14,765	9.5	1,086	23,162	
Heat pumps	692	12,538	18.1	939	21,321	
Individual air conditioners	709	12,420	17.5	1,013	21,552	
District chilled water	54	4,608	85.4	665	12,725	
Central chillers	163	17,041	104.6	1,853	38,074	
Packaged air conditioning units	1,909	45,153	23.6	3,972	84,882	
Swamp coolers	109	1,918	17.5	176	3,620	
Other	Q	328	Q	45	1,009	
<b>Main equipment replaced since 1990 (more than one may apply)</b>						
Heating	1,874	27,558	14.7	2,164	45,544	
Cooling	1,971	30,702	15.6	2,521	54,227	
<b>Water-heating equipment</b>						
Centralized system	3,348	47,534	14.2	4,210	88,167	
Distributed system	690	12,688	18.4	832	19,356	
Combination of centralized and distributed system	385	18,793	48.8	1,756	37,115	

**Table C3. Sum of major fuel consumption and expenditures, 2012**

	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	All buildings	Sum of major fuel consumption	Sum of major fuel expenditures
				Total	(trillion Btu)	Total (million dollars)
<b>All buildings</b>	<b>5,557</b>	<b>87,093</b>	<b>15.7</b>	<b>6,963</b>	<b>149,059</b>	
<b>Lighting equipment types (more than one may apply)</b>						
Incandescent	1,826	38,406	21.0	3,540	72,871	
Standard fluorescent	4,649	80,081	17.2	6,714	143,245	
Compact fluorescent	2,302	53,816	23.4	5,094	106,552	
High-intensity discharge (HID)	525	23,396	44.5	2,187	45,359	
Halogen	905	28,059	31.0	2,695	56,323	
LED	473	22,071	46.6	2,363	49,526	
Other	10	446	45.2	59	1,288	
<b>Refrigeration equipment (more than one may apply)</b>						
Any refrigeration	3,984	73,645	18.5	6,471	137,069	
Walk-in units	811	28,361	35.0	3,525	71,295	
Cases or cabinets	915	28,719	31.4	3,316	68,861	
Large cold storage areas	78	4,171	53.4	530	10,736	
Commercial ice makers	846	32,734	38.7	3,731	75,848	
Residential-type or compact units	3,388	62,381	18.4	5,183	109,536	
Vending machines	960	43,936	45.8	4,178	87,026	
No refrigeration	1,573	13,448	8.5	492	11,990	
<b>Office equipment (more than one may apply)</b>						
Desktop computers	3,977	77,063	19.4	6,586	140,644	
With flat screen monitors	3,847	76,160	19.8	6,523	139,323	
With multiple monitors	911	30,946	34.0	2,942	62,497	
Laptop computers	2,730	63,486	23.3	5,466	116,037	
Dedicated servers	1,748	53,369	30.5	4,784	102,388	
Laser printers	2,339	54,256	23.2	4,795	101,943	
Inkjet printers	2,187	36,235	16.6	2,903	63,200	
FAX machines	3,185	66,682	20.9	5,706	122,287	
Photocopiers	2,163	59,277	27.4	5,110	108,985	
<b>Number of desktop computers</b>						
None	1,581	10,030	6.3	377	8,415	
1 to 4	2,039	15,669	7.7	1,184	25,282	
5 to 9	821	9,422	11.5	738	15,649	
10 to 19	482	9,388	19.5	676	15,507	
20 to 49	355	13,094	36.9	1,121	23,764	
50 to 99	143	8,284	57.8	645	13,985	
100 to 249	92	9,728	105.6	961	19,760	
250 or more	44	11,478	258.3	1,261	26,697	

**Table C3. Sum of major fuel consumption and expenditures, 2012**

	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	All buildings	Sum of major fuel consumption	Sum of major fuel expenditures
					Total (trillion Btu)	Total (million dollars)
<b>All buildings</b>	<b>5,557</b>	<b>87,093</b>	<b>15.7</b>	<b>6,963</b>	<b>149,059</b>	
<b>Number of laptop computers</b>						
None	2,827	23,607	8.4	1,497	33,022	
1 to 4	1,944	21,161	10.9	1,516	32,556	
5 to 9	350	8,345	23.9	698	14,898	
10 to 19	181	8,343	46.0	719	15,453	
20 to 49	144	9,643	67.2	907	18,640	
50 to 99	58	5,234	91.0	506	10,692	
100 to 249	35	5,217	150.9	525	10,633	
250 or more	20	5,542	280.8	596	13,165	
<b>Number of dedicated servers</b>						
None	3,809	33,724	8.9	2,179	46,671	
1 to 4	1,562	34,097	21.8	2,718	58,557	
5 to 9	97	6,241	64.3	565	11,694	
10 to 19	50	5,711	113.6	593	13,085	
20 to 49	25	3,758	147.4	396	8,074	
50 or more	13	3,562	271.4	512	10,978	
<b>Number of photocopiers</b>						
None	3,394	27,816	8.2	1,854	40,074	
One	1,325	17,080	12.9	1,202	25,620	
2 to 4	648	20,312	31.4	1,596	34,204	
5 to 9	116	8,863	76.7	784	16,569	
10 or more	75	13,022	174.7	1,527	32,592	
<b>Number of TVs or video displays</b>						
None	2,718	24,339	9.0	1,214	27,735	
One	1,145	9,990	8.7	697	14,677	
2 to 4	1,035	16,465	15.9	1,311	28,609	
5 to 9	314	8,148	25.9	777	17,015	
10 to 19	154	8,168	53.1	810	16,990	
20 to 49	106	8,058	76.1	717	16,023	
50 to 99	48	4,378	90.9	432	8,966	
100 or more	37	7,547	201.5	1,006	19,044	
<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	1,112	22,669	
Fast food or small restaurant	173	9,787	56.5	1,206	25,388	
Cafeteria or large restaurant	130	15,222	117.1	1,624	32,102	
Commercial kitchen/ food preparation area	282	16,150	57.2	1,798	35,118	
Small kitchen area	736	14,054	19.1	1,187	24,674	

**Table C3. Sum of major fuel consumption and expenditures, 2012**

	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	All buildings	Sum of major fuel consumption	Sum of major fuel expenditures
				Total (trillion Btu)	Total (million dollars)	
<b>All buildings</b>	<b>5,557</b>	<b>87,093</b>	<b>15.7</b>	<b>6,963</b>	<b>149,059</b>	
<b>Separate computer areas (more than one may apply)</b>						
Data center or server farm	97	11,105	115.1	1,356	28,418	
Computer-based training room	244	17,723	72.7	1,696	35,069	
Student or public computer center	238	14,341	60.1	1,275	24,649	
<b>HVAC conservation features (more than one may apply)</b>						
Economizer cycle	601	30,749	51.2	3,142	64,942	
Regular HVAC maintenance	3,178	69,244	21.8	6,203	131,733	
Building automation system (BAS) <sup>2</sup>	781	37,051	47.5	3,709	78,304	
<b>Window and interior lighting features (more than one may apply)</b>						
Multipaned windows	3,012	60,362	20.0	5,250	109,145	
Tinted window glass	1,875	45,025	24.0	3,973	83,408	
Reflective window glass	549	15,908	29.0	1,652	34,327	
External overhangs or awnings	1,867	32,188	17.2	3,089	64,414	
Skylights or atriums	591	22,261	37.6	2,010	41,021	
Light scheduling	918	30,263	33.0	2,930	63,371	
Occupancy sensors	813	35,871	44.1	3,434	72,679	
Multi-level lighting or dimming	349	14,534	41.7	1,618	32,911	
Daylight harvesting	125	6,114	48.8	619	13,036	
Demand responsive lighting	176	4,738	26.9	410	9,636	
Building automation system (BAS) for lighting <sup>2</sup>	208	12,068	57.9	1,201	26,570	
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>						
Heating	3,699	63,167	17.1	5,022	108,440	
Cooling	3,517	62,516	17.8	5,008	108,878	
Lighting	4,757	78,594	16.5	6,426	137,435.0	

<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.

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/>. • 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.

Release date: May 2016  
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**Table C4. Sum of major fuel consumption and expenditure gross energy intensities , 2012**

	Sum of major fuel consumption						Sum of major fuel expenditures			
				Distribution of building-level intensities (thousand Btu/square foot)						
	per building (million Btu)	per square foot (thousand Btu)	per worker (million Btu)	25th percentile	Median	75th percentile	per building (thousand dollars)	per square foot (dollars)	per million Btu (dollars)	
<b>All buildings</b>	1,253	80.0	79.0	18.9	45.9	89.0	26.8	1.7	21.4	
<b>Building floorspace (square feet)</b>										
1,001 to 5,000	260	89.9	70.6	17.6	46.4	100.0	5.9	2.0	22.6	
5,001 to 10,000	526	72.6	70.0	18.3	40.1	74.3	11.6	1.6	22.0	
10,001 to 25,000	992	62.1	61.8	18.7	43.8	81.5	22.5	1.4	22.7	
25,001 to 50,000	2,478	69.0	72.6	24.6	48.8	88.8	52.1	1.5	21.0	
50,001 to 100,000	5,359	76.7	86.5	33.7	58.2	93.4	113.1	1.6	21.1	
100,001 to 200,000	11,497	83.4	91.5	39.0	66.2	101.1	243.4	1.8	21.2	
200,001 to 500,000	27,198	95.7	99.1	47.4	77.1	114.8	553.4	2.0	20.4	
Over 500,000	95,959	108.4	83.4	42.9	71.2	124.3	1,996.3	2.3	20.8	
<b>Principal building activity</b>										
Education	2,166	68.8	77.3	31.1	50.8	81.1	43.3	1.4	20.0	
Food sales	1,483	209.5	223.6	128.1	222.8	321.6	34.9	4.9	23.5	
Food service	1,355	282.7	149.9	94.4	241.1	449.0	26.2	5.5	19.4	
Health care	4,578	172.7	94.2	42.4	63.2	90.9	83.4	3.2	18.2	
Inpatient	57,281	231.1	128.2	163.8	205.7	272.6	978.6	4.0	17.1	
Outpatient	1,147	94.8	50.7	33.5	61.7	82.1	25.1	2.1	21.9	
Lodging	3,574	96.9	184.1	48.1	69.1	119.1	69.6	1.9	19.5	
Mercantile	1,673	88.9	110.5	33.4	63.6	107.6	37.7	2.0	22.5	
Retail (other than mall)	830	66.9	90.4	25.6	52.2	88.3	20.5	1.7	24.7	
Enclosed and strip malls	3,924	109.3	126.4	59.0	100.8	177.3	83.6	2.3	21.3	
Office	1,226	77.8	36.8	32.6	52.7	80.2	30.4	1.9	24.8	
Public assembly	1,363	86.3	154.4	22.2	49.3	82.5	29.0	1.8	21.3	
Public order and safety	1,583	92.2	71.6	32.9	62.1	107.7	33.0	1.9	20.8	
Religious worship	421	38.0	89.3	12.5	25.1	49.8	8.1	0.7	19.3	
Service	440	58.7	67.5	18.5	42.2	83.7	9.1	1.2	20.7	
Warehouse and storage	539	32.8	67.4	2.5	13.8	35.6	12.2	0.7	22.6	
Other	2,293	142.9	177.6	16.5	44.1	126.5	47.8	3.0	20.8	
Vacant	140	12.7	176.0	0.0	0.0	6.4	3.3	0.3	23.5	
<b>Year constructed</b>										
Before 1920	658	59.8	72.0	16.4	39.0	81.8	14.4	1.3	21.8	
1920 to 1945	857	69.4	69.7	16.8	46.0	84.0	19.9	1.6	23.2	
1946 to 1959	896	72.7	81.8	20.2	44.1	85.9	18.4	1.5	20.5	
1960 to 1969	1,412	87.0	91.5	28.4	53.8	107.0	28.8	1.8	20.4	
1970 to 1979	1,479	93.3	80.7	18.8	52.5	104.0	30.1	1.9	20.4	
1980 to 1989	1,272	76.4	66.6	17.6	44.3	82.5	28.6	1.7	22.5	
1990 to 1999	1,304	79.8	82.0	16.8	45.0	87.2	28.1	1.7	21.6	
2000 to 2003	1,542	80.2	77.5	22.6	48.1	100.3	33.6	1.8	21.8	
2004 to 2007	1,522	80.9	88.1	18.6	48.3	82.1	32.6	1.7	21.4	
2008 to 2012	1,598	84.5	87.1	16.9	35.8	79.8	34.1	1.8	21.3	

**Table C4. Sum of major fuel consumption and expenditure gross energy intensities , 2012**

	Sum of major fuel consumption						Sum of major fuel expenditures		
				Distribution of building-level intensities (thousand Btu/square foot)					
	per building (million Btu)	per square foot (thousand Btu)	per worker (million Btu)	25th percentile	Median	75th percentile (thousand dollars)	per building (thousand dollars)	per square foot (dollars)	per million Btu (dollars)
<b>All buildings</b>	1,253	80.0	79.0	18.9	45.9	89.0	26.8	1.7	21.4
<b>Census region and division</b>									
Northeast	1,812	93.9	82.1	24.7	54.8	104.6	43.3	2.3	23.9
New England	1,219	85.5	88.3	18.3	43.7	92.4	30.9	2.2	25.3
Middle Atlantic	2,167	97.2	80.2	30.9	61.5	119.6	50.8	2.3	23.5
Midwest	1,265	82.8	90.7	23.5	50.8	93.7	22.1	1.5	17.5
East North Central	1,538	88.7	94.8	32.3	61.7	109.2	26.8	1.6	17.4
West North Central	866	70.4	81.6	11.9	35.1	70.0	15.3	1.2	17.6
South	1,142	74.9	78.6	17.0	43.6	85.7	24.4	1.6	21.4
South Atlantic	1,244	75.5	75.0	18.4	43.2	94.2	28.7	1.7	23.0
East South Central	999	75.3	86.0	21.2	51.0	82.5	20.2	1.5	20.3
West South Central	1,068	73.6	81.7	12.5	39.2	80.2	20.4	1.4	19.1
West	1,082	74.7	67.0	17.5	41.9	79.6	25.2	1.7	23.3
Mountain	1,233	83.8	90.7	20.4	56.7	90.6	22.7	1.5	18.4
Pacific	1,027	71.3	60.1	16.8	37.0	75.6	26.1	1.8	25.5
<b>Climate region<sup>1</sup></b>									
Very cold/Cold	1,352	86.1	89.3	22.6	54.0	98.7	25.9	1.7	19.2
Mixed-humid	1,302	81.4	79.1	21.5	45.6	90.3	28.4	1.8	21.8
Mixed-dry/Hot-dry	960	66.8	61.6	15.0	31.6	68.2	24.5	1.7	25.5
Hot-humid	1,185	73.8	75.5	16.7	44.4	86.6	27.4	1.7	23.1
Marine	1,337	80.2	62.7	21.2	44.1	92.1	31.8	1.9	23.8
<b>Number of floors</b>									
One	738	71.1	80.8	16.4	42.2	88.7	16.3	1.6	22.1
Two	1,261	72.3	74.0	23.2	49.6	85.5	26.8	1.5	21.3
Three	1,787	82.1	85.4	32.5	56.4	96.0	37.6	1.7	21.0
Four to nine	8,102	105.8	88.1	42.4	66.8	102.4	160.2	2.1	19.8
Ten or more	45,392	105.8	61.2	58.3	82.0	116.1	1,048.2	2.4	23.1
<b>Elevators and escalators (more than one may apply)</b>									
Any elevators	7,855	99.1	79.6	43.7	69.9	106.3	163.0	2.1	20.8
<b>Number of elevators</b>									
One	3,253	79.2	77.9	40.5	65.7	99.2	65.7	1.6	20.2
Two to five	10,565	96.9	80.2	51.5	75.8	115.7	222.1	2.0	21.0
Six or more	65,801	129.8	80.5	67.5	96.9	166.2	1,375.4	2.7	20.9
Any escalators	38,936	103.1	78.2	65.7	66.8	115.4	838.2	2.2	21.5
<b>Number of workers (main shift)</b>									
Fewer than 5	261	42.6	149.3	8.6	32.1	71.7	5.8	1.0	22.3
5 to 9	551	66.6	85.2	26.3	48.7	94.1	12.6	1.5	22.8
10 to 19	1,056	80.3	81.5	36.4	63.3	119.0	22.4	1.7	21.2
20 to 49	2,316	81.8	79.8	37.3	63.0	113.2	49.6	1.8	21.4
50 to 99	5,594	85.3	85.6	48.1	69.9	112.2	116.7	1.8	20.9
100 to 249	11,330	96.7	79.2	57.9	89.0	127.0	232.8	2.0	20.5
250 or more	38,827	122.0	57.7	62.3	86.4	151.0	836.8	2.6	21.6

**Table C4. Sum of major fuel consumption and expenditure gross energy intensities , 2012**

	Sum of major fuel consumption						Sum of major fuel expenditures			
				Distribution of building-level intensities (thousand Btu/square foot)						
	per building (million Btu)	per square foot (thousand Btu)	per worker (million Btu)	25th per- centile	Median	75th per- centile	per building (thousand dollars)	per square foot (dollars)	per million Btu (dollars)	
All buildings	1,253	80.0	79.0	18.9	45.9	89.0	26.8	1.7	21.4	
<b>Weekly operating hours</b>										
Fewer than 40	199	27.8	69.5	2.4	16.8	42.4	4.2	0.6	21.0	
40 to 48	618	52.6	47.4	22.5	42.9	69.0	14.2	1.2	23.1	
49 to 60	1,011	61.3	50.6	25.0	48.1	83.2	23.3	1.4	23.0	
61 to 84	1,792	86.3	82.1	35.5	72.4	143.7	39.4	1.9	22.0	
85 to 167	2,294	116.9	135.8	59.0	124.7	265.2	47.8	2.4	20.8	
Open continuously	3,783	126.2	122.7	18.6	62.7	138.5	75.1	2.5	19.9	
<b>Ownership and occupancy</b>										
Nongovernment owned	1,124	79.6	78.5	17.4	44.5	89.3	24.4	1.7	21.7	
Owner occupied	1,060	85.4	101.1	19.8	45.0	93.7	21.6	1.7	20.4	
Leased to tenant(s)	1,170	78.2	63.7	22.3	51.3	102.2	27.2	1.8	23.3	
Owner occupied and leased	2,032	79.9	66.9	21.3	42.6	75.8	44.9	1.8	22.1	
Unoccupied	47	5.4		0.0	0.0	2.8	1.1	0.1	22.7	
Government owned	2,046	81.2	80.7	28.2	53.4	87.6	41.8	1.7	20.4	
Federal	4,164	87.3	64.3	32.7	58.3	67.5	94.0	2.0	22.6	
State	3,001	100.1	99.4	35.0	58.2	88.8	57.6	1.9	19.2	
Local	1,605	72.1	74.9	26.2	52.3	86.2	33.4	1.5	20.8	
<b>Party responsible for operation and maintenance of energy systems</b>										
Building owner	1,232	78.8	78.0	18.2	44.4	84.7	26.1	1.7	21.2	
Business owner or tenant	1,359	87.0	88.4	26.2	59.3	123.4	30.3	1.9	22.3	
Property management	1,773	77.0	54.8	16.3	42.6	88.7	41.0	1.8	23.2	
Other	1,172	90.6	87.3	32.9	68.3	107.0	26.6	2.1	22.7	
<b>Provider of direct input on energy-related equipment purchases</b>										
Building owner	1,227	78.5	77.9	18.3	44.4	85.3	26.1	1.7	21.3	
Business owner or tenant	1,419	92.8	88.9	26.0	61.6	135.2	31.3	2.1	22.1	
Property management	1,755	68.8	63.5	35.3	64.1	115.1	43.4	1.7	24.7	
Other	1,437	90.6	85.8	32.9	67.8	104.5	31.6	2.0	22.0	
<b>Number of establishments</b>										
One	1,067	81.6	86.1	21.0	48.8	93.0	22.2	1.7	20.8	
2 to 5	1,624	78.9	74.0	26.8	49.3	90.7	35.4	1.7	21.8	
6 to 10	2,475	82.2	61.7	23.9	48.5	88.7	56.0	1.9	22.6	
11 to 20	5,251	95.9	67.3	34.7	68.8	102.5	119.5	2.2	22.8	
More than 20	12,786	90.7	57.5	0.0	50.1	86.0	312.9	2.2	24.5	
Currently unoccupied	52	5.4		0.0	0.0	1.3	1.1	0.1	20.7	

**Table C4. Sum of major fuel consumption and expenditure gross energy intensities , 2012**

	Sum of major fuel consumption						Sum of major fuel expenditures		
				Distribution of building-level intensities (thousand Btu/square foot)					
	per building (million Btu)	per square foot (thousand Btu)	per worker (million Btu)	25th percentile	Median	75th percentile	per building (thousand dollars)	per square foot (dollars)	per million Btu (dollars)
<b>All buildings</b>	1,253	80.0	79.0	18.9	45.9	89.0	26.8	1.7	21.4
<b>Predominant exterior wall material</b>									
Brick, stone, or stucco	1,495	85.4	83.0	24.3	55.2	103.9	31.3	1.8	20.9
Concrete (block or poured)	1,533	83.0	85.2	23.6	50.8	101.4	33.7	1.8	22.0
Concrete panels	3,165	76.4	70.1	15.8	37.5	83.4	66.7	1.6	21.1
Siding or shingles	442	69.6	66.5	17.0	43.1	79.5	10.4	1.6	23.5
Metal panels	458	49.3	73.7	5.9	25.5	58.4	9.9	1.1	21.5
Window glass	9,982	127.0	64.2	55.6	147.9	668.0	213.2	2.7	21.4
Other	2,131	92.7	94.0	18.4	45.1	94.4	48.7	2.1	22.9
No one major type	2,101	76.1	Q	24.6	66.3	96.4	45.0	1.6	21.4
<b>Predominant roof material</b>									
Metal surfacing	517	54.3	72.0	8.8	31.4	67.6	11.6	1.2	22.4
Synthetic or rubber	2,681	94.6	88.6	29.8	64.4	118.4	54.9	1.9	20.5
Built-up	2,228	85.3	77.3	25.8	51.0	97.0	47.8	1.8	21.5
Slate or tile shingles	913	86.2	87.8	22.0	52.0	114.4	20.0	1.9	21.9
Wooden materials (including shingles)	591	81.2	92.6	16.6	54.0	126.1	12.0	1.7	20.4
Asphalt, fiberglass, or other shingles	745	73.2	67.8	22.3	46.9	89.3	16.4	1.6	22.1
Concrete	2,597	80.7	63.8	29.5	57.6	112.8	64.2	2.0	24.7
Other	2,447	85.6	102.3	20.8	46.6	90.5	53.1	1.9	21.7
No one major type	1,957	53.7	105.9	15.0	42.4	69.6	43.6	1.2	22.3
<b>Roof characteristics</b>									
<b>Roof tilt</b>									
Flat	2,283	90.2	78.3	25.8	57.4	115.7	48.3	1.9	21.1
Shallow pitch	743	66.9	81.7	14.5	38.4	80.2	16.4	1.5	22.1
Steeper pitch	615	65.4	77.5	19.6	43.6	77.0	13.2	1.4	21.5
Cool roof	2,482	93.6	84.9	25.5	57.5	114.9	52.2	2.0	21.0

**Table C4. Sum of major fuel consumption and expenditure gross energy intensities , 2012**

	Sum of major fuel consumption						Sum of major fuel expenditures		
				Distribution of building-level intensities (thousand Btu/square foot)					
	per building (million Btu)	per square foot (thousand Btu)	per worker (million Btu)	25th percentile	Median	75th percentile	per building (thousand dollars)	per square foot (dollars)	per million Btu (dollars)
<b>All buildings</b>	1,253	80.0	79.0	18.9	45.9	89.0	26.8	1.7	21.4
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>									
Any type of renovation	1,796	89.1	81.0	27.7	55.8	100.1	37.8	1.9	21.0
Addition or annex	2,908	99.2	103.6	30.7	57.3	99.7	55.9	1.9	19.2
Reduction in floorspace	3,165	128.7	87.8	18.3	69.1	143.4	66.0	2.7	20.9
Roof replacement	2,013	95.0	86.8	29.1	54.7	96.4	41.4	2.0	20.6
Exterior wall replacement	2,052	94.2	87.5	21.3	50.1	93.6	41.9	1.9	20.4
Interior wall reconfiguration	2,312	96.4	74.4	29.7	57.2	98.1	48.7	2.0	21.1
Window replacement	1,947	88.9	77.2	28.6	56.1	100.2	40.4	1.9	20.8
HVAC equipment upgrade	2,312	95.0	84.4	30.6	56.8	103.5	48.4	2.0	21.0
Lighting upgrade	2,484	95.7	86.3	32.1	58.9	112.3	50.9	2.0	20.5
Electrical upgrade	2,152	99.5	90.7	28.5	54.9	106.7	44.3	2.1	20.6
Plumbing system upgrade	2,169	101.0	86.9	30.6	57.3	111.3	44.3	2.1	20.4
Insulation upgrade	2,019	101.4	92.0	27.6	56.0	98.1	39.9	2.0	19.8
Fire, safety, or security upgrade	2,737	98.0	84.0	31.9	58.7	109.8	56.9	2.0	20.8
Structural upgrade	2,798	108.4	113.9	32.1	53.2	92.8	54.5	2.1	19.5
Other	1,771	81.7	68.5	35.1	62.4	137.6	43.5	2.0	24.6
No renovations	860	69.4	75.1	14.8	39.6	81.2	18.9	1.5	21.9
Buildings constructed 2008 or later	1,598	84.5	87.1	16.9	35.8	79.8	34.1	1.8	21.3
<b>Energy sources (more than one may apply)</b>									
Electricity	1,330	82.0	79.0	23.0	50.0	93.7	28.5	1.8	21.4
Natural gas	1,890	94.4	88.9	37.5	65.8	122.3	37.4	1.9	19.8
Fuel oil	4,780	110.5	87.1	35.6	69.2	124.3	101.5	2.3	21.2
District heat	16,919	135.5	98.2	74.0	113.2	162.8	362.8	2.9	21.4
District chilled water	12,331	144.4	115.9	48.2	70.9	138.8	235.8	2.8	19.1
Propane	1,143	75.7	98.8	11.6	28.3	62.6	25.8	1.7	22.6
Other	1,750	78.7	79.6	20.4	37.5	72.7	37.5	1.7	21.4
<b>Space-heating energy sources (more than one may apply)</b>									
Electricity	1,364	79.5	72.4	25.0	50.1	93.6	30.2	1.8	22.2
Natural gas	1,702	89.8	85.9	36.5	64.1	112.7	32.9	1.7	19.3
Fuel oil	1,333	82.7	86.5	30.6	54.6	97.9	31.4	2.0	23.5
District heat	16,859	135.7	98.5	74.0	113.2	162.8	361.4	2.9	21.4
Propane	443	49.3	60.3	8.8	19.4	39.6	10.5	1.2	23.8
Other	481	48.0	64.7	16.7	31.2	52.9	11.5	1.2	24.0

**Table C4. Sum of major fuel consumption and expenditure gross energy intensities , 2012**

	Sum of major fuel consumption						Sum of major fuel expenditures		
				Distribution of building-level intensities (thousand Btu/square foot)					
	per building (million Btu)	per square foot (thousand Btu)	per worker (million Btu)	25th percentile	Median	75th percentile	per building (thousand dollars)	per square foot (dollars)	per million Btu (dollars)
All buildings	1,253	80.0	79.0	18.9	45.9	89.0	26.8	1.7	21.4
<b>Primary space-heating energy source</b>									
Electricity	1,014	70.4	63.7	21.9	44.6	84.1	24.7	1.7	24.4
Natural gas	1,667	90.1	86.7	36.8	63.7	112.7	32.0	1.7	19.2
Fuel oil	912	73.7	93.6	33.6	60.2	116.0	24.5	2.0	26.8
District heat	16,834	137.0	98.7	74.0	113.6	163.2	361.4	2.9	21.5
Propane	241	32.3	42.8	8.1	15.8	33.0	6.4	0.9	26.4
Other	310	34.8	40.7	8.1	22.5	43.6	8.7	1.0	28.0
<b>Cooling energy sources (more than one may apply)</b>									
Electricity	1,433	83.1	76.8	28.2	55.3	100.8	30.9	1.8	21.6
Natural gas	8,190	133.2	93.0	51.3	66.3	72.2	136.7	2.2	16.7
District chilled water	12,331	144.4	115.9	48.2	70.9	138.8	235.8	2.8	19.1
<b>Water-heating energy sources (more than one may apply)</b>									
Electricity	1,167	72.5	66.3	24.1	47.9	87.5	27.2	1.7	23.4
Natural gas	2,292	101.9	96.1	43.3	72.9	147.3	44.1	2.0	19.2
Fuel oil	2,247	91.1	107.0	42.4	64.0	106.5	56.1	2.3	25.0
District heat	25,765	143.3	102.5	79.5	113.6	166.2	543.2	3.0	21.1
Propane	613	55.1	69.0	13.3	31.1	65.9	18.1	1.6	29.5
<b>Cooking energy sources (more than one may apply)</b>									
Electricity	2,485	99.8	91.9	31.4	64.8	148.7	51.8	2.1	20.8
Natural gas	4,074	121.7	116.6	58.3	121.6	277.0	78.4	2.3	19.2
Propane	1,159	83.4	84.7	19.4	48.1	105.9	31.3	2.3	27.0
<b>Energy end uses (more than one may apply)</b>									
Buildings with space heating	1,436	84.7	79.2	27.2	53.6	98.7	30.4	1.8	21.2
Buildings with cooling	1,518	85.4	79.0	28.3	55.5	101.0	32.5	1.8	21.4
Buildings with water heating	1,537	86.0	79.6	28.5	56.4	103.5	32.7	1.8	21.3
Buildings with cooking	2,567	105.8	99.0	35.8	75.4	173.7	52.5	2.2	20.5
Buildings with manufacturing	1,393	71.0	71.6	17.9	42.2	77.6	30.5	1.6	21.9
Buildings with electricity generation	6,833	109.3	90.6	45.0	74.2	136.6	141.1	2.3	20.7
<b>Percent of floorspace heated</b>									
Not heated	217	25.8	70.8	0.0	2.3	18.4	6.5	0.8	30.1
1 to 50	671	46.2	72.9	13.0	27.1	53.9	16.6	1.1	24.7
51 to 99	1,787	88.6	83.5	25.8	53.9	98.9	39.0	1.9	21.8
100	1,521	90.7	78.8	32.9	59.7	106.9	31.4	1.9	20.7

**Table C4. Sum of major fuel consumption and expenditure gross energy intensities , 2012**

	Sum of major fuel consumption						Sum of major fuel expenditures		
				Distribution of building-level intensities (thousand Btu/square foot)					
	per building (million Btu)	per square foot (thousand Btu)	per worker (million Btu)	25th percentile	Median	75th percentile	per building (thousand dollars)	per square foot (dollars)	per million Btu (dollars)
All buildings	1,253	80.0	79.0	18.9	45.9	89.0	26.8	1.7	21.4
<b>Percent of floorspace cooled</b>									
Not cooled	173	24.3	78.7	0.0	6.5	32.3	3.9	0.6	22.7
1 to 50	843	52.3	78.2	19.6	37.0	75.4	17.4	1.1	20.6
51 to 99	2,388	94.3	84.8	33.9	61.5	116.3	51.8	2.1	21.7
100	1,523	96.7	76.1	33.2	61.3	113.9	32.6	2.1	21.4
<b>Percent lit when open</b>									
Zero	62	13.5	74.2	1.9	8.2	12.5	1.9	0.4	31.1
1 to 50	585	50.9	95.7	16.8	35.5	67.6	12.6	1.1	21.6
51 to 99	1,830	87.6	83.8	30.9	56.8	102.0	38.3	1.8	20.9
100	1,460	90.8	72.3	28.4	57.7	113.9	31.9	2.0	21.8
Building never open/electricity not used	48	6.6	Q	0.0	0.0	2.5	1.0	0.1	20.1
<b>Percent lit during off hours</b>									
Zero	520	52.3	55.8	16.3	34.6	69.1	12.2	1.2	23.5
1 to 50	1,780	85.6	79.7	34.1	61.5	113.9	37.7	1.8	21.2
51 to 100	5,043	146.9	130.2	51.3	100.8	209.5	98.7	2.9	19.6
Building always open with no "off hours"	2,996	125.3	118.8	12.5	109.2	241.2	65.6	2.7	21.9
Electricity not used	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Heating equipment (more than one may apply)</b>									
Heat pumps	1,432	75.9	67.8	25.2	44.7	78.0	32.5	1.7	22.7
Furnaces	815	71.1	71.9	30.5	53.1	92.0	16.7	1.5	20.5
Individual space heaters	1,260	75.7	81.2	23.2	45.6	82.3	26.5	1.6	21.0
District heat	16,859	135.7	98.5	74.0	113.2	162.8	361.4	2.9	21.4
Boilers	4,157	100.8	89.9	44.4	66.8	122.0	79.8	1.9	19.2
Packaged heating units	1,457	83.0	79.9	29.3	57.4	107.1	31.0	1.8	21.3
Other	3,101	121.6	159.2	28.2	70.5	165.1	63.6	2.5	20.5
<b>Cooling equipment (more than one may apply)</b>									
Residential-type central air conditioners	702	73.6	71.9	27.1	52.6	93.7	15.0	1.6	21.3
Heat pumps	1,357	74.9	65.8	25.3	45.2	84.1	30.8	1.7	22.7
Individual air conditioners	1,429	81.6	82.1	23.7	48.2	88.8	30.4	1.7	21.3
District chilled water	12,331	144.4	115.9	48.2	70.9	138.8	235.8	2.8	19.1
Central chillers	11,374	108.7	84.4	55.6	80.6	134.8	233.7	2.2	20.6
Packaged air conditioning units	2,080	88.0	84.6	34.9	64.0	123.1	44.5	1.9	21.4
Swamp coolers	1,604	91.5	100.0	30.9	64.9	148.7	33.1	1.9	20.6
Other	Q	137.4	95.1	16.7	56.1	102.0	Q	3.1	22.4

**Table C4. Sum of major fuel consumption and expenditure gross energy intensities , 2012**

	Sum of major fuel consumption						Sum of major fuel expenditures		
	per building (million Btu)	per square foot (thousand Btu)	per worker (million Btu)	Distribution of building-level intensities (thousand Btu/square foot)			per building (thousand dollars)	per square foot (dollars)	per million Btu (dollars)
				25th per- centile	Median	75th per- centile			
All buildings	1,253	80.0	79.0	18.9	45.9	89.0	26.8	1.7	21.4
<b>Main equipment replaced since 1990 (more than one may apply)</b>									
Heating	1,155	78.5	75.5	28.5	55.9	99.9	24.3	1.7	21.1
Cooling	1,279	82.1	75.5	30.6	57.5	101.9	27.5	1.8	21.5
<b>Water-heating equipment</b>									
Centralized system	1,257	88.6	83.9	29.1	57.5	105.1	26.3	1.9	20.9
Distributed system	1,206	65.6	58.5	22.7	45.1	82.7	28.1	1.5	23.3
Combination of centralized and distributed system	4,563	93.4	83.3	37.8	66.3	123.1	96.5	2.0	21.1
<b>Lighting equipment types (more than one may apply)</b>									
Incandescent	1,939	92.2	85.1	28.3	57.5	104.0	39.9	1.9	20.6
Standard fluorescent	1,444	83.8	78.4	26.2	53.1	99.6	30.8	1.8	21.3
Compact fluorescent	2,213	94.7	85.0	31.2	59.7	113.6	46.3	2.0	20.9
High-intensity discharge (HID)	4,163	93.5	91.8	31.8	61.2	109.8	86.4	1.9	20.7
Halogen	2,978	96.0	88.4	33.7	61.5	110.2	62.2	2.0	20.9
LED	4,993	107.1	91.2	41.7	71.4	143.7	104.7	2.2	21.0
Other	5,924	131.1	105.4	86.3	162.4	165.5	130.5	2.9	22.0
<b>Refrigeration equipment (more than one may apply)</b>									
Any refrigeration	1,624	87.9	82.0	28.6	56.7	105.5	34.4	1.9	21.2
Walk-in units	4,345	124.3	113.2	73.1	161.2	310.2	87.9	2.5	20.2
Cases or cabinets	3,622	115.5	105.2	56.6	112.3	244.7	75.2	2.4	20.8
Large cold storage areas	6,779	127.0	143.5	74.3	150.8	246.2	137.4	2.6	20.3
Commercial ice makers	4,411	114.0	102.2	57.1	112.7	246.2	89.7	2.3	20.3
Residential-type or compact units	1,530	83.1	76.6	27.2	51.4	88.7	32.3	1.8	21.1
Vending machines	4,354	95.1	84.1	39.7	67.9	117.8	90.7	2.0	20.8
No refrigeration	313	36.6	53.2	1.2	18.2	51.3	7.6	0.9	24.4
<b>Office equipment (more than one may apply)</b>									
Desktop computers	1,656	85.5	78.1	29.1	56.2	101.1	35.4	1.8	21.4
With flat screen monitors	1,696	85.7	77.8	29.7	56.4	101.6	36.2	1.8	21.4
With multiple monitors	3,230	95.1	67.8	34.5	59.0	105.5	68.6	2.0	21.2
Laptop computers	2,002	86.1	74.5	30.0	54.8	94.8	42.5	1.8	21.2
Dedicated servers	2,737	89.6	75.4	34.5	60.4	104.3	58.6	1.9	21.4
Laser printers	2,050	88.4	75.6	32.4	57.9	101.6	43.6	1.9	21.3
Inkjet printers	1,327	80.1	76.9	27.4	53.6	96.4	28.9	1.7	21.8
FAX machines	1,792	85.6	77.3	29.8	57.0	100.3	38.4	1.8	21.4
Photocopiers	2,362	86.2	74.6	31.5	54.8	88.6	50.4	1.8	21.3

**Table C4. Sum of major fuel consumption and expenditure gross energy intensities , 2012**

	Sum of major fuel consumption						Sum of major fuel expenditures		
	per building (million Btu)	per square foot (thousand Btu)	per worker (million Btu)	Distribution of building-level intensities (thousand Btu/square foot)			per building (thousand dollars)	per square foot (dollars)	per million Btu (dollars)
				25th per- centile	Median	75th per- centile			
<b>All buildings</b>	1,253	80.0	79.0	18.9	45.9	89.0	26.8	1.7	21.4
<b>Number of desktop computers</b>									
None	238	37.6	98.0	1.2	16.6	53.1	5.3	0.8	22.3
1 to 4	581	75.6	104.8	25.0	52.0	111.3	12.4	1.6	21.4
5 to 9	899	78.3	76.9	29.7	53.7	93.2	19.1	1.7	21.2
10 to 19	1,402	72.0	78.1	34.9	58.5	84.1	32.2	1.7	22.9
20 to 49	3,159	85.6	87.7	38.8	63.9	111.6	67.0	1.8	21.2
50 to 99	4,504	77.9	69.5	39.7	64.8	94.6	97.6	1.7	21.7
100 to 249	10,432	98.8	76.8	49.4	70.9	106.6	214.5	2.0	20.6
250 or more	28,387	109.9	62.5	51.3	74.0	120.2	600.9	2.3	21.2
<b>Number of laptop computers</b>									
None	530	63.4	100.9	8.6	34.0	84.0	11.7	1.4	22.1
1 to 4	780	71.7	85.4	27.0	51.3	91.5	16.7	1.5	21.5
5 to 9	1,994	83.6	78.7	35.5	56.1	86.6	42.6	1.8	21.4
10 to 19	3,965	86.1	77.5	40.6	63.2	107.2	85.3	1.9	21.5
20 to 49	6,318	94.1	77.8	42.0	65.1	105.4	129.8	1.9	20.6
50 to 99	8,795	96.7	61.4	50.3	70.4	102.0	185.8	2.0	21.1
100 to 249	15,188	100.6	79.4	46.5	61.3	90.1	307.6	2.0	20.3
250 or more	30,170	107.4	54.4	55.8	77.7	126.1	667.0	2.4	22.1
<b>Number of dedicated servers</b>									
None	572	64.6	88.0	13.3	36.9	81.1	12.3	1.4	21.4
1 to 4	1,740	79.7	79.2	33.9	59.6	100.3	37.5	1.7	21.5
5 to 9	5,820	90.5	72.0	40.1	62.4	110.2	120.5	1.9	20.7
10 to 19	11,797	103.8	78.5	46.8	75.9	119.5	260.3	2.3	22.1
20 to 49	15,550	105.5	59.3	50.7	89.0	171.7	316.7	2.2	20.4
50 or more	38,977	143.6	73.0	64.7	102.2	208.9	836.2	3.1	21.5
<b>Number of photocopiers</b>									
None	546	66.6	94.2	11.7	37.1	89.5	11.8	1.4	21.6
One	907	70.4	90.0	27.6	49.7	81.1	19.3	1.5	21.3
2 to 4	2,465	78.6	74.1	36.4	59.7	96.0	52.8	1.7	21.4
5 to 9	6,782	88.5	74.7	44.3	62.7	96.5	143.3	1.9	21.1
10 or more	20,490	117.3	66.1	61.3	80.3	113.9	437.3	2.5	21.3
<b>Number of TVs or video displays</b>									
None	447	49.9	68.2	8.0	29.6	67.0	10.2	1.1	22.8
One	609	69.8	69.6	27.3	54.2	99.6	12.8	1.5	21.1
2 to 4	1,266	79.6	74.1	32.9	57.6	107.0	27.6	1.7	21.8
5 to 9	2,471	95.3	76.9	43.4	74.5	170.2	54.1	2.1	21.9
10 to 19	5,264	99.1	78.3	48.4	80.0	138.5	110.4	2.1	21.0
20 to 49	6,774	89.0	80.3	52.9	73.4	128.0	151.4	2.0	22.4
50 to 99	8,961	98.6	98.4	56.7	86.8	144.1	186.2	2.1	20.8
100 or more	26,874	133.4	113.0	62.6	93.4	143.0	508.6	2.5	18.9

**Table C4. Sum of major fuel consumption and expenditure gross energy intensities , 2012**

	Sum of major fuel consumption						Sum of major fuel expenditures		
				Distribution of building-level intensities (thousand Btu/square foot)					
	per building (million Btu)	per square foot (thousand Btu)	per worker (million Btu)	25th percentile	Median	75th percentile	per building (thousand dollars)	per square foot (dollars)	per million Btu (dollars)
<b>All buildings</b>	1,253	80.0	79.0	18.9	45.9	89.0	26.8	1.7	21.4
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>									
Snack bar or concession stand	7,264	112.5	108.4	50.3	88.6	218.0	148.1	2.3	20.4
Fast food or small restaurant	6,957	123.2	110.0	86.1	136.6	220.7	146.5	2.6	21.1
Cafeteria or large restaurant	12,491	106.7	92.2	47.1	71.9	110.2	246.9	2.1	19.8
Commercial kitchen/ food preparation area	6,372	111.4	117.2	36.6	68.8	132.5	124.4	2.2	19.5
Small kitchen area	1,614	84.5	87.2	22.2	46.0	86.5	33.5	1.8	20.8
<b>Separate computer areas (more than one may apply)</b>									
Data center or server farm	14,047	122.1	75.2	50.9	85.7	129.4	294.5	2.6	21.0
Computer-based training room	6,956	95.7	76.3	42.0	67.8	111.5	143.8	2.0	20.7
Student or public computer center	5,346	88.9	101.9	39.7	59.7	86.6	103.4	1.7	19.3
<b>HVAC conservation features (more than one may apply)</b>									
Economizer cycle	5,228	102.2	88.8	38.6	66.8	123.8	108.0	2.1	20.7
Regular HVAC maintenance	1,952	89.6	79.7	32.8	60.3	110.2	41.5	1.9	21.2
Building automation system (BAS) <sup>2</sup>	4,752	100.1	87.6	37.1	65.8	111.6	100.3	2.1	21.1
<b>Window and interior lighting features (more than one may apply)</b>									
Multipaned windows	1,743	87.0	84.3	27.5	54.4	99.6	36.2	1.8	20.8
Tinted window glass	2,118	88.2	78.2	27.1	55.9	106.1	44.5	1.9	21.0
Reflective window glass	3,013	103.9	87.0	30.6	58.6	116.1	62.6	2.2	20.8
External overhangs or awnings	1,654	96.0	91.5	30.3	60.3	120.3	34.5	2.0	20.9
Skylights or atriums	3,400	90.3	91.7	24.6	49.7	84.1	69.4	1.8	20.4
Light scheduling	3,193	96.8	83.8	35.6	64.1	122.8	69.1	2.1	21.6
Occupancy sensors	4,225	95.7	83.8	37.7	68.1	117.1	89.4	2.0	21.2
Multi-level lighting or dimming	4,637	111.3	100.3	43.7	80.1	162.4	94.3	2.3	20.3
Daylight harvesting	4,942	101.3	80.5	24.4	62.4	122.8	104.0	2.1	21.1
Demand responsive lighting	2,326	86.5	83.6	30.9	55.9	110.2	54.7	2.0	23.5
Building automation system (BAS) for lighting <sup>2</sup>	5,762	99.5	90.8	47.5	78.2	126.5	127.5	2.2	22.1

**Table C4. Sum of major fuel consumption and expenditure gross energy intensities , 2012**

	Sum of major fuel consumption						Sum of major fuel expenditures		
				Distribution of building-level intensities (thousand Btu/square foot)					
	per building (million Btu)	per square foot (thousand Btu)	per worker (million Btu)	25th per- centile	Median	75th per- centile	per building (thousand dollars)	per square foot (dollars)	per million Btu (dollars)
All buildings	1,253	80.0	79.0	18.9	45.9	89.0	26.8	1.7	21.4
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>									
Heating	1,358	79.5	73.4	26.8	52.0	92.2	29.3	1.7	21.6
Cooling	1,424	80.1	73.3	27.4	53.0	94.1	31.0	1.7	21.7
Lighting	1,351	81.8	76.7	25.6	51.4	95.1	28.9	1.8	21.4

<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.

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/> • 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, Form EIA-871A, C, D, E, and F of the 2012 Commercial Buildings Energy Consumption Survey.

**Table C5. Consumption and gross energy intensity by Census 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)			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
<b>All buildings</b>	1,459	1,566	2,566	1,372	15,534	18,919	34,279	18,360	93.9	82.8	74.9	74.7
<b>Building floorspace (square feet)</b>												
1,001 to 5,000	106	155	320	141	1,057	1,858	3,383	1,744	100.4	83.4	94.6	81.1
5,001 to 10,000	89	146	250	161	1,248	1,872	3,535	2,245	71.3	78.1	70.8	71.5
10,001 to 25,000	160	194	320	203	2,408	2,889	5,209	3,599	66.4	67.1	61.4	56.4
25,001 to 50,000	123	220	317	162	1,644	3,029	4,528	2,716	75.0	72.8	70.1	59.5
50,001 to 100,000	251	254	412	151	2,676	2,729	6,139	2,374	93.8	93.0	67.0	63.7
100,001 to 200,000	302	193	343	197	2,542	2,400	5,152	2,321	118.7	80.2	66.7	84.9
200,001 to 500,000	245	248	331	203	2,232	2,726	3,681	2,084	109.7	90.8	89.9	97.4
Over 500,000	183	157	273	154	1,727	1,418	2,652	1,277	106.2	110.5	103.0	120.4
<b>Principal building activity</b>												
Education	169	235	322	116	2,056	3,173	5,162	1,848	82.1	74.2	62.3	62.8
Food sales	72	37	87	66	316	174	399	363	227.8	213.8	217.5	182.5
Food service	73	104	236	101	292	369	771	387	249.0	282.6	306.5	260.9
Health care	176	154	252	135	1,067	862	1,441	786	165.0	178.6	175.1	172.1
Inpatient	124	114	206	105	538	496	894	447	230.4	229.1	230.2	236.0
Outpatient	52	40	47	30	529	366	548	339	98.5	110.1	85.3	87.8
Lodging	99	107	203	156	1,007	1,058	2,302	1,459	97.8	101.5	88.1	106.8
Mercantile	153	210	398	247	1,653	2,132	4,729	2,815	92.8	98.5	84.1	87.6
Retail (other than mall)	56	86	133	89	835	1,142	2,126	1,336	66.9	74.9	62.6	66.7
Enclosed and strip malls	98	124	264	157	818	990	2,603	1,478	119.2	125.7	101.6	106.4
Office	370	267	368	236	3,703	3,334	5,501	3,414	99.8	80.0	66.9	69.2
Public assembly	93	138	176	73	953	1,585	2,003	1,018	97.1	87.2	88.0	71.7
Public order and safety	37	29	50	Q	345	334	576	Q	108.4	88.1	86.4	Q
Religious worship	37	42	67	27	897	925	2,011	725	41.5	45.7	33.4	36.7
Service	49	88	102	34	823	1,472	1,642	694	59.3	59.6	62.0	48.3
Warehouse and storage	63	93	176	97	1,761	2,530	5,257	3,529	35.8	36.8	33.5	27.4
Other	64	49	116	56	273	435	827	467	236.4	112.9	140.8	120.0
Vacant	Q	11	13	13	389	536	1,659	672	Q	Q	Q	19.0
<b>Year constructed</b>												
Before 1920	97	54	73	15	1,632	1,040	982	329	59.2	51.5	73.9	47.0
1920 to 1945	166	111	88	54	1,959	1,769	1,503	795	84.7	62.6	58.4	67.6
1946 to 1959	140	145	156	96	1,581	1,662	2,634	1,504	88.4	87.3	59.3	63.8
1960 to 1969	201	216	304	182	2,240	2,687	3,499	1,937	89.7	80.3	86.8	93.7
1970 to 1979	263	260	320	169	1,952	2,619	3,693	2,582	134.9	99.2	86.7	65.3
1980 to 1989	146	233	546	238	1,743	2,617	6,942	3,929	84.1	89.0	78.7	60.7
1990 to 1999	224	211	434	234	2,044	2,798	6,172	2,788	109.3	75.4	70.3	83.8
2000 to 2003	99	134	246	99	980	1,495	3,314	1,426	101.0	89.7	74.3	69.8
2004 to 2007	53	101	199	175	501	1,236	2,839	1,948	106.2	81.8	70.1	89.7
2008 to 2012	71	102	201	110	903	997	2,701	1,122	78.5	102.1	74.4	98.2
<b>Climate region<sup>1</sup></b>												
Very cold/Cold	933	1,360	N	453	10,510	16,172	N	5,217	88.8	84.1	N	86.9
Mixed-humid	526	206	1,537	N	5,024	2,748	20,101	N	104.7	74.9	76.5	N
Mixed-dry/Hot-dry	N	N	Q	716	N	N	Q	10,490	N	N	56.7	68.3
Hot-humid	N	N	941	Q	N	N	12,632	Q	N	N	74.5	Q
Marine	N	N	N	197	N	N	N	2,454	N	N	N	80.2

**Table C5. Consumption and gross energy intensity by Census 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)			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
All buildings	1,459	1,566	2,566	1,372	15,534	18,919	34,279	18,360	93.9	82.8	74.9	74.7
<b>Number of floors</b>												
One	341	616	1,241	633	3,865	7,652	18,532	9,760	88.3	80.5	67.0	64.8
Two	369	343	464	284	4,098	4,867	6,972	4,269	90.1	70.4	66.6	66.6
Three	199	215	175	79	2,421	2,607	2,028	1,083	82.3	82.5	86.0	73.2
Four to nine	356	295	531	250	3,409	2,915	5,013	2,198	104.4	101.2	105.9	113.9
Ten or more	194	97	155	Q	1,742	879	1,734	1,049	111.4	110.6	89.4	119.6
<b>Elevators and escalators (more than one may apply)</b>												
Any elevators	871	718	1,020	574	7,911	7,555	11,022	5,633	110.1	95.1	92.5	102.0
Number of elevators												
One	258	261	252	113	2,580	3,220	3,665	1,693	99.9	81.0	68.8	66.6
Two to five	331	254	431	226	3,146	2,781	4,610	2,281	105.1	91.3	93.5	99.2
Six or more	282	204	336	235	2,186	1,554	2,746	1,658	129.2	131.1	122.5	141.8
Any escalators	86	74	113	Q	798	880	1,071	905	107.4	84.1	105.4	115.2
<b>Number of workers (main shift)</b>												
Fewer than 5	126	204	288	137	2,692	4,286	7,336	3,438	46.9	47.6	39.3	39.9
5 to 9	90	134	244	131	1,282	1,910	3,553	2,227	69.8	70.1	68.6	58.6
10 to 19	95	187	322	169	1,390	1,880	3,814	2,538	68.3	99.3	84.4	66.6
20 to 49	188	281	445	273	1,903	3,372	5,611	3,628	99.0	83.3	79.3	75.4
50 to 99	246	260	480	163	2,385	2,761	6,076	2,254	103.2	94.3	79.1	72.2
100 to 249	267	221	366	205	2,530	2,314	4,163	1,934	105.5	95.3	88.0	105.8
250 or more	447	279	420	294	3,352	2,397	3,726	2,341	133.5	116.5	112.8	125.7
<b>Weekly operating hours</b>												
Fewer than 40	37	78	71	43	1,173	2,026	3,508	1,514	31.6	38.3	20.3	28.4
40 to 48	138	175	327	192	2,361	3,048	6,789	3,631	58.6	57.4	48.1	52.9
49 to 60	245	302	478	233	3,345	4,372	8,494	4,318	73.3	69.0	56.2	54.0
61 to 84	296	335	462	276	3,313	3,628	5,275	3,651	89.4	92.4	87.6	75.7
85 to 167	256	269	389	184	1,881	2,428	3,138	1,948	136.0	110.7	124.1	94.6
Open continuously	487	407	840	443	3,461	3,418	7,076	3,298	140.6	119.1	118.7	134.4
<b>Ownership and occupancy</b>												
Nongovernment owned	1,080	1,175	2,004	1,117	11,913	14,177	26,441	15,019	90.6	82.9	75.8	74.4
Owner occupied	499	615	989	512	5,454	7,338	12,119	5,726	91.4	83.8	81.6	89.5
Leased to tenant(s)	417	385	776	463	4,430	4,720	10,105	6,860	94.2	81.5	76.8	67.5
Owner occupied and leased	163	171	237	138	1,786	1,767	3,242	2,078	91.1	96.9	73.0	66.6
Unoccupied	Q	Q	2	Q	Q	352	975	355	Q	Q	Q	Q
Government owned	380	391	562	254	3,621	4,742	7,839	3,341	104.9	82.5	71.8	76.2
Federal	Q	26	75	22	Q	275	835	204	Q	94.2	89.4	105.9
State	Q	119	164	95	1,149	1,158	2,111	1,122	153.4	102.4	77.9	85.1
Local	188	247	323	137	2,213	3,310	4,893	2,015	85.1	74.5	66.1	68.2
<b>Party responsible for operation and maintenance of energy systems</b>												
Building owner	1,215	1,379	2,102	1,112	13,304	16,815	28,772	14,811	91.3	82.0	73.1	75.1
Business owner or tenant	205	158	385	235	1,819	1,724	4,541	3,225	112.8	91.8	84.8	72.8
Property management	Q	Q	52	Q	Q	Q	652	233	Q	Q	80.3	Q
Other	Q	Q	27	Q	Q	Q	315	Q	Q	Q	84.9	Q

**Table C5. Consumption and gross energy intensity by Census 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)			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
All buildings	1,459	1,566	2,566	1,372	15,534	18,919	34,279	18,360	93.9	82.8	74.9	74.7
<b>Provider of direct input on energy-related equipment purchases</b>												
Building owner	1,235	1,404	2,166	1,179	13,567	17,159	29,802	15,742	91.0	81.8	72.7	74.9
Business owner or tenant	167	122	305	172	1,393	1,274	3,326	2,263	120.1	95.6	91.6	76.2
Property management	Q	Q	18	Q	Q	Q	345	Q	Q	Q	51.4	Q
Other	38	Q	78	11	314	345	806	221	120.9	73.7	97.0	50.4
<b>Number of establishments</b>												
One	913	1,000	1,684	889	9,527	12,503	21,742	11,222	95.8	80.0	77.4	79.2
2 to 5	311	384	463	243	3,305	4,207	6,503	3,742	94.0	91.2	71.2	65.0
6 to 10	68	72	138	85	775	798	1,750	1,103	88.1	90.5	78.7	77.4
11 to 20	80	56	150	70	833	493	1,560	818	95.9	113.1	96.0	85.3
More than 20	87	51	130	79	832	532	1,419	1,037	104.5	95.4	91.3	76.5
Currently unoccupied	Q	Q	3	6	262	386	1,306	439	Q	Q	Q	Q
<b>Predominant exterior wall material</b>												
Brick, stone, or stucco	721	814	1,374	549	7,649	9,051	16,679	7,084	94.3	89.9	82.4	77.5
Concrete (block or poured)	367	329	652	372	3,608	4,010	8,153	4,955	101.6	82.0	80.0	75.1
Concrete panels	101	170	191	202	804	1,694	3,158	3,037	125.6	100.5	60.5	66.6
Siding or shingles	100	103	91	106	1,589	1,395	1,389	1,377	62.8	73.9	65.3	77.3
Metal panels	70	99	194	64	1,020	2,150	4,246	1,257	68.9	46.3	45.8	50.7
Window glass	73	Q	34	42	432	Q	360	323	169.0	Q	95.7	129.8
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>Predominant roof material</b>												
Metal surfacing	93	167	453	152	1,626	3,264	8,295	2,733	57.2	51.3	54.6	55.5
Synthetic or rubber	581	672	719	469	5,880	7,502	7,742	4,692	98.8	89.6	92.9	100.0
Built-up	429	365	703	366	3,782	3,999	8,890	5,164	113.4	91.2	79.1	70.9
Slate or tile shingles	70	29	167	105	842	390	1,865	1,209	83.6	73.9	89.4	86.8
Wooden materials (including shingles)	17	Q	36	28	161	Q	383	469	104.3	Q	93.3	60.4
Asphalt, fiberglass, or other shingles	222	291	390	202	2,668	3,268	5,843	3,324	83.2	89.0	66.8	60.8
Concrete	30	Q	65	28	298	Q	860	403	100.9	Q	76.0	68.2
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	1,061	990	1,547	877	10,061	10,574	18,121	10,866	105.4	93.6	85.4	80.8
Shallow pitch	194	345	701	356	2,542	5,009	11,004	5,297	76.5	68.9	63.7	67.2
Steeper pitch	204	230	318	138	2,930	3,336	5,154	2,197	69.6	69.0	61.7	62.9
Cool roof	381	371	632	454	3,382	3,666	7,530	5,053	112.6	101.1	83.9	89.8

**Table C5. Consumption and gross energy intensity by Census region for sum of major fuels, 2012**

**Table C5. Consumption and gross energy intensity by Census 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)			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
All buildings	1,459	1,566	2,566	1,372	15,534	18,919	34,279	18,360	93.9	82.8	74.9	74.7
<b>Cooling energy sources (more than one may apply)</b>												
Electricity	1,254	1,487	2,360	1,220	13,303	16,826	29,950	15,955	94.3	88.4	78.8	76.5
Natural gas	43	Q	Q	Q	305	Q	Q	Q	140.9	Q	Q	Q
District chilled water	188	73	266	137	794	585	2,479	749	237.0	125.6	107.5	183.0
<b>Water-heating energy sources (more than one may apply)</b>												
Electricity	546	609	1,358	589	6,561	7,934	19,449	8,811	83.2	76.7	69.8	66.8
Natural gas	888	1,047	1,245	849	7,533	10,615	12,258	9,116	117.8	98.6	101.6	93.1
Fuel oil	123	Q	Q	Q	1,401	Q	Q	Q	87.7	Q	Q	Q
District heat	240	104	190	Q	1,641	767	1,568	575	146.6	135.3	121.0	205.6
Propane	19	18	40	10	389	392	534	260	49.6	45.1	74.5	38.9
<b>Cooking energy sources (more than one may apply)</b>												
Electricity	477	617	936	481	4,677	6,159	9,812	4,503	102.0	100.3	95.4	106.8
Natural gas	683	642	1,018	671	5,357	5,642	8,572	5,200	127.5	113.8	118.8	129.1
Propane	74	24	47	22	779	328	663	230	95.6	71.6	70.7	95.4
<b>Energy end uses (more than one may apply)</b>												
Buildings with space heating	1,447	1,560	2,449	1,326	15,053	18,055	30,499	16,471	96.1	86.4	80.3	80.5
Buildings with cooling	1,402	1,522	2,539	1,310	13,949	17,144	31,734	16,467	100.5	88.8	80.0	79.6
Buildings with water heating	1,440	1,541	2,487	1,329	14,633	17,592	30,261	16,529	98.4	87.6	82.2	80.4
Buildings with cooking	917	887	1,455	821	8,177	8,726	14,381	7,262	112.1	101.7	101.1	113.1
Buildings with manufacturing	99	69	135	58	1,059	1,172	1,708	1,139	93.1	58.5	79.1	51.0
Buildings with electricity generation	721	551	1,003	529	6,223	5,358	9,377	4,683	115.9	102.8	106.9	112.9
<b>Percent of floorspace heated</b>												
Not heated	12	6	117	46	481	864	3,781	1,890	Q	Q	30.9	24.4
1 to 50	53	55	184	175	1,132	1,310	3,979	3,709	47.1	41.6	46.3	47.3
51 to 99	278	195	546	279	2,873	2,239	6,218	3,320	96.7	87.3	87.8	84.1
100	1,116	1,310	1,719	871	11,049	14,506	20,302	9,441	101.0	90.3	84.7	92.2
<b>Percent of floorspace cooled</b>												
Not cooled	57	43	27	62	1,585	1,776	2,545	1,894	36.3	24.4	10.5	32.6
1 to 50	227	321	239	202	3,558	4,741	6,189	4,403	63.7	67.7	38.7	45.9
51 to 99	571	457	738	377	5,081	4,697	8,462	4,487	112.4	97.2	87.2	84.1
100	604	745	1,562	731	5,311	7,706	17,083	7,576	113.8	96.7	91.4	96.4
<b>Percent lit when open</b>												
Zero	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
1 to 50	109	186	235	113	2,097	2,870	4,755	2,907	51.8	64.7	49.4	39.0
51 to 99	605	747	1,106	591	6,288	7,932	13,288	7,307	96.2	94.2	83.2	80.9
100	741	625	1,220	658	6,670	7,266	14,405	7,385	111.1	86.0	84.7	89.0
Building never open/electricity not used	Q	8	3	9	437	773	1,710	683	Q	Q	Q	13.8

**Table C5. Consumption and gross energy intensity by Census region for sum of major fuels, 2012**

**Table C5. Consumption and gross energy intensity by Census 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)			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
All buildings	1,459	1,566	2,566	1,372	15,534	18,919	34,279	18,360	93.9	82.8	74.9	74.7
<b>Refrigeration equipment (more than one may apply)</b>												
Any refrigeration	1,368	1,465	2,397	1,241	13,612	16,570	28,755	14,709	100.5	88.4	83.4	84.4
Walk-in units	813	740	1,279	695	5,870	6,331	10,777	5,384	138.4	116.8	118.6	129.0
Cases or cabinets	783	743	1,106	683	6,066	6,803	10,386	5,464	129.0	109.3	106.5	125.1
Large cold storage areas	93	103	207	127	569	972	1,700	930	163.0	105.8	121.6	137.1
Commercial ice makers	753	802	1,447	729	5,573	6,598	14,516	6,048	135.1	121.6	99.7	120.6
Residential-type or compact units	1,133	1,236	1,844	970	11,436	14,257	24,189	12,499	99.1	86.7	76.2	77.6
Vending machines	928	934	1,539	777	8,448	9,673	17,627	8,188	109.9	96.6	87.3	94.9
No refrigeration	91	101	169	131	1,922	2,350	5,525	3,651	47.6	42.8	30.7	35.7
<b>Office equipment (more than one may apply)</b>												
Desktop computers	1,393	1,492	2,412	1,289	14,116	16,861	29,686	16,400	98.7	88.5	81.3	78.6
With flat screen monitors	1,381	1,479	2,382	1,281	13,956	16,628	29,347	16,229	98.9	89.0	81.2	79.0
With multiple monitors	606	637	1,059	640	5,289	6,407	12,095	7,155	114.6	99.3	87.6	89.4
Laptop computers	1,194	1,240	1,990	1,043	11,774	13,895	24,921	12,896	101.4	89.2	79.8	80.8
Dedicated servers	1,039	1,045	1,723	977	10,087	11,271	20,565	11,447	103.0	92.7	83.8	85.4
Laser printers	1,061	1,100	1,734	899	10,317	12,158	20,460	11,320	102.8	90.5	84.8	79.4
Inkjet printers	579	646	1,082	597	6,559	7,682	14,297	7,697	88.2	84.1	75.6	77.5
FAX machines	1,247	1,282	2,113	1,065	12,733	14,439	25,795	13,715	97.9	88.8	81.9	77.6
Photocopiers	1,179	1,152	1,782	997	11,654	13,053	22,099	12,471	101.2	88.3	80.6	79.9
<b>Number of desktop computers</b>												
None	67	74	154	83	1,418	2,058	4,594	1,960	47.1	35.8	33.5	42.1
1 to 4	181	265	505	233	2,457	3,582	6,273	3,356	73.5	74.1	80.4	69.6
5 to 9	115	196	287	140	1,392	2,120	3,528	2,381	82.4	92.5	81.3	58.8
10 to 19	151	147	225	153	1,644	1,826	3,531	2,388	91.9	80.2	63.8	64.1
20 to 49	228	247	433	212	2,327	2,591	5,347	2,830	98.0	95.5	80.9	75.1
50 to 99	127	166	217	134	1,365	1,984	3,243	1,692	93.3	83.9	67.0	79.4
100 to 249	271	197	289	203	2,303	2,202	3,391	1,832	117.9	89.6	85.2	110.9
250 or more	319	273	456	213	2,628	2,556	4,373	1,921	121.6	106.7	104.4	110.7
<b>Number of laptop computers</b>												
None	266	326	577	329	3,760	5,024	9,358	5,464	70.6	64.8	61.6	60.3
1 to 4	273	385	571	288	3,350	5,045	8,080	4,687	81.4	76.4	70.6	61.4
5 to 9	178	146	254	119	1,406	1,478	3,568	1,894	126.7	99.0	71.3	62.7
10 to 19	144	124	262	188	1,500	1,473	3,386	1,984	95.9	84.5	77.4	94.9
20 to 49	156	208	303	239	1,471	2,195	3,794	2,183	106.4	95.0	79.8	109.6
50 to 99	117	132	176	82	1,218	1,312	1,827	877	95.8	100.3	96.4	93.1
100 to 249	151	99	210	65	1,414	1,022	2,108	673	106.9	96.6	99.8	96.3
250 or more	175	145	213	62	1,415	1,370	2,159	598	123.6	106.0	98.8	104.0
<b>Number of dedicated servers</b>												
None	421	521	844	395	5,448	7,648	13,715	6,913	77.2	68.1	61.5	57.1
1 to 4	556	615	1,022	525	6,193	7,200	13,500	7,203	89.8	85.4	75.7	72.9
5 to 9	118	143	178	127	1,092	1,435	2,226	1,487	107.7	99.3	79.7	85.4
10 to 19	153	95	194	151	1,117	1,006	2,325	1,263	137.0	94.3	83.6	119.4
20 to 49	62	107	159	68	688	982	1,309	779	90.0	109.0	121.5	87.9
50 or more	150	86	170	106	996	649	1,204	714	151.0	132.6	140.8	148.2

**Table C5. Consumption and gross energy intensity by Census 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)			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
All buildings	1,459	1,566	2,566	1,372	15,534	18,919	34,279	18,360	93.9	82.8	74.9	74.7
<b>Number of photocopiers</b>												
None	281	413	785	375	3,880	5,866	12,181	5,889	72.3	70.5	64.4	63.7
One	208	316	421	258	2,604	3,942	6,129	4,405	79.9	80.1	68.6	58.5
2 to 4	320	377	595	304	3,581	4,583	8,063	4,085	89.4	82.3	73.8	74.4
5 to 9	228	189	241	126	1,946	2,167	3,203	1,547	117.3	87.3	75.1	81.6
10 or more	423	271	525	309	3,523	2,361	4,704	2,434	119.9	114.6	111.7	126.8
<b>Number of TVs or video displays</b>												
None	259	288	402	266	4,054	5,090	9,483	5,711	63.9	56.5	42.4	46.5
One	122	164	284	128	1,416	2,292	4,276	2,006	86.1	71.4	66.4	63.7
2 to 4	251	340	505	215	2,930	4,056	6,314	3,165	85.6	83.9	79.9	68.0
5 to 9	196	131	288	161	1,824	1,450	3,162	1,711	107.5	90.3	91.2	94.3
10 to 19	221	200	256	133	1,799	1,893	3,051	1,424	122.7	105.4	83.9	93.7
20 to 49	144	138	275	160	1,443	1,668	3,188	1,759	99.7	82.5	86.3	91.1
50 to 99	48	94	201	89	382	929	2,036	1,031	126.2	101.2	98.5	86.1
100 or more	219	212	356	220	1,685	1,541	2,769	1,552	129.8	137.7	128.5	141.5
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>												
Snack bar or concession stand	227	240	395	251	1,924	2,262	3,763	1,934	117.8	105.9	104.9	129.7
Fast food or small restaurant	220	227	466	294	1,751	1,774	3,797	2,464	125.4	127.9	122.6	119.2
Cafeteria or large restaurant	435	345	553	292	3,585	3,455	5,947	2,236	121.3	99.9	92.9	130.5
Commercial kitchen/ food preparation area	424	410	605	359	3,254	3,952	6,092	2,852	130.4	103.8	99.3	125.8
Small kitchen area	274	286	399	228	3,105	3,413	5,121	2,414	88.4	83.8	77.9	94.4
<b>Separate computer areas (more than one may apply)</b>												
Data center or server farm	317	286	424	329	2,377	2,488	3,873	2,366	133.1	114.9	109.4	139.2
Computer-based training room	330	399	637	330	3,341	3,950	7,121	3,311	98.7	101.0	89.5	99.8
Student or public computer center	249	288	493	244	2,710	3,338	5,999	2,293	91.9	86.4	82.3	106.4
<b>HVAC conservation features (more than one may apply)</b>												
Economizer cycle	810	780	881	671	6,911	7,916	9,051	6,870	117.2	98.6	97.3	97.7
Regular HVAC maintenance	1,327	1,401	2,263	1,212	12,982	15,173	26,573	14,517	102.2	92.4	85.2	83.5
Building automation system (BAS) <sup>2</sup>	782	806	1,351	770	6,934	7,996	14,578	7,542	112.8	100.8	92.7	102.1

**Table C5. Consumption and gross energy intensity by Census 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)			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
All buildings	1,459	1,566	2,566	1,372	15,534	18,919	34,279	18,360	93.9	82.8	74.9	74.7
<b>Window and interior lighting features (more than one may apply)</b>												
Multipaned windows	1,095	1,333	1,879	943	11,457	15,282	22,581	11,041	95.5	87.3	83.2	85.4
Tinted window glass	715	855	1,544	859	6,313	9,069	18,988	10,654	113.2	94.3	81.3	80.7
Reflective window glass	276	391	562	424	2,344	3,813	5,455	4,296	117.5	102.4	103.1	98.7
External overhangs or awnings	537	642	1,217	694	4,290	6,494	13,858	7,547	125.1	98.8	87.8	92.0
Skylights or atriums	453	371	706	480	4,058	4,091	8,083	6,028	111.7	90.8	87.3	79.6
Light scheduling	645	656	959	670	5,838	6,651	10,737	7,038	110.6	98.6	89.4	95.1
Occupancy sensors	819	762	1,129	724	7,732	7,916	11,922	8,300	105.9	96.3	94.7	87.3
Multi-level lighting or dimming	289	352	555	422	2,335	3,177	5,424	3,598	123.8	110.7	102.3	117.4
Daylight harvesting	132	153	168	166	1,032	1,522	1,996	1,564	128.0	100.3	84.2	106.4
Demand responsive lighting	62	87	156	105	648	912	1,692	1,487	95.6	95.4	92.1	70.8
Building automation system (BAS) for lighting <sup>2</sup>	267	251	395	287	2,159	2,448	4,507	2,953	123.7	102.7	87.7	97.1
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>												
Heating	1,128	1,183	1,724	987	12,290	14,126	23,309	13,442	91.8	83.7	74.0	73.4
Cooling	1,100	1,139	1,798	970	11,450	13,442	24,448	13,176	96.1	84.8	73.5	73.7
Lighting	1,348	1,460	2,343	1,276	14,259	17,263	30,541	16,531	94.5	84.6	76.7	77.2

<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.

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/> • 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, Form EIA-871A, C, D, E, and F of the 2012 Commercial Buildings Energy Consumption Survey.

**Table C6. Expenditures by Census region for sum of major fuels, 2012**

	Sum of major fuel expenditures (million dollars)				Sum of major fuel expenditures (dollars)							
					per million Btu				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>	34,917	27,379	54,780	31,983	23.93	17.49	21.35	23.31	2.25	1.45	1.60	1.74
<b>Building floorspace (square feet)</b>												
1,001 to 5,000	2,672	3,026	7,166	3,478	25.18	19.54	22.38	24.58	2.53	1.63	2.12	1.99
5,001 to 10,000	2,251	2,490	5,336	4,154	25.29	17.04	21.31	25.86	1.80	1.33	1.51	1.85
10,001 to 25,000	4,259	3,578	7,083	5,001	26.62	18.46	22.16	24.63	1.77	1.24	1.36	1.39
25,001 to 50,000	2,846	3,804	6,772	3,876	23.09	17.25	21.35	23.98	1.73	1.26	1.50	1.43
50,001 to 100,000	5,547	4,382	9,138	3,456	22.10	17.28	22.20	22.87	2.07	1.61	1.49	1.46
100,001 to 200,000	6,448	3,488	7,317	4,654	21.37	18.12	21.30	23.60	2.54	1.45	1.42	2.00
200,001 to 500,000	6,007	4,029	6,640	4,204	24.53	16.27	20.07	20.71	2.69	1.48	1.80	2.02
Over 500,000	4,886	2,583	5,327	3,160	26.63	16.48	19.51	20.55	2.83	1.82	2.01	2.47
<b>Principal building activity</b>												
Education	3,432	3,825	6,955	2,606	20.35	16.25	21.63	22.44	1.67	1.21	1.35	1.41
Food sales	1,684	803	2,053	1,626	23.37	21.59	23.68	24.57	5.32	4.62	5.15	4.49
Food service	1,735	1,701	4,186	2,334	23.85	16.29	17.71	23.15	5.94	4.60	5.43	6.04
Health care	3,760	2,262	4,503	2,548	21.36	14.70	17.84	18.84	3.53	2.63	3.12	3.24
Inpatient	2,542	1,549	3,376	1,906	20.52	13.63	16.41	18.07	4.73	3.12	3.78	4.27
Outpatient	1,218	713	1,126	641	23.37	17.70	24.12	21.56	2.30	1.95	2.06	1.89
Lodging	2,143	1,800	3,950	3,104	21.74	16.77	19.48	19.92	2.13	1.70	1.72	2.13
Mercantile	3,919	3,864	9,228	5,694	25.55	18.40	23.21	23.09	2.37	1.81	1.95	2.02
Retail (other than mall)	1,675	1,682	3,224	2,402	30.01	19.65	24.21	26.93	2.01	1.47	1.52	1.80
Enclosed and strip malls	2,244	2,182	6,004	3,292	23.00	17.54	22.70	20.92	2.74	2.20	2.31	2.23
Office	9,791	5,289	9,276	6,426	26.49	19.82	25.19	27.19	2.64	1.59	1.69	1.88
Public assembly	2,276	2,457	3,674	1,810	24.60	17.77	20.85	24.80	2.39	1.55	1.83	1.78
Public order and safety	1,021	412	959	Q	27.29	14.01	19.30	Q	2.96	1.23	1.67	Q
Religious worship	717	599	1,451	571	19.26	14.18	21.58	21.49	0.80	0.65	0.72	0.79
Service	1,133	1,523	2,039	918	23.23	17.35	20.03	27.38	1.38	1.03	1.24	1.32
Warehouse and storage	1,426	1,729	4,040	2,500	22.60	18.57	22.95	25.86	0.81	0.68	0.77	0.71
Other	1,741	924	2,149	1,145	26.99	18.83	18.46	20.40	6.38	2.13	2.60	2.45
Vacant	Q	191	316	327	Q	17.88	24.03	25.69	Q	0.36	0.19	0.49
<b>Year constructed</b>												
Before 1920	2,438	875	1,528	353	25.24	16.35	21.06	22.80	1.49	0.84	1.56	1.07
1920 to 1945	4,349	1,804	2,137	1,409	26.21	16.29	24.33	26.20	2.22	1.02	1.42	1.77
1946 to 1959	3,279	2,421	3,205	2,111	23.45	16.69	20.53	21.99	2.07	1.46	1.22	1.40
1960 to 1969	5,029	3,509	5,716	4,133	25.03	16.27	18.82	22.76	2.25	1.31	1.63	2.13
1970 to 1979	5,685	4,814	6,342	3,760	21.59	18.54	19.82	22.30	2.91	1.84	1.72	1.46
1980 to 1989	3,784	4,056	11,967	6,367	25.84	17.40	21.91	26.71	2.17	1.55	1.72	1.62
1990 to 1999	5,175	3,893	9,559	5,136	23.15	18.45	22.03	21.98	2.53	1.39	1.55	1.84
2000 to 2003	2,301	2,626	5,381	2,292	23.25	19.57	21.86	23.04	2.35	1.76	1.62	1.61
2004 to 2007	1,170	1,847	4,379	3,913	22.03	18.27	22.01	22.39	2.34	1.49	1.54	2.01
2008 to 2012	1,707	1,535	4,567	Q	24.09	15.08	22.73	22.78	1.89	1.54	1.69	2.24
<b>Climate region<sup>1</sup></b>												
Very cold/Cold	21,580	23,441	N	7,558	23.12	17.24	N	16.68	2.05	1.45	N	1.45
Mixed-humid	13,338	3,938	32,164	N	25.35	19.13	20.92	N	2.65	1.43	1.60	N
Mixed-dry/Hot-dry	N	N	Q	19,168	N	N	14.97	26.77	N	N	0.85	1.83
Hot-humid	N	N	21,303	Q	N	N	22.63	Q	N	N	1.69	Q
Marine	N	N	N	4,677	N	N	N	23.78	N	N	N	1.91

**Table C6. Expenditures by Census region for sum of major fuels, 2012**

	Sum of major fuel expenditures (million dollars)				Sum of major fuel expenditures (dollars)							
					per million Btu				per square foot			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
All buildings	34,917	27,379	54,780	31,983	23.93	17.49	21.35	23.31	2.25	1.45	1.60	1.74
<b>Number of floors</b>												
One	8,192	11,047	27,601	15,597	24.00	17.93	22.23	24.66	2.12	1.44	1.49	1.60
Two	8,272	6,187	10,113	6,493	22.42	18.06	21.78	22.84	2.02	1.27	1.45	1.52
Three	5,026	3,606	3,512	1,906	25.23	16.77	20.13	24.02	2.08	1.38	1.73	1.76
Four to nine	7,691	4,865	10,290	5,464	21.61	16.50	19.38	21.84	2.26	1.67	2.05	2.49
Ten or more	5,737	1,674	3,264	2,524	29.57	17.22	21.07	20.12	3.29	1.90	1.88	2.41
<b>Elevators and escalators (more than one may apply)</b>												
Any elevators	20,602	12,112	20,854	12,501	23.66	16.86	20.45	21.77	2.60	1.60	1.89	2.22
Number of elevators												
One	5,303	4,389	5,636	2,530	20.57	16.83	22.34	22.42	2.06	1.36	1.54	1.49
Two to five	7,860	4,397	8,714	5,135	23.77	17.31	20.22	22.69	2.50	1.58	1.89	2.25
Six or more	7,439	3,326	6,504	4,836	26.35	16.33	19.34	20.57	3.40	2.14	2.37	2.92
Any escalators	2,347	1,400	2,354	2,013	27.38	18.91	20.87	19.30	2.94	1.59	2.20	2.22
<b>Number of workers (main shift)</b>												
Fewer than 5	3,134	3,768	6,484	3,497	24.84	18.46	22.48	25.46	1.16	0.88	0.88	1.02
5 to 9	2,271	2,699	5,415	3,246	25.36	20.15	22.22	24.86	1.77	1.41	1.52	1.46
10 to 19	2,335	3,101	6,646	4,273	24.58	16.62	20.65	25.30	1.68	1.65	1.74	1.68
20 to 49	4,600	4,834	9,576	6,405	24.41	17.21	21.51	23.42	2.42	1.43	1.71	1.77
50 to 99	5,256	4,490	10,322	3,910	21.36	17.24	21.48	24.01	2.20	1.63	1.70	1.73
100 to 249	6,020	3,753	7,567	4,402	22.56	17.02	20.65	21.51	2.38	1.62	1.82	2.28
250 or more	11,301	4,735	8,771	6,250	25.26	16.95	20.87	21.25	3.37	1.98	2.35	2.67
<b>Weekly operating hours</b>												
Fewer than 40	862	1,395	1,477	1,065	23.28	17.96	20.75	24.80	0.73	0.69	0.42	0.70
40 to 48	3,398	3,135	7,539	5,101	24.56	17.91	23.08	26.58	1.44	1.03	1.11	1.41
49 to 60	6,534	5,529	11,032	5,823	26.63	18.32	23.10	24.99	1.95	1.26	1.30	1.35
61 to 84	6,892	5,968	10,313	6,898	23.27	17.80	22.33	24.96	2.08	1.64	1.96	1.89
85 to 167	5,804	4,660	8,010	4,399	22.69	17.34	20.57	23.88	3.09	1.92	2.55	2.26
Open continuously	11,427	6,693	16,408	8,696	23.48	16.44	19.54	19.61	3.30	1.96	2.32	2.64
<b>Ownership and occupancy</b>												
Nongovernment owned	26,501	20,825	43,065	26,257	24.55	17.73	21.49	23.50	2.22	1.47	1.63	1.75
Owner occupied	11,366	10,409	20,496	11,012	22.80	16.92	20.72	21.49	2.08	1.42	1.69	1.92
Leased to tenant(s)	11,241	7,427	17,302	11,490	26.93	19.31	22.30	24.82	2.54	1.57	1.71	1.67
Owner occupied and leased	3,870	2,932	5,205	3,665	23.79	17.12	22.00	26.48	2.17	1.66	1.61	1.76
Unoccupied	Q	Q	63	Q	Q	Q	31.67	Q	Q	Q	0.06	Q
Government owned	8,416	6,554	11,714	5,726	22.16	16.76	20.83	22.50	2.32	1.38	1.49	1.71
Federal	Q	507	1,769	387	Q	19.56	23.69	17.91	Q	1.84	2.12	1.90
State	3,592	1,952	3,037	2,069	20.38	16.46	18.46	21.69	3.13	1.69	1.44	1.84
Local	4,389	4,096	6,909	3,270	23.30	16.61	21.37	23.79	1.98	1.24	1.41	1.62
<b>Party responsible for operation and maintenance of energy systems</b>												
Building owner	29,004	23,922	44,731	25,531	23.87	17.35	21.28	22.95	2.18	1.42	1.55	1.72
Business owner or tenant	5,061	2,905	8,290	5,670	24.67	18.36	21.53	24.14	2.78	1.69	1.83	1.76
Property management	Q	Q	1,149	Q	Q	Q	21.93	Q	Q	Q	1.76	Q
Other	Q	Q	610	Q	Q	Q	22.85	Q	Q	Q	1.94	Q

**Table C6. Expenditures by Census region for sum of major fuels, 2012**

	Sum of major fuel expenditures (million dollars)				Sum of major fuel expenditures (dollars)							
					per million Btu				per square foot			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
All buildings	34,917	27,379	54,780	31,983	23.93	17.49	21.35	23.31	2.25	1.45	1.60	1.74
<b>Provider of direct input on energy-related equipment purchases</b>												
Building owner	29,498	24,412	46,177	27,211	23.88	17.39	21.32	23.08	2.17	1.42	1.55	1.73
Business owner or tenant	4,179	2,249	6,424	4,049	24.97	18.46	21.08	23.50	3.00	1.77	1.93	1.79
Property management	Q	Q	451	Q	Q	Q	25.46	Q	Q	Q	1.31	Q
Other	841	466	1,728	326	22.13	18.36	22.08	29.27	2.68	1.35	2.14	1.48
<b>Number of establishments</b>												
One	20,732	17,381	35,174	20,179	22.71	17.38	20.89	22.71	2.18	1.39	1.62	1.80
2 to 5	7,592	6,776	9,996	6,167	24.44	17.67	21.60	25.36	2.30	1.61	1.54	1.65
6 to 10	1,909	1,275	3,144	1,904	27.97	17.65	22.82	22.30	2.46	1.60	1.80	1.73
11 to 20	2,092	991	3,464	1,534	26.16	17.78	23.14	22.01	2.51	2.01	2.22	1.88
More than 20	2,569	899	2,928	2,087	29.55	17.70	22.59	26.30	3.09	1.69	2.06	2.01
Currently unoccupied	Q	Q	74	111	Q	Q	29.34	19.39	Q	Q	0.06	0.25
<b>Predominant exterior wall material</b>												
Brick, stone, or stucco	17,155	13,732	28,689	12,703	23.79	16.88	20.88	23.15	2.24	1.52	1.72	1.79
Concrete (block or poured)	8,553	5,937	14,369	8,913	23.33	18.06	22.03	23.96	2.37	1.48	1.76	1.80
Concrete panels	2,102	2,838	4,164	4,900	20.81	16.68	21.80	24.23	2.61	1.68	1.32	1.61
Siding or shingles	2,930	2,007	1,923	2,527	29.37	19.47	21.20	23.74	1.84	1.44	1.38	1.84
Metal panels	1,770	1,906	4,114	1,413	25.18	19.17	21.17	22.19	1.73	0.89	0.97	1.12
Window glass	1,588	Q	831	856	21.74	Q	24.09	20.45	3.67	Q	2.31	2.65
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	2,468	3,313	9,994	3,603	26.54	19.79	22.08	23.76	1.52	1.02	1.20	1.32
Synthetic or rubber	13,751	11,798	15,054	9,388	23.66	17.55	20.94	20.00	2.34	1.57	1.94	2.00
Built-up	9,955	5,961	14,968	9,105	23.22	16.34	21.30	24.87	2.63	1.49	1.68	1.76
Slate or tile shingles	1,450	526	3,253	2,898	20.60	18.25	19.50	27.62	1.72	1.35	1.74	2.40
Wooden materials (including shingles)	344	Q	637	695	20.43	Q	17.84	24.51	2.13	Q	1.66	1.48
Asphalt, fiberglass, or other shingles	5,893	4,998	8,540	4,936	26.55	17.19	21.88	24.42	2.21	1.53	1.46	1.48
Concrete	692	Q	1,586	820	23.02	Q	24.25	29.82	2.32	Q	1.84	2.03
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	25,449	16,979	32,186	20,022	23.99	17.15	20.80	22.82	2.53	1.61	1.78	1.84
Shallow pitch	4,424	6,471	15,728	8,641	22.75	18.75	22.44	24.26	1.74	1.29	1.43	1.63
Steeper pitch	5,044	3,929	6,866	3,319	24.72	17.06	21.59	24.03	1.72	1.18	1.33	1.51
Cool roof	8,725	6,243	13,650	10,017	22.91	16.85	21.60	22.07	2.58	1.70	1.81	1.98

**Table C6. Expenditures by Census region for sum of major fuels, 2012**

	Sum of major fuel expenditures (million dollars)				Sum of major fuel expenditures (dollars)							
					per million Btu				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>	34,917	27,379	54,780	31,983	23.93	17.49	21.35	23.31	2.25	1.45	1.60	1.74
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>												
Any type of renovation	22,854	15,440	26,780	14,055	24.16	17.42	20.97	21.54	2.47	1.53	1.74	1.88
Addition or annex	6,240	6,652	8,247	3,685	22.61	17.07	19.54	18.07	2.42	1.63	1.79	2.10
Reduction in floorspace	Q	571	1,382	451	21.06	18.02	21.13	23.50	3.95	2.09	2.21	1.67
Roof replacement	13,598	8,848	12,903	5,463	23.82	17.26	20.51	19.97	2.49	1.64	1.85	1.76
Exterior wall replacement	2,005	1,696	2,873	1,570	26.18	17.24	19.56	20.43	2.20	1.58	1.99	1.95
Interior wall reconfiguration	12,953	8,393	13,656	8,348	25.82	17.44	20.42	20.65	2.58	1.61	1.99	1.96
Window replacement	7,436	3,979	7,475	3,758	25.48	16.57	20.52	19.36	2.18	1.31	1.98	1.83
HVAC equipment upgrade	17,132	10,009	17,039	9,117	24.71	17.29	20.56	20.54	2.64	1.53	1.82	2.07
Lighting upgrade	14,813	9,633	16,446	9,132	24.35	16.89	20.32	20.22	2.46	1.58	1.86	2.00
Electrical upgrade	10,553	6,239	10,478	5,821	25.19	16.73	20.50	19.08	2.66	1.56	1.91	2.15
Plumbing system upgrade	9,028	5,534	8,687	5,297	24.77	17.21	20.16	18.94	2.67	1.61	1.88	2.23
Insulation upgrade	4,229	3,381	4,646	2,987	23.85	17.41	19.43	18.60	2.42	1.54	1.97	2.29
Fire, safety, or security upgrade	11,588	6,592	11,039	5,806	25.08	16.90	20.05	20.57	2.52	1.73	1.88	2.00
Structural upgrade	1,557	1,429	2,695	2,577	26.90	17.58	18.87	18.14	2.13	1.61	2.24	2.36
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
No renovations	10,357	10,404	23,432	15,418	23.39	18.02	21.53	25.31	1.93	1.33	1.45	1.58
Buildings constructed 2008 or later	1,707	1,535	4,567	Q	24.09	15.08	22.73	22.78	1.89	1.54	1.69	2.24
<b>Energy sources (more than one may apply)</b>												
Electricity	34,917	27,379	54,780	31,983	23.93	17.49	21.35	23.31	2.28	1.48	1.66	1.78
Natural gas	25,958	22,937	35,494	25,276	22.13	16.73	19.46	21.49	2.35	1.53	1.78	1.99
Fuel oil	15,850	7,572	15,906	8,026	25.51	16.86	20.50	20.84	2.61	1.92	2.26	2.56
District heat	7,626	2,029	5,026	2,646	26.84	17.69	19.48	17.50	3.85	2.24	2.29	2.99
District chilled water	4,046	1,293	5,102	2,284	21.49	17.59	19.14	16.66	5.09	2.21	2.06	3.05
Propane	3,604	2,549	4,194	2,831	27.04	18.68	22.20	22.76	2.06	1.34	1.63	1.91
Other	1,913	931	1,781	1,827	21.86	19.42	23.26	20.49	1.76	1.17	1.96	1.77
<b>Space-heating energy sources (more than one may apply)</b>												
Electricity	16,438	13,180	38,609	18,123	24.52	17.88	22.41	23.61	2.26	1.53	1.71	1.72
Natural gas	20,071	21,095	25,059	19,719	21.39	16.58	19.01	21.50	2.15	1.50	1.62	1.84
Fuel oil	5,651	1,223	1,419	Q	25.88	18.45	22.07	Q	1.98	1.83	1.86	Q
District heat	7,626	2,029	4,972	2,606	26.84	17.69	19.47	17.41	3.85	2.24	2.29	3.00
Propane	943	1,027	1,085	549	27.11	21.61	21.40	30.04	1.44	1.02	1.17	1.13
Other	203	Q	Q	Q	31.17	20.74	Q	24.90	0.98	1.03	Q	0.89
<b>Primary space-heating energy source</b>												
Electricity	4,684	4,367	26,130	9,826	27.91	21.33	23.64	26.73	2.14	1.46	1.73	1.66
Natural gas	17,788	19,608	19,591	17,286	21.15	16.44	18.75	21.81	2.13	1.50	1.59	1.87
Fuel oil	3,919	Q	515	Q	27.76	Q	24.66	Q	1.97	Q	1.72	Q
District heat	7,577	1,953	4,920	2,606	26.94	17.69	19.45	17.41	3.88	2.26	2.33	3.00
Propane	379	543	566	176	35.51	23.41	24.05	31.78	1.01	0.75	0.92	0.75
Other	Q	Q	Q	Q	Q	Q	Q	25.43	Q	Q	Q	0.84

**Table C6. Expenditures by Census region for sum of major fuels, 2012**

	Sum of major fuel expenditures (million dollars)				Sum of major fuel expenditures (dollars)							
					per million Btu				per square foot			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
All buildings	34,917	27,379	54,780	31,983	23.93	17.49	21.35	23.31	2.25	1.45	1.60	1.74
<b>Cooling energy sources (more than one may apply)</b>												
Electricity	30,489	25,967	50,808	29,054	24.31	17.46	21.53	23.81	2.29	1.54	1.70	1.82
Natural gas	804	Q	Q	Q	18.71	Q	Q	Q	2.64	Q	Q	Q
District chilled water	4,046	1,293	5,102	2,284	21.49	17.59	19.14	16.66	5.09	2.21	2.06	3.05
<b>Water-heating energy sources (more than one may apply)</b>												
Electricity	14,322	11,529	31,705	14,868	26.25	18.94	23.34	25.25	2.18	1.45	1.63	1.69
Natural gas	18,423	16,919	23,536	18,629	20.76	16.16	18.90	21.94	2.45	1.59	1.92	2.04
Fuel oil	3,242	Q	Q	Q	26.39	Q	Q	Q	2.31	Q	Q	Q
District heat	6,289	1,784	3,741	1,940	26.15	17.19	19.71	16.40	3.83	2.33	2.39	3.37
Propane	604	403	993	562	31.31	22.81	24.98	55.66	1.55	1.03	1.86	2.16
<b>Cooking energy sources (more than one may apply)</b>												
Electricity	11,563	10,387	19,856	10,500	24.23	16.82	21.22	21.84	2.47	1.69	2.02	2.33
Natural gas	14,479	10,138	19,452	13,943	21.19	15.78	19.11	20.78	2.70	1.80	2.27	2.68
Propane	2,069	505	1,187	751	27.77	21.50	25.30	34.16	2.65	1.54	1.79	3.26
<b>Energy end uses (more than one may apply)</b>												
Buildings with space heating	34,520	27,191	51,760	30,134	23.85	17.43	21.13	22.73	2.29	1.51	1.70	1.83
Buildings with cooling	33,503	26,565	54,100	30,600	23.90	17.45	21.30	23.36	2.40	1.55	1.70	1.86
Buildings with water heating	34,325	26,811	52,765	30,736	23.84	17.39	21.21	23.13	2.35	1.52	1.74	1.86
Buildings with cooking	21,012	14,617	30,012	17,853	22.92	16.48	20.63	21.74	2.57	1.68	2.09	2.46
Buildings with manufacturing	2,274	1,322	2,698	1,598	23.06	19.26	19.97	27.49	2.15	1.13	1.58	1.40
Buildings with electricity generation	16,878	9,161	20,738	11,115	23.41	16.64	20.69	21.02	2.71	1.71	2.21	2.37
<b>Percent of floorspace heated</b>												
Not heated	Q	189	3,019	1,849	32.71	31.43	25.82	40.10	Q	0.22	0.80	0.98
1 to 50	1,446	1,126	4,322	4,678	27.11	20.64	23.45	26.65	1.28	0.86	1.09	1.26
51 to 99	7,052	3,302	11,049	6,955	25.39	16.90	20.25	24.90	2.45	1.47	1.78	2.09
100	26,021	22,763	36,390	18,502	23.31	17.38	21.16	21.24	2.36	1.57	1.79	1.96
<b>Percent of floorspace cooled</b>												
Not cooled	1,415	814	680	1,383	24.62	18.77	25.35	22.41	0.89	0.46	0.27	0.73
1 to 50	4,719	5,485	5,314	4,880	20.82	17.10	22.20	24.14	1.33	1.16	0.86	1.11
51 to 99	14,145	7,802	15,319	9,254	24.77	17.09	20.75	24.52	2.78	1.66	1.81	2.06
100	14,638	13,279	33,467	16,466	24.22	17.82	21.43	22.54	2.76	1.72	1.96	2.17
<b>Percent lit when open</b>												
Zero	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
1 to 50	2,355	3,367	5,306	2,864	21.69	18.13	22.59	25.29	1.12	1.17	1.12	0.99
51 to 99	14,670	12,565	22,914	13,611	24.25	16.82	20.72	23.03	2.33	1.58	1.72	1.86
100	17,772	11,282	26,400	15,338	23.98	18.05	21.63	23.33	2.66	1.55	1.83	2.08
Building never open/electricity not used	Q	156	92	142	Q	20.27	29.36	15.06	Q	0.20	0.05	0.21

**Table C6. Expenditures by Census region for sum of major fuels, 2012**

**Table C6. Expenditures by Census region for sum of major fuels, 2012**

	Sum of major fuel expenditures (million dollars)				Sum of major fuel expenditures (dollars)							
					per million Btu				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>	34,917	27,379	54,780	31,983	23.93	17.49	21.35	23.31	2.25	1.45	1.60	1.74
<b>Refrigeration equipment (more than one may apply)</b>												
Any refrigeration	32,390	25,598	50,508	28,573	23.68	17.47	21.07	23.02	2.38	1.54	1.76	1.94
Walk-in units	18,443	12,272	25,895	14,686	22.70	16.59	20.25	21.14	3.14	1.94	2.40	2.73
Cases or cabinets	18,176	12,889	23,097	14,698	23.22	17.34	20.88	21.51	3.00	1.89	2.22	2.69
Large cold storage areas	2,103	1,786	4,296	2,551	22.69	17.37	20.78	20.01	3.70	1.84	2.53	2.74
Commercial ice makers	17,584	13,369	29,748	15,147	23.36	16.66	20.56	20.77	3.16	2.03	2.05	2.50
Residential-type or compact units	26,692	21,418	38,946	22,480	23.56	17.33	21.12	23.18	2.33	1.50	1.61	1.80
Vending machines	21,930	16,104	32,146	16,846	23.63	17.24	20.89	21.68	2.60	1.66	1.82	2.06
No refrigeration	2,527	1,781	4,271	3,410	27.63	17.70	25.21	26.13	1.31	0.76	0.77	0.93
<b>Office equipment (more than one may apply)</b>												
Desktop computers	33,110	25,974	51,408	30,151	23.77	17.41	21.31	23.39	2.35	1.54	1.73	1.84
With flat screen monitors	32,902	25,740	50,780	29,902	23.83	17.40	21.32	23.33	2.36	1.55	1.73	1.84
With multiple monitors	15,056	10,854	22,226	14,360	24.83	17.05	20.99	22.44	2.85	1.69	1.84	2.01
Laptop computers	28,574	21,473	42,208	23,783	23.93	17.32	21.21	22.81	2.43	1.55	1.69	1.84
Dedicated servers	25,221	18,192	36,651	22,324	24.28	17.41	21.27	22.84	2.50	1.61	1.78	1.95
Laser printers	25,076	18,907	37,028	20,931	23.63	17.18	21.35	23.27	2.43	1.56	1.81	1.85
Inkjet printers	14,432	11,365	23,087	14,316	24.94	17.58	21.35	23.99	2.20	1.48	1.61	1.86
FAX machines	29,878	22,411	45,085	24,914	23.97	17.48	21.34	23.40	2.35	1.55	1.75	1.82
Photocopiers	28,038	20,013	38,203	22,731	23.79	17.37	21.44	22.81	2.41	1.53	1.73	1.82
<b>Number of desktop computers</b>												
None	1,807	1,405	3,371	1,832	27.08	19.06	21.91	22.20	1.27	0.68	0.73	0.93
1 to 4	4,491	4,882	10,190	5,719	24.85	18.39	20.19	24.49	1.83	1.36	1.62	1.70
5 to 9	2,652	3,150	6,404	3,443	23.11	16.06	22.32	24.57	1.90	1.49	1.82	1.45
10 to 19	3,590	2,617	5,333	3,967	23.78	17.86	23.66	25.90	2.18	1.43	1.51	1.66
20 to 49	4,835	4,430	9,476	5,023	21.20	17.91	21.89	23.64	2.08	1.71	1.77	1.78
50 to 99	2,843	3,063	4,778	3,302	22.32	18.41	21.98	24.57	2.08	1.54	1.47	1.95
100 to 249	6,420	3,322	6,030	3,988	23.66	16.83	20.86	19.63	2.79	1.51	1.78	2.18
250 or more	8,280	4,510	9,197	4,710	25.92	16.54	20.15	22.15	3.15	1.76	2.10	2.45
<b>Number of laptop computers</b>												
None	6,343	5,906	12,572	8,200	23.89	18.14	21.81	24.90	1.69	1.18	1.34	1.50
1 to 4	6,528	6,916	12,053	7,060	23.93	17.95	21.12	24.55	1.95	1.37	1.49	1.51
5 to 9	3,913	2,524	5,673	2,787	21.97	17.24	22.30	23.50	2.78	1.71	1.59	1.47
10 to 19	3,160	2,263	5,737	4,292	21.97	18.18	21.90	22.79	2.11	1.54	1.69	2.16
20 to 49	3,800	3,459	6,469	4,912	24.28	16.59	21.36	20.53	2.58	1.58	1.71	2.25
50 to 99	2,796	2,293	3,573	2,031	23.96	17.42	20.29	24.87	2.30	1.75	1.96	2.32
100 to 249	3,663	1,595	4,025	1,350	24.24	16.16	19.13	20.83	2.59	1.56	1.91	2.01
250 or more	4,715	2,423	4,677	1,350	26.96	16.69	21.94	21.71	3.33	1.77	2.17	2.26
<b>Number of dedicated servers</b>												
None	9,697	9,187	18,128	9,659	23.05	17.65	21.49	24.48	1.78	1.20	1.32	1.40
1 to 4	12,981	10,962	22,304	12,310	23.35	17.83	21.82	23.44	2.10	1.52	1.65	1.71
5 to 9	2,592	2,550	3,699	2,852	22.04	17.90	20.84	22.45	2.37	1.78	1.66	1.92
10 to 19	3,926	1,590	4,297	3,273	25.66	16.76	22.11	21.71	3.51	1.58	1.85	2.59
20 to 49	1,786	1,695	3,060	1,532	28.82	15.84	19.24	22.39	2.59	1.73	2.34	1.97
50 or more	3,936	1,395	3,290	2,356	26.18	16.23	19.41	22.27	3.95	2.15	2.73	3.30

**Table C6. Expenditures by Census region for sum of major fuels, 2012**

	Sum of major fuel expenditures (million dollars)				Sum of major fuel expenditures (dollars)							
					per million Btu				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>	34,917	27,379	54,780	31,983	23.93	17.49	21.35	23.31	2.25	1.45	1.60	1.74
<b>Number of photocopiers</b>												
None	6,879	7,366	16,577	9,252	24.51	17.82	21.13	24.65	1.77	1.26	1.36	1.57
One	4,817	5,447	9,162	6,193	23.16	17.26	21.78	24.04	1.85	1.38	1.49	1.41
2 to 4	6,976	6,678	13,408	7,143	21.80	17.71	22.53	23.49	1.95	1.46	1.66	1.75
5 to 9	5,104	3,313	5,187	2,966	22.36	17.52	21.56	23.49	2.62	1.53	1.62	1.92
10 or more	11,141	4,575	10,447	6,429	26.37	16.91	19.88	20.82	3.16	1.94	2.22	2.64
<b>Number of TVs or video displays</b>												
None	6,209	5,399	9,394	6,734	23.97	18.77	23.38	25.35	1.53	1.06	0.99	1.18
One	2,765	2,923	5,896	3,092	22.69	17.86	20.77	24.21	1.95	1.28	1.38	1.54
2 to 4	5,937	6,064	11,378	5,230	23.68	17.83	22.54	24.31	2.03	1.50	1.80	1.65
5 to 9	4,894	2,233	5,953	3,935	24.95	17.05	20.65	24.39	2.68	1.54	1.88	2.30
10 to 19	4,943	3,509	5,636	2,901	22.39	17.58	22.01	21.74	2.75	1.85	1.85	2.04
20 to 49	3,551	2,431	6,306	3,735	24.68	17.66	22.92	23.31	2.46	1.46	1.98	2.12
50 to 99	1,504	1,557	3,844	2,061	31.19	16.57	19.16	23.21	3.94	1.68	1.89	2.00
100 or more	5,113	3,263	6,372	4,296	23.38	15.38	17.91	19.55	3.04	2.12	2.30	2.77
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>												
Snack bar or concession stand	5,277	3,906	8,255	5,230	23.28	16.31	20.91	20.84	2.74	1.73	2.19	2.70
Fast food or small restaurant	5,271	3,861	9,846	6,411	24.01	17.01	21.14	21.82	3.01	2.18	2.59	2.60
Cafeteria or large restaurant	9,717	5,421	11,116	5,847	22.35	15.71	20.11	20.05	2.71	1.57	1.87	2.62
Commercial kitchen/food preparation area	9,009	6,400	12,418	7,291	21.24	15.60	20.52	20.32	2.77	1.62	2.04	2.56
Small kitchen area	6,394	4,712	8,668	4,901	23.30	16.48	21.72	21.50	2.06	1.38	1.69	2.03
<b>Separate computer areas (more than one may apply)</b>												
Data center or server farm	8,354	4,798	8,449	6,818	26.39	16.79	19.93	20.69	3.51	1.93	2.18	2.88
Computer-based training room	7,991	6,713	13,382	6,983	24.24	16.82	21.00	21.13	2.39	1.70	1.88	2.11
Student or public computer center	5,357	4,501	10,127	4,664	21.51	15.60	20.52	19.12	1.98	1.35	1.69	2.03
<b>HVAC conservation features (more than one may apply)</b>												
Economizer cycle	18,929	13,346	18,194	14,473	23.37	17.10	20.66	21.56	2.74	1.69	2.01	2.11
Regular HVAC maintenance	31,704	24,112	48,123	27,793	23.90	17.21	21.26	22.94	2.44	1.59	1.81	1.91
Building automation system (BAS) <sup>2</sup>	18,998	13,979	28,291	17,036	24.30	17.34	20.94	22.11	2.74	1.75	1.94	2.26

**Table C6. Expenditures by Census region for sum of major fuels, 2012**

	Sum of major fuel expenditures (million dollars)				Sum of major fuel expenditures (dollars)							
					per million Btu				per square foot			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
All buildings	34,917	27,379	54,780	31,983	23.93	17.49	21.35	23.31	2.25	1.45	1.60	1.74
<b>Window and interior lighting features (more than one may apply)</b>												
Multipaned windows	26,342	23,177	39,409	20,216	24.07	17.38	20.97	21.44	2.30	1.52	1.75	1.83
Tinted window glass	16,385	14,754	32,566	19,703	22.92	17.26	21.09	22.93	2.60	1.63	1.72	1.85
Reflective window glass	6,662	6,754	11,674	9,237	24.18	17.29	20.76	21.79	2.84	1.77	2.14	2.15
External overhangs or awnings	12,223	11,032	26,075	15,084	22.77	17.20	21.43	21.74	2.85	1.70	1.88	2.00
Skylights or atriums	10,257	6,146	14,564	10,053	22.62	16.55	20.63	20.96	2.53	1.50	1.80	1.67
Light scheduling	16,000	11,299	20,844	15,227	24.79	17.24	21.72	22.74	2.74	1.70	1.94	2.16
Occupancy sensors	19,764	13,021	23,819	16,074	24.13	17.08	21.10	22.19	2.56	1.64	2.00	1.94
Multi-level lighting or dimming	6,908	5,813	11,576	8,613	23.89	16.52	20.86	20.40	2.96	1.83	2.13	2.39
Daylight harvesting	3,061	2,735	3,644	3,596	23.18	17.92	21.68	21.61	2.97	1.80	1.83	2.30
Demand responsive lighting	1,513	1,599	3,669	2,854	24.45	18.38	23.56	27.11	2.34	1.75	2.17	1.92
Building automation system (BAS) for lighting <sup>2</sup>	6,195	4,480	9,148	6,747	23.20	17.81	23.14	23.52	2.87	1.83	2.03	2.29
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>												
Heating	27,106	20,535	37,368	23,431	24.03	17.36	21.67	23.74	2.21	1.45	1.60	1.74
Cooling	26,151	19,934	39,233	23,560	23.77	17.50	21.82	24.28	2.28	1.48	1.60	1.79
Lighting	32,127	25,370	50,260	29,677	23.84	17.38	21.45	23.26	2.25	1.47	1.65	1.80

<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/>

- 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.

**Table C7. Consumption and gross energy intensity by Census division (part 1) 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)		
	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central
All buildings	368	1,092	1,131	4,302	11,232	12,742	85.5	97.2	88.7
<b>Building floorspace (square feet)</b>									
1,001 to 5,000	29	77	101	405	652	1,066	70.8	118.8	95.0
5,001 to 10,000	32	57	107	541	707	1,062	58.4	81.2	101.1
10,001 to 25,000	49	111	132	901	1,507	1,823	54.7	73.5	72.6
25,001 to 50,000	54	69	167	642	1,002	2,040	83.9	69.2	81.7
50,001 to 100,000	63	188	164	598	2,078	1,809	105.3	90.5	90.7
100,001 to 200,000	43	259	143	418	2,124	1,771	103.3	121.7	80.6
200,001 to 500,000	71	174	195	597	1,636	2,129	119.0	106.3	91.5
Over 500,000	Q	156	122	Q	1,526	1,042	Q	102.3	116.7
<b>Principal building activity</b>									
Education	45	124	160	642	1,414	2,205	69.7	87.7	72.7
Food sales	Q	Q	Q	Q	Q	Q	Q	Q	Q
Food service	Q	47	72	Q	162	217	Q	288.3	331.1
Health care	48	128	102	274	792	549	176.5	161.0	184.9
Inpatient	40	84	84	169	369	359	237.1	227.3	232.3
Outpatient	Q	44	18	Q	423	190	Q	103.2	95.0
Lodging	Q	75	69	Q	800	673	Q	93.9	102.0
Mercantile	35	119	172	463	1,190	1,488	75.2	99.6	115.4
Retail (other than mall)	Q	45	72	Q	672	748	Q	67.2	95.6
Enclosed and strip malls	Q	73	100	Q	518	740	Q	141.6	135.5
Office	61	309	206	738	2,965	2,430	82.4	104.1	84.8
Public assembly	24	68	103	350	603	1,196	69.9	112.8	86.1
Public order and safety	Q	Q	Q	Q	Q	Q	Q	Q	Q
Religious worship	Q	28	31	Q	613	547	Q	46.2	56.6
Service	14	35	58	255	568	847	54.9	61.3	68.8
Warehouse and storage	24	40	65	521	1,240	1,570	Q	31.9	41.4
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
Vacant	Q	Q	Q	Q	Q	345	Q	Q	Q
<b>Year constructed</b>									
Before 1920	43	54	39	692	940	642	61.9	57.2	60.7
1920 to 1945	Q	130	85	428	1,530	1,373	84.4	84.8	62.2
1946 to 1959	28	112	101	349	1,233	1,154	79.8	90.8	87.2
1960 to 1969	42	159	133	481	1,759	1,488	87.7	90.2	89.3
1970 to 1979	57	207	194	502	1,450	1,865	112.7	142.5	103.9
1980 to 1989	34	112	173	572	1,170	1,655	59.7	96.0	104.6
1990 to 1999	37	187	153	485	1,560	1,942	76.4	119.6	78.9
2000 to 2003	42	57	104	343	637	1,090	122.8	89.2	95.7
2004 to 2007	Q	20	76	Q	267	860	Q	74.5	87.8
2008 to 2012	16	55	73	217	685	672	72.3	80.5	108.4

**Table C7. Consumption and gross energy intensity by Census division (part 1) 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)		
	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central
				368	1,092	1,131	4,302	11,232	12,742
<b>All buildings</b>									
<b>Climate region<sup>1</sup></b>									
Very cold/Cold	368	565	1,041	4,302	6,208	11,683	85.5	91.1	89.1
Mixed-humid	N	526	Q	N	5,024	Q	N	104.7	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	76	265	460	1,083	2,782	4,975	70.4	95.3	92.6
Two	90	279	241	1,281	2,816	3,206	70.1	99.1	75.3
Three	76	123	140	965	1,456	1,708	78.9	84.5	81.7
Four to nine	94	262	203	782	2,626	2,085	119.9	99.8	97.3
Ten or more	Q	162	86	Q	1,552	767	Q	104.6	112.8
<b>Elevators and escalators (more than one may apply)</b>									
Any elevators	211	659	514	1,857	6,054	5,439	113.9	108.9	94.6
Number of elevators									
One	82	176	185	944	1,636	2,252	86.4	107.8	82.4
Two to five	85	245	170	713	2,432	1,993	119.6	100.8	85.4
Six or more	45	238	159	200	1,986	1,195	223.1	119.7	133.0
Any escalators	Q	82	58	Q	785	731	Q	105.0	79.7
<b>Number of workers (main shift)</b>									
Fewer than 5	36	90	140	1,017	1,675	2,663	35.1	54.0	52.6
5 to 9	37	53	88	496	786	1,110	74.6	66.8	79.6
10 to 19	33	62	132	439	951	1,232	74.7	65.4	106.9
20 to 49	53	135	203	546	1,358	2,270	97.8	99.5	89.5
50 to 99	69	177	207	657	1,728	2,147	104.6	102.6	96.4
100 to 249	72	194	145	686	1,843	1,548	105.5	105.5	93.8
250 or more	68	380	215	460	2,892	1,771	147.2	131.3	121.5
<b>Weekly operating hours</b>									
Fewer than 40	Q	28	55	392	781	1,329	23.4	35.6	41.5
40 to 48	41	98	128	830	1,531	1,988	48.8	63.9	64.2
49 to 60	57	189	207	910	2,435	2,736	62.1	77.6	75.6
61 to 84	77	219	254	984	2,329	2,591	78.7	93.9	97.9
85 to 167	84	172	180	530	1,351	1,606	157.8	127.4	112.3
Open continuously	101	386	307	655	2,806	2,491	153.5	137.6	123.4

**Table C7. Consumption and gross energy intensity by Census division (part 1) for sum of major fuels, 2012**

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	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)		
	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central
All buildings	368	1,092	1,131	4,302	11,232	12,742	85.5	97.2	88.7
<b>Predominant roof material</b>									
Metal surfacing	25	68	99	548	1,077	1,630	45.3	63.3	60.8
Synthetic or rubber	179	402	500	1,755	4,125	5,361	102.0	97.5	93.2
Built-up	55	373	261	684	3,098	2,894	81.1	120.5	90.1
Slate or tile shingles	Q	47	21	Q	591	288	Q	79.9	74.1
Wooden materials (including shingles)	Q	Q	Q	Q	Q	Q	Q	Q	Q
Asphalt, fiberglass, or other shingles	77	145	215	864	1,805	2,191	88.6	80.6	98.1
Concrete	Q	29	Q	Q	288	Q	Q	101.1	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>									
<b>Roof tilt</b>									
Flat	214	847	719	2,157	7,905	7,483	99.3	107.1	96.1
Shallow pitch	64	130	240	1,012	1,530	3,112	63.7	84.9	77.2
Steeper pitch	89	115	171	1,133	1,798	2,146	78.7	63.9	79.8
Cool roof	63	317	268	742	2,639	2,545	85.5	120.2	105.3
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>									
Any type of renovation	243	703	625	2,625	6,639	6,653	92.7	105.8	94.0
Addition or annex	84	192	257	815	1,759	2,501	103.6	108.9	102.6
Reduction in floorspace	Q	Q	Q	Q	Q	Q	Q	212.2	Q
Roof replacement	135	436	335	1,388	4,072	3,267	97.5	106.9	102.4
Exterior wall replacement	27	50	56	264	646	605	100.9	77.3	93.2
Interior wall reconfiguration	116	386	341	1,431	3,589	3,577	81.1	107.5	95.2
Window replacement	101	191	163	1,095	2,308	2,027	91.9	82.8	80.2
HVAC equipment upgrade	148	545	412	1,570	4,908	4,574	94.2	111.1	90.2
Lighting upgrade	181	427	395	1,666	4,343	4,115	108.9	98.3	95.9
Electrical upgrade	114	305	243	1,172	2,796	2,625	97.1	109.2	92.5
Plumbing system upgrade	96	268	216	1,023	2,355	2,294	94.3	113.8	94.2
Insulation upgrade	52	125	112	581	1,168	1,268	90.3	106.9	88.1
Fire, safety, or security upgrade	127	335	269	1,368	3,234	2,613	93.1	103.5	102.9
Structural upgrade	28	30	49	300	432	628	93.4	69.2	78.2
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
No renovations	109	334	432	1,460	3,909	5,416	74.6	85.4	79.9
Buildings constructed 2008 or later	16	55	73	217	685	672	72.3	80.5	108.4

**Table C7. Consumption and gross energy intensity by Census division (part 1) 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)		
	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central
All buildings	368	1,092	1,131	4,302	11,232	12,742	85.5	97.2	88.7
<b>Energy sources (more than one may apply)</b>									
Electricity	368	1,092	1,131	4,192	11,099	12,544	87.7	98.4	90.2
Natural gas	233	940	1,027	2,241	8,827	10,790	103.9	106.5	95.2
Fuel oil	181	441	316	1,866	4,213	2,619	97.0	104.6	120.7
District heat	Q	223	66	Q	1,628	574	172.2	137.2	114.7
District chilled water	Q	Q	53	Q	656	420	Q	242.9	126.6
Propane	68	65	82	861	885	829	79.4	73.4	98.5
Other	Q	59	35	397	691	532	70.9	86.0	65.9
<b>Space-heating energy sources (more than one may apply)</b>									
Electricity	184	487	537	1,848	5,428	5,687	99.5	89.7	94.4
Natural gas	195	743	964	1,990	7,362	10,122	98.1	100.9	95.2
Fuel oil	85	133	42	1,270	1,581	292	67.2	84.1	143.7
District heat	Q	223	66	Q	1,628	574	172.2	137.2	114.7
Propane	16	19	Q	314	339	280	51.5	54.8	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Primary space-heating energy source</b>									
Electricity	34	134	131	468	1,720	1,702	72.2	77.9	76.7
Natural gas	181	660	913	1,811	6,555	9,587	100.0	100.7	95.2
Fuel oil	79	62	Q	1,099	889	Q	71.8	70.1	Q
District heat	Q	221	62	Q	1,601	532	172.2	137.8	115.7
Propane	6	Q	Q	204	Q	Q	30.5	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Cooling energy sources (more than one may apply)</b>									
Electricity	312	942	1,083	3,317	9,986	11,474	94.1	94.4	94.4
Natural gas	Q	32	Q	Q	216	Q	Q	148.4	Q
District chilled water	Q	Q	53	Q	656	420	Q	242.9	126.6
<b>Water-heating energy sources (more than one may apply)</b>									
Electricity	153	393	423	1,939	4,622	4,914	78.7	85.0	86.1
Natural gas	170	718	802	1,492	6,042	7,910	113.7	118.8	101.4
Fuel oil	54	68	Q	693	708	Q	78.4	96.7	Q
District heat	Q	197	59	Q	1,383	470	169.3	142.3	126.1
Propane	12	Q	Q	233	Q	Q	50.7	Q	Q
<b>Cooking energy sources (more than one may apply)</b>									
Electricity	113	364	425	1,143	3,534	4,211	98.6	103.1	100.8
Natural gas	117	566	492	1,015	4,341	4,293	115.1	130.5	114.5
Propane	45	Q	Q	486	293	Q	91.7	102.1	Q

**Table C7. Consumption and gross energy intensity by Census division (part 1) for sum of major fuels, 2012**

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	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)		
	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central
All buildings	368	1,092	1,131	4,302	11,232	12,742	85.5	97.2	88.7
<b>Cooling equipment (more than one may apply)</b>									
Residential-type central air conditioners	48	121	225	451	1,244	2,854	106.7	96.9	78.8
Heat pumps	37	100	62	388	1,103	604	94.7	90.4	103.4
Individual air conditioners	101	269	174	1,035	2,810	1,806	98.0	95.6	96.3
District chilled water	Q	Q	53	Q	656	420	Q	242.9	126.6
Central chillers	94	310	361	783	2,706	3,484	119.5	114.5	103.7
Packaged air conditioning units	201	638	689	2,062	6,635	6,839	97.6	96.2	100.7
Swamp coolers	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Main equipment replaced since 1990 (more than one may apply)</b>									
Heating	120	335	398	1,646	3,709	4,404	73.0	90.2	90.5
Cooling	139	440	437	1,516	4,798	4,620	91.7	91.7	94.6
<b>Water-heating equipment</b>									
Centralized system	213	719	738	2,487	6,641	7,606	85.8	108.3	97.0
Distributed system	52	128	126	586	1,797	1,671	88.1	71.0	75.4
Combination of centralized and distributed system	96	232	256	843	2,279	2,804	114.5	101.7	91.4
<b>Lighting equipment types (more than one may apply)</b>									
Incandescent	175	607	630	2,046	5,520	6,180	85.4	109.9	101.9
Standard fluorescent	352	1,064	1,105	3,771	10,702	11,880	93.5	99.5	93.0
Compact fluorescent	291	866	827	2,886	7,886	8,336	101.0	109.8	99.2
High-intensity discharge (HID)	116	387	416	1,161	3,349	4,102	99.9	115.7	101.5
Halogen	151	352	492	1,494	3,774	4,590	100.9	93.2	107.1
LED	169	398	401	1,363	3,388	3,759	124.1	117.4	106.7
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Refrigeration equipment (more than one may apply)</b>									
Any refrigeration	332	1,036	1,058	3,568	10,044	11,374	93.2	103.1	93.0
Walk-in units	189	623	536	1,424	4,445	4,481	133.0	140.2	119.6
Cases or cabinets	186	597	538	1,524	4,542	4,820	121.9	131.4	111.7
Large cold storage areas	Q	69	76	Q	430	695	Q	160.1	108.8
Commercial ice makers	177	576	578	1,240	4,333	4,666	142.9	132.8	123.9
Residential-type or compact units	286	847	900	3,081	8,354	9,850	93.0	101.3	91.4
Vending machines	204	724	673	1,902	6,546	6,685	107.2	110.6	100.7
No refrigeration	35	56	73	734	1,189	1,368	48.3	47.2	53.5

**Table C7. Consumption and gross energy intensity by Census division (part 1) 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)		
	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central
All buildings	368	1,092	1,131	4,302	11,232	12,742	85.5	97.2	88.7
<b>Office equipment (more than one may apply)</b>									
Desktop computers	350	1,043	1,081	3,686	10,430	11,561	94.9	100.0	93.5
With flat screen monitors	349	1,032	1,071	3,645	10,310	11,436	95.7	100.1	93.6
With multiple monitors	132	474	448	1,158	4,132	4,244	113.9	114.8	105.6
Laptop computers	305	889	897	3,093	8,681	9,507	98.7	102.4	94.3
Dedicated servers	247	792	765	2,511	7,575	7,894	98.5	104.5	96.9
Laser printers	269	792	801	2,696	7,622	8,535	99.8	103.9	93.8
Inkjet printers	167	411	481	1,899	4,660	5,161	88.1	88.3	93.3
FAX machines	292	954	930	3,164	9,569	9,955	92.4	99.7	93.4
Photocopiers	291	888	837	2,989	8,665	9,111	97.3	102.5	91.8
<b>Number of desktop computers</b>									
None	18	49	50	616	802	1,181	29.2	60.8	42.0
1 to 4	57	124	192	846	1,611	2,283	67.3	76.8	83.9
5 to 9	Q	99	144	Q	1,142	1,390	Q	86.8	103.3
10 to 19	42	109	113	494	1,150	1,304	84.9	94.8	87.0
20 to 49	90	138	170	717	1,610	1,633	126.3	85.4	104.1
50 to 99	39	88	132	430	936	1,532	91.7	94.0	86.0
100 to 249	39	233	130	432	1,870	1,569	89.2	124.5	82.7
250 or more	67	252	201	518	2,110	1,850	129.4	119.6	108.7
<b>Number of laptop computers</b>									
None	63	203	234	1,208	2,552	3,235	51.8	79.6	72.4
1 to 4	95	177	282	1,083	2,267	3,260	88.1	78.2	86.6
5 to 9	37	Q	112	323	1,082	1,063	114.5	130.3	105.5
10 to 19	50	94	86	521	979	1,060	95.5	96.1	81.1
20 to 49	29	127	136	348	1,123	1,384	84.1	113.3	98.5
50 to 99	33	84	100	242	976	978	135.2	86.0	101.8
100 to 249	23	128	71	346	1,068	711	66.9	119.9	99.5
250 or more	Q	137	110	Q	1,185	1,051	Q	115.6	104.4
<b>Number of dedicated servers</b>									
None	120	300	366	1,790	3,657	4,848	67.3	82.1	75.4
1 to 4	137	419	467	1,582	4,611	5,055	86.5	90.9	92.5
5 to 9	31	87	98	338	755	931	91.5	114.9	104.9
10 to 19	47	106	58	340	777	663	137.9	136.6	87.1
20 to 49	Q	52	75	Q	566	714	Q	92.3	104.4
50 or more	Q	128	68	Q	867	530	Q	147.1	127.8
<b>Number of photocopiers</b>									
None	77	204	294	1,312	2,568	3,630	58.6	79.3	81.1
One	76	132	222	912	1,692	2,726	83.4	78.0	81.6
2 to 4	97	223	271	1,017	2,564	3,003	95.4	87.0	90.1
5 to 9	51	178	148	599	1,347	1,644	84.4	131.9	90.0
10 or more	67	355	196	461	3,062	1,739	146.0	116.0	112.5

**Table C7. Consumption and gross energy intensity by Census division (part 1) 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)		
	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central
All buildings	368	1,092	1,131	4,302	11,232	12,742	85.5	97.2	88.7
<b>Number of TVs or video displays</b>									
None	81	178	201	1,513	2,541	3,230	53.8	69.9	62.4
One	33	88	125	435	981	1,485	76.8	90.2	84.1
2 to 4	86	165	264	833	2,097	2,889	103.1	78.7	91.4
5 to 9	39	157	81	441	1,383	839	89.6	113.2	96.6
10 to 19	39	182	123	391	1,408	1,134	99.0	129.3	108.2
20 to 49	35	109	102	375	1,069	1,198	93.9	101.7	85.1
50 to 99	Q	31	72	Q	270	783	Q	113.4	91.4
100 or more	36	183	163	202	1,483	1,184	178.9	123.1	137.9
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>									
Snack bar or concession stand	Q	192	174	Q	1,710	1,632	Q	112.3	106.8
Fast food or small restaurant	35	184	163	335	1,416	1,299	105.4	130.1	125.3
Cafeteria or large restaurant	85	350	237	829	2,756	2,452	102.2	127.1	96.8
Commercial kitchen/food preparation area	95	329	302	915	2,339	2,960	103.7	140.8	102.1
Small kitchen area	66	208	204	776	2,329	2,282	85.6	89.3	89.4
<b>Separate computer areas (more than one may apply)</b>									
Data center or server farm	80	236	202	491	1,887	1,743	164.0	125.1	115.7
Computer-based training room	66	264	279	747	2,594	2,728	88.3	101.7	102.4
Student or public computer center	63	186	192	834	1,877	2,236	75.6	99.1	86.0
<b>HVAC conservation features (more than one may apply)</b>									
Economizer cycle	168	642	551	1,412	5,498	5,550	119.0	116.8	99.2
Regular HVAC maintenance	320	1,007	1,033	3,324	9,658	10,660	96.3	104.2	96.9
Building automation system (BAS) <sup>2</sup>	200	582	578	1,734	5,199	5,646	115.5	111.8	102.4
<b>Window and interior lighting features (more than one may apply)</b>									
Multipaned windows	307	788	944	3,410	8,047	10,082	89.9	97.9	93.6
Tinted window glass	146	568	622	1,420	4,893	6,325	103.1	116.2	98.3
Reflective window glass	55	221	275	495	1,849	2,633	110.2	119.5	104.3
External overhangs or awnings	99	438	463	1,106	3,183	4,169	89.5	137.5	111.0
Skylights or atriums	128	326	272	1,376	2,682	2,815	92.8	121.4	96.7
Light scheduling	161	485	502	1,454	4,384	5,033	110.6	110.5	99.8
Occupancy sensors	257	562	578	2,302	5,430	5,927	111.7	103.5	97.5
Multi-level lighting or dimming	82	207	258	663	1,672	2,275	124.1	123.7	113.5
Daylight harvesting	41	91	114	303	729	1,147	136.2	124.6	99.1
Demand responsive lighting	Q	49	53	Q	448	506	Q	108.6	104.9
Building automation system (BAS) for lighting <sup>2</sup>	66	201	178	526	1,633	1,680	126.1	122.9	106.2

**Table C7. Consumption and gross energy intensity by Census division (part 1) 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)		
	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central
All buildings	368	1,092	1,131	4,302	11,232	12,742	85.5	97.2	88.7
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>									
Heating	256	872	875	3,315	8,975	9,790	77.1	97.2	89.4
Cooling	262	839	837	2,931	8,520	9,321	89.3	98.4	89.8
Lighting	359	989	1,047	3,987	10,272	11,570	90.1	96.2	90.5

<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/> • 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.

**Table C8. Consumption and gross energy intensity by Census division (part 2) 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)		
	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central
All buildings	435	1,358	369	6,178	17,981	4,904	70.4	75.5	75.3
<b>Building floorspace (square feet)</b>									
1,001 to 5,000	54	169	50	792	1,564	613	67.7	107.7	82.0
5,001 to 10,000	39	127	34	810	1,764	606	47.9	71.8	56.3
10,001 to 25,000	61	159	64	1,065	2,709	769	57.6	58.5	83.6
25,001 to 50,000	54	156	45	989	2,273	501	54.4	68.8	89.9
50,001 to 100,000	90	218	57	920	3,049	1,002	97.4	71.5	56.7
100,001 to 200,000	50	192	44	628	2,817	578	79.2	68.1	76.3
200,001 to 500,000	53	173	41	597	2,089	503	88.5	82.7	81.9
Over 500,000	35	165	33	376	1,715	Q	93.2	96.3	Q
<b>Principal building activity</b>									
Education	75	178	34	968	2,840	469	77.7	62.6	72.6
Food sales	Q	38	Q	Q	188	Q	Q	204.9	Q
Food service	33	120	36	153	396	150	213.9	304.0	236.7
Health care	52	107	54	313	662	271	167.5	161.7	200.1
Inpatient	30	86	48	137	405	184	220.5	211.4	260.6
Outpatient	Q	21	Q	176	257	Q	126.4	83.1	Q
Lodging	39	111	45	384	1,217	486	100.5	91.1	93.2
Mercantile	38	235	55	644	2,746	736	59.3	85.8	74.6
Retail (other than mall)	14	61	Q	394	1,052	Q	35.5	58.3	Q
Enclosed and strip malls	24	174	Q	250	1,694	Q	96.7	102.8	Q
Office	61	201	55	904	3,183	694	67.2	63.0	78.7
Public assembly	35	80	19	390	904	330	90.7	88.6	57.3
Public order and safety	Q	Q	Q	Q	Q	Q	Q	Q	Q
Religious worship	11	34	18	378	857	614	29.9	40.1	29.7
Service	30	55	19	625	741	318	47.3	74.1	58.4
Warehouse and storage	28	83	14	960	2,832	Q	29.4	29.5	27.1
Other	Q	78	Q	Q	568	Q	Q	137.4	Q
Vacant	Q	9	Q	191	546	Q	Q	Q	Q
<b>Year constructed</b>									
Before 1920	15	41	21	398	425	278	36.6	97.1	74.8
1920 to 1945	25	42	17	396	690	219	63.9	60.5	75.6
1946 to 1959	44	80	21	508	1,515	268	87.4	52.8	77.4
1960 to 1969	83	158	47	1,198	1,699	699	69.1	92.9	67.0
1970 to 1979	66	135	60	754	1,703	555	87.4	79.4	107.6
1980 to 1989	60	263	81	962	3,584	940	62.3	73.4	85.9
1990 to 1999	58	211	79	856	2,798	1,213	67.5	75.4	64.8
2000 to 2003	30	147	13	405	1,919	208	73.8	76.7	63.5
2004 to 2007	25	138	21	375	1,923	312	67.9	71.8	67.8
2008 to 2012	29	Q	Q	325	1,725	212	89.0	82.9	Q

**Table C8. Consumption and gross energy intensity by Census division (part 2) 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)		
	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central
All buildings	435	1,358	369	6,178	17,981	4,904	70.4	75.5	75.3
<b>Climate region<sup>1</sup></b>									
Very cold/Cold	319	N	N	4,488	N	N	71.1	N	N
Mixed-humid	116	1,022	279	1,689	13,349	3,810	68.5	76.6	73.2
Mixed-dry/Hot-dry	N	N	N	N	N	N	N	N	N
Hot-humid	N	336	Q	N	4,632	Q	N	72.6	82.6
Marine	N	N	N	N	N	N	N	N	N
<b>Number of floors</b>									
One	156	614	185	2,677	9,191	2,639	58.1	66.8	69.9
Two	101	262	67	1,661	3,825	1,084	60.9	68.4	61.4
Three	75	95	27	899	992	344	84.0	95.8	78.2
Four to nine	92	300	73	829	2,913	705	111.0	102.9	103.3
Ten or more	Q	88	Q	Q	1,061	Q	Q	82.6	Q
<b>Elevators and escalators (more than one may apply)</b>									
Any elevators	204	580	125	2,115	6,484	1,236	96.5	89.5	100.8
Number of elevators									
One	75	129	34	968	1,948	440	77.8	66.2	78.4
Two to five	84	267	35	788	2,839	476	106.5	94.1	73.9
Six or more	45	184	55	359	1,697	320	124.7	108.5	171.8
Any escalators	Q	67	Q	Q	646	Q	Q	103.4	Q
<b>Number of workers (main shift)</b>									
Fewer than 5	64	140	53	1,623	3,033	1,266	39.4	46.2	42.2
5 to 9	46	120	31	800	1,751	491	56.9	68.4	62.4
10 to 19	55	170	54	648	1,935	573	84.7	87.8	94.2
20 to 49	78	219	57	1,102	3,001	964	70.6	73.0	59.2
50 to 99	53	279	75	614	3,490	764	86.8	79.9	98.7
100 to 249	75	210	40	766	2,622	447	98.3	80.2	89.4
250 or more	64	220	59	626	2,150	399	102.5	102.3	147.0
<b>Weekly operating hours</b>									
Fewer than 40	23	25	17	697	1,161	698	32.4	21.7	24.8
40 to 48	47	134	63	1,060	2,901	1,269	44.8	46.1	49.9
49 to 60	95	283	54	1,636	5,097	876	58.1	55.5	61.6
61 to 84	82	281	49	1,037	3,459	476	78.8	81.4	102.4
85 to 167	88	224	50	821	1,846	503	107.6	121.3	100.3
Open continuously	100	411	135	927	3,518	1,082	107.6	116.9	125.1

**Table C8. Consumption and gross energy intensity by Census division (part 2) for sum of major fuels, 2012**

**Table C8. Consumption and gross energy intensity by Census division (part 2) 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)		
	West		East South Central	West		East South Central	West		East South Central
	North Central	South Atlantic		North Central	South Atlantic		North Central	South Atlantic	
<b>All buildings</b>	435	1,358	369	6,178	17,981	4,904	70.4	75.5	75.3
<b>Predominant roof material</b>									
Metal surfacing	68	205	76	1,634	3,905	1,369	41.8	52.6	55.8
Synthetic or rubber	172	401	130	2,141	4,388	1,387	80.5	91.3	93.8
Built-up	104	356	81	1,104	4,714	880	94.2	75.4	92.1
Slate or tile shingles	Q	88	Q	Q	1,065	Q	Q	82.4	Q
Wooden materials (including shingles)	Q	28	Q	Q	268	Q	Q	104.3	Q
Asphalt, fiberglass, or other shingles	76	220	57	1,077	2,964	992	70.4	74.3	57.6
Concrete	Q	45	Q	Q	490	Q	Q	92.7	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	271	833	193	3,091	10,067	2,046	87.7	82.7	94.4
Shallow pitch	105	353	123	1,897	5,282	1,817	55.3	66.8	67.6
Steeper pitch	59	172	53	1,190	2,631	1,041	49.5	65.5	51.1
Cool roof	102	314	111	1,121	3,879	1,345	91.4	81.0	82.7
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>									
Any type of renovation	261	562	240	3,443	7,251	2,752	75.8	77.5	87.0
Addition or annex	133	203	82	1,580	2,353	778	84.2	86.2	105.7
Reduction in floorspace	Q	41	Q	Q	344	Q	Q	120.6	Q
Roof replacement	178	246	155	2,131	2,865	1,647	83.5	85.9	94.3
Exterior wall replacement	42	76	27	468	773	300	89.6	97.8	91.1
Interior wall reconfiguration	141	298	126	1,625	3,346	1,228	86.7	89.1	102.5
Window replacement	77	175	66	1,013	2,079	584	76.4	84.3	113.0
HVAC equipment upgrade	166	375	154	1,967	4,584	1,437	84.6	81.9	106.9
Lighting upgrade	176	337	153	1,989	4,151	1,440	88.4	81.1	106.0
Electrical upgrade	130	235	100	1,378	2,571	979	94.4	91.6	101.6
Plumbing system upgrade	106	205	80	1,153	2,371	825	91.6	86.5	97.0
Insulation upgrade	82	108	38	929	1,159	409	88.8	93.1	92.5
Fire, safety, or security upgrade	121	260	98	1,201	2,782	900	101.0	93.3	108.6
Structural upgrade	32	73	Q	258	695	Q	124.4	105.2	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
No renovations	145	653	119	2,409	9,005	1,940	60.2	72.6	61.3
Buildings constructed 2008 or later	29	Q	Q	325	1,725	212	89.0	82.9	Q

**Table C8. Consumption and gross energy intensity by Census division (part 2) 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)		
	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central
All buildings	435	1,358	369	6,178	17,981	4,904	70.4	75.5	75.3
<b>Energy sources (more than one may apply)</b>									
Electricity	435	1,358	369	6,016	17,608	4,824	72.3	77.1	76.5
Natural gas	344	941	295	4,236	9,984	3,436	81.2	94.3	85.8
Fuel oil	133	445	95	1,316	4,419	797	100.9	100.8	118.9
District heat	49	127	41	332	1,159	Q	146.9	109.4	Q
District chilled water	Q	124	49	Q	1,202	Q	Q	103.3	Q
Propane	55	88	28	1,080	1,476	470	50.7	59.4	60.2
Other	13	40	Q	267	554	Q	48.5	72.0	Q
<b>Space-heating energy sources (more than one may apply)</b>									
Electricity	200	946	234	2,951	12,514	3,170	67.9	75.6	73.8
Natural gas	309	632	234	3,909	7,309	2,662	78.9	86.5	88.1
Fuel oil	Q	38	Q	375	458	Q	64.8	83.0	Q
District heat	49	125	41	332	1,148	Q	146.9	108.8	Q
Propane	31	21	7	723	498	218	43.0	41.2	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Primary space-heating energy source</b>									
Electricity	74	624	124	1,281	8,533	1,982	57.9	73.1	62.6
Natural gas	280	489	190	3,497	5,694	2,067	80.1	85.9	92.1
Fuel oil	Q	18	Q	Q	245	Q	Q	72.8	Q
District heat	49	123	41	332	1,089	Q	146.9	112.6	Q
Propane	21	7	Q	517	307	193	39.8	24.1	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Cooling energy sources (more than one may apply)</b>									
Electricity	405	1,277	334	5,352	16,368	4,307	75.6	78.0	77.6
Natural gas	Q	Q	Q	Q	Q	Q	Q	Q	Q
District chilled water	Q	124	49	Q	1,202	Q	Q	103.3	Q
<b>Water-heating energy sources (more than one may apply)</b>									
Electricity	186	759	189	3,020	11,163	2,900	61.6	68.0	65.3
Natural gas	245	617	200	2,705	5,651	2,103	90.6	109.2	95.3
Fuel oil	Q	Q	Q	Q	Q	Q	Q	Q	Q
District heat	Q	103	Q	Q	944	Q	Q	109.0	Q
Propane	16	22	Q	251	353	Q	62.6	61.7	Q
<b>Cooking energy sources (more than one may apply)</b>									
Electricity	193	494	157	1,949	5,446	1,544	99.0	90.8	101.8
Natural gas	151	555	156	1,349	4,427	1,487	111.7	125.4	105.0
Propane	18	34	Q	211	510	Q	86.7	66.9	Q

**Table C8. Consumption and gross energy intensity by Census division (part 2) for sum of major fuels, 2012**

**Table C8. Consumption and gross energy intensity by Census division (part 2) 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)			
	West		East		West		East		West	
	North Central	South Atlantic	South Central	North Central	South Atlantic	South Central	North Central	South Atlantic	South Central	
<b>All buildings</b>	435	1,358	369	6,178	17,981	4,904	70.4	75.5	75.3	
<b>Cooling equipment (more than one may apply)</b>										
Residential-type central air conditioners	82	178	65	1,493	2,574	891	55.0	69.1	73.1	
Heat pumps	28	357	48	421	4,925	839	66.0	72.5	57.7	
Individual air conditioners	56	181	60	779	2,484	808	71.4	73.1	74.5	
District chilled water	Q	124	49	Q	1,202	Q	Q	103.3	Q	
Central chillers	127	387	92	991	3,884	831	128.7	99.6	111.4	
Packaged air conditioning units	229	763	216	2,977	9,119	2,686	76.9	83.7	80.4	
Swamp coolers	N	Q	N	N	Q	N	N	Q	N	
Other	Q	Q	N	Q	Q	N	Q	Q	N	
<b>Main equipment replaced since 1990 (more than one may apply)</b>										
Heating	160	396	138	2,482	5,204	1,616	64.4	76.1	85.2	
Cooling	185	478	157	2,591	6,455	1,755	71.4	74.0	89.2	
<b>Water-heating equipment</b>										
Centralized system	287	773	224	3,710	8,889	2,745	77.3	86.9	81.5	
Distributed system	39	165	19	663	3,030	437	58.2	54.4	43.5	
Combination of centralized and distributed system	96	374	119	1,137	4,226	1,416	84.3	88.5	83.9	
<b>Lighting equipment types (more than one may apply)</b>										
Incandescent	251	673	198	2,858	7,828	2,468	87.9	85.9	80.3	
Standard fluorescent	420	1,302	359	5,634	16,888	4,573	74.6	77.1	78.6	
Compact fluorescent	312	985	258	3,505	10,855	2,923	89.0	90.8	88.3	
High-intensity discharge (HID)	133	437	107	1,255	5,325	1,182	105.9	82.0	90.7	
Halogen	142	581	127	1,578	6,161	1,349	90.1	94.4	94.4	
LED	134	471	117	1,389	4,553	1,232	96.6	103.4	94.6	
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	
<b>Refrigeration equipment (more than one may apply)</b>										
Any refrigeration	407	1,260	356	5,196	15,268	4,498	78.4	82.5	79.1	
Walk-in units	204	721	173	1,850	6,399	1,199	110.0	112.7	144.2	
Cases or cabinets	205	625	153	1,983	5,711	1,596	103.3	109.5	96.1	
Large cold storage areas	Q	126	Q	Q	1,049	Q	Q	120.0	Q	
Commercial ice makers	224	808	231	1,932	7,957	2,457	116.1	101.5	94.2	
Residential-type or compact units	336	1,004	269	4,407	13,129	3,747	76.2	76.4	71.7	
Vending machines	261	809	237	2,988	9,706	2,702	87.5	83.3	87.7	
No refrigeration	27	98	14	982	2,713	406	27.9	36.1	33.3	

**Table C8. Consumption and gross energy intensity by Census division (part 2) 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)			
	West		East		West		East		West	
	North Central	South Atlantic	South Central	North Central	South Atlantic	South Central	North Central	South Atlantic	South Central	
<b>All buildings</b>	435	1,358	369	6,178	17,981	4,904	70.4	75.5	75.3	
<b>Office equipment (more than one may apply)</b>										
Desktop computers	411	1,289	346	5,301	16,255	4,236	77.5	79.3	81.7	
With flat screen monitors	409	1,263	343	5,192	16,079	4,156	78.7	78.5	82.6	
With multiple monitors	188	593	133	2,164	6,888	1,498	87.0	86.1	88.5	
Laptop computers	343	1,088	279	4,389	13,950	3,421	78.2	78.0	81.6	
Dedicated servers	280	942	241	3,378	11,468	2,897	82.9	82.1	83.1	
Laser printers	300	959	244	3,624	11,789	2,681	82.7	81.3	90.9	
Inkjet printers	165	574	139	2,521	7,724	1,954	65.5	74.3	71.0	
FAX machines	352	1,151	279	4,484	14,307	3,404	78.5	80.4	82.1	
Photocopiers	316	972	255	3,942	12,279	3,057	80.1	79.2	83.5	
<b>Number of desktop computers</b>										
None	24	70	23	877	1,726	668	27.5	40.4	34.2	
1 to 4	74	260	70	1,299	3,318	911	56.9	78.4	76.5	
5 to 9	53	144	43	730	1,723	649	71.9	83.7	66.7	
10 to 19	33	123	37	522	1,903	649	63.4	64.4	56.3	
20 to 49	77	226	65	958	2,966	758	80.7	76.3	85.9	
50 to 99	35	114	38	452	1,713	456	76.7	66.6	82.7	
100 to 249	68	191	41	634	2,156	410	106.8	88.4	100.2	
250 or more	72	231	53	706	2,476	403	101.3	93.2	131.1	
<b>Number of laptop computers</b>										
None	92	270	90	1,789	4,031	1,483	51.2	67.0	60.6	
1 to 4	103	296	80	1,785	4,218	1,281	57.7	70.2	62.3	
5 to 9	34	154	28	415	2,003	452	82.5	76.7	61.6	
10 to 19	39	146	50	414	1,994	489	93.2	73.4	101.3	
20 to 49	72	185	47	811	2,362	505	89.0	78.5	92.5	
50 to 99	32	67	26	334	809	244	95.9	83.0	105.6	
100 to 249	Q	106	Q	Q	1,078	Q	Q	98.0	Q	
250 or more	35	134	Q	319	1,487	Q	111.2	90.1	Q	
<b>Number of dedicated servers</b>										
None	155	416	128	2,800	6,513	2,007	55.3	63.9	63.9	
1 to 4	147	593	122	2,145	7,735	1,785	68.7	76.7	68.6	
5 to 9	45	83	Q	504	1,063	414	89.1	77.8	82.2	
10 to 19	37	103	Q	343	1,286	Q	108.2	80.4	Q	
20 to 49	Q	66	Q	Q	696	Q	Q	94.6	Q	
50 or more	Q	97	Q	Q	688	Q	Q	140.8	Q	
<b>Number of photocopiers</b>										
None	119	386	114	2,236	5,702	1,847	53.2	67.7	61.6	
One	93	222	61	1,216	3,397	816	76.6	65.3	74.5	
2 to 4	106	306	84	1,581	4,073	1,247	67.3	75.1	67.2	
5 to 9	41	151	36	523	1,943	456	78.8	77.7	79.9	
10 or more	75	294	74	621	2,865	538	120.7	102.5	138.2	

**Table C8. Consumption and gross energy intensity by Census division (part 2) 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)		
	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central
All buildings	435	1,358	369	6,178	17,981	4,904	70.4	75.5	75.3
<b>Number of TVs or video displays</b>									
None	86	215	56	1,861	4,717	1,132	46.3	45.7	49.1
One	39	140	37	806	2,162	740	48.1	64.9	50.7
2 to 4	76	251	75	1,167	3,192	964	65.2	78.5	77.6
5 to 9	50	126	41	611	1,524	637	81.6	82.4	64.1
10 to 19	77	142	38	760	1,558	435	101.3	90.8	88.4
20 to 49	36	175	42	470	1,973	401	76.0	88.5	104.6
50 to 99	Q	120	Q	Q	1,213	Q	Q	98.7	Q
100 or more	49	190	68	357	1,643	Q	137.1	115.9	150.0
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>									
Snack bar or concession stand	65	260	36	630	2,550	329	103.4	102.0	108.3
Fast food or small restaurant	64	259	72	476	2,135	609	135.0	121.3	118.5
Cafeteria or large restaurant	108	335	74	1,003	3,709	613	107.3	90.2	119.9
Commercial kitchen/ food preparation area	108	364	88	993	3,867	722	109.0	94.1	122.3
Small kitchen area	82	225	68	1,130	2,551	1,072	72.3	88.2	63.6
<b>Separate computer areas (more than one may apply)</b>									
Data center or server farm	84	233	51	745	2,296	456	113.0	101.6	112.7
Computer-based training room	120	322	98	1,222	3,895	879	98.0	82.7	111.9
Student or public computer center	96	257	78	1,102	3,187	761	87.3	80.7	102.4
<b>HVAC conservation features (more than one may apply)</b>									
Economizer cycle	230	476	124	2,366	5,286	1,059	97.1	90.0	116.7
Regular HVAC maintenance	368	1,222	296	4,513	14,891	3,362	81.5	82.1	88.2
Building automation system (BAS) <sup>2</sup>	228	744	170	2,350	8,070	1,880	97.0	92.1	90.3
<b>Window and interior lighting features (more than one may apply)</b>									
Multipaned windows	390	1,031	283	5,200	12,612	3,378	75.0	81.7	83.8
Tinted window glass	233	773	211	2,744	9,706	2,497	85.0	79.7	84.3
Reflective window glass	116	316	78	1,180	2,980	711	98.3	106.1	109.5
External overhangs or awnings	179	695	167	2,326	7,774	2,074	76.9	89.4	80.5
Skylights or atriums	99	398	77	1,276	4,768	922	77.6	83.5	83.2
Light scheduling	153	551	110	1,617	6,195	1,217	94.8	89.0	90.4
Occupancy sensors	185	664	129	1,990	7,130	1,429	92.9	93.2	90.2
Multi-level lighting or dimming	94	356	93	902	3,452	886	103.7	103.2	104.6
Daylight harvesting	39	100	Q	375	999	Q	104.0	100.2	Q
Demand responsive lighting	34	127	Q	406	1,315	Q	83.5	96.7	Q
Building automation system (BAS) for lighting <sup>2</sup>	73	251	41	768	2,714	495	95.0	92.3	83.8

**Table C8. Consumption and gross energy intensity by Census division (part 2) 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)		
	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central
All buildings	435	1,358	369	6,178	17,981	4,904	70.4	75.5	75.3
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>									
Heating	308	931	230	4,336	12,357	3,581	70.9	75.4	64.2
Cooling	302	1,003	234	4,121	13,458	3,675	73.3	74.5	63.7
Lighting	413	1,242	338	5,693	16,417	4,478	72.5	75.6	75.4

<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.

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.

**Table C9. Consumption and gross energy intensity by Census division (part 3) 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)		
	West		West			West		West	
	South central	Mountain	Pacific	South central	Mountain	Pacific	South central	Mountain	Pacific
All buildings	839	417	954	11,394	4,981	13,379	73.6	83.8	71.3
<b>Building floorspace (square feet)</b>									
1,001 to 5,000	101	42	99	1,206	528	1,216	84.1	80.4	81.4
5,001 to 10,000	89	51	109	1,164	504	1,741	76.9	101.9	62.8
10,001 to 25,000	97	52	151	1,732	990	2,609	55.9	52.1	58.1
25,001 to 50,000	116	29	133	1,755	467	2,249	66.0	62.3	59.0
50,001 to 100,000	137	54	97	2,088	725	1,648	65.5	74.2	59.1
100,001 to 200,000	107	34	163	1,756	447	1,875	61.1	76.8	86.9
200,001 to 500,000	117	65	138	1,089	774	1,310	107.2	83.4	105.6
Over 500,000	74	Q	63	604	546	731	123.3	165.4	86.8
<b>Principal building activity</b>									
Education	110	49	67	1,853	783	1,065	59.3	62.6	63.0
Food sales	Q	Q	52	Q	Q	304	Q	Q	170.8
Food service	80	24	76	225	104	282	357.5	235.1	270.4
Health care	91	45	90	508	289	497	179.4	155.0	182.0
Inpatient	72	28	77	304	132	315	236.9	214.1	245.3
Outpatient	19	17	13	204	157	182	93.7	105.2	72.7
Lodging	47	Q	72	599	519	940	77.8	160.8	77.0
Mercantile	107	61	186	1,247	727	2,088	86.0	83.5	89.0
Retail (other than mall)	44	25	64	693	307	1,030	64.0	82.3	62.1
Enclosed and strip malls	63	35	122	554	420	1,058	113.4	84.4	115.2
Office	113	59	177	1,625	852	2,562	69.5	69.8	69.0
Public assembly	77	27	46	769	321	697	100.4	85.6	65.3
Public order and safety	Q	Q	Q	Q	Q	Q	Q	Q	Q
Religious worship	15	7	19	540	214	511	27.1	33.1	38.2
Service	28	Q	28	583	Q	578	48.6	Q	48.4
Warehouse and storage	79	Q	75	1,919	591	2,938	41.1	36.8	25.5
Other	Q	Q	Q	Q	Q	345	Q	Q	126.0
Vacant	Q	Q	7	934	Q	396	Q	Q	16.4
<b>Year constructed</b>									
Before 1920	10	Q	9	279	Q	225	37.6	Q	38.2
1920 to 1945	30	Q	45	593	144	651	49.7	Q	69.7
1946 to 1959	55	22	74	850	325	1,179	65.1	69.1	62.4
1960 to 1969	99	33	149	1,101	406	1,532	90.0	81.1	97.1
1970 to 1979	125	65	104	1,435	802	1,780	87.1	80.6	58.5
1980 to 1989	202	66	172	2,419	981	2,948	83.7	67.5	58.4
1990 to 1999	144	63	171	2,161	804	1,984	66.7	78.2	86.0
2000 to 2003	86	38	62	1,187	419	1,007	72.3	89.7	61.5
2004 to 2007	40	Q	81	605	667	Q	65.8	141.2	62.9
2008 to 2012	47	21	Q	765	329	793	61.8	64.4	112.2

**Table C9. Consumption and gross energy intensity by Census division (part 3) 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)		
	West		West		West				
	South central	Mountain	Pacific	South central	Mountain	Pacific	South central	Mountain	Pacific
All buildings	839	417	954	11,394	4,981	13,379	73.6	83.8	71.3
<b>Climate region<sup>1</sup></b>									
Very cold/Cold	N	296	158	N	3,381	1,836	N	87.4	85.8
Mixed-humid	237	N	N	2,942	N	N	80.5	N	N
Mixed-dry/Hot-dry	Q	122	594	Q	1,600	8,890	56.7	76.1	66.9
Hot-humid	515	N	Q	6,906	N	Q	74.5	N	Q
Marine	N	N	197	N	N	2,454	N	N	80.2
<b>Number of floors</b>									
One	443	172	461	6,702	2,575	7,186	66.0	66.7	64.1
Two	136	92	192	2,063	1,153	3,116	66.0	80.1	61.6
Three	53	19	60	692	274	809	76.0	69.4	74.5
Four to nine	159	54	196	1,396	498	1,700	113.6	109.3	115.2
Ten or more	49	Q	46	541	Q	568	90.5	165.9	80.3
<b>Elevators and escalators (more than one may apply)</b>									
Any elevators	315	197	377	3,302	1,700	3,932	95.4	116.0	95.9
Number of elevators									
One	89	38	75	1,277	486	1,207	69.6	77.9	62.1
Two to five	129	52	174	1,295	563	1,718	99.3	92.5	101.4
Six or more	97	Q	128	730	651	1,007	133.4	164.8	126.9
Any escalators	Q	Q	30	283	Q	461	Q	Q	64.9
<b>Number of workers (main shift)</b>									
Fewer than 5	95	53	85	3,037	968	2,470	31.2	54.5	34.2
5 to 9	93	38	92	1,312	565	1,662	71.1	68.0	55.4
10 to 19	98	44	125	1,307	560	1,978	75.0	78.5	63.2
20 to 49	169	63	211	1,646	858	2,771	102.7	73.1	76.1
50 to 99	126	37	126	1,821	597	1,657	69.2	62.4	75.8
100 to 249	116	68	137	1,094	689	1,246	106.2	98.4	109.9
250 or more	142	Q	180	1,178	745	1,595	120.2	153.7	112.6
<b>Weekly operating hours</b>									
Fewer than 40	29	18	25	1,648	564	950	17.4	31.5	26.5
40 to 48	130	51	141	2,618	896	2,734	49.5	56.6	51.6
49 to 60	141	77	156	2,522	1,161	3,158	55.8	66.7	49.3
61 to 84	132	63	214	1,339	807	2,844	98.3	77.4	75.2
85 to 167	115	45	139	789	409	1,539	145.7	110.9	90.2
Open continuously	293	164	280	2,477	1,144	2,155	118.4	143.1	129.8

**Table C9. Consumption and gross energy intensity by Census division (part 3) for sum of major fuels, 2012**

**Table C9. Consumption and gross energy intensity by Census division (part 3) 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)		
	West		West		West				
	South central	Mountain	Pacific	South central	Mountain	Pacific	South central	Mountain	Pacific
All buildings	839	417	954	11,394	4,981	13,379	73.6	83.8	71.3
<b>Predominant roof material</b>									
Metal surfacing	171	58	94	3,020	956	1,776	56.6	60.5	52.8
Synthetic or rubber	188	197	272	1,968	1,841	2,851	95.7	107.1	95.5
Built-up	266	85	281	3,296	1,169	3,995	80.8	72.5	70.4
Slate or tile shingles	Q	18	87	Q	187	1,022	98.7	95.7	85.2
Wooden materials (including shingles)	Q	Q	24	Q	Q	428	Q	Q	56.4
Asphalt, fiberglass, or other shingles	113	46	156	1,887	681	2,643	59.9	67.5	59.1
Concrete	Q	Q	22	Q	Q	332	Q	Q	67.0
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>									
<b>Roof tilt</b>									
Flat	521	226	652	6,007	2,767	8,099	86.7	81.6	80.5
Shallow pitch	225	146	211	3,906	1,589	3,709	57.7	91.6	56.8
Steeper pitch	93	46	92	1,481	625	1,572	62.5	73.6	58.6
Cool roof	207	109	345	2,306	1,510	3,544	89.6	72.1	97.4
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>									
Any type of renovation	476	230	422	5,390	2,245	5,217	88.3	102.5	80.9
Addition or annex	137	Q	86	1,478	855	902	92.7	137.3	95.9
Reduction in floorspace	Q	Q	Q	Q	Q	Q	Q	Q	Q
Roof replacement	228	89	185	2,450	1,063	2,034	92.9	83.5	90.9
Exterior wall replacement	44	Q	58	369	Q	647	119.1	Q	89.6
Interior wall reconfiguration	245	166	239	2,280	1,418	2,848	107.4	116.8	83.8
Window replacement	123	Q	89	1,109	770	1,278	111.0	136.3	69.7
HVAC equipment upgrade	300	174	270	3,342	1,561	2,837	89.6	111.3	95.2
Lighting upgrade	320	169	283	3,238	1,496	3,065	98.8	113.1	92.2
Electrical upgrade	176	Q	177	1,932	986	1,721	91.1	129.4	103.1
Plumbing system upgrade	146	Q	165	1,433	782	1,593	101.8	146.7	103.5
Insulation upgrade	93	Q	78	790	Q	821	118.3	171.0	95.1
Fire, safety, or security upgrade	193	87	196	2,193	912	1,994	88.1	95.0	98.2
Structural upgrade	Q	Q	69	Q	Q	717	Q	Q	96.8
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
No renovations	316	166	443	5,240	2,406	7,370	60.3	69.0	60.1
Buildings constructed 2008 or later	47	21	Q	765	329	793	61.8	64.4	112.2

**Table C9. Consumption and gross energy intensity by Census division (part 3) for sum of major fuels, 2012**

**Table C9. Consumption and gross energy intensity by Census division (part 3) 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)		
	West		West		West		South		Pacific
	South	Mountain	Pacific	central	Mountain	Pacific	central	Mountain	Pacific
<b>All buildings</b>	839	417	954	11,394	4,981	13,379	73.6	83.8	71.3
<b>Energy end uses (more than one may apply)</b>									
Buildings with space heating	822	416	910	9,923	4,704	11,767	82.9	88.4	77.3
Buildings with cooling	828	406	904	9,931	4,489	11,978	83.4	90.5	75.5
Buildings with water heating	814	402	927	9,519	4,440	12,089	85.5	90.5	76.7
Buildings with cooking	437	267	554	4,201	2,420	4,842	104.0	110.2	114.5
Buildings with manufacturing	89	Q	47	705	Q	999	126.9	Q	46.9
Buildings with electricity generation	276	195	334	2,401	1,635	3,049	115.1	119.2	109.6
<b>Percent of floorspace heated</b>									
Not heated	16	Q	44	1,471	277	1,612	11.2	Q	27.5
1 to 50	53	32	144	1,317	592	3,117	40.0	53.6	46.1
51 to 99	201	56	224	1,883	658	2,662	106.8	84.8	84.0
100	569	328	543	6,724	3,453	5,988	84.6	95.0	90.6
<b>Percent of floorspace cooled</b>									
Not cooled	11	11	51	1,464	492	1,402	7.2	22.4	36.2
1 to 50	69	44	159	1,982	828	3,576	34.9	52.7	44.3
51 to 99	207	93	285	2,126	1,054	3,434	97.2	88.0	82.9
100	553	270	461	5,823	2,608	4,968	94.9	103.5	92.7
<b>Percent lit when open</b>									
Zero	Q	Q	Q	Q	Q	Q	Q	Q	Q
1 to 50	69	26	87	1,562	541	2,366	44.5	48.0	36.9
51 to 99	374	152	439	4,339	1,847	5,460	86.3	82.2	80.4
100	393	234	423	4,438	2,279	5,107	88.6	102.9	82.9
Building never open/electricity not used	Q	Q	4	1,003	270	413	Q	Q	10.6
<b>Percent lit during off hours</b>									
Zero	145	83	219	3,202	1,502	4,654	45.4	55.0	47.1
1 to 50	529	212	559	5,841	2,591	7,217	90.6	81.7	77.5
51 to 100	110	Q	151	1,069	572	1,033	102.7	186.4	145.9
Building always open with no "off hours"	55	Q	26	483	Q	276	113.0	Q	92.3
Electricity not used	N	N	N	800	Q	199	N	N	N
<b>Heating equipment (more than one may apply)</b>									
Heat pumps	98	37	150	1,174	498	1,955	83.7	73.5	76.7
Furnaces	91	33	75	1,599	554	983	57.2	59.2	76.8
Individual space heaters	151	87	169	1,896	1,197	2,397	79.7	72.5	70.3
District heat	89	Q	63	637	482	385	140.6	178.9	164.7
Boilers	167	108	275	1,460	1,150	2,395	114.6	94.0	114.8
Packaged heating units	554	243	617	6,745	2,967	8,092	82.2	81.8	76.2
Other	Q	Q	24	Q	Q	242	Q	Q	97.4

**Table C9. Consumption and gross energy intensity by Census division (part 3) 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)		
	West		West		West		South		Pacific
	South	Mountain	Pacific	central	Mountain	Pacific	central	Mountain	Pacific
<b>All buildings</b>	839	417	954	11,394	4,981	13,379	73.6	83.8	71.3
<b>Cooling equipment (more than one may apply)</b>									
Residential-type central air conditioners	145	48	174	2,429	668	2,160	59.8	72.5	80.4
Heat pumps	107	44	155	1,344	672	2,244	79.9	65.4	69.3
Individual air conditioners	55	45	71	971	565	1,162	56.5	79.8	61.5
District chilled water	93	Q	59	773	Q	329	120.3	185.0	180.4
Central chillers	197	86	197	1,746	920	1,697	113.1	93.8	116.2
Packaged air conditioning units	474	209	553	5,379	2,314	7,141	88.0	90.5	77.4
Swamp coolers	Q	55	63	Q	722	617	Q	76.8	102.0
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Main equipment replaced since 1990 (more than one may apply)</b>									
Heating	263	101	254	3,228	1,365	3,903	81.5	73.6	65.0
Cooling	294	117	274	3,458	1,440	4,070	84.9	81.4	67.4
<b>Water-heating equipment</b>									
Centralized system	506	249	501	5,826	2,573	7,058	86.8	96.9	71.0
Distributed system	109	41	154	1,471	699	2,333	74.2	59.3	65.9
Combination of centralized and distributed system	199	111	272	2,222	1,168	2,698	89.8	95.3	100.8
<b>Lighting equipment types (more than one may apply)</b>									
Incandescent	369	233	405	4,286	2,253	4,969	86.0	103.5	81.6
Standard fluorescent	803	401	906	9,901	4,529	12,203	81.1	88.6	74.2
Compact fluorescent	553	302	701	6,263	3,007	8,156	88.2	100.3	85.9
High-intensity discharge (HID)	214	151	225	2,841	1,314	2,868	75.4	114.7	78.5
Halogen	308	176	365	3,459	1,663	3,990	89.1	105.9	91.5
LED	207	191	275	1,774	1,513	3,099	116.7	126.4	88.8
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Refrigeration equipment (more than one may apply)</b>									
Any refrigeration	781	387	855	8,989	4,179	10,530	86.9	92.5	81.2
Walk-in units	385	237	458	3,179	1,898	3,486	121.0	124.7	131.3
Cases or cabinets	328	211	472	3,079	1,740	3,725	106.4	121.5	126.8
Large cold storage areas	46	Q	98	316	Q	676	145.6	Q	145.0
Commercial ice makers	408	253	477	4,102	2,093	3,955	99.4	120.7	120.5
Residential-type or compact units	572	273	697	7,312	3,323	9,176	78.2	82.2	75.9
Vending machines	493	255	522	5,219	2,529	5,659	94.5	101.0	92.2
No refrigeration	58	31	100	2,405	802	2,849	24.1	38.5	35.0

**Table C9. Consumption and gross energy intensity by Census division (part 3) 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)		
	West		West		West				
	South central	Mountain	Pacific	South central	Mountain	Pacific	South central	Mountain	Pacific
<b>All buildings</b>	839	417	954	11,394	4,981	13,379	73.6	83.8	71.3
<b>Office equipment (more than one may apply)</b>									
Desktop computers	778	386	903	9,194	4,338	12,062	84.6	89.0	74.9
With flat screen monitors	776	383	899	9,111	4,261	11,968	85.1	89.8	75.1
With multiple monitors	333	217	423	3,708	1,992	5,163	89.9	108.8	82.0
Laptop computers	622	330	712	7,550	3,614	9,282	82.4	91.4	76.7
Dedicated servers	540	311	666	6,199	3,189	8,258	87.1	97.6	80.6
Laser printers	532	289	611	5,990	2,952	8,367	88.8	97.7	73.0
Inkjet printers	369	169	428	4,619	2,056	5,641	79.8	82.2	75.8
FAX machines	683	338	727	8,084	3,708	10,007	84.5	91.2	72.6
Photocopiers	554	300	697	6,763	3,360	9,111	81.9	89.3	76.5
<b>Number of desktop computers</b>									
None	61	32	51	2,200	643	1,317	27.9	49.0	38.7
1 to 4	175	54	179	2,044	782	2,575	85.6	69.3	69.7
5 to 9	99	37	103	1,156	515	1,866	85.9	71.6	55.3
10 to 19	66	32	121	979	429	1,958	67.7	75.6	61.6
20 to 49	141	66	147	1,623	873	1,957	87.2	75.1	75.1
50 to 99	66	38	97	1,074	434	1,259	61.1	87.0	76.8
100 to 249	57	Q	109	826	653	1,179	69.4	143.9	92.6
250 or more	173	65	147	1,493	653	1,268	115.7	100.0	116.2
<b>Number of laptop computers</b>									
None	217	87	242	3,845	1,367	4,097	56.4	63.8	59.1
1 to 4	195	85	202	2,580	1,163	3,524	75.5	73.3	57.4
5 to 9	73	44	75	1,113	509	1,384	65.6	85.5	54.2
10 to 19	66	29	159	904	405	1,579	73.2	72.1	100.8
20 to 49	71	Q	136	927	740	1,444	76.4	139.7	94.2
50 to 99	83	22	60	774	309	568	107.5	71.1	105.1
100 to 249	73	23	42	766	285	388	95.4	78.9	109.1
250 or more	61	24	38	486	202	395	125.8	120.4	95.6
<b>Number of dedicated servers</b>									
None	299	106	289	5,195	1,792	5,122	57.6	59.2	56.3
1 to 4	307	163	362	3,980	2,061	5,143	77.1	79.3	70.3
5 to 9	61	30	97	749	357	1,131	81.1	84.5	85.7
10 to 19	55	Q	77	622	Q	899	88.6	201.2	86.1
20 to 49	67	30	39	455	282	497	146.2	105.3	78.0
50 or more	Q	Q	91	Q	Q	589	129.5	Q	154.8
<b>Number of photocopiers</b>									
None	285	117	258	4,631	1,621	4,269	61.5	72.4	60.4
One	138	70	188	1,915	1,003	3,402	72.0	69.6	55.2
2 to 4	206	77	227	2,743	1,137	2,948	75.0	67.5	77.1
5 to 9	53	32	95	804	399	1,148	66.2	79.4	82.4
10 or more	157	Q	187	1,300	821	1,613	121.0	148.3	115.9

**Table C9. Consumption and gross energy intensity by Census division (part 3) 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)		
	West		West		West		West		
	South central	Mountain	Pacific	South central	Mountain	Pacific	South central	Mountain	Pacific
<b>All buildings</b>	839	417	954	11,394	4,981	13,379	73.6	83.8	71.3
<b>Number of TVs or video displays</b>									
None	131	85	180	3,635	1,447	4,264	36.0	59.0	42.3
One	106	28	99	1,374	524	1,482	77.3	54.1	67.0
2 to 4	179	46	169	2,158	688	2,477	83.1	67.3	68.1
5 to 9	122	31	130	1,001	292	1,419	121.8	107.3	91.6
10 to 19	76	40	93	1,058	488	936	71.9	82.1	99.7
20 to 49	59	58	102	814	620	1,139	71.9	94.1	89.5
50 to 99	Q	34	Q	Q	409	622	101.1	82.9	88.2
100 or more	97	Q	126	672	Q	1,039	144.7	182.9	121.2
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>									
Snack bar or concession stand	99	Q	135	884	723	1,211	112.0	159.7	111.8
Fast food or small restaurant	134	125	168	1,053	871	1,593	127.7	143.9	105.7
Cafeteria or large restaurant	145	125	167	1,625	916	1,320	88.9	136.3	126.4
Commercial kitchen/food preparation area	153	137	221	1,503	992	1,859	101.8	138.3	119.1
Small kitchen area	106	Q	118	1,498	840	1,574	70.7	130.8	75.0
<b>Separate computer areas (more than one may apply)</b>									
Data center or server farm	139	Q	215	1,120	662	1,704	124.2	173.5	125.9
Computer-based training room	217	163	167	2,347	1,364	1,947	92.3	119.6	85.9
Student or public computer center	158	Q	132	2,051	1,010	1,283	77.2	111.2	102.6
<b>HVAC conservation features (more than one may apply)</b>									
Economizer cycle	281	222	449	2,706	2,022	4,849	104.0	109.9	92.6
Regular HVAC maintenance	745	372	840	8,319	3,991	10,526	89.6	93.2	79.8
Building automation system (BAS) <sup>2</sup>	438	242	528	4,628	2,310	5,233	94.6	104.8	101.0
<b>Window and interior lighting features (more than one may apply)</b>									
Multipaned windows	565	333	610	6,592	3,822	7,219	85.7	87.2	84.4
Tinted window glass	560	261	599	6,785	2,717	7,937	82.6	95.9	75.4
Reflective window glass	169	145	279	1,765	1,264	3,032	95.5	114.7	92.0
External overhangs or awnings	354	225	469	4,009	2,237	5,310	88.3	100.6	88.3
Skylights or atriums	231	155	324	2,394	1,510	4,519	96.6	102.9	71.8
Light scheduling	298	183	487	3,324	1,650	5,388	89.7	110.9	90.3
Occupancy sensors	336	211	513	3,364	2,027	6,273	99.8	104.3	81.8
Multi-level lighting or dimming	106	144	279	1,086	1,200	2,398	97.8	119.6	116.2
Daylight harvesting	45	51	116	666	461	1,103	67.1	109.7	105.0
Demand responsive lighting	Q	Q	91	Q	Q	1,332	Q	Q	68.6
Building automation system (BAS) for lighting <sup>2</sup>	103	72	215	1,298	807	2,146	79.4	89.5	100.0

**Table C9. Consumption and gross energy intensity by Census division (part 3) 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)		
	West			West			West		
	South	Mountain	Pacific	South	Mountain	Pacific	South	Mountain	Pacific
All buildings	839	417	954	11,394	4,981	13,379	73.6	83.8	71.3
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>									
Heating	563	289	698	7,371	3,738	9,704	76.3	77.3	71.9
Cooling	561	271	700	7,315	3,479	9,697	76.8	77.8	72.2
Lighting	763	394	882	9,645	4,497	12,034	79.1	87.6	73.3

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

**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- dry/ hot-dry		Hot-humid		Marine		Very cold/ cold		Mixed- humid		dry/ hot-dry		Hot-humid	
	Mixed-	Very	dry/	hot-	Hot-	Mar-	Very	dry/	Hot-	Mar-	Very	dry/	hot-	Hot-	Mar-	
<b>All buildings</b>	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	
<b>Building floorspace (square feet)</b>																
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	
<b>Principal building activity</b>																
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	
<b>Year constructed</b>																
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	

**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)						
	Mixed-dry/	Very cold/	Mixed- humid	dry/	Hot-dry	Humid	Marine	Very cold/	Mixed-humid	Mixed-dry/	Hot-dry	Humid	Marine	Very cold/	Mixed- humid	dry/	Hot-dry	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				
<b>Census region and division</b>																			
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				
<b>Number of floors</b>																			
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				
<b>Elevators and escalators (more than one may apply)</b>																			
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				
<b>Number of elevators</b>																			
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				
<b>Number of workers (main shift)</b>																			
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				
<b>Weekly operating hours</b>																			
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				

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

**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- dry/ hot-dry		Hot- humid		Mar- ine		Very cold/ cold		Mixed- humid		Mixed- dry/ hot-dry		Hot- humid		Mar- ine	
	Mixed-	dry/	Very	dry/	Hot-	Mar-	Very	dry/	Mixed-	dry/	Hot-	Mar-	Very	dry/	Hot-	Mar-		
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			
<b>Roof characteristics</b>																		
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			
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>																		
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			
<b>Energy sources (more than one may apply)</b>																		
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			
<b>Space-heating energy sources (more than one may apply)</b>																		
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			
<b>Primary space-heating energy source</b>																		
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			

**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)									
					Mixed-dry/hot-dry				Very cold/cold				Mixed-humid				Mixed-dry/hot-dry					
	Very cold/cold	Mixed-cold humid	dry/hot-dry	Hot-humid	Marine	Very cold/cold	Mixed-humid	dry/hot-dry	Hot-humid	Marine	Very cold/cold	Mixed-humid	dry/hot-dry	Hot-humid	Marine	Very cold/cold	Mixed-humid	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							
<b>Cooling energy sources (more than one may apply)</b>																						
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							
<b>Water-heating energy sources (more than one may apply)</b>																						
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							
<b>Cooking energy sources (more than one may apply)</b>																						
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							
<b>Energy end uses (more than one may apply)</b>																						
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	119.5							
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							
<b>Percent of floorspace heated</b>																						
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							
<b>Percent of floorspace cooled</b>																						
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							
<b>Percent lit when open</b>																						
Zero	Q	Q	Q	Q	Q	Q	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							
<b>Percent lit during off hours</b>																						
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- cold/humid	Mixed- dry/hot- dry	Hot- humid	Mar- ine	Very cold/ cold	Mixed- humid	Mixed- dry/hot- dry	Hot- humid	Mar- ine	Very cold/ cold	Mixed- cold/humid	Mixed- dry/hot- dry	Hot- humid	Mar- ine			
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			
<b>Heating equipment (more than one may apply)</b>																		
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			
<b>Cooling equipment (more than one may apply)</b>																		
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			
<b>Main equipment replaced since 1990 (more than one may apply)</b>																		
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			
<b>Water-heating equipment</b>																		
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			
<b>Lighting equipment types (more than one may apply)</b>																		
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			
<b>Refrigeration equipment (more than one may apply)</b>																		
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		dry/ hot-dry		Hot- humid		Mar- ine		Very cold/ cold		Mixed- humid		dry/ hot-dry		Hot- humid		Mar- ine		
	Mixed-	dry/	Very	cold/	Mixed-	dry/	Very	cold/	Mixed-	dry/	Very	cold/	Mixed-	dry/	Very	cold/	Mixed-	dry/	Very	cold/	
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						
<b>Office equipment (more than one may apply)</b>																					
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						
<b>Number of desktop computers</b>																					
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						
<b>Number of laptop computers</b>																					
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						
<b>Number of dedicated servers</b>																					
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						
<b>Number of photocopiers</b>																					
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/ dry/ hot-dry				Mixed- cold/ humid				Very cold/ dry/ hot-dry				Mixed- cold/ humid			
	Very cold/ dry/ hot-dry	Mixed- cold/ humid	Hot- dry	Mar- ine	Very cold/ dry/ hot-dry	Mixed- cold/ humid	Hot- dry	Mar- ine	Very cold/ dry/ hot-dry	Mixed- cold/ humid	Hot- dry	Mar- ine	Very cold/ dry/ hot-dry	Mixed- cold/ humid	Hot- dry	Mar- ine				
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					
<b>Number of TVs or video displays</b>																				
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					
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>																				
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					
<b>Separate computer areas (more than one may apply)</b>																				
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					
<b>HVAC conservation features (more than one may apply)</b>																				
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) <sup>2</sup>	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					
<b>Window and interior lighting features (more than one may apply)</b>																				
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 <sup>2</sup>	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- cold/ humid	dry/ hot-dry	Hot- humid	Mar- ine	Very cold/ cold	Mixed- humid	dry/ hot-dry	Hot- humid	Mar- ine	Very cold/ cold	Mixed- humid	dry/ hot-dry	Hot- humid	Mar- ine	
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	
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>																
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	

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

**Table C11. Consumption and gross energy intensity by building size 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)		
	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet
	All buildings	1,369	2,766	2,828	16,941	39,940	30,212	80.8	69.3
<b>Principal building activity</b>									
Education	43	408	391	744	6,067	5,427	58.0	67.2	72.0
Food sales	119	128	Q	557	562	Q	213.7	228.8	Q
Food service	429	85	N	1,429	390	N	300.2	218.7	N
Health care	35	147	535	510	1,209	2,437	68.8	121.9	219.6
Inpatient	N	57	492	N	282	2,092	N	200.7	235.2
Outpatient	35	91	43	510	927	345	68.8	97.9	124.8
Lodging	23	264	277	299	2,739	2,788	78.4	96.4	99.4
Mercantile	151	476	380	1,782	5,379	4,168	84.8	88.5	91.3
Retail (other than mall)	79	139	146	1,346	2,435	1,659	58.5	56.9	88.3
Enclosed and strip malls	72	337	234	436	2,944	2,510	166.0	114.6	93.2
Office	187	483	572	3,183	6,547	6,221	58.6	73.7	91.9
Public assembly	60	195	226	1,034	2,596	1,929	57.7	75.0	117.0
Public order and safety	22	50	61	331	557	552	65.9	89.3	110.8
Religious worship	55	106	Q	1,362	2,953	Q	40.4	35.9	Q
Service	142	116	Q	2,082	2,268	Q	68.2	51.4	Q
Warehouse and storage	63	159	206	2,456	5,777	4,845	25.8	27.6	42.6
Other	33	126	127	393	942	667	83.4	133.9	190.7
Vacant	7	22	13	779	1,954	523	8.4	11.3	24.7
<b>Year constructed</b>									
Before 1920	70	90	78	1,159	1,769	1,054	60.7	50.6	74.2
1920 to 1945	108	153	157	1,412	2,602	2,012	76.6	59.0	77.9
1946 to 1959	116	220	200	1,711	3,471	2,199	68.1	63.4	91.1
1960 to 1969	171	379	352	1,955	4,977	3,430	87.3	76.2	102.6
1970 to 1979	198	380	433	2,043	4,982	3,820	96.8	76.4	113.4
1980 to 1989	219	463	481	2,893	6,637	5,701	75.8	69.8	84.4
1990 to 1999	221	435	446	2,741	6,232	4,830	80.4	69.9	92.3
2000 to 2003	89	231	259	1,039	3,116	3,060	85.3	74.2	84.6
2004 to 2007	83	209	236	1,038	3,363	2,124	79.6	62.3	111.0
2008 to 2012	94	204	185	950	2,791	1,982	99.3	73.1	93.5

**Table C11. Consumption and gross energy intensity by building size 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)		
	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet
	All buildings	1,369	2,766	2,828	16,941	39,940	30,212	80.8	69.3
<b>Census region and division</b>									
Northeast	195	534	730.0	2,305.0	6,728.0	6,501.0	84.6	79.4	112.3
New England	60	166	141.0	946.0	2,141.0	1,215.0	63.7	77.6	116.4
Middle Atlantic	135	368	589.0	1,359.0	4,587.0	5,287.0	99.3	80.2	111.3
Midwest	301	668	597.0	3,729.0	8,646.0	6,544.0	80.7	77.3	91.2
East North Central	209	463	459.0	2,128.0	5,672.0	4,942.0	98.0	81.7	92.9
West North Central	92	205	138.0	1,602.0	2,974.0	1,602.0	57.7	68.8	86.0
South	571	1,048	947.0	6,918.0	15,877.0	11,485.0	82.5	66.0	82.5
South Atlantic	295	533	530.0	3,328.0	8,031.0	6,621.0	88.7	66.4	80.0
East South Central	84	166	119.0	1,219.0	2,272.0	1,414.0	69.2	73.1	84.0
West South Central	191	349	299.0	2,371.0	5,574.0	3,450.0	80.5	62.7	86.6
West	302	516	554.0	3,989.0	8,689.0	5,682.0	75.7	59.4	97.5
Mountain	94	134	189.0	1,032.0	2,182.0	1,766.0	90.9	61.6	107.1
Pacific	208	381	365.0	2,957.0	6,507.0	3,916.0	70.4	58.6	93.1
<b>Climate region<sup>1</sup></b>									
Very cold/Cold	483	1,163	1,100	6,106	14,795	10,997	79.1	78.6	100.0
Mixed-humid	472	827	971	5,378	11,851	10,644	87.8	69.8	91.2
Mixed-dry/Hot-dry	184	294	326	2,664	5,842	3,531	69.0	50.3	92.4
Hot-humid	197	390	360	2,370	6,232	4,229	83.3	62.5	85.1
Marine	32	93	71	423	1,220	811	75.8	76.5	88.0
<b>Number of floors</b>									
One	1,010	1,305	516	12,287	19,533	7,989	82.2	66.8	64.6
Two	271	755	435	3,496	11,628	5,083	77.4	64.9	85.6
Three	73	355	240	952	4,512	2,675	76.6	78.6	89.9
Four to nine	15	343	1,073	206	4,195	9,134	75.1	81.8	117.5
Ten or more	N	Q	563	N	Q	5,331	N	Q	105.6
<b>Elevators and escalators (more than one may apply)</b>									
Any elevators	30	914	2,239	361	10,827	20,932	84.4	84.4	107.0
Number of elevators									
One	26	536	322	337	6,828	3,992	78.2	78.5	80.6
Two to five	Q	375	863	Q	3,977	8,817	Q	94.2	97.9
Six or more	N	Q	1,054	N	Q	8,123	N	Q	129.8
Any escalators	N	10	367	N	98	3,556	N	100.6	103.2
<b>Number of workers (main shift)</b>									
Fewer than 5	509	229	18	9,205	7,457	1,089	55.3	30.7	17.0
5 to 9	357	228	13	4,158	4,337	478	85.9	52.6	26.3
10 to 19	354	388	31	2,586	6,203	834	136.8	62.5	37.0
20 to 49	147	848	193	986	10,964	2,564	149.1	77.3	75.2
50 to 99	Q	680	468	Q	7,445	6,024	Q	91.3	77.6
100 to 249	N	355	703	N	3,157	7,784	N	112.4	90.4
250 or more	N	39	1,402	N	376	11,439	N	103.0	122.6

**Table C11. Consumption and gross energy intensity by building size 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)		
	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet
	All buildings	1,369	2,766	2,828	16,941	39,940	30,212	80.8	69.3
<b>Weekly operating hours</b>									
Fewer than 40	104	103	22	3,487	4,007	727	29.7	25.8	30.1
40 to 48	238	397	197	4,355	7,975	3,498	54.6	49.8	56.4
49 to 60	274	577	407	3,985	10,618	5,927	68.8	54.4	68.6
61 to 84	288	610	472	2,125	7,725	6,017	135.4	78.9	78.5
85 to 167	293	461	344	1,328	3,882	4,185	220.9	118.8	82.1
Open continuously	172	618	1,387	1,662	5,733	9,859	103.6	107.8	140.6
<b>Ownership and occupancy</b>									
Nongovernment owned	1,243	2,058	2,075	15,030	30,573	21,947	82.7	67.3	94.6
Owner occupied	660	960	996	7,989	13,824	8,824	82.6	69.4	112.8
Leased to tenant(s)	512	870	659	5,459	11,856	8,800	93.8	73.4	74.9
Owner occupied and leased	68	222	419	1,017	3,765	4,091	66.9	58.9	102.5
Unoccupied	3	6	Q	565	1,128	Q	5.0	5.4	Q
Government owned	126	709	753	1,911	9,367	8,266	66.0	75.7	91.1
Federal	Q	Q	100	Q	Q	1,074	Q	Q	93.4
State	24	241	289	332	2,595	2,612	72.7	93.0	110.7
Local	95	437	363	1,478	6,373	4,580	64.4	68.6	79.3
<b>Party responsible for operation and maintenance of energy systems</b>									
Building owner	1,085	2,236	2,486	14,371	33,416	25,915	75.5	66.9	95.9
Business owner or tenant	249	451	283	2,222	5,538	3,548	112.2	81.5	79.7
Property management	13	36	48	123	529	598	101.7	67.9	79.9
Other	21	43	Q	225	456	Q	95.3	93.8	Q
<b>Provider of direct input on energy-related equipment purchases</b>									
Building owner	1,117	2,341	2,526	14,790	35,032	26,448	75.5	66.8	95.5
Business owner or tenant	199	345	222	1,729	3,791	2,735	114.8	91.1	81.3
Property management	11	16	33	82	315	483	139.2	51.3	68.3
Other	42	64	47	339	801	546	124.4	79.8	85.4
<b>Number of establishments</b>									
One	1,121	1,810	1,554	13,108	25,684	16,202	85.5	70.5	95.9
2 to 5	219	531	649	2,788	7,655	7,312	78.7	69.4	88.8
6 to 10	23	196	144	323	2,666	1,437	72.2	73.7	100.1
11 to 20	Q	169	185	Q	1,847	1,815	Q	91.3	101.7
More than 20	N	52	294	Q	659	3,136	N	79.4	93.9
Currently unoccupied	3	8	Q	655	1,428	Q	5.0	5.5	Q

**Table C11. Consumption and gross energy intensity by building size 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)		
	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet
	All buildings	1,369	2,766	2,828	16,941	39,940	30,212	80.8	69.3
<b>Predominant exterior wall material</b>									
Brick, stone, or stucco	700	1,479	1,278	6,785	20,210	13,467	103.1	73.2	94.9
Concrete (block or poured)	288	699	732	3,254	9,355	8,117	88.5	74.7	90.2
Concrete panels	29	209	427	499	3,204	4,990	57.3	65.2	85.5
Siding or shingles	194	145	Q	2,916	2,298	536	66.4	63.0	115.1
Metal panels	135	181	112	3,302	4,095	1,275	41.0	44.1	87.8
Window glass	Q	23	136	Q	250	1,062	Q	90.7	127.7
Other	Q	Q	52	Q	Q	407	Q	Q	126.9
No one major type	Q	Q	30	Q	Q	358	Q	Q	85.2
<b>Predominant roof material</b>									
Metal surfacing	333	356	175	5,733	7,597	2,587	58.1	46.9	67.8
Synthetic or rubber	283	939	1,220	2,341	11,360	12,115	121.0	82.6	100.7
Built-up	198	673	991	2,127	9,804	9,904	93.1	68.7	100.1
Slate or tile shingles	129	138	104	1,333	1,874	1,100	97.1	73.6	94.3
Wooden materials (including shingles)	54	29	Q	544	448	Q	98.6	65.1	Q
Asphalt, fiberglass, or other shingles	352	553	200	4,643	7,735	2,726	75.8	71.5	73.5
Concrete	Q	47	74	Q	595	914	Q	79.4	81.0
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
No one major type	Q	Q	27	Q	Q	449	Q	Q	59.4
<b>Roof characteristics</b>									
<b>Roof tilt</b>									
Flat	569	1,731	2,176	5,142	22,453	22,028	110.7	77.1	98.8
Shallow pitch	485	603	509	6,912	10,624	6,316	70.2	56.8	80.5
Steeper pitch	314	432	144	4,887	6,863	1,868	64.3	63.0	76.9
Cool roof	228	593	1,016	1,980	7,359	10,292	115.4	80.6	98.7

**Table C11. Consumption and gross energy intensity by building size 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)		
	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet
	All buildings	1,369	2,766	2,828	16,941	39,940	30,212	80.8	69.3
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>									
Any type of renovation	571	1,385	1,806	6,198	18,031	17,986	92.1	76.8	100.4
Addition or annex	117	418	757	1,248	5,269	6,505	93.8	79.3	116.4
Reduction in floorspace	32	31	162	273	437	1,042	118.0	70.9	155.8
Roof replacement	251	680	1,055	2,926	8,359	9,631	85.8	81.4	109.5
Exterior wall replacement	52	116	231	567	1,546	2,117	91.0	75.2	109.0
Interior wall reconfiguration	240	673	1,143	2,554	8,641	10,145	93.9	77.9	112.7
Window replacement	153	378	559	1,603	5,399	5,264	95.4	70.1	106.2
HVAC equipment upgrade	305	838	1,402	3,103	10,851	12,825	98.2	77.2	109.3
Lighting upgrade	298	834	1,308	2,805	9,786	12,912	106.4	85.2	101.3
Electrical upgrade	225	466	917	2,187	6,198	7,776	102.9	75.2	117.9
Plumbing system upgrade	211	447	739	1,919	5,556	6,354	109.9	80.4	116.3
Insulation upgrade	112	245	414	1,122	3,289	3,196	100.2	74.5	129.4
Fire, safety, or security upgrade	186	525	974	1,772	6,452	8,972	104.7	81.4	108.6
Structural upgrade	50	121	253	431	1,574	1,909	116.1	77.0	132.5
Other	Q	Q	36	Q	Q	442	Q	Q	80.8
No renovations	704	1,177	837	9,793	19,117	10,244	71.9	61.6	81.7
Buildings constructed 2008 or later	94	204	185	950	2,791	1,982	99.3	73.1	93.5
<b>Energy sources (more than one may apply)</b>									
Electricity	1,369	2,766	2,828	15,981	38,841	30,046	85.6	71.2	94.1
Natural gas	1,015	2,206	2,324	8,575	26,906	23,244	118.4	82.0	100.0
Fuel oil	94	578	1,559	1,163	5,435	13,602	81.2	106.3	114.6
District heat	Q	138	660	Q	1,048	4,878	Q	131.6	135.3
District chilled water	Q	89	563	Q	901	3,643	Q	98.6	154.5
Propane	82	250	252	1,721	3,086	2,899	47.5	80.8	86.9
Other	28	114	159	496	1,572	1,758	56.4	72.7	90.4
<b>Space-heating energy sources (more than one may apply)</b>									
Electricity	744	1,672	1,482	8,569	23,280	17,181	86.9	71.8	86.2
Natural gas	839	1,906	1,701	7,665	23,741	18,104	109.5	80.3	93.9
Fuel oil	55	134	172	778	1,999	1,574	70.3	66.9	109.0
District heat	Q	138	656	Q	1,048	4,839	Q	131.6	135.5
Propane	44	68	39	1,220	1,308	539	36.1	52.3	72.0
Other	14	25	Q	342	587	Q	39.7	43.1	Q
<b>Primary space-heating energy source</b>									
Electricity	476	801	568	5,631	13,195	7,378	84.5	60.7	77.0
Natural gas	731	1,638	1,502	6,851	19,975	16,161	106.7	82.0	93.0
Fuel oil	47	88	52	609	1,257	676	77.9	70.0	76.6
District heat	Q	138	646	Q	1,048	4,711	Q	131.6	137.2
Propane	27	30	Q	937	933	Q	29.3	32.5	Q
Other	7	13	Q	222	361	Q	29.7	36.7	Q

**Table C11. Consumption and gross energy intensity by building size 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)		
	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet
	All buildings	1,369	2,766	2,828	16,941	39,940	30,212	80.8	69.3
<b>Cooling energy sources (more than one may apply)</b>									
Electricity	1,265	2,599	2,457	13,359	35,444	27,231	94.7	73.3	90.2
Natural gas	Q	Q	85	Q	Q	564	Q	Q	150.7
District chilled water	Q	89	563	Q	901	3,643	Q	98.6	154.5
<b>Water-heating energy sources (more than one may apply)</b>									
Electricity	608	1,309	1,184	8,230	19,572	14,953	73.9	66.9	79.2
Natural gas	711	1,666	1,652	4,890	18,829	15,804	145.3	88.5	104.5
Fuel oil	17	67	90	223	866	822	76.3	77.5	109.4
District heat	Q	86	566	Q	612	3,934	Q	140.3	143.8
Propane	24	41	Q	492	721	Q	48.6	56.4	Q
<b>Cooking energy sources (more than one may apply)</b>									
Electricity	390	837	1,283	2,976	9,460	12,715	131.2	88.5	100.9
Natural gas	499	947	1,569	2,070	8,921	13,779	241.0	106.1	113.8
Propane	35	62	70	524	757	721	66.5	82.4	96.8
<b>Energy end uses (more than one may apply)</b>									
Buildings with space heating	1,298	2,709	2,775	14,289	36,770	29,019	90.9	73.7	95.6
Buildings with cooling	1,274	2,681	2,819	13,428	36,239	29,627	94.9	74.0	95.2
Buildings with water heating	1,275	2,716	2,807	13,338	36,472	29,205	95.6	74.5	96.1
Buildings with cooking	718	1,354	2,007	4,806	14,862	18,878	149.4	91.1	106.3
Buildings with manufacturing	65	173	122	826	2,638	1,614	79.2	65.5	75.7
Buildings with electricity generation	93	801	1,909	917	7,180	17,545	101.8	111.5	108.8
<b>Percent of floorspace heated</b>									
Not heated	70	58	53	2,652	3,170	1,193	26.5	18.1	44.7
1 to 50	118	189	161	2,338	5,016	2,776	50.6	37.6	57.9
51 to 99	224	509	565	2,252	6,174	6,224	99.5	82.5	90.8
100	956	2,011	2,049	9,699	25,580	20,019	98.6	78.6	102.4
<b>Percent of floorspace cooled</b>									
Not cooled	95	85	9	3,513	3,701	585	27.1	23.0	15.4
1 to 50	233	443	314	3,679	9,554	5,657	63.2	46.3	55.4
51 to 99	273	865	1,006	2,673	9,522	10,532	102.1	90.8	95.5
100	768	1,374	1,500	7,076	17,162	13,438	108.6	80.0	111.6
<b>Percent lit when open</b>									
Zero	2	Q	Q	240	Q	Q	9.7	Q	Q
1 to 50	197	303	143	3,559	6,665	2,405	55.2	45.5	59.4
51 to 99	468	1,301	1,280	4,984	16,289	13,541	93.9	79.8	94.6
100	690	1,153	1,400	6,625	15,184	13,917	104.2	75.9	100.6
Building never open/electricity not used	12	8	Q	1,534	1,737	333	7.7	4.9	Q

**Table C11. Consumption and gross energy intensity by building size 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)		
	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet
	All buildings	1,369	2,766	2,828	16,941	39,940	30,212	80.8	69.3
<b>Percent lit during off hours</b>									
Zero	489	543	261	8,255	11,757	4,734	59.2	46.2	55.2
1 to 50	747	1,875	1,724	6,866	24,296	19,591	108.7	77.2	88.0
51 to 100	91	261	666	600	2,041	4,285	151.4	127.7	155.5
Building always open with no "off hours"	42	88	176	260	748	1,435	163.1	117.0	122.9
Electricity not used	N	N	N	960	1,098	Q	N	N	N
<b>Heating equipment (more than one may apply)</b>									
Heat pumps	154	368	377	1,906	5,784	4,155	81.0	63.6	90.7
Furnaces	191	302	122	2,508	4,714	1,433	76.2	64.1	85.4
Individual space heaters	258	618	696	3,772	8,898	8,096	68.5	69.4	85.9
District heat	Q	138	656	Q	1,048	4,839	Q	131.6	135.5
Boilers	135	850	1,277	1,134	9,652	11,657	119.2	88.1	109.5
Packaged heating units	882	1,773	1,428	8,431	23,972	16,785	104.6	73.9	85.1
Other	15	113	64	163	886	525	91.9	127.1	121.4
<b>Cooling equipment (more than one may apply)</b>									
Residential-type central air conditioners	431	504	152	5,318	7,804	1,643	81.0	64.6	92.2
Heat pumps	185	392	363	2,177	6,148	4,214	84.8	63.7	86.0
Individual air conditioners	134	394	485	1,999	5,416	5,005	67.1	72.8	96.8
District chilled water	Q	89	563	Q	901	3,643	Q	98.6	154.5
Central chillers	Q	479	1,361	Q	4,449	12,484	Q	107.7	109.0
Packaged air conditioning units	661	1,694	1,617	5,236	21,729	18,188	126.3	78.0	88.9
Swamp coolers	40	63	72	292	864	763	137.3	72.9	95.0
Other	Q	Q	35	Q	Q	265	Q	Q	131.9
<b>Main equipment replaced since 1990 (more than one may apply)</b>									
Heating	534	961	669	5,739	13,465	8,353	93.0	71.4	80.1
Cooling	576	1,028	917	6,043	14,166	10,493	95.4	72.5	87.4
<b>Water-heating equipment</b>									
Centralized system	1,026	1,716	1,468	10,637	22,855	14,043	96.5	75.1	104.5
Distributed system	132	380	319	1,901	6,205	4,581	69.6	61.3	69.7
Combination of centralized and distributed system	116	620	1,020	800	7,412	10,581	145.0	83.7	96.4

**Table C11. Consumption and gross energy intensity by building size 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)		
	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet
	All buildings	1,369	2,766	2,828	16,941	39,940	30,212	80.8	69.3
<b>Lighting equipment types (more than one may apply)</b>									
Incandescent	515	1,261	1,764	5,370	15,993	17,044	96.0	78.8	103.5
Standard fluorescent	1,259	2,674	2,781	14,055	36,814	29,212	89.6	72.6	95.2
Compact fluorescent	700	1,882	2,513	6,555	23,389	23,873	106.8	80.5	105.2
High-intensity discharge (HID)	104	734	1,348	1,109	8,653	13,635	94.2	84.9	98.9
Halogen	268	946	1,481	2,431	11,448	14,179	110.1	82.6	104.5
LED	163	701	1,500	1,061	7,613	13,397	153.1	92.0	111.9
Other	Q	Q	35	Q	Q	293	Q	Q	120.4
<b>Refrigeration equipment (more than one may apply)</b>									
Any refrigeration	1,181	2,538	2,753	12,013	33,246	28,386	98.3	76.3	97.0
Walk-in units	578	1,066	1,880	2,142	9,277	16,942	270.0	115.0	111.0
Cases or cabinets	508	1,017	1,791	2,483	9,809	16,427	204.5	103.7	109.0
Large cold storage areas	42	158	329	156	1,248	2,767	269.1	127.0	119.0
Commercial ice makers	483	1,190	2,058	2,100	11,717	18,918	230.2	101.6	108.8
Residential-type or compact units	786	2,079	2,317	10,311	28,259	23,811	76.2	73.6	97.3
Vending machines	178	1,583	2,417	1,784	17,672	24,480	99.8	89.6	98.7
No refrigeration	188	228	76	4,928	6,694	1,826	38.2	34.1	41.4
<b>Office equipment (more than one may apply)</b>									
Desktop computers	1,123	2,667	2,796	11,924	35,779	29,360	94.2	74.6	95.2
With flat screen monitors	1,091	2,638	2,794	11,435	35,422	29,303	95.4	74.5	95.4
With multiple monitors	228	967	1,747	2,424	12,296	16,226	94.2	78.6	107.6
Laptop computers	676	2,163	2,627	7,905	28,847	26,734	85.6	75.0	98.2
Dedicated servers	468	1,854	2,462	4,641	23,333	25,395	100.8	79.5	97.0
Laser printers	621	1,940	2,235	6,677	24,644	22,934	93.0	78.7	97.4
Inkjet printers	664	1,143	1,097	6,979	16,716	12,540	95.1	68.3	87.5
FAX machines	856	2,336	2,515	9,355	30,661	26,667	91.5	76.2	94.3
Photocopiers	425	2,078	2,607	5,688	27,050	26,539	74.6	76.8	98.2
<b>Number of desktop computers</b>									
None	246	99	Q	5,017	4,161	852	48.9	23.8	Q
1 to 4	709	437	38	6,942	7,402	1,324	102.1	59.0	29.0
5 to 9	268	400	70	2,966	5,430	1,026	90.2	73.7	68.4
10 to 19	88	452	136	1,346	6,179	1,863	65.3	73.2	73.1
20 to 49	50	684	386	636	7,902	4,556	79.0	86.6	84.8
50 to 99	Q	337	304	Q	4,563	3,694	Q	73.9	82.4
100 to 249	Q	289	667	Q	3,571	6,152	Q	80.9	108.5
250 or more	N	68	1,193	N	732	10,745	N	92.8	111.0

**Table C11. Consumption and gross energy intensity by building size 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)		
	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet
	All buildings	1,369	2,766	2,828	16,941	39,940	30,212	80.8	69.3
<b>Number of laptop computers</b>									
None	692	603	202	9,036	11,093	3,478	76.6	54.4	58.0
1 to 4	566	742	208	6,543	11,397	3,221	86.6	65.1	64.5
5 to 9	77	387	233	994	5,079	2,273	78.0	76.3	102.4
10 to 19	28	368	323	297	4,518	3,528	93.2	81.4	91.6
20 to 49	Q	377	525	Q	4,587	4,985	Q	82.2	105.4
50 to 99	N	185	321	N	1,937	3,297	N	95.7	97.2
100 to 249	N	65	460	N	982	4,235	N	65.9	108.7
250 or more	N	Q	557	N	Q	5,197	N	Q	107.2
<b>Number of dedicated servers</b>									
None	901	913	366	12,300	16,607	4,817	73.3	54.9	75.9
1 to 4	449	1,440	829	4,525	18,595	10,976	99.2	77.5	75.5
5 to 9	Q	206	349	Q	2,446	3,712	Q	84.1	94.1
10 to 19	Q	102	487	Q	1,266	4,425	Q	80.5	110.1
20 to 49	Q	91	305	Q	822	2,928	Q	110.6	104.2
50 or more	Q	Q	492	Q	Q	3,354	Q	Q	146.7
<b>Number of photocopiers</b>									
None	944	688	221	11,253	12,890	3,674	83.9	53.4	60.3
One	304	678	221	4,197	9,634	3,250	72.3	70.3	67.9
2 to 4	111	948	537	1,380	12,031	6,902	80.6	78.8	77.8
5 to 9	Q	287	493	Q	3,485	5,312	Q	82.3	92.7
10 or more	Q	166	1,356	Q	1,900	11,075	Q	87.3	122.5
<b>Number of TVs or video displays</b>									
None	488	541	185	8,683	11,772	3,885	56.2	46.0	47.7
One	332	302	63	3,854	4,899	1,237	86.1	61.6	51.3
2 to 4	353	698	260	3,217	9,910	3,338	109.7	70.4	77.8
5 to 9	144	365	267	908	4,218	3,021	159.0	86.6	88.4
10 to 19	34	352	424	180	3,919	4,069	187.8	89.7	104.3
20 to 49	Q	262	441	Q	2,983	5,010	Q	87.9	88.0
50 to 99	Q	123	305	Q	1,169	3,177	Q	105.3	95.9
100 or more	N	123	883	N	1,070	6,477	N	115.4	136.3
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>									
Snack bar or concession stand	61	203	848	378	1,958	7,549	160.4	103.8	112.4
Fast food or small restaurant	94	355	757	438	2,666	6,684	215.4	133.1	113.3
Cafeteria or large restaurant	Q	356	1,260	Q	4,268	10,913	Q	83.4	115.5
Commercial kitchen/food preparation area	43	587	1,168	536	5,763	9,850	80.6	101.9	118.6
Small kitchen area	146	420	621	2,297	5,931	5,826	63.7	70.8	106.6

**Table C11. Consumption and gross energy intensity by building size 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)		
	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet
	All buildings	1,369	2,766	2,828	16,941	39,940	30,212	80.8	69.3
<b>Separate computer areas (more than one may apply)</b>									
Data center or server farm	Q	210	1,132	Q	1,941	9,058	Q	108.4	125.0
Computer-based training room	31	479	1,187	325	5,568	11,831	94.5	86.0	100.3
Student or public computer center	21	441	813	356	5,710	8,276	58.7	77.3	98.2
<b>HVAC conservation features (more than one may apply)</b>									
Economizer cycle	170	1,005	1,967	1,118	11,110	18,521	152.5	90.5	106.2
Regular HVAC maintenance	977	2,453	2,773	9,050	31,653	28,541	108.0	77.5	97.2
Building automation system (BAS) <sup>2</sup>	175	1,202	2,332	1,601	13,348	22,101	109.3	90.1	105.5
<b>Window and interior lighting features (more than one may apply)</b>									
Multipaned windows	865	2,089	2,296	9,016	27,885	23,461	95.9	74.9	97.9
Tinted window glass	530	1,512	1,931	5,223	20,337	19,465	101.4	74.4	99.2
Reflective window glass	140	570	942	1,542	6,613	7,753	90.7	86.3	121.5
External overhangs or awnings	623	1,198	1,267	5,805	14,678	11,705	107.4	81.6	108.2
Skylights or atriums	109	610	1,291	1,539	8,361	12,360	71.1	73.0	104.4
Light scheduling	298	1,054	1,578	2,401	12,227	15,635	124.2	86.2	100.9
Occupancy sensors	188	1,263	1,983	1,699	14,108	20,064	110.8	89.6	98.8
Multi-level lighting or dimming	126	577	916	813	5,480	8,240	154.3	105.2	111.2
Daylight harvesting	22	184	413	225	1,963	3,927	97.4	93.7	105.3
Demand responsive lighting	45	164	201	494	1,997	2,246	91.1	82.1	89.4
Building automation system (BAS) for lighting <sup>2</sup>	52	418	730	423	4,003	7,641	122.3	104.5	95.6
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>									
Heating	976	1,995	2,051	11,239	28,994	22,935	86.8	68.8	89.4
Cooling	952	1,992	2,064	10,666	28,578	23,272	89.2	69.7	88.7
Lighting	1,269	2,579	2,578	14,552	36,182	27,860	87.2	71.3	92.5

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

**Table C12. Consumption and gross energy intensity by year constructed 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)		
	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>	1,193	3,078	2,692	17,390	36,439	33,265	68.6	84.5	80.9
<b>Building floorspace (square feet)</b>									
1,001 to 5,000	170	284	268	2,336	3,018	2,687	72.9	94.2	99.7
5,001 to 10,000	125	303	218	1,946	3,874	3,080	64.0	78.3	70.8
10,001 to 25,000	169	412	296	3,251	6,065	4,789	51.9	67.9	61.7
25,001 to 50,000	122	425	275	2,236	5,387	4,293	54.8	78.9	64.1
50,001 to 100,000	172	386	509	2,355	5,144	6,419	73.0	75.1	79.3
100,001 to 200,000	130	444	461	2,089	4,692	5,634	62.3	94.7	81.8
200,001 to 500,000	169	472	385	1,838	5,157	3,728	92.0	91.5	103.3
Over 500,000	136	351	280	1,338	3,102	2,634	101.6	113.1	106.4
<b>Principal building activity</b>									
Education	188	324	330	2,829	4,625	4,784	66.3	70.1	69.0
Food sales	Q	100	135	Q	485	609	Q	205.6	222.2
Food service	103	211	201	501	716	603	205.4	294.8	332.7
Health care	87	326	305	553	1,846	1,757	156.7	176.8	173.4
Inpatient	68	264	217	307	1,161	906	221.5	227.2	239.4
Outpatient	19	63	88	246	685	851	76.0	91.3	103.0
Lodging	71	257	237	738	2,768	2,319	96.5	92.7	102.0
Mercantile	85	455	467	1,296	4,877	5,156	65.9	93.4	90.5
Retail (other than mall)	48	105	211	935	1,689	2,816	51.1	62.3	74.9
Enclosed and strip malls	38	350	256	361	3,189	2,340	104.2	109.8	109.4
Office	289	632	320	3,760	7,521	4,671	76.9	84.0	68.5
Public assembly	104	201	175	1,541	2,051	1,968	67.4	97.9	89.1
Public order and safety	Q	51	55	Q	503	671	Q	100.6	82.2
Religious worship	48	68	57	1,316	1,629	1,613	36.2	42.1	35.5
Service	59	129	85	1,001	2,026	1,603	58.7	63.4	52.8
Warehouse and storage	69	171	189	1,893	5,146	6,038	36.6	33.2	31.3
Other	28	131	127	511	774	716	55.7	169.2	176.7
Vacant	8	22	11	1,028	1,471	756	8.2	14.9	14.7
<b>Census region and division</b>									
Northeast	402	611	446	5,172	5,935	4,427	77.8	102.9	100.8
New England	107	133	128	1,469	1,555	1,278	72.7	85.5	100.2
Middle Atlantic	296	478	318	3,703	4,380	3,149	79.8	109.1	101.1
Midwest	309	708	548	4,470	7,922	6,526	69.2	89.4	84.0
East North Central	225	500	406	3,169	5,008	4,564	71.0	99.8	88.9
West North Central	84	209	142	1,301	2,914	1,962	64.7	71.6	72.4
South	317	1,170	1,080	5,119	14,133	15,027	61.8	82.8	71.9
South Atlantic	163	556	639	2,630	6,986	8,364	62.0	79.6	76.4
East South Central	58	187	124	766	2,193	1,945	75.9	85.4	63.6
West South Central	95	426	317	1,722	4,954	4,718	55.3	86.1	67.2
West	165	589	618	2,628	8,448	7,284	62.9	69.7	84.8
Mountain	38	164	216	573	2,189	2,219	65.9	74.8	97.3
Pacific	127	425	402	2,056	6,259	5,065	62.0	67.9	79.4

**Table C12. Consumption and gross energy intensity by year constructed 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)		
	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
All buildings	1,193	3,078	2,692	17,390	36,439	33,265	68.6	84.5	80.9
<b>Climate region<sup>1</sup></b>									
Very cold/Cold	579	1,127	1,041	7,958	12,657	11,283	72.8	89.0	92.2
Mixed-humid	416	994	860	5,914	10,988	10,971	70.4	90.4	78.4
Mixed-dry/Hot-dry	98	372	334	1,800	5,537	4,700	54.6	67.1	71.0
Hot-humid	81	493	373	1,319	5,969	5,543	61.2	82.6	67.3
Marine	19	92	85	398	1,287	768	48.1	71.6	111.1
<b>Number of floors</b>									
One	295	1,270	1,266	5,274	16,837	17,699	55.9	75.4	71.5
Two	236	694	531	3,642	9,327	7,237	64.8	74.4	73.3
Three	194	267	207	2,788	2,766	2,585	69.4	96.5	80.3
Four to nine	356	547	529	4,483	4,595	4,457	79.5	119.0	118.8
Ten or more	113	300	159	1,203	2,914	1,286	93.7	102.9	123.6
<b>Elevators and escalators (more than one may apply)</b>									
Any elevators	583	1,352	1,248	7,057	12,884	12,178	82.6	105.0	102.5
Number of elevators									
One	199	345	340	2,941	3,781	4,437	67.6	91.3	76.6
Two to five	199	526	518	2,528	5,208	5,081	78.5	100.9	101.9
Six or more	185	482	390	1,589	3,896	2,660	116.7	123.7	146.7
Any escalators	76	158	144	866	1,673	1,115	87.3	94.2	128.9
<b>Number of workers (main shift)</b>									
Fewer than 5	213	316	227	5,228	6,886	5,637	40.8	45.9	40.2
5 to 9	108	275	214	1,844	3,803	3,326	58.6	72.4	64.4
10 to 19	122	323	327	1,598	4,158	3,866	76.4	77.8	84.5
20 to 49	155	571	462	2,109	6,493	5,912	73.3	87.9	78.2
50 to 99	210	450	489	2,766	5,152	5,558	76.1	87.4	88.0
100 to 249	136	430	492	1,624	4,308	5,010	83.7	99.9	98.2
250 or more	249	711	481	2,221	5,638	3,956	112.2	126.1	121.6
<b>Weekly operating hours</b>									
Fewer than 40	73	94	62	2,745	3,196	2,280	26.6	29.4	27.1
40 to 48	212	362	258	4,214	6,226	5,388	50.3	58.1	47.9
49 to 60	234	543	480	3,663	9,125	7,742	64.0	59.5	62.0
61 to 84	191	645	534	2,631	7,082	6,154	72.6	91.1	86.7
85 to 167	198	395	505	1,627	3,247	4,521	121.8	121.5	111.8
Open continuously	285	1,039	853	2,510	7,563	7,180	113.6	137.3	118.8
<b>Ownership and occupancy</b>									
Nongovernment owned	824	2,385	2,166	12,440	28,684	26,426	66.3	83.1	82.0
Owner occupied	444	1,059	1,113	6,338	11,439	12,861	70.0	92.6	86.5
Leased to tenant(s)	267	952	822	3,824	12,093	10,198	69.9	78.7	80.6
Owner occupied and leased	111	370	229	1,682	4,236	2,956	65.8	87.2	77.4
Unoccupied	3	5	Q	597	916	412	4.3	5.1	Q
Government owned	369	693	526	4,950	7,755	6,839	74.6	89.3	76.9
Federal	52	39	47	624	436	513	82.5	89.8	90.9
State	137	272	146	1,440	2,466	1,633	95.2	110.1	89.4
Local	181	382	333	2,885	4,853	4,694	62.6	78.7	71.0

**Table C12. Consumption and gross energy intensity by year constructed 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)		
	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
All buildings	1,193	3,078	2,692	17,390	36,439	33,265	68.6	84.5	80.9
<b>Party responsible for operation and maintenance of energy systems</b>									
Building owner	1,057	2,549	2,202	15,671	30,180	27,851	67.5	84.4	79.1
Business owner or tenant	113	447	424	1,467	5,297	4,544	76.7	84.3	93.3
Property management	Q	54	30	Q	652	499	Q	83.6	60.6
Other	Q	28	36	Q	310	370	Q	89.8	96.7
<b>Provider of direct input on energy-related equipment purchases</b>									
Building owner	1,073	2,645	2,266	15,895	31,704	28,672	67.5	83.4	79.0
Business owner or tenant	95	342	329	1,134	3,568	3,554	84.2	95.8	92.6
Property management	Q	28	22	Q	472	317	Q	59.4	67.9
Other	14	63	75	270	695	722	53.3	90.6	104.5
<b>Number of establishments</b>									
One	785	1,891	1,809	11,056	21,758	22,180	71.0	86.9	81.6
2 to 5	277	607	517	4,016	7,196	6,545	69.0	84.3	78.9
6 to 10	53	180	130	708	2,180	1,538	75.2	82.7	84.6
11 to 20	22	177	156	294	1,816	1,594	75.4	97.5	97.8
More than 20	53	216	78	550	2,426	844	96.0	89.0	92.3
Currently unoccupied	3	7	Q	766	1,062	564	4.1	6.2	Q
<b>Predominant exterior wall material</b>									
Brick, stone, or stucco	801	1,475	1,180	11,151	15,810	13,502	71.8	93.3	87.4
Concrete (block or poured)	241	893	585	3,561	10,059	7,106	67.8	88.8	82.3
Concrete panels	25	254	386	323	3,740	4,630	76.4	67.9	83.3
Siding or shingles	78	151	171	1,544	2,052	2,154	50.5	73.5	79.5
Metal panels	Q	185	212	457	3,669	4,547	Q	50.4	46.6
Window glass	Q	71	90	Q	641	642	Q	111.3	140.7
Other	Q	27	46	Q	264	411	Q	104.3	111.7
No one major type	Q	Q	22	Q	Q	272	Q	Q	79.3
<b>Predominant roof material</b>									
Metal surfacing	105	311	449	1,990	5,225	8,701	52.6	59.6	51.6
Synthetic or rubber	393	969	1,080	5,325	10,611	9,880	73.7	91.3	109.3
Built-up	283	1,026	554	4,040	11,034	6,760	70.0	93.0	81.9
Slate or tile shingles	123	123	125	1,644	1,427	1,235	74.7	86.2	101.3
Wooden materials (including shingles)	22	47	24	232	524	384	93.7	88.9	63.1
Asphalt, fiberglass, or other shingles	237	487	380	3,499	6,208	5,397	67.8	78.5	70.5
Concrete	14	63	55	292	744	605	49.5	84.5	91.1
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
No one major type	Q	17	Q	Q	321	Q	Q	53.0	Q

**Table C12. Consumption and gross energy intensity by year constructed 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)		
	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
All buildings	1,193	3,078	2,692	17,390	36,439	33,265	68.6	84.5	80.9
<b>Roof characteristics</b>									
Roof tilt									
Flat	733	2,218	1,525	9,686	23,717	16,220	75.7	93.5	94.0
Shallow pitch	233	564	800	3,900	8,739	11,214	59.7	64.5	71.4
Steeper pitch	228	296	367	3,803	3,983	5,831	59.9	74.3	62.9
Cool roof	238	779	820	2,868	8,047	8,715	83.1	96.8	94.0
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>									
Any type of renovation	845	2,047	869	11,392	21,646	9,178	74.2	94.6	94.7
Addition or annex	280	628	383	2,996	6,369	3,657	93.6	98.7	104.7
Reduction in floorspace	43	157	26	372	1,122	260	114.7	140.1	100.0
Roof replacement	459	1,215	312	5,877	11,922	3,117	78.1	101.9	100.0
Exterior wall replacement	109	189	101	1,447	1,892	891	75.6	99.8	112.8
Interior wall reconfiguration	469	1,088	499	5,658	11,070	4,612	82.9	98.3	108.1
Window replacement	373	545	172	5,015	5,800	1,450	74.4	94.0	118.6
HVAC equipment upgrade	604	1,432	509	7,510	14,545	4,724	80.4	98.4	107.7
Lighting upgrade	596	1,329	514	7,257	13,491	4,754	82.2	98.5	108.2
Electrical upgrade	498	792	318	5,719	7,721	2,720	87.0	102.6	116.8
Plumbing system upgrade	390	698	308	4,566	6,613	2,650	85.4	105.6	116.4
Insulation upgrade	199	375	197	2,326	3,563	1,718	85.5	105.3	114.7
Fire, safety, or security upgrade	444	924	318	5,038	9,199	2,959	88.1	100.4	107.3
Structural upgrade	89	194	141	1,063	1,737	1,113	84.0	111.5	126.8
Other	Q	42	Q	Q	484	Q	Q	86.1	Q
No renovations	348	1,030	1,339	5,998	14,792	18,364	58.0	69.6	72.9
Buildings constructed 2008 or later	N	N	484	N	N	5,723	N	N	84.5
<b>Energy sources (more than one may apply)</b>									
Electricity	1,193	3,078	2,692	16,874	35,545	32,449	70.7	86.6	83.0
Natural gas	921	2,470	2,153	11,504	25,420	21,801	80.1	97.2	98.7
Fuel oil	362	992	878	4,076	8,826	7,298	88.8	112.3	120.3
District heat	193	377	239	1,874	2,380	1,710	102.7	158.2	139.7
District chilled water	90	325	251	804	2,044	1,759	111.4	158.8	142.7
Propane	72	221	290	1,110	3,015	3,581	65.0	73.1	81.1
Other	72	135	94	870	1,581	1,375	82.9	85.2	68.6
<b>Space-heating energy sources (more than one may apply)</b>									
Electricity	588	1,746	1,564	8,447	20,696	19,888	69.6	84.4	78.6
Natural gas	772	1,943	1,731	10,080	21,118	18,313	76.6	92.0	94.5
Fuel oil	113	162	85	1,790	1,707	855	63.2	94.9	99.2
District heat	191	376	236	1,857	2,378	1,690	103.1	158.2	139.8
Propane	23	48	81	522	1,143	1,402	43.7	41.7	57.6
Other	20	23	Q	357	451	201	56.0	51.3	Q

**Table C12. Consumption and gross energy intensity by year constructed 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)		
	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
All buildings	1,193	3,078	2,692	17,390	36,439	33,265	68.6	84.5	80.9
<b>Primary space-heating energy source</b>									
Electricity	178	847	821	3,200	11,143	11,862	55.5	76.0	69.2
Natural gas	709	1,675	1,487	9,209	18,153	15,625	77.0	92.3	95.2
Fuel oil	75	68	45	1,248	797	497	60.0	84.7	90.2
District heat	190	374	231	1,850	2,365	1,582	102.6	158.1	145.8
Propane	7	21	36	345	704	898	18.9	29.3	39.8
Other	Q	15	Q	Q	336	Q	Q	44.5	Q
<b>Cooling energy sources (more than one may apply)</b>									
Electricity	1,093	2,787	2,441	14,558	32,233	29,243	75.1	86.5	83.5
Natural gas	Q	39	Q	Q	282	Q	Q	139.6	Q
District chilled water	90	325	251	804	2,044	1,759	111.4	158.8	142.7
<b>Water-heating energy sources (more than one may apply)</b>									
Electricity	422	1,395	1,285	7,044	18,122	17,589	59.9	77.0	73.1
Natural gas	649	1,805	1,576	7,294	17,542	14,687	88.9	102.9	107.3
Fuel oil	56	83	36	770	760	381	72.1	108.8	94.2
District heat	159	306	188	1,502	1,747	1,302	105.8	175.1	144.0
Propane	9	34	44	215	629	732	43.1	53.5	60.1
<b>Cooking energy sources (more than one may apply)</b>									
Electricity	394	1,066	1,051	4,764	10,195	10,192	82.8	104.6	103.1
Natural gas	458	1,338	1,219	4,443	10,793	9,534	103.0	123.9	127.9
Propane	26	79	61	342	804	856	76.3	98.8	71.7
<b>Energy end uses (more than one may apply)</b>									
Buildings with space heating	1,162	2,999	2,621	16,006	33,499	30,573	72.6	89.5	85.7
Buildings with cooling	1,136	3,000	2,637	14,981	33,675	30,637	75.8	89.1	86.1
Buildings with water heating	1,151	3,016	2,631	15,112	33,688	30,215	76.1	89.5	87.1
Buildings with cooking	678	1,784	1,617	7,614	16,026	14,906	89.1	111.3	108.5
Buildings with manufacturing	64	185	111	1,246	2,294	1,539	51.6	80.8	72.0
Buildings with electricity generation	340	1,193	1,270	3,328	10,918	11,395	102.2	109.2	111.5
<b>Percent of floorspace heated</b>									
Not heated	31	79	71	1,384	2,940	2,692	22.5	26.8	26.5
1 to 50	81	189	198	2,140	4,564	3,427	37.9	41.4	57.6
51 to 99	239	569	490	3,449	5,872	5,328	69.3	96.9	92.0
100	842	2,241	1,934	10,417	23,062	21,818	80.8	97.2	88.6
<b>Percent of floorspace cooled</b>									
Not cooled	57	77	55	2,409	2,763	2,627	23.7	27.9	20.9
1 to 50	262	414	312	4,311	8,396	6,184	60.9	49.4	50.5
51 to 99	402	907	835	5,149	9,200	8,378	78.0	98.6	99.6
100	472	1,679	1,491	5,521	16,080	16,075	85.5	104.4	92.7

**Table C12. Consumption and gross energy intensity by year constructed 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)		
	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
All buildings	1,193	3,078	2,692	17,390	36,439	33,265	68.6	84.5	80.9
<b>Percent lit when open</b>									
Zero	Q	Q	Q	Q	Q	Q	Q	Q	Q
1 to 50	185	239	219	3,513	4,801	4,315	52.5	49.7	50.8
51 to 99	530	1,379	1,140	6,938	15,190	12,687	76.4	90.8	89.8
100	472	1,446	1,325	5,907	15,017	14,801	80.0	96.3	89.5
Building never open/electricity not used	5	12	Q	1,010	1,381	1,212	5.3	8.5	5.6
<b>Percent lit during off hours</b>									
Zero	273	532	489	5,584	9,684	9,478	48.9	54.9	51.6
1 to 50	790	1,899	1,657	9,964	21,827	18,962	79.2	87.0	87.4
51 to 100	109	513	396	1,154	3,047	2,725	94.6	168.3	145.1
Building always open with no "off hours"	Q	134	151	Q	987	1,284	Q	135.2	117.5
Electricity not used	N	N	N	515	894	816	N	N	N
<b>Heating equipment (more than one may apply)</b>									
Heat pumps	144	394	361	2,021	4,880	4,945	71.5	80.7	72.9
Furnaces	118	290	207	1,603	4,277	2,775	73.9	67.7	74.8
Individual space heaters	338	740	494	5,436	8,933	6,397	62.1	82.8	77.2
District heat	191	376	236	1,857	2,378	1,690	103.1	158.2	139.8
Boilers	484	972	806	5,896	9,242	7,305	82.0	105.1	110.4
Packaged heating units	541	1,812	1,730	7,683	20,863	20,642	70.4	86.8	83.8
Other	Q	76	98	Q	620	756	Q	122.4	129.6
<b>Cooling equipment (more than one may apply)</b>									
Residential-type central air conditioners	222	509	356	3,062	6,623	5,079	72.4	76.8	70.1
Heat pumps	158	416	365	2,204	5,185	5,148	71.6	80.3	70.9
Individual air conditioners	306	473	234	3,978	5,157	3,285	76.8	91.8	71.2
District chilled water	90	325	251	804	2,044	1,759	111.4	158.8	142.7
Central chillers	338	852	663	3,529	7,633	5,879	95.6	111.6	112.8
Packaged air conditioning units	612	1,769	1,591	7,815	19,583	17,755	78.4	90.3	89.6
Swamp coolers	34	84	57	360	773	785	95.2	109.3	72.3
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Main equipment replaced since 1990 (more than one may apply)</b>									
Heating	574	1,590	N	8,694	18,863	N	66.0	84.3	N
Cooling	711	1,809	N	9,732	20,970	N	73.1	86.3	N
<b>Water-heating equipment</b>									
Centralized system	736	1,825	1,649	9,510	19,888	18,136	77.4	91.8	90.9
Distributed system	149	387	296	2,213	5,666	4,809	67.3	68.3	61.5
Combination of centralized and distributed system	266	804	686	3,390	8,134	7,270	78.4	98.8	94.3

**Table C12. Consumption and gross energy intensity by year constructed 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)		
	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
All buildings	1,193	3,078	2,692	17,390	36,439	33,265	68.6	84.5	80.9
<b>Lighting equipment types (more than one may apply)</b>									
Incandescent	657	1,685	1,199	8,536	17,161	12,708	76.9	98.2	94.3
Standard fluorescent	1,138	2,995	2,580	15,612	34,113	30,356	72.9	87.8	85.0
Compact fluorescent	821	2,225	2,048	10,400	22,575	20,842	79.0	98.6	98.3
High-intensity discharge (HID)	309	995	882	3,884	10,426	9,086	79.6	95.5	97.1
Halogen	444	1,125	1,125	5,184	11,489	11,386	85.7	98.0	98.8
LED	342	1,022	1,000	3,578	9,230	9,263	95.5	110.7	107.9
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Refrigeration equipment (more than one may apply)</b>									
Any refrigeration	1,082	2,863	2,527	14,123	30,838	28,684	76.6	92.8	88.1
Walk-in units	464	1,600	1,461	4,362	12,772	11,227	106.4	125.3	130.1
Cases or cabinets	466	1,446	1,404	4,627	12,078	12,013	100.6	119.8	116.8
Large cold storage areas	62	207	261	554	1,713	1,904	111.6	120.8	137.1
Commercial ice makers	514	1,689	1,529	4,686	13,981	14,067	109.6	120.8	108.7
Residential-type or compact units	880	2,376	1,927	11,908	26,467	24,006	73.9	89.8	80.3
Vending machines	598	1,902	1,678	6,931	18,916	18,089	86.3	100.6	92.8
No refrigeration	111	215	166	3,266	5,601	4,581	34.1	38.4	36.2
<b>Office equipment (more than one may apply)</b>									
Desktop computers	1,103	2,908	2,576	14,509	32,652	29,902	76.0	89.1	86.1
With flat screen monitors	1,090	2,874	2,559	14,222	32,261	29,677	76.7	89.1	86.2
With multiple monitors	422	1,317	1,204	4,825	13,279	12,842	87.4	99.1	93.7
Laptop computers	916	2,474	2,076	11,877	27,542	24,067	77.1	89.8	86.3
Dedicated servers	722	2,133	1,929	9,080	23,038	21,251	79.5	92.6	90.8
Laser printers	800	2,085	1,910	9,908	22,701	21,646	80.8	91.8	88.2
Inkjet printers	501	1,312	1,090	7,215	15,507	13,513	69.4	84.6	80.7
FAX machines	921	2,544	2,241	12,128	28,379	26,175	76.0	89.6	85.6
Photocopiers	837	2,254	2,019	10,859	25,382	23,036	77.1	88.8	87.6
<b>Number of desktop computers</b>									
None	91	170	116	2,881	3,787	3,363	31.5	44.8	34.6
1 to 4	261	514	409	4,241	6,160	5,268	61.5	83.5	77.7
5 to 9	106	314	317	1,361	4,235	3,825	78.2	74.3	82.9
10 to 19	82	269	325	1,230	3,728	4,431	66.4	72.3	73.4
20 to 49	149	503	469	1,852	5,630	5,612	80.3	89.4	83.5
50 to 99	138	282	226	1,797	3,397	3,090	76.5	82.9	73.2
100 to 249	139	432	390	1,826	3,948	3,953	75.9	109.5	98.6
250 or more	229	592	440	2,201	5,554	3,723	104.0	106.6	118.2

**Table C12. Consumption and gross energy intensity by year constructed 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)		
	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
All buildings	1,193	3,078	2,692	17,390	36,439	33,265	68.6	84.5	80.9
<b>Number of laptop computers</b>									
None	277	603	616	5,512	8,896	9,198	50.3	67.8	67.0
1 to 4	274	687	556	4,318	8,926	7,918	63.4	76.9	70.2
5 to 9	78	365	255	1,210	3,945	3,191	64.7	92.4	79.8
10 to 19	103	294	321	1,315	3,424	3,604	78.2	86.0	89.2
20 to 49	162	372	373	1,836	4,121	3,686	88.0	90.4	101.3
50 to 99	102	220	184	1,173	2,109	1,951	86.6	104.5	94.2
100 to 249	76	257	192	858	2,557	1,802	88.8	100.6	106.3
250 or more	122	278	195	1,167	2,459	1,916	104.2	113.2	102.0
<b>Number of dedicated servers</b>									
None	472	944	763	8,310	13,401	12,014	56.8	70.5	63.5
1 to 4	426	1,207	1,086	6,037	14,100	13,960	70.6	85.6	77.8
5 to 9	80	250	235	871	2,894	2,476	91.9	86.3	94.9
10 to 19	75	237	281	972	2,476	2,262	77.6	95.6	124.2
20 to 49	38	188	170	456	1,898	1,404	83.8	99.0	121.3
50 or more	102	252	157	744	1,671	1,148	137.2	151.0	137.1
<b>Number of photocopiers</b>									
None	356	824	673	6,531	11,056	10,229	54.6	74.5	65.8
One	191	520	491	3,284	7,278	6,518	58.3	71.4	75.3
2 to 4	246	680	670	3,383	8,374	8,555	72.8	81.2	78.3
5 to 9	130	373	281	1,567	3,740	3,556	83.0	99.8	78.9
10 or more	269	680	578	2,625	5,990	4,406	102.5	113.6	131.2
<b>Number of TVs or video displays</b>									
None	268	515	431	5,947	9,923	8,469	45.1	51.9	50.9
One	119	327	251	2,275	3,965	3,751	52.4	82.5	66.9
2 to 4	253	544	514	3,303	6,650	6,511	76.4	81.8	79.0
5 to 9	161	305	310	1,651	2,895	3,602	97.5	105.5	86.1
10 to 19	110	406	294	1,513	3,931	2,724	72.6	103.3	108.0
20 to 49	89	325	302	1,078	3,618	3,362	82.9	89.9	89.9
50 to 99	66	183	183	723	1,633	2,022	90.7	112.2	90.3
100 or more	128	472	407	900	3,823	2,824	141.8	123.4	144.1
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>									
Snack bar or concession stand	155	486	471	1,571	4,371	3,943	98.4	111.3	119.5
Fast food or small restaurant	111	531	565	973	4,522	4,292	114.0	117.3	131.6
Cafeteria or large restaurant	257	757	610	2,763	6,865	5,594	93.2	110.3	109.0
Commercial kitchen/ food preparation area	257	823	719	2,882	6,932	6,336	89.1	118.7	113.4
Small kitchen area	254	499	434	3,432	5,626	4,996	74.1	88.7	86.8

**Table C12. Consumption and gross energy intensity by year constructed 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)		
	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
All buildings	1,193	3,078	2,692	17,390	36,439	33,265	68.6	84.5	80.9
<b>Separate computer areas (more than one may apply)</b>									
Data center or server farm	167	621	568	1,582	5,332	4,192	105.4	116.4	135.5
Computer-based training room	271	693	732	3,192	6,743	7,789	84.9	102.8	94.0
Student or public computer center	218	563	494	2,719	6,200	5,422	80.0	90.8	91.1
<b>HVAC conservation features (more than one may apply)</b>									
Economizer cycle	447	1,346	1,350	5,107	12,760	12,881	87.5	105.5	104.8
Regular HVAC maintenance	979	2,755	2,469	12,116	29,468	27,660	80.8	93.5	89.2
Building automation system (BAS) <sup>2</sup>	492	1,513	1,704	5,489	14,738	16,823	89.7	102.7	101.3
<b>Window and interior lighting features (more than one may apply)</b>									
Multipaned windows	766	2,169	2,315	10,444	23,874	26,044	73.3	90.8	88.9
Tinted window glass	483	1,849	1,641	6,117	20,403	18,505	78.9	90.6	88.7
Reflective window glass	166	720	767	2,073	6,648	7,188	80.1	108.3	106.7
External overhangs or awnings	432	1,406	1,251	4,928	14,352	12,908	87.6	97.9	96.9
Skylights or atriums	269	934	807	3,029	10,563	8,668	88.7	88.5	93.1
Light scheduling	373	1,204	1,353	4,203	12,411	13,649	88.6	97.0	99.1
Occupancy sensors	544	1,419	1,472	5,917	14,314	15,640	91.9	99.1	94.1
Multi-level lighting or dimming	194	640	784	2,057	5,860	6,617	94.4	109.2	118.6
Daylight harvesting	67	259	292	802	2,393	2,919	84.1	108.4	100.2
Demand responsive lighting	42	194	173	536	2,236	1,966	78.9	86.9	88.1
Building automation system (BAS) for lighting <sup>2</sup>	129	430	642	1,140	4,512	6,416	113.3	95.2	100.1
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>									
Heating	884	2,165	1,972	12,611	26,348	24,208	70.1	82.2	81.5
Cooling	876	2,166	1,966	11,857	26,347	24,312	73.9	82.2	80.9
Lighting	1,145	2,845	2,436	15,895	33,301	29,398	72.0	85.4	82.9

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

**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)	Primary		Site		
			Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (trillion Btu)	Total (billion kWh)	Total (million dollars)
<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

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

	All buildings using electricity		Electricity consumption		Electricity expenditures		
			Primary	Site			
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (trillion Btu)	Total (billion kWh)	Total (million dollars)
<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

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

	All buildings using electricity		Electricity consumption		Electricity expenditures		
			Primary	Site			
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (trillion Btu)	Total (billion kWh)	Total (million dollars)
<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

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

	All buildings using electricity		Electricity consumption		Electricity expenditures		
			Primary	Site			
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (trillion Btu)	Total (billion kWh)	Total (million dollars)
<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>							
<b>Roof tilt</b>							
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

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

	All buildings using electricity		Electricity consumption		Electricity expenditures		
			Primary		Site		
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (trillion Btu)	Total (billion kWh)	Total (million dollars)
<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

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

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

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

	All buildings using electricity		Electricity consumption		Electricity expenditures		
			Primary	Site			
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (trillion Btu)	Total (billion kWh)	Total (million dollars)
<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

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

	All buildings using electricity	Electricity consumption			Electricity expenditures			
		Primary		Site				
		Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (trillion Btu)	Total (billion kWh)	Total (million dollars)
<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		
			Primary	Site			
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (trillion Btu)	Total (billion kWh)	Total (million dollars)
<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		
			Primary	Site			
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (trillion Btu)	Total (billion kWh)	Total (million dollars)
<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		
		Primary		Site			
		Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (trillion Btu)	Total (billion kWh)
All buildings	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		
All buildings	237	14.6	14.1	3.8	8.7	17.2	23.3	1.44	0.098		
<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)		
All buildings	237	14.6	14.1	3.8	8.7	17.2	23.3	1.44	0.098		
<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		
<b>Number of elevators</b>											
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)	
	237	14.6	14.1	3.8	8.7	17.2	23.3	1.44	0.098	
<b>All buildings</b>										
<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)		
All buildings	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)		
All buildings	237	14.6	14.1	3.8	8.7	17.2	23.3	1.44	0.098		
<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					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)		
	237	14.6	14.1	3.8	8.7	17.2	23.3	1.44	0.098		
<b>All buildings</b>											
<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	0.098		
<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	0.098	
<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	0.098		
<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)		
	All buildings	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
All buildings	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**

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	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
All buildings	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**

	Electricity expenditures (dollars)											
	Total electricity expenditures (million dollars)				per kWh				per square foot			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
All buildings	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
<b>Number of elevators</b>												
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**

	Electricity expenditures (dollars)											
	Total electricity expenditures (million dollars)				per kWh				per square foot			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
All buildings	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**

	Electricity expenditures (dollars)											
	Total electricity expenditures (million dollars)				per kWh				per square foot			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
All buildings	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**

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

	Electricity expenditures (dollars)											
	Total electricity expenditures (million dollars)				per kWh				per square foot			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
All buildings	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**

	Electricity expenditures (dollars)											
	Total electricity expenditures (million dollars)				per kWh				per square foot			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
All buildings	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**

	Electricity expenditures (dollars)											
	Total electricity expenditures (million dollars)				per kWh				per square foot			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
All buildings	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**

	Electricity expenditures (dollars)											
	Total electricity expenditures (million dollars)				per kWh				per square foot			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
All buildings	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	North Central	East		North Central	East		North Central
				New England	Middle Atlantic		New England	Middle Atlantic	
All buildings	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
All buildings	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**

**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
All buildings	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>									
<b>Roof tilt</b>									
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
All buildings	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**

**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
All buildings	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
All buildings	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
All buildings	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
All buildings	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		East		West		East		West	
	North Central	South Atlantic	South Central	North Central	South Atlantic	South Central	North Central	South Atlantic	South Central	
All buildings	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
	All buildings	75	287	71	6,016	17,608	4,824	12.5	16.3
<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**

**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
All buildings	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>									
<b>Roof tilt</b>									
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
All buildings	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
	All buildings	75	287	71	6,016	17,608	4,824	12.5	16.3
<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
All buildings	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
	All buildings	75	287	71	6,016	17,608	4,824	12.5	16.3
<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
All buildings	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
	All buildings	75	287	71	6,016	17,608	4,824	12.5	16.3
<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		West		West				
	South Central	Mountain	Pacific	South Central	Mountain	Pacific	South Central	Mountain	Pacific
All buildings	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		West		West		South		Central
	South	Mountain	Pacific	Central	Mountain	Pacific	Central	Mountain	Pacific
All buildings	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**

**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		West		West		South		Central
	South	Mountain	Pacific	Central	Mountain	Pacific	Central	Mountain	Pacific
All buildings	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>									
<b>Roof tilt</b>									
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		West		West					
	South	Central	South	Central	Mountain	Pacific	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**

**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		West		South		
	Central	Mountain	Pacific	Central	Mountain	Pacific	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			West			West		
	Central	South	Mountain	Central	South	Mountain	Pacific	Central	Mountain
<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		West		West				
	South	Central	South	Central	Mountain	Pacific	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			West			West				
	Central	South	Mountain	Central	South	Mountain	Pacific	Central	South	Mountain	Pacific
All buildings	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/		Mixed-dry/		Very cold/		Mixed-humid		Very cold/		Mixed-dry/				
	Cold	Mixed-humid	Hot-dry	Hot-humid	Cold	Mixed-humid	Hot-dry	Hot-humid	Cold	Mixed-humid	Hot-dry	Hot-humid	Mixed-humid		
<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- dry/ Hot-dry		Hot-humid		Marine		Very cold/ Cold		Mixed- humid		Mixed- dry/ Hot-dry		Hot-humid		Marine					
	Mixed-	dry/	Hot-	dry	Hot-	humid	Mar-	ine	Mixed-	humid	Hot-	dry	Mar-	ine	Mixed-	dry/	Hot-	dry	Hot-	humid	Mar-	ine
All buildings	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							
<b>Number of elevators</b>																						
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**

**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- dry/ Hot-dry		Mixed- humid	Very cold/ Cold		Mixed- humid		Mixed- dry/ Hot-dry	Very cold/ Cold		Mixed- dry/ Hot-dry		Mixed- humid
	Roof characteristics	Roof tilt	Flat	Shallow pitch	Steeper pitch	Cool roof	Roof tilt	Flat	Shallow pitch	Steeper pitch	Cool roof	Roof tilt	Flat	Shallow pitch	Steeper pitch
All buildings	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
Roof characteristics															
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
Renovations in buildings constructed before 2008 (more than one may apply)															
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
Energy sources (more than one may apply)															
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
Space-heating energy sources															
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
Primary space-heating energy source															
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- dry/ Hot-dry		Hot-humid		Marine		Very cold/ Cold		Mixed- humid		Mixed- dry/ Hot-dry		Hot-humid		Marine				
	Mixed-	dry/	Hot-	dry	Hot-	humid	Mar-	ine	Mixed-	dry/	Hot-	humid	Mar-	ine	Mixed-	dry/	Hot-	humid	Mar-	ine	
All buildings	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>Cooling energy sources</b>																					
Electricity	391	385	143	208	31	27,377	24,968	10,490	11,043	2,157	14.3	15.4	13.7	18.9	14.4						
Other excluding electricity	15	25	Q	10	Q	851	1,397	Q	581	Q	17.1	17.8	15.2	18.0	Q						
Buildings without cooling	13	6	3	2	Q	3,058	1,057	856	378	226	4.4	5.7	3.5	4.1	15.8						
<b>Water-heating energy sources</b>																					
Electricity	189	219	74	149	18	13,252	14,954	5,678	7,690	1,180	14.2	14.7	13.0	19.4	15.1						
Other excluding electricity	224	188	71	61	16	16,314	10,818	4,907	3,147	1,075	13.7	17.3	14.6	19.4	15.0						
Buildings without water heating	6	9	7	10	Q	1,720	1,650	1,158	1,165	Q	3.7	5.2	6.1	8.6	Q						
<b>Cooking energy sources</b>																					
Electricity	159	156	47	77	13	9,761	9,042	2,299	3,437	612	16.3	17.3	20.6	22.5	21.2						
Other excluding electricity	81	90	34	35	7	5,214	4,428	1,730	1,660	363	15.6	20.2	19.4	21.4	18.7						
Buildings without cooking	178	169	71	108	15	16,311	13,952	7,714	6,904	1,441	10.9	12.1	9.3	15.6	10.7						
<b>Energy end uses (more than one may apply)</b>																					
Buildings with space heating	416	411	145	192	34	30,444	26,716	10,484	10,090	2,319	13.7	15.4	13.9	19.0	14.7						
Buildings with cooling	406	410	149	219	32	28,228	26,365	10,887	11,624	2,190	14.4	15.5	13.7	18.8	14.5						
Buildings with water heating	413	407	145	210	34	29,567	25,772	10,585	10,837	2,255	14.0	15.8	13.7	19.4	15.0						
Buildings with cooking	241	246	81	113	20	14,975	13,469	4,029	5,098	975	16.1	18.3	20.1	22.1	20.3						
Buildings with manufacturing	25	13	6	19	Q	2,133	1,273	786	684	Q	11.7	10.3	8.2	28.4	Q						
Buildings with electricity generation	179	172	49	73	17	10,597	8,525	2,471	3,168	880	16.9	20.1	20.0	23.1	19.7						
<b>Percent of floorspace heated</b>																					
Not heated	3	5	7	29	Q	842	706	1,259	1,912	Q	4.1	7.0	5.6	15.0	Q						
1 to 50	19	24	28	21	5	2,299	2,485	3,165	1,752	414	8.4	9.7	8.8	12.3	12.6						
51 to 99	58	81	39	47	8	4,045	5,425	2,434	2,146	595	14.3	15.0	16.2	22.1	12.7						
100	339	305	78	123	21	24,099	18,806	4,885	6,193	1,310	14.1	16.2	16.0	19.8	16.3						
<b>Percent of floorspace cooled</b>																					
Not cooled	13	6	3	2	Q	3,058	1,057	856	378	226	4.4	5.7	3.5	4.1	15.8						
1 to 50	65	39	25	19	Q	7,561	5,220	3,505	2,191	415	8.6	7.4	7.1	8.8	12.4						
51 to 99	135	140	45	52	10	8,314	8,333	2,734	2,562	785	16.2	16.7	16.6	20.2	12.6						
100	206	231	79	148	17	12,354	12,812	4,648	6,871	990	16.7	18.1	17.0	21.5	16.8						
<b>Percent lit when open</b>																					
Zero	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	
1 to 50	41	36	14	20	3	4,637	3,702	2,225	1,689	377	8.9	9.7	6.4	11.6	7.7						
51 to 99	188	168	67	86	16	13,284	10,873	4,849	4,790	1,018	14.2	15.5	13.9	18.0	15.2						
100	188	210	70	114	17	12,498	12,453	4,432	5,359	984	15.0	16.9	15.8	21.3	17.1						
Building never open/electricity not used	2	1	Q	Q	Q	727	315	Q	Q	Q	2.5	1.6	Q	Q	Q						
<b>Percent lit during off hours</b>																					
Zero	83	66	37	36	9	9,716	6,918	4,237	3,080	796	8.5	9.6	8.8	11.8	11.3						
1 to 50	268	263	85	146	23	18,723	17,279	6,139	7,216	1,397	14.3	15.2	13.8	20.2	16.6						
51 to 100	52	62	24	24	Q	2,252	2,373	1,009	1,102	Q	23.1	26.2	23.5	22.2	Q						
Building always open with no "off hours"	17	24	7	14	Q	595	852	359	604	Q	28.0	28.4	18.7	23.3	Q						
Electricity not used	N	N	N	N	N	N	N	N	N	N	N	N	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- dry/ Hot-dry		Hot-humid		Marine		Very cold/ Cold		Mixed- humid		Mixed- dry/ Hot-dry		Hot-humid		Marine		
	Mixed-	cold/	dry/	Hot-	Hot-	Mar-	Very	cold/	Mixed-	Mixed-	dry/	Hot-	Mar-	Very	cold/	Mixed-	dry/	Hot-	Mar-
All buildings	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)				
					Mixed:										
	Very cold/ Cold	Mixed- humid	dry/ Hot-dry	Hot- humid	Mar- ine	Very cold/ Cold	Mixed- humid	Mixed- dry/ Hot-dry	Hot- humid	Mar- ine	Very cold/ Cold	Mixed- humid	dry/ Hot-dry	Hot- humid	Mar- ine
All buildings	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
<strong>Office equipment (more than one may apply)</strong>															
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
<strong>Number of desktop computers</strong>															
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
<strong>Number of laptop computers</strong>															
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
<strong>Number of dedicated servers</strong>															
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
<strong>Number of photocopiers</strong>															
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)				
	Mixed:					Mixed-dry/Hot-dry					Mixed-dry/Hot-dry				
	Very cold/ Cold	Mixed- humid	dry/ Hot- dry	Hot- humid	Mar- ine	Very cold/ Cold	Mixed- humid	dry/ Hot- dry	Hot- humid	Mar- ine	Very cold/ Cold	Mixed- humid	dry/ Hot- dry	Hot- humid	Mar- ine
All buildings	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- dry/ Hot-dry		Mar- ine	Very cold/ Cold		Mixed- humid		Mixed- dry/ Hot-dry	Mar- ine	Very cold/ Cold		Mixed- dry/ Hot-dry	
	Mixed- humid	Hot- humid	Hot- dry	Humid		Cold	Humid	Hot-dry	Humid	Hot- dry		Cold	Humid	Hot-dry	Humid
All buildings	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
All buildings	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
All buildings	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
All buildings	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>									
<b>Roof tilt</b>									
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
All buildings	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
All buildings	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
All buildings	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
All buildings	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
All buildings	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
All buildings	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
All buildings	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
All buildings	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
All buildings	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.

**Table C23. Total natural gas consumption and expenditures, 2012**

	All buildings using natural gas		Natural gas consumption		Natural gas expenditures	
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (billion cubic feet)	Total (million dollars)
<b>All buildings</b>	2,933	58,725	20.0	2,248	2,193	17,279
<b>Building floorspace (square feet)</b>						
1,001 to 5,000	1,253	3,757	3.0	256	249	2,157
5,001 to 10,000	660	4,817	7.3	248	242	1,957
10,001 to 25,000	548	8,823	16.1	304	297	2,549
25,001 to 50,000	227	8,148	35.9	284	277	2,101
50,001 to 100,000	142	9,935	70.1	338	330	2,621
100,001 to 200,000	67	9,416	139.6	290	283	2,261
200,001 to 500,000	29	8,293	283.5	310	302	2,161
Over 500,000	6	5,535	911.1	219	214	1,473
<b>Principal building activity</b>						
Education	234	9,520	40.7	291	284	2,200
Food sales	82	846	10.3	53	52	420
Food service	283	1,394	4.9	227	222	1,700
Health care	95	3,292	34.6	265	258	1,818
Inpatient	8	2,113	263.2	219	214	1,441
Outpatient	87	1,179	13.5	46	45	377
Lodging	99	4,918	49.5	221	215	1,628
Mercantile	356	8,493	23.9	291	284	2,392
Retail (other than mall)	232	3,371	14.5	74	72	607
Enclosed and strip malls	124	5,123	41.5	217	212	1,785
Office	595	10,290	17.3	282	275	2,306
Public assembly	205	3,888	19.0	135	132	1,063
Public order and safety	53	1,007	19.0	41	40	310
Religious worship	229	3,016	13.2	87	85	691
Service	339	2,790	8.2	122	119	950
Warehouse and storage	261	7,007	26.8	139	136	1,120
Other	59	1,378	23.3	81	79	571
Vacant	44	886	20.2	13	12	108
<b>Year constructed</b>						
Before 1920	202	2,320	11.5	87	85	757
1920 to 1945	288	3,792	13.2	145	141	1,167
1946 to 1959	334	5,393	16.1	199	195	1,595
1960 to 1969	401	7,553	18.8	314	307	2,398
1970 to 1979	406	7,979	19.6	340	332	2,542
1980 to 1989	431	9,887	22.9	335	327	2,624
1990 to 1999	407	9,162	22.5	338	330	2,535
2000 to 2003	182	4,723	25.9	158	154	1,198
2004 to 2007	144	4,096	28.4	172	167	1,284
2008 to 2012	138	3,821	27.7	159	156	1,180

**Table C23. Total natural gas consumption and expenditures, 2012**

	All buildings using natural gas		Natural gas consumption		Natural gas expenditures	
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (billion cubic feet)	Total (million dollars)
<b>All buildings</b>	2,933	58,725	20.0	2,248	2,193	17,279
<b>Census region and division</b>						
Northeast	433	11,068	25.6	499	487	4,599
New England	98	2,241	22.9	111	108	1,067
Middle Atlantic	335	8,827	26.3	389	379	3,533
Midwest	843	15,025	17.8	642	627	4,383
East North Central	577	10,790	18.7	494	482	3,344
West North Central	266	4,236	15.9	149	145	1,039
South	950	19,900	21.0	615	600	4,793
South Atlantic	387	9,984	25.8	305	298	2,641
East South Central	191	3,436	18.0	104	101	790
West South Central	372	6,480	17.4	207	202	1,362
West	707	12,732	18.0	491	479	3,503
Mountain	218	3,766	17.3	163	159	1,075
Pacific	489	8,966	18.3	328	320	2,428
<b>Climate region<sup>1</sup></b>						
Very cold/Cold	1,264	24,511	19.4	1,097	1,070	8,269
Mixed-humid	932	19,361	20.8	657	641	5,432
Mixed-dry/Hot-dry	428	7,520	17.6	255	249	1,723
Hot-humid	215	5,300	24.7	171	167	1,262
Marine	94	2,033	21.6	68	67	593
<b>Number of floors</b>						
One	1,832	24,497	13.4	918	896	7,305
Two	723	14,665	20.3	511	499	3,956
Three	245	6,084	24.8	224	219	1,700
Four to nine	124	9,764	78.5	443	432	3,233
Ten or more	8	3,715	437.3	151	147	1,085
<b>Number of workers (main shift)</b>						
Fewer than 5	1,225	7,858	6.4	264	258	2,221
5 to 9	606	5,355	8.8	202	197	1,678
10 to 19	498	6,799	13.6	298	291	2,296
20 to 49	348	10,613	30.5	379	369	2,954
50 to 99	154	10,320	67.0	360	352	2,808
100 to 249	74	8,880	120.1	337	329	2,546
250 or more	27	8,900	328.6	408	398	2,775
<b>Weekly operating hours</b>						
Fewer than 40	433	3,705	8.6	97	95	783
40 to 48	726	9,960	13.7	259	252	2,118
49 to 60	757	14,006	18.5	369	360	2,960
61 to 84	454	11,494	25.3	469	458	3,747
85 to 167	281	6,734	24.0	349	340	2,684
Open continuously	282	12,827	45.4	705	688	4,986

**Table C23. Total natural gas consumption and expenditures, 2012**

	All buildings using natural gas			Natural gas consumption		Natural gas expenditures
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (billion cubic feet)	Total (million dollars)
<b>All buildings</b>	2,933	58,725	20.0	2,248	2,193	17,279
<b>Ownership and occupancy</b>						
Nongovernment owned	2,489	44,481	17.9	1,747	1,704	13,484
Owner occupied	1,317	20,542	15.6	890	868	6,629
Leased to tenant(s)	951	17,361	18.3	634	618	5,172
Owner occupied and leased	198	6,254	31.5	219	213	1,647
Unoccupied	23	325	14.1	4	4	37
Government owned	444	14,244	32.1	501	489	3,794
Federal	21	868	41.1	30	29	228
State	100	3,939	39.2	169	165	1,259
Local	322	9,438	29.3	302	294	2,307
<b>Party responsible for operation and maintenance of energy systems</b>						
Building owner	2,439	49,100	20.1	1,852	1,807	14,092
Business owner or tenant	432	8,240	19.1	343	334	2,776
Property management	30	778	26.1	27	26	206
Other	32	607	18.9	27	26	204
<b>Provider of direct input on energy-related equipment purchases</b>						
Building owner	2,538	50,946	20.1	1,915	1,868	14,619
Business owner or tenant	314	6,025	19.2	264	258	2,101
Property management	18	516	28.2	17	17	121
Other	63	1,238	19.8	52	51	438
<b>Number of establishments</b>						
One	2,244	37,156	16.6	1,527	1,490	11,567
2 to 5	514	12,432	24.2	429	418	3,352
6 to 10	91	3,092	34.1	107	105	877
11 to 20	47	2,762	58.2	112	110	880
More than 20	11	2,862	253.7	67	65	553
Currently unoccupied	26	420	16.3	6	6	49
<b>Predominant exterior wall material</b>						
Brick, stone, or stucco	1,427	28,999	20.3	1,160	1,131	8,924
Concrete (block or poured)	631	14,517	23.0	535	522	4,166
Concrete panels	110	5,939	54.0	208	203	1,420
Siding or shingles	355	2,888	8.1	134	131	1,094
Metal panels	366	4,386	12.0	126	123	1,028
Window glass	14	1,048	76.7	48	47	385
Other	15	496	32.2	Q	Q	Q
No one major type	16	453	28.3	14	14	111

**Table C23. Total natural gas consumption and expenditures, 2012**

	All buildings using natural gas			Natural gas consumption		Natural gas expenditures
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (billion cubic feet)	Total (million dollars)
<b>All buildings</b>	2,933	58,725	20.0	2,248	2,193	17,279
<b>Predominant roof material</b>						
Metal surfacing	645	7,825	12.1	241	235	1,968
Synthetic or rubber	622	19,790	31.8	850	830	6,488
Built-up	516	16,026	31.1	582	568	4,301
Slate or tile shingles	220	2,800	12.8	114	111	901
Wooden materials (including shingles)	79	611	7.7	41	40	289
Asphalt, fiberglass, or other shingles	807	9,896	12.3	368	359	2,916
Concrete	18	838	46.2	24	23	177
Other	17	539	32.4	18	18	146
No one major type	10	400	40.0	10	9	92
<b>Roof characteristics</b>						
<b>Roof tilt</b>						
Flat	1,184	35,833	30.3	1,455	1,420	10,950
Shallow pitch	1,021	14,500	14.2	481	470	3,811
Steeper pitch	728	8,392	11.5	312	304	2,518
Cool roof	447	14,352	32.1	602	588	4,507
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>						
Any type of renovation	1,293	30,945	23.9	1,230	1,200	9,407
Addition or annex	282	10,105	35.8	468	457	3,376
Reduction in floorspace	42	1,385	33.2	70	68	497
Roof replacement	627	16,151	25.8	681	664	5,201
Exterior wall replacement	120	3,395	28.4	129	126	974
Interior wall reconfiguration	586	16,075	27.4	644	629	4,851
Window replacement	369	9,286	25.2	387	378	2,926
HVAC equipment upgrade	719	20,438	28.4	842	822	6,341
Lighting upgrade	641	19,298	30.1	810	790	6,007
Electrical upgrade	482	12,374	25.7	551	537	4,139
Plumbing system upgrade	414	10,550	25.5	515	502	3,849
Insulation upgrade	252	5,894	23.4	269	262	2,036
Fire, safety, or security upgrade	415	13,227	31.9	569	555	4,234
Structural upgrade	101	2,835	28.2	151	148	1,070
Other	17	559	32.2	14	13	107
No renovations	1,502	23,959	15.9	859	838	6,692
Buildings constructed 2008 or later	138	3,821	27.7	159	156	1,180

**Table C23. Total natural gas consumption and expenditures, 2012**

	All buildings using natural gas		Natural gas consumption		Natural gas expenditures	
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (billion cubic feet)	Total (million dollars)
All buildings	2,933	58,725	20.0	2,248	2,193	17,279
<b>Energy sources (more than one may apply)</b>						
Electricity	2,933	58,725	20.0	2,248	2,193	17,279
Natural gas	2,933	58,725	20.0	2,248	2,193	17,279
Fuel oil	164	13,663	83.4	623	608	4,456
District heat	17	2,860	168.1	108	106	748
District chilled water	21	2,431	116.6	133	130	921
Propane	69	3,396	48.9	146	143	1,035
Other	72	2,637	36.7	108	106	821
<b>Space-heating energy sources</b>						
Natural gas	2,612	49,511	19.0	1,971	1,923	15,055
Natural gas main	2,322	42,988	18.5	1,769	1,726	13,530
Natural gas secondary	289	6,524	22.6	202	197	1,525
Other excluding natural gas	276	8,617	31.2	252	246	2,016
Buildings without heating	45	597	13.1	25	25	208
<b>Primary space-heating energy source</b>						
Electricity	509	11,549	22.7	335	327	2,700
Natural gas	2,322	42,988	18.5	1,769	1,726	13,530
Fuel oil	15	410	27.3	8	8	75
District heat	17	2,791	165.2	106	103	730
Propane	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q
<b>Cooling energy sources</b>						
Natural gas	12	732	61.5	58	57	423
Other excluding natural gas	2,688	56,167	20.9	2,120	2,068	16,243
Buildings without cooling	233	1,826	7.8	70	68	612
<b>Water-heating energy sources</b>						
Natural gas	1,758	39,523	22.5	1,771	1,728	13,379
Other excluding natural gas	985	17,496	17.8	439	428	3,606
Buildings without water heating	191	1,706	9.0	38	37	293
<b>Cooking energy sources</b>						
Natural gas	740	24,770	33.5	1,238	1,208	9,283
Other excluding natural gas	347	6,256	18.0	205	200	1,578
Buildings without cooking	1,846	27,699	15.0	805	786	6,418
<b>Energy end uses (more than one may apply)</b>						
Buildings with space heating	2,888	58,129	20.1	2,223	2,169	17,071
Buildings with cooling	2,700	56,899	21.1	2,178	2,125	16,667
Buildings with water heating	2,742	57,019	20.8	2,210	2,156	16,986
Buildings with cooking	1,087	31,026	28.6	1,443	1,408	10,861
Buildings with manufacturing	153	3,740	24.4	123	120	1,020
Buildings with electricity generation	270	20,271	75.0	855	834	6,275

**Table C23. Total natural gas consumption and expenditures, 2012**

	All buildings using natural gas			Natural gas consumption		Natural gas expenditures
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (billion cubic feet)	Total (million dollars)
All buildings	2,933	58,725	20.0	2,248	2,193	17,279
<b>Percent of floorspace heated</b>						
Not heated	45	597	13.1	25	25	208
1 to 50	322	5,716	17.7	123	120	978
51 to 99	465	11,147	24.0	443	432	3,431
100	2,101	41,265	19.6	1,657	1,617	12,661
<b>Percent of floorspace cooled</b>						
Not cooled	233	1,826	7.8	70	68	612
1 to 50	697	13,031	18.7	418	408	3,257
51 to 99	592	17,106	28.9	667	651	5,161
100	1,411	26,762	19.0	1,093	1,066	8,248
<b>Heating equipment (more than one may apply)</b>						
Heat pumps	233	7,560	32.5	247	241	1,984
Furnaces	550	7,046	12.8	244	238	1,993
Individual space heaters	774	15,808	20.4	545	532	4,209
District heat	17	2,833	166.8	108	105	746
Boilers	409	20,019	48.9	984	960	7,351
Packaged heating units	1,901	37,569	19.8	1,360	1,327	10,488
Other	36	1,194	33.4	54	53	451
<b>Cooling equipment (more than one may apply)</b>						
Residential-type central air conditioners	1,012	10,504	10.4	416	406	3,330
Heat pumps	265	8,017	30.2	257	250	2,067
Individual air conditioners	385	9,137	23.7	374	365	2,992
District chilled water	21	2,431	116.6	133	130	921
Central chillers	127	13,745	108.5	598	584	4,259
Packaged air conditioning units	1,311	34,917	26.6	1,318	1,286	9,995
Swamp coolers	69	1,536	22.3	71	69	519
Other	Q	290	Q	10	10	86
<b>Main equipment replaced since 1990 (more than one may apply)</b>						
Heating	1,201	21,058	17.5	790	771	6,149
Cooling	1,243	23,093	18.6	882	860	6,880
<b>Water-heating equipment</b>						
Centralized system	2,073	34,005	16.4	1,414	1,380	10,835
Distributed system	388	8,211	21.2	257	251	2,012
Combination of centralized and distributed system	282	14,803	52.6	539	526	4,139

**Table C23. Total natural gas consumption and expenditures, 2012**

	All buildings using natural gas			Natural gas consumption		Natural gas expenditures
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (billion cubic feet)	Total (million dollars)
<b>All buildings</b>	2,933	58,725	20.0	2,248	2,193	17,279
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>						
Snack bar or concession stand	96	7,867	81.7	364	355	2,660
Fast food or small restaurant	132	8,345	63.2	372	363	2,811
Cafeteria or large restaurant	104	13,043	125.6	587	572	4,206
Commercial kitchen/food preparation area	221	14,082	63.8	673	657	4,943
Small kitchen area	459	10,883	23.7	409	399	3,190
<b>HVAC conservation features (more than one may apply)</b>						
Economizer cycle	441	24,683	56.0	1,015	991	7,520
Regular HVAC maintenance	1,993	50,691	25.4	1,991	1,942	15,133
Building automation system (BAS) <sup>2</sup>	519	27,821	53.6	1,100	1,073	8,094
<b>Window and interior lighting features (more than one may apply)</b>						
Multipaned windows	1,852	43,774	23.6	1,752	1,709	13,407
Tinted window glass	1,163	32,631	28.1	1,290	1,259	9,673
Reflective window glass	362	12,051	33.3	541	528	4,030
External overhangs or awnings	1,119	23,220	20.7	1,030	1,005	7,857
Skylights or atriums	365	16,745	45.9	681	664	5,111
Light scheduling	607	23,109	38.1	927	905	7,031
Occupancy sensors	555	26,972	48.6	1,067	1,041	8,061
Multi-level lighting or dimming	262	11,703	44.6	573	560	4,218
Daylight harvesting	77	4,920	64.0	197	192	1,516
Demand responsive lighting	101	3,678	36.5	127	124	1,051
Building automation system (BAS) for lighting <sup>2</sup>	142	9,400	66.3	335	327	2,536
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>						
Heating	2,313	46,818	20.2	1,675	1,635	13,009
Cooling	2,183	45,726	20.9	1,644	1,604	12,753
Lighting	2,774	55,033	19.8	2,105	2,054	16,253
<b>Annual consumption (hundred cubic feet)</b>						
1,000 or less	1,016	6,952	6.8	53	51	629
1,001 to 5,000	1,151	13,335	11.6	282	275	2,526
5,001 to 10,000	325	7,987	24.6	238	232	1,931
10,001 to 25,000	289	11,157	38.6	459	448	3,510
25,001 to 50,000	88	7,156	81.3	311	304	2,346
50,001 to 100,000	41	5,278	127.4	285	278	2,104
Over 100,000	23	6,860	301.2	621	606	4,234

**Table C23. Total natural gas consumption and expenditures, 2012**

All buildings using natural gas	Natural gas consumption			Natural gas expenditures		
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (billion cubic feet)	Total (million dollars)
All buildings	2,933	58,725	20.0	2,248	2,193	17,279

<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/> • 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 C of the 2012 Commercial Buildings Energy Consumption Survey.

**Table C24. Natural gas consumption and expenditure intensities, 2012**

	Natural gas consumption									
	per building (thousand cubic feet)	per square foot (cubic feet)	per worker (thousand cubic feet)	Distribution of building-level intensities (cubic feet/square foot)			Natural gas expenditures			per thousand cubic feet (dollars)
				25th percentile	Median	75th percentile	per building (thousand dollars)	per square foot (dollars)	per thousand cubic feet (dollars)	
All buildings	748	37.3	35.2	12.1	26.6	55.3	5.9	0.3	7.9	
<b>Building floorspace (square feet)</b>										
1,001 to 5,000	199	66.4	45.6	17.0	35.6	73.2	1.7	0.6	8.7	
5,001 to 10,000	366	50.2	42.3	10.8	24.8	52.8	3.0	0.4	8.1	
10,001 to 25,000	541	33.6	28.9	8.8	20.2	42.3	4.7	0.3	8.6	
25,001 to 50,000	1,220	34.0	31.8	9.2	21.3	44.5	9.3	0.3	7.6	
50,001 to 100,000	2,327	33.2	37.5	9.2	22.2	42.7	18.5	0.3	8.0	
100,001 to 200,000	4,198	30.1	34.0	6.5	18.8	39.0	33.5	0.2	8.0	
200,001 to 500,000	10,330	36.4	38.6	8.0	21.6	44.1	73.9	0.3	7.2	
Over 500,000	35,203	38.6	29.5	3.1	12.4	41.7	242.4	0.3	6.9	
<b>Principal building activity</b>										
Education	1,215	29.8	33.1	10.7	23.8	49.1	9.4	0.2	7.8	
Food sales	634	61.3	63.6	18.3	46.4	75.9	5.1	0.5	8.1	
Food service	783	159.2	80.8	51.3	132.5	255.3	6.0	1.2	7.7	
Health care	2,714	78.5	43.5	12.1	21.6	47.1	19.1	0.6	7.0	
Inpatient	26,609	101.1	55.6	21.2	85.0	129.0	179.5	0.7	6.8	
Outpatient	514	38.0	21.3	11.2	21.0	42.9	4.3	0.3	8.4	
Lodging	2,169	43.8	83.7	19.5	36.0	65.5	16.4	0.3	7.6	
Mercantile	799	33.5	42.6	12.0	25.4	50.1	6.7	0.3	8.4	
Retail (other than mall)	312	21.5	30.7	10.8	20.8	39.2	2.6	0.2	8.4	
Enclosed and strip malls	1,714	41.3	49.1	16.4	42.7	93.4	14.5	0.4	8.4	
Office	463	26.8	12.4	10.4	22.8	40.0	3.9	0.2	8.4	
Public assembly	643	33.9	60.4	13.6	28.4	46.7	5.2	0.3	8.1	
Public order and safety	751	39.5	32.2	16.6	25.9	47.7	5.9	0.3	7.8	
Religious worship	371	28.1	67.8	10.6	21.7	44.7	3.0	0.2	8.2	
Service	351	42.7	43.6	13.6	29.9	63.5	2.8	0.3	8.0	
Warehouse and storage	520	19.4	34.0	5.6	14.6	29.9	4.3	0.2	8.3	
Other	1,334	57.2	64.6	13.8	28.8	72.5	9.7	0.4	7.3	
Vacant	281	13.9	82.8	5.8	16.5	29.5	2.5	0.1	8.8	
<b>Year constructed</b>										
Before 1920	422	36.8	38.7	13.6	29.4	58.6	3.7	0.3	8.9	
1920 to 1945	492	37.3	33.6	15.0	37.0	63.6	4.1	0.3	8.3	
1946 to 1959	582	36.1	39.8	12.9	27.1	50.0	4.8	0.3	8.2	
1960 to 1969	765	40.6	42.1	11.7	26.8	59.2	6.0	0.3	7.8	
1970 to 1979	816	41.6	33.9	12.9	29.8	62.7	6.3	0.3	7.7	
1980 to 1989	757	33.0	27.8	10.8	24.9	47.9	6.1	0.3	8.0	
1990 to 1999	812	36.0	34.3	11.7	24.1	54.0	6.2	0.3	7.7	
2000 to 2003	845	32.6	30.7	10.7	23.5	49.7	6.6	0.3	7.8	
2004 to 2007	1,163	40.9	46.6	12.3	26.2	54.9	8.9	0.3	7.7	
2008 to 2012	1,128	40.7	38.8	10.0	19.3	61.1	8.6	0.3	7.6	

**Table C24. Natural gas consumption and expenditure intensities, 2012**

	Natural gas consumption					Distribution of building-level intensities (cubic feet/square foot)			Natural gas expenditures		
	per building (thousand cubic feet)	per square foot (cubic feet)	per worker (thousand cubic feet)	25th percentile	Median	75th percentile	per building (thousand dollars)	per square foot (dollars)	per thousand cubic feet (dollars)		
	748	37.3	35.2	12.1	26.6	55.3	5.9	0.3	7.9		
<b>Census region and division</b>											
Northeast	1,125	44.0	36.4	16.1	35.1	63.5	10.6	0.4	9.4		
New England	1,104	48.1	46.6	12.6	26.0	45.2	10.9	0.5	9.9		
Middle Atlantic	1,131	43.0	34.2	17.6	39.2	73.2	10.5	0.4	9.3		
Midwest	743	41.7	43.9	17.0	32.0	56.0	5.2	0.3	7.0		
East North Central	835	44.6	45.8	18.9	34.3	59.1	5.8	0.3	6.9		
West North Central	545	34.3	38.5	13.5	24.3	49.9	3.9	0.3	7.2		
South	632	30.2	30.6	8.9	22.1	52.3	5.0	0.2	8.0		
South Atlantic	770	29.8	30.2	9.6	24.1	62.7	6.8	0.3	8.9		
East South Central	529	29.4	32.2	9.6	21.6	33.1	4.1	0.2	7.8		
West South Central	542	31.1	30.6	8.0	20.2	52.0	3.7	0.2	6.8		
West	678	37.6	31.7	8.1	23.8	53.7	5.0	0.3	7.3		
Mountain	731	42.3	43.6	15.6	30.4	59.0	4.9	0.3	6.7		
Pacific	654	35.7	27.9	6.5	20.4	49.7	5.0	0.3	7.6		
<b>Climate region<sup>1</sup></b>											
Very cold/Cold	847	43.7	43.3	18.0	34.0	59.0	6.5	0.3	7.7		
Mixed-humid	688	33.1	32.1	11.9	24.3	56.5	5.8	0.3	8.5		
Mixed-dry/Hot-dry	582	33.1	27.7	6.0	15.5	40.1	4.0	0.2	6.9		
Hot-humid	776	31.4	27.3	6.7	19.4	55.4	5.9	0.2	7.6		
Marine	706	32.7	26.0	9.2	21.1	46.4	6.3	0.3	8.9		
<b>Number of floors</b>											
One	489	36.6	37.8	12.3	27.5	59.6	4.0	0.3	8.2		
Two	689	34.0	34.1	11.9	24.0	48.5	5.5	0.3	7.9		
Three	894	36.0	36.6	13.4	29.4	53.6	6.9	0.3	7.8		
Four to nine	3,478	44.3	36.9	10.4	29.1	56.5	26.0	0.3	7.5		
Ten or more	17,357	39.7	23.2	4.6	26.6	43.2	127.7	0.3	7.4		
<b>Number of workers (main shift)</b>											
Fewer than 5	211	32.8	96.6	14.1	27.9	54.0	1.8	0.3	8.6		
5 to 9	325	36.8	51.1	10.8	24.2	55.4	2.8	0.3	8.5		
10 to 19	583	42.8	44.6	12.1	28.3	69.0	4.6	0.3	7.9		
20 to 49	1,061	34.8	36.2	11.7	26.2	55.7	8.5	0.3	8.0		
50 to 99	2,283	34.1	34.9	8.5	21.2	47.9	18.2	0.3	8.0		
100 to 249	4,449	37.0	31.8	9.5	29.8	56.5	34.4	0.3	7.7		
250 or more	14,690	44.7	21.2	6.5	21.7	54.2	102.4	0.3	7.0		
<b>Weekly operating hours</b>											
Fewer than 40	219	25.6	46.7	12.1	24.8	44.7	1.8	0.2	8.3		
40 to 48	347	25.3	21.6	10.6	22.6	40.7	2.9	0.2	8.4		
49 to 60	476	25.7	21.4	10.5	22.7	46.7	3.9	0.2	8.2		
61 to 84	1,009	39.9	39.1	14.0	33.9	89.1	8.3	0.3	8.2		
85 to 167	1,211	50.5	55.5	19.7	54.2	155.0	9.6	0.4	7.9		
Open continuously	2,437	53.6	49.2	17.7	34.9	71.0	17.7	0.4	7.3		

**Table C24. Natural gas consumption and expenditure intensities, 2012**

	Natural gas consumption					Distribution of building-level intensities (cubic feet/square foot)			Natural gas expenditures		
	per building (thousand cubic feet)	per square foot (cubic feet)	per worker (thousand cubic feet)	25th percentile	Median	75th percentile	per building (thousand dollars)	per square foot (dollars)	per thousand cubic feet (dollars)		
	748	37.3	35.2	12.1	26.6	55.3	5.9	0.3	7.9		
<b>All buildings</b>											
<b>Ownership and occupancy</b>											
Nongovernment owned	685	38.3	35.4	11.9	27.0	56.8	5.4	0.3	7.9		
Owner occupied	659	42.3	47.2	13.6	28.7	57.1	5.0	0.3	7.6		
Leased to tenant(s)	650	35.6	27.4	11.5	27.1	64.3	5.4	0.3	8.4		
Owner occupied and leased	1,077	34.1	29.8	7.3	17.7	38.2	8.3	0.3	7.7		
Unoccupied	177	12.5	N	5.8	18.9	29.5	1.6	0.1	9.0		
Government owned	1,102	34.3	34.2	13.3	25.5	48.6	8.5	0.3	7.8		
Federal	1,395	34.0	23.2	14.3	22.9	37.9	10.8	0.3	7.7		
State	1,644	42.0	40.3	10.6	28.2	53.3	12.5	0.3	7.6		
Local	913	31.2	33.0	13.9	25.6	48.6	7.2	0.2	7.8		
<b>Party responsible for operation and maintenance of energy systems</b>											
Building owner	741	36.8	34.5	12.2	26.4	53.3	5.8	0.3	7.8		
Business owner or tenant	774	40.6	40.3	11.7	27.5	69.8	6.4	0.3	8.3		
Property management	869	33.3	22.0	10.8	30.4	72.3	6.9	0.3	8.0		
Other	814	43.0	45.9	18.8	42.2	83.7	6.4	0.3	7.8		
<b>Provider of direct input on energy-related equipment purchases</b>											
Building owner	736	36.7	34.4	12.2	26.4	53.1	5.8	0.3	7.8		
Business owner or tenant	822	42.8	40.4	10.8	32.2	75.3	6.7	0.4	8.1		
Property management	911	32.3	29.1	16.0	43.0	155.0	6.6	0.2	7.2		
Other	811	40.9	44.9	13.6	25.0	76.9	7.0	0.4	8.6		
<b>Number of establishments</b>											
One	664	40.1	40.0	13.3	28.2	59.6	5.2	0.3	7.8		
2 to 5	814	33.6	31.4	9.2	22.7	45.6	6.5	0.3	8.0		
6 to 10	1,153	33.8	26.7	7.6	24.5	43.0	9.7	0.3	8.4		
11 to 20	2,310	39.7	29.3	13.7	32.6	57.2	18.5	0.3	8.0		
More than 20	5,786	22.8	15.9	6.3	22.5	60.5	49.0	0.2	8.5		
Currently unoccupied	231	14.1	N	5.8	20.7	30.5	1.9	0.1	8.3		
<b>Predominant exterior wall material</b>											
Brick, stone, or stucco	793	39.0	37.0	13.0	29.4	63.0	6.3	0.3	7.9		
Concrete (block or poured)	827	35.9	34.9	10.6	26.1	52.2	6.6	0.3	8.0		
Concrete panels	1,850	34.2	32.8	4.0	17.4	55.4	12.9	0.2	7.0		
Siding or shingles	368	45.3	43.3	16.1	29.8	58.2	3.1	0.4	8.4		
Metal panels	336	28.0	34.6	11.8	20.4	44.2	2.8	0.2	8.4		
Window glass	3,407	44.4	22.2	18.4	77.5	344.5	28.2	0.4	8.3		
Other	Q	46.0	44.9	11.9	20.2	30.1	Q	0.3	6.6		
No one major type	865	30.6	Q	20.5	36.0	53.0	6.9	0.3	8.0		

**Table C24. Natural gas consumption and expenditure intensities, 2012**

	Natural gas consumption					Distribution of building-level intensities (cubic feet/square foot)			Natural gas expenditures		
	per building (thousand cubic feet)	per square foot (cubic feet)	per worker (thousand cubic feet)	25th percentile	Median	75th percentile	per building (thousand dollars)	per square foot (dollars)	per thousand cubic feet (dollars)		
	748	37.3	35.2	12.1	26.6	55.3	5.9	0.3	7.9		
<b>All buildings</b>											
<b>Predominant roof material</b>											
Metal surfacing	365	30.1	34.8	11.8	23.5	47.6	3.1	0.3	8.4		
Synthetic or rubber	1,334	41.9	39.4	14.6	29.6	62.0	10.4	0.3	7.8		
Built-up	1,102	35.5	31.6	9.2	24.9	55.5	8.3	0.3	7.6		
Slate or tile shingles	506	39.7	41.8	14.8	38.2	73.2	4.1	0.3	8.1		
Wooden materials (including shingles)	506	65.7	63.2	11.3	34.0	72.7	3.6	0.5	7.2		
Asphalt, fiberglass, or other shingles	445	36.3	32.1	12.1	28.3	54.9	3.6	0.3	8.1		
Concrete	1,271	27.5	16.1	4.0	18.6	38.7	9.8	0.2	7.7		
Other	1,065	32.8	38.9	10.7	20.2	40.6	8.8	0.3	8.3		
No one major type	939	23.5	Q	15.2	19.1	53.6	9.1	0.2	9.7		
<b>Roof characteristics</b>											
Roof tilt											
Flat	1,199	39.6	33.5	11.6	27.9	65.1	9.2	0.3	7.7		
Shallow pitch	460	32.4	36.1	11.1	24.5	49.7	3.7	0.3	8.1		
Steeper pitch	418	36.2	43.2	14.4	28.5	52.1	3.5	0.3	8.3		
Cool roof	1,314	40.9	37.0	12.6	28.4	61.6	10.1	0.3	7.7		
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>											
Any type of renovation	928	38.8	35.1	13.0	28.7	58.2	7.3	0.3	7.8		
Addition or annex	1,619	45.2	46.2	13.1	28.7	56.9	12.0	0.3	7.4		
Reduction in floorspace	1,627	49.0	31.6	11.9	36.0	67.6	11.9	0.4	7.3		
Roof replacement	1,059	41.1	36.9	13.6	26.8	55.9	8.3	0.3	7.8		
Exterior wall replacement	1,054	37.2	35.5	8.6	23.9	48.6	8.1	0.3	7.7		
Interior wall reconfiguration	1,073	39.1	30.6	11.1	24.9	47.9	8.3	0.3	7.7		
Window replacement	1,023	40.7	35.0	14.4	27.9	55.9	7.9	0.3	7.8		
HVAC equipment upgrade	1,143	40.2	35.7	14.0	27.1	56.5	8.8	0.3	7.7		
Lighting upgrade	1,233	40.9	37.2	13.8	29.8	58.3	9.4	0.3	7.6		
Electrical upgrade	1,114	43.4	38.6	14.2	28.5	60.3	8.6	0.3	7.7		
Plumbing system upgrade	1,214	47.6	40.4	15.1	30.5	72.1	9.3	0.4	7.7		
Insulation upgrade	1,040	44.5	39.7	14.2	26.8	49.7	8.1	0.4	7.8		
Fire, safety, or security upgrade	1,336	41.9	35.9	12.0	26.8	56.5	10.2	0.3	7.6		
Structural upgrade	1,469	52.1	53.7	12.7	25.2	44.7	10.6	0.4	7.2		
Other	770	23.9	19.9	16.1	42.5	77.4	6.2	0.2	8.0		
No renovations	558	35.0	34.7	11.7	25.4	53.1	4.5	0.3	8.0		
Buildings constructed 2008 or later	1,128	40.7	38.8	10.0	19.3	61.1	8.6	0.3	7.6		

**Table C24. Natural gas consumption and expenditure intensities, 2012**

	Natural gas consumption					Distribution of building-level intensities (cubic feet/square foot)			Natural gas expenditures		
	per building (thousand cubic feet)	per square foot (cubic feet)	per worker (thousand cubic feet)	25th percentile	Median	75th percentile per thousand dollars	per building (thousand dollars)	per square foot (dollars)	per thousand cubic feet (dollars)		
				25th percentile	Median						
All buildings	748	37.3	35.2	12.1	26.6	55.3	5.9	0.3	7.9		
<b>Energy sources (more than one may apply)</b>											
Electricity	748	37.3	35.2	12.1	26.6	55.3	5.9	0.3	7.9		
Natural gas	748	37.3	35.2	12.1	26.6	55.3	5.9	0.3	7.9		
Fuel oil	3,713	44.5	34.1	10.8	28.3	58.7	27.2	0.3	7.3		
District heat	6,206	36.9	23.3	2.3	11.9	49.1	44.0	0.3	7.1		
District chilled water	6,245	53.5	40.9	4.8	29.5	106.3	44.2	0.4	7.1		
Propane	2,053	42.0	58.1	7.3	22.7	52.3	14.9	0.3	7.3		
Other	1,470	40.1	41.1	8.8	22.8	43.1	11.4	0.3	7.8		
<b>Space-heating energy sources</b>											
Natural gas	736	38.8	37.2	13.0	27.1	54.0	5.8	0.3	7.8		
Natural gas main	743	40.2	38.7	14.0	28.5	55.0	5.8	0.3	7.8		
Natural gas secondary	681	30.2	27.7	7.2	18.8	43.0	5.3	0.2	7.7		
Other excluding natural gas	890	28.5	24.3	5.8	22.4	68.2	7.3	0.2	8.2		
Buildings without heating	541	41.1	48.0	2.2	25.8	118.9	4.6	0.4	8.5		
<b>Primary space-heating energy source</b>											
Electricity	643	28.3	27.2	7.0	21.9	55.4	5.3	0.2	8.3		
Natural gas	743	40.2	38.7	14.0	28.5	55.0	5.8	0.3	7.8		
Fuel oil	520	19.0	16.4	7.6	22.4	52.2	5.0	0.2	9.6		
District heat	6,122	37.1	23.6	2.2	11.9	49.1	43.2	0.3	7.1		
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>											
Natural gas	4,790	77.9	54.4	27.0	41.6	53.7	35.6	0.6	7.4		
Other excluding natural gas	769	36.8	34.4	12.1	26.3	55.3	6.0	0.3	7.9		
Buildings without cooling	293	37.3	58.8	13.6	32.7	54.5	2.6	0.3	9.0		
<b>Water-heating energy sources</b>											
Natural gas	983	43.7	41.2	14.1	30.9	67.6	7.6	0.3	7.7		
Other excluding natural gas	435	24.5	21.9	10.8	23.5	43.8	3.7	0.2	8.4		
Buildings without water heating	197	22.0	42.2	8.5	18.9	48.2	1.5	0.2	7.8		
<b>Cooking energy sources</b>											
Natural gas	1,632	48.7	46.7	20.9	49.4	127.2	12.5	0.4	7.7		
Other excluding natural gas	577	32.0	29.3	10.8	24.5	46.1	4.6	0.3	7.9		
Buildings without cooking	426	28.4	26.5	10.5	22.8	43.4	3.5	0.2	8.2		

**Table C24. Natural gas consumption and expenditure intensities, 2012**

Natural gas consumption										
	Distribution of building-level intensities (cubic feet/square foot)					Natural gas expenditures				
	per building (thousand cubic feet)	per square foot (cubic feet)	per worker (thousand cubic feet)	25th percentile	Median	75th percentile	per building (thousand dollars)	per square foot (dollars)	per thousand cubic feet (dollars)	per thousand cubic feet (dollars)
<b>All buildings</b>	748	37.3	35.2	12.1	26.6	55.3	5.9	0.3	7.9	
<b>Energy end uses (more than one may apply)</b>										
Buildings with space heating	751	37.3	35.1	12.3	26.6	54.5	5.9	0.3	7.9	
Buildings with cooling	787	37.4	34.7	12.1	26.5	55.3	6.2	0.3	7.8	
Buildings with water heating	786	37.8	35.1	12.6	27.1	55.8	6.2	0.3	7.9	
Buildings with cooking	1,295	45.4	43.1	16.6	38.7	93.1	10.0	0.4	7.7	
Buildings with manufacturing	785	32.2	32.1	7.2	19.8	40.0	6.7	0.3	8.5	
Buildings with electricity generation	3,088	41.1	35.3	12.2	28.4	55.7	23.2	0.3	7.5	
<b>Percent of floorspace heated</b>										
Not heated	541	41.1	48.0	2.2	25.8	118.9	4.6	0.4	8.5	
1 to 50	373	21.0	34.0	5.6	13.6	31.8	3.0	0.2	8.2	
51 to 99	930	38.8	37.6	11.3	25.0	59.8	7.4	0.3	7.9	
100	770	39.2	34.5	14.9	29.8	58.2	6.0	0.3	7.8	
<b>Percent of floorspace cooled</b>										
Not cooled	293	37.3	58.8	13.6	32.7	54.5	2.6	0.3	9.0	
1 to 50	586	31.3	46.7	10.1	24.6	49.9	4.7	0.3	8.0	
51 to 99	1,100	38.0	35.1	12.6	26.3	60.8	8.7	0.3	7.9	
100	755	39.8	31.4	13.3	28.4	57.0	5.8	0.3	7.7	
<b>Heating equipment (more than one may apply)</b>										
Heat pumps	1,037	31.9	30.1	7.4	18.5	48.2	8.5	0.3	8.2	
Furnaces	434	33.8	33.6	13.0	23.4	44.3	3.6	0.3	8.4	
Individual space heaters	687	33.6	36.4	13.6	27.9	53.5	5.4	0.3	7.9	
District heat	6,207	37.2	23.6	2.3	11.9	49.1	44.0	0.3	7.1	
Boilers	2,347	48.0	41.7	21.8	39.2	68.0	18.0	0.4	7.7	
Packaged heating units	698	35.3	35.0	11.6	26.2	55.2	5.5	0.3	7.9	
Other	1,472	44.1	58.3	19.7	29.9	56.0	12.6	0.4	8.6	
<b>Cooling equipment (more than one may apply)</b>										
Residential-type central air conditioners	401	38.7	38.3	13.4	25.2	54.4	3.3	0.3	8.2	
Heat pumps	943	31.2	29.2	8.9	20.9	55.2	7.8	0.3	8.3	
Individual air conditioners	947	40.0	40.7	13.4	29.7	56.8	7.8	0.3	8.2	
District chilled water	6,245	53.5	40.9	4.8	29.5	106.3	44.2	0.4	7.1	
Central chillers	4,608	42.5	33.1	12.2	29.6	53.7	33.6	0.3	7.3	
Packaged air conditioning units	981	36.8	35.4	11.0	26.5	56.0	7.6	0.3	7.8	
Swamp coolers	1,007	45.1	50.5	16.9	43.0	123.9	7.5	0.3	7.5	
Other	Q	35.0	34.8	7.3	18.1	52.0	Q	0.3	8.5	
<b>Main equipment replaced since 1990 (more than one may apply)</b>										
Heating	642	36.6	35.6	12.6	28.0	60.0	5.1	0.3	8.0	
Cooling	692	37.2	34.9	13.1	28.3	59.2	5.5	0.3	8.0	

**Table C24. Natural gas consumption and expenditure intensities, 2012**

	Natural gas consumption					Distribution of building-level intensities (cubic feet/square foot)			Natural gas expenditures		
	per building (thousand cubic feet)	per square foot (cubic feet)	per worker (thousand cubic feet)	25th percentile	Median	75th percentile per thousand dollars	per building (thousand dollars)	per square foot (dollars)	per thousand cubic feet (dollars)		
				25th percentile	Median						
<b>All buildings</b>	748	37.3	35.2	12.1	26.6	55.3	5.9	0.3	7.9		
<b>Water-heating equipment</b>											
Centralized system	666	40.6	37.9	13.6	28.5	58.1	5.2	0.3	7.9		
Distributed system	646	30.5	28.7	8.6	21.1	47.9	5.2	0.2	8.0		
Combination of centralized and distributed system	1,867	35.5	32.2	12.3	25.1	57.8	14.7	0.3	7.9		
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>											
Snack bar or concession stand	3,691	45.2	43.2	10.4	27.5	67.5	27.6	0.3	7.5		
Fast food or small restaurant	2,745	43.4	39.8	19.7	47.9	93.4	21.3	0.3	7.8		
Cafeteria or large restaurant	5,511	43.9	38.1	11.5	27.7	53.0	40.5	0.3	7.4		
Commercial kitchen/food preparation area	2,974	46.6	49.0	15.5	32.4	66.3	22.4	0.4	7.5		
Small kitchen area	868	36.7	39.4	10.7	24.3	46.9	6.9	0.3	8.0		
<b>HVAC conservation features (more than one may apply)</b>											
Economizer cycle	2,248	40.1	35.5	11.4	26.9	59.6	17.1	0.3	7.6		
Regular HVAC maintenance	975	38.3	34.2	12.6	28.4	58.7	7.6	0.3	7.8		
Building automation system (BAS) <sup>2</sup>	2,069	38.6	34.1	9.6	24.5	49.1	15.6	0.3	7.5		
<b>Window and interior lighting features (more than one may apply)</b>											
Multipaned windows	923	39.0	37.3	13.2	28.2	56.1	7.2	0.3	7.8		
Tinted window glass	1,082	38.6	33.6	10.0	24.5	54.2	8.3	0.3	7.7		
Reflective window glass	1,458	43.8	36.7	9.3	24.2	58.9	11.1	0.3	7.6		
External overhangs or awnings	898	43.3	41.3	13.1	30.0	71.0	7.0	0.3	7.8		
Skylights or atriums	1,821	39.7	40.3	9.2	23.8	49.1	14.0	0.3	7.7		
Light scheduling	1,492	39.2	34.2	12.1	27.5	57.9	11.6	0.3	7.8		
Occupancy sensors	1,875	38.6	34.2	10.5	28.6	52.2	14.5	0.3	7.7		
Multi-level lighting or dimming	2,132	47.8	42.6	16.7	42.3	89.6	16.1	0.4	7.5		
Daylight harvesting	2,505	39.1	31.7	17.4	29.8	59.8	19.7	0.3	7.9		
Demand responsive lighting	1,230	33.7	33.6	12.5	27.5	55.4	10.4	0.3	8.5		
Building automation system (BAS) for lighting <sup>2</sup>	2,305	34.8	33.2	10.8	24.0	56.7	17.9	0.3	7.8		
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>											
Heating	707	34.9	32.9	11.6	25.6	51.5	5.6	0.3	8.0		
Cooling	735	35.1	32.8	11.5	25.3	51.6	5.8	0.3	8.0		
Lighting	740	37.3	34.7	12.3	26.6	54.5	5.9	0.3	7.9		

**Table C24. Natural gas consumption and expenditure intensities, 2012**

	Natural gas consumption					Distribution of building-level intensities (cubic feet/square foot)				Natural gas expenditures		
	per building (thousand cubic feet)	per square foot (cubic feet)	per worker (thousand cubic feet)	25th per- centile	Median	75th per- centile	per building (thousand dollars)	per square foot (dollars)	per thousand cubic feet (dollars)	per thousand cubic feet (dollars)	per thousand cubic feet (dollars)	
	All buildings	748	37.3	35.2	12.1	26.6	55.3	5.9	0.3	7.9		
<b>Annual consumption (hundred cubic feet)</b>												
1,000 or less	50	7.4	7.0	4.9	11.6	22.7	0.6	0.1	12.3			
1,001 to 5,000	239	20.6	18.7	17.8	31.5	58.1	2.2	0.2	9.2			
5,001 to 10,000	713	29.0	29.7	24.5	50.7	112.0	5.9	0.2	8.3			
10,001 to 25,000	1,550	40.1	37.4	32.4	68.6	175.8	12.1	0.3	7.8			
25,001 to 50,000	3,449	42.4	43.4	35.3	56.5	121.7	26.6	0.3	7.7			
50,001 to 100,000	6,711	52.7	54.6	39.5	67.4	124.4	50.8	0.4	7.6			
Over 100,000	26,592	88.3	71.4	58.6	106.3	140.2	185.9	0.6	7.0			

<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.

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/> • 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 C of the 2012 Commercial Buildings Energy Consumption Survey.

**Table C25. Natural gas consumption and conditional energy intensity by Census region, 2012**

	Total natural gas consumption (billion cubic feet)				Total floorspace of buildings using natural gas (million square feet)				Natural gas energy intensity (cubic feet/square foot)			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
<b>All buildings</b>	487	627	600	479	11,068	15,025	19,900	12,732	44.0	41.7	30.2	37.6
<b>Building floorspace (square feet)</b>												
1,001 to 5,000	40	65	91	54	478	1,126	1,266	888	83.1	57.5	71.6	61.1
5,001 to 10,000	32	71	83	55	630	1,378	1,536	1,273	51.2	51.3	54.3	43.5
10,001 to 25,000	59	81	83	74	1,608	2,185	2,632	2,398	36.4	37.2	31.4	31.0
25,001 to 50,000	46	100	74	57	1,134	2,628	2,639	1,747	40.6	38.0	28.0	32.6
50,001 to 100,000	85	100	97	48	2,119	2,181	4,004	1,631	40.2	45.7	24.2	29.4
100,001 to 200,000	101	69	56	57	2,155	1,866	3,479	1,915	46.8	37.1	16.0	30.0
200,001 to 500,000	75	92	56	79	1,717	2,391	2,378	1,808	43.9	38.3	23.6	43.8
Over 500,000	49	50	61	Q	1,226	1,270	1,967	1,071	40.0	39.2	31.1	50.1
<b>Principal building activity</b>												
Education	77	106	61	40	1,645	2,735	3,715	1,426	46.6	38.8	16.5	27.9
Food sales	Q	Q	10	Q	Q	Q	169	Q	Q	Q	59.1	Q
Food service	26	49	103	45	196	300	577	320	130.7	162.4	178.0	139.7
Health care	62	62	78	57	898	722	1,010	662	68.8	85.7	77.0	86.0
Inpatient	46	48	73	46	431	427	830	424	107.4	111.7	88.3	109.0
Outpatient	15	14	4	11	466	295	180	239	33.1	48.0	24.8	45.2
Lodging	34	41	66	74	785	838	1,982	1,314	43.9	49.3	33.1	56.3
Mercantile	52	80	77	75	1,290	1,853	2,957	2,394	40.4	43.0	26.1	31.4
Retail (other than mall)	13	29	14	16	506	869	935	1,060	25.1	33.9	15.1	15.2
Enclosed and strip malls	39	50	63	59	784	984	2,021	1,334	50.3	50.9	31.2	44.4
Office	93	84	47	52	2,704	2,535	2,718	2,333	34.3	33.2	17.2	22.2
Public assembly	28	53	28	23	664	1,316	1,061	847	42.6	40.5	26.0	26.7
Public order and safety	Q	Q	10	Q	Q	Q	419	Q	Q	Q	23.4	Q
Religious worship	19	27	24	15	730	705	1,081	501	25.8	38.9	22.2	29.1
Service	18	47	42	12	286	1,223	934	348	64.8	38.1	44.6	35.3
Warehouse and storage	31	37	29	39	1,134	1,819	2,526	1,528	27.6	20.3	11.3	25.5
Other	Q	Q	24	Q	Q	Q	584	313	Q	Q	41.6	74.0
Vacant	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Year constructed</b>												
Before 1920	34	27	20	4	988	743	379	210	34.1	36.9	53.3	18.8
1920 to 1945	49	53	20	19	1,239	1,280	773	500	39.4	41.7	25.8	38.7
1946 to 1959	56	61	40	37	1,021	1,447	1,819	1,105	54.9	42.3	22.0	33.7
1960 to 1969	65	92	79	71	1,741	2,238	2,108	1,466	37.5	41.0	37.3	48.4
1970 to 1979	87	93	89	62	1,552	2,110	2,314	2,003	55.9	44.3	38.6	31.0
1980 to 1989	43	99	113	71	1,148	2,143	4,045	2,551	37.1	46.3	28.0	28.0
1990 to 1999	75	80	95	80	1,551	2,253	3,282	2,075	48.5	35.3	29.0	38.6
2000 to 2003	36	42	43	32	841	1,168	1,810	904	43.2	36.4	23.8	35.5
2004 to 2007	20	36	53	Q	333	977	1,711	1,074	58.6	36.9	30.7	55.2
2008 to 2012	23	42	48	Q	652	666	1,660	843	35.1	63.0	28.9	50.6
<b>Climate region<sup>1</sup></b>												
Very cold/Cold	323	561	N	186	7,259	13,130	N	4,123	44.5	42.7	N	45.2
Mixed-humid	164	65	411	N	3,809	1,895	13,656	N	43.1	34.5	30.1	N
Mixed-dry/Hot-dry	N	N	Q	226	N	N	Q	6,576	N	N	24.0	34.4
Hot-humid	N	N	167	N	N	N	5,300	N	N	N	31.4	N
Marine	N	N	N	67	N	N	N	2,033	N	N	N	32.7

**Table C25. Natural gas consumption and conditional energy intensity by Census region, 2012**

	Total natural gas consumption (billion cubic feet)				Total floorspace of buildings using natural gas (million square feet)				Natural gas energy intensity (cubic feet/square foot)			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
All buildings	487	627	600	479	11,068	15,025	19,900	12,732	44.0	41.7	30.2	37.6
<b>Number of floors</b>												
One	120	262	300	214	2,569	6,030	9,737	6,160	46.7	43.5	30.8	34.8
Two	142	141	111	105	3,146	4,042	4,304	3,172	45.0	35.0	25.7	33.1
Three	56	92	46	25	1,609	2,112	1,572	791	34.9	43.6	29.1	31.5
Four to nine	132	102	110	89	2,664	2,124	3,277	1,699	49.5	47.9	33.6	52.1
Ten or more	38	29	34	Q	1,080	716	1,010	909	34.9	40.8	33.6	Q
<b>Number of workers (main shift)</b>												
Fewer than 5	50	87	72	49	1,238	2,532	2,515	1,573	40.0	34.4	28.8	31.2
5 to 9	34	54	64	44	859	1,475	1,783	1,238	39.8	36.9	35.9	35.8
10 to 19	37	89	101	64	1,063	1,622	2,254	1,860	34.6	54.6	44.8	34.6
20 to 49	59	117	107	87	1,436	2,898	3,564	2,714	40.9	40.3	30.0	32.0
50 to 99	92	105	101	54	1,782	2,409	4,346	1,783	51.6	43.6	23.1	30.4
100 to 249	100	83	67	79	2,198	2,128	3,000	1,555	45.5	39.0	22.2	51.0
250 or more	116	92	89	101	2,492	1,961	2,438	2,010	46.5	46.8	36.5	50.4
<b>Weekly operating hours</b>												
Fewer than 40	14	36	25	19	485	1,208	1,242	770	29.9	29.9	20.4	24.5
40 to 48	44	83	64	62	1,453	2,547	3,761	2,198	30.3	32.6	16.9	28.0
49 to 60	72	121	95	72	2,473	3,581	4,870	3,081	29.2	33.8	19.5	23.4
61 to 84	114	144	115	85	2,600	3,144	3,180	2,570	44.0	45.8	36.1	33.1
85 to 167	96	88	101	55	1,547	1,797	2,049	1,341	62.0	48.8	49.5	41.0
Open continuously	146	155	201	186	2,510	2,748	4,798	2,771	58.2	56.4	41.8	67.2
<b>Ownership and occupancy</b>												
Nongovernment owned	358	474	472	400	8,516	11,040	14,603	10,322	42.0	42.9	32.3	38.8
Owner occupied	170	265	227	206	3,786	5,701	6,778	4,276	45.0	46.5	33.4	48.2
Leased to tenant(s)	130	140	196	152	3,304	3,668	5,930	4,459	39.5	38.1	33.0	34.2
Owner occupied and leased	56	67	50	41	1,366	1,546	1,861	1,482	41.2	43.4	26.6	27.3
Unoccupied	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Government owned	129	153	128	79	2,552	3,986	5,298	2,409	50.7	38.3	24.2	32.8
Federal	Q	Q	11	Q	Q	Q	422	Q	Q	Q	25.2	Q
State	Q	36	42	27	895	821	1,434	788	66.6	44.4	29.5	34.1
Local	67	109	75	43	1,597	2,920	3,441	1,478	41.9	37.5	21.8	29.1
<b>Party responsible for operation and maintenance of energy systems</b>												
Building owner	397	550	472	387	9,348	13,080	16,364	10,308	42.5	42.0	28.9	37.6
Business owner or tenant	74	66	111	83	1,421	1,573	3,011	2,235	52.2	41.7	37.0	37.2
Property management	Q	Q	10	Q	Q	Q	343	Q	Q	Q	29.4	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Provider of direct input on energy-related equipment purchases</b>												
Building owner	406	564	486	412	9,496	13,446	16,985	11,019	42.7	41.9	28.6	37.4
Business owner or tenant	58	49	90	61	1,084	1,150	2,314	1,477	54.0	42.4	38.9	41.2
Property management	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	22	Q	Q	328	481	Q	Q	30.4	45.1	Q

**Table C25. Natural gas consumption and conditional energy intensity by Census region, 2012**

	Total natural gas consumption (billion cubic feet)				Total floorspace of buildings using natural gas (million square feet)				Natural gas energy intensity (cubic feet/square foot)			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
All buildings	487	627	600	479	11,068	15,025	19,900	12,732	44.0	41.7	30.2	37.6
<b>Number of establishments</b>												
One	329	417	417	327	6,832	9,780	12,802	7,742	48.2	42.6	32.6	42.2
2 to 5	93	142	104	79	2,206	3,459	4,184	2,584	42.1	41.1	24.8	30.7
6 to 10	21	27	26	30	575	709	977	831	36.4	38.5	27.1	36.0
11 to 20	27	23	36	24	719	436	970	637	37.0	53.5	37.2	37.1
More than 20	17	16	16	17	675	518	869	801	25.0	30.2	18.8	20.6
Currently unoccupied	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Predominant exterior wall material</b>												
Brick, stone, or stucco	258	344	329	202	6,045	7,489	10,487	4,978	42.6	45.9	31.3	40.5
Concrete (block or poured)	118	134	153	117	2,711	3,379	4,818	3,609	43.4	39.6	31.8	32.4
Concrete panels	35	62	41	Q	656	1,351	1,892	2,039	53.3	46.1	21.6	31.9
Siding or shingles	24	37	29	42	629	920	455	884	38.1	39.7	63.2	47.0
Metal panels	Q	39	41	22	443	1,325	1,870	748	Q	29.1	22.0	28.8
Window glass	Q	Q	Q	14	Q	Q	Q	250	Q	Q	Q	57.3
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	22	62	101	50	744	2,093	3,450	1,538	28.9	29.7	29.4	32.6
Synthetic or rubber	213	257	181	179	4,618	6,049	5,503	3,620	46.1	42.5	32.8	49.5
Built-up	137	151	164	116	2,947	3,437	5,926	3,716	46.6	43.8	27.7	31.3
Slate or tile shingles	30	13	29	40	627	330	1,048	795	47.2	39.3	Q	50.2
Wooden materials (including shingles)	Q	Q	16	11	Q	Q	195	246	Q	Q	80.5	44.9
Asphalt, fiberglass, or other shingles	64	130	95	69	1,695	2,677	3,242	2,283	37.8	48.6	29.5	30.3
Concrete	8	Q	Q	5	211	Q	Q	256	37.0	Q	Q	20.6
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>												
<b>Roof tilt</b>												
Flat	357	387	371	304	7,900	8,833	11,477	7,623	45.2	43.9	32.3	39.9
Shallow pitch	74	133	139	124	1,456	3,847	5,593	3,604	51.0	34.5	24.8	34.3
Steeper pitch	56	106	90	51	1,712	2,345	2,831	1,505	32.7	45.3	31.9	34.2
Cool roof	127	143	155	162	2,397	3,196	5,104	3,655	53.1	44.8	30.4	44.3

**Table C25. Natural gas consumption and conditional energy intensity by Census region, 2012**

	Total natural gas consumption (billion cubic feet)				Total floorspace of buildings using natural gas (million square feet)				Natural gas energy intensity (cubic feet/square foot)			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
<b>All buildings</b>	487	627	600	479	11,068	15,025	19,900	12,732	44.0	41.7	30.2	37.6
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>												
Any type of renovation	309	340	304	247	6,944	8,306	9,919	5,776	44.4	40.9	30.7	42.8
Addition or annex	98	141	127	91	1,948	3,337	3,299	1,521	50.1	42.4	38.4	59.8
Reduction in floorspace	Q	11	18	Q	Q	233	454	Q	Q	46.2	40.0	Q
Roof replacement	192	196	160	117	4,074	4,496	5,024	2,558	47.0	43.5	31.9	45.6
Exterior wall replacement	23	34	37	33	730	881	1,061	723	31.4	38.1	34.6	45.6
Interior wall reconfiguration	156	176	147	150	3,991	4,278	4,356	3,450	39.2	41.1	33.8	43.4
Window replacement	93	101	98	86	2,362	2,568	2,559	1,798	39.5	39.4	38.2	47.6
HVAC equipment upgrade	216	217	207	181	5,000	5,473	6,252	3,712	43.2	39.7	33.2	48.7
Lighting upgrade	197	223	190	180	4,618	5,090	5,830	3,760	42.7	43.8	32.7	47.8
Electrical upgrade	139	142	124	133	3,155	3,163	3,728	2,328	44.0	44.8	33.2	57.2
Plumbing system upgrade	131	121	126	125	2,679	2,818	3,040	2,012	48.8	42.8	41.4	62.1
Insulation upgrade	61	67	67	Q	1,378	1,784	1,615	1,116	44.2	37.5	41.8	60.0
Fire, safety, or security upgrade	151	142	146	116	3,540	3,138	4,102	2,447	42.6	45.2	35.6	47.4
Structural upgrade	16	27	40	Q	481	733	735	885	33.2	37.3	54.9	72.3
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
No renovations	156	245	248	189	3,472	6,053	8,321	6,112	44.9	40.5	29.8	31.0
Buildings constructed 2008 or later	23	42	48	Q	652	666	1,660	843	35.1	63.0	28.9	50.6
<b>Energy sources (more than one may apply)</b>												
Electricity	487	627	600	479	11,068	15,025	19,900	12,732	44.0	41.7	30.2	37.6
Natural gas	487	627	600	479	11,068	15,025	19,900	12,732	44.0	41.7	30.2	37.6
Fuel oil	154	151	156	148	3,508	3,071	4,455	2,629	43.8	49.1	35.0	56.2
District heat	Q	5	16	Q	1,042	367	903	548	Q	14.0	Q	87.7
District chilled water	Q	5	26	Q	Q	329	1,100	483	86.7	15.4	23.7	111.8
Propane	17	40	36	Q	534	945	971	946	32.3	42.0	37.4	Q
Other	40	19	13	33	805	631	471	730	49.7	30.3	28.6	45.4
<b>Space-heating energy sources</b>												
Natural gas	440	614	483	386	9,352	14,031	15,438	10,690	47.0	43.7	31.3	36.1
Natural gas main	417	584	396	329	8,366	13,084	12,312	9,226	49.8	44.7	32.1	35.7
Natural gas secondary	23	29	87	57	986	947	3,126	1,464	23.4	31.0	27.9	39.2
Other excluding natural gas	Q	13	106	81	1,709	971	4,106	1,832	26.8	13.0	25.9	44.3
Buildings without heating	Q	Q	11	Q	Q	Q	357	Q	Q	Q	31.2	Q
<b>Primary space-heating energy source</b>												
Electricity	28	35	176	88	1,238	1,385	6,271	2,655	22.4	25.6	28.0	33.3
Natural gas	417	584	396	329	8,366	13,084	12,312	9,226	49.8	44.7	32.1	35.7
Fuel oil	5	N	Q	Q	369	N	Q	Q	14.8	N	Q	Q
District heat	Q	4	16	Q	1,015	352	892	532	Q	12.2	Q	90.3
Propane	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Cooling energy sources</b>												
Natural gas	27	Q	Q	Q	305	Q	Q	Q	89.6	Q	Q	Q
Other excluding natural gas	442	589	590	447	10,294	14,233	19,570	12,069	42.9	41.4	30.2	37.0
Buildings without cooling	18	19	5	27	469	572	212	574	37.8	32.9	23.0	46.6

**Table C25. Natural gas consumption and conditional energy intensity by Census region, 2012**

**Table C25. Natural gas consumption and conditional energy intensity by Census region, 2012**

	Total natural gas consumption (billion cubic feet)				Total floorspace of buildings using natural gas (million square feet)				Natural gas energy intensity (cubic feet/square foot)			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
All buildings	487	627	600	479	11,068	15,025	19,900	12,732	44.0	41.7	30.2	37.6
<b>Main equipment replaced since 1990 (more than one may apply)</b>												
Heating	175	231	233	132	4,060	5,843	6,981	4,174	43.1	39.5	33.3	31.7
Cooling	194	267	257	143	4,819	6,303	7,780	4,191	40.3	42.3	33.0	34.0
<b>Water-heating equipment</b>												
Centralized system	315	426	369	269	6,761	9,489	10,764	6,990	46.5	44.9	34.3	38.5
Distributed system	61	67	53	69	1,675	2,054	2,575	1,908	36.3	32.8	20.7	36.1
Combination of centralized and distributed system	108	126	163	128	2,457	3,174	5,791	3,381	44.1	39.8	28.2	37.7
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>												
Snack bar or concession stand	77	91	93	94	1,465	1,950	2,725	1,727	52.6	46.4	34.3	54.7
Fast food or small restaurant	69	79	112	103	1,523	1,548	2,973	2,300	45.1	51.0	37.6	44.8
Cafeteria or large restaurant	148	143	158	123	2,993	3,118	4,935	1,998	49.5	45.9	32.0	61.6
Commercial kitchen/food preparation area	164	178	169	146	2,725	3,656	5,103	2,598	60.1	48.8	33.1	56.2
Small kitchen area	95	124	93	87	2,430	3,048	3,368	2,038	39.1	40.7	27.6	42.6
<b>HVAC conservation features (more than one may apply)</b>												
Economizer cycle	262	290	197	241	5,650	6,831	6,384	5,817	46.4	42.5	30.9	41.4
Regular HVAC maintenance	442	561	514	425	9,847	12,918	16,835	11,091	44.9	43.4	30.5	38.4
Building automation system (BAS) <sup>2</sup>	246	285	275	268	5,485	6,567	9,665	6,105	44.8	43.4	28.4	43.9
<b>Window and interior lighting features (more than one may apply)</b>												
Multipaned windows	380	537	446	347	8,464	12,564	14,525	8,221	44.8	42.7	30.7	42.2
Tinted window glass	252	331	375	301	5,185	7,534	12,054	7,858	48.6	43.9	31.1	38.3
Reflective window glass	95	147	123	163	1,813	3,378	3,540	3,320	52.6	43.4	34.8	49.0
External overhangs or awnings	191	261	292	262	3,425	5,578	8,398	5,818	55.6	46.7	34.8	45.0
Skylights or atriums	164	143	163	194	3,298	3,615	5,266	4,566	49.6	39.6	30.9	42.5
Light scheduling	212	251	214	227	4,785	5,765	6,876	5,684	44.4	43.5	31.2	40.0
Occupancy sensors	271	287	230	253	6,006	6,646	7,989	6,332	45.2	43.2	28.8	39.9
Multi-level lighting or dimming	97	134	150	179	1,967	2,607	3,924	3,205	49.5	51.3	38.1	55.8
Daylight harvesting	53	47	36	57	894	1,311	1,348	1,368	59.0	36.2	26.5	41.3
Demand responsive lighting	25	31	36	32	468	878	1,093	1,240	52.6	35.3	33.2	25.9
Building automation system (BAS) for lighting <sup>2</sup>	90	86	71	80	1,823	2,124	2,991	2,461	49.3	40.6	23.6	32.5
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>												
Heating	385	498	422	330	9,195	11,986	15,384	10,253	41.8	41.6	27.4	32.2
Cooling	378	474	431	320	8,855	11,394	15,634	9,844	42.7	41.6	27.6	32.5
Lighting	457	594	553	449	10,410	14,154	18,539	11,930	43.9	42.0	29.8	37.7

**Table C25. Natural gas consumption and conditional energy intensity by Census region, 2012**

	Total natural gas consumption (billion cubic feet)				Total floorspace of buildings using natural gas (million square feet)				Natural gas energy intensity (cubic feet/square foot)			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
All buildings	487	627	600	479	11,068	15,025	19,900	12,732	44.0	41.7	30.2	37.6
<b>Annual consumption (hundred cubic feet)</b>												
1,000 or less	5	16	17	13	686	1,244	3,078	1,945	7.7	13.0	5.6	6.4
1,001 to 5,000	49	83	83	60	2,125	3,218	4,932	3,061	22.9	25.7	16.9	19.7
5,001 to 10,000	43	60	81	47	1,478	1,737	3,363	1,408	29.2	34.7	24.1	33.6
10,001 to 25,000	65	129	141	113	1,832	3,193	3,682	2,450	35.5	40.4	38.4	45.9
25,001 to 50,000	72	95	82	56	1,657	1,895	2,138	1,466	43.5	49.9	38.2	37.9
50,001 to 100,000	73	84	70	50	1,387	1,668	1,300	924	52.6	50.5	54.1	54.7
Over 100,000	180	160	125	140	1,904	2,070	1,407	1,479	94.6	77.2	89.1	94.8

<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/>

• 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 C of the 2012 Commercial Buildings Energy Consumption Survey.

**Table C26. Natural gas expenditures by Census region, 2012**

	Total natural gas expenditures (million dollars)				Natural gas expenditures (dollars)							
					per thousand cubic feet				per square foot			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
All buildings	4,599	4,383	4,793	3,503	9.44	6.99	7.98	7.31	0.42	0.29	0.24	0.28
<b>Building floorspace (square feet)</b>												
1,001 to 5,000	407	526	784	440	10.23	8.13	8.65	8.10	0.85	0.47	0.62	0.50
5,001 to 10,000	336	519	670	432	10.41	7.34	8.03	7.81	0.53	0.38	0.44	0.34
10,001 to 25,000	631	639	681	598	10.77	7.87	8.25	8.06	0.39	0.29	0.26	0.25
25,001 to 50,000	426	704	553	417	9.26	7.05	7.48	7.33	0.38	0.27	0.21	0.24
50,001 to 100,000	835	638	795	353	9.79	6.40	8.21	7.36	0.39	0.29	0.20	0.22
100,001 to 200,000	883	483	481	413	8.75	6.99	8.63	7.20	0.41	0.26	0.14	0.22
200,001 to 500,000	645	585	421	510	8.56	6.39	7.51	6.44	0.38	0.24	0.18	0.28
Over 500,000	437	288	409	Q	8.91	5.79	6.67	6.30	0.36	0.23	0.21	0.32
<b>Principal building activity</b>												
Education	718	729	463	290	9.36	6.87	7.53	7.30	0.44	0.27	0.12	0.20
Food sales	Q	Q	83	Q	Q	Q	8.32	Q	Q	Q	0.49	Q
Food service	238	336	781	344	9.31	6.89	7.60	7.70	1.22	1.12	1.35	1.08
Health care	560	384	511	364	9.07	6.20	6.57	6.39	0.62	0.53	0.51	0.55
Inpatient	395	285	476	285	8.52	5.98	6.49	6.17	0.91	0.67	0.57	0.67
Outpatient	165	98	35	79	10.71	6.95	7.79	7.34	0.35	0.33	0.19	0.33
Lodging	314	311	504	499	9.10	7.54	7.67	6.75	0.40	0.37	0.25	0.38
Mercantile	552	573	701	567	10.57	7.20	9.09	7.53	0.43	0.31	0.24	0.24
Retail (other than mall)	153	206	119	129	11.98	7.01	8.45	8.00	0.30	0.24	0.13	0.12
Enclosed and strip malls	399	366	582	438	10.12	7.31	9.23	7.40	0.51	0.37	0.29	0.33
Office	856	609	426	416	9.23	7.24	9.12	8.02	0.32	0.24	0.16	0.18
Public assembly	295	364	220	184	10.42	6.82	7.99	8.13	0.44	0.28	0.21	0.22
Public order and safety	Q	Q	87	Q	Q	Q	8.89	Q	Q	Q	0.21	Q
Religious worship	180	206	179	125	9.59	7.53	7.47	8.59	0.25	0.29	0.17	0.25
Service	169	347	336	99	9.11	7.44	8.05	8.07	0.59	0.28	0.36	0.28
Warehouse and storage	312	271	275	263	9.95	7.34	9.63	6.73	0.27	0.15	0.11	0.17
Other	Q	Q	201	Q	Q	Q	8.25	6.45	Q	Q	0.34	0.48
Vacant	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Year constructed</b>												
Before 1920	345	209	170	34	10.21	7.63	8.39	8.65	0.35	0.28	0.45	0.16
1920 to 1945	495	374	161	137	10.14	7.01	8.06	7.09	0.40	0.29	0.21	0.27
1946 to 1959	554	429	316	297	9.88	7.01	7.89	7.96	0.54	0.30	0.17	0.27
1960 to 1969	641	649	593	515	9.83	7.07	7.53	7.25	0.37	0.29	0.28	0.35
1970 to 1979	765	651	653	472	8.81	6.97	7.32	7.62	0.49	0.31	0.28	0.24
1980 to 1989	409	697	980	538	9.59	7.02	8.66	7.54	0.36	0.33	0.24	0.21
1990 to 1999	664	581	717	572	8.83	7.30	7.53	7.14	0.43	0.26	0.22	0.28
2000 to 2003	337	279	347	235	9.28	6.58	8.04	7.32	0.40	0.24	0.19	0.26
2004 to 2007	170	248	455	Q	8.69	6.88	8.65	6.93	0.51	0.25	0.27	0.38
2008 to 2012	220	265	402	292	9.63	6.32	8.37	6.85	0.34	0.40	0.24	0.35
<b>Climate region<sup>1</sup></b>												
Very cold/Cold	3,059	3,891	N	1,320	9.47	6.93	N	7.08	0.42	0.30	N	0.32
Mixed-humid	1,541	492	3,399	N	9.38	7.52	8.27	N	0.40	0.26	0.25	N
Mixed-dry/Hot-dry	N	N	Q	1,590	N	N	5.86	7.03	N	N	0.14	0.24
Hot-humid	N	N	1,262	N	N	N	7.58	N	N	N	0.24	N
Marine	N	N	N	593	N	N	N	8.91	N	N	N	0.29

**Table C26. Natural gas expenditures by Census region, 2012**

	Natural gas expenditures (dollars)											
	Total natural gas expenditures (million dollars)			per thousand cubic feet				per square foot				
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
All buildings	4,599	4,383	4,793	3,503	9.44	6.99	7.98	7.31	0.42	0.29	0.24	0.28
<b>Number of floors</b>												
One	1,188	1,954	2,514	1,648	9.91	7.45	8.39	7.70	0.46	0.32	0.26	0.27
Two	1,291	973	893	799	9.12	6.88	8.06	7.62	0.41	0.24	0.21	0.25
Three	563	613	344	180	10.03	6.65	7.51	7.24	0.35	0.29	0.22	0.23
Four to nine	1,210	655	793	574	9.18	6.44	7.20	6.48	0.45	0.31	0.24	0.34
Ten or more	347	189	248	Q	9.20	6.46	7.33	6.46	0.32	0.26	0.25	Q
<b>Number of workers (main shift)</b>												
Fewer than 5	523	702	607	388	10.56	8.07	8.39	7.91	0.42	0.28	0.24	0.25
5 to 9	385	435	503	354	11.27	8.00	7.86	8.00	0.45	0.30	0.28	0.29
10 to 19	375	600	801	520	10.19	6.78	7.92	8.09	0.35	0.37	0.36	0.28
20 to 49	560	855	889	651	9.52	7.32	8.31	7.50	0.39	0.30	0.25	0.24
50 to 99	873	693	849	393	9.50	6.60	8.44	7.27	0.49	0.29	0.20	0.22
100 to 249	910	543	561	533	9.10	6.54	8.43	6.72	0.41	0.26	0.19	0.34
250 or more	973	554	584	664	8.40	6.03	6.57	6.55	0.39	0.28	0.24	0.33
<b>Weekly operating hours</b>												
Fewer than 40	154	287	193	149	10.61	7.94	7.64	7.91	0.32	0.24	0.16	0.19
40 to 48	438	638	567	476	9.93	7.69	8.91	7.72	0.30	0.25	0.15	0.22
49 to 60	735	875	772	579	10.16	7.23	8.13	8.01	0.30	0.24	0.16	0.19
61 to 84	1,121	986	1,004	636	9.80	6.85	8.75	7.48	0.43	0.31	0.32	0.25
85 to 167	881	576	785	442	9.19	6.56	7.75	8.03	0.57	0.32	0.38	0.33
Open continuously	1,271	1,022	1,472	1,221	8.70	6.59	7.34	6.56	0.51	0.37	0.31	0.44
<b>Ownership and occupancy</b>												
Nongovernment owned	3,396	3,345	3,821	2,922	9.49	7.06	8.09	7.30	0.40	0.30	0.26	0.28
Owner occupied	1,593	1,854	1,714	1,468	9.34	6.99	7.57	7.13	0.42	0.33	0.25	0.34
Leased to tenant(s)	1,274	1,026	1,714	1,158	9.77	7.34	8.75	7.60	0.39	0.28	0.29	0.26
Owner occupied and leased	521	451	391	284	9.25	6.73	7.89	7.00	0.38	0.29	0.21	0.19
Unoccupied	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Government owned	1,203	1,038	972	581	9.29	6.80	7.59	7.35	0.47	0.26	0.18	0.24
Federal	Q	Q	98	Q	Q	Q	9.24	Q	Q	Q	0.23	Q
State	Q	237	295	202	8.82	6.49	6.96	7.51	0.59	0.29	0.21	0.26
Local	654	753	580	320	9.76	6.88	7.72	7.46	0.41	0.26	0.17	0.22
<b>Party responsible for operation and maintenance of energy systems</b>												
Building owner	3,741	3,834	3,685	2,833	9.41	6.97	7.80	7.32	0.40	0.29	0.23	0.27
Business owner or tenant	728	477	966	606	9.80	7.26	8.67	7.28	0.51	0.30	0.32	0.27
Property management	Q	Q	Q	Q	Q	Q	8.68	Q	Q	Q	0.26	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Provider of direct input on energy-related equipment purchases</b>												
Building owner	3,829	3,941	3,840	3,009	9.43	6.99	7.89	7.30	0.40	0.29	0.23	0.27
Business owner or tenant	569	341	744	447	9.73	6.99	8.27	7.35	0.53	0.30	0.32	0.30
Property management	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	194	Q	Q	7.14	8.93	Q	Q	0.22	0.40	Q

**Table C26. Natural gas expenditures by Census region, 2012**

	Natural gas expenditures (dollars)											
	Total natural gas expenditures (million dollars)			per thousand cubic feet				per square foot				
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
All buildings	4,599	4,383	4,793	3,503	9.44	6.99	7.98	7.31	0.42	0.29	0.24	0.28
<b>Number of establishments</b>												
One	3,071	2,911	3,212	2,374	9.33	6.99	7.70	7.26	0.45	0.30	0.25	0.31
2 to 5	904	981	884	583	9.73	6.91	8.51	7.35	0.41	0.28	0.21	0.23
6 to 10	204	203	235	235	9.73	7.44	8.89	7.84	0.35	0.29	0.24	0.28
11 to 20	250	163	292	174	9.41	7.01	8.10	7.35	0.35	0.38	0.30	0.27
More than 20	161	111	167	114	9.56	7.12	10.25	6.88	0.24	0.21	0.19	0.14
Currently unoccupied	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Predominant exterior wall material</b>												
Brick, stone, or stucco	2,469	2,420	2,585	1,450	9.58	7.05	7.87	7.19	0.41	0.32	0.25	0.29
Concrete (block or poured)	1,063	936	1,286	881	9.03	7.00	8.39	7.53	0.39	0.28	0.27	0.24
Concrete panels	275	385	301	Q	7.86	6.18	7.38	7.04	0.42	0.28	0.16	0.22
Siding or shingles	282	271	221	321	11.77	7.41	7.67	7.72	0.45	0.29	0.49	0.36
Metal panels	Q	292	331	175	10.60	7.58	8.07	8.10	0.52	0.22	0.18	0.23
Window glass	Q	Q	Q	105	Q	Q	Q	7.29	Q	Q	Q	0.42
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	239	475	861	394	11.08	7.64	8.48	7.87	0.32	0.23	0.25	0.26
Synthetic or rubber	2,051	1,752	1,437	1,248	9.63	6.82	7.96	6.97	0.44	0.29	0.26	0.34
Built-up	1,199	994	1,253	856	8.73	6.60	7.64	7.37	0.41	0.29	0.21	0.23
Slate or tile shingles	274	105	223	299	9.25	8.08	7.81	7.50	0.44	0.32	0.21	0.38
Wooden materials (including shingles)	Q	Q	102	76	Q	Q	6.53	6.89	Q	Q	0.53	0.31
Asphalt, fiberglass, or other shingles	657	940	797	523	10.25	7.23	8.34	7.56	0.39	0.35	0.25	0.23
Concrete	61	Q	Q	38	7.82	Q	Q	7.29	0.29	Q	Q	0.15
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	3,312	2,611	2,843	2,184	9.28	6.74	7.66	7.18	0.42	0.30	0.25	0.29
Shallow pitch	706	957	1,222	927	9.51	7.20	8.80	7.49	0.49	0.25	0.22	0.26
Steeper pitch	581	815	728	393	10.39	7.67	8.05	7.63	0.34	0.35	0.26	0.26
Cool roof	1,165	988	1,211	1,143	9.14	6.91	7.79	7.06	0.49	0.31	0.24	0.31

**Table C26. Natural gas expenditures by Census region, 2012**

	Total natural gas expenditures (million dollars)				Natural gas expenditures (dollars)							
					per thousand cubic feet				per square foot			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
All buildings	4,599	4,383	4,793	3,503	9.44	6.99	7.98	7.31	0.42	0.29	0.24	0.28
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>												
Any type of renovation	2,892	2,349	2,381	1,786	9.37	6.91	7.82	7.22	0.42	0.28	0.24	0.31
Addition or annex	913	960	896	607	9.35	6.79	7.06	6.67	0.47	0.29	0.27	0.40
Reduction in floorspace	Q	71	127	Q	7.82	6.58	6.99	Q	0.49	0.30	0.28	Q
Roof replacement	1,806	1,341	1,230	825	9.42	6.85	7.67	7.07	0.44	0.30	0.24	0.32
Exterior wall replacement	240	237	277	220	10.48	7.06	7.54	6.66	0.33	0.27	0.26	0.30
Interior wall reconfiguration	1,506	1,172	1,113	1,059	9.64	6.67	7.57	7.07	0.38	0.27	0.26	0.31
Window replacement	928	683	722	594	9.96	6.74	7.38	6.94	0.39	0.27	0.28	0.33
HVAC equipment upgrade	2,024	1,504	1,547	1,265	9.36	6.92	7.46	7.00	0.40	0.27	0.25	0.34
Lighting upgrade	1,837	1,490	1,421	1,260	9.32	6.68	7.46	7.01	0.40	0.29	0.24	0.34
Electrical upgrade	1,304	965	960	910	9.40	6.80	7.77	6.84	0.41	0.30	0.26	0.39
Plumbing system upgrade	1,226	828	944	851	9.38	6.85	7.49	6.81	0.46	0.29	0.31	0.42
Insulation upgrade	600	483	502	450	9.85	7.22	7.44	6.72	0.44	0.27	0.31	0.40
Fire, safety, or security upgrade	1,435	933	1,061	805	9.51	6.57	7.27	6.94	0.41	0.30	0.26	0.33
Structural upgrade	156	184	312	Q	9.73	6.74	7.73	6.53	0.32	0.25	0.42	0.47
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
No renovations	1,488	1,769	2,010	1,425	9.55	7.22	8.11	7.53	0.43	0.29	0.24	0.23
Buildings constructed 2008 or later	220	265	402	292	9.63	6.32	8.37	6.85	0.34	0.40	0.24	0.35
<b>Energy sources (more than one may apply)</b>												
Electricity	4,599	4,383	4,793	3,503	9.44	6.99	7.98	7.31	0.42	0.29	0.24	0.28
Natural gas	4,599	4,383	4,793	3,503	9.44	6.99	7.98	7.31	0.42	0.29	0.24	0.28
Fuel oil	1,389	919	1,172	976	9.03	6.10	7.52	6.61	0.40	0.30	0.26	0.37
District heat	Q	31	105	Q	8.49	6.04	6.65	6.26	Q	0.08	Q	0.55
District chilled water	Q	32	177	Q	8.08	6.23	6.80	6.45	0.70	0.10	0.16	0.72
Propane	171	245	276	Q	9.89	6.16	7.61	6.95	0.32	0.26	0.28	0.36
Other	360	133	97	232	8.99	6.94	7.17	6.99	0.45	0.21	0.21	0.32
<b>Space-heating energy sources</b>												
Natural gas	4,165	4,287	3,747	2,856	9.47	6.98	7.76	7.39	0.45	0.31	0.24	0.27
Natural gas main	3,946	4,074	3,057	2,453	9.47	6.97	7.72	7.45	0.47	0.31	0.25	0.27
Natural gas secondary	219	213	691	403	9.48	7.25	7.92	7.02	0.22	0.22	0.22	0.28
Other excluding natural gas	419	94	941	562	9.14	7.42	8.86	6.93	0.24	0.10	0.23	0.31
Buildings without heating	Q	Q	105	Q	Q	Q	9.39	Q	Q	Q	0.29	Q
<b>Primary space-heating energy source</b>												
Electricity	276	266	1,509	649	9.99	7.51	8.58	7.34	0.22	0.19	0.24	0.24
Natural gas	3,946	4,074	3,057	2,453	9.47	6.97	7.72	7.45	0.47	0.31	0.25	0.27
Fuel oil	54	N	Q	Q	9.99	N	Q	Q	0.15	N	Q	Q
District heat	Q	24	104	Q	8.50	5.68	6.64	6.26	Q	0.07	Q	0.57
Propane	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Cooling energy sources</b>												
Natural gas	243	Q	Q	Q	8.88	Q	Q	Q	0.80	Q	Q	Q
Other excluding natural gas	4,168	4,133	4,704	3,238	9.43	7.02	7.97	7.25	0.40	0.29	0.24	0.27
Buildings without cooling	189	151	39	234	10.63	8.04	7.94	8.74	0.40	0.26	0.18	0.41

**Table C26. Natural gas expenditures by Census region, 2012**

**Table C26. Natural gas expenditures by Census region, 2012**

	Natural gas expenditures (dollars)											
	Total natural gas expenditures (million dollars)				per thousand cubic feet				per square foot			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
All buildings	4,599	4,383	4,793	3,503	9.44	6.99	7.98	7.31	0.42	0.29	0.24	0.28
<b>Main equipment replaced since 1990 (more than one may apply)</b>												
Heating	1,704	1,637	1,813	995	9.74	7.09	7.79	7.52	0.42	0.28	0.26	0.24
Cooling	1,910	1,876	2,032	1,062	9.84	7.04	7.92	7.44	0.40	0.30	0.26	0.25
<b>Water-heating equipment</b>												
Centralized system	2,930	2,970	2,938	1,997	9.31	6.96	7.95	7.42	0.43	0.31	0.27	0.29
Distributed system	602	493	442	475	9.89	7.31	8.28	6.89	0.36	0.24	0.17	0.25
Combination of centralized and distributed system	1,027	862	1,314	936	9.47	6.83	8.04	7.33	0.42	0.27	0.23	0.28
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>												
Snack bar or concession stand	689	602	739	631	8.94	6.65	7.91	6.68	0.47	0.31	0.27	0.37
Fast food or small restaurant	622	535	935	720	9.04	6.76	8.37	6.98	0.41	0.35	0.31	0.31
Cafeteria or large restaurant	1,315	953	1,136	802	8.87	6.66	7.19	6.51	0.44	0.31	0.23	0.40
Commercial kitchen/food preparation area	1,464	1,209	1,287	982	8.94	6.78	7.63	6.73	0.54	0.33	0.25	0.38
Small kitchen area	914	859	786	630	9.62	6.93	8.46	7.25	0.38	0.28	0.23	0.31
<b>HVAC conservation features (more than one may apply)</b>												
Economizer cycle	2,314	1,924	1,594	1,688	8.82	6.64	8.07	7.01	0.41	0.28	0.25	0.29
Regular HVAC maintenance	4,119	3,844	4,103	3,067	9.32	6.85	7.98	7.21	0.42	0.30	0.24	0.28
Building automation system (BAS) <sup>2</sup>	2,204	1,902	2,107	1,881	8.97	6.68	7.68	7.02	0.40	0.29	0.22	0.31
<b>Window and interior lighting features (more than one may apply)</b>												
Multipaned windows	3,548	3,725	3,583	2,551	9.35	6.94	8.04	7.35	0.42	0.30	0.25	0.31
Tinted window glass	2,302	2,237	2,946	2,189	9.13	6.76	7.85	7.28	0.44	0.30	0.24	0.28
Reflective window glass	888	1,007	993	1,142	9.32	6.86	8.06	7.02	0.49	0.30	0.28	0.34
External overhangs or awnings	1,804	1,791	2,380	1,881	9.47	6.87	8.15	7.18	0.53	0.32	0.28	0.32
Skylights or atriums	1,514	950	1,273	1,374	9.25	6.63	7.81	7.08	0.46	0.26	0.24	0.30
Light scheduling	1,958	1,691	1,754	1,628	9.21	6.74	8.19	7.16	0.41	0.29	0.26	0.29
Occupancy sensors	2,491	1,905	1,863	1,802	9.17	6.63	8.11	7.13	0.41	0.29	0.23	0.28
Multi-level lighting or dimming	908	893	1,218	1,199	9.32	6.68	8.14	6.70	0.46	0.34	0.31	0.37
Daylight harvesting	522	311	293	390	9.89	6.57	8.19	6.89	0.58	0.24	0.22	0.28
Demand responsive lighting	256	219	342	235	10.40	7.05	9.41	7.31	0.55	0.25	0.31	0.19
Building automation system (BAS) for lighting <sup>2</sup>	791	564	594	588	8.79	6.53	8.41	7.36	0.43	0.27	0.20	0.24
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>												
Heating	3,648	3,503	3,423	2,434	9.49	7.03	8.11	7.38	0.40	0.29	0.22	0.24
Cooling	3,572	3,315	3,511	2,354	9.45	6.99	8.15	7.35	0.40	0.29	0.22	0.24
Lighting	4,333	4,155	4,466	3,298	9.48	6.99	8.08	7.34	0.42	0.29	0.24	0.28

**Table C26. Natural gas expenditures by Census region, 2012**

	Natural gas expenditures (dollars)											
	Total natural gas expenditures (million dollars)			per thousand cubic feet				per square foot				
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
All buildings	4,599	4,383	4,793	3,503	9.44	6.99	7.98	7.31	0.42	0.29	0.24	0.28
<b>Annual consumption (hundred cubic feet)</b>												
1,000 or less	88	185	224	132	16.54	11.44	13.03	10.53	0.13	0.15	0.07	0.07
1,001 to 5,000	569	668	769	519	11.71	8.09	9.22	8.59	0.27	0.21	0.16	0.17
5,001 to 10,000	438	458	676	359	10.16	7.59	8.35	7.58	0.30	0.26	0.20	0.25
10,001 to 25,000	608	923	1,113	867	9.35	7.16	7.87	7.70	0.33	0.29	0.30	0.35
25,001 to 50,000	693	640	625	388	9.63	6.77	7.65	6.98	0.42	0.34	0.29	0.26
50,001 to 100,000	659	553	533	358	9.04	6.57	7.58	7.10	0.48	0.33	0.41	0.39
Over 100,000	1,544	956	853	880	8.57	5.98	6.81	6.28	0.81	0.46	0.61	0.60

<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/>

• 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 C of the 2012 Commercial Buildings Energy Consumption Survey.

**Table C27. Natural gas consumption and conditional energy intensity by Census division (part 1), 2012**

	Total natural gas consumption (billion cubic feet)			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/square foot)		
	New England	Middle Atlantic	North Central	East		New England	Middle Atlantic	North Central	East
				New	Middle	North	Central	England	Atlantic
All buildings	108	379	482	2,241	8,827	10,790	48.1	43.0	44.6
<b>Building floorspace (square feet)</b>									
1,001 to 5,000	Q	35	43	Q	384	745	Q	90.5	57.5
5,001 to 10,000	Q	25	55	Q	449	931	Q	55.6	59.5
10,001 to 25,000	12	47	58	459	1,149	1,530	25.6	40.7	38.0
25,001 to 50,000	Q	30	85	Q	830	1,928	Q	36.2	43.9
50,001 to 100,000	14	71	73	330	1,789	1,485	41.9	39.9	49.4
100,001 to 200,000	8	93	49	230	1,925	1,344	35.9	48.1	36.6
200,001 to 500,000	34	42	78	492	1,225	1,886	68.2	34.1	41.6
Over 500,000	Q	37	40	Q	1,077	941	Q	34.3	42.1
<b>Principal building activity</b>									
Education	Q	60	84	Q	1,247	1,979	Q	48.5	42.5
Food sales	Q	Q	Q	Q	Q	Q	Q	Q	Q
Food service	Q	20	35	Q	116	208	Q	169.4	170.2
Health care	Q	50	41	Q	745	460	Q	66.8	88.4
Inpatient	Q	36	36	Q	337	306	Q	106.1	116.3
Outpatient	Q	14	5	Q	407	154	Q	34.2	33.2
Lodging	Q	28	32	Q	681	620	Q	41.0	51.5
Mercantile	Q	43	68	Q	1,000	1,429	Q	43.3	47.4
Retail (other than mall)	Q	12	26	Q	495	689	Q	25.2	37.3
Enclosed and strip malls	Q	31	42	Q	505	740	Q	61.0	56.7
Office	11	82	68	399	2,304	1,969	28.1	35.4	34.6
Public assembly	Q	22	42	Q	523	993	Q	42.4	41.8
Public order and safety	Q	Q	Q	Q	Q	Q	Q	Q	Q
Religious worship	Q	15	21	Q	560	484	Q	26.3	43.2
Service	Q	17	34	Q	222	803	Q	76.8	41.8
Warehouse and storage	Q	17	29	Q	949	1,169	Q	17.9	24.7
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	Q	17	22	Q	725	491	Q	24.0	44.7
1920 to 1945	Q	44	40	Q	1,048	998	Q	41.6	40.4
1946 to 1959	Q	50	47	Q	876	1,078	Q	57.4	43.6
1960 to 1969	Q	52	63	Q	1,464	1,346	Q	35.5	46.5
1970 to 1979	11	76	73	287	1,266	1,562	39.1	59.7	46.5
1980 to 1989	10	32	80	326	822	1,541	31.9	39.2	52.2
1990 to 1999	Q	63	62	Q	1,282	1,619	Q	48.8	38.1
2000 to 2003	Q	18	35	Q	563	874	Q	31.6	40.2
2004 to 2007	Q	Q	27	Q	Q	743	Q	Q	36.9
2008 to 2012	Q	Q	32	Q	Q	539	Q	Q	60.1

**Table C27. Natural gas consumption and conditional energy intensity by Census division (part 1), 2012**

**Table C27. Natural gas consumption and conditional energy intensity by Census division (part 1), 2012**

	Total natural gas consumption (billion cubic feet)			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/square foot)		
	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central
				North	North	North	North	North	North
All buildings	108	379	482	2,241	8,827	10,790	48.1	43.0	44.6
<b>Provider of direct input on energy-related equipment purchases</b>									
Building owner	91	315	431	1,867	7,629	9,569	48.8	41.3	45.1
Business owner or tenant	Q	51	38	Q	830	884	Q	61.2	43.5
Property management	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Number of establishments</b>									
One	54	275	316	1,235	5,598	7,021	43.8	49.2	45.0
2 to 5	31	62	112	511	1,694	2,396	60.9	36.5	46.9
6 to 10	Q	12	20	Q	435	518	Q	27.6	38.6
11 to 20	Q	19	21	Q	458	354	Q	41.8	59.5
More than 20	Q	11	11	Q	610	420	Q	17.6	26.3
Currently unoccupied	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Predominant exterior wall material</b>									
Brick, stone, or stucco	65	193	269	1,351	4,694	5,371	48.0	41.1	50.0
Concrete (block or poured)	18	99	108	423	2,289	2,684	43.6	43.4	40.2
Concrete panels	Q	26	47	Q	556	968	Q	46.7	48.2
Siding or shingles	Q	13	29	Q	366	653	Q	35.8	44.5
Metal panels	Q	Q	18	Q	388	625	Q	Q	28.4
Window glass	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	N	Q	Q	N	Q	Q	N	Q	Q
No one major type	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Predominant roof material</b>									
Metal surfacing	Q	18	41	Q	683	1,187	Q	26.7	34.3
Synthetic or rubber	76	137	202	1,385	3,233	4,463	55.1	42.3	45.3
Built-up	11	126	110	305	2,642	2,519	36.2	47.8	43.5
Slate or tile shingles	Q	24	10	Q	442	254	Q	54.2	39.4
Wooden materials (including shingles)	Q	Q	Q	Q	Q	Q	Q	Q	Q
Asphalt, fiberglass, or other shingles	10	54	107	268	1,427	2,041	38.2	37.8	52.2
Concrete	Q	Q	Q	Q	Q	Q	Q	Q	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	73	284	293	1,572	6,328	6,373	46.5	44.9	46.1
Shallow pitch	23	52	100	339	1,117	2,612	66.9	46.2	38.3
Steeper pitch	Q	44	88	329	1,382	1,805	36.5	31.8	48.7
Cool roof	18	109	113	427	1,970	2,337	43.1	55.3	48.4

**Table C27. Natural gas consumption and conditional energy intensity by Census division (part 1), 2012**

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**Table C27. Natural gas consumption and conditional energy intensity by Census division (part 1), 2012**

	Total natural gas consumption (billion cubic feet)			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/square foot)		
	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central
All buildings	108	379	482	2,241	8,827	10,790	48.1	43.0	44.6
<b>Cooling equipment (more than one may apply)</b>									
Residential-type central air conditioners	10	54	113	240	1,074	2,760	40.2	50.4	41.1
Heat pumps	13	32	22	309	884	458	41.0	35.7	47.8
Individual air conditioners	43	103	71	581	2,256	1,660	73.2	45.6	42.5
District chilled water	Q	Q	5	Q	Q	220	Q	Q	20.8
Central chillers	31	97	142	511	2,228	3,021	59.9	43.7	47.2
Packaged air conditioning units	73	200	299	1,399	5,388	6,192	52.0	37.0	48.2
Swamp coolers	N	3	6	N	18	74	N	184.1	81.3
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Main equipment replaced since 1990 (more than one may apply)</b>									
Heating	33	142	170	919	3,140	3,901	36.2	45.1	43.5
Cooling	36	158	199	942	3,877	4,336	38.2	40.8	45.9
<b>Water-heating equipment</b>									
Centralized system	50	264	324	1,306	5,455	6,813	38.6	48.4	47.5
Distributed system	Q	38	56	Q	1,343	1,502	Q	28.4	37.2
Combination of centralized and distributed system	34	74	98	539	1,919	2,311	63.0	38.8	42.5
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>									
Snack bar or concession stand	Q	64	72	Q	1,354	1,452	Q	47.6	49.3
Fast food or small restaurant	Q	57	59	Q	1,263	1,154	Q	45.0	51.0
Cafeteria or large restaurant	27	121	107	535	2,458	2,336	50.1	49.4	45.7
Commercial kitchen/food preparation area	37	127	140	696	2,029	2,853	52.9	62.5	49.1
Small kitchen area	16	79	90	368	2,062	2,120	43.9	38.3	42.6
<b>HVAC conservation features (more than one may apply)</b>									
Economizer cycle	52	211	218	1,032	4,618	4,910	50.2	45.6	44.5
Regular HVAC maintenance	101	341	439	2,003	7,844	9,446	50.5	43.4	46.4
Building automation system (BAS) <sup>2</sup>	62	184	216	1,208	4,277	4,817	51.2	43.0	44.8

**Table C27. Natural gas consumption and conditional energy intensity by Census division (part 1), 2012**

	Total natural gas consumption (billion cubic feet)			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/square foot)		
	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central	New England	Middle Atlantic	East North Central
All buildings	108	379	482	2,241	8,827	10,790	48.1	43.0	44.6
<b>Window and interior lighting features (more than one may apply)</b>									
Multipaned windows	98	281	407	1,955	6,509	8,803	50.3	43.2	46.2
Tinted window glass	47	205	252	1,076	4,109	5,434	43.5	50.0	46.4
Reflective window glass	12	83	111	302	1,510	2,465	40.5	55.0	45.1
External overhangs or awnings	28	162	200	721	2,704	3,833	39.3	60.0	52.3
Skylights or atriums	41	123	112	1,006	2,292	2,534	40.9	53.5	44.4
Light scheduling	59	154	206	1,019	3,766	4,570	57.4	40.9	45.0
Occupancy sensors	82	189	231	1,474	4,532	5,106	55.7	41.8	45.2
Multi-level lighting or dimming	25	73	106	474	1,493	1,972	52.3	48.6	53.6
Daylight harvesting	Q	38	38	Q	654	987	Q	58.3	38.3
Demand responsive lighting	Q	22	22	Q	405	491	Q	54.6	44.1
Building automation system (BAS) for lighting <sup>2</sup>	24	66	64	409	1,415	1,555	57.6	47.0	41.3
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>									
Heating	74	310	390	1,869	7,326	8,751	39.7	42.4	44.5
Cooling	81	298	369	1,813	7,042	8,263	44.5	42.3	44.6
Lighting	107	350	455	2,193	8,217	10,107	49.0	42.6	45.0
<b>Annual consumption (hundred cubic feet)</b>									
1,000 or less	1	4	11	209	476	789	5.5	8.7	13.4
1,001 to 5,000	12	37	56	578	1,546	2,121	20.5	23.8	26.2
5,001 to 10,000	Q	36	45	Q	1,300	1,264	Q	27.4	35.3
10,001 to 25,000	13	52	93	276	1,556	2,159	47.9	33.3	43.3
25,001 to 50,000	Q	63	83	Q	1,361	1,586	Q	46.1	52.3
50,001 to 100,000	Q	53	62	Q	1,075	1,218	Q	49.0	50.7
Over 100,000	45	136	133	391	1,513	1,653	114.0	89.6	80.2

<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/> • 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 C of the 2012 Commercial Buildings Energy Consumption Survey.

**Table C28. Natural gas consumption and conditional energy intensity by Census division (part 2), 2012**

	Total natural gas consumption (billion cubic feet)			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/square foot)				
	West		East		West		East		West		
	North	South	South	Central	North	South	South	Central	North	South	
	Central	Atlantic	Central		Central	Atlantic	Central		Central	Atlantic	
<b>All buildings</b>	145	298	101		4,236	9,984	3,436		34.3	29.8	29.4
<b>Building floorspace (square feet)</b>											
1,001 to 5,000	22	45	11		381	487	258		57.6	91.6	40.8
5,001 to 10,000	15	44	9		447	587	292		34.2	74.6	30.6
10,001 to 25,000	23	37	19		656	1,119	597		35.1	33.1	32.4
25,001 to 50,000	15	32	17		700	1,303	349		21.8	24.8	48.2
50,001 to 100,000	26	46	Q		696	1,986	708		37.8	23.0	23.4
100,001 to 200,000	20	35	8		522	2,036	455		38.4	17.1	17.3
200,001 to 500,000	13	33	9		504	1,332	460		25.8	24.5	20.6
Over 500,000	Q	27	12		Q	1,134	Q		Q	23.8	Q
<b>Principal building activity</b>											
Education	22	28	9		755	1,867	384		29.1	15.1	22.5
Food sales	Q	Q	Q		Q	Q	Q		Q	Q	Q
Food service	13	50	14		93	296	96		144.9	170.0	149.8
Health care	21	30	19		262	426	248		80.8	71.2	75.4
Inpatient	Q	30	18		Q	383	184		Q	77.1	95.8
Outpatient	Q	Q	Q		Q	Q	Q		Q	Q	Q
Lodging	9	33	Q		218	1,023	Q		43.0	31.9	40.4
Mercantile	12	44	10		424	1,628	523		28.1	27.0	18.2
Retail (other than mall)	4	7	Q		180	365	Q		21.0	19.6	Q
Enclosed and strip malls	Q	37	Q		Q	1,263	Q		Q	29.1	Q
Office	16	22	10		566	1,427	388		28.1	15.7	24.7
Public assembly	12	11	Q		323	497	Q		36.5	22.2	Q
Public order and safety	Q	Q	Q		Q	Q	Q		Q	Q	Q
Religious worship	6	Q	Q		220	399	Q		29.3	32.5	Q
Service	13	24	Q		420	407	Q		31.2	58.9	Q
Warehouse and storage	8	16	Q		651	1,269	Q		12.4	12.7	Q
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	9	Q		252	220	Q		21.6	41.3	Q
1920 to 1945	13	8	Q		281	289	Q		46.3	28.1	Q
1946 to 1959	14	20	6		369	1,009	218		38.2	19.7	27.2
1960 to 1969	29	37	17		893	939	582		32.7	39.0	28.6
1970 to 1979	21	35	19		548	931	404		38.0	37.7	47.5
1980 to 1989	19	51	18		602	1,972	793		31.4	26.0	22.3
1990 to 1999	18	43	19		634	1,322	836		28.3	32.6	23.0
2000 to 2003	7	24	Q		294	1,070	Q		25.0	22.1	Q
2004 to 2007	9	34	Q		234	1,185	Q		36.9	29.0	Q
2008 to 2012	Q	36	Q		Q	1,048	Q		Q	34.7	Q

**Table C28. Natural gas consumption and conditional energy intensity by Census division (part 2), 2012**

**Table C28. Natural gas consumption and conditional energy intensity by Census division (part 2), 2012**

	Total natural gas consumption (billion cubic feet)			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/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
	All buildings	145	298	101	4,236	9,984	3,436	34.3	29.8
<b>Provider of direct input on energy-related equipment purchases</b>									
Building owner	132	234	88	3,877	8,220	3,008	34.1	28.4	29.1
Business owner or tenant	10	52	9	265	1,449	Q	38.8	35.8	Q
Property management	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Number of establishments</b>									
One	101	197	76	2,758	5,945	2,223	36.5	33.1	34.0
2 to 5	30	56	14	1,062	2,245	755	27.8	24.8	18.9
6 to 10	Q	15	Q	Q	552	Q	Q	28.0	Q
11 to 20	Q	Q	Q	Q	Q	Q	Q	31.4	Q
More than 20	Q	11	Q	Q	620	Q	Q	17.2	Q
Currently unoccupied	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Predominant exterior wall material</b>									
Brick, stone, or stucco	75	158	68	2,118	5,076	1,995	35.3	31.2	34.2
Concrete (block or poured)	26	87	17	695	2,718	731	37.5	31.9	22.9
Concrete panels	16	24	Q	384	1,055	Q	41.0	22.4	Q
Siding or shingles	7	8	Q	267	168	Q	27.9	49.1	Q
Metal panels	21	15	8	699	712	281	29.7	20.6	27.0
Window glass	N	Q	Q	N	Q	Q	N	Q	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>Predominant roof material</b>									
Metal surfacing	21	39	19	906	1,258	683	23.6	31.2	27.3
Synthetic or rubber	55	97	39	1,586	2,958	1,153	34.5	32.7	33.7
Built-up	41	74	24	918	3,055	728	44.7	24.3	33.2
Slate or tile shingles	Q	14	Q	Q	699	Q	Q	Q	Q
Wooden materials (including shingles)	Q	Q	N	Q	Q	N	Q	Q	N
Asphalt, fiberglass, or other shingles	23	53	14	636	1,649	647	36.9	32.2	21.9
Concrete	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
No one major type	Q	N	Q	Q	N	Q	Q	N	Q
<b>Roof characteristics</b>									
<b>Roof tilt</b>									
Flat	94	187	62	2,460	6,194	1,662	38.2	30.2	37.1
Shallow pitch	33	64	21	1,235	2,553	1,002	26.5	25.2	21.2
Steeper pitch	18	46	18	540	1,238	773	34.0	37.4	23.4
Cool roof	30	67	37	859	2,480	1,107	34.7	26.9	33.8

**Table C28. Natural gas consumption and conditional energy intensity by Census division (part 2), 2012**

	Total natural gas consumption (billion cubic feet)			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/square foot)				
	West		East		West		East		West		
	North	South	South	Central	North	South	South	Central	North	South	
<b>All buildings</b>	145	298	101		4,236	9,984	3,436		34.3	29.8	29.4
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>											
Any type of renovation	86	127	68		2,548	4,501	2,101		33.7	28.3	32.2
Addition or annex	40	55	32		1,166	1,536	678		34.6	36.0	47.4
Reduction in floorspace	Q	9	Q		Q	273	Q		Q	34.1	Q
Roof replacement	55	59	43		1,564	1,916	1,359		34.9	30.9	31.8
Exterior wall replacement	14	13	Q		356	551	Q		39.9	24.3	Q
Interior wall reconfiguration	45	59	32		1,271	1,964	886		35.7	30.2	36.5
Window replacement	28	36	23		747	1,378	476		37.7	25.9	48.5
HVAC equipment upgrade	53	85	50		1,451	2,819	1,206		36.7	30.0	41.6
Lighting upgrade	58	72	47		1,465	2,661	1,116		39.8	27.1	42.3
Electrical upgrade	42	52	26		981	1,627	734		42.8	31.8	36.0
Plumbing system upgrade	32	45	33		792	1,418	618		40.3	32.1	53.1
Insulation upgrade	22	21	Q		752	779	Q		29.7	26.6	Q
Fire, safety, or security upgrade	39	58	36		805	1,806	650		48.8	31.9	55.6
Structural upgrade	11	14	Q		224	453	Q		50.0	30.1	Q
Other	Q	Q	Q		Q	Q	Q		Q	Q	Q
No renovations	50	134	32		1,560	4,436	1,229		31.9	30.2	26.1
Buildings constructed 2008 or later	Q	36	Q		Q	1,048	Q		Q	34.7	Q
<b>Energy sources (more than one may apply)</b>											
Electricity	145	298	101		4,236	9,984	3,436		34.3	29.8	29.4
Natural gas	145	298	101		4,236	9,984	3,436		34.3	29.8	29.4
Fuel oil	44	80	26		1,035	2,732	574		42.9	29.2	45.2
District heat	Q	4	Q		Q	Q	Q		Q	Q	Q
District chilled water	Q	7	Q		Q	Q	Q		Q	Q	Q
Propane	Q	10	Q		Q	419	Q		Q	24.6	Q
Other	Q	Q	Q		Q	Q	Q		Q	Q	Q
<b>Space-heating energy sources</b>											
Natural gas	141	227	92		3,909	7,309	2,662		36.1	31.0	34.6
Natural gas main	131	183	80		3,497	5,694	2,067		37.5	32.2	38.7
Natural gas secondary	10	43	12		412	1,615	595		24.3	26.7	20.3
Other excluding natural gas	4	61	9		326	2,405	773		11.8	25.4	11.6
Buildings without heating	N	10	(*)		N	270	2		N	36.3	25.8
<b>Primary space-heating energy source</b>											
Electricity	11	99	18		451	3,456	1,096		23.9	28.7	16.2
Natural gas	131	183	80		3,497	5,694	2,067		37.5	32.2	38.7
Fuel oil	N	1	(*)		N	9	25		N	116.0	9.5
District heat	Q	4	Q		Q	Q	Q		Q	Q	Q
Propane	Q	N	N		Q	N	N		Q	N	N
Other	Q	Q	Q		Q	Q	Q		Q	Q	Q

**Table C28. Natural gas consumption and conditional energy intensity by Census division (part 2), 2012**

**Table C28. Natural gas consumption and conditional energy intensity by Census division (part 2), 2012**

	Total natural gas consumption (billion cubic feet)			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/square foot)		
	West		East South Central	West		East South Central	West		East South Central
	North Central	South Atlantic		North Central	South Atlantic		North Central	South Atlantic	
<b>All buildings</b>	145	298	101	4,236	9,984	3,436	34.3	29.8	29.4
<b>Cooling equipment (more than one may apply)</b>									
Residential-type central air conditioners	33	44	19	1,084	1,114	662	30.8	39.5	29.1
Heat pumps	6	77	8	252	2,765	461	25.6	27.9	17.5
Individual air conditioners	20	47	22	560	1,636	644	35.9	28.8	34.7
District chilled water	Q	7	Q	Q	Q	Q	Q	Q	Q
Central chillers	43	86	31	765	2,820	749	55.9	30.6	41.3
Packaged air conditioning units	80	185	65	2,423	6,065	2,170	33.0	30.5	30.1
Swamp coolers	N	5	N	N	129	N	N	39.1	N
Other	Q	Q	N	Q	Q	N	Q	Q	N
<b>Main equipment replaced since 1990 (more than one may apply)</b>									
Heating	61	103	47	1,942	3,318	1,310	31.5	30.9	35.6
Cooling	68	116	51	1,967	3,882	1,407	34.4	29.8	36.2
<b>Water-heating equipment</b>									
Centralized system	103	178	64	2,676	5,148	1,869	38.3	34.6	34.3
Distributed system	12	25	4	552	1,282	300	20.9	19.7	13.4
Combination of centralized and distributed system	28	85	32	863	3,082	1,161	32.6	27.5	27.5
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>									
Snack bar or concession stand	19	52	13	498	1,735	277	37.9	30.1	47.1
Fast food or small restaurant	20	62	16	394	1,733	520	51.3	35.5	30.9
Cafeteria or large restaurant	36	81	29	781	2,799	591	46.5	29.0	49.5
Commercial kitchen/food preparation area	38	93	30	803	3,095	615	47.7	30.0	48.7
Small kitchen area	34	49	21	928	1,520	848	36.5	32.2	24.4
<b>HVAC conservation features (more than one may apply)</b>									
Economizer cycle	72	99	32	1,921	3,549	779	37.3	27.9	41.4
Regular HVAC maintenance	122	261	81	3,472	8,810	2,579	35.3	29.6	31.3
Building automation system (BAS) <sup>2</sup>	69	134	39	1,750	5,137	1,497	39.5	26.1	26.4

**Table C28. Natural gas consumption and conditional energy intensity by Census division (part 2), 2012**

	Total natural gas consumption (billion cubic feet)			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/square foot)		
	West		East South Central	West		East South Central	West		East South Central
	North Central	South Atlantic		North Central	South Atlantic		North Central	South Atlantic	
<b>All buildings</b>	145	298	101	4,236	9,984	3,436	34.3	29.8	29.4
<b>Window and interior lighting features (more than one may apply)</b>									
Multipaned windows	130	232	77	3,761	7,939	2,479	34.5	29.2	30.9
Tinted window glass	79	182	62	2,099	6,128	1,860	37.6	29.7	33.6
Reflective window glass	35	69	22	913	1,879	606	38.8	36.6	37.0
External overhangs or awnings	60	158	46	1,745	4,489	1,381	34.5	35.1	33.5
Skylights or atriums	31	83	25	1,081	3,049	729	28.5	27.2	33.9
Light scheduling	45	107	28	1,196	3,740	981	37.7	28.5	28.6
Occupancy sensors	56	126	30	1,540	4,604	1,036	36.5	27.4	29.1
Multi-level lighting or dimming	28	93	26	635	2,385	701	44.0	39.2	37.2
Daylight harvesting	10	22	Q	323	644	Q	29.7	34.3	Q
Demand responsive lighting	9	31	Q	387	882	Q	24.2	34.9	Q
Building automation system (BAS) for lighting <sup>2</sup>	22	43	8	570	1,767	323	38.7	24.3	26.1
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>									
Heating	109	217	63	3,235	7,783	2,649	33.6	27.9	23.7
Cooling	106	227	64	3,131	8,092	2,650	33.7	28.0	24.3
Lighting	139	275	98	4,047	9,350	3,154	34.4	29.4	31.2
<b>Annual consumption (hundred cubic feet)</b>									
1,000 or less	6	5	5	455	1,359	558	12.4	3.7	8.6
1,001 to 5,000	27	36	15	1,097	2,387	848	24.5	15.2	17.4
5,001 to 10,000	16	40	14	473	1,432	710	33.1	27.7	20.3
10,001 to 25,000	36	84	15	1,034	2,073	573	34.4	40.7	26.3
25,001 to 50,000	12	44	15	310	1,169	342	37.6	37.7	43.3
50,001 to 100,000	22	35	Q	450	870	Q	49.9	39.7	Q
Over 100,000	27	54	27	418	694	220	65.3	77.4	121.6

<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/> • 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 C of the 2012 Commercial Buildings Energy Consumption Survey.

**Table C29. Natural gas consumption and conditional energy intensity by Census division (part 3), 2012**

	Total natural gas consumption (billion cubic feet)			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/square foot)		
	West			West			West		
	Central	Mountain	Pacific	Central	Mountain	Pacific	Central	Mountain	Pacific
All buildings	202	159	320	6,480	3,766	8,966	31.1	42.3	35.7
<b>Building floorspace (square feet)</b>									
1,001 to 5,000	36	17	37	521	327	560	68.2	51.9	66.5
5,001 to 10,000	31	21	34	657	372	902	46.7	57.1	37.8
10,001 to 25,000	26	23	51	916	665	1,733	28.6	34.7	29.5
25,001 to 50,000	25	10	47	987	312	1,435	25.1	30.8	33.0
50,001 to 100,000	35	18	30	1,310	536	1,095	26.4	33.6	27.4
100,001 to 200,000	13	12	46	989	379	1,536	13.2	30.6	29.8
200,001 to 500,000	14	22	57	586	684	1,124	24.0	32.0	51.0
Over 500,000	23	Q	17	515	Q	581	44.2	Q	28.7
<b>Principal building activity</b>									
Education	25	18	22	1,463	635	791	16.8	27.7	28.1
Food sales	Q	Q	Q	Q	Q	Q	Q	Q	Q
Food service	38	Q	33	185	Q	241	205.3	Q	137.6
Health care	29	19	38	335	232	430	85.5	83.4	87.4
Inpatient	26	12	Q	263	118	306	99.5	102.6	111.5
Outpatient	Q	Q	4	Q	Q	124	Q	Q	28.2
Lodging	16	Q	32	535	503	810	29.6	83.2	39.5
Mercantile	24	14	61	805	606	1,788	29.4	23.8	34.0
Retail (other than mall)	5	Q	11	355	Q	806	13.6	Q	13.2
Enclosed and strip malls	19	9	50	450	351	983	41.8	25.6	51.1
Office	15	18	34	904	616	1,716	16.3	29.6	19.6
Public assembly	Q	Q	15	368	Q	593	Q	Q	25.9
Public order and safety	Q	Q	Q	Q	Q	Q	Q	Q	Q
Religious worship	4	Q	Q	256	Q	311	15.2	Q	Q
Service	10	Q	9	287	Q	271	36.3	Q	33.5
Warehouse and storage	9	Q	26	901	Q	1,143	10.2	34.3	22.6
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	Q	Q	Q	Q	Q	Q	Q	Q	Q
1920 to 1945	9	Q	16	381	Q	388	22.6	Q	40.2
1946 to 1959	14	12	25	593	273	832	23.9	45.5	29.9
1960 to 1969	25	14	57	587	370	1,096	43.4	37.5	52.1
1970 to 1979	35	25	37	980	650	1,352	35.7	37.8	27.7
1980 to 1989	44	22	49	1,280	616	1,935	34.5	36.3	25.4
1990 to 1999	33	22	58	1,124	642	1,434	29.3	34.1	40.6
2000 to 2003	17	15	18	617	303	601	27.4	48.0	29.2
2004 to 2007	11	Q	23	345	501	573	30.5	Q	40.5
2008 to 2012	10	Q	Q	507	Q	613	20.4	Q	55.9

**Table C29. Natural gas consumption and conditional energy intensity by Census division (part 3), 2012**

**Table C29. Natural gas consumption and conditional energy intensity by Census division (part 3), 2012**

	Total natural gas consumption (billion cubic feet)			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/square foot)		
	West		West		West		South		
	Central	Mountain	Pacific	Central	Mountain	Pacific	Central	Mountain	Pacific
<b>All buildings</b>	202	159	320	6,480	3,766	8,966	31.1	42.3	35.7
<b>Provider of direct input on energy-related equipment purchases</b>									
Building owner	165	149	263	5,758	3,442	7,577	28.7	43.2	34.7
Business owner or tenant	29	10	51	587	248	1,229	48.7	38.7	41.6
Property management	Q	N	Q	Q	N	Q	Q	N	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Number of establishments</b>									
One	145	113	213	4,634	2,313	5,429	31.3	49.1	39.3
2 to 5	34	31	48	1,184	912	1,672	28.7	34.5	28.6
6 to 10	Q	Q	26	Q	Q	668	Q	Q	38.7
11 to 20	Q	Q	18	Q	Q	478	Q	Q	37.1
More than 20	Q	Q	13	Q	Q	593	Q	Q	22.1
Currently unoccupied	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Predominant exterior wall material</b>									
Brick, stone, or stucco	102	74	127	3,416	1,803	3,175	29.8	41.1	40.1
Concrete (block or poured)	50	30	87	1,369	923	2,687	36.3	33.0	32.2
Concrete panels	13	Q	29	522	Q	1,551	25.3	Q	18.8
Siding or shingles	16	Q	37	201	Q	719	Q	Q	51.5
Metal panels	19	11	10	877	321	427	21.4	35.3	23.9
Window glass	Q	Q	13	Q	Q	208	Q	Q	60.8
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
No one major type	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Predominant roof material</b>									
Metal surfacing	44	21	29	1,508	580	958	28.9	36.4	30.2
Synthetic or rubber	45	80	99	1,393	1,553	2,067	32.3	51.5	48.0
Built-up	65	29	87	2,144	871	2,844	30.5	33.7	30.5
Slate or tile shingles	12	Q	34	302	Q	686	40.4	Q	48.9
Wooden materials (including shingles)	Q	Q	Q	Q	Q	Q	Q	Q	Q
Asphalt, fiberglass, or other shingles	28	19	50	945	576	1,707	29.9	32.8	29.5
Concrete	Q	Q	4	Q	Q	229	Q	Q	19.6
Other	N	Q	Q	N	Q	Q	N	Q	Q
No one major type	Q	N	Q	Q	N	Q	Q	N	Q
<b>Roof characteristics</b>									
<b>Roof tilt</b>									
Flat	122	80	224	3,621	2,042	5,581	33.8	39.0	40.2
Shallow pitch	53	Q	64	2,039	1,253	2,351	26.1	47.9	27.1
Steeper pitch	26	20	32	820	471	1,034	31.8	41.8	30.7
Cool roof	51	36	126	1,517	1,122	2,533	33.9	32.1	49.7

**Table C29. Natural gas consumption and conditional energy intensity by Census division (part 3), 2012**

	Total natural gas consumption (billion cubic feet)			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/square foot)		
	West		South		West		South		
	Central	Mountain	Pacific	Central	Mountain	Pacific	Central	Mountain	Pacific
<b>All buildings</b>	202	159	320	6,480	3,766	8,966	31.1	42.3	35.7
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>									
Any type of renovation	109	96	151	3,317	1,945	3,830	33.0	49.3	39.5
Addition or annex	39	Q	38	1,084	824	696	36.3	64.4	54.5
Reduction in floorspace	Q	Q	Q	Q	Q	Q	Q	Q	Q
Roof replacement	58	38	78	1,749	945	1,612	33.0	40.4	48.7
Exterior wall replacement	Q	Q	Q	266	Q	565	Q	Q	41.4
Interior wall reconfiguration	55	Q	84	1,506	1,227	2,223	36.7	53.9	37.6
Window replacement	39	Q	33	705	718	1,080	55.3	72.5	31.0
HVAC equipment upgrade	73	74	107	2,227	1,385	2,328	32.6	53.4	45.9
Lighting upgrade	71	72	108	2,053	1,317	2,443	34.6	54.5	44.1
Electrical upgrade	46	Q	76	1,367	873	1,455	33.3	65.9	51.9
Plumbing system upgrade	48	Q	72	1,005	634	1,378	47.5	83.1	52.4
Insulation upgrade	33	Q	30	614	Q	676	53.9	Q	43.9
Fire, safety, or security upgrade	52	35	81	1,646	831	1,615	31.6	42.1	50.1
Structural upgrade	Q	Q	27	Q	Q	547	Q	Q	50.1
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
No renovations	82	55	134	2,656	1,590	4,523	30.8	34.6	29.7
Buildings constructed 2008 or later	10	Q	Q	507	Q	613	20.4	Q	55.9
<b>Energy sources (more than one may apply)</b>									
Electricity	202	159	320	6,480	3,766	8,966	31.1	42.3	35.7
Natural gas	202	159	320	6,480	3,766	8,966	31.1	42.3	35.7
Fuel oil	50	Q	88	1,150	916	1,713	43.7	65.6	51.1
District heat	Q	Q	Q	124	Q	225	Q	Q	Q
District chilled water	Q	Q	Q	244	Q	186	Q	Q	133.9
Propane	Q	Q	17	Q	Q	587	Q	Q	29.4
Other	Q	9	Q	Q	305	425	Q	28.0	57.9
<b>Space-heating energy sources</b>									
Natural gas	164	119	267	5,467	3,180	7,509	30.0	37.6	35.5
Natural gas main	132	106	223	4,551	2,893	6,333	29.1	36.6	35.3
Natural gas secondary	32	14	44	916	288	1,176	34.8	47.7	37.1
Other excluding natural gas	36	Q	41	929	582	1,250	39.0	Q	32.9
Buildings without heating	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Primary space-heating energy source</b>									
Electricity	59	23	65	1,719	512	2,143	34.3	45.3	30.4
Natural gas	132	106	223	4,551	2,893	6,333	29.1	36.6	35.3
Fuel oil	N	N	1	N	N	6	N	N	165.1
District heat	Q	Q	Q	124	Q	208	Q	Q	Q
Propane	Q	N	Q	Q	N	Q	Q	N	Q
Other	N	1	(*)	N	35	40	N	16.5	9.9

**Table C29. Natural gas consumption and conditional energy intensity by Census division (part 3), 2012**

**Table C29. Natural gas consumption and conditional energy intensity by Census division (part 3), 2012**

	Total natural gas consumption (billion cubic feet)			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/square foot)		
	West			West			West		
	Central	South	Mountain	Central	South	Mountain	Pacific	Central	Mountain
All buildings	202	159	320	6,480	3,766	8,966	31.1	42.3	35.7
<b>Cooling equipment (more than one may apply)</b>									
Residential-type central air conditioners	44	19	69	1,479	532	1,558	29.9	35.1	44.4
Heat pumps	31	12	51	1,073	410	1,407	28.5	28.2	35.9
Individual air conditioners	15	19	25	607	513	681	25.2	37.6	37.0
District chilled water	Q	Q	Q	244	Q	186	Q	Q	133.9
Central chillers	52	35	66	1,351	795	1,504	38.4	44.2	44.1
Packaged air conditioning units	120	73	192	3,827	1,955	5,499	31.2	37.5	34.8
Swamp coolers	Q	24	28	Q	571	533	Q	41.9	51.9
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Main equipment replaced since 1990 (more than one may apply)</b>									
Heating	84	44	89	2,353	1,160	3,014	35.5	37.6	29.4
Cooling	90	52	91	2,491	1,253	2,938	36.2	41.1	31.0
<b>Water-heating equipment</b>									
Centralized system	127	99	170	3,747	2,081	4,910	33.9	47.7	34.6
Distributed system	24	18	51	993	553	1,355	24.2	32.5	37.6
Combination of centralized and distributed system	47	35	92	1,548	994	2,387	30.2	35.3	38.7
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>									
Snack bar or concession stand	28	Q	45	713	679	1,048	39.5	72.2	43.4
Fast food or small restaurant	34	Q	58	720	794	1,505	47.3	Q	38.5
Cafeteria or large restaurant	48	Q	71	1,545	785	1,213	30.9	66.6	58.4
Commercial kitchen/food preparation area	46	Q	85	1,392	949	1,649	33.0	64.6	51.3
Small kitchen area	23	Q	37	1,000	773	1,265	23.2	Q	29.4
<b>HVAC conservation features (more than one may apply)</b>									
Economizer cycle	66	84	157	2,057	1,796	4,022	32.2	46.7	39.0
Regular HVAC maintenance	172	141	285	5,446	3,290	7,801	31.6	42.8	36.5
Building automation system (BAS) <sup>2</sup>	101	84	184	3,030	1,876	4,229	33.4	44.8	43.5

**Table C29. Natural gas consumption and conditional energy intensity by Census division (part 3), 2012**

	Total natural gas consumption (billion cubic feet)			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/square foot)		
	West		West		West		South		
	Central	Mountain	Pacific	Central	Mountain	Pacific	Central	Mountain	Pacific
<b>All buildings</b>	202	159	320	6,480	3,766	8,966	31.1	42.3	35.7
<b>Window and interior lighting features (more than one may apply)</b>									
Multipaned windows	137	130	217	4,107	2,965	5,255	33.3	43.9	41.3
Tinted window glass	131	97	204	4,067	2,080	5,778	32.1	46.7	35.2
Reflective window glass	32	Q	103	1,055	992	2,328	30.3	60.5	44.1
External overhangs or awnings	88	91	171	2,528	1,830	3,988	34.9	49.5	43.0
Skylights or atriums	55	Q	127	1,487	1,261	3,305	37.2	53.4	38.3
Light scheduling	80	73	155	2,155	1,354	4,330	36.9	53.7	35.7
Occupancy sensors	74	Q	174	2,349	1,622	4,710	31.3	48.3	37.0
Multi-level lighting or dimming	30	Q	118	838	1,073	2,132	35.9	56.6	55.4
Daylight harvesting	10	15	41	499	433	935	19.9	35.3	44.1
Demand responsive lighting	Q	Q	27	Q	Q	1,103	Q	Q	24.3
Building automation system (BAS) for lighting <sup>2</sup>	19	18	61	901	624	1,838	21.4	29.6	33.4
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>									
Heating	142	104	226	4,952	2,952	7,300	28.6	35.2	30.9
Cooling	140	96	224	4,893	2,726	7,118	28.5	35.2	31.5
Lighting	179	153	296	6,034	3,641	8,289	29.7	42.1	35.7
<b>Annual consumption (hundred cubic feet)</b>									
1,000 or less	7	4	8	1,161	306	1,638	6.3	13.3	5.2
1,001 to 5,000	32	23	37	1,697	893	2,168	19.1	26.1	17.2
5,001 to 10,000	27	17	31	1,222	389	1,018	22.1	42.6	30.2
10,001 to 25,000	42	31	81	1,036	788	1,662	40.5	39.4	49.0
25,001 to 50,000	23	17	39	627	434	1,033	36.3	38.6	37.6
50,001 to 100,000	Q	13	38	Q	350	574	Q	36.8	65.5
Over 100,000	45	Q	85	494	Q	873	91.0	90.5	97.8

<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/> • 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 C of the 2012 Commercial Buildings Energy Consumption Survey.

**Table C30. Natural gas consumption and conditional energy intensity by climate region, 2012**

	Total natural gas consumption (billion cubic feet)				Total floorspace of buildings using natural gas (million square feet)				Natural gas energy intensity (cubic feet/square foot)									
	Mixed-dry/hot-dry		Hot-humid		Very cold/cold		Mixed-humid		Mixed-dry/hot-dry		Hot-humid		Very cold/cold		dry/hot-dry		Humid	
	Very cold	Mixed-cold	dry/hot-dry	Humid	Marine	Very cold	Mixed-cold	humid	dry/hot-dry	Humid	Marine	Very cold	Mixed-cold	dry/hot-dry	Humid	Marine		
All buildings	1,070	641	249	167	67	24,511	19,361	7,520	5,300	2,033	43.7	33.1	33.1	31.4	32.7			
<b>Building floorspace (square feet)</b>																		
1,001 to 5,000	96	93	30	24	6	1,618	1,299	453	269	Q	59.5	71.2	66.8	90.0	51.3			
5,001 to 10,000	111	76	30	18	Q	2,088	1,367	875	354	Q	53.2	55.8	34.3	50.6	Q			
10,001 to 25,000	146	76	33	26	16	3,895	2,431	1,493	623	381	37.4	31.2	22.1	42.1	41.3			
25,001 to 50,000	141	74	35	17	Q	3,384	2,474	1,184	789	318	41.6	29.9	29.8	21.7	30.5			
50,001 to 100,000	178	97	22	23	Q	4,034	3,719	870	941	Q	44.0	26.0	25.8	24.9	Q			
100,001 to 200,000	128	99	35	16	Q	3,522	3,580	1,277	818	Q	36.3	27.6	27.2	19.8	Q			
200,001 to 500,000	165	61	Q	18	8	3,818	2,437	941	798	298	43.2	25.1	53.5	22.5	26.5			
Over 500,000	106	66	13	23	Q	2,152	2,053	427	708	Q	49.4	32.0	30.1	33.2	Q			
<b>Principal building activity</b>																		
Education	159	91	15	15	Q	3,873	3,615	842	1,077	Q	40.9	25.1	17.9	13.6	Q			
Food sales	28	12	Q	Q	Q	400	193	Q	Q	Q	70.4	64.6	Q	Q	Q			
Food service	76	87	26	27	Q	503	487	186	151	Q	150.4	178.7	139.1	179.6	Q			
Health care	111	83	Q	25	Q	1,436	1,032	346	388	Q	77.3	80.7	93.2	63.7	Q			
Inpatient	78	75	Q	24	Q	720	746	262	316	Q	108.7	100.0	115.0	75.2	Q			
Outpatient	33	9	Q	Q	Q	717	286	Q	Q	Q	45.7	30.6	Q	Q	Q			
Lodging	99	64	30	17	Q	1,684	1,617	812	676	Q	58.6	39.6	36.7	25.8	Q			
Mercantile	136	62	44	32	Q	3,402	2,619	1,300	871	Q	39.9	23.8	34.2	37.1	Q			
Retail (other than mall)	48	16	Q	Q	Q	1,517	975	Q	Q	Q	31.6	16.9	Q	Q	Q			
Enclosed and strip malls	88	46	40	30	Q	1,885	1,644	824	643	Q	46.6	28.0	48.5	47.4	Q			
Office	157	76	17	10	15	4,654	3,223	1,197	621	596	33.8	23.7	14.3	15.9	24.7			
Public assembly	72	28	13	Q	Q	1,802	952	557	324	Q	39.9	29.5	24.0	Q	Q			
Public order and safety	19	12	Q	Q	Q	409	326	Q	Q	Q	45.6	36.4	Q	Q	Q			
Religious worship	40	30	Q	Q	Q	1,181	1,208	284	Q	Q	33.6	24.5	Q	Q	Q			
Service	58	44	Q	Q	Q	1,400	932	Q	Q	Q	41.7	47.0	Q	Q	Q			
Warehouse and storage	75	31	25	Q	Q	2,773	2,485	1,111	526	Q	27.1	12.4	22.8	7.3	Q			
Other	34	Q	Q	Q	Q	541	Q	Q	Q	Q	63.5	Q	Q	Q	Q			
Vacant	7	Q	Q	N	Q	454	Q	Q	N	Q	15.8	Q	Q	N	Q			
<b>Year constructed</b>																		
Before 1920	57	26	Q	Q	Q	1,432	724	Q	Q	Q	39.7	35.9	Q	Q	Q			
1920 to 1945	68	53	14	Q	Q	1,677	1,418	388	Q	Q	40.6	37.1	35.0	Q	Q			
1946 to 1959	117	49	15	10	Q	2,385	1,749	716	363	Q	49.0	28.0	21.6	26.5	Q			
1960 to 1969	141	87	46	22	10	3,420	2,467	942	438	285	41.2	35.4	48.5	51.0	36.3			
1970 to 1979	148	117	36	24	Q	3,337	2,363	1,330	768	Q	44.4	49.6	27.4	31.7	Q			
1980 to 1989	152	77	35	46	17	3,484	3,054	1,337	1,415	598	43.5	25.3	25.9	32.8	27.7			
1990 to 1999	155	99	38	28	11	3,857	2,963	1,099	947	295	40.1	33.5	34.2	29.1	38.6			
2000 to 2003	82	40	16	12	Q	1,958	1,704	500	416	Q	41.9	23.5	32.6	28.2	Q			
2004 to 2007	84	42	15	17	Q	1,547	1,489	471	397	Q	54.4	28.5	Q	42.8	Q			
2008 to 2012	67	50	Q	Q	Q	1,414	1,430	661	Q	Q	47.4	35.0	50.5	Q	Q			

**Table C30. Natural gas consumption and conditional energy intensity by climate region, 2012**

	Total natural gas consumption (billion cubic feet)				Total floorspace of buildings using natural gas (million square feet)				Natural gas energy intensity (cubic feet/square foot)							
	Mixed- Very cold/ cold		dry/ hot-dry		Hot- humid		Mar- ine		Mixed- Very cold/ cold		dry/ hot-dry		Hot- humid		Mar- ine	
All buildings	1,070	641	249	167	67	24,511	19,361	7,520	5,300	2,033	43.7	33.1	33.1	31.4	32.7	
Census region and division																
Northeast	323	164	N	N	N	7,259	3,809	N	N	N	44.5	43.1	N	N	N	
New England	108	N	N	N	N	2,241	N	N	N	N	48.1	N	N	N	N	
Middle Atlantic	215	164	N	N	N	5,018	3,809	N	N	N	42.9	43.1	N	N	N	
Midwest	561	65	N	N	N	13,130	1,895	N	N	N	42.7	34.5	N	N	N	
East North Central	452	Q	N	N	N	9,944	Q	N	N	N	45.5	34.9	N	N	N	
West North Central	109	36	N	N	N	3,185	1,050	N	N	N	34.3	34.3	N	N	N	
South	N	411	23	167	N	N	13,656	944	5,300	N	N	30.1	24.0	31.4	N	
South Atlantic	N	251	N	47	N	N	8,542	N	1,442	N	N	29.4	N	32.5	N	
East South Central	N	79	N	22	N	N	2,813	N	623	N	N	28.0	N	35.6	N	
West South Central	N	82	23	97	N	N	2,301	944	3,235	N	N	35.5	24.0	30.1	N	
West	186	N	226	N	67	4,123	N	6,576	N	2,033	45.2	N	34.4	N	32.7	
Mountain	131	N	29	N	N	2,872	N	894	N	N	45.6	N	31.9	N	N	
Pacific	55	N	198	N	67	1,251	N	5,681	N	2,033	44.3	N	34.8	N	32.7	
Number of floors																
One	399	260	122	86	29	9,104	8,144	3,965	2,540	744	43.9	31.9	30.7	34.0	38.3	
Two	272	145	42	21	Q	6,764	4,589	1,651	1,027	634	40.3	31.5	25.6	20.9	28.2	
Three	134	58	15	8	Q	3,265	1,858	494	339	Q	41.1	31.0	31.0	24.5	Q	
Four to nine	185	133	61	41	13	4,022	3,323	1,064	1,025	330	46.0	40.0	57.3	39.8	37.9	
Ten or more	79	46	9	10	Q	1,357	1,447	346	369	Q	58.4	31.7	24.8	25.9	Q	
Number of workers (main shift)																
Fewer than 5	128	89	24	10	7	3,450	2,709	1,133	357	Q	37.1	32.8	21.3	28.6	32.4	
5 to 9	84	64	26	17	Q	2,248	1,656	780	457	Q	37.2	38.5	33.1	36.3	Q	
10 to 19	135	82	41	25	Q	2,811	2,055	1,171	503	Q	47.9	40.1	34.6	50.3	Q	
20 to 49	178	102	39	32	18	4,577	3,229	1,382	906	520	39.0	31.6	28.0	35.6	34.2	
50 to 99	196	99	25	23	Q	4,005	3,794	1,113	1,150	Q	48.9	26.0	22.6	19.8	Q	
100 to 249	164	81	55	25	Q	3,766	3,010	1,060	878	Q	43.5	27.0	52.2	28.9	Q	
250 or more	186	124	39	34	15	3,655	2,909	881	1,049	407	50.9	42.6	44.5	32.4	36.2	
Weekly operating hours																
Fewer than 40	50	30	8	5	Q	1,533	1,226	503	352	Q	32.6	24.2	15.3	15.2	Q	
40 to 48	135	64	39	8	7	3,911	3,506	1,529	654	360	34.5	18.3	25.3	11.5	19.2	
49 to 60	205	100	18	20	17	6,012	4,648	1,489	1,188	669	34.1	21.5	12.4	17.1	25.4	
61 to 84	222	132	55	37	12	5,156	3,480	1,542	936	380	43.1	37.9	35.5	39.9	30.5	
85 to 167	177	99	21	30	Q	3,199	2,096	797	427	Q	55.3	47.2	26.8	70.0	Q	
Open continuously	282	216	108	66	16	4,701	4,404	1,661	1,743	317	60.0	49.1	65.0	37.9	49.8	
Ownership and occupancy																
Nongovernment owned	820	485	212	133	54	18,488	14,228	6,179	3,867	1,719	44.3	34.1	34.3	34.5	31.5	
Owner occupied	430	253	103	62	21	8,997	6,294	2,716	1,917	618	47.8	40.2	38.0	32.2	33.3	
Leased to tenant(s)	263	181	89	57	28	6,647	5,981	2,542	1,398	793	39.6	30.3	35.1	40.8	35.5	
Owner occupied and leased	125	50	19	15	Q	2,672	1,914	836	552	Q	46.7	26.3	22.9	26.8	Q	
Unoccupied	Q	Q	Q	N	Q	Q	Q	Q	N	Q	Q	Q	Q	N	Q	
Government owned	251	156	37	33	12	6,023	5,133	1,341	1,433	315	41.6	30.5	27.5	23.0	39.3	
Federal	13	11	Q	Q	Q	313	448	Q	Q	Q	42.8	24.9	Q	Q	Q	
State	79	61	9	Q	Q	1,703	1,404	364	353	Q	46.1	43.8	26.1	28.5	Q	
Local	159	84	25	21	6	4,007	3,280	932	1,026	193	39.6	25.5	26.6	20.4	33.1	

**Table C30. Natural gas consumption and conditional energy intensity by climate region, 2012**

	Total natural gas consumption (billion cubic feet)				Total floorspace of buildings using natural gas (million square feet)				Natural gas energy intensity (cubic feet/square foot)										
	Very cold/ cold		Mixed- dry/ hot-dry		Hot- humid		Mar- ine		Very cold/ cold		Mixed- humid		Mixed- dry/ hot-dry		Hot- humid		Mar- ine		
	Mixed-	-	-	-	-	-	-	-	Mixed-	-	-	-	-	-	-	-	Mixed-	-	-
All buildings	1,070	641	249	167	67	24,511	19,361	7,520	5,300	2,033	43.7	33.1	33.1	31.4	32.7				
<b>Party responsible for operation and maintenance of energy systems</b>																			
Building owner	918	510	192	134	53	20,953	15,877	5,997	4,512	1,760	43.8	32.1	32.0	29.6	30.4				
Business owner or tenant	132	108	Q	31	Q	3,093	2,830	1,395	666	256	42.8	38.1	36.5	46.4	48.5				
Property management	6	13	Q	Q	Q	211	415	Q	Q	Q	29.0	32.1	Q	Q	Q				
Other	Q	Q	Q	Q	N	Q	Q	Q	Q	N	Q	Q	Q	Q	Q				
<b>Provider of direct input on energy-related equipment purchases</b>																			
Building owner	948	528	202	133	57	21,704	16,478	6,384	4,553	1,826	43.7	32.0	31.7	29.2	31.1				
Business owner or tenant	94	85	Q	28	Q	2,156	2,111	978	587	Q	43.6	40.4	41.6	48.2	Q				
Property management	6	Q	Q	Q	N	173	Q	Q	Q	N	32.6	Q	Q	Q	N				
Other	23	21	Q	Q	Q	478	532	Q	Q	Q	47.1	39.9	Q	Q	Q				
<b>Number of establishments</b>																			
One	703	475	172	99	40	15,702	12,336	4,794	3,284	1,040	44.8	38.5	35.8	30.2	38.9				
2 to 5	240	90	36	38	14	5,352	3,948	1,384	1,159	588	44.9	22.8	25.9	32.6	24.2				
6 to 10	50	25	13	Q	Q	1,242	1,073	375	Q	Q	40.1	23.4	33.9	Q	Q				
11 to 20	48	32	14	14	Q	1,117	889	353	330	Q	42.7	36.3	40.4	Q	Q				
More than 20	26	18	14	6	Q	895	1,012	529	315	Q	28.7	17.9	26.1	20.0	Q				
Currently unoccupied	Q	Q	Q	N	Q	Q	Q	Q	N	Q	Q	Q	Q	N	Q				
<b>Predominant exterior wall material</b>																			
Brick, stone, or stucco	552	375	111	68	Q	11,912	10,651	3,191	2,570	675	46.3	35.2	34.9	26.5	36.9				
Concrete (block or poured)	228	157	63	53	21	5,688	4,573	2,056	1,510	691	40.0	34.4	30.8	35.3	29.7				
Concrete panels	131	30	17	18	7	2,405	1,507	1,175	552	299	54.6	19.7	14.3	32.8	24.6				
Siding or shingles	62	24	Q	Q	Q	1,683	467	518	Q	Q	36.9	50.6	53.9	Q	Q				
Metal panels	71	31	6	12	Q	1,957	1,610	304	388	Q	36.2	19.4	19.4	30.6	Q				
Window glass	14	Q	Q	Q	Q	465	Q	Q	Q	Q	29.3	Q	Q	Q	Q				
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q				
No one major type	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q				
<b>Predominant roof material</b>																			
Metal surfacing	101	82	16	29	Q	2,976	2,930	935	821	Q	33.8	27.9	16.8	35.0	Q				
Synthetic or rubber	495	205	72	41	16	10,464	6,015	1,506	1,212	593	47.3	34.1	47.8	33.8	27.8				
Built-up	228	197	71	49	22	5,559	5,526	2,358	1,862	721	41.0	35.7	30.3	26.6	31.1				
Slate or tile shingles	40	26	26	10	Q	832	1,001	637	206	Q	48.1	Q	40.3	50.7	Q				
Wooden materials (including shingles)	9	18	Q	Q	Q	160	169	Q	Q	Q	59.1	108.8	Q	Q	Q				
Asphalt, fiberglass, or other shingles	184	92	45	31	7	4,037	3,104	1,512	962	281	45.7	29.8	29.5	31.9	23.7				
Concrete	Q	12	Q	Q	Q	Q	332	Q	Q	Q	Q	35.4	Q	Q	Q				
Other	Q	Q	Q	Q	N	Q	Q	Q	N	Q	Q	Q	Q	Q	N				
No one major type	Q	Q	Q	N	Q	Q	Q	Q	N	Q	Q	Q	Q	Q	N	Q			
<b>Roof characteristics</b>																			
Roof tilt																			
Flat	668	422	180	109	41	15,178	11,482	4,593	3,311	1,269	44.0	36.8	39.1	32.8	32.2				
Shallow pitch	242	125	44	38	21	5,508	5,019	2,089	1,320	564	43.9	25.0	21.0	28.7	37.0				
Steeper pitch	160	93	25	20	5	3,825	2,859	838	670	200	42.0	32.6	30.4	30.1	24.0				
Cool roof	241	176	96	54	21	5,434	4,669	2,023	1,711	514	44.3	37.8	47.4	31.4	40.8				

**Table C30. Natural gas consumption and conditional energy intensity by climate region, 2012**

	Total natural gas consumption (billion cubic feet)				Total floorspace of buildings using natural gas (million square feet)				Natural gas energy intensity (cubic feet/square foot)							
	Mixed-dry/humid		Hot-dry/humid		Very cold/cold		Mixed-humid		Mixed-dry/hot-dry		Hot-humid		Very cold/cold			
	Very cold/cold	Mixed-humid	dry/humid	Hot-dry	Marine	Very cold/cold	Mixed-humid	dry/hot-dry	Hot-humid	Marine	Very cold/cold	Mixed-humid	dry/humid	Hot-dry	Marine	
All buildings	1,070	641	249	167	67	24,511	19,361	7,520	5,300	2,033	43.7	33.1	33.1	31.4	32.7	
Renovations in buildings constructed before 2008 (more than one may apply)																
Any type of renovation	618	348	108	90	36	13,747	10,438	2,847	2,759	1,154	45.0	33.3	38.0	32.5	31.2	
Addition or annex	251	133	Q	37	Q	5,008	3,394	617	939	Q	50.1	39.1	46.1	39.9	Q	
Reduction in floorspace	16	Q	Q	Q	Q	340	810	Q	Q	Q	46.4	57.7	Q	Q	Q	
Roof replacement	344	196	60	47	16	7,356	5,378	1,286	1,606	526	46.8	36.4	47.0	29.5	31.2	
Exterior wall replacement	47	40	Q	14	Q	1,224	1,129	491	407	Q	38.3	35.2	42.5	Q	Q	
Interior wall reconfiguration	340	159	57	50	22	7,659	4,890	1,459	1,308	758	44.4	32.5	39.1	38.5	29.2	
Window replacement	209	101	24	34	10	4,427	3,093	664	666	436	47.2	32.6	36.6	50.9	21.9	
HVAC equipment upgrade	407	251	78	63	23	9,127	6,889	1,833	1,913	675	44.6	36.4	42.4	33.1	33.9	
Lighting upgrade	430	199	77	61	23	8,992	6,177	1,849	1,645	635	47.9	32.2	41.7	37.1	36.0	
Electrical upgrade	288	136	58	41	15	5,654	3,879	1,129	1,221	491	51.0	35.0	51.4	33.6	29.5	
Plumbing system upgrade	256	134	58	42	14	4,749	3,489	1,079	816	418	53.8	38.3	53.5	50.9	32.9	
Insulation upgrade	142	63	Q	29	Q	2,958	1,805	491	471	Q	48.0	35.1	41.9	62.4	Q	
Fire, safety, or security upgrade	268	156	61	48	22	5,839	4,231	1,244	1,370	543	45.8	36.9	49.1	34.9	40.3	
Structural upgrade	71	31	Q	Q	Q	1,325	677	352	Q	Q	53.5	45.6	55.9	Q	Q	
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	
No renovations	385	243	107	74	28	9,350	7,493	4,012	2,268	836	41.2	32.5	26.8	32.7	33.6	
Buildings constructed 2008 or later	67	50	Q	Q	Q	1,414	1,430	661	Q	Q	47.4	35.0	50.5	Q	Q	
Energy sources (more than one may apply)																
Electricity	1,070	641	249	167	67	24,511	19,361	7,520	5,300	2,033	43.7	33.1	33.1	31.4	32.7	
Natural gas	1,070	641	249	167	67	24,511	19,361	7,520	5,300	2,033	43.7	33.1	33.1	31.4	32.7	
Fuel oil	290	179	68	53	19	5,395	4,834	1,190	1,637	607	53.8	36.9	56.9	32.2	30.9	
District heat	Q	Q	Q	Q	Q	1,074	1,493	Q	Q	Q	Q	Q	Q	Q	Q	
District chilled water	Q	Q	Q	Q	Q	820	1,224	170	194	Q	Q	Q	Q	134.5	66.1	
Propane	86	29	10	16	Q	1,591	887	490	356	Q	54.1	33.0	19.7	44.5	Q	
Other	60	20	Q	Q	Q	1,438	643	341	Q	Q	41.6	31.4	Q	Q	Q	
Space-heating energy sources																
Natural gas	1,007	552	202	104	58	22,436	15,774	6,268	3,316	1,717	44.9	35.0	32.3	31.4	33.8	
Natural gas main	945	483	163	79	56	20,554	12,884	5,252	2,710	1,588	46.0	37.5	31.1	29.0	35.1	
Natural gas secondary	62	68	39	26	Q	1,882	2,890	1,016	607	Q	32.8	23.6	38.6	42.1	Q	
Other excluding natural gas	63	88	39	51	Q	2,044	3,578	1,086	1,629	280	30.9	24.5	36.0	31.5	16.5	
Buildings without heating	Q	Q	Q	11	Q	Q	Q	Q	355	Q	Q	Q	Q	31.3	Q	
Primary space-heating energy source																
Electricity	78	114	63	68	Q	2,526	4,582	1,979	2,141	321	30.7	24.9	31.8	31.7	14.4	
Natural gas	945	483	163	79	56	20,554	12,884	5,252	2,710	1,588	46.0	37.5	31.1	29.0	35.1	
Fuel oil	Q	5	N	N	N	Q	360	N	N	N	Q	15.1	N	N	N	
District heat	Q	Q	Q	Q	Q	1,032	1,483	Q	Q	Q	Q	Q	Q	Q	Q	
Propane	Q	Q	Q	N	N	Q	Q	Q	N	N	Q	Q	Q	N	N	
Other	Q	Q	N	N	N	Q	Q	N	N	N	Q	Q	N	N	N	
Cooling energy sources																
Natural gas	30	22	Q	Q	Q	403	272	Q	Q	Q	74.9	80.9	Q	Q	Q	
Other excluding natural gas	995	607	244	165	58	22,970	18,728	7,325	5,276	1,868	43.3	32.4	33.3	31.2	30.8	
Buildings without cooling	45	12	2	Q	Q	1,138	361	158	Q	Q	39.4	33.9	12.0	Q	Q	
Water-heating energy sources																
Natural gas	839	514	201	124	50	16,960	11,896	5,927	3,447	1,294	49.4	43.2	34.0	36.0	38.9	
Other excluding natural gas	216	114	44	41	14	7,014	6,724	1,327	1,784	647	30.8	16.9	32.9	22.8	21.7	
Buildings without water heating	16	14	4	Q	Q	537	741	266	Q	Q	29.7	18.2	14.6	Q	Q	

**Table C30. Natural gas consumption and conditional energy intensity by climate region, 2012**

**Table C30. Natural gas consumption and conditional energy intensity by climate region, 2012**

	Total natural gas consumption (billion cubic feet)				Total floorspace of buildings using natural gas (million square feet)				Natural gas energy intensity (cubic feet/square foot)							
	Mixed-				Very cold/	Mixed-	Mixed-	Very cold/	Mixed-							
	Very cold/	Mixed- cold	dry/ hot-dry	Hot- humid	Mar- ine	cold/	humid	dry/ hot-dry	Hot- humid	Mar- ine	cold/	humid	dry/ hot-dry	Hot- humid	Mar- ine	
All buildings	1,070	641	249	167	67	24,511	19,361	7,520	5,300	2,033	43.7	33.1	33.1	31.4	32.7	
Main equipment replaced since 1990 (more than one may apply)																
Heating	371	248	73	57	22	8,831	6,974	2,789	1,725	739	42.0	35.6	26.1	33.3	29.3	
Cooling	423	261	82	71	22	9,590	7,817	2,755	2,242	689	44.1	33.4	29.9	31.7	32.1	
Water-heating equipment																
Centralized system	693	419	130	99	38	15,179	10,784	4,230	2,832	980	45.7	38.9	30.8	34.9	38.5	
Distributed system	127	49	50	21	Q	3,427	2,299	1,275	933	Q	37.1	21.4	39.0	22.4	Q	
Combination of centralized and distributed system	234	159	65	45	23	5,367	5,536	1,749	1,466	685	43.6	28.7	37.1	30.6	33.5	
Food preparation or serving areas in non-food service buildings (more than one may apply)																
Snack bar or concession stand	182	92	38	33	10	3,283	2,630	839	844	271	55.6	35.1	45.2	38.5	37.5	
Fast food or small restaurant	160	92	51	49	11	2,944	2,513	1,350	1,221	316	54.2	36.8	37.9	40.0	33.5	
Cafeteria or large restaurant	259	193	59	45	16	4,911	5,239	1,073	1,495	325	52.8	36.9	54.6	30.3	49.7	
Commercial kitchen/ food preparation area	317	205	67	50	18	5,862	4,702	1,403	1,763	352	54.0	43.6	47.8	28.3	51.5	
Small kitchen area	223	110	31	27	8	4,820	3,527	1,102	1,154	279	46.3	31.3	27.8	23.3	26.9	
HVAC conservation features (more than one may apply)																
Economizer cycle	524	254	124	57	33	11,676	7,198	3,058	1,615	1,137	44.8	35.3	40.4	35.0	29.0	
Regular HVAC maintenance	965	553	221	149	55	21,395	16,426	6,449	4,755	1,666	45.1	33.6	34.2	31.3	33.1	
Building automation system (BAS) <sup>2</sup>	531	262	150	99	31	11,678	8,783	3,369	2,934	1,056	45.4	29.9	44.5	33.7	29.8	
Window and interior lighting features (more than one may apply)																
Multipaned windows	925	473	147	115	49	20,517	14,990	3,905	3,075	1,287	45.1	31.5	37.6	37.5	38.3	
Tinted window glass	556	382	157	115	49	12,194	10,966	4,817	3,203	1,450	45.6	34.9	32.5	35.8	33.6	
Reflective window glass	258	133	78	38	21	5,332	3,314	1,816	1,137	452	48.4	40.1	43.2	33.1	45.6	
External overhangs or awnings	440	311	126	90	39	9,079	7,538	3,145	2,495	962	48.4	41.2	39.9	36.0	40.8	
Skylights or atriums	305	185	81	60	32	6,592	5,361	2,460	1,494	838	46.3	34.6	32.8	40.5	38.5	
Light scheduling	462	215	113	80	36	9,885	6,723	3,262	2,266	973	46.7	31.9	34.7	35.1	36.6	
Occupancy sensors	558	237	117	85	44	12,241	7,515	3,245	2,703	1,268	45.6	31.5	36.1	31.5	35.0	
Multi-level lighting or dimming	248	156	99	36	20	4,712	3,751	1,729	1,004	507	52.6	41.7	57.5	35.8	39.2	
Daylight harvesting	94	40	34	17	Q	2,168	1,205	784	601	Q	43.4	33.4	43.7	28.2	Q	
Demand responsive lighting	47	40	23	11	Q	1,216	1,124	973	268	Q	38.5	35.8	23.5	39.4	Q	
Building automation system (BAS) for lighting <sup>2</sup>	182	64	44	24	12	4,128	2,540	1,357	990	386	44.1	25.1	32.8	24.2	31.9	
Equipment usage reduced when building not in full use (more than one may apply)																
Heating	820	482	181	103	48	19,735	15,659	6,228	3,592	1,603	41.6	30.8	29.0	28.7	29.9	
Cooling	787	470	185	116	45	18,722	15,340	6,201	4,017	1,447	42.0	30.7	29.9	29.0	30.9	
Lighting	1,015	596	230	150	64	23,235	18,079	6,910	4,850	1,959	43.7	32.9	33.2	30.9	32.4	

**Table C30. Natural gas consumption and conditional energy intensity by climate region, 2012**

	Total natural gas consumption (billion cubic feet)					Total floorspace of buildings using natural gas (million square feet)					Natural gas energy intensity (cubic feet/square foot)											
	Very cold/ cold		Mixed- dry/ hot-dry		Hot-humid	Marine		Very cold/ cold		Mixed- humid		Mixed- dry/ hot-dry		Hot-humid	Marine		Very cold/ cold		Mixed- dry/ hot-dry		Hot-humid	Marine
	Mixed-	cold/ cold	Mixed-	dry/ hot-dry	Hot-humid	Marine	Very	cold/ cold	Mixed-	humid	Mixed-	dry/ hot-dry	Hot-humid	Marine	Very	cold/ cold	Mixed-	dry/ hot-dry	Hot-humid	Marine		
All buildings	1,070	641	249	167	67	24,511	19,361	7,520	5,300	2,033	43.7	33.1	33.1	31.4	32.7							
<b>Annual consumption (hundred cubic feet)</b>																						
1,000 or less	21	17	8	4	1	1,757	2,491	1,649	906	Q	11.8	7.0	4.9	4.0	8.8							
1,001 to 5,000	133	86	33	16	7	5,090	4,791	1,936	1,035	484	26.2	18.0	17.0	15.5	13.9							
5,001 to 10,000	103	80	24	19	7	2,811	3,072	898	921	285	36.5	25.9	26.3	21.0	23.3							
10,001 to 25,000	192	138	57	36	25	4,791	3,635	1,276	963	491	40.2	37.9	44.5	37.1	51.5							
25,001 to 50,000	154	94	27	19	10	3,349	2,300	579	498	429	46.1	40.8	46.9	37.1	22.8							
50,001 to 100,000	160	54	28	31	Q	3,061	1,235	476	455	Q	52.3	43.3	58.9	68.3	Q							
Over 100,000	307	173	72	42	Q	3,652	1,836	705	523	Q	84.0	94.1	102.4	80.6	Q							

<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/> • 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 C of the 2012 Commercial Buildings Energy Consumption Survey.

**Table C31. Natural gas consumption and conditional energy intensity by building size, 2012**

	Total natural gas consumption (billion cubic feet)			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/square foot)		
	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet
All buildings	491	903	799	8,575	26,906	23,244	57.3	33.6	34.4
<b>Principal building activity</b>									
Education	14	140	130	376	4,483	4,661	37.1	31.1	28.0
Food sales	13	36	Q	229	484	Q	55.3	74.9	Q
Food service	184	37	N	1,087	307	N	169.7	121.8	N
Health care	10	40	208	307	821	2,164	31.8	48.9	96.3
Inpatient	N	17	197	N	234	1,878	N	71.4	104.8
Outpatient	10	23	12	307	587	286	31.8	39.9	40.7
Lodging	8	103	105	152	2,303	2,462	52.7	44.6	42.5
Mercantile	50	152	82	1,003	3,922	3,568	49.9	38.9	22.9
Retail (other than mall)	20	32	21	706	1,419	1,246	28.1	22.5	16.6
Enclosed and strip malls	30	121	61	298	2,503	2,322	101.7	48.2	26.2
Office	54	121	101	1,821	4,431	4,038	29.4	27.4	24.9
Public assembly	22	65	45	544	2,007	1,337	40.2	32.5	33.5
Public order and safety	9	15	16	169	490	348	50.6	30.8	46.2
Religious worship	29	53	Q	710	2,129	Q	40.7	24.8	Q
Service	70	47	Q	1,118	1,614	Q	62.5	28.9	Q
Warehouse and storage	16	55	65	737	2,779	3,490	21.2	19.7	18.8
Other	12	30	37	221	545	612	52.5	55.2	60.6
Vacant	Q	9	Q	Q	592	Q	Q	14.8	Q
<b>Year constructed</b>									
Before 1920	28	33	24	635	1,009	677	43.9	32.7	36.1
1920 to 1945	48	55	38	838	1,778	1,175	57.6	30.8	32.7
1946 to 1959	47	79	68	959	2,585	1,849	49.5	30.4	37.0
1960 to 1969	61	142	104	1,235	3,790	2,529	49.4	37.5	41.0
1970 to 1979	80	122	130	1,256	3,393	3,330	63.4	36.0	38.9
1980 to 1989	70	148	108	1,289	4,346	4,252	54.6	34.1	25.4
1990 to 1999	69	137	124	1,191	4,276	3,694	58.0	32.1	33.6
2000 to 2003	29	62	63	456	1,963	2,303	63.3	31.6	27.4
2004 to 2007	27	56	84	323	1,980	1,793	84.7	28.5	46.8
2008 to 2012	31	69	56	392	1,786	1,643	79.3	38.5	33.9
<b>Census region and division</b>									
Northeast	72	190	225	1,108	4,861	5,098	65.0	39.1	44.2
New England	12	42	54	275	1,094	872	44.6	38.0	61.9
Middle Atlantic	60	148	171	833	3,767	4,226	71.7	39.4	40.5
Midwest	135	281	211	2,504	6,995	5,527	54.1	40.1	38.1
East North Central	98	216	167	1,676	4,943	4,171	58.6	43.7	40.1
West North Central	37	65	43	828	2,052	1,356	45.0	31.5	32.0
South	174	253	173	2,802	9,274	7,824	62.1	27.3	22.1
South Atlantic	88	115	94	1,074	4,409	4,502	82.3	26.1	21.0
East South Central	19	53	29	551	1,653	1,232	35.4	31.9	23.4
West South Central	66	86	50	1,177	3,212	2,091	56.2	26.6	23.9
West	110	179	190	2,161	5,776	4,795	50.7	31.0	39.7
Mountain	38	51	Q	699	1,513	1,554	54.7	33.5	45.4
Pacific	71	129	120	1,462	4,263	3,241	48.8	30.1	37.0

**Table C31. Natural gas consumption and conditional energy intensity by building size, 2012**

	Total natural gas consumption (billion cubic feet)			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/square foot)		
	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet
<b>All buildings</b>	491	903	799	8,575	26,906	23,244	57.3	33.6	34.4
<b>Climate region<sup>1</sup></b>									
Very cold/Cold	207	464	399	3,706	11,313	9,492	55.9	41.0	42.0
Mixed-humid	169	246	226	2,666	8,624	8,071	63.3	28.6	28.0
Mixed-dry/Hot-dry	60	91	98	1,328	3,547	2,645	45.4	25.6	37.0
Hot-humid	42	67	58	623	2,353	2,324	67.7	28.4	24.8
Marine	13	35	19	252	1,070	712	50.3	32.8	26.4
<b>Number of floors</b>									
One	343	433	121	5,693	12,525	6,278	60.2	34.6	19.2
Two	110	251	137	2,166	8,148	4,350	51.0	30.8	31.5
Three	31	113	75	590	3,186	2,309	52.9	35.5	32.4
Four to nine	Q	102	323	Q	2,996	6,644	Q	34.1	48.7
Ten or more	N	Q	144	N	Q	3,663	N	Q	39.2
<b>Number of workers (main shift)</b>									
Fewer than 5	172	80	Q	3,898	3,458	Q	44.2	23.0	Q
5 to 9	119	74	Q	2,360	2,644	Q	50.4	28.1	Q
10 to 19	146	137	8	1,750	4,425	624	83.4	30.9	13.0
20 to 49	53	276	40	561	8,133	1,918	95.2	33.9	20.9
50 to 99	Q	220	131	Q	5,690	4,624	Q	38.7	28.3
100 to 249	N	109	220	N	2,329	6,551	N	46.7	33.6
250 or more	N	8	390	N	226	8,674	N	34.1	45.0
<b>Weekly operating hours</b>									
Fewer than 40	42	48	5	1,295	1,989	421	32.2	24.2	11.8
40 to 48	80	126	46	2,295	5,059	2,606	34.8	24.9	17.7
49 to 60	100	179	81	2,401	7,322	4,282	41.8	24.4	19.0
61 to 84	117	215	127	1,192	5,492	4,810	97.8	39.1	26.4
85 to 167	105	138	97	740	2,708	3,286	141.6	50.9	29.6
Open continuously	48	197	443	652	4,336	7,839	73.3	45.5	56.5
<b>Ownership and occupancy</b>									
Nongovernment owned	448	677	579	7,555	20,132	16,794	59.4	33.6	34.5
Owner occupied	245	320	303	4,137	9,422	6,983	59.3	34.0	43.3
Leased to tenant(s)	186	274	159	2,877	7,965	6,519	64.5	34.4	24.4
Owner occupied and leased	16	80	117	489	2,481	3,285	32.9	32.3	35.7
Unoccupied	Q	Q	Q	Q	Q	Q	Q	Q	Q
Government owned	43	226	220	1,020	6,774	6,450	41.8	33.4	34.2
Federal	Q	Q	19	Q	Q	450	Q	Q	41.2
State	8	73	84	141	1,729	2,068	54.0	42.4	40.8
Local	32	145	118	815	4,690	3,933	39.1	30.9	29.9
<b>Party responsible for operation and maintenance of energy systems</b>									
Building owner	384	723	700	7,111	22,274	19,715	54.0	32.5	35.5
Business owner or tenant	95	153	86	1,278	4,021	2,941	74.6	38.0	29.3
Property management	Q	Q	9	Q	Q	455	Q	Q	20.6
Other	Q	16	Q	Q	368	Q	Q	42.5	Q

**Table C31. Natural gas consumption and conditional energy intensity by building size, 2012**

	Total natural gas consumption (billion cubic feet)			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/square foot)		
	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet
<b>All buildings</b>	491	903	799	8,575	26,906	23,244	57.3	33.6	34.4
<b>Provider of direct input on energy-related equipment purchases</b>									
Building owner	397	761	710	7,353	23,438	20,156	54.0	32.5	35.2
Business owner or tenant	73	116	69	968	2,798	2,258	75.9	41.4	30.4
Property management	Q	Q	8	Q	Q	369	Q	Q	21.6
Other	16	22	13	204	573	462	79.4	37.7	28.0
<b>Number of establishments</b>									
One	412	588	490	6,791	17,387	12,978	60.6	33.8	37.8
2 to 5	71	171	176	1,521	5,686	5,225	46.5	30.2	33.7
6 to 10	6	63	35	172	1,827	1,094	36.4	34.7	31.9
11 to 20	Q	60	48	Q	1,372	1,357	Q	44.0	35.7
More than 20	N	16	50	N	343	2,520	N	46.0	19.7
Currently unoccupied	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Predominant exterior wall material</b>									
Brick, stone, or stucco	269	494	369	4,110	14,475	10,414	65.4	34.1	35.4
Concrete (block or poured)	103	214	205	1,740	6,477	6,301	59.1	33.0	32.6
Concrete panels	8	70	126	168	1,881	3,889	47.0	37.1	32.3
Siding or shingles	57	51	Q	1,168	1,344	Q	48.7	37.6	Q
Metal panels	43	60	19	1,272	2,282	832	34.2	26.4	22.9
Window glass	Q	Q	Q	Q	Q	833	Q	Q	38.5
Other	Q	Q	Q	Q	Q	324	Q	Q	55.8
No one major type	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Predominant roof material</b>									
Metal surfacing	112	95	28	2,161	3,971	1,694	51.6	24.0	16.8
Synthetic or rubber	107	345	377	1,530	8,539	9,721	70.0	40.4	38.8
Built-up	67	202	299	1,217	7,081	7,728	55.0	28.6	38.7
Slate or tile shingles	47	56	8	672	1,494	Q	69.5	37.5	Q
Wooden materials (including shingles)	24	Q	Q	312	Q	Q	77.1	Q	Q
Asphalt, fiberglass, or other shingles	128	175	56	2,560	5,013	2,323	50.0	34.9	24.0
Concrete	Q	Q	13	Q	Q	522	Q	Q	25.2
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>									
<b>Roof tilt</b>									
Flat	207	573	640	2,947	15,811	17,074	70.1	36.3	37.5
Shallow pitch	166	179	125	3,244	6,462	4,794	51.1	27.7	26.0
Steeper pitch	119	151	35	2,384	4,632	1,376	49.8	32.5	25.3
Cool roof	80	208	300	1,175	4,821	8,357	68.0	43.2	35.8

**Table C31. Natural gas consumption and conditional energy intensity by building size, 2012**

	Total natural gas consumption (billion cubic feet)			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/square foot)		
	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet
<b>All buildings</b>	491	903	799	8,575	26,906	23,244	57.3	33.6	34.4
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>									
Any type of renovation	219	455	526	3,651	13,315	13,978	59.9	34.2	37.6
Addition or annex	50	133	273	768	3,942	5,396	65.3	33.8	50.7
Reduction in floorspace	9	8	Q	144	378	862	65.8	20.3	58.7
Roof replacement	94	247	323	1,796	6,469	7,887	52.6	38.2	40.9
Exterior wall replacement	23	34	70	316	1,286	1,793	71.7	26.3	38.9
Interior wall reconfiguration	90	224	315	1,623	6,683	7,769	55.6	33.4	40.5
Window replacement	66	129	183	1,020	4,026	4,239	64.9	31.9	43.2
HVAC equipment upgrade	120	292	409	1,959	8,407	10,072	61.3	34.8	40.6
Lighting upgrade	110	288	392	1,784	7,317	10,197	61.6	39.4	38.4
Electrical upgrade	92	156	289	1,415	4,559	6,400	65.1	34.3	45.1
Plumbing system upgrade	82	163	257	1,197	4,203	5,150	68.7	38.7	50.0
Insulation upgrade	42	80	141	755	2,375	2,764	55.0	33.5	51.1
Fire, safety, or security upgrade	70	181	304	1,177	4,833	7,217	59.2	37.5	42.1
Structural upgrade	23	37	88	309	1,078	1,447	74.4	34.3	60.6
Other	Q	Q	6	Q	Q	370	Q	Q	16.0
No renovations	241	379	218	4,531	11,805	7,623	53.2	32.1	28.5
Buildings constructed 2008 or later	31	69	56	392	1,786	1,643	79.3	38.5	33.9
<b>Energy sources (more than one may apply)</b>									
Electricity	491	903	799	8,575	26,906	23,244	57.3	33.6	34.4
Natural gas	491	903	799	8,575	26,906	23,244	57.3	33.6	34.4
Fuel oil	17	146	445	292	3,316	10,055	56.8	44.2	44.3
District heat	Q	6	99	Q	289	2,553	Q	19.2	38.6
District chilled water	Q	10	113	Q	338	2,071	Q	30.2	54.6
Propane	9	66	68	176	1,321	1,899	49.9	49.9	35.8
Other	8	43	55	157	1,132	1,349	51.0	37.8	40.8
<b>Space-heating energy sources</b>									
Natural gas	421	819	683	7,665	23,741	18,104	54.9	34.5	37.7
Natural gas main	364	738	623	6,851	19,975	16,161	53.2	37.0	38.6
Natural gas secondary	57	80	60	814	3,766	1,943	69.5	21.3	30.9
Other excluding natural gas	57	75	114	764	2,956	4,897	74.9	25.3	23.2
Buildings without heating	13	Q	Q	145	Q	Q	89.4	Q	Q
<b>Primary space-heating energy source</b>									
Electricity	109	143	75	1,469	5,956	4,124	74.3	24.0	18.2
Natural gas	364	738	623	6,851	19,975	16,161	53.2	37.0	38.6
Fuel oil	Q	Q	Q	Q	Q	Q	Q	Q	Q
District heat	Q	6	96	Q	289	2,484	Q	19.2	38.8
Propane	Q	Q	N	Q	Q	N	Q	Q	N
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Cooling energy sources</b>									
Natural gas	Q	Q	50	Q	Q	564	Q	Q	88.6
Other excluding natural gas	460	861	747	7,806	25,771	22,589	58.9	33.4	33.1
Buildings without cooling	30	36	Q	739	996	Q	40.4	36.0	Q

**Table C31. Natural gas consumption and conditional energy intensity by building size, 2012**

**Table C31. Natural gas consumption and conditional energy intensity by building size, 2012**

	Total natural gas consumption (billion cubic feet)			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/square foot)		
	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet
<b>All buildings</b>	491	903	799	8,575	26,906	23,244	57.3	33.6	34.4
<b>Main equipment replaced since 1990 (more than one may apply)</b>									
Heating	217	345	209	3,648	10,175	7,234	59.5	33.9	28.9
Cooling	223	350	287	3,734	10,478	8,880	59.7	33.4	32.3
<b>Water-heating equipment</b>									
Centralized system	374	567	439	6,349	16,787	10,869	58.9	33.7	40.4
Distributed system	48	111	92	1,043	3,636	3,532	45.6	30.5	26.1
Combination of centralized and distributed system	44	215	266	576	5,713	8,514	75.9	37.7	31.3
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>									
Snack bar or concession stand	11	67	278	173	1,475	6,219	61.8	45.5	44.6
Fast food or small restaurant	31	130	202	300	2,393	5,652	102.3	54.2	35.8
Cafeteria or large restaurant	Q	128	443	Q	3,359	9,663	Q	38.1	45.9
Commercial kitchen/food preparation area	14	217	425	367	4,851	8,864	38.4	44.8	48.0
Small kitchen area	46	156	196	1,300	4,701	4,882	35.6	33.2	40.2
<b>HVAC conservation features (more than one may apply)</b>									
Economizer cycle	75	330	585	746	8,815	15,122	101.2	37.4	38.7
Regular HVAC maintenance	357	805	780	5,425	23,040	22,226	65.8	35.0	35.1
Building automation system (BAS) <sup>2</sup>	64	353	656	992	9,711	17,118	64.9	36.3	38.3
<b>Window and interior lighting features (more than one may apply)</b>									
Multipaned windows	332	710	666	5,349	20,051	18,374	62.1	35.4	36.3
Tinted window glass	193	488	577	3,140	14,413	15,078	61.4	33.9	38.3
Reflective window glass	52	191	285	984	4,845	6,221	52.4	39.4	45.8
External overhangs or awnings	221	405	380	3,286	10,445	9,489	67.2	38.8	40.0
Skylights or atriums	37	220	407	783	6,146	9,816	47.7	35.8	41.4
Light scheduling	116	352	437	1,574	9,154	12,381	73.6	38.5	35.3
Occupancy sensors	66	398	577	1,046	10,434	15,492	63.5	38.2	37.2
Multi-level lighting or dimming	60	206	294	583	4,359	6,762	102.9	47.2	43.4
Daylight harvesting	9	64	120	116	1,537	3,268	78.2	41.6	36.6
Demand responsive lighting	16	53	56	270	1,523	1,885	58.8	34.5	29.5
Building automation system (BAS) for lighting <sup>2</sup>	17	126	184	240	3,116	6,045	70.5	40.5	30.4
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>									
Heating	381	666	588	6,786	21,648	18,384	56.1	30.8	32.0
Cooling	367	655	582	6,401	20,876	18,450	57.3	31.4	31.5
Lighting	465	841	747	8,153	25,244	21,636	57.1	33.3	34.5

**Table C31. Natural gas consumption and conditional energy intensity by building size, 2012**

	Total natural gas consumption (billion cubic feet)			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/square foot)		
	1,001 to square feet	10,001 to 10,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet
	All buildings	491	903	799	8,575	26,906	23,244	57.3	33.6
<b>Annual consumption (hundred cubic feet)</b>									
1,000 or less	44	7	(*)	3,379	2,499	1,074	13.1	2.7	0.2
1,001 to 5,000	176	97	2	3,877	8,034	1,425	45.3	12.1	1.6
5,001 to 10,000	92	132	7	678	5,307	2,002	136.0	24.9	3.7
10,001 to 25,000	143	270	35	570	6,561	4,026	251.1	41.1	8.7
25,001 to 50,000	Q	202	78	Q	3,067	4,037	Q	65.9	19.4
50,001 to 100,000	Q	123	142	Q	1,048	4,211	Q	117.7	33.8
Over 100,000	N	Q	534	N	Q	6,469	N	Q	82.5

<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/> • 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 C of the 2012 Commercial Buildings Energy Consumption Survey.

**Table C32. Natural gas consumption and conditional energy intensity by year constructed, 2012**

	Total natural gas consumption (billion cubic feet)			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/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>	421	965	807	11,504	25,420	21,801	36.6	38.0	37.0
<b>Building floorspace (square feet)</b>									
1,001 to 5,000	69	98	82	1,196	1,475	1,086	58.0	66.4	75.5
5,001 to 10,000	54	113	74	1,236	2,305	1,276	43.9	49.1	58.3
10,001 to 25,000	59	152	86	2,187	3,785	2,852	27.0	40.0	30.2
25,001 to 50,000	51	134	93	1,497	3,851	2,800	33.8	34.7	33.1
50,001 to 100,000	57	127	146	1,688	3,893	4,354	33.7	32.7	33.5
100,001 to 200,000	40	138	105	1,476	3,732	4,207	27.1	36.9	25.0
200,001 to 500,000	65	115	122	1,549	3,800	2,944	42.1	30.2	41.5
Over 500,000	26	89	99	675	2,578	2,281	38.5	34.4	43.4
<b>Principal building activity</b>									
Education	79	114	91	2,357	3,729	3,434	33.5	30.6	26.5
Food sales	Q	20	27	Q	317	421	Q	62.4	63.6
Food service	47	95	80	409	532	453	114.4	179.0	176.3
Health care	32	111	116	440	1,493	1,359	72.2	74.4	85.1
Inpatient	25	96	93	245	1,045	822	101.1	91.7	113.0
Outpatient	7	15	23	194	448	537	35.6	33.9	42.3
Lodging	24	104	87	594	2,356	1,968	40.0	44.3	44.3
Mercantile	23	139	121	863	3,679	3,952	27.0	37.9	30.7
Retail (other than mall)	12	22	39	554	959	1,858	21.0	22.5	21.1
Enclosed and strip malls	Q	118	82	Q	2,720	2,094	Q	43.3	39.2
Office	79	135	62	2,220	5,169	2,901	35.5	26.1	21.2
Public assembly	32	49	51	1,154	1,250	1,485	27.8	39.3	34.1
Public order and safety	Q	15	17	Q	296	507	Q	50.2	33.4
Religious worship	27	34	24	968	1,100	949	27.4	31.0	25.5
Service	30	55	34	601	1,348	841	50.4	40.8	40.1
Warehouse and storage	29	53	53	916	3,166	2,925	32.0	16.8	18.2
Other	Q	33	42	Q	570	441	Q	58.5	94.2
Vacant	3	6	Q	307	415	Q	8.9	15.2	Q
<b>Census region and division</b>									
Northeast	139	195	154	3,248	4,442	3,378	42.7	43.8	45.6
New England	27	35	46	599	890	752	45.6	39.3	60.6
Middle Atlantic	111	160	108	2,649	3,552	2,626	42.0	45.0	41.3
Midwest	142	285	200	3,470	6,491	5,064	40.9	43.8	39.5
East North Central	109	216	157	2,568	4,448	3,774	42.6	48.5	41.5
West North Central	33	69	44	902	2,042	1,291	36.1	33.8	33.8
South	80	281	239	2,971	8,467	8,463	27.0	33.2	28.3
South Atlantic	37	123	138	1,518	3,841	4,625	24.4	32.0	29.7
East South Central	17	53	31	413	1,778	1,245	40.6	30.1	24.8
West South Central	26	105	71	1,040	2,847	2,593	25.3	36.8	27.3
West	61	204	214	1,815	6,020	4,897	33.4	33.9	43.7
Mountain	18	61	81	453	1,636	1,677	39.4	37.1	48.2
Pacific	43	144	133	1,362	4,384	3,220	31.4	32.8	41.4

**Table C32. Natural gas consumption and conditional energy intensity by year constructed, 2012**

**Table C32. Natural gas consumption and conditional energy intensity by year constructed, 2012**

	Total natural gas consumption (billion cubic feet)			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/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
All buildings	421	965	807	11,504	25,420	21,801	36.6	38.0	37.0
<b>Provider of direct input on energy-related equipment purchases</b>									
Building owner	375	820	673	10,490	22,166	18,291	35.8	37.0	36.8
Business owner or tenant	38	117	103	789	2,564	2,672	47.8	45.7	38.6
Property management	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	21	24	Q	468	600	Q	44.1	40.7
<b>Number of establishments</b>									
One	294	630	566	7,344	15,383	14,430	40.0	40.9	39.3
2 to 5	94	185	139	2,794	5,174	4,463	33.7	35.7	31.1
6 to 10	15	49	41	575	1,540	977	25.8	32.0	41.5
11 to 20	Q	59	45	Q	1,269	1,259	Q	46.5	35.4
More than 20	11	38	16	452	1,829	581	24.1	21.0	27.6
Currently unoccupied	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Predominant exterior wall material</b>									
Brick, stone, or stucco	281	483	367	7,889	11,765	9,345	35.6	41.1	39.3
Concrete (block or poured)	84	282	155	2,148	7,316	5,053	39.2	38.6	30.7
Concrete panels	7	70	125	233	2,446	3,260	32.1	28.8	38.5
Siding or shingles	28	52	51	839	1,027	1,022	33.4	50.7	49.6
Metal panels	Q	46	59	Q	2,032	2,121	Q	22.8	27.8
Window glass	Q	17	Q	Q	501	489	Q	33.0	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>Predominant roof material</b>									
Metal surfacing	22	101	112	843	2,773	4,209	25.9	36.4	26.7
Synthetic or rubber	160	299	371	3,819	7,977	7,994	41.8	37.5	46.4
Built-up	97	317	154	2,911	8,611	4,503	33.5	36.8	34.1
Slate or tile shingles	47	34	31	1,057	844	900	44.3	39.8	Q
Wooden materials (including shingles)	Q	24	Q	Q	323	Q	Q	73.9	Q
Asphalt, fiberglass, or other shingles	78	165	116	2,421	3,978	3,497	32.2	41.4	33.1
Concrete	Q	10	10	Q	436	321	Q	24.1	32.5
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>									
<b>Roof tilt</b>									
Flat	260	674	485	6,996	17,364	11,473	37.2	38.8	42.3
Shallow pitch	83	180	206	2,194	5,550	6,757	38.0	32.5	30.5
Steeper pitch	78	110	116	2,315	2,506	3,571	33.6	43.9	32.6
Cool roof	96	233	258	2,249	5,907	6,196	42.6	39.5	41.7

**Table C32. Natural gas consumption and conditional energy intensity by year constructed, 2012**

**Table C32. Natural gas consumption and conditional energy intensity by year constructed, 2012**

	Total natural gas consumption (billion cubic feet)			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/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>	421	965	807	11,504	25,420	21,801	36.6	38.0	37.0
<b>Cooling energy sources</b>									
Natural gas	Q	22	Q	Q	282	Q	Q	79.4	Q
Other excluding natural gas	377	914	777	10,587	24,422	21,158	35.6	37.4	36.7
Buildings without cooling	24	29	16	666	716	444	35.5	40.1	35.6
<b>Water-heating energy sources</b>									
Natural gas	330	770	627	7,294	17,542	14,687	45.3	43.9	42.7
Other excluding natural gas	81	179	168	3,459	7,370	6,666	23.4	24.3	25.2
Buildings without water heating	10	16	12	751	507	448	13.1	30.8	26.9
<b>Cooking energy sources</b>									
Natural gas	212	534	462	4,443	10,793	9,534	47.7	49.5	48.4
Other excluding natural gas	50	81	69	1,606	2,226	2,425	31.4	36.4	28.3
Buildings without cooking	159	350	277	5,456	12,400	9,842	29.1	28.2	28.2
<b>Energy end uses (more than one may apply)</b>									
Buildings with space heating	416	953	800	11,408	25,082	21,639	36.5	38.0	36.9
Buildings with cooling	398	936	791	10,838	24,703	21,357	36.7	37.9	37.1
Buildings with water heating	411	949	795	10,753	24,912	21,353	38.3	38.1	37.2
Buildings with cooking	262	615	530	6,049	13,019	11,959	43.4	47.2	44.3
Buildings with manufacturing	29	51	41	929	1,708	1,102	30.9	29.8	36.9
Buildings with electricity generation	101	333	401	2,370	8,638	9,263	42.5	38.5	43.3
<b>Percent of floorspace heated</b>									
Not heated	Q	12	Q	Q	337	Q	Q	35.5	Q
1 to 50	25	52	43	1,225	2,815	1,676	20.5	18.5	25.7
51 to 99	90	180	161	2,596	4,465	4,086	34.8	40.4	39.5
100	301	720	595	7,586	17,802	15,877	39.7	40.5	37.5
<b>Percent of floorspace cooled</b>									
Not cooled	24	29	16	666	716	444	35.5	40.1	35.6
1 to 50	131	170	107	3,266	5,893	3,871	40.0	28.9	27.7
51 to 99	113	269	269	3,589	7,057	6,460	31.6	38.0	41.6
100	154	497	415	3,983	11,753	11,025	38.6	42.3	37.6
<b>Heating equipment (more than one may apply)</b>									
Heat pumps	45	97	99	1,372	3,133	3,055	33.0	30.9	32.5
Furnaces	51	107	80	1,384	3,372	2,290	36.8	31.9	35.0
Individual space heaters	129	247	156	3,778	6,951	5,079	34.2	35.5	30.6
District heat	9	Q	Q	581	1,174	1,078	14.9	48.9	Q
Boilers	226	403	330	5,001	8,675	6,342	45.3	46.5	52.1
Packaged heating units	215	601	511	6,313	16,317	14,940	34.0	36.8	34.2
Other	Q	18	31	Q	434	663	Q	42.4	46.4

**Table C32. Natural gas consumption and conditional energy intensity by year constructed, 2012**

	Total natural gas consumption (billion cubic feet)			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/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>	421	965	807	11,504	25,420	21,801	36.6	38.0	37.0
<b>Cooling equipment (more than one may apply)</b>									
Residential-type central air conditioners	89	192	124	2,359	4,918	3,226	37.8	39.1	38.5
Heat pumps	49	108	93	1,563	3,371	3,083	31.5	31.9	30.3
Individual air conditioners	121	171	73	2,976	3,997	2,164	40.7	42.8	33.7
District chilled water	5	61	Q	191	1,151	1,089	27.7	52.8	Q
Central chillers	102	261	221	2,549	6,386	4,810	40.0	40.8	46.0
Packaged air conditioning units	215	579	492	6,027	15,288	13,602	35.7	37.9	36.1
Swamp coolers	16	35	18	248	654	634	65.6	52.9	29.1
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Main equipment replaced since 1990 (more than one may apply)</b>									
Heating	228	543	N	6,646	14,412	N	34.3	37.7	N
Cooling	255	605	N	7,506	15,587	N	34.0	38.8	N
<b>Water-heating equipment</b>									
Centralized system	273	580	526	6,713	14,556	12,735	40.7	39.8	41.3
Distributed system	62	111	78	1,601	3,867	2,743	38.6	28.7	28.4
Combination of centralized and distributed system	76	259	191	2,439	6,489	5,875	31.3	39.8	32.5
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>									
Snack bar or concession stand	40	151	164	1,005	3,527	3,336	40.2	42.8	49.2
Fast food or small restaurant	31	163	169	835	3,777	3,733	36.7	43.1	45.4
Cafeteria or large restaurant	95	256	222	2,339	5,996	4,708	40.7	42.6	47.1
Commercial kitchen/food preparation area	102	294	261	2,336	6,195	5,552	43.6	47.4	47.0
Small kitchen area	100	159	140	2,801	4,183	3,899	35.7	38.0	36.0
<b>HVAC conservation features (more than one may apply)</b>									
Economizer cycle	129	412	450	3,553	10,587	10,543	36.2	38.9	42.7
Regular HVAC maintenance	343	862	738	8,859	22,036	19,796	38.7	39.1	37.3
Building automation system (BAS) <sup>2</sup>	147	428	498	3,844	11,380	12,598	38.3	37.6	39.5

**Table C32. Natural gas consumption and conditional energy intensity by year constructed, 2012**

	Total natural gas consumption (billion cubic feet)			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/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
All buildings	421	965	807	11,504	25,420	21,801	36.6	38.0	37.0
<b>Window and interior lighting features (more than one may apply)</b>									
Multipaned windows	284	704	721	7,427	17,931	18,416	38.2	39.3	39.2
Tinted window glass	186	575	498	4,794	14,758	13,079	38.7	39.0	38.1
Reflective window glass	63	207	258	1,552	5,264	5,234	40.7	39.3	49.2
External overhangs or awnings	149	459	397	3,300	10,776	9,143	45.3	42.6	43.4
Skylights or atriums	87	303	274	2,293	7,732	6,721	37.8	39.2	40.8
Light scheduling	130	376	399	3,256	9,678	10,175	39.8	38.8	39.3
Occupancy sensors	161	431	449	3,951	11,337	11,684	40.8	38.1	38.4
Multi-level lighting or dimming	68	215	277	1,580	4,699	5,425	42.7	45.7	51.1
Daylight harvesting	28	84	81	522	2,047	2,351	53.2	41.0	34.3
Demand responsive lighting	21	57	47	383	1,722	1,574	54.7	32.9	29.6
Building automation system (BAS) for lighting <sup>2</sup>	45	114	168	847	3,612	4,942	52.8	31.6	34.0
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>									
Heating	335	706	593	9,145	20,019	17,654	36.7	35.3	33.6
Cooling	319	695	590	8,684	19,680	17,362	36.7	35.3	34.0
Lighting	407	905	743	11,022	23,946	20,065	36.9	37.8	37.0
<b>Annual consumption (hundred cubic feet)</b>									
1,000 or less	17	21	13	1,561	3,247	2,143	10.9	6.6	6.0
1,001 to 5,000	82	113	81	3,106	5,498	4,731	26.4	20.5	17.0
5,001 to 10,000	54	109	68	1,945	3,411	2,631	27.9	32.0	26.0
10,001 to 25,000	78	195	175	1,849	4,816	4,491	42.2	40.4	39.0
25,001 to 50,000	51	139	114	1,234	2,948	2,974	41.2	47.1	38.4
50,001 to 100,000	32	131	115	664	2,339	2,275	47.5	56.2	50.6
Over 100,000	108	257	241	1,144	3,161	2,556	94.2	81.3	94.3

<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/> • 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 C of the 2012 Commercial Buildings Energy Consumption Survey.

**Table C33. Total fuel oil consumption and expenditures, 2012**

	All buildings using fuel oil			Fuel oil expenditures		
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (million gallons)	Total (million dollars)
All buildings	467	20,200	43.3	134	974	3,230
<b>Building floorspace (square feet)</b>						
1,001 to 5,000	204	604	3.0	21	151	522
5,001 to 10,000	74	559	7.6	10	74	253
10,001 to 25,000	67	1,123	16.7	20	147	494
25,001 to 50,000	39	1,490	38.3	14	102	329
50,001 to 100,000	39	2,822	71.5	23	171	559
100,001 to 200,000	19	2,858	148.6	20	147	461
200,001 to 500,000	18	5,370	303.4	14	98	329
Over 500,000	6	5,374	924.0	12	84	284
<b>Principal building activity</b>						
Education	30	2,185	71.9	28	205	658
Food sales	Q	Q	Q	Q	Q	Q
Food service	Q	Q	Q	Q	Q	Q
Health care	23	2,776	118.5	20	142	444
Inpatient	9	2,257	264.4	16	117	362
Outpatient	15	520	34.9	Q	Q	Q
Lodging	28	2,051	74.0	8	61	204
Mercantile	44	1,119	25.6	9	69	241
Retail (other than mall)	37	454	12.3	7	53	188
Enclosed and strip malls	7	665	97.8	Q	Q	Q
Office	86	5,328	62.2	18	131	449
Public assembly	27	1,663	Q	7	48	160
Public order and safety	34	908	26.9	2	17	59
Religious worship	23	391	16.6	5	39	134
Service	86	733	8.6	16	118	394
Warehouse and storage	26	1,773	68.1	5	38	129
Other	28	738	26.5	10	71	243
Vacant	Q	Q	Q	Q	Q	Q
<b>Year constructed</b>						
Before 1920	56	1,099	19.7	16	119	398
1920 to 1945	44	1,447	32.8	14	105	355
1946 to 1959	53	1,530	28.9	18	133	428
1960 to 1969	75	2,407	32.2	20	144	478
1970 to 1979	58	2,614	45.1	16	118	383
1980 to 1989	50	3,806	75.5	16	114	385
1990 to 1999	51	3,201	62.4	14	98	330
2000 to 2003	35	1,467	42.4	10	75	253
2004 to 2007	18	1,497	82.0	3	22	74
2008 to 2012	27	1,133	42.7	6	46	145

**Table C33. Total fuel oil consumption and expenditures, 2012**

	All buildings using fuel oil			Fuel oil expenditures		
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (million gallons)	Total (million dollars)
All buildings	467	20,200	43.3	134	974	3,230
<b>Census region and division</b>						
Northeast	217	6,079	28.1	90	652	2,146
New England	115	1,866	16.3	47	344	1,119
Middle Atlantic	102	4,213	41.4	42	308	1,027
Midwest	77	3,935	51.1	15	108	367
East North Central	46	2,619	57.3	10	70	237
West North Central	31	1,316	42.1	5	38	130
South	131	7,051	54.0	23	167	553
South Atlantic	69	4,419	64.0	16	118	387
East South Central	30	797	27.0	3	21	73
West South Central	32	1,835	57.5	4	28	94
West	43	3,135	73.6	7	48	164
Mountain	8	1,092	Q	Q	Q	Q
Pacific	35	2,043	59.2	5	34	117
<b>Climate region<sup>1</sup></b>						
Very cold/Cold	271	8,008	29.6	81	592	1,967
Mixed-humid	131	7,287	55.5	43	314	1,043
Mixed-dry/Hot-dry	22	1,605	72.7	2	18	62
Hot-humid	36	2,597	72.6	6	43	133
Marine	7	703	100.0	1	8	26
<b>Number of floors</b>						
One	256	4,139	16.1	42	306	1,009
Two	105	3,375	32.0	32	233	783
Three	58	2,091	36.2	23	167	553
Four to nine	38	6,246	164.6	28	207	679
Ten or more	9	4,349	477.7	8	62	207
<b>Number of workers (main shift)</b>						
Fewer than 5	214	1,489	7.0	31	227	767
5 to 9	73	717	9.8	9	65	222
10 to 19	45	765	17.0	11	83	270
20 to 49	44	1,824	41.2	17	122	409
50 to 99	39	3,137	79.6	21	153	514
100 to 249	30	4,040	136.5	22	161	526
250 or more	21	8,229	389.8	22	162	523
<b>Weekly operating hours</b>						
Fewer than 40	58	538	9.3	10	70	241
40 to 48	125	2,668	21.3	27	194	635
49 to 60	102	3,910	38.4	25	181	604
61 to 84	49	3,104	63.4	20	143	477
85 to 167	30	1,868	62.0	9	64	211
Open continuously	102	8,113	79.2	44	322	1,062

**Table C33. Total fuel oil consumption and expenditures, 2012**

	All buildings using fuel oil			Fuel oil expenditures		
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (million gallons)	Total (million dollars)
All buildings	467	20,200	43.3	134	974	3,230
<b>Ownership and occupancy</b>						
Nongovernment owned	365	14,057	38.5	91	663	2,224
Owner occupied	223	6,308	28.3	56	411	1,372
Leased to tenant(s)	108	4,749	43.8	23	171	578
Owner occupied and leased	29	2,928	101.6	11	79	267
Unoccupied	Q	Q	Q	Q	Q	Q
Government owned	101	6,143	60.6	43	311	1,007
Federal	Q	1,083	Q	Q	Q	Q
State	15	1,400	95.8	5	39	125
Local	83	3,660	44.2	34	250	808
<b>Party responsible for operation and maintenance of energy systems</b>						
Building owner	412	18,105	43.9	121	879	2,911
Business owner or tenant	41	1,420	34.5	10	70	233
Property management	3	454	Q	1	7	24
Other	Q	Q	Q	Q	Q	Q
<b>Provider of direct input on energy- related equipment purchases</b>						
Building owner	418	18,292	43.8	123	895	2,964
Business owner or tenant	29	1,142	39.1	6	47	156
Property management	4	353	83.1	2	12	41
Other	15	414	26.9	3	20	69
<b>Number of establishments</b>						
One	356	11,534	32.4	98	716	2,368
2 to 5	89	4,944	55.7	25	179	589
6 to 10	7	873	129.1	5	38	124
11 to 20	4	884	203.4	1	8	26
More than 20	5	1,893	391.8	4	32	116
Currently unoccupied	Q	Q	Q	Q	Q	Q
<b>Predominant exterior wall material</b>						
Brick, stone, or stucco	156	8,798	56.3	59	432	1,418
Concrete (block or poured)	106	4,462	42.2	28	203	678
Concrete panels	12	3,015	245.5	7	51	163
Siding or shingles	108	1,092	10.1	21	154	525
Metal panels	73	1,195	16.4	13	98	330
Window glass	4	865	221.8	2	16	53
Other	Q	491	Q	Q	Q	Q
No one major type	Q	Q	Q	Q	Q	Q

**Table C33. Total fuel oil consumption and expenditures, 2012**

	All buildings using fuel oil			Fuel oil expenditures		
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (million gallons)	Total (million dollars)
All buildings	467	20,200	43.3	134	974	3,230
<b>Predominant roof material</b>						
Metal surfacing	124	2,024	16.4	23	167	562
Synthetic or rubber	104	7,980	76.9	40	288	958
Built-up	63	5,780	92.2	31	229	748
Slate or tile shingles	18	724	40.6	4	32	117
Wooden materials (including shingles)	Q	Q	Q	Q	Q	Q
Asphalt, fiberglass, or other shingles	139	2,569	18.5	27	195	655
Concrete	3	620	195.7	3	22	60
Other	Q	Q	Q	Q	Q	Q
No one major type	Q	Q	Q	Q	Q	Q
<b>Roof characteristics</b>						
<b>Roof tilt</b>						
Flat	171	14,380	84.3	68	496	1,644
Shallow pitch	155	3,891	25.1	34	248	822
Steeper pitch	141	1,929	13.7	32	230	764
Cool roof	80	6,090	76.6	33	237	791
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>						
Any type of renovation	233	12,546	53.8	80	584	1,934
Addition or annex	65	4,629	71.6	34	248	795
Reduction in floorspace	9	549	Q	Q	Q	Q
Roof replacement	130	7,374	56.7	55	398	1,313
Exterior wall replacement	22	1,636	72.8	11	82	263
Interior wall reconfiguration	107	7,620	71.4	39	283	920
Window replacement	70	4,239	60.4	35	255	824
HVAC equipment upgrade	112	8,810	78.7	48	350	1,151
Lighting upgrade	105	8,632	82.0	52	378	1,245
Electrical upgrade	82	5,588	68.4	38	277	911
Plumbing system upgrade	69	4,912	70.8	33	243	818
Insulation upgrade	34	2,510	74.0	13	96	320
Fire, safety, or security upgrade	79	6,775	86.1	39	283	932
Structural upgrade	23	1,737	75.0	9	68	226
Other	Q	371	Q	Q	Q	Q
No renovations	207	6,521	31.5	47	344	1,151
Buildings constructed 2008 or later	27	1,133	42.7	6	46	145

**Table C33. Total fuel oil consumption and expenditures, 2012**

	All buildings using fuel oil			Fuel oil expenditures		
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (million gallons)	Total (million dollars)
All buildings	467	20,200	43.3	134	974	3,230
<b>Energy sources (more than one may apply)</b>						
Electricity	467	20,200	43.3	134	974	3,230
Natural gas	164	13,663	83.4	41	298	1,002
Fuel oil	467	20,200	43.3	134	974	3,230
District heat	10	3,110	307.5	6	47	159
District chilled water	8	2,134	263.2	4	32	108
Propane	90	3,080	34.3	43	314	1,008
Other	41	1,133	27.6	8	59	201
<b>Space-heating energy sources</b>						
Fuel oil	270	4,351	16.1	104	753	2,484
Fuel oil main	205	2,542	12.4	98	715	2,357
Fuel oil secondary	65	1,809	28.0	5	39	127
Other excluding fuel oil	185	15,319	82.8	29	207	692
Buildings without heating	12	530	Q	2	13	54
<b>Primary space-heating energy source</b>						
Electricity	85	4,651	54.4	10	71	226
Natural gas	114	9,022	79.0	16	117	396
Fuel oil	205	2,542	12.4	98	715	2,357
District heat	10	2,991	304.7	5	38	130
Propane	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q
<b>Cooling energy sources</b>						
Fuel oil	Q	Q	Q	Q	Q	Q
Other excluding fuel oil	360	19,241	53.4	109	794	2,635
Buildings without cooling	106	891	8.4	22	161	541
<b>Water-heating energy sources</b>						
Fuel oil	77	1,911	24.7	60	433	1,401
Other excluding fuel oil	334	17,797	53.3	66	477	1,632
Buildings without water heating	56	492	8.9	9	64	198
<b>Cooking energy sources</b>						
Fuel oil	Q	Q	Q	Q	Q	Q
Other excluding fuel oil	163	12,628	77.5	74	540	1,772
Buildings without cooking	300	7,506	25.0	58	423	1,422
<b>Energy end uses (more than one may apply)</b>						
Buildings with space heating	455	19,670	43.2	132	961	3,176
Buildings with cooling	360	19,309	53.6	112	813	2,689
Buildings with water heating	411	19,708	47.9	125	911	3,032
Buildings with cooking	166	12,694	76.3	76	551	1,808
Buildings with manufacturing	25	863	35.0	6	47	152
Buildings with electricity generation	214	17,073	79.8	68	491	1,613

**Table C33. Total fuel oil consumption and expenditures, 2012**

	All buildings using fuel oil			Fuel oil expenditures		
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (million gallons)	Total (million dollars)
All buildings	467	20,200	43.3	134	974	3,230
<b>Percent of floorspace heated</b>						
Not heated	12	530	Q	2	13	54
1 to 50	65	2,005	30.9	10	69	218
51 to 99	58	3,815	65.8	18	132	439
100	332	13,849	41.7	104	759	2,519
<b>Heating equipment (more than one may apply)</b>						
Heat pumps	44	3,047	68.9	12	88	292
Furnaces	42	870	20.8	7	54	184
Individual space heaters	177	5,874	33.1	38	275	912
District heat	10	3,088	306.8	6	44	150
Boilers	139	9,340	67.3	80	583	1,897
Packaged heating units	218	9,580	44.0	46	335	1,126
Other	Q	Q	Q	Q	Q	Q
<b>Water-heating equipment</b>						
Centralized system	314	10,979	34.9	85	616	2,072
Distributed system	52	2,510	48.4	13	98	324
Combination of centralized and distributed system	45	6,219	138.0	27	197	636
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>						
Snack bar or concession stand	24	4,868	202.6	16	114	384
Fast food or small restaurant	19	3,624	192.9	8	60	200
Cafeteria or large restaurant	35	7,093	204.0	42	306	1,002
Commercial kitchen/ food preparation area	49	6,678	135.2	33	237	783
Small kitchen area	82	4,666	57.2	31	225	745
<b>HVAC conservation features (more than one may apply)</b>						
Economizer cycle	86	11,271	131.6	43	313	1,026
Regular HVAC maintenance	318	18,901	59.5	111	809	2,681
Building automation system (BAS) <sup>2</sup>	119	13,867	116.3	58	423	1,371
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>						
Heating	320	14,165	44.3	92	673	2,233
Cooling	254	13,963	54.9	78	566	1,880
Lighting	427	18,903	44.3	123	897	2,971

**Table C33. Total fuel oil consumption and expenditures, 2012**

All buildings using fuel oil					Fuel oil expenditures	
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (million gallons)	Total (million dollars)
All buildings	467	20,200	43.3	134	974	3,230
<b>Annual consumption (gallons)</b>						
1,000 or less	311	9,042	29.0	14	99	349
1,001 to 5,000	111	4,830	43.6	33	239	810
5,001 to 10,000	29	2,528	86.9	26	190	620
10,001 to 25,000	10	2,302	226.7	21	156	519
Over 25,000	5	1,498	280.4	40	291	932

<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/> • 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 F of the 2012 Commercial Buildings Energy Consumption Survey.

**Table C34. Fuel oil consumption and expenditure intensities, 2012**

	Fuel oil consumption		Fuel oil expenditures			
	per building (gallons)	per square foot (gallons)	per worker (gallons)	per building (thousand dollars)	per square foot (dollars)	per gallon (dollars)
<b>All buildings</b>	2,087	0.05	38.0	6.9	0.16	3.32
<b>Building floorspace (square feet)</b>						
1,001 to 5,000	740	0.25	190.3	2.6	0.86	3.45
5,001 to 10,000	1,011	0.13	159.7	3.4	0.45	3.39
10,001 to 25,000	2,179	0.13	101.5	7.3	0.44	3.36
25,001 to 50,000	2,607	0.07	64.3	8.4	0.22	3.24
50,001 to 100,000	4,325	0.06	47.7	14.2	0.20	3.27
100,001 to 200,000	7,620	0.05	39.1	24.0	0.16	3.15
200,001 to 500,000	5,551	0.02	14.7	18.6	0.06	3.35
Over 500,000	14,515	0.02	11.5	48.8	0.05	3.36
<b>Principal building activity</b>						
Education	6,763	0.09	123.6	21.7	0.30	3.20
Food sales	Q	Q	Q	Q	Q	Q
Food service	Q	Q	Q	Q	Q	Q
Health care	6,075	0.05	28.4	19.0	0.16	3.12
Inpatient	13,711	0.05	28.6	42.4	0.16	3.09
Outpatient	Q	0.05	Q	Q	0.16	3.24
Lodging	2,206	0.03	49.6	7.4	0.10	3.34
Mercantile	1,574	0.06	70.5	5.5	0.22	3.51
Retail (other than mall)	1,434	0.12	Q	5.1	0.41	3.55
Enclosed and strip malls	Q	Q	Q	Q	Q	3.38
Office	1,533	0.02	10.9	5.2	0.08	3.42
Public assembly	1,758	0.03	49.5	5.9	0.10	3.34
Public order and safety	497	0.02	14.2	1.7	0.06	3.51
Religious worship	1,656	0.10	238.1	5.7	0.34	3.44
Service	1,385	0.16	219.8	4.6	0.54	3.33
Warehouse and storage	1,474	0.02	50.5	5.0	0.07	3.37
Other	2,545	0.10	110.0	8.7	0.33	3.42
Vacant	Q	Q	Q	Q	Q	Q
<b>Year constructed</b>						
Before 1920	2,133	0.11	125.3	7.1	0.36	3.35
1920 to 1945	2,368	0.07	49.3	8.0	0.25	3.39
1946 to 1959	2,505	0.09	83.4	8.1	0.28	3.22
1960 to 1969	1,923	0.06	51.2	6.4	0.20	3.33
1970 to 1979	2,043	0.05	27.6	6.6	0.15	3.24
1980 to 1989	2,260	0.03	21.4	7.6	0.10	3.38
1990 to 1999	1,918	0.03	25.3	6.4	0.10	3.36
2000 to 2003	2,175	0.05	44.4	7.3	0.17	3.36
2004 to 2007	1,215	0.01	15.2	4.1	0.05	3.36
2008 to 2012	1,736	0.04	30.7	5.5	0.13	3.15

**Table C34. Fuel oil consumption and expenditure intensities, 2012**

	Fuel oil consumption		Fuel oil expenditures			
	per building (gallons)	per square foot (gallons)	per worker (gallons)	per building (thousand dollars)	per square foot (dollars)	per gallon (dollars)
All buildings	2,087	0.05	38.0	6.9	0.16	3.32
<b>Census region and division</b>						
Northeast	3,008	0.11	79.8	9.9	0.35	3.29
New England	2,994	0.18	184.4	9.7	0.60	3.25
Middle Atlantic	3,023	0.07	48.8	10.1	0.24	3.34
Midwest	1,400	0.03	22.4	4.8	0.09	3.41
East North Central	1,521	0.03	21.4	5.2	0.09	3.40
West North Central	1,222	0.03	24.7	4.2	0.10	3.41
South	1,277	0.02	19.5	4.2	0.08	3.32
South Atlantic	1,706	0.03	22.6	5.6	0.09	3.28
East South Central	722	0.03	22.5	2.5	0.09	3.41
West South Central	863	0.02	11.5	2.9	0.05	3.40
West	1,128	0.02	11.7	3.9	0.05	3.42
Mountain	Q	0.01	12.8	Q	0.04	3.38
Pacific	987	0.02	11.3	3.4	0.06	3.43
<b>Climate region<sup>1</sup></b>						
Very cold/Cold	2,189	0.07	60.7	7.3	0.25	3.32
Mixed-humid	2,391	0.04	33.7	7.9	0.14	3.32
Mixed-dry/Hot-dry	811	0.01	8.8	2.8	0.04	3.44
Hot-humid	1,189	0.02	12.2	3.7	0.05	3.13
Marine	1,084	0.01	7.5	3.7	0.04	3.44
<b>Number of floors</b>						
One	1,193	0.07	78.4	3.9	0.24	3.30
Two	2,208	0.07	69.7	7.4	0.23	3.36
Three	2,887	0.08	76.7	9.6	0.26	3.32
Four to nine	5,455	0.03	23.7	17.9	0.11	3.28
Ten or more	6,786	0.01	8.3	22.7	0.05	3.35
<b>Number of workers (main shift)</b>						
Fewer than 5	1,060	0.15	546.4	3.6	0.52	3.38
5 to 9	887	0.09	141.3	3.0	0.31	3.41
10 to 19	1,838	0.11	140.4	6.0	0.35	3.26
20 to 49	2,766	0.07	90.0	9.2	0.22	3.34
50 to 99	3,891	0.05	58.8	13.0	0.16	3.35
100 to 249	5,453	0.04	37.8	17.8	0.13	3.26
250 or more	7,694	0.02	10.2	24.8	0.06	3.22
<b>Weekly operating hours</b>						
Fewer than 40	1,207	0.13	218.0	4.1	0.45	3.44
40 to 48	1,544	0.07	61.5	5.1	0.24	3.28
49 to 60	1,782	0.05	26.8	5.9	0.15	3.33
61 to 84	2,919	0.05	35.7	9.7	0.15	3.34
85 to 167	2,128	0.03	40.3	7.0	0.11	3.29
Open continuously	3,146	0.04	32.9	10.4	0.13	3.30

**Table C34. Fuel oil consumption and expenditure intensities, 2012**

	Fuel oil consumption			Fuel oil expenditures		
	per building (gallons)	per square foot (gallons)	per worker (gallons)	per building (thousand dollars)	per square foot (dollars)	per gallon (dollars)
All buildings	2,087	0.05	38.0	6.9	0.16	3.32
<b>Ownership and occupancy</b>						
Nongovernment owned	1,815	0.05	35.5	6.1	0.16	3.35
Owner occupied	1,846	0.07	58.3	6.2	0.22	3.34
Leased to tenant(s)	1,576	0.04	21.7	5.3	0.12	3.38
Owner occupied and leased	2,743	0.03	21.1	9.3	0.09	3.37
Unoccupied	Q	Q	N	Q	Q	Q
Government owned	3,070	0.05	44.7	9.9	0.16	3.23
Federal	Q	Q	Q	Q	Q	3.31
State	2,649	0.03	27.1	8.5	0.09	3.22
Local	3,026	0.07	61.5	9.8	0.22	3.23
<b>Party responsible for operation and maintenance of energy systems</b>						
Building owner	2,130	0.05	37.9	7.1	0.16	3.31
Business owner or tenant	1,700	0.05	48.1	5.7	0.16	3.33
Property management	Q	0.02	9.2	Q	0.05	3.47
Other	Q	Q	Q	Q	Q	Q
<b>Provider of direct input on energy-related equipment purchases</b>						
Building owner	2,143	0.05	38.2	7.1	0.16	3.31
Business owner or tenant	1,599	0.04	37.2	5.4	0.14	3.35
Property management	2,803	0.03	27.0	9.6	0.12	3.43
Other	1,315	0.05	41.7	4.5	0.17	3.44
<b>Number of establishments</b>						
One	2,008	0.06	55.0	6.6	0.21	3.31
2 to 5	2,015	0.04	30.6	6.6	0.12	3.29
6 to 10	5,561	0.04	21.9	18.3	0.14	3.30
11 to 20	1,765	0.01	4.7	6.0	0.03	3.39
More than 20	6,690	0.02	9.5	23.9	0.06	3.58
Currently unoccupied	Q	Q	N	Q	Q	Q
<b>Predominant exterior wall material</b>						
Brick, stone, or stucco	2,762	0.05	37.4	9.1	0.16	3.28
Concrete (block or poured)	1,923	0.05	42.4	6.4	0.15	3.34
Concrete panels	4,192	0.02	12.4	13.3	0.05	3.17
Siding or shingles	1,429	0.14	131.9	4.9	0.48	3.41
Metal panels	1,344	0.08	77.9	4.5	0.28	3.37
Window glass	4,168	0.02	8.2	13.7	0.06	3.28
Other	1,677	0.03	Q	5.3	0.08	3.17
No one major type	Q	Q	Q	Q	Q	Q

**Table C34. Fuel oil consumption and expenditure intensities, 2012**

	Fuel oil consumption			Fuel oil expenditures		
	per building (gallons)	per square foot (gallons)	per worker (gallons)	per building (thousand dollars)	per square foot (dollars)	per gallon (dollars)
All buildings	2,087	0.05	38.0	6.9	0.16	3.32
<b>Predominant roof material</b>						
Metal surfacing	1,349	0.08	88.0	4.5	0.28	3.37
Synthetic or rubber	2,774	0.04	29.1	9.2	0.12	3.33
Built-up	3,655	0.04	27.3	11.9	0.13	3.27
Slate or tile shingles	1,820	0.04	35.4	6.5	0.16	3.60
Wooden materials (including shingles)	Q	Q	Q	Q	Q	Q
Asphalt, fiberglass, or other shingles	1,404	0.08	61.7	4.7	0.26	3.36
Concrete	7,045	0.04	21.6	18.9	0.10	2.68
Other	Q	Q	Q	Q	Q	Q
No one major type	Q	Q	Q	Q	Q	Q
<b>Roof characteristics</b>						
<b>Roof tilt</b>						
Flat	2,909	0.03	24.8	9.6	0.11	3.31
Shallow pitch	1,598	0.06	67.7	5.3	0.21	3.32
Steeper pitch	1,632	0.12	118.5	5.4	0.40	3.32
Cool roof	2,983	0.04	30.8	9.9	0.13	3.34
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>						
Any type of renovation	2,503	0.05	34.5	8.3	0.15	3.31
Addition or annex	3,836	0.05	47.1	12.3	0.17	3.21
Reduction in floorspace	Q	Q	Q	Q	Q	3.32
Roof replacement	3,058	0.05	41.5	10.1	0.18	3.30
Exterior wall replacement	3,640	0.05	42.1	11.7	0.16	3.22
Interior wall reconfiguration	2,651	0.04	23.6	8.6	0.12	3.25
Window replacement	3,634	0.06	46.2	11.7	0.19	3.23
HVAC equipment upgrade	3,124	0.04	27.7	10.3	0.13	3.29
Lighting upgrade	3,591	0.04	31.7	11.8	0.14	3.29
Electrical upgrade	3,396	0.05	35.5	11.2	0.16	3.28
Plumbing system upgrade	3,503	0.05	35.6	11.8	0.17	3.37
Insulation upgrade	2,836	0.04	32.0	9.4	0.13	3.33
Fire, safety, or security upgrade	3,602	0.04	29.0	11.8	0.14	3.29
Structural upgrade	2,914	0.04	36.9	9.7	0.13	3.34
Other	Q	Q	Q	Q	Q	3.55
No renovations	1,663	0.05	47.8	5.6	0.18	3.34
Buildings constructed 2008 or later	1,736	0.04	30.7	5.5	0.13	3.15

**Table C34. Fuel oil consumption and expenditure intensities, 2012**

	Fuel oil consumption		Fuel oil expenditures			
	per building (gallons)	per square foot (gallons)	per worker (gallons)	per building (thousand dollars)	per square foot (dollars)	per gallon (dollars)
All buildings	2,087	0.05	38.0	6.9	0.16	3.32
<b>Energy sources (more than one may apply)</b>						
Electricity	2,087	0.05	38.0	6.9	0.16	3.32
Natural gas	1,820	0.02	16.7	6.1	0.07	3.36
Fuel oil	2,087	0.05	38.0	6.9	0.16	3.32
District heat	4,605	0.01	10.5	15.7	0.05	3.41
District chilled water	3,924	0.01	11.4	13.3	0.05	3.40
Propane	3,493	0.10	139.6	11.2	0.33	3.21
Other	1,435	0.05	44.0	4.9	0.18	3.41
<b>Space-heating energy sources</b>						
Fuel oil	2,789	0.17	181.0	9.2	0.57	3.30
Fuel oil main	3,480	0.28	357.4	11.5	0.93	3.30
Fuel oil secondary	598	0.02	17.9	2.0	0.07	3.29
Other excluding fuel oil	1,121	0.01	9.9	3.7	0.05	3.34
Buildings without heating	1,155	0.03	32.2	4.6	0.10	4.02
<b>Primary space-heating energy source</b>						
Electricity	827	0.02	10.9	2.6	0.05	3.19
Natural gas	1,022	0.01	9.7	3.5	0.04	3.40
Fuel oil	3,480	0.28	357.4	11.5	0.93	3.30
District heat	3,857	0.01	8.8	13.2	0.04	3.43
Propane	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q
<b>Cooling energy sources</b>						
Fuel oil	Q	Q	Q	Q	Q	Q
Other excluding fuel oil	2,205	0.04	31.6	7.3	0.14	3.32
Buildings without cooling	1,519	0.18	377.0	5.1	0.61	3.35
<b>Water-heating energy sources</b>						
Fuel oil	5,595	0.23	266.4	18.1	0.73	3.23
Other excluding fuel oil	1,430	0.03	20.1	4.9	0.09	3.42
Buildings without water heating	1,142	0.13	250.7	3.6	0.40	3.12
<b>Cooking energy sources</b>						
Fuel oil	Q	Q	Q	Q	Q	Q
Other excluding fuel oil	3,313	0.04	32.7	10.9	0.14	3.28
Buildings without cooking	1,409	0.06	47.0	4.7	0.19	3.36
<b>Energy end uses (more than one may apply)</b>						
Buildings with space heating	2,111	0.05	38.1	7.0	0.16	3.31
Buildings with cooling	2,255	0.04	32.3	7.5	0.14	3.31
Buildings with water heating	2,215	0.05	35.9	7.4	0.15	3.33
Buildings with cooking	3,313	0.04	33.2	10.9	0.14	3.28
Buildings with manufacturing	1,891	0.05	43.4	6.2	0.18	3.27
Buildings with electricity generation	2,297	0.03	21.6	7.5	0.09	3.28

**Table C34. Fuel oil consumption and expenditure intensities, 2012**

	Fuel oil consumption			Fuel oil expenditures		
	per building (gallons)	per square foot (gallons)	per worker (gallons)	per building (thousand dollars)	per square foot (dollars)	per gallon (dollars)
<b>All buildings</b>	2,087	0.05	38.0	6.9	0.16	3.32
<b>Percent of floorspace heated</b>						
Not heated	1,155	0.03	32.2	4.6	0.10	4.02
1 to 50	1,067	0.03	67.2	3.4	0.11	3.15
51 to 99	2,283	0.03	24.4	7.6	0.12	3.32
100	2,285	0.05	40.5	7.6	0.18	3.32
<b>Heating equipment (more than one may apply)</b>						
Heat pumps	1,991	0.03	20.1	6.6	0.10	3.31
Furnaces	1,284	0.06	51.9	4.4	0.21	3.43
Individual space heaters	1,553	0.05	41.2	5.1	0.16	3.31
District heat	4,378	0.01	10.0	14.9	0.05	3.41
Boilers	4,197	0.06	45.6	13.7	0.20	3.25
Packaged heating units	1,541	0.04	29.0	5.2	0.12	3.36
Other	Q	Q	Q	Q	Q	Q
<b>Water-heating equipment</b>						
Centralized system	1,960	0.06	44.4	6.6	0.19	3.37
Distributed system	1,886	0.04	30.3	6.3	0.13	3.32
Combination of centralized and distributed system	4,374	0.03	23.8	14.1	0.10	3.23
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>						
Snack bar or concession stand	4,760	0.02	19.8	16.0	0.08	3.36
Fast food or small restaurant	3,176	0.02	12.8	10.6	0.06	3.35
Cafeteria or large restaurant	8,807	0.04	30.7	28.8	0.14	3.27
Commercial kitchen/ food preparation area	4,790	0.04	32.0	15.9	0.12	3.31
Small kitchen area	2,756	0.05	38.1	9.1	0.16	3.31
<b>HVAC conservation features (more than one may apply)</b>						
Economizer cycle	3,658	0.03	20.8	12.0	0.09	3.28
Regular HVAC maintenance	2,545	0.04	32.5	8.4	0.14	3.31
Building automation system (BAS) <sup>2</sup>	3,547	0.03	21.5	11.5	0.10	3.24
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>						
Heating	2,103	0.05	36.1	7.0	0.16	3.32
Cooling	2,229	0.04	30.2	7.4	0.13	3.32
Lighting	2,103	0.05	37.0	7.0	0.16	3.31

**Table C34. Fuel oil consumption and expenditure intensities, 2012**

	Fuel oil consumption			Fuel oil expenditures		
	per building (gallons)	per square foot (gallons)	per worker (gallons)	per building (thousand dollars)	per square foot (dollars)	per gallon (dollars)
<b>All buildings</b>	2,087	0.05	38.0	6.9	0.16	3.32
<b>Annual consumption (gallons)</b>						
1,000 or less	316	0.01	8.3	1.1	0.04	3.54
1,001 to 5,000	2,157	0.05	38.1	7.3	0.17	3.39
5,001 to 10,000	6,522	0.08	62.6	21.3	0.25	3.27
10,001 to 25,000	15,386	0.07	57.6	51.1	0.23	3.32
Over 25,000	54,423	0.19	161.8	174.4	0.62	3.20

<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/> • 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 F of the 2012 Commercial Buildings Energy Consumption Survey.

**Table C35. Fuel oil consumption and conditional energy intensity by Census region, 2012**

	Total fuel oil consumption (million gallons)				Total floorspace of buildings using fuel oil (million square feet)				Fuel oil energy intensity (gallons/square foot)			
	North- east	Mid- west	South	West	North- east	Mid- west	South	West	North- east	Mid- west	South	West
<b>All buildings</b>	652	108	167.0	48	6,079	3,935	7,051	3,135	0.11	0.03	0.02	0.02
<b>Building floorspace (square feet)</b>												
1,001 to 10,000	160	23	32.0	Q	589	164	317	Q	0.27	0.14	0.10	Q
10,001 to 100,000	296	53	61.0	8	2,157	1,084	1,583	612	0.14	0.05	0.04	0.01
Over 100,000	196	31	74.0	28	3,334	2,688	5,151	2,429	0.06	0.01	0.01	0.01
<b>Principal building activity</b>												
Education	143	12	47.0	Q	957	544	500	Q	0.15	0.02	0.09	Q
Health care	107	10	18.0	7	718	592	992	474	0.15	0.02	0.02	0.02
Office	93	8	20.0	11	1,666	901	1,850	911	0.06	0.01	0.01	0.01
All others	309	77	81.0	27	2,738	1,899	3,709	1,566	0.11	0.04	0.02	0.02
<b>Year constructed</b>												
Before 1945	196	5	16.0	Q	1,530	352	589	Q	0.13	0.02	0.03	Q
1946 to 1979	299	31	51.0	15	2,296	1,355	1,942	958	0.13	0.02	0.03	0.02
1980 to 1999	122	26	45.0	19	1,620	1,232	2,741	1,413	0.08	0.02	0.02	0.01
2000 to 2012	35	Q	55.0	Q	633	997	1,779	689	0.06	Q	0.03	0.01
<b>Climate region<sup>1</sup></b>												
Very cold/Cold	478	91	N	23	3,495	3,505	N	1,008	0.14	0.03	N	0.02
Mixed-humid	173	Q	124.0	N	2,584	430	4,273	N	0.07	Q	0.03	N
Mixed-dry/Hot-dry	N	N	Q	13	N	N	Q	1,344	N	N	Q	0.01
Hot-humid	N	N	39.0	Q	N	N	2,516	Q	N	N	0.02	Q
Marine	N	N	N	8	N	N	N	703	N	N	N	0.01
<b>Number of floors</b>												
One	146	61	83.0	16	1,025	762	1,904	447	0.14	0.08	0.04	0.04
Two	177	17	31.0	8	1,088	808	907	572	0.16	0.02	0.03	0.01
Three	152	Q	7.0	2	868	494	577	151	0.17	Q	0.01	0.01
Four to nine	142	15	34.0	16	1,768	1,265	2,162	1,051	0.08	0.01	0.02	0.02
Ten or more	35	8	12.0	Q	1,329	607	1,500	913	0.03	0.01	0.01	Q
<b>Number of workers (main shift)</b>												
Fewer than 10	182	61	38.0	Q	980	522	624	Q	0.19	0.12	0.06	Q
10 to 99	263	20	65.0	11	1,834	1,043	1,957	892	0.14	0.02	0.03	0.01
100 or more	206	27	64.0	27	3,265	2,370	4,470	2,163	0.06	0.01	0.01	0.01
<b>Weekly operating hours</b>												
Fewer than 48	192	16	53.0	3	1,409	682	756	359	0.14	0.02	0.07	0.01
49 to 84	223	30	51.0	21	2,251	1,316	2,356	1,090	0.10	0.02	0.02	0.02
85 to 167	43	10	7.0	Q	487	573	597	Q	0.09	0.02	0.01	Q
Open continuously	194	51	56.0	20	1,932	1,364	3,342	1,475	0.10	0.04	0.02	0.01
<b>Ownership and occupancy</b>												
Nongovernment owned	464	63	99.0	37	4,182	2,568	4,841	2,467	0.11	0.02	0.02	0.02
Owner occupied	306	34	48.0	23	1,801	1,368	2,159	980	0.17	0.02	0.02	0.02
Leased to tenant(s)	110	18	36.0	8	1,532	643	1,760	815	0.07	0.03	0.02	0.01
Owner occupied and leased	48	10	15.0	7	829	519	908	672	0.06	0.02	0.02	0.01
Unoccupied	Q	Q	Q	N	Q	Q	Q	N	Q	Q	Q	N
Government owned	188	Q	68.0	11	1,897	1,367	2,210	668	0.10	Q	0.03	0.02
Federal	Q	Q	6.0	Q	Q	Q	661	Q	Q	Q	0.01	Q
State	Q	5	Q	Q	375	479	333	Q	Q	Q	0.01	Q
Local	155	Q	53.0	5	1,285	788	1,216	371	0.12	Q	0.04	0.01

**Table C35. Fuel oil consumption and conditional energy intensity by Census region, 2012**

	Total fuel oil consumption (million gallons)				Total floorspace of buildings using fuel oil (million square feet)				Fuel oil energy intensity (gallons/square foot)			
	North- east	Mid- west	South	West	North- east	Mid- west	South	West	North- east	Mid- west	South	West
All buildings	652	108	167.0	48	6,079	3,935	7,051	3,135	0.11	0.03	0.02	0.02
<b>Party responsible for operation and maintenance of energy systems</b>												
Building owner	591	99	145.0	44	5,509	3,574	6,223	2,799	0.11	0.03	0.02	0.02
Business owner or tenant	42	Q	18.0	Q	374	Q	590	Q	0.11	Q	0.03	Q
Property management	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Provider of direct input on energy- related equipment purchases</b>												
Building owner	603	102	146.0	44	5,611	3,575	6,241	2,865	0.11	0.03	0.02	0.02
Business owner or tenant	Q	Q	12.0	Q	Q	Q	493	Q	Q	Q	0.02	Q
Property management	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Number of establishments</b>												
One	519	55	113.0	29	3,393	2,426	4,063	1,652	0.15	0.02	0.03	0.02
2 to 5	77	Q	40.0	15	1,567	956	1,592	829	0.05	0.05	0.03	0.02
6 to 10	Q	Q	Q	Q	300	Q	242	Q	0.10	Q	0.01	Q
11 to 20	Q	Q	3.0	Q	Q	Q	409	Q	Q	Q	0.01	Q
More than 20	Q	Q	7.0	2	567	Q	731	442	Q	Q	0.01	0.01
Currently unoccupied	Q	Q	Q	N	Q	Q	Q	N	Q	Q	Q	N
<b>Predominant exterior wall material</b>												
Brick, stone, or stucco	301	22	92.0	16	2,913	1,698	3,265	922	0.10	0.01	0.03	0.02
Concrete (block or poured)	144	16	27.0	16	1,211	699	1,530	1,022	0.12	0.02	0.02	0.02
Concrete panels	15	9	19.0	9	326	788	1,291	610	0.04	0.01	0.01	0.02
Siding or shingles	126	Q	Q	Q	637	Q	Q	Q	0.20	Q	Q	Q
Metal panels	Q	35	20.0	Q	397	313	439	Q	0.11	0.11	0.04	Q
Window glass	Q	Q	3.0	Q	Q	Q	269	Q	Q	Q	0.01	Q
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	88	37	40.0	Q	526	641	752	Q	0.17	0.06	0.05	Q
Synthetic or rubber	186	Q	33.0	24	2,607	1,624	2,379	1,370	0.07	Q	0.01	0.02
Built-up	162	17	38.0	13	1,590	1,102	2,173	915	0.10	0.02	0.02	0.01
Slate or tile shingles	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Wooden materials (including shingles)	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Asphalt, fiberglass, or other shingles	147	6	38.0	4	796	386	1,076	311	0.19	0.02	0.03	0.01
Concrete	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	N	Q	Q	Q	N	Q	Q	Q	N
No one major type	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Roof characteristics</b>												
Roof tilt												
Flat	345	40	79.0	33	4,315	2,801	4,919	2,345	0.08	0.01	0.02	0.01
Shallow pitch	115	Q	71.0	12	860	805	1,586	641	0.13	0.06	0.04	0.02
Steeper pitch	192	18	17.0	Q	904	330	546	Q	0.21	0.06	0.03	Q
Cool roof	146	26	45.0	20	1,584	1,166	2,306	1,033	0.09	0.02	0.02	0.02

**Table C35. Fuel oil consumption and conditional energy intensity by Census region, 2012**

	Total fuel oil consumption (million gallons)				Total floorspace of buildings using fuel oil (million square feet)				Fuel oil energy intensity (gallons/square foot)			
	North- east	Mid- west	South	West	North- east	Mid- west	South	West	North- east	Mid- west	South	West
All buildings	652	108	167.0	48	6,079	3,935	7,051	3,135	0.11	0.03	0.02	0.02
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>												
Any type of renovation	401	62	86.0	35	4,012	2,310	4,220	2,004	0.10	0.03	0.02	0.02
Addition or annex	169	Q	30.0	12	1,309	1,094	1,494	732	0.13	Q	0.02	0.02
Reduction in floorspace	Q	Q	7.0	Q	Q	Q	246	Q	Q	Q	0.03	Q
Roof replacement	286	52	44.0	16	2,543	1,665	2,125	1,041	0.11	0.03	0.02	0.02
Exterior wall replacement	69	4	5.0	Q	499	346	510	Q	0.14	0.01	0.01	Q
Interior wall reconfiguration	190	15	57.0	20	2,197	1,420	2,504	1,499	0.09	0.01	0.02	0.01
Window replacement	210	9	28.0	Q	1,627	634	1,253	726	0.13	0.01	0.02	0.01
HVAC equipment upgrade	252	20	56.0	22	2,964	1,563	2,776	1,507	0.09	0.01	0.02	0.01
Lighting upgrade	271	28	58.0	21	2,731	1,553	2,881	1,467	0.10	0.02	0.02	0.01
Electrical upgrade	205	14	42.0	16	1,801	1,073	1,723	990	0.11	0.01	0.02	0.02
Plumbing system upgrade	172	Q	28.0	12	1,587	838	1,598	889	0.11	Q	0.02	0.01
Insulation upgrade	61	8	19.0	8	702	625	633	551	0.09	0.01	0.03	0.02
Fire, safety, or security upgrade	204	12	47.0	21	2,169	1,242	2,216	1,148	0.09	0.01	0.02	0.02
Structural upgrade	42	3	16.0	Q	366	293	563	514	0.11	0.01	0.03	0.01
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
No renovations	235	41	57.0	11	1,801	1,411	2,419	891	0.13	0.03	0.02	0.01
Buildings constructed 2008 or later	Q	Q	Q	Q	Q	Q	413	Q	Q	Q	0.06	Q
<b>Energy sources (more than one may apply)</b>												
Electricity	652	108	167.0	48	6,079	3,935	7,051	3,135	0.11	0.03	0.02	0.02
Natural gas	161	36	68.0	34	3,508	3,071	4,455	2,629	0.05	0.01	0.02	0.01
Fuel oil	652	108	167.0	48	6,079	3,935	7,051	3,135	0.11	0.03	0.02	0.02
District heat	12	9	17.0	9	966	428	1,198	517	0.01	0.02	0.01	0.02
District chilled water	5	Q	11.0	Q	279	352	1,084	Q	0.02	Q	0.01	0.02
Propane	229	Q	40.0	11	1,008	725	845	502	0.23	Q	0.05	0.02
Other	40	Q	Q	4	367	Q	329	211	0.11	Q	Q	0.02
<b>Space-heating energy sources</b>												
Fuel oil	595	68	80.0	Q	2,851	667	765	Q	0.21	0.10	0.10	Q
Fuel oil main	569	Q	74.0	Q	1,988	Q	299	Q	0.29	Q	0.25	Q
Fuel oil secondary	26	7	5.0	Q	863	436	466	Q	0.03	0.02	0.01	Q
Other excluding fuel oil	52	40	83.0	33	3,189	3,214	6,012	2,903	0.02	0.01	0.01	0.01
Buildings without heating	Q	Q	4.0	Q	Q	Q	274	Q	Q	Q	0.01	Q
<b>Primary space-heating energy source</b>												
Electricity	11	7	47.0	6	642	678	2,739	591	0.02	0.01	0.02	0.01
Natural gas	39	29	29.0	19	2,271	2,385	2,569	1,797	0.02	0.01	0.01	0.01
Fuel oil	569	Q	74.0	Q	1,988	Q	299	Q	0.29	Q	0.25	Q
District heat	11	8	12.0	Q	939	418	1,119	515	0.01	0.02	0.01	0.01
Propane	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Cooling energy sources</b>												
Fuel oil	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other excluding fuel oil	513	77	161.0	43	5,440	3,735	6,996	3,070	0.09	0.02	0.02	0.01
Buildings without cooling	121	Q	Q	Q	Q	Q	Q	Q	0.21	Q	Q	Q

**Table C35. Fuel oil consumption and conditional energy intensity by Census region, 2012**

	Total fuel oil consumption (million gallons)				Total floorspace of buildings using fuel oil (million square feet)				Fuel oil energy intensity (gallons/square foot)			
	North- east	Mid- west	South	West	North- east	Mid- west	South	West	North- east	Mid- west	South	West
All buildings	652	108	167.0	48	6,079	3,935	7,051	3,135	0.11	0.03	0.02	0.02
<b>Water-heating energy sources</b>												
Fuel oil	383	Q	Q	Q	1,401	Q	Q	Q	0.27	Q	Q	Q
Other excluding fuel oil	235	87	114.0	42	4,487	3,662	6,715	2,933	0.05	0.02	0.02	0.01
Buildings without water heating	Q	Q	Q	Q	191	Q	Q	Q	Q	Q	Q	Q
<b>Cooking energy sources</b>												
Fuel oil	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other excluding fuel oil	373	36	100.0	32	3,847	2,519	4,159	2,103	0.10	0.01	0.02	0.02
Buildings without cooking	269	72	66.0	16	2,180	1,411	2,884	1,030	0.12	0.05	0.02	0.02
<b>Energy end uses (more than one may apply)</b>												
Buildings with space heating	647	108	163.0	43	6,040	3,882	6,777	2,971	0.11	0.03	0.02	0.01
Buildings with cooling	531	77	162.0	43	5,491	3,739	7,004	3,075	0.10	0.02	0.02	0.01
Buildings with water heating	617	91	156.0	46	5,888	3,864	6,923	3,032	0.10	0.02	0.02	0.02
Buildings with cooking	383	36	100.0	32	3,899	2,524	4,167	2,105	0.10	0.01	0.02	0.02
Buildings with manufacturing	36	Q	Q	Q	347	Q	Q	Q	0.10	Q	Q	Q
Buildings with electricity generation	285	42	128.0	37	3,980	3,427	6,605	3,061	0.07	0.01	0.02	0.01
<b>Percent of floorspace heated</b>												
Not heated	Q	Q	4.0	Q	Q	Q	274	Q	Q	Q	0.01	Q
1 to 50	35	Q	20.0	6	486	Q	670	520	0.07	Q	0.03	0.01
51 to 99	93	7	25.0	7	1,270	568	1,250	726	0.07	0.01	0.02	0.01
100	519	91	118.0	31	4,284	2,984	4,856	1,725	0.12	0.03	0.02	0.02
<b>Heating equipment (more than one may apply)</b>												
Heat pumps	46	4	33.0	5	704	376	1,387	580	0.07	0.01	0.02	0.01
Furnaces	Q	Q	Q	Q	164	222	291	Q	0.23	0.02	0.03	Q
Individual space heaters	185	33	43.0	Q	1,910	1,322	1,945	697	0.10	0.03	0.02	0.02
District heat	12	9	17.0	Q	966	428	1,178	515	0.01	0.02	0.01	0.01
Boilers	454	30	82.0	17	3,398	2,041	2,351	1,550	0.13	0.01	0.03	0.01
Packaged heating units	184	62	70.0	19	2,132	2,127	3,940	1,382	0.09	0.03	0.02	0.01
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Water-heating equipment</b>												
Centralized system	421	71	91.0	33	3,556	2,224	3,575	1,624	0.12	0.03	0.03	0.02
Distributed system	71	6	16.0	4	869	417	813	411	0.08	0.02	0.02	0.01
Combination of centralized and distributed system	125	14	50.0	9	1,464	1,224	2,535	997	0.09	0.01	0.02	0.01
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>												
Snack bar or concession stand	52	11	37.0	15	1,131	990	1,862	886	0.05	0.01	0.02	0.02
Fast food or small restaurant	22	9	19.0	Q	749	689	1,381	804	0.03	0.01	0.01	0.01
Cafeteria or large restaurant	208	15	65.0	18	2,115	1,346	2,333	1,299	0.10	0.01	0.03	0.01
Commercial kitchen/ food preparation area	148	21	50.0	17	1,728	1,451	2,319	1,180	0.09	0.01	0.02	0.01
Small kitchen area	153	16	45.0	11	1,495	1,038	1,379	755	0.10	0.02	0.03	0.01

**Table C35. Fuel oil consumption and conditional energy intensity by Census region, 2012**

	Total fuel oil consumption (million gallons)				Total floorspace of buildings using fuel oil (million square feet)				Fuel oil energy intensity (gallons/square foot)			
	North- east	Mid- west	South	West	North- east	Mid- west	South	West	North- east	Mid- west	South	West
All buildings	652	108	167.0	48	6,079	3,935	7,051	3,135	0.11	0.03	0.02	0.02
<b>HVAC conservation features (more than one may apply)</b>												
Economizer cycle	180	31	76.0	26	2,974	2,495	3,546	2,257	0.06	0.01	0.02	0.01
Regular HVAC maintenance	550	75	142.0	41	5,603	3,565	6,687	3,046	0.10	0.02	0.02	0.01
Building automation system (BAS) <sup>2</sup>	217	60	113.0	33	3,339	2,823	5,259	2,446	0.07	0.02	0.02	0.01
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>												
Heating	460	57	123.0	33	4,707	2,843	4,513	2,103	0.10	0.02	0.03	0.02
Cooling	375	40	123.0	29	4,170	2,779	4,863	2,151	0.09	0.01	0.03	0.01
Lighting	614	84	155.0	44	5,596	3,719	6,609	2,980	0.11	0.02	0.02	0.01
<b>Annual consumption (gallons)</b>												
1,000 or less	43	17	29.0	9	1,964	2,000	3,466	1,612	0.02	0.01	0.01	0.01
1,001 to 5,000	144	Q	43.0	13	1,645	908	1,605	673	0.09	Q	0.03	0.02
5,001 to 10,000	117	33	28.0	12	837	451	835	406	0.14	0.07	0.03	0.03
10,001 to 25,000	120	Q	17.0	Q	905	436	794	Q	0.13	0.03	0.02	Q
Over 25,000	227	Q	50.0	Q	729	Q	351	Q	0.31	Q	0.14	Q

<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/>

• 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 F of the 2012 Commercial Buildings Energy Consumption Survey.

**Table C36. Fuel oil expenditures by Census region, 2012**

	Fuel oil expenditures (dollars)											
	Total fuel oil expenditures (million dollars)				per gallon				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>	2,146	367	553	164	3.29	3.41	3.32	3.42	0.35	0.09	0.08	0.05
<b>Building floorspace (square feet)</b>												
1,001 to 10,000	551	79	106	Q	3.45	3.43	3.34	Q	0.94	0.48	0.33	Q
10,001 to 100,000	977	182	194	29	3.29	3.40	3.19	3.44	0.45	0.17	0.12	0.05
Over 100,000	619	106	253	97	3.16	3.40	3.42	3.42	0.19	0.04	0.05	0.04
<b>Principal building activity</b>												
Education	460	42	148	Q	3.22	3.35	3.11	Q	0.48	0.08	0.30	Q
Health care	321	36	61	26	3.01	3.47	3.45	3.49	0.45	0.06	0.06	0.05
Office	316	28	68	37	3.42	3.42	3.40	3.41	0.19	0.03	0.04	0.04
All others	1,048	262	276	93	3.39	3.40	3.39	3.40	0.38	0.14	0.07	0.06
<b>Year constructed</b>												
Before 1945	662	19	51	Q	3.37	3.54	3.23	Q	0.43	0.06	0.09	Q
1946 to 1979	961	106	172	50	3.22	3.41	3.41	3.42	0.42	0.08	0.09	0.05
1980 to 1999	408	89	153	65	3.34	3.39	3.41	3.42	0.25	0.07	0.06	0.05
2000 to 2012	115	Q	176	Q	3.29	3.40	3.18	3.44	0.18	Q	0.10	0.04
<b>Climate region<sup>1</sup></b>												
Very cold/Cold	1,579	310	N	78	3.30	3.41	N	3.38	0.45	0.09	N	0.08
Mixed-humid	567	Q	418	N	3.27	3.36	3.38	N	0.22	Q	0.10	N
Mixed-dry/Hot-dry	N	N	Q	46	N	N	Q	3.46	N	N	Q	0.03
Hot-humid	N	N	120	Q	N	N	3.10	Q	N	N	0.05	Q
Marine	N	N	N	26	N	N	N	3.44	N	N	N	0.04
<b>Number of floors</b>												
One	481	207	266	55	3.29	3.40	3.22	3.39	0.47	0.27	0.14	0.12
Two	591	60	107	26	3.33	3.45	3.49	3.39	0.54	0.07	0.12	0.04
Three	503	Q	23	5	3.31	3.37	3.38	3.43	0.58	Q	0.04	0.03
Four to nine	457	50	116	56	3.22	3.41	3.37	3.46	0.26	0.04	0.05	0.05
Ten or more	114	28	42	Q	3.31	3.40	3.39	3.40	0.09	0.05	0.03	Q
<b>Number of workers (main shift)</b>												
Fewer than 10	617	209	128	Q	3.38	3.42	3.37	Q	0.63	0.40	0.21	Q
10 to 99	882	67	207	36	3.35	3.35	3.19	3.43	0.48	0.06	0.11	0.04
100 or more	647	91	218	92	3.14	3.42	3.42	3.42	0.20	0.04	0.05	0.04
<b>Weekly operating hours</b>												
Fewer than 48	643	56	166	11	3.35	3.47	3.15	3.42	0.46	0.08	0.22	0.03
49 to 84	735	102	173	70	3.30	3.40	3.41	3.42	0.33	0.08	0.07	0.06
85 to 167	139	34	24	Q	3.23	3.40	3.41	Q	0.29	0.06	0.04	Q
Open continuously	629	174	190	69	3.23	3.39	3.39	3.43	0.33	0.13	0.06	0.05

**Table C36. Fuel oil expenditures by Census region, 2012**

**Table C36. Fuel oil expenditures by Census region, 2012**

	Fuel oil expenditures (dollars)											
	Total fuel oil expenditures (million dollars)				per gallon				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>	2,146	367	553	164	3.29	3.41	3.32	3.42	0.35	0.09	0.08	0.05
<b>Predominant roof material</b>												
Metal surfacing	295	126	134	Q	3.34	3.40	3.38	Q	0.56	0.20	0.18	Q
Synthetic or rubber	612	Q	114	82	3.29	3.38	3.40	3.40	0.23	Q	0.05	0.06
Built-up	518	58	128	44	3.21	3.46	3.39	3.39	0.33	0.05	0.06	0.05
Slate or tile shingles	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Wooden materials (including shingles)	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Asphalt, fiberglass, or other shingles	492	22	128	13	3.34	3.46	3.41	3.52	0.62	0.06	0.12	0.04
Concrete	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	N	Q	Q	Q	N	Q	Q	Q	N
No one major type	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Roof characteristics</b>												
Roof tilt												
Flat	1,129	135	267	112	3.27	3.41	3.39	3.42	0.26	0.05	0.05	0.05
Shallow pitch	383	Q	229	40	3.34	3.42	3.22	3.39	0.45	0.21	0.14	0.06
Steeper pitch	633	62	57	Q	3.30	3.36	3.39	Q	0.70	0.19	0.10	Q
Cool roof	480	89	154	68	3.28	3.42	3.42	3.41	0.30	0.08	0.07	0.07
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>												
Any type of renovation	1,315	210	289	120	3.28	3.39	3.37	3.41	0.33	0.09	0.07	0.06
Addition or annex	527	Q	101	42	3.12	3.38	3.41	3.39	0.40	Q	0.07	0.06
Reduction in floorspace	Q	Q	25	Q	Q	Q	3.52	Q	Q	Q	0.10	Q
Roof replacement	933	178	149	53	3.27	3.40	3.39	3.38	0.37	0.11	0.07	0.05
Exterior wall replacement	220	15	19	Q	3.17	3.41	3.60	Q	0.44	0.04	0.04	Q
Interior wall reconfiguration	606	52	192	69	3.19	3.42	3.36	3.40	0.28	0.04	0.08	0.05
Window replacement	672	32	93	Q	3.20	3.44	3.34	3.39	0.41	0.05	0.07	0.04
HVAC equipment upgrade	820	68	188	75	3.26	3.41	3.36	3.41	0.28	0.04	0.07	0.05
Lighting upgrade	884	94	194	73	3.26	3.41	3.35	3.41	0.32	0.06	0.07	0.05
Electrical upgrade	667	49	140	55	3.26	3.41	3.35	3.39	0.37	0.05	0.08	0.06
Plumbing system upgrade	579	Q	92	40	3.37	3.40	3.31	3.39	0.36	Q	0.06	0.04
Insulation upgrade	203	26	63	28	3.31	3.44	3.35	3.37	0.29	0.04	0.10	0.05
Fire, safety, or security upgrade	663	40	157	71	3.25	3.43	3.36	3.39	0.31	0.03	0.07	0.06
Structural upgrade	138	9	54	Q	3.30	3.41	3.42	3.41	0.38	0.03	0.10	0.05
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
No renovations	779	140	196	37	3.31	3.42	3.42	3.41	0.43	0.10	0.08	0.04
Buildings constructed 2008 or later	Q	Q	Q	Q	Q	Q	2.90	Q	Q	Q	0.17	Q
<b>Energy sources (more than one may apply)</b>												
Electricity	2,146	367	553	164	3.29	3.41	3.32	3.42	0.35	0.09	0.08	0.05
Natural gas	532	121	233	115	3.31	3.40	3.42	3.42	0.15	0.04	0.05	0.04
Fuel oil	2,146	367	553	164	3.29	3.41	3.32	3.42	0.35	0.09	0.08	0.05
District heat	41	29	58	31	3.51	3.36	3.36	3.40	0.04	0.07	0.05	0.06
District chilled water	16	Q	38	Q	3.48	3.38	3.40	3.37	0.06	Q	0.03	0.07
Propane	725	Q	134	37	3.16	3.39	3.35	3.39	0.72	Q	0.16	0.07
Other	137	Q	Q	12	3.41	Q	3.34	3.46	0.37	Q	Q	0.06

**Table C36. Fuel oil expenditures by Census region, 2012**

	Fuel oil expenditures (dollars)											
	Total fuel oil expenditures (million dollars)				per gallon				per square foot			
	North- east	Mid- west	South	West	North- east	Mid- west	South	West	North- east	Mid- west	South	West
All buildings	2,146	367	553	164	3.29	3.41	3.32	3.42	0.35	0.09	0.08	0.05
<b>Space-heating energy sources</b>												
Fuel oil	1,946	231	270	Q	3.27	3.41	3.40	Q	0.68	0.35	0.35	Q
Fuel oil main	1,863	Q	252	Q	3.27	Q	3.39	Q	0.94	Q	0.84	Q
Fuel oil secondary	82	24	18	Q	3.20	3.37	3.53	Q	0.10	0.05	0.04	Q
Other excluding fuel oil	176	136	269	111	3.41	3.41	3.23	3.42	0.06	0.04	0.04	0.04
Buildings without heating	Q	Q	14	Q	Q	Q	3.67	Q	Q	Q	0.05	Q
<b>Primary space-heating energy source</b>												
Electricity	36	22	145	22	3.34	3.43	3.09	3.42	0.06	0.03	0.05	0.04
Natural gas	132	98	100	66	3.34	3.41	3.43	3.43	0.06	0.04	0.04	0.04
Fuel oil	1,863	Q	252	Q	3.27	Q	3.39	Q	0.94	Q	0.84	Q
District heat	40	28	39	Q	3.52	3.36	3.39	3.41	0.04	0.07	0.03	0.04
Propane	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Cooling energy sources</b>												
Fuel oil	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other excluding fuel oil	1,692	263	534	146	3.30	3.41	3.31	3.42	0.31	0.07	0.08	0.05
Buildings without cooling	403	Q	Q	Q	3.33	Q	Q	Q	0.68	Q	Q	Q
<b>Water-heating energy sources</b>												
Fuel oil	1,231	Q	Q	Q	3.22	Q	Q	Q	0.88	Q	Q	Q
Other excluding fuel oil	803	295	391	143	3.42	3.40	3.43	3.42	0.18	0.08	0.06	0.05
Buildings without water heating	Q	Q	Q	Q	3.26	Q	Q	Q	Q	Q	Q	Q
<b>Cooking energy sources</b>												
Fuel oil	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other excluding fuel oil	1,203	121	339	109	3.23	3.40	3.39	3.43	0.31	0.05	0.08	0.05
Buildings without cooking	909	245	213	55	3.38	3.41	3.22	3.39	0.42	0.17	0.07	0.05
<b>Energy end uses (more than one may apply)</b>												
Buildings with space heating	2,122	367	540	148	3.28	3.41	3.31	3.42	0.35	0.09	0.08	0.05
Buildings with cooling	1,743	264	536	146	3.28	3.41	3.31	3.42	0.32	0.07	0.08	0.05
Buildings with water heating	2,034	310	530	158	3.29	3.40	3.40	3.42	0.35	0.08	0.08	0.05
Buildings with cooking	1,237	122	340	109	3.23	3.40	3.39	3.43	0.32	0.05	0.08	0.05
Buildings with manufacturing	117	Q	Q	Q	3.23	Q	Q	Q	0.34	Q	Q	Q
Buildings with electricity generation	921	142	423	127	3.23	3.40	3.30	3.42	0.23	0.04	0.06	0.04
<b>Percent of floorspace heated</b>												
Not heated	Q	Q	14	Q	Q	Q	3.67	Q	Q	Q	0.05	Q
1 to 50	113	Q	52	19	3.26	Q	2.67	3.43	0.23	Q	0.08	0.04
51 to 99	307	24	84	24	3.28	3.41	3.38	3.45	0.24	0.04	0.07	0.03
100	1,702	309	403	105	3.28	3.39	3.40	3.40	0.40	0.10	0.08	0.06

**Table C36. Fuel oil expenditures by Census region, 2012**

	Fuel oil expenditures (dollars)											
	Total fuel oil expenditures (million dollars)				per gallon				per square foot			
	North- east	Mid- west	South	West	North- east	Mid- west	South	West	North- east	Mid- west	South	West
All buildings	2,146	367	553	164	3.29	3.41	3.32	3.42	0.35	0.09	0.08	0.05
<b>Heating equipment (more than one may apply)</b>												
Heat pumps	153	12	109	18	3.33	3.42	3.26	3.44	0.22	0.03	0.08	0.03
Furnaces	Q	Q	Q	Q	3.46	3.24	3.41	Q	0.79	0.06	0.11	Q
Individual space heaters	604	114	148	Q	3.26	3.44	3.40	3.41	0.32	0.09	0.08	0.07
District heat	41	29	57	Q	3.51	3.36	3.36	3.41	0.04	0.07	0.05	0.04
Boilers	1,470	103	265	59	3.24	3.44	3.23	3.44	0.43	0.05	0.11	0.04
Packaged heating units	612	208	240	66	3.32	3.38	3.42	3.40	0.29	0.10	0.06	0.05
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Water-heating equipment</b>												
Centralized system	1,410	243	306	113	3.35	3.40	3.38	3.42	0.40	0.11	0.09	0.07
Distributed system	233	22	55	15	3.26	3.39	3.51	3.43	0.27	0.05	0.07	0.04
Combination of centralized and distributed system	391	46	170	30	3.12	3.38	3.41	3.41	0.27	0.04	0.07	0.03
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>												
Snack bar or concession stand	170	37	127	50	3.27	3.41	3.44	3.42	0.15	0.04	0.07	0.06
Fast food or small restaurant	68	30	67	Q	3.14	3.40	3.51	3.42	0.09	0.04	0.05	0.04
Cafeteria or large restaurant	664	52	223	62	3.20	3.46	3.41	3.44	0.31	0.04	0.10	0.05
Commercial kitchen/ food preparation area	482	71	171	59	3.25	3.39	3.39	3.43	0.28	0.05	0.07	0.05
Small kitchen area	499	55	154	37	3.27	3.39	3.41	3.41	0.33	0.05	0.11	0.05
<b>HVAC conservation features (more than one may apply)</b>												
Economizer cycle	572	105	260	90	3.17	3.42	3.42	3.41	0.19	0.04	0.07	0.04
Regular HVAC maintenance	1,813	256	470	142	3.30	3.40	3.30	3.42	0.32	0.07	0.07	0.05
Building automation system (BAS) <sup>2</sup>	684	204	372	111	3.15	3.40	3.30	3.42	0.20	0.07	0.07	0.05
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>												
Heating	1,525	192	403	113	3.32	3.39	3.28	3.40	0.32	0.07	0.09	0.05
Cooling	1,242	135	406	97	3.32	3.39	3.29	3.40	0.30	0.05	0.08	0.05
Lighting	2,021	286	514	150	3.29	3.41	3.32	3.42	0.36	0.08	0.08	0.05
<b>Annual consumption (gallons)</b>												
1,000 or less	155	59	102	33	3.63	3.48	3.47	3.51	0.08	0.03	0.03	0.02
1,001 to 5,000	490	Q	144	43	3.40	3.39	3.35	3.40	0.30	Q	0.09	0.06
5,001 to 10,000	390	111	80	40	3.32	3.37	2.89	3.38	0.47	0.25	0.10	0.10
10,001 to 25,000	395	Q	57	Q	3.29	3.45	3.42	Q	0.44	0.11	0.07	Q
Over 25,000	716	Q	170	Q	3.15	Q	3.40	Q	0.98	Q	0.48	Q

**Table C36. Fuel oil expenditures by Census region, 2012**

	Fuel oil expenditures (dollars)											
	Total fuel oil expenditures (million dollars)				per gallon				per square foot			
	North- east	Mid- west	South	West	North- east	Mid- west	South	West	North- east	Mid- west	South	West
All buildings	2,146	367	553	164	3.29	3.41	3.32	3.42	0.35	0.09	0.08	0.05

<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/> • 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 F of the 2012 Commercial Buildings Energy Consumption Survey.

**Table C37. Total district heat consumption and expenditures, 2012**

	All buildings using district heat			District heat consumption	District heat expenditures
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (million dollars)
<b>All buildings</b>	48	5,964	124.9	341	6,675
<b>Building floorspace (square feet)</b>					
1,001 to 25,000	16	169	10.7	13	272
25,001 to 50,000	6	213	36.8	17	320
50,001 to 100,000	10	704	68.2	52	870
100,001 to 200,000	9	1,313	146.7	77	1,678
200,001 to 500,000	5	1,565	309.9	88	1,683
Over 500,000	2	2,001	1054.3	94	1,852
<b>Principal building activity</b>					
Education	12	1,155	92.8	65	1,068
Food sales	N	N	N	N	N
Food service	Q	Q	Q	Q	Q
Health care	2	684	333.6	68	1,225
Inpatient	1	576	458.0	62	1,136
Outpatient	Q	Q	Q	Q	Q
Lodging	4	630	156.5	31	667
Mercantile	Q	Q	Q	Q	Q
Retail (other than mall)	Q	Q	Q	Q	Q
Enclosed and strip malls	Q	Q	Q	Q	Q
Office	12	1,794	144.9	76	1,787
Public assembly	7	888	132.5	64	1,106
Public order and safety	Q	Q	Q	Q	Q
Religious worship	N	N	N	N	N
Service	Q	Q	Q	Q	Q
Warehouse and storage	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q
Vacant	Q	Q	Q	Q	Q
<b>Year constructed</b>					
Before 1920	5	540	106.8	25	523
1920 to 1945	7	888	122.7	40	898
1946 to 1959	5	446	89.7	29	538
1960 to 1969	9	1,002	111.9	66	1,185
1970 to 1979	10	930	96.1	73	1,655
1980 to 1989	2	449	257.8	17	321
1990 to 1999	3	642	218.8	23	420
2000 to 2003	4	Q	116.7	Q	Q
2004 to 2007	2	Q	Q	23	Q
2008 to 2012	Q	Q	Q	Q	Q

**Table C37. Total district heat consumption and expenditures, 2012**

	All buildings using district heat			District heat consumption	District heat expenditures
		Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)
All buildings	48		5,964	124.9	341
<b>Census region and division</b>					
Northeast	16		1,981	127.8	119
New England	Q		Q	Q	Q
Middle Atlantic	9		1,628	184.9	81
Midwest	7		906	134.2	58
East North Central	3		574	192.9	32
West North Central	4		332	87.9	Q
South	18		2,191	119.5	119
South Atlantic	9		1,159	135.9	59
East South Central	Q		Q	88.1	Q
West South Central	5		646	119.2	Q
West	7		886	123.7	45
Mountain	Q		482	Q	23
Pacific	5		404	76.1	22
<b>Climate region<sup>1</sup></b>					
Very cold/Cold	18		1,926	109.8	137
Mixed-humid	20		3,012	147.2	152
Mixed-dry/Hot-dry	4		Q	138.1	Q
Hot-humid	Q		374	83.2	18
Marine	Q		Q	Q	Q
<b>Number of floors</b>					
One	Q		Q	Q	Q
Two	11		Q	44.5	Q
Three	10		544	56.7	47
Four to nine	18		2,830	160.5	173
Ten or more	3		1,900	564.0	77
<b>Number of workers (main shift)</b>					
Fewer than 5	Q		Q	Q	Q
5 to 9	Q		Q	Q	Q
10 to 19	Q		Q	Q	Q
20 to 49	11		623	56.8	43
50 to 99	7		669	93.3	38
100 to 249	7		1,096	159.8	67
250 or more	7		3,082	472.6	171
<b>Weekly operating hours</b>					
Fewer than 40	Q		Q	Q	Q
40 to 48	7		403	56.8	19
49 to 60	11		1,099	95.9	50
61 to 84	9		844	97.6	31
85 to 167	6		631	98.3	58
Open continuously	11		2,815	245.6	180

**Table C37. Total district heat consumption and expenditures, 2012**

	All buildings using district heat			District heat consumption	District heat expenditures
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (million dollars)
<b>All buildings</b>	48	5,964	124.9	341	6,675
<b>Ownership and occupancy</b>					
Nongovernment owned	22	3,135	145.6	168	3,244
Owner occupied	13	1,842	139.5	115	1,997
Leased to tenant(s)	Q	730	Q	25	649
Owner occupied and leased	2	557	237.6	27	597
Unoccupied	Q	Q	Q	Q	Q
Government owned	26	2,829	107.9	173	3,431
Federal	1	708	647.1	27	550
State	18	1,538	84.0	105	2,023
Local	7	584	85.6	41	858
<b>Party responsible for operation and maintenance of energy systems</b>					
Building owner	46	5,776	126.9	324	6,273
Business owner or tenant	Q	Q	Q	Q	Q
Property management	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q
<b>Provider of direct input on energy-related equipment purchases</b>					
Building owner	46	5,733	125.8	325	6,263
Business owner or tenant	Q	Q	Q	Q	Q
Property management	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q
<b>Number of establishments</b>					
One	36	3,410	95.2	208	3,958
2 to 5	8	1,457	180.0	98	1,940
6 to 10	Q	357	232.3	11	267
11 to 20	Q	Q	Q	Q	Q
More than 20	1	447	771.9	15	315
Currently unoccupied	Q	Q	Q	Q	Q
<b>Predominant exterior wall material</b>					
Brick, stone, or stucco	32	3,423	107.9	203	3,569
Concrete (block or poured)	9	1,166	134.8	56	1,506
Concrete panels	2	730	321.9	38	747
Siding or shingles	Q	Q	Q	Q	Q
Metal panels	Q	Q	Q	Q	Q
Window glass	Q	214	Q	13	199
Other	Q	Q	Q	Q	Q
No one major type	Q	Q	Q	Q	Q

**Table C37. Total district heat consumption and expenditures, 2012**

	All buildings using district heat			District heat consumption	District heat expenditures
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (million dollars)
<b>All buildings</b>	48	5,964	124.9	341	6,675
<b>Predominant roof material</b>					
Metal surfacing	Q	Q	Q	Q	Q
Synthetic or rubber	19	1,958	104.3	112	2,104
Built-up	13	1,893	145.1	98	2,357
Slate or tile shingles	6	Q	131.9	Q	775
Wooden materials (including shingles)	Q	Q	Q	Q	Q
Asphalt, fiberglass, or other shingles	5	552	101.9	40	768
Concrete	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q
No one major type	Q	Q	Q	Q	Q
<b>Roof characteristics</b>					
<b>Roof tilt</b>					
Flat	34	4,172	121.6	225	4,754
Shallow pitch	7	1,120	154.6	64	1,057
Steeper pitch	6	672	108.4	Q	863
Cool roof	10	1,779	177.0	94	2,187
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>					
Any type of renovation	27	3,993	145.7	240	4,905
Addition or annex	4	1,256	286.9	91	1,725
Reduction in floorspace	Q	Q	Q	Q	Q
Roof replacement	12	2,021	167.3	126	2,829
Exterior wall replacement	1	369	454.4	18	397
Interior wall reconfiguration	14	2,600	186.6	157	3,075
Window replacement	6	1,447	228.7	68	1,483
HVAC equipment upgrade	17	3,005	181.5	177	3,934
Lighting upgrade	18	3,055	168.8	180	3,279
Electrical upgrade	11	2,051	190.6	116	2,361
Plumbing system upgrade	8	1,724	213.5	90	1,852
Insulation upgrade	6	1,070	172.1	60	1,132
Fire, safety, or security upgrade	12	2,092	175.2	115	2,288
Structural upgrade	Q	697	Q	29	528
Other	Q	Q	Q	Q	Q
No renovations	19	1,770	92.9	87	1,499
Buildings constructed 2008 or later	Q	Q	Q	Q	Q

**Table C37. Total district heat consumption and expenditures, 2012**

	All buildings using district heat			District heat consumption	District heat expenditures
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (million dollars)
<b>All buildings</b>	48	5,964	124.9	341	6,675
<b>Energy sources (more than one may apply)</b>					
Electricity	48	5,964	124.9	341	6,675
Natural gas	17	2,860	168.1	173	3,541
Fuel oil	10	3,110	307.5	171	3,319
District heat	48	5,964	124.9	341	6,675
District chilled water	26	3,730	144.5	236	4,417
Propane	Q	Q	Q	Q	Q
Other	1	335	265.1	15	259
<b>Space-heating energy sources</b>					
District heat	48	5,925	124.3	340	6,656
District heat main	47	5,797	122.9	338	6,627
District heat secondary	Q	Q	Q	Q	Q
Other excluding district heat	Q	Q	Q	Q	Q
Buildings without heating	Q	Q	Q	Q	Q
<b>Primary space-heating energy source</b>					
Electricity	Q	Q	Q	Q	Q
Natural gas	Q	Q	Q	Q	Q
Fuel oil	Q	Q	Q	Q	Q
District heat	47	5,797	122.9	338	6,627
Propane	N	N	N	N	N
Other	N	N	N	N	N
<b>Cooling energy sources</b>					
District heat	1	251	269.9	23	570
Other excluding district heat	43	5,651	131.1	314	6,064
Buildings without cooling	Q	Q	Q	Q	Q
<b>Water-heating energy sources</b>					
District heat	25	4,551	179.7	279	5,437
Other excluding district heat	19	1,271	65.7	57	1,099
Buildings without water heating	Q	Q	Q	Q	Q
<b>Cooking energy sources</b>					
District heat	Q	942	Q	77	1,706
Other excluding district heat	10	2,212	231.1	94	1,868
Buildings without cooking	34	2,810	82.7	170	3,101

**Table C37. Total district heat consumption and expenditures, 2012**

	All buildings using district heat			District heat consumption	District heat expenditures
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (million dollars)
<b>All buildings</b>	48	5,964	124.9	341	6,675
<b>Energy end uses (more than one may apply)</b>					
Buildings with space heating	48	5,962	124.9	341	6,673
Buildings with cooling	44	5,903	134.0	337	6,634
Buildings with water heating	45	5,822	130.4	336	6,537
Buildings with cooking	14	3,154	228.7	171	3,574
Buildings with manufacturing	Q	Q	Q	Q	Q
Buildings with electricity generation	15	3,749	248.2	208	3,879
<b>Percent of floorspace heated</b>					
Not heated	Q	Q	Q	Q	Q
1 to 50	Q	Q	Q	Q	Q
51 to 99	7	1,126	168.2	39	901
100	40	4,720	117.1	300	5,758
<b>Heating equipment (more than one may apply)</b>					
Heat pumps	3	556	210.3	27	536
Furnaces	Q	Q	Q	Q	Q
Individual space heaters	9	1,354	158.2	63	1,207
District heat	48	5,925	124.3	340	6,656
Boilers	Q	Q	Q	Q	Q
Packaged heating units	3	742	213.3	45	865
Other	Q	Q	Q	Q	Q
<b>Water-heating equipment</b>					
Centralized system	30	3,596	119.0	227	4,357
Distributed system	6	501	81.9	23	539
Combination of centralized and distributed system	8	1,725	207.5	86	1,641
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>					
Snack bar or concession stand	3	1,613	513.4	81	1,489
Fast food or small restaurant	2	1,195	527.7	61	1,142
Cafeteria or large restaurant	6	1,828	319.1	105	2,269
Commercial kitchen/ food preparation area	4	1,562	387.2	97	2,170
Small kitchen area	3	1,138	362.6	55	1,001
<b>HVAC conservation features (more than one may apply)</b>					
Economizer cycle	23	4,090	181.3	245	5,088
Regular HVAC maintenance	41	5,630	138.8	319	6,375
Building automation system (BAS) <sup>2</sup>	30	5,006	169.0	266	5,023

**Table C37. Total district heat consumption and expenditures, 2012**

	All buildings using district heat			District heat consumption	District heat expenditures
		Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)
<b>All buildings</b>	48	5,964	124.9	341	6,675
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>					
Heating	32	4,027	124.2	208	4,494
Cooling	31	4,045	129.7	209	4,419
Lighting	45	5,507	122.9	318	6,240

<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/> • 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 D of the 2012 Commercial Buildings Energy Consumption Survey.

**Table C38. District heat consumption and expenditure intensities, 2012**

	District heat consumption			District heat expenditures		
	per building (million Btu)	per square foot (thousand Btu)	per worker (million Btu)	per building (thousand dollars)	per square foot (dollars)	per million Btu (dollars)
All buildings	7,132	57.1	41.4	139.8	1.12	19.60
<b>Building floorspace (square feet)</b>						
1,001 to 25,000	806	75.0	50.9	17.3	1.61	21.42
25,001 to 50,000	2,940	79.8	71.9	55.3	1.50	18.80
50,001 to 100,000	4,997	73.3	64.2	84.2	1.23	16.84
100,001 to 200,000	8,650	59.0	Q	187.5	1.28	21.68
200,001 to 500,000	17,418	56.2	45.7	333.4	1.08	19.14
Over 500,000	49,493	46.9	27.5	976.0	0.93	19.72
<b>Principal building activity</b>						
Education	5,215	56.2	85.2	85.8	0.92	16.46
Food sales	N	N	N	N	N	N
Food service	Q	Q	Q	Q	Q	Q
Health care	33,123	99.3	50.3	597.1	1.79	18.03
Inpatient	49,661	108.4	58.3	903.2	1.97	18.19
Outpatient	Q	Q	Q	Q	Q	Q
Lodging	7,723	49.4	128.4	165.5	1.06	21.43
Mercantile	Q	Q	Q	Q	Q	Q
Retail (other than mall)	Q	Q	Q	Q	Q	Q
Enclosed and strip malls	Q	Q	Q	Q	Q	Q
Office	6,130	42.3	17.3	144.4	1.00	23.55
Public assembly	9,513	71.8	102.5	165.0	1.25	17.35
Public order and safety	Q	Q	Q	Q	Q	Q
Religious worship	N	N	N	N	N	N
Service	Q	Q	Q	Q	Q	Q
Warehouse and storage	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q
Vacant	Q	Q	Q	Q	Q	Q
<b>Year constructed</b>						
Before 1920	5,028	47.1	40.6	103.6	0.97	20.60
1920 to 1945	5,497	44.8	25.0	124.0	1.01	22.56
1946 to 1959	Q	65.8	54.6	108.1	1.20	18.32
1960 to 1969	7,330	65.5	54.5	132.3	1.18	18.04
1970 to 1979	7,574	78.9	39.0	171.0	1.78	22.57
1980 to 1989	9,499	36.9	21.9	184.6	0.72	19.44
1990 to 1999	7,851	35.9	31.5	142.9	0.65	18.21
2000 to 2003	7,079	60.7	70.7	110.2	0.94	15.57
2004 to 2007	14,439	62.6	73.9	247.5	1.07	17.14
2008 to 2012	Q	Q	Q	Q	Q	Q

**Table C38. District heat consumption and expenditure intensities, 2012**

	District heat consumption			District heat expenditures		
	per building (million Btu)	per square foot (thousand Btu)	per worker (million Btu)	per building (thousand dollars)	per square foot (dollars)	per million Btu (dollars)
All buildings	7,132	57.1	41.4	139.8	1.12	19.60
<b>Census region and division</b>						
Northeast	7,661	60.0	29.3	196.7	1.54	25.67
New England	Q	106.4	Q	Q	1.80	16.92
Middle Atlantic	9,227	49.9	23.3	274.2	1.48	29.71
Midwest	8,553	63.8	69.3	135.1	1.01	15.79
East North Central	10,913	56.6	56.9	154.8	0.80	14.18
West North Central	6,694	76.1	96.1	119.6	1.36	17.86
South	6,483	54.2	52.6	106.9	0.89	16.49
South Atlantic	6,901	50.8	42.5	118.8	0.87	17.22
East South Central	Q	Q	72.7	Q	Q	17.98
West South Central	Q	59.3	66.5	102.7	0.86	14.54
West	6,309	51.0	41.5	105.1	0.85	16.66
Mountain	Q	48.3	43.6	Q	0.72	15.00
Pacific	4,130	54.3	39.6	76.1	1.00	18.42
<b>Climate region<sup>1</sup></b>						
Very cold/Cold	7,830	71.3	61.6	129.5	1.18	16.53
Mixed-humid	7,412	50.4	30.9	175.3	1.19	23.66
Mixed-dry/Hot-dry	Q	53.8	51.2	98.5	0.71	13.25
Hot-humid	4,057	48.8	51.6	71.0	0.85	17.51
Marine	Q	Q	Q	Q	Q	Q
<b>Number of floors</b>						
One	Q	Q	Q	Q	Q	Q
Two	Q	67.7	Q	Q	1.91	28.22
Three	4,951	87.3	76.4	81.7	1.44	16.50
Four to nine	9,805	61.1	60.9	168.6	1.05	17.20
Ten or more	22,931	40.7	21.4	544.5	0.97	23.74
<b>Number of workers (main shift)</b>						
Fewer than 5	Q	Q	Q	Q	Q	Q
5 to 9	Q	Q	Q	Q	Q	Q
10 to 19	Q	Q	Q	Q	Q	Q
20 to 49	3,890	68.5	119.0	74.1	1.30	19.04
50 to 99	5,265	56.5	82.9	81.6	0.87	15.50
100 to 249	9,759	61.1	65.7	151.7	0.95	15.54
250 or more	26,182	55.4	27.1	583.8	1.24	22.30
<b>Weekly operating hours</b>						
Fewer than 40	Q	Q	Q	Q	Q	Q
40 to 48	2,711	47.7	35.4	52.1	0.92	19.20
49 to 60	4,345	45.3	28.7	75.9	0.79	17.46
61 to 84	3,573	36.6	22.7	70.1	0.72	19.63
85 to 167	9,108	92.6	119.3	167.1	1.70	18.35
Open continuously	15,674	63.8	44.3	324.8	1.32	20.72

**Table C38. District heat consumption and expenditure intensities, 2012**

	District heat consumption			District heat expenditures		
	per building (million Btu)	per square foot (thousand Btu)	per worker (million Btu)	per building (thousand dollars)	per square foot (dollars)	per million Btu (dollars)
All buildings	7,132	57.1	41.4	139.8	1.12	19.60
<b>Ownership and occupancy</b>						
Nongovernment owned	7,796	53.5	37.4	150.7	1.03	19.33
Owner occupied	8,721	62.5	66.8	151.2	1.08	17.34
Leased to tenant(s)	Q	34.8	13.5	Q	0.89	25.57
Owner occupied and leased	11,621	48.9	30.8	254.7	1.07	21.91
Unoccupied	Q	Q	N	Q	Q	Q
Government owned	6,588	61.1	46.2	130.8	1.21	19.86
Federal	24,285	37.5	28.3	503.2	0.78	20.72
State	5,724	68.2	54.5	110.5	1.32	19.30
Local	6,069	70.9	47.1	125.7	1.47	20.71
<b>Party responsible for operation and maintenance of energy systems</b>						
Building owner	7,113	56.1	40.7	137.8	1.09	19.37
Business owner or tenant	Q	Q	Q	Q	Q	Q
Property management	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q
<b>Provider of direct input on energy-related equipment purchases</b>						
Building owner	7,123	56.6	41.3	137.5	1.09	19.30
Business owner or tenant	Q	Q	Q	Q	Q	Q
Property management	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q
<b>Number of establishments</b>						
One	5,813	61.1	50.7	110.5	1.16	19.01
2 to 5	12,148	67.5	60.0	239.6	1.33	19.73
6 to 10	7,050	30.4	15.5	174.0	0.75	24.68
11 to 20	Q	Q	Q	Q	Q	Q
More than 20	26,183	33.9	12.7	545.0	0.71	20.81
Currently unoccupied	Q	Q	N	Q	Q	Q
<b>Predominant exterior wall material</b>						
Brick, stone, or stucco	6,406	59.3	47.5	112.6	1.04	17.57
Concrete (block or poured)	6,479	48.1	30.6	174.1	1.29	26.87
Concrete panels	16,644	51.7	41.8	329.6	1.02	19.80
Siding or shingles	Q	Q	Q	Q	Q	Q
Metal panels	Q	Q	Q	Q	Q	Q
Window glass	Q	62.4	27.0	Q	0.93	14.95
Other	Q	Q	Q	Q	Q	Q
No one major type	Q	Q	Q	Q	Q	Q

**Table C38. District heat consumption and expenditure intensities, 2012**

	District heat consumption			District heat expenditures		
	per building (million Btu)	per square foot (thousand Btu)	per worker (million Btu)	per building (thousand dollars)	per square foot (dollars)	per million Btu (dollars)
All buildings	7,132	57.1	41.4	139.8	1.12	19.60
<b>Predominant roof material</b>						
Metal surfacing	Q	Q	Q	Q	Q	Q
Synthetic or rubber	5,959	57.1	45.2	112.1	1.07	18.81
Built-up	7,532	51.9	30.9	180.7	1.24	23.99
Slate or tile shingles	8,588	65.1	67.0	126.2	0.96	14.70
Wooden materials (including shingles)	Q	Q	Q	Q	Q	Q
Asphalt, fiberglass, or other shingles	7,436	73.0	47.1	141.8	1.39	19.07
Concrete	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q
No one major type	Q	Q	Q	Q	Q	Q
<b>Roof characteristics</b>						
<b>Roof tilt</b>						
Flat	6,559	53.9	35.9	138.6	1.14	21.13
Shallow pitch	8,838	57.2	60.7	145.9	0.94	16.51
Steeper pitch	8,310	76.7	Q	139.1	1.28	16.74
Cool roof	9,339	52.8	33.9	217.6	1.23	23.30
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>						
Any type of renovation	8,747	60.1	40.1	179.0	1.23	20.46
Addition or annex	20,860	72.7	71.2	393.8	1.37	18.88
Reduction in floorspace	Q	Q	Q	Q	Q	Q
Roof replacement	10,453	62.5	37.6	234.2	1.40	22.41
Exterior wall replacement	22,742	50.1	25.6	488.8	1.08	21.49
Interior wall reconfiguration	11,243	60.3	40.3	220.6	1.18	19.62
Window replacement	10,669	46.7	28.2	234.4	1.02	21.97
HVAC equipment upgrade	10,714	59.0	36.7	237.5	1.31	22.17
Lighting upgrade	9,919	58.8	43.6	181.1	1.07	18.26
Electrical upgrade	10,806	56.7	38.2	219.5	1.15	20.31
Plumbing system upgrade	11,195	52.4	33.9	229.4	1.07	20.49
Insulation upgrade	9,661	56.2	41.3	182.1	1.06	18.85
Fire, safety, or security upgrade	9,617	54.9	36.1	191.6	1.09	19.92
Structural upgrade	Q	41.0	42.6	Q	0.76	18.47
Other	Q	Q	Q	Q	Q	Q
No renovations	4,544	48.9	41.6	78.7	0.85	17.31
Buildings constructed 2008 or later	Q	Q	Q	Q	Q	Q

**Table C38. District heat consumption and expenditure intensities, 2012**

	District heat consumption			District heat expenditures		
	per building (million Btu)	per square foot (thousand Btu)	per worker (million Btu)	per building (thousand dollars)	per square foot (dollars)	per million Btu (dollars)
All buildings	7,132	57.1	41.4	139.8	1.12	19.60
<b>Energy sources (more than one may apply)</b>						
Electricity	7,132	57.1	41.4	139.8	1.12	19.60
Natural gas	10,172	60.5	38.2	208.1	1.24	20.46
Fuel oil	16,949	55.1	38.5	328.2	1.07	19.36
District heat	7,132	57.1	41.4	139.8	1.12	19.60
District chilled water	9,135	63.2	48.5	171.1	1.18	18.73
Propane	Q	Q	Q	Q	Q	Q
Other	11,668	44.0	58.2	205.3	0.77	17.60
<b>Space-heating energy sources</b>						
District heat	7,123	57.3	41.6	139.6	1.12	19.60
District heat main	7,163	58.3	42.0	140.4	1.14	19.61
District heat secondary	Q	Q	Q	Q	Q	Q
Other excluding district heat	Q	Q	Q	Q	Q	Q
Buildings without heating	Q	Q	Q	Q	Q	Q
<b>Primary space-heating energy source</b>						
Electricity	Q	Q	Q	Q	Q	Q
Natural gas	Q	Q	Q	Q	Q	Q
Fuel oil	Q	Q	Q	Q	Q	Q
District heat	7,163	58.3	42.0	140.4	1.14	19.61
Propane	N	N	N	N	N	N
Other	N	N	N	N	N	N
<b>Cooling energy sources</b>						
District heat	24,774	91.8	36.6	612.0	2.27	24.70
Other excluding district heat	7,278	55.5	41.4	140.6	1.07	19.32
Buildings without cooling	Q	Q	Q	Q	Q	Q
<b>Water-heating energy sources</b>						
District heat	11,012	61.3	43.8	214.7	1.19	19.50
Other excluding district heat	2,957	45.0	31.4	56.9	0.87	19.23
Buildings without water heating	Q	Q	Q	Q	Q	Q
<b>Cooking energy sources</b>						
District heat	Q	81.6	39.4	Q	1.81	22.18
Other excluding district heat	9,834	42.6	25.2	195.2	0.84	19.85
Buildings without cooking	4,993	60.4	66.6	91.3	1.10	18.28
<b>Energy end uses (more than one may apply)</b>						
Buildings with space heating	7,132	57.1	41.4	139.8	1.12	19.60
Buildings with cooling	7,648	57.1	41.0	150.6	1.12	19.69
Buildings with water heating	7,524	57.7	41.1	146.4	1.12	19.45
Buildings with cooking	12,402	54.2	30.1	259.2	1.13	20.90
Buildings with manufacturing	Q	Q	Q	Q	Q	Q
Buildings with electricity generation	13,761	55.5	42.2	256.8	1.03	18.66

**Table C38. District heat consumption and expenditure intensities, 2012**

	District heat consumption			District heat expenditures		
	per building (million Btu)	per square foot (thousand Btu)	per worker (million Btu)	per building (thousand dollars)	per square foot (dollars)	per million Btu (dollars)
All buildings	7,132	57.1	41.4	139.8	1.12	19.60
<b>Percent of floorspace heated</b>						
Not heated	Q	Q	Q	Q	Q	Q
1 to 50	Q	Q	Q	Q	Q	Q
51 to 99	5,887	35.0	23.4	134.6	0.80	22.87
100	7,448	63.6	46.2	142.8	1.22	19.18
<b>Heating equipment (more than one may apply)</b>						
Heat pumps	10,088	48.0	31.5	202.9	0.96	20.12
Furnaces	Q	Q	Q	Q	Q	Q
Individual space heaters	7,322	46.3	33.4	141.1	0.89	19.26
District heat	7,123	57.3	41.6	139.6	1.12	19.60
Boilers	Q	Q	Q	Q	Q	Q
Packaged heating units	12,810	60.0	35.4	248.8	1.17	19.42
Other	Q	Q	Q	Q	Q	Q
<b>Water-heating equipment</b>						
Centralized system	7,504	63.1	47.7	144.1	1.21	19.21
Distributed system	3,797	46.4	23.5	88.0	1.07	23.18
Combination of centralized and distributed system	10,340	49.8	35.2	197.4	0.95	19.09
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>						
Snack bar or concession stand	25,743	50.1	32.7	473.8	0.92	18.41
Fast food or small restaurant	26,948	51.1	28.3	504.2	0.96	18.71
Cafeteria or large restaurant	18,411	57.7	28.9	396.2	1.24	21.52
Commercial kitchen/ food preparation area	24,004	62.0	38.6	538.2	1.39	22.42
Small kitchen area	17,389	48.0	25.3	319.0	0.88	18.34
<b>HVAC conservation features (more than one may apply)</b>						
Economizer cycle	10,862	59.9	39.5	225.6	1.24	20.76
Regular HVAC maintenance	7,865	56.7	39.8	157.1	1.13	19.98
Building automation system (BAS) <sup>2</sup>	8,974	53.1	41.1	169.6	1.00	18.90
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>						
Heating	6,402	51.6	34.9	138.6	1.12	21.64
Cooling	6,687	51.6	34.0	141.6	1.09	21.18
Lighting	7,097	57.7	40.9	139.3	1.13	19.63

**Table C38. District heat consumption and expenditure intensities, 2012**

	District heat consumption			District heat expenditures		
	per building (million Btu)	per square foot (thousand Btu)	per worker (million Btu)	per building (thousand dollars)	per square foot (dollars)	per million Btu (dollars)
All buildings	7,132	57.1	41.4	139.8	1.12	19.60

<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/> • 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 D of the 2012 Commercial Buildings Energy Consumption Survey.

**Table E1. Major fuel consumption (Btu) by end use, 2012**

	Total major fuel consumption (trillion Btu)										
	Total	Space heat-ing	Cool-ing	Venti-lation	Water heat-ing	Light-ing	Cook-ing	Refrig-eration	Office equip-ment	Com-puting	Other
<b>All buildings</b>	6,963	1,756	656	668	507	724	517	670	172	405	857
<b>Building floorspace (square feet)</b>											
1,001 to 5,000	723	155	50	45	56	59	105	131	21	33	56
5,001 to 10,000	646	157	45	48	42	58	82	93	17	33	62
10,001 to 25,000	876	244	67	79	56	92	60	92	28	50	103
25,001 to 50,000	823	223	79	84	61	97	33	68	21	46	108
50,001 to 100,000	1,067	288	103	108	83	110	42	103	27	60	141
100,001 to 200,000	1,035	243	95	116	77	119	54	92	21	73	144
200,001 to 500,000	1,026	267	125	106	74	109	59	68	19	62	136
Over 500,000	767	178	92	82	57	80	81	23	19	48	106
<b>Principal building activity</b>											
Education	842	299	91	68	68	78	15	40	21	78	84
Food sales	262	31	6	12	3	16	29	147	2	2	14
Food service	514	46	30	31	43	19	199	114	7	4	21
Health care	718	210	79	82	82	61	52	19	17	34	82
Inpatient	549	164	67	46	78	40	47	14	12	21	59
Outpatient	169	46	12	37	4	21	4	4	5	13	23
Lodging	564	67	39	49	136	40	69	33	43	6	83
Mercantile	1,008	181	91	121	66	140	72	191	18	23	103
Retail (other than mall)	364	76	40	47	5	72	8	53	7	11	46
Enclosed and strip malls	644	106	52	75	61	68	64	139	11	12	57
Office	1,241	305	118	214	35	148	Q	28	37	167	153
Public assembly	480	189	86	24	7	35	14	25	7	16	72
Public order and safety	133	36	16	5	21	15	4	3	3	8	22
Religious worship	173	75	15	13	Q	9	11	4	3	3	26
Service	272	118	21	14	22	37	1	5	4	8	39
Warehouse and storage	429	116	35	13	11	85	Q	47	6	16	74
Other	286	69	26	16	2	37	Q	15	2	40	77
Vacant	41	13	2	4	Q	5	Q	1	(*)	1	8
<b>Year constructed</b>											
Before 1920	238	102	10	19	9	20	19	15	4	10	27
1920 to 1945	418	143	34	35	34	38	23	33	9	23	45
1946 to 1959	537	177	44	48	40	50	35	41	12	25	63
1960 to 1969	902	280	74	73	71	90	44	70	23	56	118
1970 to 1979	1,012	251	87	100	98	98	89	90	25	58	113
1980 to 1989	1,164	219	142	130	78	132	84	115	31	77	150
1990 to 1999	1,102	227	113	108	70	121	101	128	27	65	135
2000 to 2003	579	139	58	61	31	67	33	57	14	40	78
2004 to 2007	528	104	50	47	41	57	Q	66	15	25	62
2008 to 2012	484	114	46	49	35	50	33	54	12	26	64

**Table E1. Major fuel consumption (Btu) by end use, 2012**

	Total major fuel consumption (trillion Btu)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	6,963	1,756	656	668	507	724	517	670	172	405	857
<b>Census region and division</b>											
Northeast	1,459	503	89	134	100	134	91	121	27	81	176
New England	368	159	15	27	15	29	17	34	7	16	46
Middle Atlantic	1,092	344	73	107	85	105	74	87	21	65	130
Midwest	1,566	574	98	141	94	155	82	128	33	79	176
East North Central	1,131	431	67	100	67	109	58	91	22	55	126
West North Central	435	143	30	41	27	46	24	37	11	24	50
South	2,566	405	376	259	183	295	201	278	72	152	332
South Atlantic	1,358	203	199	140	92	154	103	154	42	89	174
East South Central	369	73	39	37	35	40	30	42	11	18	42
West South Central	839	128	138	82	56	101	67	82	19	45	116
West	1,372	275	94	134	129	139	143	143	40	93	173
Mountain	417	108	30	39	35	38	Q	35	13	22	44
Pacific	954	167	64	95	95	101	91	109	27	71	129
<b>Climate region<sup>1</sup></b>											
Very cold/Cold	2,746	1,011	135	246	165	257	170	237	58	138	317
Mixed-humid	2,270	522	228	221	182	243	179	217	61	138	270
Mixed-dry/Hot-dry	804	114	79	76	83	87	83	88	23	60	106
Hot-humid	947	63	207	103	60	117	72	109	25	53	135
Marine	197	46	7	22	17	21	12	18	5	17	29
<b>Number of floors</b>											
One	2,831	621	260	243	170	324	248	434	61	127	317
Two	1,460	383	125	139	103	154	104	132	36	101	180
Three	668	223	59	64	47	63	28	38	18	43	84
Four to nine	1,432	411	145	154	136	127	76	50	38	94	199
Ten or more	572	119	66	68	52	55	Q	16	19	41	77
<b>Elevators and escalators (more than one may apply)</b>											
Any elevators	3,183	853	328	349	261	304	200	136	83	237	428
Number of elevators											
One	884	265	72	95	74	88	46	52	24	58	108
Two to five	1,242	328	125	140	86	122	52	51	32	120	185
Six or more	1,058	259	132	115	101	94	102	33	28	59	135
Any escalators	377	73	45	43	25	42	Q	16	12	17	52
<b>Number of workers (main shift)</b>											
Fewer than 5	756	229	55	45	52	78	41	93	22	24	91
5 to 9	598	142	51	49	40	61	60	79	17	24	72
10 to 19	772	184	57	60	65	71	102	99	22	32	79
20 to 49	1,188	284	106	112	81	126	90	145	30	73	140
50 to 99	1,150	290	118	119	83	128	50	118	27	75	143
100 to 249	1,058	286	101	110	63	116	51	86	21	68	156
250 or more	1,441	341	168	172	123	143	124	50	34	109	177

**Table E1. Major fuel consumption (Btu) by end use, 2012**

	Total major fuel consumption (trillion Btu)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	6,963	1,756	656	668	507	724	517	670	172	405	857
<b>Weekly operating hours</b>											
Fewer than 40	229	95	20	8	10	17	11	15	6	12	25
40 to 48	832	256	87	74	36	99	19	40	27	82	107
49 to 60	1,258	371	127	138	49	150	33	64	33	121	168
61 to 84	1,370	330	128	148	88	143	123	173	25	65	143
85 to 167	1,098	253	89	92	59	106	130	212	13	27	112
Open continuously	2,177	450	204	209	265	209	201	166	67	97	302
<b>Ownership and occupancy</b>											
Nongovernment owned	5,375	1,236	485	530	385	571	448	602	136	293	663
Owner occupied	2,615	646	238	222	206	262	229	267	72	117	346
Leased to tenant(s)	2,041	410	180	230	136	229	180	268	48	122	225
Owner occupied and leased	709	176	67	78	42	79	38	67	16	54	92
Unoccupied	10	4	(*)	(*)	Q	Q	Q	Q	Q	Q	Q
Government owned	1,588	520	171	139	122	153	69	68	36	112	194
Federal	137	40	13	17	7	15	11	3	2	8	21
State	555	191	36	55	55	50	Q	23	13	34	64
Local	896	289	122	66	60	87	24	43	21	71	109
<b>Party responsible for operation and maintenance of energy systems</b>											
Building owner	5,808	1,517	557	561	415	606	403	476	149	357	738
Business owner or tenant	983	204	80	90	76	101	99	176	18	39	98
Property management	96	17	10	12	11	9	8	8	3	7	12
Other	75	18	8	5	6	7	8	10	2	2	9
<b>Provider of direct input on energy-related equipment purchases</b>											
Building owner	5,984	1,557	571	577	430	625	414	505	153	365	756
Business owner or tenant	766	156	65	70	58	78	81	133	14	32	78
Property management	61	12	6	8	5	7	5	5	2	3	8
Other	153	31	14	14	14	14	17	27	3	5	15
<b>Number of establishments</b>											
One	4,485	1,155	407	387	356	455	369	405	120	248	556
2 to 5	1,400	382	130	143	90	145	81	147	29	71	181
6 to 10	364	85	34	45	21	37	22	47	8	28	38
11 to 20	355	78	36	46	22	38	26	45	7	19	37
More than 20	347	51	48	47	17	48	19	26	7	39	44
Currently unoccupied	13	6	(*)	(*)	Q	(*)	Q	Q	Q	Q	Q
<b>Predominant exterior wall material</b>											
Brick, stone, or stucco	3,457	917	319	335	284	330	262	292	92	207	408
Concrete (block or poured)	1,720	366	178	163	127	186	130	232	39	81	214
Concrete panels	664	157	57	69	42	77	Q	47	18	50	91
Siding or shingles	400	106	28	35	26	39	40	46	11	19	45
Metal panels	428	137	43	32	13	64	9	31	7	22	61
Window glass	170	46	17	22	Q	17	5	7	3	21	23
Other	79	13	11	7	3	7	Q	Q	1	3	9
No one major type	45	15	3	5	2	5	Q	4	1	2	6

**Table E1. Major fuel consumption (Btu) by end use, 2012**

	Total major fuel consumption (trillion Btu)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	6,963	1,756	656	668	507	724	517	670	172	405	857
<b>Predominant roof material</b>											
Metal surfacing	865	209	92	65	39	115	56	98	21	45	112
Synthetic or rubber	2,442	667	210	245	164	243	181	228	55	144	302
Built-up	1,862	437	194	199	145	198	131	163	42	118	232
Slate or tile shingles	371	101	26	30	36	30	38	34	12	19	42
Wooden materials (including shingles)	92	26	6	6	9	7	12	12	2	3	8
Asphalt, fiberglass, or other shingles	1,105	276	100	99	97	107	86	113	35	56	130
Concrete	132	16	20	16	10	16	4	11	4	16	20
Other	58	11	6	5	4	5	7	9	1	2	8
No one major type	35	13	3	3	Q	4	Q	Q	1	2	5
<b>Roof characteristics</b>											
Roof tilt											
Flat	4,476	1,103	446	464	348	472	314	382	102	276	560
Shallow pitch	1,597	382	139	136	85	177	131	213	41	87	193
Steeper pitch	890	271	71	69	74	75	72	75	29	42	104
Cool roof	1,837	434	180	183	139	186	143	179	40	113	236
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>											
Any type of renovation	3,762	992	352	368	277	367	291	320	89	229	469
Addition or annex	1,292	365	131	113	109	118	123	84	32	59	158
Reduction in floorspace	226	50	20	23	Q	22	Q	18	4	9	23
Roof replacement	1,986	554	183	194	153	189	147	145	44	118	255
Exterior wall replacement	399	89	41	38	28	37	45	35	8	28	49
Interior wall reconfiguration	2,056	539	201	219	139	199	155	143	48	155	255
Window replacement	1,090	304	98	100	88	97	96	64	30	73	138
HVAC equipment upgrade	2,545	651	252	252	197	245	210	198	59	157	322
Lighting upgrade	2,440	662	221	235	183	227	195	208	56	147	305
Electrical upgrade	1,608	421	150	149	122	144	149	121	37	100	212
Plumbing system upgrade	1,397	365	120	129	119	116	143	99	35	86	183
Insulation upgrade	771	196	68	66	52	63	90	69	19	52	96
Fire, safety, or security upgrade	1,685	445	167	164	140	150	126	118	38	113	221
Structural upgrade	424	83	42	35	30	35	68	30	11	29	59
Other	69	19	9	9	3	8	1	3	2	6	9
No renovations	2,718	650	258	251	195	307	193	295	71	150	324
Buildings constructed 2008 or later	484	114	46	49	35	50	33	54	12	26	64
<b>Energy sources (more than one may apply)</b>											
Electricity	6,963	1,756	656	668	507	724	517	670	172	405	857
Natural gas	5,544	1,520	472	498	476	514	483	523	127	283	640
Fuel oil	2,231	587	243	226	161	222	151	116	51	157	313
District heat	808	256	39	83	82	68	90	23	19	40	108
District chilled water	665	207	18	68	68	58	79	18	16	40	94
Propane	583	122	49	47	35	64	Q	78	17	23	93
Other	301	85	27	31	15	30	15	26	5	16	51

**Table E1. Major fuel consumption (Btu) by end use, 2012**

	Total major fuel consumption (trillion Btu)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	6,963	1,756	656	668	507	724	517	670	172	405	857
<b>Space-heating energy sources (more than one may apply)</b>											
Electricity	3,898	779	430	408	271	432	286	435	106	246	497
Natural gas	4,446	1,396	361	393	337	414	312	419	95	226	487
Fuel oil	360	146	29	28	18	34	12	19	7	17	48
District heat	804	256	38	83	81	67	89	22	19	40	107
Propane	151	27	12	14	5	19	10	26	5	7	26
Other	48	13	2	5	2	7	Q	5	1	2	7
<b>Primary space-heating energy source</b>											
Electricity	1,846	106	258	216	139	237	166	236	64	149	271
Natural gas	3,871	1,297	309	339	268	360	242	361	78	197	414
Fuel oil	187	92	10	12	4	17	5	9	4	8	27
District heat	794	253	37	82	80	67	89	22	18	39	105
Propane	63	4	5	6	(*)	9	Q	17	2	3	11
Other	21	5	1	2	Q	4	Q	2	Q	1	4
<b>Cooling energy sources (more than one may apply)</b>											
Electricity	6,322	1,533	649	619	450	659	451	637	157	373	783
Natural gas	97	37	15	9	9	7	3	2	2	4	11
District chilled water	665	207	18	68	68	58	79	18	16	40	94
<b>Water-heating energy sources (more than one may apply)</b>											
Electricity	3,102	649	347	339	95	380	207	378	74	222	405
Natural gas	4,029	1,093	341	348	432	350	347	407	93	184	429
Fuel oil	174	75	12	12	6	14	8	10	4	7	25
District heat	652	188	33	67	74	56	81	17	16	31	89
Propane	87	6	10	8	(*)	9	6	24	3	3	15
<b>Cooking energy sources (more than one may apply)</b>											
Electricity	2,511	574	253	231	200	219	280	312	56	121	263
Natural gas	3,015	635	274	258	296	232	466	398	65	100	289
Propane	167	34	16	14	8	14	10	33	5	Q	22
<b>Energy end uses (more than one may apply)</b>											
Buildings with space heating	6,782	1,756	619	657	492	693	506	647	168	397	832
Buildings with cooling	6,774	1,679	656	665	493	699	511	650	169	401	838
Buildings with water heating	6,798	1,707	641	658	507	696	516	664	168	396	832
Buildings with cooking	4,079	897	390	364	357	340	517	528	94	171	420
Buildings with manufacturing	360	89	34	28	14	49	14	32	5	15	80
Buildings with electricity generation	2,803	688	292	287	206	274	183	211	65	195	401
<b>Percent of floorspace heated</b>											
Not heated	181	N	36	11	15	31	11	23	4	8	25
1 to 50	468	71	38	38	25	63	40	63	11	39	78
51 to 99	1,298	304	129	129	91	131	114	158	29	60	152
100	5,016	1,381	453	491	376	499	351	426	127	298	602

**Table E1. Major fuel consumption (Btu) by end use, 2012**

	Total major fuel consumption (trillion Btu)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	6,963	1,756	656	668	507	724	517	670	172	405	857
<b>Percent of floorspace cooled</b>											
Not cooled	189	78	N	3	13	24	5	20	3	4	19
1 to 50	989	363	42	65	57	122	49	82	19	40	147
51 to 99	2,143	553	192	214	154	206	156	231	49	138	247
100	3,642	763	421	385	283	370	306	336	102	224	444
<b>Percent lit when open</b>											
Zero	4	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
1 to 50	642	182	54	61	47	50	34	49	23	27	105
51 to 99	3,049	828	274	295	230	284	204	307	72	175	375
100	3,244	733	326	311	229	387	278	314	77	203	374
<b>Building never open/electricity not used</b>											
24	13	1	(*)	Q	Q	Q	Q	Q	Q	Q	Q
<b>Percent lit during off hours</b>											
Zero	1,293	394	117	116	59	126	71	102	32	94	161
1 to 50	4,346	1,105	427	432	312	463	294	418	106	251	531
51 to 100	1,018	208	80	88	108	98	134	105	23	47	123
<b>Building always open with no "off hours"</b>											
306	49	31	32	28	36	18	44	11	13	41	
Electricity not used	N	N	N	N	N	N	N	N	N	N	N
<b>Heating equipment (more than one may apply)</b>											
Heat pumps	899	143	117	86	84	97	70	87	34	62	117
Furnaces	615	179	47	53	37	58	55	68	18	32	67
Individual space heaters	1,572	471	129	148	114	166	81	132	42	84	201
District heat	804	256	38	83	81	67	89	22	19	40	107
Boilers	2,262	741	217	211	198	197	106	123	52	137	279
Packaged heating units	4,083	925	411	419	260	431	345	493	91	222	479
Other	191	33	9	18	12	15	21	62	2	3	16
<b>Cooling equipment (more than one may apply)</b>											
Residential-type central air conditioners	1,086	281	93	75	81	108	98	144	29	47	128
Heat pumps	939	154	115	93	85	104	66	96	34	66	123
Individual air conditioners	1,013	298	97	81	106	89	64	70	34	47	125
District chilled water	665	207	18	68	68	58	79	18	16	40	94
Central chillers	1,853	481	234	210	143	179	85	80	43	147	249
Packaged air conditioning units	3,972	957	403	415	265	404	320	452	85	202	463
Swamp coolers	176	45	14	14	16	16	21	23	3	6	17
Other	45	9	4	5	2	5	Q	1	(*)	Q	7

**Table E1. Major fuel consumption (Btu) by end use, 2012**

	Total major fuel consumption (trillion Btu)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	6,963	1,756	656	668	507	724	517	670	172	405	857
<b>Main equipment replaced since 1990 (more than one may apply)</b>											
Heating	2,164	551	199	202	170	215	159	222	58	135	249
Cooling	2,521	650	252	235	204	243	182	233	68	158	292
<b>Water-heating equipment</b>											
Centralized system	4,210	1,109	377	391	335	415	347	387	111	230	499
Distributed system	832	192	82	83	43	105	46	75	19	55	130
Combination of centralized and distributed system	1,756	406	182	185	129	176	124	202	38	111	203
<b>Lighting equipment types (more than one may apply)</b>											
Incandescent	3,540	878	353	336	287	340	321	344	86	184	403
Standard fluorescent	6,714	1,698	632	650	491	693	492	649	166	394	830
Compact fluorescent	5,094	1,265	497	507	407	493	426	451	129	305	610
High-intensity discharge (HID)	2,187	557	227	215	159	229	173	190	49	112	272
Halogen	2,695	636	275	271	206	266	240	272	64	138	323
LED	2,363	561	242	248	174	220	206	251	52	117	292
Other	59	16	9	5	4	4	4	6	1	2	6
<b>Refrigeration equipment (more than one may apply)</b>											
Any refrigeration	6,471	1,600	610	623	486	647	517	670	159	365	788
Walk-in units	3,525	733	329	309	307	283	451	547	73	130	361
Cases or cabinets	3,316	697	291	307	273	282	400	523	70	126	346
Large cold storage areas	530	102	40	37	32	42	61	145	7	13	53
Commercial ice makers	3,731	789	370	357	335	326	416	457	91	172	418
Residential-type or compact units	5,183	1,383	499	513	388	537	332	413	131	324	657
Vending machines	4,178	1,034	418	430	337	439	273	379	102	243	524
No refrigeration	492	156	45	46	21	77	Q	N	13	40	69
<b>Office equipment (more than one may apply)</b>											
Desktop computers	6,586	1,657	629	647	483	687	473	620	163	399	828
With flat screen monitors	6,523	1,644	624	641	478	678	466	614	162	398	817
With multiple monitors	2,942	745	296	321	195	298	216	212	69	233	358
Laptop computers	5,466	1,411	545	556	403	570	354	427	136	363	700
Dedicated servers	4,784	1,169	476	496	340	498	328	425	115	341	596
Laser printers	4,795	1,239	451	488	346	495	316	428	126	316	590
Inkjet printers	2,903	707	298	273	200	306	228	280	66	161	384
FAX machines	5,706	1,425	554	574	404	612	399	541	140	345	710
Photocopiers	5,110	1,342	509	528	357	540	305	387	132	344	665

**Table E1. Major fuel consumption (Btu) by end use, 2012**

	Total major fuel consumption (trillion Btu)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	6,963	1,756	656	668	507	724	517	670	172	405	857
<b>Number of desktop computers</b>											
None	377	99	27	22	24	36	44	50	9	Q	29
1 to 4	1,184	270	82	82	104	106	162	189	30	22	135
5 to 9	738	192	60	62	44	77	55	106	20	27	95
10 to 19	676	173	58	69	41	79	31	79	17	41	87
20 to 49	1,121	269	118	118	86	131	52	117	29	55	146
50 to 99	645	165	69	73	44	77	36	45	16	41	80
100 to 249	961	249	82	99	76	101	Q	48	25	81	131
250 or more	1,261	339	160	144	89	116	67	35	27	132	152
<b>Number of laptop computers</b>											
None	1,497	345	111	112	103	154	162	243	36	43	157
1 to 4	1,516	394	137	125	101	165	120	181	40	60	192
5 to 9	698	157	65	73	59	81	58	70	16	32	85
10 to 19	719	169	82	79	66	75	42	63	16	38	88
20 to 49	907	244	73	96	68	91	70	56	25	74	111
50 to 99	506	149	55	53	31	51	14	22	11	37	83
100 to 249	525	152	51	58	38	50	21	17	12	61	66
250 or more	596	147	83	72	40	57	29	18	15	60	74
<b>Number of dedicated servers</b>											
None	2,179	588	180	172	167	225	189	245	57	64	261
1 to 4	2,718	657	246	266	206	295	191	309	68	136	345
5 to 9	565	138	54	60	40	59	47	55	12	35	67
10 to 19	593	140	66	74	29	63	Q	34	16	51	77
20 to 49	396	113	51	45	26	39	16	13	9	36	48
50 or more	512	122	59	51	38	42	32	14	10	83	60
<b>Number of photocopiers</b>											
None	1,854	414	147	141	150	184	212	282	40	62	191
One	1,202	325	103	102	88	127	80	143	31	49	154
2 to 4	1,596	428	156	167	102	178	67	137	45	104	211
5 to 9	784	187	76	84	50	92	56	58	17	66	97
10 or more	1,527	401	174	174	117	143	101	49	39	124	204
<b>Number of TVs or video displays</b>											
None	1,214	348	89	97	53	145	72	140	14	73	152
One	697	207	54	59	40	74	52	84	13	32	83
2 to 4	1,311	352	123	125	64	146	85	136	27	67	186
5 to 9	777	178	79	80	45	78	64	91	17	58	87
10 to 19	810	185	81	91	57	84	76	76	16	54	89
20 to 49	717	153	81	86	50	80	43	73	21	46	84
50 to 99	432	105	39	43	44	43	18	29	19	38	52
100 or more	1,006	227	109	87	156	73	107	41	46	37	123

**Table E1. Major fuel consumption (Btu) by end use, 2012**

	Total major fuel consumption (trillion Btu)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	6,963	1,756	656	668	507	724	517	670	172	405	857
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>											
Snack bar or concession stand	1,112	266	124	99	79	93	121	131	25	51	123
Fast food or small restaurant	1,206	217	120	122	92	113	141	202	29	43	127
Cafeteria or large restaurant	1,624	400	185	156	163	138	167	105	41	87	181
Commercial kitchen/ food preparation area	1,798	421	184	157	196	142	190	200	47	64	196
Small kitchen area	1,187	314	129	106	90	103	104	108	33	54	145
<b>Separate computer areas (more than one may apply)</b>											
Data center or server farm	1,356	345	171	141	89	124	93	46	31	151	163
Computer-based training room	1,696	426	196	177	118	174	124	123	39	123	197
Student or public computer center	1,275	374	130	114	121	111	90	79	36	78	141
<b>HVAC conservation features (more than one may apply)</b>											
Economizer cycle	3,142	824	295	343	221	312	236	237	66	200	406
Regular HVAC maintenance	6,203	1,538	604	620	455	640	463	576	151	377	769
Building automation system (BAS) <sup>2</sup>	3,709	896	389	403	262	379	243	311	81	253	488
<b>Window and interior lighting features (more than one may apply)</b>											
Multipaned windows	5,250	1,346	476	516	382	524	405	515	131	307	634
Tinted window glass	3,973	937	411	408	290	416	305	364	95	240	501
Reflective window glass	1,652	368	174	174	121	163	147	154	41	118	191
External overhangs or awnings	3,089	702	283	296	233	295	317	381	74	158	346
Skylights or atriums	2,010	534	187	205	147	197	178	142	45	105	268
Light scheduling	2,930	668	299	318	194	284	235	327	67	183	351
Occupancy sensors	3,434	880	344	362	225	331	224	310	77	224	452
Multi-level lighting or dimming	1,618	360	156	161	141	132	186	182	39	72	188
Daylight harvesting	619	160	61	68	31	61	44	64	12	29	89
Demand responsive lighting	410	77	42	45	32	44	33	65	9	16	44
Building automation system (BAS) for lighting <sup>2</sup>	1,201	246	131	144	65	130	80	165	21	71	147
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>											
Heating	5,022	1,324	485	502	328	509	364	480	118	296	603
Cooling	5,008	1,268	516	508	336	511	367	476	119	297	602
Lighting	6,426	1,658	606	620	460	664	478	595	156	376	791

**Table E1. Major fuel consumption (Btu) by end use, 2012**

Total major fuel consumption (trillion Btu)

	Total	Space heat-ing	Cool-ing	Venti-lation	Water heat-ing	Light-ing	Cook-ing	Refrig-eration	Office equip-ment	Com-puting	Other
All buildings	6,963	1,756	656	668	507	724	517	670	172	405	857

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

Release date: May 2016

**Table E2. Major fuel consumption intensities (Btu) by end use, 2012**

Major fuel energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using any major fuel for the end use)											
	Total	Space heat-ing	Cool-ing	Venti-lation	Water heat-ing	Light-ing	Cook-ing	Refrig-eration	Office equip-ment	Com-puting	Other
<b>All buildings</b>	82.0	22.3	8.6	8.1	6.5	8.7	13.8	9.1	2.1	5.2	10.5
<b>Building floorspace (square feet)</b>											
1,001 to 5,000	96.5	24.3	8.2	6.5	9.5	8.3	54.2	24.0	3.4	5.9	8.9
5,001 to 10,000	76.1	21.7	6.2	6.1	6.1	7.1	32.7	14.2	2.3	4.7	8.4
10,001 to 25,000	64.6	19.6	5.5	6.0	4.7	6.9	15.0	8.4	2.2	4.1	8.0
25,001 to 50,000	70.5	20.8	7.4	7.4	5.6	8.4	9.0	6.8	1.9	4.3	9.5
50,001 to 100,000	78.5	22.2	8.1	8.1	6.4	8.1	6.3	8.4	2.0	4.5	10.5
100,001 to 200,000	83.7	20.4	8.6	9.5	6.5	9.7	8.4	8.1	1.7	6.0	11.7
200,001 to 500,000	96.3	25.8	12.5	10.0	7.2	10.3	8.5	6.8	1.8	5.9	12.9
Over 500,000	109.1	26.5	14.6	11.8	8.2	11.4	15.3	3.2	2.7	6.9	15.1
<b>Principal building activity</b>											
Education	68.8	25.0	8.5	5.6	5.7	6.3	1.8	3.6	1.8	6.4	6.9
Food sales	209.5	26.9	5.3	9.4	2.6	12.4	31.6	117.6	1.6	2.0	11.2
Food service	282.7	27.2	18.0	17.2	25.3	10.2	120.9	62.4	4.1	2.7	11.7
Health care	172.7	51.5	19.8	19.9	19.8	14.7	20.0	4.6	4.0	8.2	19.7
Inpatient	231.1	70.2	30.0	19.3	33.0	16.7	21.8	6.0	5.1	9.0	24.9
Outpatient	94.8	26.4	6.9	20.7	2.3	11.9	10.5	2.6	2.5	7.2	12.7
Lodging	96.9	11.8	7.4	8.4	24.2	6.8	16.9	5.7	7.5	1.2	14.4
Mercantile	89.0	17.1	8.2	10.8	6.1	12.4	11.3	18.5	1.6	2.1	9.1
Retail (other than mall)	67.0	15.5	7.6	8.6	0.9	13.3	4.5	11.8	1.3	2.0	8.5
Enclosed and strip malls	109.3	18.6	8.8	12.7	10.4	11.5	13.9	23.6	1.8	2.1	9.6
Office	77.8	19.5	7.8	13.4	2.3	9.2	Q	2.0	2.3	10.5	9.6
Public assembly	86.3	36.9	18.6	4.4	1.4	6.4	5.3	5.0	1.4	3.0	13.9
Public order and safety	92.2	27.2	11.4	3.7	16.3	10.8	4.1	2.1	2.2	5.4	15.5
Religious worship	38.0	17.2	3.6	2.9	Q	2.1	3.5	0.9	0.9	0.8	6.3
Service	60.3	29.4	5.4	3.4	6.0	8.4	1.8	1.3	1.0	2.0	9.3
Warehouse and storage	34.1	11.7	3.4	1.2	1.1	7.0	Q	5.4	0.6	1.5	6.9
Other	145.1	36.9	14.4	8.5	1.2	19.3	Q	8.5	1.3	22.1	39.5
Vacant	24.4	9.5	2.2	3.1	0.8	4.4	Q	1.3	0.5	1.3	7.5
<b>Year constructed</b>											
Before 1920	62.7	29.0	3.6	5.3	2.8	5.5	13.0	5.0	1.3	3.2	7.8
1920 to 1945	71.3	26.1	6.6	6.2	6.6	6.6	8.4	6.8	1.7	4.4	8.0
1946 to 1959	74.5	26.0	6.6	6.9	6.4	7.1	10.7	6.5	1.7	3.9	9.0
1960 to 1969	88.4	29.0	8.2	7.4	7.4	9.0	9.6	7.9	2.3	5.9	11.8
1970 to 1979	95.8	25.6	9.2	9.6	9.8	9.5	19.4	10.0	2.5	5.9	10.9
1980 to 1989	78.7	16.2	10.2	9.0	5.7	9.0	13.0	9.0	2.2	5.5	10.6
1990 to 1999	84.0	18.7	9.5	8.5	5.8	9.4	16.2	11.1	2.2	5.3	10.8
2000 to 2003	80.5	21.0	8.9	8.7	4.5	9.4	11.7	8.8	2.0	5.7	11.2
2004 to 2007	81.4	17.8	8.6	7.6	7.0	8.9	Q	11.7	2.5	4.1	10.3
2008 to 2012	85.6	21.0	8.9	8.8	6.9	9.0	14.2	10.9	2.2	4.9	11.6

**Table E2. Major fuel consumption intensities (Btu) by end use, 2012**

**Major fuel energy intensity<sup>1</sup>**  
**(thousand Btu/square foot in buildings using any major fuel for the end use)**

	Total	Space heat-ing	Cool-ing	Venti-lation	Water heat-ing	Light-ing	Cook-ing	Refrig-eration	Office equip-ment	Com-puting	Other
<b>All buildings</b>	82.0	22.3	8.6	8.1	6.5	8.7	13.8	9.1	2.1	5.2	10.5
<b>Census region and division</b>											
Northeast	95.4	34.1	6.6	9.0	7.0	8.9	11.8	8.9	1.9	5.6	11.8
New England	87.7	41.0	4.5	6.7	3.9	7.3	10.2	9.5	1.7	4.2	11.6
Middle Atlantic	98.4	31.6	7.3	9.8	8.0	9.5	12.3	8.6	1.9	6.1	11.9
Midwest	84.4	32.5	5.8	7.8	5.5	8.5	9.6	7.7	1.9	4.6	9.8
East North Central	90.2	35.6	5.9	8.2	5.6	8.9	9.5	8.0	1.9	4.7	10.3
West North Central	72.3	25.7	5.7	7.0	5.1	7.9	9.6	7.0	1.9	4.5	8.7
South	77.7	13.4	12.5	8.1	6.1	9.1	14.3	9.7	2.3	5.0	10.4
South Atlantic	77.1	12.9	12.1	8.1	5.8	8.8	13.5	10.1	2.5	5.4	10.3
East South Central	76.5	15.9	9.0	7.8	7.7	8.5	13.9	9.2	2.5	4.1	9.1
West South Central	79.2	13.0	14.9	8.2	5.9	9.7	16.1	9.2	1.9	4.8	11.3
West	76.2	16.9	5.9	7.8	7.9	7.8	19.9	9.7	2.3	5.6	10.1
Mountain	86.7	23.3	7.2	8.3	8.0	8.1	Q	8.3	2.9	5.0	9.6
Pacific	72.4	14.4	5.4	7.6	7.9	7.7	19.0	10.3	2.2	5.8	10.3
<b>Climate region<sup>2</sup></b>											
Very cold/Cold	87.8	34.0	4.9	8.1	5.7	8.4	11.9	8.6	2.0	4.8	10.5
Mixed-humid	82.8	19.8	9.1	8.2	7.2	9.0	13.7	9.0	2.4	5.4	10.2
Mixed-dry/Hot-dry	68.4	11.0	7.5	6.8	7.9	7.4	20.8	9.4	2.1	5.6	9.6
Hot-humid	78.9	6.2	18.7	8.9	5.6	9.8	14.4	10.6	2.2	4.7	11.6
Marine	81.4	20.0	3.2	9.7	7.5	8.7	12.7	8.9	2.1	7.6	12.9
<b>Number of floors</b>											
One	74.4	18.4	7.7	6.7	5.2	8.7	18.3	14.0	1.8	3.8	9.0
Two	73.3	20.0	6.7	7.1	5.5	7.8	11.8	7.4	1.9	5.3	9.2
Three	82.5	28.7	8.0	8.1	6.0	7.9	7.6	5.3	2.3	5.5	10.5
Four to nine	106.7	31.7	12.7	11.7	10.4	9.6	10.5	4.0	2.9	7.2	15.0
Ten or more	106.5	22.5	13.3	12.6	9.8	10.2	14.6	3.1	3.5	7.7	14.4
<b>Elevators and escalators (more than one may apply)</b>											
Any elevators	99.7	27.4	11.4	11.0	8.4	9.6	10.9	4.6	2.6	7.5	13.5
Number of elevators											
One	79.5	24.6	7.2	8.6	6.9	7.9	8.3	5.0	2.2	5.3	9.8
Two to five	97.7	26.4	10.9	11.0	6.9	9.7	8.4	4.4	2.6	9.6	14.7
Six or more	130.4	32.9	17.7	14.1	12.6	11.6	15.4	4.2	3.4	7.3	16.6
Any escalators	103.5	20.8	13.9	11.8	7.0	11.6	Q	4.8	3.3	4.6	14.5
<b>Number of workers (main shift)</b>											
Fewer than 5	48.7	18.7	4.8	3.4	4.6	5.5	10.7	9.0	2.0	2.4	7.6
5 to 9	66.6	17.2	6.3	5.7	5.0	6.8	24.6	10.6	1.9	2.9	8.3
10 to 19	80.3	20.9	6.2	6.4	7.2	7.4	33.8	12.1	2.3	3.4	8.4
20 to 49	81.8	20.2	7.7	7.8	5.8	8.7	14.1	11.1	2.1	5.1	9.7
50 to 99	85.3	22.2	9.2	8.8	6.3	9.5	6.9	9.3	2.0	5.5	10.6
100 to 249	96.7	26.5	10.0	10.0	5.8	10.7	8.3	8.2	1.9	6.3	14.3
250 or more	122.0	29.5	15.5	14.6	10.6	12.1	14.6	4.4	2.8	9.2	15.0

**Table E2. Major fuel consumption intensities (Btu) by end use, 2012**

**Major fuel energy intensity<sup>1</sup>**  
 (thousand Btu/square foot in buildings using any major fuel for the end use)

	Total	Space heat-ing	Cool-ing	Venti-lation	Water heat-ing	Light-ing	Cook-ing	Refrig-eration	Office equip-ment	Com-puting	Other
<b>All buildings</b>	82.0	22.3	8.6	8.1	6.5	8.7	13.8	9.1	2.1	5.2	10.5
<b>Weekly operating hours</b>											
Fewer than 40	34.9	17.4	4.1	1.4	2.0	3.1	3.8	3.4	1.4	3.0	5.3
40 to 48	52.9	17.5	6.2	4.8	2.5	6.3	3.9	3.0	1.8	5.5	7.1
49 to 60	61.6	19.5	6.8	6.9	2.6	7.3	4.9	3.7	1.7	6.2	8.4
61 to 84	86.7	22.1	8.6	9.5	5.8	9.0	15.4	11.9	1.6	4.3	9.3
85 to 167	117.3	29.4	10.5	10.2	6.7	11.4	29.3	25.0	1.5	3.1	12.5
Open continuously	128.1	28.0	13.4	12.6	16.6	12.4	19.0	10.6	4.1	6.1	18.1
<b>Ownership and occupancy</b>											
Nongovernment owned	81.9	20.5	8.2	8.4	6.5	8.9	17.2	10.8	2.2	4.9	10.5
Owner occupied	86.3	23.2	8.8	7.6	7.6	8.8	17.9	10.0	2.5	4.3	11.7
Leased to tenant(s)	79.1	17.4	7.6	9.3	5.7	9.0	19.6	12.5	2.0	5.1	9.2
Owner occupied and leased	80.4	21.2	7.9	8.9	5.0	9.0	9.6	8.6	1.8	6.2	10.5
Unoccupied	15.4	8.7	1.7	0.1	Q	1.9	Q	Q	Q	Q	6.4
Government owned	82.5	28.0	10.2	7.3	6.7	8.0	6.1	3.9	1.9	6.0	10.3
Federal	87.3	26.1	9.4	10.9	4.5	9.7	12.1	1.9	1.2	4.8	13.1
State	100.4	35.5	8.7	10.2	10.5	9.3	Q	4.6	2.4	6.4	11.8
Local	73.7	24.8	10.9	5.5	5.3	7.2	3.0	3.8	1.8	6.0	9.3
<b>Party responsible for operation and maintenance of energy systems</b>											
Building owner	81.0	22.8	8.8	8.1	6.3	8.6	12.6	7.7	2.2	5.4	10.7
Business owner or tenant	88.3	19.5	7.5	8.2	7.2	9.2	22.1	17.6	1.7	3.6	9.0
Property management	77.3	15.7	9.1	9.9	9.3	7.5	13.3	7.2	2.8	6.0	9.6
Other	91.2	23.0	10.3	6.5	7.8	8.2	17.3	12.9	2.3	3.0	11.2
<b>Provider of direct input on energy-related equipment purchases</b>											
Building owner	80.7	22.6	8.6	8.0	6.4	8.6	12.6	7.9	2.2	5.3	10.6
Business owner or tenant	93.9	20.4	8.4	8.7	7.5	9.6	24.6	17.9	1.8	4.1	9.6
Property management	68.8	16.9	6.7	9.5	6.2	7.6	9.9	6.8	2.2	4.0	9.3
Other	90.9	20.4	9.1	8.2	8.9	8.2	21.3	17.4	1.9	3.0	9.0
<b>Number of establishments</b>											
One	82.3	23.2	8.5	7.4	7.3	8.5	15.9	8.6	2.4	5.0	10.7
2 to 5	78.9	22.5	7.7	8.1	5.4	8.2	11.4	9.4	1.7	4.1	10.3
6 to 10	84.3	20.0	8.1	10.5	5.1	8.5	10.7	12.3	1.9	6.5	8.8
11 to 20	96.6	21.9	10.1	12.5	6.1	10.4	11.2	13.1	2.0	5.3	10.0
More than 20	91.4	14.3	13.2	12.4	4.5	12.6	6.8	7.4	1.9	10.2	11.5
Currently unoccupied	15.2	9.9	1.6	0.1	Q	1.6	Q	Q	Q	Q	5.7
<b>Predominant exterior wall material</b>											
Brick, stone, or stucco	87.3	24.2	8.9	8.6	7.6	8.4	13.0	8.2	2.4	5.5	10.6
Concrete (block or poured)	84.3	19.6	9.5	8.2	6.7	9.2	13.5	12.9	2.0	4.2	10.7
Concrete panels	78.6	19.7	7.3	8.3	5.3	9.2	Q	6.5	2.2	6.2	11.1
Siding or shingles	71.9	20.9	5.8	6.6	5.5	7.1	20.7	10.2	2.1	4.1	8.9
Metal panels	53.1	21.4	6.9	4.5	2.3	8.5	6.1	5.3	1.1	3.3	8.6
Window glass	127.0	34.5	14.3	16.5	Q	12.8	7.3	5.7	2.5	15.9	17.5
Other	92.7	15.0	14.9	7.7	3.0	7.6	Q	15.9	1.6	5.0	11.3
No one major type	76.1	26.1	5.7	8.2	4.2	8.0	Q	7.2	1.7	4.0	10.2

**Table E2. Major fuel consumption intensities (Btu) by end use, 2012**

**Major fuel energy intensity<sup>1</sup>**  
 (thousand Btu/square foot in buildings using any major fuel for the end use)

	Total	Space heat-ing	Cool-ing	Venti-lation	Water heat-ing	Light-ing	Cook-ing	Refrig-eration	Office equip-ment	Com-puting	Other
<b>All buildings</b>	82.0	22.3	8.6	8.1	6.5	8.7	13.8	9.1	2.1	5.2	10.5
<b>Predominant roof material</b>											
Metal surfacing	57.6	17.1	7.5	4.8	3.3	8.0	14.2	8.5	1.6	3.5	8.3
Synthetic or rubber	95.3	26.7	8.8	9.7	6.6	9.6	14.7	9.7	2.2	5.8	11.9
Built-up	87.4	21.4	9.9	9.5	7.1	9.4	11.6	8.7	2.0	5.8	11.1
Slate or tile shingles	87.9	26.0	8.0	7.4	9.3	7.0	19.0	8.8	3.0	5.1	10.6
Wooden materials (including shingles)	83.7	28.4	6.2	5.6	9.5	6.3	40.0	13.7	2.4	3.4	7.8
Asphalt, fiberglass, or other shingles	75.3	19.8	7.3	6.9	7.3	7.4	13.5	8.9	2.5	4.2	9.3
Concrete	83.6	13.1	13.5	11.2	7.2	10.3	7.1	8.3	2.4	11.0	12.7
Other	85.6	17.1	9.0	7.8	5.8	7.7	13.6	14.7	1.6	3.3	11.3
No one major type	53.7	22.7	4.1	3.8	Q	5.4	Q	Q	1.0	2.7	7.2
<b>Roof characteristics</b>											
Roof tilt											
Flat	91.8	23.8	9.9	9.7	7.5	9.8	13.7	8.8	2.2	5.9	11.7
Shallow pitch	69.4	18.8	7.1	6.3	4.3	7.8	16.7	11.2	1.9	4.3	9.0
Steeper pitch	68.0	22.4	6.3	5.5	6.3	5.8	10.9	6.7	2.5	3.7	8.6
Cool roof	94.8	23.0	10.0	9.5	7.5	9.7	13.6	10.3	2.1	6.0	12.4
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>											
Any type of renovation	89.8	24.7	9.1	8.9	7.0	8.9	13.9	8.4	2.2	5.7	11.4
Addition or annex	99.6	28.8	10.6	8.7	8.6	9.1	15.8	6.9	2.5	4.6	12.3
Reduction in floorspace	130.2	30.2	13.7	13.2	16.0	13.0	Q	11.0	2.2	5.6	13.0
Roof replacement	95.6	27.5	9.4	9.5	7.7	9.2	12.3	7.5	2.1	5.9	12.5
Exterior wall replacement	94.4	21.8	10.1	9.1	6.8	8.7	18.1	8.9	2.0	6.8	11.8
Interior wall reconfiguration	96.8	26.3	10.1	10.4	6.8	9.5	14.8	7.3	2.3	7.5	12.1
Window replacement	89.0	25.6	8.6	8.3	7.5	8.0	14.4	5.7	2.5	6.3	11.4
HVAC equipment upgrade	95.5	25.3	10.0	9.5	7.7	9.2	14.1	8.0	2.2	6.1	12.2
Lighting upgrade	96.0	26.9	9.3	9.3	7.5	9.0	14.2	8.7	2.2	5.9	12.1
Electrical upgrade	99.9	27.2	10.0	9.4	7.9	9.0	17.3	8.2	2.3	6.5	13.3
Plumbing system upgrade	101.2	27.2	9.2	9.5	9.0	8.5	18.5	7.6	2.6	6.5	13.3
Insulation upgrade	102.1	27.0	10.0	8.8	7.3	8.4	22.0	9.8	2.6	7.1	12.8
Fire, safety, or security upgrade	98.2	27.0	10.4	9.7	8.5	8.8	12.6	7.4	2.3	6.8	13.0
Structural upgrade	108.4	22.2	12.3	9.0	8.0	8.9	30.0	8.2	2.9	7.7	15.4
Other	81.7	25.0	12.3	10.5	4.2	9.2	2.9	4.5	2.1	7.7	11.0
No renovations	72.9	19.6	7.9	7.1	5.9	8.4	13.6	9.7	2.1	4.5	9.3
Buildings constructed 2008 or later	85.6	21.0	8.9	8.8	6.9	9.0	14.2	10.9	2.2	4.9	11.6
<b>Energy sources (more than one may apply)</b>											
Electricity	82.0	22.3	8.6	8.1	6.5	8.7	13.8	9.1	2.1	5.2	10.5
Natural gas	94.4	26.2	8.5	8.5	8.4	8.8	15.6	9.8	2.2	5.0	11.0
Fuel oil	110.5	30.0	13.3	11.3	8.3	11.1	12.4	6.1	2.6	8.0	15.7
District heat	135.5	43.0	11.1	14.1	14.0	11.5	28.4	4.0	3.3	6.9	18.2
District chilled water	144.4	45.5	11.1	14.7	15.1	12.8	38.0	4.2	3.5	8.8	20.4
Propane	75.9	19.6	7.2	6.3	5.7	8.3	Q	11.1	2.4	3.1	12.4
Other	79.2	24.1	7.6	8.2	4.4	7.9	7.9	7.1	1.4	4.2	13.7

**Table E2. Major fuel consumption intensities (Btu) by end use, 2012**

**Major fuel energy intensity<sup>1</sup>**  
(thousand Btu/square foot in buildings using any major fuel for the end use)

	Total	Space heat-ing	Cool-ing	Venti-lation	Water heat-ing	Light-ing	Cook-ing	Refrig-eration	Office equip-ment	Com-puting	Other
<b>All buildings</b>	82.0	22.3	8.6	8.1	6.5	8.7	13.8	9.1	2.1	5.2	10.5
<b>Space-heating energy sources (more than one may apply)</b>											
Electricity	79.5	15.9	9.1	8.3	5.8	8.9	12.3	9.8	2.2	5.2	10.3
Natural gas	89.8	28.2	7.6	8.0	7.0	8.4	12.7	9.4	2.0	4.8	10.0
Fuel oil	82.7	33.6	8.0	6.4	4.3	8.0	5.9	4.8	1.8	4.4	11.4
District heat	135.7	43.2	11.1	14.0	14.0	11.6	28.5	4.0	3.3	6.9	18.2
Propane	49.6	13.1	4.6	4.6	2.4	6.2	10.6	9.5	1.8	2.5	9.0
Other	49.2	17.3	2.1	5.4	2.3	6.7	10.8	6.1	1.3	2.0	7.9
<b>Primary space-heating energy source</b>											
Electricity	70.4	4.0	10.2	8.2	5.6	9.1	15.2	10.3	2.5	6.0	10.5
Natural gas	90.1	30.2	7.5	7.9	6.5	8.4	11.4	9.3	1.9	4.8	9.8
Fuel oil	73.7	36.1	5.1	4.7	1.7	6.8	5.3	4.2	1.7	3.7	10.9
District heat	137.0	43.7	11.2	14.2	14.1	11.7	29.4	4.1	3.2	7.0	18.3
Propane	32.3	3.9	3.0	3.2	0.2	4.7	9.6	10.3	1.3	1.6	6.5
Other	36.3	12.5	1.7	3.6	Q	6.5	Q	4.2	1.7	2.4	7.9
<b>Cooling energy sources (more than one may apply)</b>											
Electricity	83.1	21.1	8.5	8.1	6.2	8.7	12.7	9.3	2.1	5.1	10.4
Natural gas	133.2	49.9	20.2	11.7	12.1	9.5	11.6	3.2	2.3	5.1	14.7
District chilled water	144.4	45.5	11.1	14.7	15.1	12.8	38.0	4.2	3.5	8.8	20.4
<b>Water-heating energy sources (more than one may apply)</b>											
Electricity	72.5	16.1	8.5	8.0	2.2	8.9	11.3	9.9	1.8	5.4	9.6
Natural gas	101.9	28.0	9.0	8.9	10.9	8.9	14.9	11.1	2.4	4.8	11.0
Fuel oil	91.1	41.8	7.1	6.8	3.2	7.1	8.0	5.6	2.2	3.8	13.3
District heat	143.3	41.3	12.1	14.7	16.3	12.3	31.2	3.9	3.5	6.9	19.7
Propane	55.1	6.2	7.3	5.2	0.7	5.9	11.9	16.5	2.2	2.3	9.8
<b>Cooking energy sources (more than one may apply)</b>											
Electricity	99.8	23.6	10.5	9.2	8.1	8.7	11.1	12.4	2.2	4.9	10.5
Natural gas	121.7	26.0	11.5	10.4	12.0	9.4	18.8	16.1	2.6	4.1	11.7
Propane	83.4	22.0	8.8	7.1	5.5	6.9	10.3	16.3	2.7	Q	11.3
<b>Energy end uses (more than one may apply)</b>											
Buildings with space heating	84.7	22.3	8.4	8.2	6.5	8.7	13.8	9.1	2.2	5.2	10.6
Buildings with cooling	85.4	22.1	8.6	8.4	6.6	8.9	13.9	9.1	2.2	5.3	10.7
Buildings with water heating	86.0	22.6	8.7	8.4	6.5	8.8	13.9	9.3	2.2	5.2	10.7
Buildings with cooking	105.8	24.1	10.6	9.5	9.5	8.8	13.8	13.7	2.5	4.6	10.9
Buildings with manufacturing	71.0	18.7	7.2	5.7	3.1	9.7	11.5	7.1	1.0	3.2	15.8
Buildings with electricity generation	109.3	27.5	12.2	11.2	8.3	10.7	11.2	8.5	2.5	7.6	15.7
<b>Percent of floorspace heated</b>											
Not heated	37.6	N	15.1	4.6	6.3	7.3	14.8	10.6	1.5	3.1	8.5
1 to 50	46.2	7.1	4.2	3.7	2.8	6.3	20.6	7.8	1.2	4.3	8.0
51 to 99	88.6	21.1	9.2	8.8	6.6	9.0	14.4	11.7	2.0	4.2	10.4
100	90.7	25.4	8.9	8.9	7.1	9.1	13.1	8.5	2.4	5.7	11.1

**Table E2. Major fuel consumption intensities (Btu) by end use, 2012**

**Major fuel energy intensity<sup>1</sup>**  
(thousand Btu/square foot in buildings using any major fuel for the end use)

	Total	Space heat-ing	Cool-ing	Venti-lation	Water heat-ing	Light-ing	Cook-ing	Refrig-eration	Office equip-ment	Com-puting	Other
<b>All buildings</b>	82.0	22.3	8.6	8.1	6.5	8.7	13.8	9.1	2.1	5.2	10.5
<b>Percent of floorspace cooled</b>											
Not cooled	34.0	26.5	N	1.0	5.5	5.2	7.3	8.4	1.0	1.8	7.0
1 to 50	52.3	20.6	2.2	3.5	3.3	6.5	10.5	5.1	1.0	2.2	7.9
51 to 99	94.3	25.1	8.9	9.4	7.1	9.1	12.2	10.9	2.2	6.2	11.0
100	96.7	21.0	11.8	10.2	7.8	9.9	16.0	9.9	2.8	6.2	12.0
<b>Percent lit when open</b>											
Zero	13.5	Q	Q	Q	Q	Q	Q	Q	Q	Q	8.1
1 to 50	50.9	16.3	5.1	5.3	4.4	4.0	9.7	5.0	2.0	2.5	9.1
51 to 99	87.6	25.1	8.5	8.6	7.0	8.2	11.9	9.6	2.1	5.2	10.9
100	90.8	21.7	10.0	8.8	6.8	10.8	16.7	9.9	2.2	6.0	10.8
Building never open/electricity											
not used	17.4	15.1	2.1	0.1	Q	Q	Q	Q	Q	Q	4.8
<b>Percent lit during off hours</b>											
Zero	52.3	18.1	5.6	5.0	2.8	5.4	9.6	5.3	1.5	4.6	7.4
1 to 50	85.6	22.9	9.0	8.6	6.5	9.1	12.2	9.2	2.1	5.1	10.6
51 to 100	146.9	31.5	13.7	12.9	16.2	14.2	29.7	16.1	3.5	7.1	18.1
Building always open with no "off hours"											
125.3	21.4	13.8	13.7	12.9	15.1	12.4	20.0	4.8	5.8	17.5	
Electricity not used	N	N	N	N	N	N	N	N	N	N	N
<b>Heating equipment (more than one may apply)</b>											
Heat pumps	75.9	12.1	10.0	7.3	7.3	8.2	11.0	8.1	2.9	5.3	10.0
Furnaces	71.1	21.3	5.6	6.1	4.5	6.7	14.6	8.9	2.1	3.9	7.9
Individual space heaters	75.7	23.0	6.9	7.2	5.9	8.1	8.6	7.1	2.1	4.3	9.9
District heat	135.7	43.2	11.1	14.0	14.0	11.6	28.5	4.0	3.3	6.9	18.2
Boilers	100.8	33.3	10.2	9.4	9.1	8.8	7.3	5.8	2.4	6.2	12.5
Packaged heating units	83.0	19.0	8.6	8.5	5.6	8.8	15.3	11.2	1.9	4.7	9.9
Other	121.9	21.7	6.1	11.3	8.0	9.8	16.5	39.8	1.2	2.1	10.4
<b>Cooling equipment (more than one may apply)</b>											
Residential-type central air conditioners	73.6	20.4	6.3	5.1	5.8	7.3	16.8	11.1	2.0	3.4	8.9
Heat pumps	74.9	12.4	9.2	7.4	7.0	8.3	10.0	8.5	2.7	5.4	10.0
Individual air conditioners	81.6	25.2	7.9	6.5	9.1	7.2	9.2	6.2	2.8	4.0	10.2
District chilled water	144.4	45.5	11.1	14.7	15.1	12.8	38.0	4.2	3.5	8.8	20.4
Central chillers	108.7	28.9	13.8	12.3	8.6	10.6	7.2	4.9	2.5	8.7	14.7
Packaged air conditioning units	88.0	22.1	8.9	9.2	6.2	9.0	14.5	11.0	1.9	4.6	10.4
Swamp coolers	91.5	24.4	7.4	7.4	8.9	8.4	21.8	13.3	1.7	3.0	9.0
Other	137.4	26.3	12.1	15.2	4.8	15.4	Q	4.5	1.3	Q	20.9
<b>Main equipment replaced since 1990 (more than one may apply)</b>											
Heating	78.5	20.3	7.6	7.3	6.6	7.8	12.4	9.1	2.2	5.2	9.2
Cooling	82.1	22.2	8.2	7.7	7.1	7.9	12.3	8.5	2.3	5.4	9.6

**Table E2. Major fuel consumption intensities (Btu) by end use, 2012**

**Major fuel energy intensity<sup>1</sup>**  
**(thousand Btu/square foot in buildings using any major fuel for the end use)**

	Total	Space heat-ing	Cool-ing	Venti-lation	Water heat-ing	Light-ing	Cook-ing	Refrig-eration	Office equip-ment	Com-puting	Other
<b>All buildings</b>	82.0	22.3	8.6	8.1	6.5	8.7	13.8	9.1	2.1	5.2	10.5
<b>Water-heating equipment</b>											
Centralized system	88.6	24.5	8.7	8.3	7.2	8.8	16.6	9.0	2.4	5.1	10.7
Distributed system	65.6	16.3	6.9	6.6	3.4	8.3	11.4	7.1	1.5	4.5	10.4
Combination of centralized and distributed system	93.4	22.1	10.0	9.8	7.0	9.4	10.1	11.3	2.0	6.0	10.9
<b>Lighting equipment types (more than one may apply)</b>											
Incandescent	92.2	23.9	9.9	8.9	7.8	8.9	14.1	9.6	2.3	5.0	10.7
Standard fluorescent	83.8	22.5	8.6	8.3	6.6	8.7	13.4	9.1	2.1	5.2	10.6
Compact fluorescent	94.7	24.4	10.0	9.5	7.8	9.2	14.2	9.0	2.4	5.8	11.4
High-intensity discharge (HID)	93.5	24.7	10.5	9.3	7.0	9.8	11.9	8.7	2.1	4.9	11.8
Halogen	96.0	23.5	10.3	9.7	7.6	9.5	14.0	10.3	2.3	5.0	11.6
LED	107.1	26.2	11.7	11.2	8.0	10.0	13.9	11.9	2.4	5.3	13.3
Other	131.1	36.3	23.2	12.1	8.8	9.8	10.4	13.9	3.0	5.4	13.2
<b>Refrigeration equipment (more than one may apply)</b>											
Any refrigeration	87.9	22.7	8.9	8.5	6.9	8.8	13.8	9.1	2.2	5.1	10.8
Walk-in units	124.3	26.7	12.2	10.9	11.0	10.0	17.9	19.3	2.6	4.7	12.7
Cases or cabinets	115.5	25.0	10.7	10.7	9.7	9.8	17.4	18.2	2.4	4.5	12.1
Large cold storage areas	127.0	25.6	9.9	8.8	7.7	10.0	18.8	34.7	1.7	3.1	12.7
Commercial ice makers	114.0	24.8	12.0	10.9	10.4	10.0	16.6	14.0	2.8	5.3	12.8
Residential-type or compact units	83.1	23.2	8.6	8.3	6.5	8.6	10.9	6.6	2.1	5.4	10.6
Vending machines	95.1	24.1	10.2	9.8	7.9	10.0	11.2	8.6	2.3	5.6	11.9
No refrigeration	43.8	18.7	5.8	4.9	2.8	7.6	Q	N	1.7	5.2	8.3
<b>Office equipment (more than one may apply)</b>											
Desktop computers	85.5	22.5	8.7	8.4	6.6	8.9	13.2	8.9	2.1	5.2	10.8
With flat screen monitors	85.7	22.6	8.8	8.5	6.6	8.9	13.1	8.9	2.1	5.2	10.7
With multiple monitors	95.1	24.9	10.3	10.4	6.4	9.6	13.9	7.3	2.2	7.5	11.6
Laptop computers	86.1	23.2	9.2	8.8	6.6	9.0	11.4	7.3	2.1	5.7	11.1
Dedicated servers	89.6	22.6	9.4	9.3	6.6	9.3	12.0	8.5	2.2	6.4	11.2
Laser printers	88.4	23.7	8.9	9.0	6.6	9.1	12.1	8.6	2.3	5.8	10.9
Inkjet printers	80.1	20.6	8.7	7.6	5.9	8.4	13.8	8.5	1.8	4.5	10.6
FAX machines	85.6	22.3	8.8	8.7	6.3	9.2	12.5	8.9	2.1	5.2	10.7
Photocopiers	86.2	23.5	9.1	8.9	6.2	9.1	10.2	7.0	2.2	5.8	11.2
<b>Number of desktop computers</b>											
None	48.3	19.0	6.3	3.7	5.4	5.5	28.2	12.3	2.6	Q	7.6
1 to 4	75.6	18.9	5.8	5.4	7.7	6.8	31.0	14.3	1.9	1.4	8.7
5 to 9	78.3	21.6	6.5	6.6	4.8	8.2	17.5	13.0	2.1	2.8	10.2
10 to 19	72.0	19.7	6.4	7.5	4.7	8.4	8.4	9.5	1.8	4.4	9.3
20 to 49	85.6	21.1	9.3	9.0	6.7	10.0	9.4	10.1	2.2	4.2	11.2
50 to 99	77.9	20.6	8.8	8.8	5.3	9.3	9.0	5.9	1.9	5.0	9.7
100 to 249	98.8	26.1	9.5	10.1	7.9	10.4	Q	5.1	2.5	8.4	13.5
250 or more	109.9	30.0	15.2	12.6	7.8	10.1	7.9	3.1	2.4	11.5	13.2

**Table E2. Major fuel consumption intensities (Btu) by end use, 2012**

**Major fuel energy intensity<sup>1</sup>**  
(thousand Btu/square foot in buildings using any major fuel for the end use)

	Total	Space heat-ing	Cool-ing	Venti-lation	Water heat-ing	Light-ing	Cook-ing	Refrig-eration	Office equip-ment	Com-puting	Other
<b>All buildings</b>	82.0	22.3	8.6	8.1	6.5	8.7	13.8	9.1	2.1	5.2	10.5
<b>Number of laptop computers</b>											
None	70.0	19.3	6.5	5.9	6.1	7.6	25.3	15.9	2.2	2.8	8.8
1 to 4	71.7	20.0	6.9	6.0	5.2	7.8	17.0	9.8	1.9	2.8	9.2
5 to 9	83.6	19.4	8.2	8.9	7.4	9.7	14.7	9.5	1.9	3.9	10.2
10 to 19	86.1	20.7	10.1	9.4	8.1	9.0	10.0	8.1	2.0	4.6	10.6
20 to 49	94.1	26.3	8.5	9.9	7.2	9.4	14.3	6.1	2.6	7.6	11.5
50 to 99	96.7	29.4	11.3	10.1	6.1	9.8	4.3	4.3	2.0	7.1	16.0
100 to 249	100.6	29.3	11.5	11.1	7.5	9.6	6.4	3.4	2.3	11.7	12.6
250 or more	107.4	26.9	15.7	13.1	7.2	10.3	6.7	3.3	2.7	10.8	13.4
<b>Number of dedicated servers</b>											
None	69.2	21.7	7.0	5.9	6.4	7.5	18.6	10.3	2.1	2.5	9.3
1 to 4	79.7	20.0	7.5	7.8	6.3	8.7	12.2	9.8	2.0	4.0	10.1
5 to 9	90.5	22.6	9.0	9.5	6.5	9.4	13.0	9.2	2.0	5.6	10.7
10 to 19	103.8	24.8	13.4	13.0	5.2	11.0	Q	6.3	2.8	8.9	13.5
20 to 49	105.5	30.8	14.3	11.9	7.1	10.5	7.0	3.6	2.4	9.6	12.8
50 or more	143.6	34.9	18.4	14.5	10.9	11.9	12.5	4.1	2.7	23.3	16.7
<b>Number of photocopiers</b>											
None	72.4	19.2	7.2	6.1	7.3	7.6	28.3	15.3	1.9	3.1	8.7
One	70.4	20.3	6.3	6.0	5.5	7.4	11.6	9.3	1.8	2.9	9.0
2 to 4	78.6	21.7	7.9	8.2	5.1	8.8	7.1	7.3	2.2	5.2	10.4
5 to 9	88.5	21.5	9.2	9.5	5.7	10.3	10.5	6.8	1.9	7.5	10.9
10 or more	117.3	31.4	15.2	13.4	9.2	11.0	12.4	3.9	3.0	9.5	15.7
<b>Number of TVs or video displays</b>											
None	54.9	18.9	5.1	4.9	3.0	6.9	17.0	9.3	0.8	4.2	8.3
One	69.8	22.3	5.7	6.0	4.5	7.5	17.1	9.6	1.3	3.4	8.3
2 to 4	79.6	22.4	7.8	7.6	4.0	8.9	15.5	9.2	1.6	4.2	11.3
5 to 9	95.3	22.1	10.1	9.9	5.6	9.6	15.5	11.8	2.0	7.3	10.7
10 to 19	99.1	23.7	10.9	11.1	7.2	10.3	14.6	9.8	2.0	6.7	10.9
20 to 49	89.0	19.4	10.4	10.6	6.3	10.0	7.2	9.5	2.6	5.8	10.4
50 to 99	98.6	24.5	10.9	9.9	10.0	9.9	5.9	6.7	4.3	8.7	11.9
100 or more	133.4	31.1	15.7	11.5	21.0	9.6	17.1	5.5	6.1	4.9	16.3
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>											
Snack bar or concession stand	112.5	28.1	13.3	10.0	8.2	9.4	12.5	13.3	2.6	5.2	12.4
Fast food or small restaurant	123.2	22.9	12.8	12.4	9.5	11.6	14.6	20.6	3.0	4.4	13.0
Cafeteria or large restaurant	106.7	26.9	12.9	10.2	10.8	9.1	11.3	6.9	2.7	5.7	11.9
Commercial kitchen/ food preparation area	111.4	26.8	12.0	9.7	12.2	8.8	12.0	12.4	2.9	4.0	12.2
Small kitchen area	84.5	23.3	9.7	7.5	6.6	7.3	7.6	7.7	2.4	4.0	10.5
<b>Separate computer areas (more than one may apply)</b>											
Data center or server farm	122.1	31.5	17.3	12.7	8.1	11.2	13.9	4.3	2.8	13.6	14.7
Computer-based training room	95.7	24.7	12.0	10.0	6.7	9.8	10.2	7.1	2.2	6.9	11.1
Student or public computer center	88.9	26.5	10.1	7.9	8.6	7.7	8.4	5.7	2.5	5.5	9.9

**Table E2. Major fuel consumption intensities (Btu) by end use, 2012**

Major fuel energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using any major fuel for the end use)											
	Total	Space heat-ing	Cool-ing	Venti-lation	Water heat-ing	Light-ing	Cook-ing	Refrig-eration	Office equip-ment	Com-puting	Other
<b>All buildings</b>	82.0	22.3	8.6	8.1	6.5	8.7	13.8	9.1	2.1	5.2	10.5
<b>HVAC conservation features (more than one may apply)</b>											
Economizer cycle	102.2	27.2	10.2	11.1	7.3	10.2	12.9	8.3	2.2	6.5	13.3
Regular HVAC maintenance	89.6	23.0	9.3	9.0	6.8	9.3	13.6	9.2	2.2	5.6	11.3
Building automation system (BAS) <sup>3</sup>	100.1	24.7	11.4	10.9	7.2	10.3	10.8	8.9	2.2	6.9	13.3
<b>Window and interior lighting features (more than one may apply)</b>											
Multipaned windows	87.9	23.5	8.6	8.7	6.8	8.9	13.9	9.5	2.3	5.4	10.8
Tinted window glass	89.5	22.1	9.8	9.2	6.9	9.4	14.4	9.1	2.2	5.6	11.4
Reflective window glass	104.3	24.0	11.6	11.1	7.8	10.3	16.3	10.5	2.6	7.6	12.1
External overhangs or awnings	96.3	23.0	9.5	9.3	7.6	9.3	19.1	13.0	2.3	5.1	10.9
Skylights or atriums	91.1	25.4	9.4	9.4	6.9	9.0	14.9	7.0	2.1	4.9	12.3
Light scheduling	96.8	23.0	10.4	10.6	6.6	9.4	13.4	11.6	2.3	6.2	11.7
Occupancy sensors	95.7	25.4	10.3	10.2	6.5	9.2	11.6	9.3	2.2	6.4	12.7
Multi-level lighting or dimming	111.3	25.8	11.4	11.1	9.9	9.1	17.8	13.1	2.7	5.0	13.0
Daylight harvesting	101.3	26.8	10.9	11.3	5.2	9.9	11.3	10.8	2.0	4.8	14.7
Demand responsive lighting	86.5	17.0	9.3	9.6	7.0	9.4	11.8	14.8	2.1	3.5	9.8
Building automation system (BAS) for lighting <sup>3</sup>	99.5	21.0	11.3	12.0	5.5	10.8	9.9	14.1	1.7	5.9	12.3
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>											
Heating	79.5	21.3	8.2	8.0	5.5	8.1	12.2	8.5	1.9	4.9	9.7
Cooling	80.1	21.1	8.5	8.1	5.7	8.2	12.3	8.4	1.9	4.9	9.8
Lighting	81.8	22.5	8.5	8.1	6.3	8.5	13.6	8.6	2.1	5.0	10.3

<sup>1</sup>The major fuel intensity calculation (total electricity, natural gas, fuel oil and district heat use for the end use divided by the floorspace in buildings that use any of those sources for the particular end use) differs from the calculation used in the 2003 CBECS tables, in which the intensities were not conditional on the presence of the end use; the 2003 CBECS denominator was total floorspace in all buildings. In this table, the intensities for each end use do not sum to the total intensity, whereas they did in the 2003 CBECS table.

<sup>2</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>3</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/> • 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.

**Table E3. Electricity consumption (Btu) by end use, 2012**

	Total electricity consumption (trillion Btu)										
	Total	Space heat-ing	Cool-ing	Venti-lation	Water heat-ing	Light-ing	Cook-ing	Refrig-eration	Office equip-ment	Com-puting	Other
<b>All buildings</b>	4,241	85	633	668	22	724	93	670	172	405	769
<b>Building floorspace (square feet)</b>											
1,001 to 5,000	445	12	50	45	3	59	28	131	21	33	63
5,001 to 10,000	386	8	45	48	3	58	16	93	17	33	66
10,001 to 25,000	543	15	67	79	4	92	13	92	28	50	103
25,001 to 50,000	508	12	74	84	3	97	4	68	21	46	98
50,001 to 100,000	654	14	102	108	4	110	8	103	27	60	117
100,001 to 200,000	647	10	94	116	2	119	7	92	21	73	113
200,001 to 500,000	615	8	116	106	3	109	8	68	19	62	117
Over 500,000	442	5	84	82	2	80	9	23	19	48	91
<b>Principal building activity</b>											
Education	458	10	90	68	3	78	4	40	21	78	66
Food sales	208	2	6	12	(*)	16	10	147	2	2	12
Food service	279	5	30	31	3	19	46	114	7	4	21
Health care	365	4	69	82	1	61	8	19	17	34	70
Inpatient	251	2	58	46	1	40	7	14	12	21	50
Outpatient	114	2	11	37	(*)	21	1	4	5	13	20
Lodging	304	8	39	49	3	40	10	33	43	6	74
Mercantile	705	13	91	121	7	140	6	191	18	23	94
Retail (other than mall)	281	5	40	47	1	72	2	53	7	11	44
Enclosed and strip malls	424	8	52	75	7	68	4	139	11	12	50
Office	865	19	116	214	2	148	2	28	37	167	132
Public assembly	275	9	82	24	(*)	35	4	25	7	16	73
Public order and safety	73	1	15	5	1	15	1	3	3	8	20
Religious worship	81	3	15	13	(*)	9	1	4	3	3	28
Service	127	3	16	14	(*)	37	(*)	5	4	8	39
Warehouse and storage	284	4	34	13	1	85	(*)	47	6	16	78
Other	191	3	26	16	(*)	37	Q	15	2	40	51
Vacant	26	1	2	4	(*)	5	Q	1	(*)	1	12
<b>Year constructed</b>											
Before 1920	109	2	10	19	(*)	20	3	15	4	10	25
1920 to 1945	219	3	32	35	1	38	4	33	9	23	42
1946 to 1959	290	6	42	48	2	50	6	41	12	25	58
1960 to 1969	502	11	68	73	3	90	11	70	23	56	96
1970 to 1979	582	11	79	100	3	98	15	90	25	58	102
1980 to 1989	797	16	140	130	4	132	14	115	31	77	137
1990 to 1999	727	15	112	108	4	121	18	128	27	65	127
2000 to 2003	380	6	57	61	2	67	8	57	14	40	68
2004 to 2007	330	6	48	47	1	57	5	66	15	25	60
2008 to 2012	304	6	44	49	1	50	8	54	12	26	54

**Table E3. Electricity consumption (Btu) by end use, 2012**

	Total electricity consumption (trillion Btu)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	4,241	85	633	668	22	724	93	670	172	405	769
<b>Census region and division</b>											
Northeast	752	17	76	134	3	134	15	121	27	81	143
New England	172	5	13	27	1	29	4	34	7	16	37
Middle Atlantic	579	12	63	107	2	105	11	87	21	65	107
Midwest	851	25	96	141	4	155	23	128	33	79	167
East North Central	595	16	66	100	2	109	15	91	22	55	118
West North Central	256	9	30	41	2	46	8	37	11	24	49
South	1,809	28	369	259	11	295	38	278	72	152	307
South Atlantic	978	15	197	140	7	154	18	154	42	89	162
East South Central	241	5	39	37	1	40	7	42	11	18	41
West South Central	590	8	133	82	3	101	13	82	19	45	103
West	829	14	92	134	4	139	18	143	40	93	152
Mountain	229	5	30	39	1	38	5	35	13	22	41
Pacific	600	9	62	95	3	101	13	109	27	71	111
<b>Climate region<sup>1</sup></b>											
Very cold/Cold	1,430	44	131	246	6	257	32	237	58	138	280
Mixed-humid	1,418	31	216	221	8	243	35	217	61	138	249
Mixed-dry/Hot-dry	520	3	77	76	2	87	11	88	23	60	94
Hot-humid	752	5	202	103	5	117	14	109	25	53	120
Marine	120	2	7	22	1	21	2	18	5	17	26
<b>Number of floors</b>											
One	1,861	40	260	243	13	324	55	434	61	127	304
Two	884	21	124	139	4	154	12	132	36	101	160
Three	373	8	55	64	1	63	8	38	18	43	75
Four to nine	788	12	134	154	2	127	13	50	38	94	163
Ten or more	335	4	59	68	1	55	5	16	19	41	67
<b>Elevators and escalators (more than one may apply)</b>											
Any elevators	1,840	30	310	349	6	304	27	136	83	237	357
Number of elevators											
One	501	11	72	95	2	88	6	52	24	58	94
Two to five	759	13	123	140	3	122	10	51	32	120	147
Six or more	580	6	116	115	1	94	12	33	28	59	116
Any escalators	226	4	40	43	1	42	4	16	12	17	47
<b>Number of workers (main shift)</b>											
Fewer than 5	456	13	54	45	3	78	11	93	22	24	112
5 to 9	381	10	51	49	2	61	16	79	17	24	71
10 to 19	451	11	57	60	3	71	21	99	22	32	76
20 to 49	750	16	101	112	5	126	17	145	30	73	124
50 to 99	730	15	117	119	4	128	9	118	27	75	120
100 to 249	632	9	100	110	3	116	6	86	21	68	113
250 or more	840	11	152	172	3	143	13	50	34	109	153

**Table E3. Electricity consumption (Btu) by end use, 2012**

	Total electricity consumption (trillion Btu)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	4,241	85	633	668	22	724	93	670	172	405	769
<b>Weekly operating hours</b>											
Fewer than 40	119	5	20	8	1	17	2	15	6	12	33
40 to 48	527	13	87	74	2	99	3	40	27	82	100
49 to 60	814	21	126	138	4	150	6	64	33	121	152
61 to 84	850	17	126	148	7	143	14	173	25	65	131
85 to 167	682	11	85	92	2	106	34	212	13	27	100
Open continuously	1,248	17	189	209	5	209	34	166	67	97	254
<b>Ownership and occupancy</b>											
Nongovernment owned	3,370	68	472	530	18	571	81	602	136	293	600
Owner occupied	1,554	32	231	222	6	262	43	267	72	117	301
Leased to tenant(s)	1,358	28	177	230	10	229	30	268	48	122	217
Owner occupied and leased	452	7	63	78	2	79	7	67	16	54	79
Unoccupied	6	Q	(*)	(*)	Q	Q	Q	Q	Q	Q	4
Government owned	871	17	161	139	4	153	13	68	36	112	168
Federal	77	1	13	17	(*)	15	1	3	2	8	18
State	275	5	35	55	1	50	4	23	13	34	55
Local	518	11	113	66	3	87	8	43	21	71	95
<b>Party responsible for operation and maintenance of energy systems</b>											
Building owner	3,512	71	539	561	17	606	73	476	149	357	662
Business owner or tenant	620	11	76	90	5	101	16	176	18	39	88
Property management	63	1	10	12	(*)	9	2	8	3	7	11
Other	46	1	8	5	Q	7	2	10	2	2	8
<b>Provider of direct input on energy-related equipment purchases</b>											
Building owner	3,621	73	552	577	18	625	74	505	153	365	679
Business owner or tenant	485	9	61	70	4	78	15	133	14	32	69
Property management	40	1	6	8	(*)	7	1	5	2	3	7
Other	94	1	14	14	(*)	14	3	27	3	5	14
<b>Number of establishments</b>											
One	2,651	55	395	387	12	455	73	405	120	248	501
2 to 5	849	16	122	143	4	145	14	147	29	71	157
6 to 10	240	4	33	45	2	37	2	47	8	28	34
11 to 20	234	5	36	46	2	38	2	45	7	19	33
More than 20	260	4	46	47	2	48	2	26	7	39	38
Currently unoccupied	6	Q	(*)	(*)	Q	(*)	Q	Q	Q	Q	5
<b>Predominant exterior wall material</b>											
Brick, stone, or stucco	2,035	43	309	335	11	330	52	292	92	207	363
Concrete (block or poured)	1,101	18	171	163	7	186	20	232	39	81	183
Concrete panels	411	6	56	69	1	77	5	47	18	50	83
Siding or shingles	244	8	28	35	1	39	10	46	11	19	46
Metal panels	270	7	43	32	1	64	2	31	7	22	62
Window glass	107	2	16	22	(*)	17	1	7	3	21	18
Other	47	1	6	7	(*)	7	1	Q	1	3	9
No one major type	26	(*)	3	5	(*)	5	Q	4	1	2	6

**Table E3. Electricity consumption (Btu) by end use, 2012**

	Total electricity consumption (trillion Btu)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	4,241	85	633	668	22	724	93	670	172	405	769
<b>Predominant roof material</b>											
Metal surfacing	576	14	91	65	3	115	11	98	21	45	113
Synthetic or rubber	1,440	29	203	245	6	243	29	228	55	144	258
Built-up	1,150	19	184	199	6	198	26	163	42	118	196
Slate or tile shingles	200	3	26	30	1	30	5	34	12	19	41
Wooden materials (including shingles)	47	(*)	6	6	(*)	7	2	12	2	3	8
Asphalt, fiberglass, or other shingles	670	17	95	99	4	107	19	113	35	56	124
Concrete	102	1	20	16	Q	16	1	11	4	16	18
Other	36	(*)	6	5	Q	5	Q	9	1	2	7
No one major type	18	(*)	3	3	Q	4	Q	Q	1	2	4
<b>Roof characteristics</b>											
Roof tilt											
Flat	2,728	49	428	464	13	472	57	382	102	276	484
Shallow pitch	1,017	21	134	136	6	177	21	213	41	87	182
Steeper pitch	495	14	71	69	3	75	15	75	29	42	103
Cool roof	1,108	18	170	183	6	186	21	179	40	113	190
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>											
Any type of renovation	2,212	45	332	368	11	367	49	320	89	229	401
Addition or annex	698	14	126	113	4	118	13	84	32	59	136
Reduction in floorspace	121	1	20	23	(*)	22	2	18	4	9	21
Roof replacement	1,124	22	171	194	6	189	27	145	44	118	208
Exterior wall replacement	240	5	39	38	1	37	5	35	8	28	42
Interior wall reconfiguration	1,216	24	186	219	6	199	21	143	48	155	215
Window replacement	601	12	94	100	3	97	15	64	30	73	111
HVAC equipment upgrade	1,477	29	234	252	7	245	30	198	59	157	266
Lighting upgrade	1,398	27	211	235	6	227	34	208	56	147	247
Electrical upgrade	903	18	143	149	4	144	20	121	37	100	167
Plumbing system upgrade	758	15	114	129	4	116	20	99	35	86	139
Insulation upgrade	429	9	64	66	2	63	10	69	19	52	76
Fire, safety, or security upgrade	963	19	160	164	4	150	24	118	38	113	172
Structural upgrade	235	4	40	35	1	35	4	30	11	29	46
Other	44	1	7	9	(*)	8	Q	3	2	6	8
No renovations	1,725	34	256	251	10	307	36	295	71	150	314
Buildings constructed 2008 or later	304	6	44	49	1	50	8	54	12	26	54
<b>Energy sources (more than one may apply)</b>											
Electricity	4,241	85	633	668	22	724	93	670	172	405	769
Natural gas	3,082	51	458	498	14	514	69	523	127	283	545
Fuel oil	1,303	20	224	226	5	222	22	116	51	157	259
District heat	353	3	25	83	1	68	6	23	19	40	84
District chilled water	292	3	12	68	1	58	5	18	16	40	71
Propane	376	11	48	47	2	64	11	78	17	23	75
Other	170	3	26	31	1	30	3	26	5	16	31

**Table E3. Electricity consumption (Btu) by end use, 2012**

	Total electricity consumption (trillion Btu)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	4,241	85	633	668	22	724	93	670	172	405	769
<b>Space-heating energy sources</b>											
Electricity	2,642	85	415	408	17	432	57	435	106	246	440
Electricity main	1,499	54	257	216	12	237	32	236	64	149	243
Electricity secondary	1,142	31	158	192	5	195	25	199	42	98	197
Other excluding electricity	1,445	N	181	249	4	261	34	212	62	151	292
Buildings without heating	154	N	36	11	1	31	2	23	4	8	37
<b>Primary space-heating energy source</b>											
Electricity	1,499	54	257	216	12	237	32	236	64	149	243
Natural gas	2,085	23	300	339	8	360	47	361	78	197	372
Fuel oil	81	2	9	12	(*)	17	1	9	4	8	19
District heat	345	3	24	82	1	67	6	22	18	39	83
Propane	61	3	5	6	(*)	9	Q	17	2	3	11
Other	16	Q	1	2	(*)	4	Q	2	Q	1	4
<b>Cooling energy sources</b>											
Electricity	3,954	82	633	619	21	659	89	637	157	373	685
Other excluding electricity	193	1	N	46	1	40	3	13	12	29	48
Buildings without cooling	94	1	N	3	(*)	24	2	20	3	4	36
<b>Water-heating energy sources</b>											
Electricity	2,215	54	341	339	22	380	41	378	74	222	365
Other excluding electricity	1,912	29	277	319	N	316	52	286	95	175	363
Buildings without water heating	114	2	15	10	N	28	Q	5	4	9	41
<b>Cooking energy sources</b>											
Electricity	1,547	32	246	231	9	219	93	312	56	121	229
Other excluding electricity	842	11	134	133	5	120	N	216	38	50	135
Buildings without cooking	1,851	41	254	304	8	384	N	142	78	235	405
<b>Energy end uses (more than one may apply)</b>											
Buildings with space heating	4,086	85	596	657	21	693	91	647	168	397	732
Buildings with cooling	4,147	83	633	665	22	699	92	650	169	401	733
Buildings with water heating	4,127	83	618	658	22	696	93	664	168	396	728
Buildings with cooking	2,390	43	379	364	14	340	93	528	94	171	364
Buildings with manufacturing	228	4	33	28	1	49	3	32	5	15	57
Buildings with electricity generation	1,673	26	272	287	7	274	30	211	65	195	306
<b>Percent of floorspace heated</b>											
Not heated	154	N	36	11	1	31	2	23	4	8	37
1 to 50	334	3	38	38	1	63	4	63	11	39	74
51 to 99	798	13	126	129	5	131	16	158	29	60	131
100	2,955	69	432	491	15	499	71	426	127	298	527
<b>Percent of floorspace cooled</b>											
Not cooled	94	1	N	3	(*)	24	2	20	3	4	36
1 to 50	522	11	42	65	2	122	6	82	19	40	132
51 to 99	1,301	23	187	214	7	206	28	231	49	138	216
100	2,324	48	403	385	12	370	58	336	102	224	385

**Table E3. Electricity consumption (Btu) by end use, 2012**

	Total electricity consumption (trillion Btu)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	4,241	85	633	668	22	724	93	670	172	405	769
<b>Percent lit when open</b>											
Zero	3	Q	Q	Q	Q	Q	Q	Q	Q	Q	3
1 to 50	388	10	54	61	2	50	6	49	23	27	107
51 to 99	1,793	36	265	295	11	284	39	307	72	175	309
100	2,045	39	313	311	9	387	49	314	77	203	343
Building never open/electricity not used	11	(*)	1	(*)	Q	Q	Q	Q	Q	Q	7
<b>Percent lit during off hours</b>											
Zero	791	21	117	116	4	126	12	102	32	94	167
1 to 50	2,675	54	415	432	16	463	56	418	106	251	464
51 to 100	562	8	70	88	2	98	20	105	23	47	100
Building always open with no "off hours"	213	2	31	32	1	36	5	44	11	13	38
Electricity not used	N	N	N	N	N	N	N	N	N	N	N
<b>Heating equipment (more than one may apply)</b>											
Heat pumps	613	15	113	86	5	97	11	87	34	62	104
Furnaces	363	11	47	53	2	58	12	68	18	32	63
Individual space heaters	926	29	122	148	5	166	19	132	42	84	179
District heat	350	3	25	83	1	67	6	22	19	40	84
Boilers	1,193	14	208	211	3	197	20	123	52	137	228
Packaged heating units	2,632	63	401	419	15	431	66	493	91	222	431
Other	131	4	9	18	1	15	4	62	2	3	13
<b>Cooling equipment (more than one may apply)</b>											
Residential-type central air conditioners	636	14	93	75	4	108	13	144	29	47	110
Heat pumps	644	16	112	93	5	104	10	96	34	66	108
Individual air conditioners	546	14	88	81	4	89	13	70	34	47	106
District chilled water	292	3	12	68	1	58	5	18	16	40	71
Central chillers	1,120	14	215	210	3	179	18	80	43	147	210
Packaged air conditioning units	2,480	51	390	415	14	404	63	452	85	202	403
Swamp coolers	98	3	13	14	1	16	5	23	3	6	15
Other	32	Q	4	5	Q	5	Q	1	(*)	Q	5
<b>Main equipment replaced since 1990 (more than one may apply)</b>											
Heating	1,323	32	196	202	8	215	30	222	58	135	225
Cooling	1,519	33	245	235	9	243	33	233	68	158	262
<b>Water-heating equipment</b>											
Centralized system	2,484	52	362	391	12	415	67	387	111	230	457
Distributed system	539	12	80	83	3	105	7	75	19	55	99
Combination of centralized and distributed system	1,104	19	176	185	7	176	19	202	38	111	172

**Table E3. Electricity consumption (Btu) by end use, 2012**

	Total electricity consumption (trillion Btu)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	4,241	85	633	668	22	724	93	670	172	405	769
<b>Lighting equipment types (more than one may apply)</b>											
Incandescent	2,087	40	338	336	12	340	46	344	86	184	359
Standard fluorescent	4,085	80	609	650	21	693	89	649	166	394	735
Compact fluorescent	3,034	58	478	507	17	493	72	451	129	305	524
High-intensity discharge (HID)	1,303	22	220	215	7	229	22	190	49	112	237
Halogen	1,632	32	262	271	9	266	37	272	64	138	281
LED	1,416	24	229	248	7	220	28	251	52	117	241
Other	33	Q	5	5	Q	4	1	6	1	2	5
<b>Refrigeration equipment (more than one may apply)</b>											
Any refrigeration	3,923	77	587	623	21	647	93	670	159	365	681
Walk-in units	2,069	30	314	309	12	283	77	547	73	130	292
Cases or cabinets	1,987	32	283	307	11	282	66	523	70	126	288
Large cold storage areas	334	3	38	37	1	42	8	145	7	13	41
Commercial ice makers	2,228	39	354	357	12	326	73	457	91	172	348
Residential-type or compact units	3,109	65	481	513	17	537	59	413	131	324	568
Vending machines	2,532	44	397	430	13	439	39	379	102	243	448
No refrigeration	318	8	45	46	1	77	Q	N	13	40	88
<b>Office equipment (more than one may apply)</b>											
Desktop computers	4,017	78	606	647	20	687	86	620	163	399	711
With flat screen monitors	3,977	77	601	641	20	678	85	614	162	398	700
With multiple monitors	1,785	29	280	321	8	298	26	212	69	233	309
Laptop computers	3,303	65	527	556	17	570	48	427	136	363	595
Dedicated servers	2,964	56	460	496	14	498	51	425	115	341	508
Laser printers	2,921	54	439	488	14	495	52	428	126	316	511
Inkjet printers	1,787	39	284	273	10	306	46	280	66	161	321
FAX machines	3,512	68	531	574	18	612	67	541	140	345	615
Photocopiers	3,099	59	491	528	14	540	43	387	132	344	561
<b>Number of desktop computers</b>											
None	223	6	27	22	2	36	7	50	9	Q	58
1 to 4	700	16	82	82	4	106	41	189	30	22	128
5 to 9	456	10	60	62	3	77	11	106	20	27	80
10 to 19	441	11	58	69	2	79	6	79	17	41	78
20 to 49	716	14	114	118	5	131	8	117	29	55	126
50 to 99	408	10	68	73	2	77	4	45	16	41	72
100 to 249	545	8	75	99	3	101	6	48	25	81	101
250 or more	751	9	150	144	2	116	11	35	27	132	125

**Table E3. Electricity consumption (Btu) by end use, 2012**

	Total electricity consumption (trillion Btu)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	4,241	85	633	668	22	724	93	670	172	405	769
<b>Number of laptop computers</b>											
None	938	20	105	112	5	154	45	243	36	43	174
1 to 4	930	23	136	125	6	165	19	181	40	60	175
5 to 9	431	8	65	73	3	81	6	70	16	32	76
10 to 19	445	11	77	79	3	75	6	63	16	38	78
20 to 49	525	9	72	96	3	91	6	56	25	74	95
50 to 99	292	5	54	53	1	51	4	22	11	37	55
100 to 249	308	4	49	58	1	50	3	17	12	61	53
250 or more	372	6	75	72	1	57	5	18	15	60	63
<b>Number of dedicated servers</b>											
None	1,276	28	173	172	8	225	43	245	57	64	261
1 to 4	1,695	37	242	266	9	295	36	309	68	136	297
5 to 9	343	7	53	60	3	59	4	55	12	35	56
10 to 19	373	5	61	74	1	63	4	34	16	51	64
20 to 49	239	4	50	45	1	39	3	13	9	36	41
50 or more	313	3	55	51	1	42	4	14	10	83	50
<b>Number of photocopiers</b>											
None	1,142	26	142	141	8	184	51	282	40	62	208
One	732	17	102	102	4	127	15	143	31	49	142
2 to 4	998	23	154	167	5	178	10	137	45	104	173
5 to 9	492	9	76	84	3	92	5	58	17	66	83
10 or more	876	10	158	174	2	143	12	49	39	124	163
<b>Number of TVs or video displays</b>											
None	763	17	89	97	3	145	19	140	14	73	166
One	412	9	49	59	2	74	12	84	13	32	77
2 to 4	805	16	123	125	4	146	15	136	27	67	147
5 to 9	512	14	79	80	3	78	14	91	17	58	79
10 to 19	500	8	79	91	3	84	10	76	16	54	79
20 to 49	476	9	80	86	4	80	6	73	21	46	72
50 to 99	264	5	35	43	1	43	4	29	19	38	46
100 or more	508	6	99	87	1	73	14	41	46	37	104
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>											
Snack bar or concession stand	651	11	119	99	3	93	16	131	25	51	102
Fast food or small restaurant	765	9	118	122	5	113	14	202	29	43	110
Cafeteria or large restaurant	890	14	178	156	4	138	18	105	41	87	150
Commercial kitchen/ food preparation area	996	17	177	157	5	142	23	200	47	64	165
Small kitchen area	693	13	127	106	3	103	18	108	33	54	127
<b>Separate computer areas (more than one may apply)</b>											
Data center or server farm	814	12	159	141	1	124	9	46	31	151	138
Computer-based training room	1,022	16	185	177	4	174	14	123	39	123	168
Student or public computer center	692	13	125	114	4	111	12	79	36	78	120

**Table E3. Electricity consumption (Btu) by end use, 2012**

	Total electricity consumption (trillion Btu)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	4,241	85	633	668	22	724	93	670	172	405	769
<b>HVAC conservation features (more than one may apply)</b>											
Economizer cycle	1,839	34	278	343	7	312	33	237	66	200	330
Regular HVAC maintenance	3,782	71	581	620	19	640	82	576	151	377	666
Building automation system (BAS) <sup>2</sup>	2,285	38	372	403	10	379	37	311	81	253	401
<b>Window and interior lighting features (more than one may apply)</b>											
Multipaned windows	3,174	68	464	516	17	524	75	515	131	307	556
Tinted window glass	2,451	45	398	408	14	416	45	364	95	240	426
Reflective window glass	1,025	19	169	174	5	163	15	154	41	118	167
External overhangs or awnings	1,874	34	276	296	12	295	50	381	74	158	299
Skylights or atriums	1,131	19	180	205	6	197	18	142	45	105	215
Light scheduling	1,847	32	287	318	10	284	35	327	67	183	302
Occupancy sensors	2,076	36	323	362	10	331	32	310	77	224	372
Multi-level lighting or dimming	929	17	145	161	5	132	21	182	39	72	154
Daylight harvesting	371	6	58	68	2	61	7	64	12	29	66
Demand responsive lighting	272	5	40	45	3	44	4	65	9	16	41
Building automation system (BAS) for lighting <sup>2</sup>	816	13	128	144	5	130	14	165	21	71	125
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>											
Heating	3,046	68	470	502	17	509	58	480	118	296	528
Cooling	3,078	66	502	508	17	511	58	476	119	297	525
Lighting	3,880	80	584	620	21	664	83	595	156	376	699
<b>Annual consumption (kilowatthours)</b>											
10,000 or less	14	1	2	1	(*)	3	(*)	1	1	1	6
10,001 to 50,000	170	6	21	20	1	34	2	13	10	18	46
50,001 to 100,000	213	7	27	27	1	41	4	24	11	21	48
100,001 to 500,000	964	23	119	130	6	158	30	209	45	78	165
500,001 to 1,000,000	562	13	83	88	4	88	20	89	28	56	94
1,000,001 to 5,000,000	1,293	23	188	223	6	225	22	239	43	107	217
Over 5,000,000	1,024	12	192	179	4	176	15	95	34	124	194

<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 E4. Electricity consumption intensities (Btu) by end use, 2012**

	Electricity energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using electricity for the end use)										
	Total	Space heat-ing	Cool-ing	Venti-lation	Water heat-ing	Light-ing	Cook-ing	Refrig-eration	Office equip-ment	Com-puting	Other
<b>All buildings</b>	50.0	1.7	8.3	8.1	0.5	8.7	3.7	9.1	2.1	5.2	9.1
<b>Building floorspace (square feet)</b>											
1,001 to 5,000	59.4	2.9	8.2	6.5	0.7	8.3	20.4	24.0	3.4	5.9	8.5
5,001 to 10,000	45.5	1.8	6.1	6.1	0.6	7.1	9.9	14.2	2.3	4.7	7.8
10,001 to 25,000	40.0	1.9	5.5	6.0	0.5	6.9	5.0	8.4	2.2	4.1	7.6
25,001 to 50,000	43.5	1.8	7.0	7.4	0.5	8.4	1.9	6.8	1.9	4.3	8.4
50,001 to 100,000	48.1	1.7	8.1	8.1	0.5	8.1	1.8	8.4	2.0	4.5	8.6
100,001 to 200,000	52.3	1.4	8.5	9.5	0.4	9.7	1.6	8.1	1.7	6.0	9.1
200,001 to 500,000	57.7	1.4	11.7	10.0	0.5	10.3	1.7	6.8	1.8	5.9	11.0
Over 500,000	62.9	1.2	13.3	11.8	0.4	11.4	2.3	3.2	2.7	6.9	12.9
<b>Principal building activity</b>											
Education	37.4	1.6	8.4	5.6	0.7	6.3	0.7	3.6	1.8	6.4	5.4
Food sales	166.1	2.0	5.3	9.4	0.1	12.4	14.8	117.6	1.6	2.0	9.4
Food service	153.2	4.7	18.0	17.2	3.8	10.2	54.3	62.4	4.1	2.7	11.5
Health care	87.9	1.8	17.5	19.9	0.8	14.7	4.2	4.6	4.0	8.2	16.8
Inpatient	105.8	1.6	26.2	19.3	2.3	16.7	4.6	6.0	5.1	9.0	21.1
Outpatient	64.0	2.0	6.4	20.7	0.2	11.9	2.5	2.6	2.5	7.2	11.0
Lodging	52.2	2.1	7.3	8.4	2.3	6.8	4.6	5.7	7.5	1.2	12.8
Mercantile	62.3	1.6	8.2	10.8	0.8	12.4	1.4	18.5	1.6	2.1	8.3
Retail (other than mall)	51.8	1.8	7.6	8.6	0.1	13.3	1.5	11.8	1.3	2.0	8.2
Enclosed and strip malls	72.0	1.5	8.8	12.7	1.3	11.5	1.3	23.6	1.8	2.1	8.5
Office	54.2	1.9	7.6	13.4	0.2	9.2	0.7	2.0	2.3	10.5	8.3
Public assembly	49.4	3.3	17.7	4.4	0.1	6.4	1.8	5.0	1.4	3.0	13.1
Public order and safety	50.7	1.5	11.2	3.7	2.2	10.8	2.2	2.1	2.2	5.4	13.8
Religious worship	17.8	1.1	3.6	2.9	0.1	2.1	0.7	0.9	0.9	0.8	6.2
Service	28.2	1.5	4.3	3.4	0.2	8.4	0.8	1.3	1.0	2.0	8.6
Warehouse and storage	22.6	0.7	3.4	1.2	0.1	7.0	0.1	5.4	0.6	1.5	6.2
Other	96.7	2.5	14.3	8.5	0.1	19.3	Q	8.5	1.3	22.1	25.8
Vacant	15.5	0.8	2.2	3.1	(*)	4.4	Q	1.3	0.5	1.3	6.9
<b>Year constructed</b>											
Before 1920	28.7	1.3	3.5	5.3	0.2	5.5	2.7	5.0	1.3	3.2	6.6
1920 to 1945	37.4	1.2	6.2	6.2	0.3	6.6	2.2	6.8	1.7	4.4	7.1
1946 to 1959	40.2	1.7	6.4	6.9	0.6	7.1	3.0	6.5	1.7	3.9	8.1
1960 to 1969	49.2	2.1	7.6	7.4	0.6	9.0	3.9	7.9	2.3	5.9	9.5
1970 to 1979	55.2	1.9	8.4	9.6	0.7	9.5	5.2	10.0	2.5	5.9	9.6
1980 to 1989	53.9	1.7	10.1	9.0	0.5	9.0	3.3	9.0	2.2	5.5	9.2
1990 to 1999	55.4	1.9	9.4	8.5	0.6	9.4	4.3	11.1	2.2	5.3	9.7
2000 to 2003	52.8	1.5	8.9	8.7	0.5	9.4	3.9	8.8	2.0	5.7	9.5
2004 to 2007	51.0	1.5	8.4	7.6	0.4	8.9	2.8	11.7	2.5	4.1	9.3
2008 to 2012	53.7	1.5	8.6	8.8	0.4	9.0	4.4	10.9	2.2	4.9	9.6

**Table E4. Electricity consumption intensities (Btu) by end use, 2012**

Electricity energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using electricity for the end use)											
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	50.0	1.7	8.3	8.1	0.5	8.7	3.7	9.1	2.1	5.2	9.1
<b>Census region and division</b>											
Northeast	49.2	2.4	5.7	9.0	0.4	8.9	3.2	8.9	1.9	5.6	9.4
New England	41.1	2.8	4.0	6.7	0.4	7.3	3.2	9.5	1.7	4.2	8.8
Middle Atlantic	52.2	2.3	6.3	9.8	0.4	9.5	3.1	8.6	1.9	6.1	9.6
Midwest	45.8	2.9	5.7	7.8	0.5	8.5	3.7	7.7	1.9	4.6	9.0
East North Central	47.4	2.9	5.7	8.2	0.5	8.9	3.5	8.0	1.9	4.7	9.4
West North Central	42.5	3.0	5.6	7.0	0.5	7.9	4.0	7.0	1.9	4.5	8.1
South	54.8	1.2	12.3	8.1	0.6	9.1	3.8	9.7	2.3	5.0	9.3
South Atlantic	55.6	1.2	12.0	8.1	0.6	8.8	3.3	10.1	2.5	5.4	9.2
East South Central	49.9	1.7	9.0	7.8	0.5	8.5	4.4	9.2	2.5	4.1	8.5
West South Central	55.7	1.1	14.4	8.2	0.6	9.7	4.6	9.2	1.9	4.8	9.8
West	46.1	1.3	5.7	7.8	0.5	7.8	4.0	9.7	2.3	5.6	8.4
Mountain	47.5	1.7	7.1	8.3	0.5	8.1	3.5	8.3	2.9	5.0	8.5
Pacific	45.5	1.2	5.3	7.6	0.5	7.7	4.3	10.3	2.2	5.8	8.4
<b>Climate region<sup>2</sup></b>											
Very cold/Cold	45.7	2.9	4.8	8.1	0.5	8.4	3.3	8.6	2.0	4.8	9.0
Mixed-humid	51.7	1.8	8.7	8.2	0.5	9.0	3.9	9.0	2.4	5.4	9.1
Mixed-dry/Hot-dry	44.3	0.5	7.3	6.8	0.4	7.4	4.7	9.4	2.1	5.6	8.0
Hot-humid	62.7	0.5	18.3	8.9	0.6	9.8	4.0	10.6	2.2	4.7	10.0
Marine	49.8	1.6	3.2	9.7	0.5	8.7	3.0	8.9	2.1	7.6	10.7
<b>Number of floors</b>											
One	48.9	1.8	7.7	6.7	0.6	8.7	5.7	14.0	1.8	3.8	8.0
Two	44.4	1.7	6.7	7.1	0.4	7.8	2.2	7.4	1.9	5.3	8.0
Three	46.1	1.8	7.4	8.1	0.4	7.9	3.1	5.3	2.3	5.5	9.2
Four to nine	58.7	1.7	11.8	11.7	0.5	9.6	2.8	4.0	2.9	7.2	12.2
Ten or more	62.3	1.3	12.2	12.6	0.3	10.2	2.0	3.1	3.5	7.7	12.4
<b>Elevators and escalators (more than one may apply)</b>											
Any elevators	57.6	1.7	10.8	11.0	0.4	9.6	2.2	4.6	2.6	7.5	11.2
Number of elevators											
One	45.0	1.7	7.2	8.6	0.4	7.9	1.6	5.0	2.2	5.3	8.5
Two to five	59.7	1.8	10.8	11.0	0.5	9.7	2.4	4.4	2.6	9.6	11.6
Six or more	71.5	1.4	15.7	14.1	0.4	11.6	2.5	4.2	3.4	7.3	14.3
Any escalators	62.0	1.6	12.5	11.8	0.4	11.6	2.2	4.8	3.3	4.6	12.9
<b>Number of workers (main shift)</b>											
Fewer than 5	29.3	1.9	4.8	3.4	0.4	5.5	4.7	9.0	2.0	2.4	7.2
5 to 9	42.5	1.8	6.3	5.7	0.5	6.8	9.3	10.6	1.9	2.9	7.9
10 to 19	46.9	2.0	6.2	6.4	0.6	7.4	10.0	12.1	2.3	3.4	7.9
20 to 49	51.7	1.7	7.4	7.8	0.6	8.7	4.5	11.1	2.1	5.1	8.5
50 to 99	54.2	1.6	9.1	8.8	0.6	9.5	1.7	9.3	2.0	5.5	8.9
100 to 249	57.8	1.5	9.9	10.0	0.5	10.7	1.5	8.2	1.9	6.3	10.4
250 or more	71.1	1.6	14.1	14.6	0.5	12.1	2.2	4.4	2.8	9.2	13.0

**Table E4. Electricity consumption intensities (Btu) by end use, 2012**

	Electricity energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using electricity for the end use)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	50.0	1.7	8.3	8.1	0.5	8.7	3.7	9.1	2.1	5.2	9.1
<b>Weekly operating hours</b>											
Fewer than 40	18.2	1.6	4.1	1.4	0.4	3.1	1.3	3.4	1.4	3.0	5.1
40 to 48	33.5	1.4	6.2	4.8	0.3	6.3	1.0	3.0	1.8	5.5	6.3
49 to 60	39.8	1.8	6.7	6.9	0.3	7.3	1.2	3.7	1.7	6.2	7.4
61 to 84	53.8	1.7	8.6	9.5	0.7	9.0	2.7	11.9	1.6	4.3	8.3
85 to 167	72.9	2.2	10.0	10.2	0.5	11.4	11.2	25.0	1.5	3.1	10.6
Open continuously	73.4	1.7	12.5	12.6	0.8	12.4	5.0	10.6	4.1	6.1	14.9
<b>Ownership and occupancy</b>											
Nongovernment owned	51.4	1.7	8.0	8.4	0.5	8.9	4.8	10.8	2.2	4.9	9.2
Owner occupied	51.2	1.9	8.6	7.6	0.4	8.8	5.3	10.0	2.5	4.3	9.9
Leased to tenant(s)	52.6	1.7	7.5	9.3	0.6	9.0	5.0	12.5	2.0	5.1	8.4
Owner occupied and leased	51.2	1.3	7.5	8.9	0.4	9.0	2.8	8.6	1.8	6.2	9.0
Unoccupied	8.6	Q	1.7	0.1	Q	1.9	Q	Q	Q	Q	6.2
Government owned	45.2	1.7	9.6	7.3	0.6	8.0	1.5	3.9	1.9	6.0	8.8
Federal	49.2	1.4	9.1	10.9	0.2	9.7	1.3	1.9	1.2	4.8	11.2
State	49.8	2.0	8.6	10.2	0.4	9.3	2.1	4.6	2.4	6.4	10.0
Local	42.6	1.7	10.1	5.5	0.7	7.2	1.4	3.8	1.8	6.0	7.9
<b>Party responsible for operation and maintenance of energy systems</b>											
Building owner	49.0	1.8	8.5	8.1	0.5	8.6	3.4	7.7	2.2	5.4	9.2
Business owner or tenant	55.7	1.5	7.1	8.2	0.6	9.2	5.3	17.6	1.7	3.6	7.9
Property management	50.5	1.3	9.1	9.9	0.3	7.5	4.4	7.2	2.8	6.0	8.5
Other	55.3	1.8	10.2	6.5	Q	8.2	5.9	12.9	2.3	3.0	9.7
<b>Provider of direct input on energy-related equipment purchases</b>											
Building owner	48.8	1.7	8.4	8.0	0.5	8.6	3.4	7.9	2.2	5.3	9.2
Business owner or tenant	59.4	1.7	7.8	8.7	0.7	9.6	6.5	17.9	1.8	4.1	8.5
Property management	46.0	1.8	6.7	9.5	0.4	7.6	4.3	6.8	2.2	4.0	8.0
Other	55.9	1.3	9.1	8.2	0.4	8.2	4.3	17.4	1.9	3.0	8.1
<b>Number of establishments</b>											
One	48.7	1.9	8.3	7.4	0.5	8.5	4.7	8.6	2.4	5.0	9.2
2 to 5	47.8	1.5	7.3	8.1	0.4	8.2	2.8	9.4	1.7	4.1	8.8
6 to 10	55.7	1.4	7.9	10.5	0.7	8.5	1.5	12.3	1.9	6.5	8.0
11 to 20	63.6	1.7	10.0	12.5	0.7	10.4	1.4	13.1	2.0	5.3	9.1
More than 20	68.6	1.3	12.6	12.4	0.7	12.6	1.3	7.4	1.9	10.2	10.1
Currently unoccupied	7.5	Q	1.6	0.1	Q	1.6	Q	Q	Q	Q	5.5
<b>Predominant exterior wall material</b>											
Brick, stone, or stucco	51.4	1.8	8.6	8.6	0.6	8.4	3.9	8.2	2.4	5.5	9.2
Concrete (block or poured)	53.9	1.5	9.1	8.2	0.6	9.2	3.3	12.9	2.0	4.2	9.0
Concrete panels	48.7	1.2	7.1	8.3	0.3	9.2	2.7	6.5	2.2	6.2	9.8
Siding or shingles	43.8	2.5	5.8	6.6	0.5	7.1	6.6	10.2	2.1	4.1	8.3
Metal panels	33.5	1.8	6.9	4.5	0.3	8.5	2.0	5.3	1.1	3.3	7.7
Window glass	79.8	2.5	14.0	16.5	0.2	12.8	2.0	5.7	2.5	15.9	13.2
Other	54.7	2.3	9.1	7.7	0.5	7.6	Q	15.9	1.6	5.0	10.3
No one major type	44.7	1.3	5.3	8.2	0.2	8.0	Q	7.2	1.7	4.0	9.4

**Table E4. Electricity consumption intensities (Btu) by end use, 2012**

Electricity energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using electricity for the end use)											
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
<b>All buildings</b>	50.0	1.7	8.3	8.1	0.5	8.7	3.7	9.1	2.1	5.2	9.1
<b>Predominant roof material</b>											
Metal surfacing	38.4	1.8	7.4	4.8	0.3	8.0	3.7	8.5	1.6	3.5	7.5
Synthetic or rubber	56.2	2.0	8.5	9.7	0.5	9.6	3.5	9.7	2.2	5.8	10.1
Built-up	54.0	1.5	9.5	9.5	0.6	9.4	3.5	8.7	2.0	5.8	9.2
Slate or tile shingles	47.3	1.5	8.0	7.4	0.9	7.0	4.4	8.8	3.0	5.1	9.6
Wooden materials (including shingles)	42.8	0.9	6.2	5.6	0.6	6.3	11.4	13.7	2.4	3.4	7.3
Asphalt, fiberglass, or other shingles	45.7	1.9	7.0	6.9	0.6	7.4	4.4	8.9	2.5	4.2	8.5
Concrete	64.5	1.1	13.4	11.2	Q	10.3	2.2	8.3	2.4	11.0	11.1
Other	53.8	0.7	9.0	7.8	Q	7.7	Q	14.7	1.6	3.3	10.1
No one major type	27.4	1.2	4.1	3.8	Q	5.4	Q	Q	1.0	2.7	6.7
<b>Roof characteristics</b>											
Roof tilt											
Flat	56.0	1.7	9.5	9.7	0.5	9.8	3.8	8.8	2.2	5.9	9.9
Shallow pitch	44.2	1.7	6.8	6.3	0.5	7.8	3.9	11.2	1.9	4.3	7.9
Steeper pitch	37.8	1.9	6.3	5.5	0.5	5.8	3.3	6.7	2.5	3.7	7.9
Cool roof	57.2	1.5	9.5	9.5	0.6	9.7	3.1	10.3	2.1	6.0	9.8
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>											
Any type of renovation	52.8	1.8	8.6	8.9	0.5	8.9	3.5	8.4	2.2	5.7	9.6
Addition or annex	53.8	1.8	10.2	8.7	0.6	9.1	2.5	6.9	2.5	4.6	10.5
Reduction in floorspace	70.0	1.3	13.5	13.2	0.4	13.0	3.2	11.0	2.2	5.6	12.1
Roof replacement	54.1	1.8	8.9	9.5	0.6	9.2	3.3	7.5	2.1	5.9	10.0
Exterior wall replacement	56.8	2.1	9.7	9.1	0.7	8.7	3.0	8.9	2.0	6.8	9.9
Interior wall reconfiguration	57.2	1.8	9.4	10.4	0.5	9.5	2.9	7.3	2.3	7.5	10.1
Window replacement	49.0	1.7	8.2	8.3	0.5	8.0	3.5	5.7	2.5	6.3	9.1
HVAC equipment upgrade	55.4	1.8	9.3	9.5	0.5	9.2	3.0	8.0	2.2	6.1	10.0
Lighting upgrade	55.0	1.7	9.0	9.3	0.5	9.0	3.6	8.7	2.2	5.9	9.7
Electrical upgrade	56.1	1.8	9.5	9.4	0.6	9.0	3.6	8.2	2.3	6.5	10.4
Plumbing system upgrade	54.9	1.7	8.8	9.5	0.6	8.5	4.0	7.6	2.6	6.5	10.1
Insulation upgrade	56.8	1.9	9.5	8.8	0.6	8.4	3.6	9.8	2.6	7.1	10.1
Fire, safety, or security upgrade	56.1	1.8	9.9	9.7	0.5	8.8	3.5	7.4	2.3	6.8	10.0
Structural upgrade	60.0	1.6	11.6	9.0	0.4	8.9	3.0	8.2	2.9	7.7	11.7
Other	52.2	1.3	10.7	10.5	0.3	9.2	Q	4.5	2.1	7.7	9.1
No renovations	46.2	1.7	7.9	7.1	0.5	8.4	3.8	9.7	2.1	4.5	8.4
Buildings constructed 2008 or later	53.7	1.5	8.6	8.8	0.4	9.0	4.4	10.9	2.2	4.9	9.6
<b>Energy sources (more than one may apply)</b>											
Electricity	50.0	1.7	8.3	8.1	0.5	8.7	3.7	9.1	2.1	5.2	9.1
Natural gas	52.5	1.6	8.3	8.5	0.6	8.8	3.7	9.8	2.2	5.0	9.3
Fuel oil	64.5	1.9	12.3	11.3	0.5	11.1	2.5	6.1	2.6	8.0	12.8
District heat	59.1	1.6	7.3	14.1	0.6	11.5	2.8	4.0	3.3	6.9	14.1
District chilled water	63.3	1.8	7.7	14.7	0.9	12.8	3.6	4.2	3.5	8.8	15.4
Propane	49.0	2.7	7.1	6.3	0.4	8.3	4.2	11.1	2.4	3.1	9.7
Other	44.7	1.4	7.5	8.2	0.3	7.9	2.0	7.1	1.4	4.2	8.1

**Table E4. Electricity consumption intensities (Btu) by end use, 2012**

Electricity energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using electricity for the end use)											
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	50.0	1.7	8.3	8.1	0.5	8.7	3.7	9.1	2.1	5.2	9.1
<b>Space-heating energy sources</b>											
Electricity	53.9	1.7	8.8	8.3	0.6	8.9	3.5	9.8	2.2	5.2	9.0
Electricity main	57.2	2.0	10.2	8.2	0.6	9.1	4.0	10.3	2.5	6.0	9.3
Electricity secondary	50.0	1.4	7.2	8.4	0.5	8.6	3.0	9.4	1.9	4.4	8.6
Other excluding electricity	46.6	N	6.9	8.1	0.4	8.5	4.1	7.8	2.1	5.2	9.4
Buildings without heating	32.0	N	15.1	4.6	0.3	7.3	4.2	10.6	1.5	3.1	7.7
<b>Primary space-heating energy source</b>											
Electricity	57.2	2.0	10.2	8.2	0.6	9.1	4.0	10.3	2.5	6.0	9.3
Natural gas	48.5	1.2	7.3	7.9	0.5	8.4	3.6	9.3	1.9	4.8	8.7
Fuel oil	31.8	2.6	4.7	4.7	0.3	6.8	1.5	4.2	1.7	3.7	7.6
District heat	59.5	1.6	7.3	14.2	0.6	11.7	2.9	4.1	3.2	7.0	14.3
Propane	31.3	3.4	3.0	3.2	0.2	4.7	9.6	10.3	1.3	1.6	5.8
Other	27.2	Q	1.7	3.6	0.2	6.5	Q	4.2	1.7	2.4	6.9
<b>Cooling energy sources</b>											
Electricity	52.0	1.7	8.3	8.1	0.5	8.7	3.7	9.3	2.1	5.1	9.0
Other excluding electricity	59.1	1.6	N	14.1	0.7	12.6	5.1	4.5	3.9	9.0	14.7
Buildings without cooling	16.8	1.3	N	1.0	0.3	5.2	3.2	8.4	1.0	1.8	6.5
<b>Water-heating energy sources</b>											
Electricity	51.8	1.8	8.4	8.0	0.5	8.9	2.9	9.9	1.8	5.4	8.5
Other excluding electricity	52.7	1.8	8.5	8.9	N	8.8	4.7	8.6	2.7	5.0	10.0
Buildings without water heating	19.4	0.7	5.3	2.7	N	5.7	Q	2.5	1.2	3.1	7.0
<b>Cooking energy sources</b>											
Electricity	61.5	1.9	10.2	9.2	0.7	8.7	3.7	12.4	2.2	4.9	9.1
Other excluding electricity	62.9	1.6	10.7	10.0	0.9	9.0	N	16.1	2.9	3.8	10.1
Buildings without cooking	40.0	1.6	6.4	6.9	0.3	8.5	N	4.0	1.9	5.7	8.8
<b>Energy end uses (more than one may apply)</b>											
Buildings with space heating	51.0	1.7	8.1	8.2	0.5	8.7	3.7	9.1	2.2	5.2	9.1
Buildings with cooling	52.3	1.7	8.3	8.4	0.5	8.9	3.7	9.1	2.2	5.3	9.2
Buildings with water heating	52.2	1.8	8.4	8.4	0.5	8.8	3.7	9.3	2.2	5.2	9.2
Buildings with cooking	62.0	1.8	10.4	9.5	0.7	8.8	3.7	13.7	2.5	4.6	9.4
Buildings with manufacturing	44.9	1.3	7.1	5.7	0.3	9.7	3.8	7.1	1.0	3.2	11.2
Buildings with electricity generation	65.2	1.7	11.5	11.2	0.6	10.7	2.6	8.5	2.5	7.6	11.9
<b>Percent of floorspace heated</b>											
Not heated	32.0	N	15.1	4.6	0.3	7.3	4.2	10.6	1.5	3.1	7.7
1 to 50	33.0	0.5	4.2	3.7	0.2	6.3	3.5	7.8	1.2	4.3	7.3
51 to 99	54.5	1.3	9.0	8.8	0.6	9.0	3.2	11.7	2.0	4.2	9.0
100	53.4	2.1	8.6	8.9	0.6	9.1	3.8	8.5	2.4	5.7	9.5
<b>Percent of floorspace cooled</b>											
Not cooled	16.8	1.3	N	1.0	0.3	5.2	3.2	8.4	1.0	1.8	6.5
1 to 50	27.6	1.1	2.2	3.5	0.2	6.5	2.0	5.1	1.0	2.2	7.0
51 to 99	57.2	1.7	8.7	9.4	0.6	9.1	3.2	10.9	2.2	6.2	9.5
100	61.7	2.1	11.3	10.2	0.6	9.9	4.5	9.9	2.8	6.2	10.2

**Table E4. Electricity consumption intensities (Btu) by end use, 2012**

Electricity energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using electricity for the end use)											
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	50.0	1.7	8.3	8.1	0.5	8.7	3.7	9.1	2.1	5.2	9.1
<b>Percent lit when open</b>											
Zero	10.7	Q	Q	Q	Q	Q	Q	Q	Q	Q	8.0
1 to 50	30.7	1.3	5.0	5.3	0.4	4.0	2.6	5.0	2.0	2.5	8.5
51 to 99	51.5	1.7	8.2	8.6	0.6	8.2	3.4	9.6	2.1	5.2	8.9
100	57.2	1.9	9.6	8.8	0.5	10.8	4.2	9.9	2.2	6.0	9.6
Building never open/electricity not used	7.8	1.3	2.1	0.1	Q	Q	Q	Q	Q	Q	4.7
<b>Percent lit during off hours</b>											
Zero	32.0	1.7	5.6	5.0	0.3	5.4	2.3	5.3	1.5	4.6	6.7
1 to 50	52.7	1.7	8.8	8.6	0.6	9.1	3.5	9.2	2.1	5.1	9.1
51 to 100	81.2	1.8	12.0	12.9	0.7	14.2	7.0	16.1	3.5	7.1	14.5
Building always open with no "off hours"	87.0	1.4	13.8	13.7	0.5	15.1	5.6	20.0	4.8	5.8	15.5
Electricity not used	N	N	N	N	N	N	N	N	N	N	N
<b>Heating equipment (more than one may apply)</b>											
Heat pumps	51.7	1.3	9.6	7.3	0.6	8.2	2.2	8.1	2.9	5.3	8.8
Furnaces	41.9	2.2	5.6	6.1	0.4	6.7	4.4	8.9	2.1	3.9	7.3
Individual space heaters	44.6	1.8	6.5	7.2	0.5	8.1	2.7	7.1	2.1	4.3	8.6
District heat	59.1	1.6	7.3	14.0	0.6	11.6	2.8	4.0	3.3	6.9	14.1
Boilers	53.2	1.3	9.8	9.4	0.5	8.8	2.1	5.8	2.4	6.2	10.2
Packaged heating units	53.5	1.8	8.4	8.5	0.5	8.8	4.4	11.2	1.9	4.7	8.8
Other	83.3	3.1	6.0	11.3	0.7	9.8	4.0	39.8	1.2	2.1	8.4
<b>Cooling equipment (more than one may apply)</b>											
Residential-type central air conditioners	43.1	1.7	6.3	5.1	0.5	7.3	3.2	11.1	2.0	3.4	7.5
Heat pumps	51.4	1.3	9.0	7.4	0.6	8.3	2.0	8.5	2.7	5.4	8.6
Individual air conditioners	44.0	1.7	7.1	6.5	0.6	7.2	2.7	6.2	2.8	4.0	8.6
District chilled water	63.3	1.8	7.7	14.7	0.9	12.8	3.6	4.2	3.5	8.8	15.4
Central chillers	65.7	1.5	12.8	12.3	0.4	10.6	2.2	4.9	2.5	8.7	12.4
Packaged air conditioning units	54.9	1.7	8.7	9.2	0.5	9.0	4.3	11.0	1.9	4.6	8.9
Swamp coolers	51.1	1.9	6.9	7.4	0.6	8.4	7.5	13.3	1.7	3.0	7.9
Other	97.8	Q	11.9	15.2	Q	15.4	Q	4.5	1.3	Q	14.2
<b>Main equipment replaced since 1990 (more than one may apply)</b>											
Heating	48.0	1.8	7.5	7.3	0.6	7.8	3.7	9.1	2.2	5.2	8.2
Cooling	49.5	1.8	8.0	7.7	0.6	7.9	3.5	8.5	2.3	5.4	8.5
<b>Water-heating equipment</b>											
Centralized system	52.3	2.0	8.4	8.3	0.6	8.8	4.8	9.0	2.4	5.1	9.6
Distributed system	42.5	1.5	6.8	6.6	0.3	8.3	2.8	7.1	1.5	4.5	7.8
Combination of centralized and distributed system	58.7	1.5	9.7	9.8	0.6	9.4	2.2	11.3	2.0	6.0	9.1

**Table E4. Electricity consumption intensities (Btu) by end use, 2012**

Electricity energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using electricity for the end use)											
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	50.0	1.7	8.3	8.1	0.5	8.7	3.7	9.1	2.1	5.2	9.1
<b>Lighting equipment types (more than one may apply)</b>											
Incandescent	54.3	1.7	9.5	8.9	0.6	8.9	3.1	9.6	2.3	5.0	9.4
Standard fluorescent	51.0	1.7	8.4	8.3	0.5	8.7	3.6	9.1	2.1	5.2	9.2
Compact fluorescent	56.4	1.8	9.7	9.5	0.6	9.2	3.6	9.0	2.4	5.8	9.7
High-intensity discharge (HID)	55.7	1.5	10.2	9.3	0.5	9.8	2.2	8.7	2.1	4.9	10.1
Halogen	58.2	1.7	9.8	9.7	0.6	9.5	3.1	10.3	2.3	5.0	10.0
LED	64.1	1.7	11.0	11.2	0.6	10.0	2.9	11.9	2.4	5.3	10.9
Other	72.9	Q	12.9	12.1	Q	9.8	3.6	13.9	3.0	5.4	11.8
<b>Refrigeration equipment (more than one may apply)</b>											
Any refrigeration	53.3	1.7	8.6	8.5	0.5	8.8	3.7	9.1	2.2	5.1	9.2
Walk-in units	72.9	1.8	11.6	10.9	0.8	10.0	4.8	19.3	2.6	4.7	10.3
Cases or cabinets	69.2	1.8	10.4	10.7	0.8	9.8	4.3	18.2	2.4	4.5	10.0
Large cold storage areas	80.1	1.1	9.6	8.8	0.6	10.0	4.1	34.7	1.7	3.1	9.8
Commercial ice makers	68.1	1.8	11.5	10.9	0.7	10.0	4.4	14.0	2.8	5.3	10.6
Residential-type or compact units	49.8	1.7	8.3	8.3	0.5	8.6	2.8	6.6	2.1	5.4	9.1
Vending machines	57.6	1.7	9.7	9.8	0.6	10.0	2.4	8.6	2.3	5.6	10.2
No refrigeration	28.3	1.6	5.8	4.9	0.3	7.6	Q	N	1.7	5.2	7.9
<b>Office equipment (more than one may apply)</b>											
Desktop computers	52.1	1.7	8.4	8.4	0.5	8.9	3.6	8.9	2.1	5.2	9.2
With flat screen monitors	52.2	1.7	8.5	8.5	0.5	8.9	3.6	8.9	2.1	5.2	9.2
With multiple monitors	57.7	1.6	9.8	10.4	0.5	9.6	2.4	7.3	2.2	7.5	10.0
Laptop computers	52.0	1.7	8.9	8.8	0.5	9.0	2.3	7.3	2.1	5.7	9.4
Dedicated servers	55.5	1.7	9.1	9.3	0.5	9.3	2.7	8.5	2.2	6.4	9.5
Laser printers	53.8	1.7	8.7	9.0	0.5	9.1	2.9	8.6	2.3	5.8	9.4
Inkjet printers	49.3	1.8	8.3	7.6	0.5	8.4	4.2	8.5	1.8	4.5	8.8
FAX machines	52.7	1.7	8.5	8.7	0.5	9.2	3.1	8.9	2.1	5.2	9.2
Photocopiers	52.3	1.7	8.8	8.9	0.5	9.1	2.1	7.0	2.2	5.8	9.5
<b>Number of desktop computers</b>											
None	28.6	2.2	6.3	3.7	0.6	5.5	7.2	12.3	2.6	Q	7.5
1 to 4	44.7	1.8	5.8	5.4	0.5	6.8	11.9	14.3	1.9	1.4	8.2
5 to 9	48.4	1.7	6.5	6.6	0.5	8.2	5.2	13.0	2.1	2.8	8.5
10 to 19	46.9	1.8	6.4	7.5	0.5	8.4	2.9	9.5	1.8	4.4	8.3
20 to 49	54.7	1.7	8.9	9.0	0.6	10.0	2.2	10.1	2.2	4.2	9.6
50 to 99	49.2	1.9	8.7	8.8	0.5	9.3	1.6	5.9	1.9	5.0	8.7
100 to 249	56.0	1.5	8.8	10.1	0.6	10.4	1.4	5.1	2.5	8.4	10.3
250 or more	65.5	1.4	14.3	12.6	0.3	10.1	1.7	3.1	2.4	11.5	10.9

**Table E4. Electricity consumption intensities (Btu) by end use, 2012**

Electricity energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using electricity for the end use)											
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
<b>All buildings</b>	50.0	1.7	8.3	8.1	0.5	8.7	3.7	9.1	2.1	5.2	9.1
<b>Number of laptop computers</b>											
None	43.9	1.9	6.2	5.9	0.5	7.6	10.6	15.9	2.2	2.8	8.1
1 to 4	44.0	1.9	6.8	6.0	0.5	7.8	4.4	9.8	1.9	2.8	8.3
5 to 9	51.6	1.4	8.2	8.9	0.6	9.7	2.4	9.5	1.9	3.9	9.1
10 to 19	53.4	1.9	9.5	9.4	0.6	9.0	2.0	8.1	2.0	4.6	9.3
20 to 49	54.5	1.5	8.3	9.9	0.6	9.4	1.8	6.1	2.6	7.6	9.9
50 to 99	55.7	1.6	11.1	10.1	0.4	9.8	1.6	4.3	2.0	7.1	10.5
100 to 249	59.0	1.4	11.2	11.1	0.4	9.6	1.4	3.4	2.3	11.7	10.2
250 or more	67.1	1.7	14.3	13.1	0.4	10.3	1.5	3.3	2.7	10.8	11.3
<b>Number of dedicated servers</b>											
None	40.5	1.9	6.8	5.9	0.6	7.5	6.4	10.3	2.1	2.5	8.3
1 to 4	49.7	1.7	7.4	7.8	0.5	8.7	3.4	9.8	2.0	4.0	8.7
5 to 9	55.0	1.6	8.9	9.5	0.7	9.4	1.8	9.2	2.0	5.6	9.0
10 to 19	65.3	1.6	12.3	13.0	0.4	11.0	1.9	6.3	2.8	8.9	11.3
20 to 49	63.7	1.7	13.8	11.9	0.3	10.5	1.8	3.6	2.4	9.6	10.8
50 or more	88.0	1.6	17.1	14.5	0.4	11.9	2.0	4.1	2.7	23.3	14.0
<b>Number of photocopiers</b>											
None	44.6	1.9	7.0	6.1	0.6	7.6	10.6	15.3	1.9	3.1	8.1
One	42.9	1.7	6.3	6.0	0.5	7.4	3.3	9.3	1.8	2.9	8.3
2 to 4	49.1	1.8	7.9	8.2	0.5	8.8	1.6	7.3	2.2	5.2	8.5
5 to 9	55.5	1.5	9.1	9.5	0.6	10.3	1.4	6.8	1.9	7.5	9.3
10 or more	67.3	1.5	13.9	13.4	0.4	11.0	2.0	3.9	3.0	9.5	12.5
<b>Number of TVs or video displays</b>											
None	34.5	1.6	5.1	4.9	0.3	6.9	6.6	9.3	0.8	4.2	7.5
One	41.2	1.5	5.2	6.0	0.3	7.5	5.7	9.6	1.3	3.4	7.7
2 to 4	48.9	1.7	7.8	7.6	0.5	8.9	4.6	9.2	1.6	4.2	8.9
5 to 9	62.9	2.5	10.1	9.9	0.6	9.6	5.4	11.8	2.0	7.3	9.6
10 to 19	61.3	1.7	10.7	11.1	0.7	10.3	2.8	9.8	2.0	6.7	9.7
20 to 49	59.1	1.6	10.3	10.6	0.8	10.0	1.3	9.5	2.6	5.8	8.9
50 to 99	60.3	2.0	9.8	9.9	0.9	9.9	1.7	6.7	4.3	8.7	10.4
100 or more	67.3	1.4	14.3	11.5	0.6	9.6	3.3	5.5	6.1	4.9	13.8
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>											
Snack bar or concession stand	65.9	1.7	12.8	10.0	0.6	9.4	2.1	13.3	2.6	5.2	10.4
Fast food or small restaurant	78.2	1.3	12.6	12.4	0.8	11.6	2.3	20.6	3.0	4.4	11.3
Cafeteria or large restaurant	58.5	1.6	12.4	10.2	0.6	9.1	1.8	6.9	2.7	5.7	9.9
Commercial kitchen/ food preparation area	61.7	1.7	11.5	9.7	0.7	8.8	2.3	12.4	2.9	4.0	10.2
Small kitchen area	49.3	1.6	9.5	7.5	0.5	7.3	1.8	7.7	2.4	4.0	9.1
<b>Separate computer areas (more than one may apply)</b>											
Data center or server farm	73.3	1.9	16.2	12.7	0.3	11.2	1.9	4.3	2.8	13.6	12.4
Computer-based training room	57.7	1.5	11.3	10.0	0.5	9.8	1.6	7.1	2.2	6.9	9.5
Student or public computer center	48.3	1.7	9.8	7.9	0.7	7.7	1.6	5.7	2.5	5.5	8.3

**Table E4. Electricity consumption intensities (Btu) by end use, 2012**

Electricity energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using electricity for the end use)											
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	50.0	1.7	8.3	8.1	0.5	8.7	3.7	9.1	2.1	5.2	9.1
<b>HVAC conservation features (more than one may apply)</b>											
Economizer cycle	59.8	1.8	9.6	11.1	0.5	10.2	2.7	8.3	2.2	6.5	10.7
Regular HVAC maintenance	54.6	1.7	8.9	9.0	0.5	9.3	3.6	9.2	2.2	5.6	9.6
Building automation system (BAS) <sup>3</sup>	61.7	1.7	10.9	10.9	0.5	10.3	2.4	8.9	2.2	6.9	10.8
<b>Window and interior lighting features (more than one may apply)</b>											
Multipaned windows	53.1	1.9	8.4	8.7	0.6	8.9	3.8	9.5	2.3	5.4	9.3
Tinted window glass	55.2	1.6	9.5	9.2	0.6	9.4	3.2	9.1	2.2	5.6	9.6
Reflective window glass	64.7	1.8	11.3	11.1	0.5	10.3	2.5	10.5	2.6	7.6	10.5
External overhangs or awnings	58.5	1.7	9.3	9.3	0.7	9.3	4.6	13.0	2.3	5.1	9.3
Skylights or atriums	51.2	1.4	9.1	9.4	0.5	9.0	2.2	7.0	2.1	4.9	9.7
Light scheduling	61.0	1.7	10.0	10.6	0.6	9.4	2.9	11.6	2.3	6.2	10.0
Occupancy sensors	57.9	1.6	9.8	10.2	0.5	9.2	2.4	9.3	2.2	6.4	10.4
Multi-level lighting or dimming	63.9	1.9	10.7	11.1	0.6	9.1	3.1	13.1	2.7	5.0	10.6
Daylight harvesting	60.7	1.6	10.4	11.3	0.6	9.9	2.6	10.8	2.0	4.8	10.7
Demand responsive lighting	57.4	1.4	8.8	9.6	0.8	9.4	1.8	14.8	2.1	3.5	8.7
Building automation system (BAS) for lighting <sup>3</sup>	67.6	1.6	11.1	12.0	0.7	10.8	2.3	14.1	1.7	5.9	10.4
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>											
Heating	48.2	1.8	8.0	8.0	0.5	8.1	2.9	8.5	1.9	4.9	8.4
Cooling	49.2	1.7	8.3	8.1	0.5	8.2	3.0	8.4	1.9	4.9	8.4
Lighting	49.4	1.7	8.2	8.1	0.5	8.5	3.5	8.6	2.1	5.0	8.9
<b>Annual consumption (kilowatthours)</b>											
10,000 or less	4.5	0.7	1.1	0.4	0.1	1.2	0.4	0.4	0.4	0.7	1.9
10,001 to 50,000	16.2	1.1	2.4	2.0	0.2	3.4	1.1	1.6	1.1	2.1	4.3
50,001 to 100,000	28.0	1.7	4.0	3.7	0.3	5.4	3.1	4.2	1.6	3.3	6.4
100,001 to 500,000	45.3	1.8	6.0	6.3	0.5	7.4	6.7	11.5	2.2	3.9	7.7
500,001 to 1,000,000	55.9	1.9	8.6	8.8	0.8	8.7	6.3	9.5	2.8	5.6	9.3
1,000,001 to 5,000,000	62.3	1.7	9.7	10.8	0.5	10.8	2.7	12.2	2.1	5.2	10.4
Over 5,000,000	88.5	2.0	18.7	15.5	0.7	15.2	2.5	8.3	2.9	10.7	16.7

**Table E4. Electricity consumption intensities (Btu) by end use, 2012**

Electricity energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using electricity for the end use)											
	Total	Space heat-ing	Cool-ing	Venti-lation	Water heat-ing	Light-ing	Cook-ing	Refrig-eration	Office equip-ment	Com-puting	Other
All buildings	50.0	1.7	8.3	8.1	0.5	8.7	3.7	9.1	2.1	5.2	9.1

<sup>1</sup>The electricity intensity calculation (electricity consumption for the end use divided by the floorspace in buildings that use electricity for the particular end use) differs from the calculation used in the 2003 CBECS tables, in which the intensities were not conditional on the presence of the end use; the 2003 CBECS denominator was total floorspace in all buildings that used electricity. In this table, the intensities for each end use do not sum to the total electricity intensity, whereas they did in the 2003 CBECS table.

<sup>2</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>3</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 E5. Electricity consumption (kWh) by end use, 2012**

	Total electricity consumption (billion kWh)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
<b>All buildings</b>	1,243	25	185	196	6	212	27	196	50	119	225
<b>Building floorspace (square feet)</b>											
1,001 to 5,000	130	4	15	13	1	17	8	38	6	10	19
5,001 to 10,000	113	2	13	14	1	17	5	27	5	10	19
10,001 to 25,000	159	4	20	23	1	27	4	27	8	15	30
25,001 to 50,000	149	4	22	25	1	28	1	20	6	14	29
50,001 to 100,000	192	4	30	32	1	32	2	30	8	18	34
100,001 to 200,000	190	3	28	34	1	35	2	27	6	21	33
200,001 to 500,000	180	2	34	31	1	32	2	20	6	18	34
Over 500,000	130	1	25	24	(*)	23	3	7	5	14	27
<b>Principal building activity</b>											
Education	134	3	26	20	1	23	1	12	6	23	19
Food sales	61	1	2	3	(*)	5	3	43	1	1	3
Food service	82	1	9	9	1	5	13	33	2	1	6
Health care	107	1	20	24	(*)	18	2	6	5	10	20
Inpatient	74	(*)	17	13	(*)	12	2	4	4	6	15
Outpatient	33	1	3	11	(*)	6	(*)	1	1	4	6
Lodging	89	2	11	14	1	12	3	10	13	2	22
Mercantile	207	4	27	36	2	41	2	56	5	7	28
Retail (other than mall)	82	2	12	14	(*)	21	1	15	2	3	13
Enclosed and strip malls	124	2	15	22	2	20	1	41	3	4	15
Office	253	6	34	63	1	43	1	8	11	49	39
Public assembly	80	3	24	7	(*)	10	1	7	2	5	21
Public order and safety	21	(*)	4	2	(*)	4	(*)	1	1	2	6
Religious worship	24	1	4	4	(*)	3	(*)	1	1	1	8
Service	37	1	5	4	(*)	11	(*)	1	1	2	11
Warehouse and storage	83	1	10	4	(*)	25	(*)	14	2	5	23
Other	56	1	8	5	(*)	11	Q	4	1	12	15
Vacant	8	(*)	1	1	(*)	1	Q	(*)	(*)	(*)	3
<b>Year constructed</b>											
Before 1920	32	1	3	6	(*)	6	1	4	1	3	7
1920 to 1945	64	1	9	10	(*)	11	1	10	3	7	12
1946 to 1959	85	2	12	14	(*)	15	2	12	3	7	17
1960 to 1969	147	3	20	22	1	26	3	21	7	16	28
1970 to 1979	171	3	23	29	1	29	5	26	7	17	30
1980 to 1989	234	5	41	38	1	39	4	34	9	23	40
1990 to 1999	213	5	33	32	1	35	5	38	8	19	37
2000 to 2003	111	2	17	18	1	20	2	17	4	12	20
2004 to 2007	97	2	14	14	(*)	17	2	19	4	7	18
2008 to 2012	89	2	13	14	(*)	15	2	16	3	8	16

**Table E5. Electricity consumption (kWh) by end use, 2012**

	Total electricity consumption (billion kWh)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	1,243	25	185	196	6	212	27	196	50	119	225
<b>Census region and division</b>											
Northeast	220	5	22	39	1	39	4	35	8	24	42
New England	51	1	4	8	(*)	9	1	10	2	5	11
Middle Atlantic	170	4	18	31	1	31	3	25	6	19	31
Midwest	249	7	28	41	1	46	7	37	10	23	49
East North Central	174	5	19	29	1	32	4	27	7	16	35
West North Central	75	3	9	12	(*)	14	2	11	3	7	14
South	530	8	108	76	3	87	11	82	21	45	90
South Atlantic	287	4	58	41	2	45	5	45	12	26	48
East South Central	71	2	11	11	(*)	12	2	12	3	5	12
West South Central	173	2	39	24	1	30	4	24	6	13	30
West	243	4	27	39	1	41	5	42	12	27	44
Mountain	67	1	9	11	(*)	11	2	10	4	7	12
Pacific	176	3	18	28	1	30	4	32	8	21	32
<b>Climate region<sup>1</sup></b>											
Very cold/Cold	419	13	38	72	2	75	9	70	17	40	82
Mixed-humid	415	9	63	65	2	71	10	64	18	40	73
Mixed-dry/Hot-dry	152	1	22	22	1	25	3	26	7	17	28
Hot-humid	220	1	59	30	1	34	4	32	7	15	35
Marine	35	1	2	7	(*)	6	1	5	1	5	8
<b>Number of floors</b>											
One	545	12	76	71	4	95	16	127	18	37	89
Two	259	6	36	41	1	45	4	39	10	29	47
Three	109	2	16	19	(*)	19	2	11	5	12	22
Four to nine	231	3	39	45	1	37	4	15	11	27	48
Ten or more	98	1	17	20	(*)	16	2	5	5	12	20
<b>Elevators and escalators (more than one may apply)</b>											
Any elevators	539	9	91	102	2	89	8	40	24	69	105
Number of elevators											
One	147	3	21	28	1	26	2	15	7	17	28
Two to five	222	4	36	41	1	36	3	15	9	35	43
Six or more	170	2	34	34	(*)	28	4	10	8	17	34
Any escalators	66	1	12	13	(*)	12	1	5	4	5	14
<b>Number of workers (main shift)</b>											
Fewer than 5	134	4	16	13	1	23	3	27	6	7	33
5 to 9	112	3	15	15	1	18	5	23	5	7	21
10 to 19	132	3	17	18	1	21	6	29	6	9	22
20 to 49	220	5	30	33	1	37	5	42	9	21	36
50 to 99	214	4	34	35	1	38	3	35	8	22	35
100 to 249	185	3	29	32	1	34	2	25	6	20	33
250 or more	246	3	45	50	1	42	4	15	10	32	45

**Table E5. Electricity consumption (kWh) by end use, 2012**

	Total electricity consumption (billion kWh)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	1,243	25	185	196	6	212	27	196	50	119	225
<b>Weekly operating hours</b>											
Fewer than 40	35	1	6	2	(*)	5	1	4	2	3	10
40 to 48	155	4	25	22	1	29	1	12	8	24	29
49 to 60	238	6	37	40	1	44	2	19	10	36	45
61 to 84	249	5	37	43	2	42	4	51	7	19	38
85 to 167	200	3	25	27	1	31	10	62	4	8	29
Open continuously	366	5	55	61	2	61	10	49	20	29	74
<b>Ownership and occupancy</b>											
Nongovernment owned	988	20	138	155	5	167	24	176	40	86	176
Owner occupied	455	9	68	65	2	77	13	78	21	34	88
Leased to tenant(s)	398	8	52	67	3	67	9	78	14	36	64
Owner occupied and leased	132	2	19	23	1	23	2	20	5	16	23
Unoccupied	2	Q	(*)	(*)	Q	Q	Q	Q	Q	Q	1
Government owned	255	5	47	41	1	45	4	20	11	33	49
Federal	23	(*)	4	5	(*)	4	(*)	1	1	2	5
State	81	2	10	16	(*)	15	1	7	4	10	16
Local	152	3	33	19	1	26	2	13	6	21	28
<b>Party responsible for operation and maintenance of energy systems</b>											
Building owner	1,029	21	158	165	5	178	21	139	44	105	194
Business owner or tenant	182	3	22	26	1	30	5	52	5	12	26
Property management	18	(*)	3	3	(*)	3	1	2	1	2	3
Other	13	(*)	2	2	Q	2	1	3	1	1	2
<b>Provider of direct input on energy-related equipment purchases</b>											
Building owner	1,061	21	162	169	5	183	22	148	45	107	199
Business owner or tenant	142	3	18	20	1	23	4	39	4	9	20
Property management	12	(*)	2	2	(*)	2	(*)	2	1	1	2
Other	28	(*)	4	4	(*)	4	1	8	1	1	4
<b>Number of establishments</b>											
One	777	16	116	113	3	133	21	119	35	73	147
2 to 5	249	5	36	42	1	43	4	43	9	21	46
6 to 10	70	1	10	13	1	11	1	14	2	8	10
11 to 20	69	1	11	13	1	11	1	13	2	6	10
More than 20	76	1	14	14	1	14	1	8	2	11	11
Currently unoccupied	2	Q	(*)	(*)	Q	(*)	Q	Q	Q	Q	1
<b>Predominant exterior wall material</b>											
Brick, stone, or stucco	596	13	90	98	3	97	15	86	27	61	107
Concrete (block or poured)	323	5	50	48	2	55	6	68	11	24	54
Concrete panels	121	2	16	20	(*)	22	2	14	5	15	24
Siding or shingles	71	2	8	10	(*)	11	3	14	3	6	14
Metal panels	79	2	13	9	(*)	19	1	9	2	6	18
Window glass	31	1	5	6	(*)	5	(*)	2	1	6	5
Other	14	(*)	2	2	(*)	2	(*)	Q	(*)	1	3
No one major type	8	(*)	1	1	(*)	1	Q	1	(*)	1	2

**Table E5. Electricity consumption (kWh) by end use, 2012**

	Total electricity consumption (billion kWh)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	1,243	25	185	196	6	212	27	196	50	119	225
<b>Predominant roof material</b>											
Metal surfacing	169	4	27	19	1	34	3	29	6	13	33
Synthetic or rubber	422	9	59	72	2	71	8	67	16	42	76
Built-up	337	5	54	58	2	58	8	48	12	35	57
Slate or tile shingles	59	1	8	9	(*)	9	1	10	3	6	12
Wooden materials (including shingles)	14	(*)	2	2	(*)	2	1	4	1	1	2
Asphalt, fiberglass, or other shingles	196	5	28	29	1	31	6	33	10	17	36
Concrete	30	(*)	6	5	Q	5	(*)	3	1	5	5
Other	11	(*)	2	2	Q	2	Q	3	(*)	1	2
No one major type	5	(*)	1	1	Q	1	Q	Q	(*)	1	1
<b>Roof characteristics</b>											
Roof tilt											
Flat	799	14	125	136	4	138	17	112	30	81	142
Shallow pitch	298	6	39	40	2	52	6	62	12	26	53
Steeper pitch	145	4	21	20	1	22	4	22	9	12	30
Cool roof	325	5	50	54	2	55	6	52	12	33	56
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>											
Any type of renovation	648	13	97	108	3	108	14	94	26	67	118
Addition or annex	205	4	37	33	1	35	4	25	9	17	40
Reduction in floorspace	36	(*)	6	7	(*)	7	1	5	1	3	6
Roof replacement	329	7	50	57	2	56	8	43	13	35	61
Exterior wall replacement	70	2	12	11	(*)	11	2	10	2	8	12
Interior wall reconfiguration	356	7	54	64	2	58	6	42	14	46	63
Window replacement	176	4	28	29	1	28	5	19	9	21	33
HVAC equipment upgrade	433	9	68	74	2	72	9	58	17	46	78
Lighting upgrade	410	8	62	69	2	66	10	61	17	43	72
Electrical upgrade	265	5	42	44	1	42	6	35	11	29	49
Plumbing system upgrade	222	4	34	38	1	34	6	29	10	25	41
Insulation upgrade	126	3	19	19	1	18	3	20	6	15	22
Fire, safety, or security upgrade	282	6	47	48	1	44	7	35	11	33	50
Structural upgrade	69	1	12	10	(*)	10	1	9	3	9	13
Other	13	(*)	2	3	(*)	2	Q	1	1	2	2
No renovations	506	10	75	74	3	90	11	87	21	44	92
Buildings constructed 2008 or later	89	2	13	14	(*)	15	2	16	3	8	16
<b>Energy sources (more than one may apply)</b>											
Electricity	1,243	25	185	196	6	212	27	196	50	119	225
Natural gas	903	15	134	146	4	151	20	153	37	83	160
Fuel oil	382	6	66	66	1	65	7	34	15	46	76
District heat	103	1	7	24	(*)	20	2	7	6	12	25
District chilled water	86	1	4	20	(*)	17	1	5	5	12	21
Propane	110	3	14	14	(*)	19	3	23	5	7	22
Other	50	1	8	9	(*)	9	1	8	2	5	9

**Table E5. Electricity consumption (kWh) by end use, 2012**

	Total electricity consumption (billion kWh)											
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other	
All buildings	1,243	25	185	196	6	212	27	196	50	119	225	
<b>Space-heating energy sources</b>												
Electricity	774	25	122	120	5	127	17	127	31	72	129	
Electricity main	439	16	75	63	3	69	9	69	19	44	71	
Electricity secondary	335	9	46	56	2	57	7	58	12	29	58	
Other excluding electricity	423	N	53	73	1	76	10	62	18	44	86	
Buildings without heating	45	N	11	3	(*)	9	1	7	1	2	11	
<b>Primary space-heating energy source</b>												
Electricity	439	16	75	63	3	69	9	69	19	44	71	
Natural gas	611	7	88	99	2	105	14	106	23	58	109	
Fuel oil	24	1	3	3	(*)	5	(*)	3	1	2	6	
District heat	101	1	7	24	(*)	20	2	7	5	12	24	
Propane	18	1	1	2	(*)	3	Q	5	1	1	3	
Other	5	Q	(*)	1	(*)	1	Q	1	Q	(*)	1	
<b>Cooling energy sources</b>												
Electricity	1,159	24	185	182	6	193	26	187	46	109	201	
Other excluding electricity	56	(*)	N	13	(*)	12	1	4	4	8	14	
Buildings without cooling	27	(*)	N	1	(*)	7	(*)	6	1	1	11	
<b>Water-heating energy sources</b>												
Electricity	649	16	100	99	6	111	12	111	22	65	107	
Other excluding electricity	560	8	81	94	N	93	15	84	28	51	106	
Buildings without water heating	33	(*)	4	3	N	8	Q	2	1	3	12	
<b>Cooking energy sources</b>												
Electricity	454	9	72	68	3	64	27	92	16	35	67	
Other excluding electricity	247	3	39	39	1	35	N	63	11	15	40	
Buildings without cooking	542	12	74	89	2	113	N	42	23	69	119	
<b>Energy end uses (more than one may apply)</b>												
Buildings with space heating	1,198	25	175	193	6	203	27	189	49	116	215	
Buildings with cooling	1,215	24	185	195	6	205	27	190	50	118	215	
Buildings with water heating	1,209	24	181	193	6	204	27	195	49	116	213	
Buildings with cooking	700	13	111	107	4	100	27	155	28	50	107	
Buildings with manufacturing	67	1	10	8	(*)	14	1	9	1	4	17	
Buildings with electricity generation	490	7	80	84	2	80	9	62	19	57	90	
<b>Percent of floorspace heated</b>												
Not heated	45	N	11	3	(*)	9	1	7	1	2	11	
1 to 50	98	1	11	11	(*)	18	1	18	3	11	22	
51 to 99	234	4	37	38	1	38	5	46	9	18	38	
100	866	20	127	144	4	146	21	125	37	87	154	
<b>Percent of floorspace cooled</b>												
Not cooled	27	(*)	N	1	(*)	7	(*)	6	1	1	11	
1 to 50	153	3	12	19	1	36	2	24	6	12	39	
51 to 99	381	7	55	63	2	61	8	68	14	40	63	
100	681	14	118	113	4	109	17	99	30	66	113	

**Table E5. Electricity consumption (kWh) by end use, 2012**

	Total electricity consumption (billion kWh)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	1,243	25	185	196	6	212	27	196	50	119	225
<b>Percent lit when open</b>											
Zero	1	Q	Q	Q	Q	Q	Q	Q	Q	Q	1
1 to 50	114	3	16	18	1	15	2	14	7	8	31
51 to 99	526	11	78	87	3	83	11	90	21	51	91
100	599	11	92	91	3	113	14	92	23	59	101
Building never open/electricity not used	3	(*)	(*)	(*)	Q	Q	Q	Q	Q	Q	2
<b>Percent lit during off hours</b>											
Zero	232	6	34	34	1	37	3	30	9	28	49
1 to 50	784	16	122	127	5	136	16	123	31	74	136
51 to 100	165	2	21	26	(*)	29	6	31	7	14	29
Building always open with no "off hours"	62	1	9	10	(*)	11	2	13	3	4	11
Electricity not used	N	N	N	N	N	N	N	N	N	N	N
<b>Heating equipment (more than one may apply)</b>											
Heat pumps	180	4	33	25	1	28	3	26	10	18	30
Furnaces	106	3	14	15	1	17	3	20	5	9	18
Individual space heaters	271	9	36	43	2	49	6	39	12	25	52
District heat	103	1	7	24	(*)	20	2	7	6	12	24
Boilers	350	4	61	62	1	58	6	36	15	40	67
Packaged heating units	771	18	118	123	5	126	19	144	27	65	126
Other	38	1	3	5	(*)	5	1	18	1	1	4
<b>Cooling equipment (more than one may apply)</b>											
Residential-type central air conditioners	186	4	27	22	1	32	4	42	8	14	32
Heat pumps	189	5	33	27	1	30	3	28	10	19	32
Individual air conditioners	160	4	26	24	1	26	4	21	10	14	31
District chilled water	86	1	4	20	(*)	17	1	5	5	12	21
Central chillers	328	4	63	62	1	53	5	24	12	43	62
Packaged air conditioning units	727	15	114	122	4	118	18	132	25	59	118
Swamp coolers	29	1	4	4	(*)	5	1	7	1	2	4
Other	9	Q	1	1	Q	1	Q	(*)	(*)	Q	1
<b>Main equipment replaced since 1990 (more than one may apply)</b>											
Heating	388	9	57	59	2	63	9	65	17	40	66
Cooling	445	10	72	69	3	71	10	68	20	46	77
<b>Water-heating equipment</b>											
Centralized system	728	15	106	114	3	122	20	114	33	68	134
Distributed system	158	4	23	24	1	31	2	22	6	16	29
Combination of centralized and distributed system	324	6	52	54	2	51	6	59	11	33	50

**Table E5. Electricity consumption (kWh) by end use, 2012**

	Total electricity consumption (billion kWh)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	1,243	25	185	196	6	212	27	196	50	119	225
<b>Lighting equipment types (more than one may apply)</b>											
Incandescent	612	12	99	99	3	100	14	101	25	54	105
Standard fluorescent	1,197	24	179	191	6	203	26	190	49	115	215
Compact fluorescent	889	17	140	149	5	144	21	132	38	89	154
High-intensity discharge (HID)	382	6	65	63	2	67	6	56	14	33	70
Halogen	478	9	77	80	3	78	11	80	19	41	82
LED	415	7	67	73	2	64	8	74	15	34	71
Other	10	Q	2	2	Q	1	(*)	2	(*)	1	2
<b>Refrigeration equipment (more than one may apply)</b>											
Any refrigeration	1,150	23	172	183	6	189	27	196	47	107	200
Walk-in units	606	9	92	91	3	83	23	160	21	38	85
Cases or cabinets	582	9	83	90	3	83	19	153	20	37	84
Large cold storage areas	98	1	11	11	(*)	12	2	42	2	4	12
Commercial ice makers	653	11	104	105	3	96	21	134	27	50	102
Residential-type or compact units	911	19	141	150	5	157	17	121	38	95	166
Vending machines	742	13	116	126	4	129	11	111	30	71	131
No refrigeration	93	2	13	13	(*)	23	Q	N	4	12	26
<b>Office equipment (more than one may apply)</b>											
Desktop computers	1,177	23	178	190	6	201	25	182	48	117	208
With flat screen monitors	1,166	23	176	188	6	199	25	180	48	117	205
With multiple monitors	523	9	82	94	2	87	8	62	20	68	90
Laptop computers	968	19	155	163	5	167	14	125	40	106	174
Dedicated servers	869	16	135	145	4	146	15	124	34	100	149
Laser printers	856	16	129	143	4	145	15	125	37	92	150
Inkjet printers	524	12	83	80	3	90	13	82	19	47	94
FAX machines	1,029	20	156	168	5	179	20	159	41	101	180
Photocopiers	908	17	144	155	4	158	12	114	39	101	164
<b>Number of desktop computers</b>											
None	65	2	8	6	(*)	11	2	15	2	Q	17
1 to 4	205	5	24	24	1	31	12	56	9	6	37
5 to 9	134	3	18	18	1	23	3	31	6	8	24
10 to 19	129	3	17	20	1	23	2	23	5	12	23
20 to 49	210	4	33	34	1	38	2	34	9	16	37
50 to 99	120	3	20	21	1	23	1	13	5	12	21
100 to 249	160	2	22	29	1	30	2	14	7	24	29
250 or more	220	3	44	42	1	34	3	10	8	39	37

**Table E5. Electricity consumption (kWh) by end use, 2012**

	Total electricity consumption (billion kWh)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	1,243	25	185	196	6	212	27	196	50	119	225
<b>Number of laptop computers</b>											
None	275	6	31	33	1	45	13	71	11	13	51
1 to 4	273	7	40	37	2	48	5	53	12	18	51
5 to 9	126	2	19	21	1	24	2	21	5	9	22
10 to 19	131	3	23	23	1	22	2	19	5	11	23
20 to 49	154	3	21	28	1	27	2	16	7	22	28
50 to 99	85	1	16	15	(*)	15	1	6	3	11	16
100 to 249	90	1	14	17	(*)	15	1	5	4	18	16
250 or more	109	2	22	21	(*)	17	2	5	4	18	18
<b>Number of dedicated servers</b>											
None	374	8	51	50	2	66	13	72	17	19	76
1 to 4	497	11	71	78	3	86	10	90	20	40	87
5 to 9	101	2	15	17	1	17	1	16	4	10	16
10 to 19	109	2	18	22	(*)	18	1	10	5	15	19
20 to 49	70	1	15	13	(*)	12	1	4	3	11	12
50 or more	92	1	16	15	(*)	12	1	4	3	24	15
<b>Number of photocopiers</b>											
None	335	8	41	41	2	54	15	83	12	18	61
One	215	5	30	30	1	37	4	42	9	14	42
2 to 4	293	7	45	49	1	52	3	40	13	31	51
5 to 9	144	3	22	25	1	27	1	17	5	19	24
10 or more	257	3	46	51	1	42	4	14	12	36	48
<b>Number of TVs or video displays</b>											
None	224	5	26	29	1	42	6	41	4	21	49
One	121	3	14	17	1	22	4	25	4	9	22
2 to 4	236	5	36	37	1	43	4	40	8	20	43
5 to 9	150	4	23	23	1	23	4	27	5	17	23
10 to 19	147	2	23	27	1	25	3	22	5	16	23
20 to 49	140	3	23	25	1	24	2	21	6	13	21
50 to 99	77	1	10	13	(*)	13	1	9	6	11	13
100 or more	149	2	29	25	(*)	21	4	12	14	11	31
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>											
Snack bar or concession stand	191	3	35	29	1	27	5	39	7	15	30
Fast food or small restaurant	224	3	34	36	1	33	4	59	9	13	32
Cafeteria or large restaurant	261	4	52	46	1	40	5	31	12	26	44
Commercial kitchen/ food preparation area	292	5	52	46	1	42	7	59	14	19	48
Small kitchen area	203	4	37	31	1	30	5	32	10	16	37
<b>Separate computer areas (more than one may apply)</b>											
Data center or server farm	238	4	47	41	(*)	36	3	14	9	44	40
Computer-based training room	300	5	54	52	1	51	4	36	12	36	49
Student or public computer center	203	4	37	33	1	32	4	23	11	23	35

**Table E5. Electricity consumption (kWh) by end use, 2012**

	Total electricity consumption (billion kWh)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	1,243	25	185	196	6	212	27	196	50	119	225
<b>HVAC conservation features (more than one may apply)</b>											
Economizer cycle	539	10	81	100	2	91	10	70	19	58	97
Regular HVAC maintenance	1,108	21	170	182	6	188	24	169	44	110	195
Building automation system (BAS) <sup>2</sup>	670	11	109	118	3	111	11	91	24	74	117
<b>Window and interior lighting features (more than one may apply)</b>											
Multipaned windows	930	20	136	151	5	154	22	151	38	90	163
Tinted window glass	718	13	117	120	4	122	13	107	28	70	125
Reflective window glass	300	6	49	51	1	48	4	45	12	35	49
External overhangs or awnings	549	10	81	87	4	86	15	112	22	46	88
Skylights or atriums	332	6	53	60	2	58	5	42	13	31	63
Light scheduling	541	10	84	93	3	83	10	96	20	54	88
Occupancy sensors	609	10	95	106	3	97	9	91	23	66	109
Multi-level lighting or dimming	272	5	43	47	2	39	6	53	11	21	45
Daylight harvesting	109	2	17	20	1	18	2	19	3	8	19
Demand responsive lighting	80	1	12	13	1	13	1	19	3	5	12
Building automation system (BAS) for lighting <sup>2</sup>	239	4	37	42	2	38	4	48	6	21	37
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>											
Heating	893	20	138	147	5	149	17	141	35	87	155
Cooling	902	19	147	149	5	150	17	139	35	87	154
Lighting	1,137	23	171	182	6	195	24	174	46	110	205
<b>Annual consumption (kilowatthours)</b>											
10,000 or less	4	(*)	(*)	(*)	(*)	1	(*)	(*)	(*)	(*)	2
10,001 to 50,000	50	2	6	6	(*)	10	1	4	3	5	13
50,001 to 100,000	62	2	8	8	(*)	12	1	7	3	6	14
100,001 to 500,000	283	7	35	38	2	46	9	61	13	23	48
500,001 to 1,000,000	165	4	24	26	1	26	6	26	8	16	28
1,000,001 to 5,000,000	379	7	55	65	2	66	7	70	13	31	63
Over 5,000,000	300	4	56	53	1	51	4	28	10	36	57

<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 E6. Electricity consumption intensities (kWh) by end use, 2012**Electricity energy intensity<sup>1</sup> (kWh/square foot in buildings using electricity for the end use)

	Total	Space heat-ing	Cool-ing	Venti-lation	Water heat-ing	Light-ing	Cook-ing	Refrig-eration	Office equip-ment	Com-puting	Other
<b>All buildings</b>	14.6	0.5	2.4	2.4	0.2	2.5	1.1	2.7	0.6	1.5	2.7
<b>Building floorspace (square feet)</b>											
1,001 to 5,000	17.4	0.9	2.4	1.9	0.2	2.4	6.0	7.0	1.0	1.7	2.5
5,001 to 10,000	13.3	0.5	1.8	1.8	0.2	2.1	2.9	4.1	0.7	1.4	2.3
10,001 to 25,000	11.7	0.6	1.6	1.8	0.2	2.0	1.5	2.5	0.6	1.2	2.2
25,001 to 50,000	12.8	0.5	2.1	2.2	0.1	2.5	0.6	2.0	0.6	1.2	2.5
50,001 to 100,000	14.1	0.5	2.4	2.4	0.2	2.4	0.5	2.5	0.6	1.3	2.5
100,001 to 200,000	15.3	0.4	2.5	2.8	0.1	2.8	0.5	2.4	0.5	1.8	2.7
200,001 to 500,000	16.9	0.4	3.4	2.9	0.2	3.0	0.5	2.0	0.5	1.7	3.2
Over 500,000	18.4	0.4	3.9	3.5	0.1	3.3	0.7	1.0	0.8	2.0	3.8
<b>Principal building activity</b>											
Education	11.0	0.5	2.5	1.6	0.2	1.9	0.2	1.0	0.5	1.9	1.6
Food sales	48.7	0.6	1.6	2.8	(*)	3.6	4.3	34.5	0.5	0.6	2.7
Food service	44.9	1.4	5.3	5.0	1.1	3.0	15.9	18.3	1.2	0.8	3.4
Health care	25.8	0.5	5.1	5.8	0.2	4.3	1.2	1.4	1.2	2.4	4.9
Inpatient	31.0	0.5	7.7	5.6	0.7	4.9	1.3	1.8	1.5	2.6	6.2
Outpatient	18.7	0.6	1.9	6.1	(*)	3.5	0.7	0.8	0.7	2.1	3.2
Lodging	15.3	0.6	2.1	2.5	0.7	2.0	1.4	1.7	2.2	0.3	3.7
Mercantile	18.3	0.5	2.4	3.2	0.2	3.6	0.4	5.4	0.5	0.6	2.4
Retail (other than mall)	15.2	0.5	2.2	2.5	(*)	3.9	0.4	3.5	0.4	0.6	2.4
Enclosed and strip malls	21.1	0.4	2.6	3.7	0.4	3.4	0.4	6.9	0.5	0.6	2.5
Office	15.9	0.6	2.2	3.9	0.1	2.7	0.2	0.6	0.7	3.1	2.4
Public assembly	14.5	1.0	5.2	1.3	(*)	1.9	0.5	1.5	0.4	0.9	3.8
Public order and safety	14.9	0.4	3.3	1.1	0.6	3.2	0.6	0.6	0.7	1.6	4.0
Religious worship	5.2	0.3	1.0	0.9	(*)	0.6	0.2	0.3	0.3	0.2	1.8
Service	8.3	0.4	1.3	1.0	0.1	2.5	0.2	0.4	0.3	0.6	2.5
Warehouse and storage	6.6	0.2	1.0	0.4	(*)	2.1	(*)	1.6	0.2	0.4	1.8
Other	28.3	0.7	4.2	2.5	(*)	5.7	Q	2.5	0.4	6.5	7.6
Vacant	4.5	0.2	0.6	0.9	(*)	1.3	Q	0.4	0.1	0.4	2.0
<b>Year constructed</b>											
Before 1920	8.4	0.4	1.0	1.6	0.1	1.6	0.8	1.5	0.4	0.9	1.9
1920 to 1945	10.9	0.4	1.8	1.8	0.1	1.9	0.6	2.0	0.5	1.3	2.1
1946 to 1959	11.8	0.5	1.9	2.0	0.2	2.1	0.9	1.9	0.5	1.1	2.4
1960 to 1969	14.4	0.6	2.2	2.2	0.2	2.6	1.1	2.3	0.7	1.7	2.8
1970 to 1979	16.2	0.6	2.4	2.8	0.2	2.8	1.5	2.9	0.7	1.7	2.8
1980 to 1989	15.8	0.5	3.0	2.6	0.1	2.6	1.0	2.6	0.6	1.6	2.7
1990 to 1999	16.2	0.6	2.8	2.5	0.2	2.7	1.3	3.2	0.6	1.6	2.8
2000 to 2003	15.5	0.5	2.6	2.5	0.1	2.8	1.1	2.6	0.6	1.7	2.8
2004 to 2007	14.9	0.4	2.5	2.2	0.1	2.6	0.8	3.4	0.7	1.2	2.7
2008 to 2012	15.7	0.4	2.5	2.6	0.1	2.6	1.3	3.2	0.6	1.4	2.8

**Table E6. Electricity consumption intensities (kWh) by end use, 2012**

Electricity energy intensity <sup>1</sup> (kWh/square foot in buildings using electricity for the end use)											
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	14.6	0.5	2.4	2.4	0.2	2.5	1.1	2.7	0.6	1.5	2.7
<b>Census region and division</b>											
Northeast	14.4	0.7	1.7	2.6	0.1	2.6	0.9	2.6	0.5	1.6	2.8
New England	12.1	0.8	1.2	2.0	0.1	2.1	1.0	2.8	0.5	1.2	2.6
Middle Atlantic	15.3	0.7	1.8	2.9	0.1	2.8	0.9	2.5	0.6	1.8	2.8
Midwest	13.4	0.9	1.7	2.3	0.1	2.5	1.1	2.3	0.6	1.4	2.6
East North Central	13.9	0.8	1.7	2.4	0.1	2.6	1.0	2.3	0.5	1.4	2.8
West North Central	12.5	0.9	1.7	2.1	0.1	2.3	1.2	2.1	0.6	1.3	2.4
South	16.1	0.4	3.6	2.4	0.2	2.7	1.1	2.8	0.7	1.5	2.7
South Atlantic	16.3	0.3	3.5	2.4	0.2	2.6	1.0	3.0	0.7	1.6	2.7
East South Central	14.6	0.5	2.6	2.3	0.1	2.5	1.3	2.7	0.7	1.2	2.5
West South Central	16.3	0.3	4.2	2.4	0.2	2.8	1.4	2.7	0.6	1.4	2.9
West	13.5	0.4	1.7	2.3	0.1	2.3	1.2	2.9	0.7	1.6	2.5
Mountain	13.9	0.5	2.1	2.4	0.1	2.4	1.0	2.4	0.8	1.5	2.5
Pacific	13.3	0.3	1.5	2.2	0.1	2.3	1.3	3.0	0.6	1.7	2.5
<b>Climate region<sup>2</sup></b>											
Very cold/Cold	13.4	0.8	1.4	2.4	0.1	2.5	1.0	2.5	0.6	1.4	2.6
Mixed-humid	15.2	0.5	2.5	2.4	0.2	2.6	1.1	2.6	0.7	1.6	2.7
Mixed-dry/Hot-dry	13.0	0.1	2.1	2.0	0.1	2.2	1.4	2.7	0.6	1.6	2.3
Hot-humid	18.4	0.2	5.4	2.6	0.2	2.9	1.2	3.1	0.6	1.4	2.9
Marine	14.6	0.5	0.9	2.8	0.1	2.5	0.9	2.6	0.6	2.2	3.1
<b>Number of floors</b>											
One	14.3	0.5	2.2	2.0	0.2	2.6	1.7	4.1	0.5	1.1	2.3
Two	13.0	0.5	2.0	2.1	0.1	2.3	0.6	2.2	0.5	1.6	2.4
Three	13.5	0.5	2.2	2.4	0.1	2.3	0.9	1.6	0.7	1.6	2.7
Four to nine	17.2	0.5	3.5	3.4	0.1	2.8	0.8	1.2	0.9	2.1	3.6
Ten or more	18.3	0.4	3.6	3.7	0.1	3.0	0.6	0.9	1.0	2.2	3.6
<b>Elevators and escalators (more than one may apply)</b>											
Any elevators	16.9	0.5	3.2	3.2	0.1	2.8	0.7	1.3	0.8	2.2	3.3
Number of elevators											
One	13.2	0.5	2.1	2.5	0.1	2.3	0.5	1.5	0.6	1.6	2.5
Two to five	17.5	0.5	3.2	3.2	0.1	2.8	0.7	1.3	0.8	2.8	3.4
Six or more	21.0	0.4	4.6	4.1	0.1	3.4	0.7	1.2	1.0	2.1	4.2
Any escalators	18.2	0.5	3.6	3.5	0.1	3.4	0.6	1.4	1.0	1.4	3.8
<b>Number of workers (main shift)</b>											
Fewer than 5	8.6	0.6	1.4	1.0	0.1	1.6	1.4	2.7	0.6	0.7	2.1
5 to 9	12.5	0.5	1.8	1.7	0.1	2.0	2.7	3.1	0.6	0.8	2.3
10 to 19	13.7	0.6	1.8	1.9	0.2	2.2	2.9	3.5	0.7	1.0	2.3
20 to 49	15.1	0.5	2.2	2.3	0.2	2.6	1.3	3.3	0.6	1.5	2.5
50 to 99	15.9	0.5	2.7	2.6	0.2	2.8	0.5	2.7	0.6	1.6	2.6
100 to 249	16.9	0.4	2.9	2.9	0.1	3.1	0.4	2.4	0.6	1.8	3.0
250 or more	20.8	0.5	4.1	4.3	0.2	3.5	0.6	1.3	0.8	2.7	3.8

**Table E6. Electricity consumption intensities (kWh) by end use, 2012**

Electricity energy intensity<sup>1</sup> (kWh/square foot in buildings using electricity for the end use)

	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	14.6	0.5	2.4	2.4	0.2	2.5	1.1	2.7	0.6	1.5	2.7
<b>Weekly operating hours</b>											
Fewer than 40	5.3	0.5	1.2	0.4	0.1	0.9	0.4	1.0	0.4	0.9	1.5
40 to 48	9.8	0.4	1.8	1.4	0.1	1.9	0.3	0.9	0.5	1.6	1.9
49 to 60	11.7	0.5	2.0	2.0	0.1	2.2	0.4	1.1	0.5	1.8	2.2
61 to 84	15.8	0.5	2.5	2.8	0.2	2.7	0.8	3.5	0.5	1.2	2.4
85 to 167	21.4	0.7	2.9	3.0	0.1	3.3	3.3	7.3	0.4	0.9	3.1
Open continuously	21.5	0.5	3.7	3.7	0.2	3.6	1.5	3.1	1.2	1.8	4.4
<b>Ownership and occupancy</b>											
Nongovernment owned	15.1	0.5	2.3	2.5	0.1	2.6	1.4	3.2	0.6	1.4	2.7
Owner occupied	15.0	0.6	2.5	2.2	0.1	2.6	1.6	2.9	0.7	1.3	2.9
Leased to tenant(s)	15.4	0.5	2.2	2.7	0.2	2.6	1.5	3.7	0.6	1.5	2.5
Owner occupied and leased	15.0	0.4	2.2	2.6	0.1	2.6	0.8	2.5	0.5	1.8	2.6
Unoccupied	2.5	Q	0.5	(*)	Q	0.6	Q	Q	Q	Q	1.8
Government owned	13.3	0.5	2.8	2.1	0.2	2.3	0.4	1.1	0.6	1.8	2.6
Federal	14.4	0.4	2.7	3.2	0.1	2.9	0.4	0.5	0.4	1.4	3.3
State	14.6	0.6	2.5	3.0	0.1	2.7	0.6	1.3	0.7	1.9	2.9
Local	12.5	0.5	2.9	1.6	0.2	2.1	0.4	1.1	0.5	1.8	2.3
<b>Party responsible for operation and maintenance of energy systems</b>											
Building owner	14.4	0.5	2.5	2.4	0.1	2.5	1.0	2.3	0.6	1.6	2.7
Business owner or tenant	16.3	0.4	2.1	2.4	0.2	2.7	1.5	5.2	0.5	1.1	2.3
Property management	14.8	0.4	2.7	2.9	0.1	2.2	1.3	2.1	0.8	1.8	2.5
Other	16.2	0.5	3.0	1.9	Q	2.4	1.7	3.8	0.7	0.9	2.9
<b>Provider of direct input on energy-related equipment purchases</b>											
Building owner	14.3	0.5	2.5	2.4	0.1	2.5	1.0	2.3	0.6	1.6	2.7
Business owner or tenant	17.4	0.5	2.3	2.5	0.2	2.8	1.9	5.2	0.5	1.2	2.5
Property management	13.5	0.5	2.0	2.8	0.1	2.2	1.3	2.0	0.6	1.2	2.3
Other	16.4	0.4	2.7	2.4	0.1	2.4	1.3	5.1	0.6	0.9	2.4
<b>Number of establishments</b>											
One	14.3	0.6	2.4	2.2	0.1	2.5	1.4	2.5	0.7	1.5	2.7
2 to 5	14.0	0.4	2.1	2.4	0.1	2.4	0.8	2.8	0.5	1.2	2.6
6 to 10	16.3	0.4	2.3	3.1	0.2	2.5	0.4	3.6	0.5	1.9	2.3
11 to 20	18.6	0.5	2.9	3.7	0.2	3.0	0.4	3.8	0.6	1.5	2.7
More than 20	20.1	0.4	3.7	3.6	0.2	3.7	0.4	2.2	0.6	3.0	3.0
Currently unoccupied	2.2	Q	0.5	(*)	Q	0.5	Q	Q	Q	Q	1.6
<b>Predominant exterior wall material</b>											
Brick, stone, or stucco	15.1	0.5	2.5	2.5	0.2	2.5	1.2	2.4	0.7	1.6	2.7
Concrete (block or poured)	15.8	0.4	2.7	2.4	0.2	2.7	1.0	3.8	0.6	1.2	2.6
Concrete panels	14.3	0.3	2.1	2.4	0.1	2.7	0.8	1.9	0.6	1.8	2.9
Siding or shingles	12.8	0.7	1.7	1.9	0.2	2.1	1.9	3.0	0.6	1.2	2.4
Metal panels	9.8	0.5	2.0	1.3	0.1	2.5	0.6	1.5	0.3	1.0	2.2
Window glass	23.4	0.7	4.1	4.8	0.1	3.8	0.6	1.7	0.7	4.7	3.9
Other	16.0	0.7	2.7	2.2	0.2	2.2	Q	4.6	0.5	1.5	3.0
No one major type	13.1	0.4	1.5	2.4	0.1	2.4	Q	2.1	0.5	1.2	2.8

**Table E6. Electricity consumption intensities (kWh) by end use, 2012**

Electricity energy intensity<sup>1</sup> (kWh/square foot in buildings using electricity for the end use)

	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	14.6	0.5	2.4	2.4	0.2	2.5	1.1	2.7	0.6	1.5	2.7
<b>Predominant roof material</b>											
Metal surfacing	11.2	0.5	2.2	1.4	0.1	2.3	1.1	2.5	0.5	1.0	2.2
Synthetic or rubber	16.5	0.6	2.5	2.8	0.1	2.8	1.0	2.9	0.6	1.7	3.0
Built-up	15.8	0.4	2.8	2.8	0.2	2.7	1.0	2.5	0.6	1.7	2.7
Slate or tile shingles	13.9	0.4	2.3	2.2	0.3	2.1	1.3	2.6	0.9	1.5	2.8
Wooden materials (including shingles)	12.5	0.3	1.8	1.6	0.2	1.9	3.4	4.0	0.7	1.0	2.1
Asphalt, fiberglass, or other shingles	13.4	0.6	2.1	2.0	0.2	2.2	1.3	2.6	0.7	1.2	2.5
Concrete	18.9	0.3	3.9	3.3	Q	3.0	0.6	2.4	0.7	3.2	3.2
Other	15.8	0.2	2.6	2.3	Q	2.3	Q	4.3	0.5	1.0	2.9
No one major type	8.0	0.4	1.2	1.1	Q	1.6	Q	Q	0.3	0.8	2.0
<b>Roof characteristics</b>											
Roof tilt											
Flat	16.4	0.5	2.8	2.8	0.2	2.9	1.1	2.6	0.6	1.7	2.9
Shallow pitch	13.0	0.5	2.0	1.8	0.1	2.3	1.1	3.3	0.6	1.3	2.3
Steeper pitch	11.1	0.6	1.8	1.6	0.2	1.7	1.0	2.0	0.7	1.1	2.3
Cool roof	16.8	0.4	2.8	2.8	0.2	2.9	0.9	3.0	0.6	1.8	2.9
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>											
Any type of renovation	15.5	0.5	2.5	2.6	0.2	2.6	1.0	2.5	0.6	1.7	2.8
Addition or annex	15.8	0.5	3.0	2.6	0.2	2.7	0.7	2.0	0.7	1.4	3.1
Reduction in floorspace	20.5	0.4	4.0	3.9	0.1	3.8	0.9	3.2	0.6	1.6	3.5
Roof replacement	15.9	0.5	2.6	2.8	0.2	2.7	1.0	2.2	0.6	1.7	2.9
Exterior wall replacement	16.6	0.6	2.9	2.7	0.2	2.6	0.9	2.6	0.6	2.0	2.9
Interior wall reconfiguration	16.8	0.5	2.7	3.0	0.1	2.8	0.9	2.1	0.7	2.2	3.0
Window replacement	14.4	0.5	2.4	2.4	0.1	2.3	1.0	1.7	0.7	1.8	2.7
HVAC equipment upgrade	16.2	0.5	2.7	2.8	0.2	2.7	0.9	2.3	0.7	1.8	2.9
Lighting upgrade	16.1	0.5	2.6	2.7	0.1	2.6	1.1	2.6	0.7	1.7	2.9
Electrical upgrade	16.4	0.5	2.8	2.7	0.2	2.6	1.1	2.4	0.7	1.9	3.0
Plumbing system upgrade	16.1	0.5	2.6	2.8	0.2	2.5	1.2	2.2	0.8	1.9	3.0
Insulation upgrade	16.6	0.6	2.8	2.6	0.2	2.5	1.1	2.9	0.8	2.1	2.9
Fire, safety, or security upgrade	16.4	0.5	2.9	2.9	0.1	2.6	1.0	2.2	0.7	2.0	2.9
Structural upgrade	17.6	0.5	3.4	2.6	0.1	2.6	0.9	2.4	0.9	2.3	3.4
Other	15.3	0.4	3.1	3.1	0.1	2.7	Q	1.3	0.6	2.3	2.7
No renovations	13.6	0.5	2.3	2.1	0.2	2.5	1.1	2.8	0.6	1.3	2.5
Buildings constructed 2008 or later	15.7	0.4	2.5	2.6	0.1	2.6	1.3	3.2	0.6	1.4	2.8
<b>Energy sources (more than one may apply)</b>											
Electricity	14.6	0.5	2.4	2.4	0.2	2.5	1.1	2.7	0.6	1.5	2.7
Natural gas	15.4	0.5	2.4	2.5	0.2	2.6	1.1	2.9	0.7	1.5	2.7
Fuel oil	18.9	0.6	3.6	3.3	0.1	3.2	0.7	1.8	0.7	2.3	3.8
District heat	17.3	0.5	2.2	4.1	0.2	3.4	0.8	1.2	1.0	2.0	4.1
District chilled water	18.6	0.5	2.2	4.3	0.3	3.7	1.1	1.2	1.0	2.6	4.5
Propane	14.4	0.8	2.1	1.8	0.1	2.4	1.2	3.2	0.7	0.9	2.9
Other	13.1	0.4	2.2	2.4	0.1	2.3	0.6	2.1	0.4	1.2	2.4

**Table E6. Electricity consumption intensities (kWh) by end use, 2012**

Electricity energy intensity <sup>1</sup> (kWh/square foot in buildings using electricity for the end use)											
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	14.6	0.5	2.4	2.4	0.2	2.5	1.1	2.7	0.6	1.5	2.7
<b>Space-heating energy sources</b>											
Electricity	15.8	0.5	2.6	2.4	0.2	2.6	1.0	2.9	0.6	1.5	2.6
Electricity main	16.8	0.6	3.0	2.4	0.2	2.7	1.2	3.0	0.7	1.8	2.7
Electricity secondary	14.7	0.4	2.1	2.5	0.1	2.5	0.9	2.8	0.5	1.3	2.5
Other excluding electricity	13.7	N	2.0	2.4	0.1	2.5	1.2	2.3	0.6	1.5	2.8
Buildings without heating	9.4	N	4.4	1.3	0.1	2.1	1.2	3.1	0.4	0.9	2.3
<b>Primary space-heating energy source</b>											
Electricity	16.8	0.6	3.0	2.4	0.2	2.7	1.2	3.0	0.7	1.8	2.7
Natural gas	14.2	0.3	2.1	2.3	0.1	2.5	1.1	2.7	0.5	1.4	2.5
Fuel oil	9.3	0.8	1.4	1.4	0.1	2.0	0.4	1.2	0.5	1.1	2.2
District heat	17.4	0.5	2.1	4.2	0.2	3.4	0.9	1.2	1.0	2.0	4.2
Propane	9.2	1.0	0.9	0.9	0.1	1.4	2.8	3.0	0.4	0.5	1.7
Other	8.0	Q	0.5	1.1	0.1	1.9	Q	1.2	0.5	0.7	2.0
<b>Cooling energy sources</b>											
Electricity	15.2	0.5	2.4	2.4	0.2	2.6	1.1	2.7	0.6	1.5	2.6
Other excluding electricity	17.3	0.5	N	4.1	0.2	3.7	1.5	1.3	1.1	2.6	4.3
Buildings without cooling	4.9	0.4	N	0.3	0.1	1.5	0.9	2.4	0.3	0.5	1.9
<b>Water-heating energy sources</b>											
Electricity	15.2	0.5	2.5	2.3	0.2	2.6	0.9	2.9	0.5	1.6	2.5
Other excluding electricity	15.5	0.5	2.5	2.6	N	2.6	1.4	2.5	0.8	1.5	2.9
Buildings without water heating	5.7	0.2	1.5	0.8	N	1.7	Q	0.7	0.4	0.9	2.0
<b>Cooking energy sources</b>											
Electricity	18.0	0.6	3.0	2.7	0.2	2.6	1.1	3.6	0.7	1.4	2.7
Other excluding electricity	18.4	0.5	3.1	2.9	0.3	2.6	N	4.7	0.8	1.1	3.0
Buildings without cooking	11.7	0.5	1.9	2.0	0.1	2.5	N	1.2	0.5	1.7	2.6
<b>Energy end uses (more than one may apply)</b>											
Buildings with space heating	15.0	0.5	2.4	2.4	0.2	2.6	1.1	2.7	0.6	1.5	2.7
Buildings with cooling	15.3	0.5	2.4	2.5	0.2	2.6	1.1	2.7	0.6	1.5	2.7
Buildings with water heating	15.3	0.5	2.5	2.5	0.2	2.6	1.1	2.7	0.6	1.5	2.7
Buildings with cooking	18.2	0.5	3.0	2.8	0.2	2.6	1.1	4.0	0.7	1.3	2.8
Buildings with manufacturing	13.2	0.4	2.1	1.7	0.1	2.9	1.1	2.1	0.3	0.9	3.3
Buildings with electricity generation	19.1	0.5	3.4	3.3	0.2	3.1	0.8	2.5	0.7	2.2	3.5
<b>Percent of floorspace heated</b>											
Not heated	9.4	N	4.4	1.3	0.1	2.1	1.2	3.1	0.4	0.9	2.3
1 to 50	9.7	0.1	1.2	1.1	0.1	1.9	1.0	2.3	0.3	1.3	2.1
51 to 99	16.0	0.4	2.6	2.6	0.2	2.6	0.9	3.4	0.6	1.2	2.6
100	15.7	0.6	2.5	2.6	0.2	2.7	1.1	2.5	0.7	1.7	2.8
<b>Percent of floorspace cooled</b>											
Not cooled	4.9	0.4	N	0.3	0.1	1.5	0.9	2.4	0.3	0.5	1.9
1 to 50	8.1	0.3	0.7	1.0	0.1	1.9	0.6	1.5	0.3	0.6	2.0
51 to 99	16.8	0.5	2.5	2.8	0.2	2.7	1.0	3.2	0.6	1.8	2.8
100	18.1	0.6	3.3	3.0	0.2	2.9	1.3	2.9	0.8	1.8	3.0

**Table E6. Electricity consumption intensities (kWh) by end use, 2012**

Electricity energy intensity <sup>1</sup> (kWh/square foot in buildings using electricity for the end use)											
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	14.6	0.5	2.4	2.4	0.2	2.5	1.1	2.7	0.6	1.5	2.7
<b>Percent lit when open</b>											
Zero	3.1	Q	Q	Q	Q	Q	Q	Q	Q	Q	2.3
1 to 50	9.0	0.4	1.5	1.5	0.1	1.2	0.8	1.5	0.6	0.7	2.5
51 to 99	15.1	0.5	2.4	2.5	0.2	2.4	1.0	2.8	0.6	1.5	2.6
100	16.8	0.5	2.8	2.6	0.1	3.2	1.2	2.9	0.7	1.8	2.8
Building never open/electricity not used	2.3	0.4	0.6	(*)	Q	Q	Q	Q	Q	Q	1.4
<b>Percent lit during off hours</b>											
Zero	9.4	0.5	1.7	1.5	0.1	1.6	0.7	1.5	0.4	1.3	2.0
1 to 50	15.4	0.5	2.6	2.5	0.2	2.7	1.0	2.7	0.6	1.5	2.7
51 to 100	23.8	0.5	3.5	3.8	0.2	4.2	2.1	4.7	1.0	2.1	4.2
Building always open with no "off hours"	25.5	0.4	4.0	4.0	0.2	4.4	1.7	5.9	1.4	1.7	4.5
Electricity not used	N	N	N	N	N	N	N	N	N	N	N
<b>Heating equipment (more than one may apply)</b>											
Heat pumps	15.2	0.4	2.8	2.1	0.2	2.4	0.7	2.4	0.9	1.6	2.6
Furnaces	12.3	0.6	1.6	1.8	0.1	2.0	1.3	2.6	0.6	1.1	2.1
Individual space heaters	13.1	0.5	1.9	2.1	0.1	2.4	0.8	2.1	0.6	1.3	2.5
District heat	17.3	0.5	2.1	4.1	0.2	3.4	0.8	1.2	1.0	2.0	4.1
Boilers	15.6	0.4	2.9	2.8	0.1	2.6	0.6	1.7	0.7	1.8	3.0
Packaged heating units	15.7	0.5	2.5	2.5	0.2	2.6	1.3	3.3	0.6	1.4	2.6
Other	24.4	0.9	1.8	3.3	0.2	2.9	1.2	11.7	0.3	0.6	2.5
<b>Cooling equipment (more than one may apply)</b>											
Residential-type central air conditioners	12.6	0.5	1.8	1.5	0.1	2.1	0.9	3.3	0.6	1.0	2.2
Heat pumps	15.1	0.4	2.6	2.2	0.2	2.4	0.6	2.5	0.8	1.6	2.5
Individual air conditioners	12.9	0.5	2.1	1.9	0.2	2.1	0.8	1.8	0.8	1.2	2.5
District chilled water	18.6	0.5	2.2	4.3	0.3	3.7	1.1	1.2	1.0	2.6	4.5
Central chillers	19.3	0.4	3.7	3.6	0.1	3.1	0.6	1.4	0.7	2.6	3.6
Packaged air conditioning units	16.1	0.5	2.5	2.7	0.2	2.6	1.3	3.2	0.6	1.3	2.6
Swamp coolers	15.0	0.6	2.0	2.2	0.2	2.5	2.2	3.9	0.5	0.9	2.3
Other	28.7	Q	3.5	4.4	Q	4.5	Q	1.3	0.4	Q	4.1
<b>Main equipment replaced since 1990 (more than one may apply)</b>											
Heating	14.1	0.5	2.2	2.1	0.2	2.3	1.1	2.7	0.6	1.5	2.4
Cooling	14.5	0.5	2.4	2.2	0.2	2.3	1.0	2.5	0.7	1.6	2.5
<b>Water-heating equipment</b>											
Centralized system	15.3	0.6	2.5	2.4	0.2	2.6	1.4	2.6	0.7	1.5	2.8
Distributed system	12.4	0.4	2.0	1.9	0.1	2.4	0.8	2.1	0.4	1.3	2.3
Combination of centralized and distributed system	17.2	0.4	2.8	2.9	0.2	2.8	0.7	3.3	0.6	1.8	2.7

**Table E6. Electricity consumption intensities (kWh) by end use, 2012**

Electricity energy intensity<sup>1</sup> (kWh/square foot in buildings using electricity for the end use)

	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	14.6	0.5	2.4	2.4	0.2	2.5	1.1	2.7	0.6	1.5	2.7
<b>Lighting equipment types (more than one may apply)</b>											
Incandescent	15.9	0.5	2.8	2.6	0.2	2.6	0.9	2.8	0.7	1.5	2.7
Standard fluorescent	15.0	0.5	2.4	2.4	0.2	2.5	1.1	2.7	0.6	1.5	2.7
Compact fluorescent	16.5	0.5	2.8	2.8	0.2	2.7	1.0	2.6	0.7	1.7	2.9
High-intensity discharge (HID)	16.3	0.4	3.0	2.7	0.2	2.9	0.7	2.6	0.6	1.4	3.0
Halogen	17.0	0.5	2.9	2.8	0.2	2.8	0.9	3.0	0.7	1.5	2.9
LED	18.8	0.5	3.2	3.3	0.2	2.9	0.8	3.5	0.7	1.6	3.2
Other	21.4	Q	3.8	3.5	Q	2.9	1.1	4.1	0.9	1.6	3.4
<b>Refrigeration equipment (more than one may apply)</b>											
Any refrigeration	15.6	0.5	2.5	2.5	0.2	2.6	1.1	2.7	0.6	1.5	2.7
Walk-in units	21.4	0.5	3.4	3.2	0.2	2.9	1.4	5.7	0.8	1.4	3.0
Cases or cabinets	20.3	0.5	3.1	3.1	0.2	2.9	1.3	5.3	0.7	1.3	2.9
Large cold storage areas	23.5	0.3	2.8	2.6	0.2	2.9	1.2	10.2	0.5	0.9	2.9
Commercial ice makers	19.9	0.5	3.4	3.2	0.2	2.9	1.3	4.1	0.8	1.6	3.1
Residential-type or compact units	14.6	0.5	2.4	2.4	0.2	2.5	0.8	1.9	0.6	1.6	2.7
Vending machines	16.9	0.5	2.8	2.9	0.2	2.9	0.7	2.5	0.7	1.6	3.0
No refrigeration	8.3	0.5	1.7	1.4	0.1	2.2	Q	N	0.5	1.5	2.3
<b>Office equipment (more than one may apply)</b>											
Desktop computers	15.3	0.5	2.5	2.5	0.1	2.6	1.0	2.6	0.6	1.5	2.7
With flat screen monitors	15.3	0.5	2.5	2.5	0.1	2.6	1.0	2.6	0.6	1.5	2.7
With multiple monitors	16.9	0.5	2.9	3.0	0.1	2.8	0.7	2.1	0.7	2.2	2.9
Laptop computers	15.2	0.5	2.6	2.6	0.2	2.6	0.7	2.1	0.6	1.7	2.7
Dedicated servers	16.3	0.5	2.7	2.7	0.1	2.7	0.8	2.5	0.6	1.9	2.8
Laser printers	15.8	0.5	2.5	2.6	0.1	2.7	0.9	2.5	0.7	1.7	2.8
Inkjet printers	14.5	0.5	2.4	2.2	0.2	2.5	1.2	2.5	0.5	1.3	2.6
FAX machines	15.4	0.5	2.5	2.5	0.1	2.7	0.9	2.6	0.6	1.5	2.7
Photocopiers	15.3	0.5	2.6	2.6	0.1	2.7	0.6	2.1	0.7	1.7	2.8
<b>Number of desktop computers</b>											
None	8.4	0.7	1.8	1.1	0.2	1.6	2.1	3.6	0.8	Q	2.2
1 to 4	13.1	0.5	1.7	1.6	0.1	2.0	3.5	4.2	0.6	0.4	2.4
5 to 9	14.2	0.5	1.9	1.9	0.2	2.4	1.5	3.8	0.6	0.8	2.5
10 to 19	13.8	0.5	1.9	2.2	0.1	2.5	0.9	2.8	0.5	1.3	2.4
20 to 49	16.0	0.5	2.6	2.6	0.2	2.9	0.6	3.0	0.7	1.2	2.8
50 to 99	14.4	0.6	2.6	2.6	0.2	2.7	0.5	1.7	0.6	1.5	2.6
100 to 249	16.4	0.4	2.6	3.0	0.2	3.0	0.4	1.5	0.7	2.4	3.0
250 or more	19.2	0.4	4.2	3.7	0.1	3.0	0.5	0.9	0.7	3.4	3.2

**Table E6. Electricity consumption intensities (kWh) by end use, 2012**

Electricity energy intensity<sup>1</sup> (kWh/square foot in buildings using electricity for the end use)

	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
<b>All buildings</b>	14.6	0.5	2.4	2.4	0.2	2.5	1.1	2.7	0.6	1.5	2.7
<b>Number of laptop computers</b>											
None	12.9	0.5	1.8	1.7	0.1	2.2	3.1	4.6	0.6	0.8	2.4
1 to 4	12.9	0.5	2.0	1.8	0.1	2.3	1.3	2.9	0.6	0.8	2.4
5 to 9	15.1	0.4	2.4	2.6	0.2	2.9	0.7	2.8	0.6	1.1	2.7
10 to 19	15.6	0.6	2.8	2.8	0.2	2.6	0.6	2.4	0.6	1.4	2.7
20 to 49	16.0	0.4	2.4	2.9	0.2	2.8	0.5	1.8	0.8	2.2	2.9
50 to 99	16.3	0.5	3.3	3.0	0.1	2.9	0.5	1.3	0.6	2.1	3.1
100 to 249	17.3	0.4	3.3	3.3	0.1	2.8	0.4	1.0	0.7	3.4	3.0
250 or more	19.7	0.5	4.2	3.8	0.1	3.0	0.4	1.0	0.8	3.2	3.3
<b>Number of dedicated servers</b>											
None	11.9	0.5	2.0	1.7	0.2	2.2	1.9	3.0	0.6	0.7	2.4
1 to 4	14.6	0.5	2.2	2.3	0.1	2.5	1.0	2.9	0.6	1.2	2.6
5 to 9	16.1	0.5	2.6	2.8	0.2	2.8	0.5	2.7	0.6	1.7	2.6
10 to 19	19.1	0.5	3.6	3.8	0.1	3.2	0.6	1.9	0.8	2.6	3.3
20 to 49	18.7	0.5	4.0	3.5	0.1	3.1	0.5	1.1	0.7	2.8	3.2
50 or more	25.8	0.5	5.0	4.2	0.1	3.5	0.6	1.2	0.8	6.8	4.1
<b>Number of photocopiers</b>											
None	13.1	0.6	2.0	1.8	0.2	2.2	3.1	4.5	0.6	0.9	2.4
One	12.6	0.5	1.8	1.8	0.1	2.2	1.0	2.7	0.5	0.9	2.4
2 to 4	14.4	0.5	2.3	2.4	0.1	2.6	0.5	2.1	0.6	1.5	2.5
5 to 9	16.3	0.4	2.7	2.8	0.2	3.0	0.4	2.0	0.6	2.2	2.7
10 or more	19.7	0.4	4.1	3.9	0.1	3.2	0.6	1.1	0.9	2.8	3.7
<b>Number of TVs or video displays</b>											
None	10.1	0.5	1.5	1.4	0.1	2.0	1.9	2.7	0.2	1.2	2.2
One	12.1	0.4	1.5	1.8	0.1	2.2	1.7	2.8	0.4	1.0	2.3
2 to 4	14.3	0.5	2.3	2.2	0.1	2.6	1.3	2.7	0.5	1.2	2.6
5 to 9	18.4	0.7	3.0	2.9	0.2	2.8	1.6	3.5	0.6	2.1	2.8
10 to 19	18.0	0.5	3.1	3.3	0.2	3.0	0.8	2.9	0.6	2.0	2.8
20 to 49	17.3	0.5	3.0	3.1	0.2	2.9	0.4	2.8	0.7	1.7	2.6
50 to 99	17.7	0.6	2.9	2.9	0.3	2.9	0.5	2.0	1.3	2.5	3.0
100 or more	19.7	0.4	4.2	3.4	0.2	2.8	1.0	1.6	1.8	1.4	4.0
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>											
Snack bar or concession stand	19.3	0.5	3.8	2.9	0.2	2.8	0.6	3.9	0.7	1.5	3.0
Fast food or small restaurant	22.9	0.4	3.7	3.6	0.2	3.4	0.7	6.0	0.9	1.3	3.3
Cafeteria or large restaurant	17.1	0.5	3.6	3.0	0.2	2.7	0.5	2.0	0.8	1.7	2.9
Commercial kitchen/ food preparation area	18.1	0.5	3.4	2.9	0.2	2.6	0.7	3.6	0.9	1.2	3.0
Small kitchen area	14.5	0.5	2.8	2.2	0.1	2.2	0.5	2.3	0.7	1.2	2.7
<b>Separate computer areas (more than one may apply)</b>											
Data center or server farm	21.5	0.6	4.8	3.7	0.1	3.3	0.5	1.2	0.8	4.0	3.6
Computer-based training room	16.9	0.4	3.3	2.9	0.1	2.9	0.5	2.1	0.7	2.0	2.8
Student or public computer center	14.1	0.5	2.9	2.3	0.2	2.3	0.5	1.7	0.7	1.6	2.4

**Table E6. Electricity consumption intensities (kWh) by end use, 2012**

Electricity energy intensity<sup>1</sup> (kWh/square foot in buildings using electricity for the end use)

	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	14.6	0.5	2.4	2.4	0.2	2.5	1.1	2.7	0.6	1.5	2.7
<b>HVAC conservation features (more than one may apply)</b>											
Economizer cycle	17.5	0.5	2.8	3.3	0.1	3.0	0.8	2.4	0.6	1.9	3.1
Regular HVAC maintenance	16.0	0.5	2.6	2.6	0.2	2.7	1.1	2.7	0.7	1.6	2.8
Building automation system (BAS) <sup>3</sup>	18.1	0.5	3.2	3.2	0.2	3.0	0.7	2.6	0.7	2.0	3.2
<b>Window and interior lighting features (more than one may apply)</b>											
Multipaned windows	15.6	0.5	2.5	2.6	0.2	2.6	1.1	2.8	0.7	1.6	2.7
Tinted window glass	16.2	0.5	2.8	2.7	0.2	2.8	0.9	2.7	0.6	1.6	2.8
Reflective window glass	19.0	0.5	3.3	3.3	0.2	3.0	0.7	3.1	0.8	2.2	3.1
External overhangs or awnings	17.1	0.5	2.7	2.7	0.2	2.7	1.3	3.8	0.7	1.5	2.7
Skylights or atriums	15.0	0.4	2.7	2.7	0.2	2.6	0.7	2.0	0.6	1.4	2.9
Light scheduling	17.9	0.5	2.9	3.1	0.2	2.8	0.9	3.4	0.7	1.8	2.9
Occupancy sensors	17.0	0.5	2.9	3.0	0.1	2.7	0.7	2.7	0.6	1.9	3.0
Multi-level lighting or dimming	18.7	0.6	3.1	3.3	0.2	2.7	0.9	3.8	0.8	1.5	3.1
Daylight harvesting	17.8	0.5	3.0	3.3	0.2	2.9	0.8	3.2	0.6	1.4	3.1
Demand responsive lighting	16.8	0.4	2.6	2.8	0.2	2.8	0.5	4.3	0.6	1.0	2.5
Building automation system (BAS) for lighting <sup>3</sup>	19.8	0.5	3.2	3.5	0.2	3.2	0.7	4.1	0.5	1.7	3.0
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>											
Heating	14.1	0.5	2.3	2.3	0.1	2.4	0.9	2.5	0.6	1.4	2.5
Cooling	14.4	0.5	2.4	2.4	0.1	2.4	0.9	2.5	0.6	1.4	2.5
Lighting	14.5	0.5	2.4	2.4	0.2	2.5	1.0	2.5	0.6	1.5	2.6
<b>Annual consumption (kilowatthours)</b>											
10,000 or less	1.3	0.2	0.3	0.1	(*)	0.3	0.1	0.1	0.1	0.2	0.5
10,001 to 50,000	4.8	0.3	0.7	0.6	0.1	1.0	0.3	0.5	0.3	0.6	1.3
50,001 to 100,000	8.2	0.5	1.2	1.1	0.1	1.6	0.9	1.2	0.5	1.0	1.9
100,001 to 500,000	13.3	0.5	1.8	1.8	0.2	2.2	2.0	3.4	0.6	1.1	2.3
500,001 to 1,000,000	16.4	0.6	2.5	2.6	0.2	2.6	1.9	2.8	0.8	1.6	2.7
1,000,001 to 5,000,000	18.3	0.5	2.8	3.2	0.2	3.2	0.8	3.6	0.6	1.5	3.1
Over 5,000,000	25.9	0.6	5.5	4.5	0.2	4.4	0.7	2.4	0.9	3.1	4.9

**Table E6. Electricity consumption intensities (kWh) by end use, 2012**

Electricity energy intensity <sup>1</sup> (kWh/square foot in buildings using electricity for the end use)											
	Total	Space heat-ing	Cool-ing	Venti-lation	Water heat-ing	Light-ing	Cook-ing	Refrig-eration	Office equip-ment	Com-puting	Other
All buildings	14.6	0.5	2.4	2.4	0.2	2.5	1.1	2.7	0.6	1.5	2.7

<sup>1</sup>The electricity intensity calculation (electricity consumption for the end use divided by the floorspace in buildings that use electricity for the particular end use) differs from the calculation used in the 2003 CBECS tables, in which the intensities were not conditional on the presence of the end use; the 2003 CBECS denominator was total floorspace in all buildings that used electricity. In this table, the intensities for each end use do not sum to the total electricity intensity, whereas they did in the 2003 CBECS table.

<sup>2</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>3</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 E7. Natural gas consumption and conditional energy intensities (Btu) by end use, 2012**

	Total natural gas consumption (trillion Btu)					Natural gas energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using natural gas for the end use)				
	Total	Space heating	Water heating	Cooking	Other	Total	Space heating	Water heating	Cooking	Other
All buildings	2,248	1,339	424	394	91	38.3	27.1	10.7	15.9	10.0
<b>Building floorspace (square feet)</b>										
1,001 to 5,000	256	122	53	78	Q	68.0	36.9	25.5	94.7	Q
5,001 to 10,000	248	138	39	66	4	51.4	31.8	14.0	52.6	16.9
10,001 to 25,000	304	203	52	47	3	34.5	25.3	9.1	22.0	5.6
25,001 to 50,000	284	192	55	28	9	34.8	26.5	9.7	12.5	9.5
50,001 to 100,000	338	215	71	32	19	34.0	25.3	9.5	7.0	12.0
100,001 to 200,000	290	164	62	39	26	30.8	21.8	9.0	8.3	10.5
200,001 to 500,000	310	194	54	48	14	37.3	27.7	9.1	9.2	7.1
Over 500,000	219	112	37	Q	13	39.6	31.0	12.5	Q	11.2
<b>Principal building activity</b>										
Education	291	212	54	10	14	30.6	26.7	7.0	1.8	5.6
Food sales	53	29	3	19	Q	62.8	43.3	4.4	32.8	Q
Food service	227	35	40	152	Q	163.2	34.0	39.2	120.5	Q
Health care	265	159	61	32	12	80.5	60.9	23.7	16.3	18.7
Inpatient	219	121	58	30	10	103.6	74.2	34.3	16.6	25.0
Outpatient	46	39	4	Q	Q	39.0	39.1	3.9	Q	Q
Lodging	221	46	113	Q	6	44.9	14.5	26.5	Q	6.6
Mercantile	291	159	58	66	8	34.3	21.5	10.6	13.5	6.0
Retail (other than mall)	74	63	4	6	Q	22.0	20.5	2.5	6.0	Q
Enclosed and strip malls	217	97	54	60	6	42.4	22.1	14.1	15.4	6.9
Office	282	220	29	Q	13	27.4	25.7	4.8	Q	9.4
Public assembly	135	118	6	9	2	34.8	35.3	2.1	6.4	4.7
Public order and safety	41	22	16	2	Q	40.4	25.8	21.4	3.5	Q
Religious worship	87	67	Q	10	Q	28.8	25.0	Q	5.6	Q
Service	122	98	21	Q	Q	43.7	35.5	15.0	Q	Q
Warehouse and storage	139	109	10	Q	7	19.9	16.7	2.9	Q	7.0
Other	81	55	2	Q	Q	58.6	44.8	2.3	Q	Q
Vacant	13	11	Q	Q	Q	14.3	15.0	1.4	Q	Q
<b>Year constructed</b>										
Before 1920	87	65	6	13	Q	37.7	32.8	5.0	19.1	Q
1920 to 1945	145	97	28	17	3	38.2	30.4	11.7	11.3	9.4
1946 to 1959	199	135	32	27	5	37.0	27.6	8.7	11.7	7.7
1960 to 1969	314	203	60	31	Q	41.6	30.9	10.6	9.3	Q
1970 to 1979	340	188	81	60	10	42.6	28.8	14.5	18.4	9.5
1980 to 1989	335	183	70	68	Q	33.9	22.9	11.2	16.2	Q
1990 to 1999	338	188	61	80	9	36.9	24.7	10.0	18.2	9.3
2000 to 2003	158	100	24	24	10	33.4	26.7	7.6	13.8	7.3
2004 to 2007	172	84	32	Q	6	41.9	24.2	11.3	Q	8.2
2008 to 2012	159	95	30	24	10	41.7	27.3	11.5	17.1	8.3

**Table E7. Natural gas consumption and conditional energy intensities (Btu) by end use, 2012**

	Total natural gas consumption (trillion Btu)					Natural gas energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using natural gas for the end use)				
	Total	Space heating	Water heating	Cooking	Other	Total	Space heating	Water heating	Cooking	Other
All buildings	2,248	1,339	424	394	91	38.3	27.1	10.7	15.9	10.0
<b>Census region and division</b>										
Northeast	499	330	80	64	26	45.1	35.3	10.6	11.9	10.3
New England	111	81	10	12	8	49.3	40.7	6.7	11.6	12.3
Middle Atlantic	389	249	70	52	19	44.1	33.8	11.5	11.9	9.7
Midwest	642	499	77	55	11	42.8	35.6	7.3	9.7	4.9
East North Central	494	386	58	41	9	45.7	38.1	7.3	9.4	4.7
West North Central	149	114	19	14	2	35.1	29.1	7.1	10.4	5.7
South	615	281	155	153	26	30.9	18.2	12.6	17.8	9.1
South Atlantic	305	137	79	78	12	30.6	18.7	14.0	17.7	6.2
East South Central	104	52	27	22	2	30.1	19.5	13.1	14.9	5.0
West South Central	207	93	49	52	Q	31.9	17.0	10.8	19.7	Q
West	491	229	112	123	27	38.6	21.4	12.3	23.6	20.9
Mountain	163	89	25	Q	4	43.4	27.8	9.5	Q	7.7
Pacific	328	141	87	77	Q	36.5	18.7	13.5	22.0	Q
<b>Climate region<sup>2</sup></b>										
Very cold/Cold	1,097	802	132	130	33	44.8	35.8	7.8	13.4	7.2
Mixed-humid	657	359	149	126	22	33.9	22.8	12.5	14.9	7.4
Mixed-dry/Hot-dry	255	89	78	71	Q	33.9	14.2	13.1	23.1	Q
Hot-humid	171	48	52	57	Q	32.2	14.6	15.1	19.8	Q
Marine	68	40	13	10	Q	33.6	23.4	10.4	14.4	Q
<b>Number of floors</b>										
One	918	541	156	194	27	37.5	24.6	10.1	22.7	10.0
Two	511	314	96	83	17	34.8	25.1	9.6	13.9	7.1
Three	224	157	41	19	7	36.9	29.4	8.8	8.1	7.5
Four to nine	443	261	102	50	31	45.4	35.1	14.1	9.4	13.6
Ten or more	151	66	28	Q	9	40.7	30.6	13.8	Q	12.7
<b>Number of workers (main shift)</b>										
Fewer than 5	264	184	47	29	4	33.6	25.7	10.1	16.7	Q
5 to 9	202	119	37	43	3	37.7	25.5	11.2	39.6	8.2
10 to 19	298	157	57	81	2	43.8	26.6	12.7	54.1	6.2
20 to 49	379	225	70	71	12	35.7	24.2	9.3	15.8	8.7
50 to 99	360	227	75	41	16	34.9	25.4	9.7	8.0	7.8
100 to 249	337	206	54	43	34	38.0	27.5	8.4	8.8	14.3
250 or more	408	221	83	85	19	45.8	36.4	15.5	14.4	9.7
<b>Weekly operating hours</b>										
Fewer than 40	97	79	9	8	Q	26.2	23.6	3.6	6.3	Q
40 to 48	259	204	33	15	7	26.0	22.7	5.1	5.4	6.1
49 to 60	369	292	37	26	15	26.4	24.0	4.4	6.8	6.8
61 to 84	469	272	78	109	11	40.8	27.4	9.9	18.7	6.7
85 to 167	349	188	52	95	13	51.8	31.5	10.5	30.2	8.7
Open continuously	705	304	216	140	45	55.0	33.4	22.9	17.9	18.0

**Table E7. Natural gas consumption and conditional energy intensities (Btu) by end use, 2012**

	Total natural gas consumption (trillion Btu)					Natural gas energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using natural gas for the end use)				
	Total	Space heating	Water heating	Cooking	Other	Total	Space heating	Water heating	Cooking	Other
All buildings	2,248	1,339	424	394	91	38.3	27.1	10.7	15.9	10.0
<b>Ownership and occupancy</b>										
Nongovernment owned	1,747	991	328	356	72	39.3	26.4	11.7	20.3	12.0
Owner occupied	890	489	174	180	47	43.3	29.1	13.1	22.4	15.3
Leased to tenant(s)	634	351	120	147	16	36.5	23.2	11.3	22.9	8.3
Owner occupied and leased	219	147	34	29	9	35.0	27.8	8.3	9.4	9.3
Unoccupied	4	4	Q	Q	N	12.9	12.2	Q	Q	N
Government owned	501	349	96	37	19	35.2	29.0	8.4	5.2	6.1
Federal	30	21	4	4	Q	34.8	32.0	6.9	11.6	Q
State	169	103	40	Q	8	43.0	33.6	13.1	Q	9.9
Local	302	225	52	16	10	32.0	27.1	6.7	2.9	4.5
<b>Party responsible for operation and maintenance of energy systems</b>										
Building owner	1,852	1,131	339	302	80	37.7	27.7	10.1	14.6	10.4
Business owner or tenant	343	181	71	81	10	41.6	23.8	13.7	24.7	8.0
Property management	27	13	9	4	Q	34.2	21.2	16.7	10.5	Q
Other	27	15	5	6	Q	44.1	33.4	15.0	18.5	Q
<b>Provider of direct input on energy- related equipment purchases</b>										
Building owner	1,915	1,165	354	313	82	37.6	27.4	10.2	14.5	10.3
Business owner or tenant	264	138	54	65	8	43.9	25.1	14.4	27.4	8.8
Property management	17	10	4	3	Q	33.1	22.9	10.7	9.9	Q
Other	52	26	12	13	Q	42.0	24.5	14.8	23.3	Q
<b>Number of establishments</b>										
One	1,527	877	306	278	65	41.1	27.9	11.7	19.2	10.6
2 to 5	429	286	67	58	17	34.5	26.8	9.1	12.0	10.1
6 to 10	107	71	17	17	2	34.7	26.9	9.4	12.7	7.2
11 to 20	112	66	20	23	3	40.7	26.8	9.4	13.0	6.6
More than 20	67	33	14	17	4	23.4	17.7	8.1	7.5	7.6
Currently unoccupied	6	6	Q	Q	N	14.5	15.8	Q	Q	N
<b>Predominant exterior wall material</b>										
Brick, stone, or stucco	1,160	686	238	193	43	40.0	28.3	11.6	14.2	8.7
Concrete (block or poured)	535	294	115	99	28	36.8	24.4	11.9	14.4	11.6
Concrete panels	208	130	26	Q	6	35.1	25.9	6.8	Q	6.7
Siding or shingles	134	77	25	30	Q	46.4	28.7	11.8	35.5	Q
Metal panels	126	104	9	7	Q	28.7	25.5	3.8	10.4	15.9
Window glass	48	30	Q	4	Q	45.5	43.4	Q	8.2	Q
Other	Q	7	2	Q	Q	47.2	17.0	6.3	Q	Q
No one major type	14	11	Q	Q	Q	31.4	32.0	Q	Q	Q

**Table E7. Natural gas consumption and conditional energy intensities (Btu) by end use, 2012**

	Total natural gas consumption (trillion Btu)					Natural gas energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using natural gas for the end use)				
	Total	Space heating	Water heating	Cooking	Other	Total	Space heating	Water heating	Cooking	Other
All buildings	2,248	1,339	424	394	91	38.3	27.1	10.7	15.9	10.0
<b>Predominant roof material</b>										
Metal surfacing	241	155	36	41	9	30.8	21.9	7.7	20.9	9.0
Synthetic or rubber	850	536	130	147	38	43.0	31.3	9.7	16.4	10.3
Built-up	582	335	125	89	33	36.3	25.2	11.0	11.5	12.7
Slate or tile shingles	114	50	29	32	Q	40.7	26.0	15.0	25.8	Q
Wooden materials (including shingles)	41	22	9	10	Q	67.3	43.7	21.7	53.3	Q
Asphalt, fiberglass, or other shingles	368	214	83	65	6	37.2	26.0	12.6	16.6	5.6
Concrete	24	12	9	2	Q	28.2	18.3	15.9	7.4	Q
Other	18	8	Q	Q	Q	33.7	18.3	Q	Q	Q
No one major type	10	Q	Q	Q	Q	24.1	Q	Q	Q	Q
<b>Roof characteristics</b>										
Roof tilt										
Flat	1,455	860	292	236	67	40.6	28.7	11.6	14.5	11.6
Shallow pitch	481	291	68	105	18	33.2	23.3	7.7	21.9	7.7
Steeper pitch	312	189	64	53	6	37.2	26.8	11.5	14.4	6.1
Cool roof	602	332	119	108	43	42.0	28.6	12.3	14.4	15.8
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>										
Any type of renovation	1,230	732	223	218	58	39.7	28.6	10.8	14.8	12.5
Addition or annex	468	276	77	99	15	46.3	33.1	10.6	16.6	8.8
Reduction in floorspace	70	28	Q	Q	Q	50.2	32.0	24.7	24.0	Q
Roof replacement	681	413	125	102	41	42.2	31.2	11.2	12.2	16.6
Exterior wall replacement	129	64	24	35	6	38.1	23.5	10.5	18.4	11.9
Interior wall reconfiguration	644	390	104	121	29	40.1	29.6	10.2	16.3	10.8
Window replacement	387	225	67	74	22	41.7	29.8	10.6	16.5	13.3
HVAC equipment upgrade	842	487	153	158	44	41.2	28.8	11.0	15.1	13.7
Lighting upgrade	810	477	140	146	47	42.0	29.8	10.8	15.0	14.9
Electrical upgrade	551	307	87	117	39	44.5	30.7	10.4	18.0	18.3
Plumbing system upgrade	515	273	93	112	38	48.8	31.4	12.4	19.9	21.9
Insulation upgrade	269	142	34	75	18	45.6	30.0	8.7	23.9	20.4
Fire, safety, or security upgrade	569	326	113	89	41	43.0	30.3	11.9	12.2	17.0
Structural upgrade	151	57	20	Q	Q	53.4	26.4	11.4	36.7	Q
Other	14	9	Q	1	Q	24.5	22.1	9.7	3.3	Q
No renovations	859	513	171	152	24	35.9	25.1	10.5	17.6	7.2
Buildings constructed 2008 or later	159	95	30	24	10	41.7	27.3	11.5	17.1	8.3

**Table E7. Natural gas consumption and conditional energy intensities (Btu) by end use, 2012**

	Total natural gas consumption (trillion Btu)					Natural gas energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using natural gas for the end use)				
	Total	Space heating	Water heating	Cooking	Other	Total	Space heating	Water heating	Cooking	Other
All buildings	2,248	1,339	424	394	91	38.3	27.1	10.7	15.9	10.0
<b>Energy sources</b>										
(more than one may apply)										
Electricity	2,248	1,339	424	394	91	38.3	27.1	10.7	15.9	10.0
Natural gas	2,248	1,339	424	394	91	38.3	27.1	10.7	15.9	10.0
Fuel oil	623	364	122	112	25	45.6	35.6	12.8	13.6	15.4
District heat	108	13	Q	Q	Q	37.8	36.9	Q	Q	Q
District chilled water	133	33	Q	Q	Q	54.9	47.3	26.0	Q	Q
Propane	146	69	26	Q	Q	43.1	25.7	12.4	Q	Q
Other	108	68	14	9	Q	41.1	28.6	7.6	7.5	Q
<b>Space-heating energy sources</b>										
Natural gas	1,971	1,339	324	255	53	39.8	27.1	9.3	13.2	7.5
Natural gas main	1,769	1,271	260	195	43	41.2	29.6	8.5	11.7	7.0
Natural gas secondary	202	68	64	60	9	30.9	10.4	15.7	23.1	11.1
Other excluding natural gas	252	N	85	131	36	29.2	N	19.6	25.2	18.0
Buildings without heating	25	N	15	8	Q	42.1	N	33.0	24.5	Q
<b>Primary space-heating energy source</b>										
Electricity	335	52	125	133	25	29.0	8.9	17.3	22.6	14.2
Natural gas	1,769	1,271	260	195	43	41.2	29.6	8.5	11.7	7.0
Fuel oil	8	Q	Q	3	Q	19.5	Q	Q	12.2	Q
District heat	106	Q	Q	Q	Q	38.0	Q	Q	Q	Q
Propane	Q	Q	Q	N	Q	Q	Q	Q	N	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Cooling energy sources</b>										
Natural gas	58	36	8	3	11	79.8	50.5	12.7	8.8	15.5
Other excluding natural gas	2,120	1,252	404	388	77	37.7	26.6	10.7	16.1	9.4
Buildings without cooling	70	52	12	4	Q	38.2	30.8	11.5	11.1	Q
<b>Water-heating energy sources</b>										
Natural gas	1,771	1,013	424	280	54	44.8	29.2	10.7	14.7	8.7
Other excluding natural gas	439	290	N	114	35	25.1	22.1	N	19.8	12.5
Buildings without water heating	38	36	N	Q	Q	22.5	21.3	N	Q	Q
<b>Cooking energy sources</b>										
Natural gas	1,238	542	265	394	37	50.0	28.2	14.0	15.9	8.0
Other excluding natural gas	205	155	46	N	4	32.8	28.5	10.8	N	4.8
Buildings without cooking	805	643	113	N	49	29.1	25.9	6.9	N	14.2

**Table E7. Natural gas consumption and conditional energy intensities (Btu) by end use, 2012**

	Total natural gas consumption (trillion Btu)					Natural gas energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using natural gas for the end use)				
	Total	Space heating	Water heating	Cooking	Other	Total	Space heating	Water heating	Cooking	Other
All buildings	2,248	1,339	424	394	91	38.3	27.1	10.7	15.9	10.0
<b>Energy end uses (more than one may apply)</b>										
Buildings with space heating	2,223	1,339	410	385	89	38.2	27.1	10.5	15.8	9.9
Buildings with cooling	2,178	1,288	412	390	88	38.3	26.9	10.7	16.0	9.9
Buildings with water heating	2,210	1,303	424	394	89	38.8	27.3	10.7	15.9	9.9
Buildings with cooking	1,443	696	311	394	41	46.5	28.2	13.4	15.9	7.5
Buildings with manufacturing	123	79	13	11	20	33.0	23.2	6.5	14.5	21.3
Buildings with electricity generation	855	492	160	137	66	42.2	31.0	11.2	11.6	8.3
<b>Percent of floorspace heated</b>										
Not heated	25	N	15	8	Q	42.1	N	33.0	24.5	Q
1 to 50	123	60	23	36	4	21.5	12.2	6.9	31.3	11.8
51 to 99	443	256	76	95	16	39.7	27.5	10.5	16.1	10.3
100	1,657	1,024	310	255	69	40.2	29.0	10.9	14.7	9.7
<b>Percent of floorspace cooled</b>										
Not cooled	70	52	12	4	Q	38.2	30.8	11.5	11.1	Q
1 to 50	418	315	51	41	11	32.1	26.3	6.5	13.8	7.5
51 to 99	667	401	125	117	24	39.0	27.8	10.5	12.9	8.9
100	1,093	571	236	232	54	40.8	26.7	12.6	18.7	11.2
<b>Heating equipment (more than one may apply)</b>										
Heat pumps	247	109	71	57	11	32.7	18.3	13.9	14.3	9.5
Furnaces	244	161	35	44	4	34.7	23.6	7.3	19.3	6.4
Individual space heaters	545	373	100	55	17	34.5	26.9	9.7	9.1	7.0
District heat	108	13	Q	Q	Q	38.1	37.7	Q	Q	Q
Boilers	984	666	193	85	40	49.2	35.3	11.5	7.5	9.0
Packaged heating units	1,360	805	238	274	43	36.2	24.4	9.6	17.2	8.4
Other	54	25	11	15	3	45.2	23.2	10.0	15.3	7.9
<b>Cooling equipment (more than one may apply)</b>										
Residential-type central air conditioners	416	239	75	84	Q	39.6	25.3	10.3	25.6	Q
Heat pumps	257	118	73	53	13	32.0	18.1	13.6	12.6	9.9
Individual air conditioners	374	222	92	44	16	41.0	29.9	14.4	9.1	10.3
District chilled water	133	33	Q	Q	Q	54.9	47.3	26.0	Q	Q
Central chillers	598	391	118	60	30	43.5	35.0	10.8	7.0	8.7
Packaged air conditioning units	1,318	793	230	248	46	37.7	26.2	9.8	15.3	8.7
Swamp coolers	71	37	15	16	Q	46.2	26.4	12.0	21.7	Q
Other	10	Q	Q	Q	Q	35.9	Q	Q	Q	Q

**Table E7. Natural gas consumption and conditional energy intensities (Btu) by end use, 2012**

	Total natural gas consumption (trillion Btu)					Natural gas energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using natural gas for the end use)				
	Total	Space heating	Water heating	Cooking	Other	Total	Space heating	Water heating	Cooking	Other
All buildings	2,248	1,339	424	394	91	38.3	27.1	10.7	15.9	10.0
<b>Main equipment replaced since 1990 (more than one may apply)</b>										
Heating	790	481	161	129	19	37.5	25.8	11.6	14.4	6.7
Cooling	882	532	181	145	23	38.2	26.7	11.7	14.4	7.4
<b>Water-heating equipment</b>										
Centralized system	1,414	839	283	257	35	41.6	28.8	11.4	19.6	6.8
Distributed system	257	153	38	37	Q	31.3	23.0	9.2	14.9	25.5
Combination of centralized and distributed system	539	311	104	99	25	36.4	25.9	9.8	10.9	9.2
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>										
Snack bar or concession stand	364	196	60	93	15	46.3	32.2	10.2	13.9	7.8
Fast food or small restaurant	372	166	72	121	13	44.5	27.2	13.4	16.2	8.1
Cafeteria or large restaurant	587	305	138	123	22	45.0	30.3	13.2	10.7	7.3
Commercial kitchen/ food preparation area	673	335	171	141	25	47.8	30.0	15.1	11.1	7.9
Small kitchen area	409	243	74	80	12	37.6	27.4	9.3	10.8	6.3
<b>HVAC conservation features (more than one may apply)</b>										
Economizer cycle	1,015	602	172	177	65	41.1	28.7	9.7	13.1	12.0
Regular HVAC maintenance	1,991	1,177	376	351	86	39.3	27.5	10.7	15.2	10.1
Building automation system (BAS) <sup>2</sup>	1,100	644	198	186	72	39.5	28.6	10.0	11.6	11.4
<b>Window and interior lighting features (more than one may apply)</b>										
Multipaned windows	1,752	1,054	318	311	69	40.0	28.3	10.7	15.9	9.2
Tinted window glass	1,290	743	243	239	64	39.5	26.8	10.7	16.0	12.8
Reflective window glass	541	298	97	127	20	44.9	29.6	11.1	19.9	9.9
External overhangs or awnings	1,030	547	196	246	41	44.4	28.2	12.4	21.0	11.8
Skylights or atriums	681	377	117	137	49	40.6	28.0	10.5	15.7	13.7
Light scheduling	927	538	161	188	40	40.1	28.1	9.8	14.6	8.9
Occupancy sensors	1,067	647	178	175	67	39.6	28.8	9.6	12.6	12.0
Multi-level lighting or dimming	573	273	115	155	31	49.0	28.6	13.2	19.5	16.6
Daylight harvesting	197	116	25	32	Q	40.1	28.7	7.7	10.1	18.1
Demand responsive lighting	127	65	28	28	6	34.6	20.4	10.7	12.9	8.0
Building automation system (BAS) for lighting <sup>3</sup>	335	205	51	61	18	35.6	25.8	7.5	9.9	7.4

**Table E7. Natural gas consumption and conditional energy intensities (Btu) by end use, 2012**

	Total natural gas consumption (trillion Btu)					Natural gas energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using natural gas for the end use)				
	Total	Space heating	Water heating	Cooking	Other	Total	Space heating	Water heating	Cooking	Other
All buildings	2,248	1,339	424	394	91	38.3	27.1	10.7	15.9	10.0
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>										
Heating	1,675	1,039	283	284	71	35.8	25.6	8.9	14.2	9.3
Cooling	1,644	996	293	287	68	35.9	25.6	9.4	14.4	9.3
Lighting	2,105	1,267	387	366	85	38.3	27.1	10.4	15.9	10.1
<b>Annual consumption (hundred cubic feet)</b>										
1,000 or less	53	44	5	2	1	7.6	8.3	1.7	3.4	Q
1,001 to 5,000	282	213	34	31	4	21.1	18.4	4.4	10.9	3.9
5,001 to 10,000	238	145	41	48	4	29.7	22.2	8.2	16.4	4.7
10,001 to 25,000	459	243	100	106	10	41.2	26.1	12.8	18.8	6.5
25,001 to 50,000	311	191	67	44	9	43.5	30.9	12.0	11.7	6.1
50,001 to 100,000	285	154	62	54	15	54.0	32.1	14.1	14.6	9.6
Over 100,000	621	350	114	108	48	90.5	59.3	20.3	21.0	28.1

<sup>1</sup> The natural gas intensity calculation (total natural gas use for the end use divided by the floorspace in buildings that use natural gas for the particular end use) differs from the calculation used in the 2003 CBECS tables, in which the intensities were not conditional on the presence of the end use; the 2003 CBECS denominator was total floorspace in all buildings that use natural gas. In this table, the intensities for each end use do not sum to the total natural gas intensity, whereas they did in the 2003 CBECS table.

<sup>2</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>3</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/> • 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 C of the 2012 Commercial Buildings Energy Consumption Survey.

**Table E8. Natural gas consumption and conditional energy intensities (cubic feet) by end use, 2012**

	Total natural gas consumption (billion cubic feet)					Natural gas energy intensity <sup>1</sup> (cubic feet/square foot in buildings using natural gas for the end use)				
	Total	Space heating	Water heating	Cooking	Other	Total	Space heating	Water heating	Cooking	Other
All buildings	2,193	1,307	414	384	89	37.3	26.4	10.5	15.5	9.8
<b>Building floorspace (square feet)</b>										
1,001 to 5,000	249	119	52	76	Q	66.4	36.0	24.9	92.4	Q
5,001 to 10,000	242	135	38	64	4	50.2	31.0	13.7	51.3	16.5
10,001 to 25,000	297	198	50	46	3	33.6	24.7	8.9	21.4	5.5
25,001 to 50,000	277	187	54	28	8	34.0	25.9	9.5	12.2	9.3
50,001 to 100,000	330	210	70	31	19	33.2	24.7	9.3	6.9	11.7
100,001 to 200,000	283	160	60	38	26	30.1	21.3	8.8	8.1	10.2
200,001 to 500,000	302	189	53	46	14	36.4	27.0	8.9	9.0	6.9
Over 500,000	214	109	36	Q	12	38.6	30.3	12.2	Q	11.0
<b>Principal building activity</b>										
Education	284	207	53	10	14	29.8	26.0	6.8	1.8	5.5
Food sales	52	28	3	19	Q	61.3	42.2	4.3	32.0	Q
Food service	222	34	39	148	Q	159.2	33.2	38.2	117.6	Q
Health care	258	155	60	32	11	78.5	59.4	23.2	15.9	18.3
Inpatient	214	118	56	30	10	101.1	72.4	33.4	16.2	24.4
Outpatient	45	38	3	Q	Q	38.0	38.1	3.8	Q	Q
Lodging	215	45	110	Q	6	43.8	14.1	25.8	Q	6.4
Mercantile	284	156	57	64	7	33.5	20.9	10.3	13.2	5.9
Retail (other than mall)	72	61	4	6	Q	21.5	20.0	2.4	5.8	Q
Enclosed and strip malls	212	95	53	59	6	41.3	21.6	13.7	15.0	6.8
Office	275	214	28	Q	12	26.8	25.1	4.7	Q	9.2
Public assembly	132	115	6	9	2	33.9	34.4	2.0	6.2	4.6
Public order and safety	40	21	16	2	Q	39.5	25.2	20.9	3.4	Q
Religious worship	85	65	Q	10	Q	28.1	24.4	Q	5.4	Q
Service	119	96	21	Q	Q	42.7	34.7	14.7	Q	Q
Warehouse and storage	136	106	10	Q	6	19.4	16.3	2.8	Q	6.9
Other	79	53	2	Q	Q	57.2	43.7	2.3	Q	Q
Vacant	12	11	Q	Q	Q	13.9	14.6	1.3	Q	Q
<b>Year constructed</b>										
Before 1920	85	63	6	12	Q	36.8	32.0	4.9	18.6	Q
1920 to 1945	141	95	27	17	3	37.3	29.7	11.4	11.0	9.1
1946 to 1959	195	132	31	26	5	36.1	26.9	8.5	11.5	7.5
1960 to 1969	307	198	58	30	Q	40.6	30.2	10.3	9.0	Q
1970 to 1979	332	184	79	59	10	41.6	28.1	14.1	17.9	9.3
1980 to 1989	327	179	68	66	Q	33.0	22.3	10.9	15.8	Q
1990 to 1999	330	184	59	78	9	36.0	24.1	9.7	17.8	9.1
2000 to 2003	154	98	23	24	9	32.6	26.0	7.4	13.5	7.1
2004 to 2007	167	82	31	Q	6	40.9	23.6	11.0	Q	8.0
2008 to 2012	156	93	30	24	9	40.7	26.7	11.3	16.7	8.1

**Table E8. Natural gas consumption and conditional energy intensities (cubic feet) by end use, 2012**

	Total natural gas consumption (billion cubic feet)					Natural gas energy intensity <sup>1</sup> (cubic feet/square foot in buildings using natural gas for the end use)				
	Total	Space heating	Water heating	Cooking	Other	Total	Space heating	Water heating	Cooking	Other
All buildings	2,193	1,307	414	384	89	37.3	26.4	10.5	15.5	9.8
<b>Census region and division</b>										
Northeast	487	322	78	62	26	44.0	34.4	10.3	11.6	10.1
New England	108	79	10	11	8	48.1	39.7	6.6	11.3	12.0
Middle Atlantic	379	243	68	51	18	43.0	33.0	11.3	11.6	9.5
Midwest	627	487	75	53	11	41.7	34.7	7.1	9.4	4.8
East North Central	482	376	57	40	9	44.6	37.2	7.2	9.2	4.6
West North Central	145	111	19	14	2	34.3	28.3	6.9	10.2	5.6
South	600	274	151	149	26	30.2	17.8	12.3	17.4	8.9
South Atlantic	298	133	77	76	11	29.8	18.2	13.6	17.2	6.0
East South Central	101	51	27	22	2	29.4	19.0	12.7	14.6	4.9
West South Central	202	91	47	51	Q	31.1	16.6	10.5	19.2	Q
West	479	224	109	120	26	37.6	20.9	12.0	23.1	20.4
Mountain	159	86	25	Q	4	42.3	27.2	9.3	Q	7.5
Pacific	320	137	85	75	Q	35.7	18.3	13.1	21.5	Q
<b>Climate region<sup>2</sup></b>										
Very cold/Cold	1,070	783	129	127	32	43.7	34.9	7.6	13.1	7.0
Mixed-humid	641	350	145	123	22	33.1	22.2	12.2	14.6	7.2
Mixed-dry/Hot-dry	249	87	76	69	Q	33.1	13.9	12.8	22.6	Q
Hot-humid	167	47	51	55	Q	31.4	14.3	14.7	19.3	Q
Marine	67	39	13	10	Q	32.7	22.9	10.2	14.1	Q
<b>Number of floors</b>										
One	896	528	153	189	27	36.6	24.0	9.8	22.2	9.7
Two	499	307	94	81	17	34.0	24.4	9.3	13.6	6.9
Three	219	153	40	19	7	36.0	28.7	8.6	7.9	7.4
Four to nine	432	255	99	48	30	44.3	34.2	13.7	9.2	13.3
Ten or more	147	65	28	Q	8	39.7	29.9	13.4	Q	12.4
<b>Number of workers (main shift)</b>										
Fewer than 5	258	179	46	29	4	32.8	25.1	9.8	16.3	Q
5 to 9	197	116	36	42	3	36.8	24.9	10.9	38.6	8.0
10 to 19	291	153	56	79	2	42.8	25.9	12.4	52.8	6.0
20 to 49	369	219	68	69	12	34.8	23.7	9.1	15.4	8.5
50 to 99	352	222	74	40	16	34.1	24.8	9.5	7.8	7.6
100 to 249	329	201	52	42	34	37.0	26.8	8.2	8.6	14.0
250 or more	398	216	81	83	18	44.7	35.5	15.2	14.0	9.5
<b>Weekly operating hours</b>										
Fewer than 40	95	77	9	8	Q	25.6	23.0	3.5	6.2	Q
40 to 48	252	199	32	15	7	25.3	22.2	5.0	5.3	6.0
49 to 60	360	285	36	25	14	25.7	23.4	4.3	6.6	6.7
61 to 84	458	265	76	106	11	39.9	26.7	9.7	18.2	6.6
85 to 167	340	183	51	93	13	50.5	30.7	10.2	29.4	8.5
Open continuously	688	297	211	137	44	53.6	32.6	22.3	17.5	17.5

**Table E8. Natural gas consumption and conditional energy intensities (cubic feet) by end use, 2012**

	Total natural gas consumption (billion cubic feet)					Natural gas energy intensity <sup>1</sup> (cubic feet/square foot in buildings using natural gas for the end use)				
	Total	Space heating	Water heating	Cooking	Other	Total	Space heating	Water heating	Cooking	Other
	All buildings	2,193	1,307	414	384	89	37.3	26.4	10.5	15.5
<b>Ownership and occupancy</b>										
Nongovernment owned	1,704	966	320	348	70	38.3	25.8	11.4	19.8	11.7
Owner occupied	868	477	169	176	46	42.3	28.4	12.8	21.8	15.0
Leased to tenant(s)	618	342	117	144	15	35.6	22.6	11.1	22.4	8.0
Owner occupied and leased	213	143	33	28	9	34.1	27.1	8.1	9.2	9.0
Unoccupied	4	4	Q	Q	N	12.5	11.9	Q	Q	N
Government owned	489	340	94	36	18	34.3	28.3	8.2	5.1	6.0
Federal	29	21	4	3	Q	34.0	31.2	6.7	11.4	Q
State	165	101	39	Q	8	42.0	32.8	12.7	Q	9.7
Local	294	219	50	15	9	31.2	26.4	6.6	2.9	4.4
<b>Party responsible for operation and maintenance of energy systems</b>										
Building owner	1,807	1,103	331	295	78	36.8	27.0	9.9	14.2	10.2
Business owner or tenant	334	176	69	79	10	40.6	23.2	13.4	24.1	7.8
Property management	26	12	9	4	Q	33.3	20.7	16.3	10.3	Q
Other	26	15	5	5	Q	43.0	32.6	14.6	18.0	Q
<b>Provider of direct input on energy- related equipment purchases</b>										
Building owner	1,868	1,137	346	305	80	36.7	26.7	10.0	14.2	10.0
Business owner or tenant	258	134	52	64	8	42.8	24.5	14.1	26.7	8.6
Property management	17	9	4	3	Q	32.3	22.3	10.4	9.7	Q
Other	51	26	12	12	Q	40.9	23.9	14.4	22.7	Q
<b>Number of establishments</b>										
One	1,490	856	299	272	63	40.1	27.2	11.4	18.7	10.4
2 to 5	418	279	66	56	17	33.6	26.1	8.8	11.7	9.8
6 to 10	105	69	17	17	2	33.8	26.2	9.2	12.4	7.0
11 to 20	110	65	19	23	3	39.7	26.2	9.2	12.7	6.5
More than 20	65	32	13	17	4	22.8	17.3	7.9	7.4	7.4
Currently unoccupied	6	5	Q	Q	N	14.1	15.4	Q	Q	N
<b>Predominant exterior wall material</b>										
Brick, stone, or stucco	1,131	669	232	188	42	39.0	27.6	11.4	13.8	8.5
Concrete (block or poured)	522	287	112	96	27	35.9	23.8	11.6	14.0	11.3
Concrete panels	203	127	25	Q	6	34.2	25.3	6.6	Q	6.6
Siding or shingles	131	75	24	29	Q	45.3	28.0	11.6	34.6	Q
Metal panels	123	101	9	7	Q	28.0	24.9	3.8	10.1	15.5
Window glass	47	30	Q	4	Q	44.4	42.3	Q	8.0	Q
Other	Q	7	2	Q	Q	46.0	16.6	6.1	Q	Q
No one major type	14	11	Q	Q	Q	30.6	31.2	Q	Q	Q

**Table E8. Natural gas consumption and conditional energy intensities (cubic feet) by end use, 2012**

	Total natural gas consumption (billion cubic feet)					Natural gas energy intensity <sup>1</sup> (cubic feet/square foot in buildings using natural gas for the end use)				
	Total	Space heating	Water heating	Cooking	Other	Total	Space heating	Water heating	Cooking	Other
<b>All buildings</b>	2,193	1,307	414	384	89	37.3	26.4	10.5	15.5	9.8
<b>Predominant roof material</b>										
Metal surfacing	235	151	35	40	9	30.1	21.4	7.5	20.4	8.8
Synthetic or rubber	830	523	127	143	37	41.9	30.6	9.5	16.0	10.1
Built-up	568	327	122	87	32	35.5	24.6	10.7	11.2	12.4
Slate or tile shingles	111	49	29	31	Q	39.7	25.4	14.6	25.2	Q
Wooden materials (including shingles)	40	21	8	10	Q	65.7	42.6	21.1	52.0	Q
Asphalt, fiberglass, or other shingles	359	208	81	64	6	36.3	25.3	12.2	16.1	5.5
Concrete	23	11	8	2	Q	27.5	17.8	15.5	7.2	Q
Other	18	8	Q	Q	Q	32.8	17.8	Q	Q	Q
No one major type	9	Q	Q	Q	Q	23.5	Q	Q	Q	Q
<b>Roof characteristics</b>										
Roof tilt										
Flat	1,420	839	285	230	66	39.6	28.0	11.3	14.1	11.3
Shallow pitch	470	284	66	102	17	32.4	22.7	7.5	21.4	7.5
Steeper pitch	304	184	62	52	6	36.2	26.1	11.2	14.0	6.0
Cool roof	588	324	116	105	42	40.9	27.9	12.0	14.1	15.4
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>										
Any type of renovation	1,200	714	217	213	56	38.8	27.9	10.6	14.4	12.2
Addition or annex	457	270	75	97	15	45.2	32.3	10.3	16.2	8.5
Reduction in floorspace	68	28	Q	Q	Q	49.0	31.3	24.1	23.4	Q
Roof replacement	664	403	122	100	40	41.1	30.4	11.0	11.9	16.2
Exterior wall replacement	126	63	24	34	6	37.2	22.9	10.3	18.0	11.6
Interior wall reconfiguration	629	381	101	118	29	39.1	28.8	10.0	15.9	10.5
Window replacement	378	219	65	72	21	40.7	29.0	10.3	16.1	13.0
HVAC equipment upgrade	822	475	149	154	43	40.2	28.1	10.7	14.7	13.4
Lighting upgrade	790	465	137	142	46	40.9	29.1	10.5	14.6	14.5
Electrical upgrade	537	299	85	114	38	43.4	29.9	10.2	17.5	17.8
Plumbing system upgrade	502	266	90	109	37	47.6	30.7	12.1	19.4	21.4
Insulation upgrade	262	139	33	73	18	44.5	29.3	8.5	23.3	19.9
Fire, safety, or security upgrade	555	318	110	87	40	41.9	29.6	11.6	11.9	16.6
Structural upgrade	148	56	20	Q	Q	52.1	25.8	11.1	35.8	Q
Other	13	9	Q	1	Q	23.9	21.5	9.4	3.2	Q
No renovations	838	500	167	148	23	35.0	24.4	10.2	17.1	7.1
Buildings constructed 2008 or later	156	93	30	24	9	40.7	26.7	11.3	16.7	8.1

**Table E8. Natural gas consumption and conditional energy intensities (cubic feet) by end use, 2012**

	Total natural gas consumption (billion cubic feet)					Natural gas energy intensity <sup>1</sup> (cubic feet/square foot in buildings using natural gas for the end use)				
	Total	Space heating	Water heating	Cooking	Other	Total	Space heating	Water heating	Cooking	Other
All buildings	2,193	1,307	414	384	89	37.3	26.4	10.5	15.5	9.8
<b>Energy sources (more than one may apply)</b>										
Electricity	2,193	1,307	414	384	89	37.3	26.4	10.5	15.5	9.8
Natural gas	2,193	1,307	414	384	89	37.3	26.4	10.5	15.5	9.8
Fuel oil	608	355	119	110	25	44.5	34.7	12.5	13.3	15.1
District heat	106	13	Q	Q	Q	36.9	36.0	Q	Q	Q
District chilled water	130	33	Q	Q	Q	53.5	46.2	25.4	Q	Q
Propane	143	68	25	Q	Q	42.0	25.0	12.1	Q	Q
Other	106	66	13	9	Q	40.1	27.9	7.4	7.3	Q
<b>Space-heating energy sources</b>										
Natural gas	1,923	1,307	316	248	52	38.8	26.4	9.1	12.9	7.4
Natural gas main	1,726	1,240	254	190	42	40.2	28.9	8.3	11.4	6.9
Natural gas secondary	197	66	63	59	9	30.2	10.2	15.3	22.5	10.8
Other excluding natural gas	246	N	83	128	35	28.5	N	19.1	24.5	17.6
Buildings without heating	25	N	14	8	Q	41.1	N	32.2	23.9	Q
<b>Primary space-heating energy source</b>										
Electricity	327	51	122	130	24	28.3	8.7	16.9	22.1	13.9
Natural gas	1,726	1,240	254	190	42	40.2	28.9	8.3	11.4	6.9
Fuel oil	8	Q	Q	3	Q	19.0	Q	Q	11.9	Q
District heat	103	Q	Q	Q	Q	37.1	Q	Q	Q	Q
Propane	Q	Q	Q	N	Q	Q	Q	Q	N	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Cooling energy sources</b>										
Natural gas	57	35	8	3	11	77.9	49.3	12.4	8.6	15.1
Other excluding natural gas	2,068	1,221	394	378	75	36.8	25.9	10.4	15.7	9.1
Buildings without cooling	68	50	12	4	Q	37.3	30.0	11.2	10.8	Q
<b>Water-heating energy sources</b>										
Natural gas	1,728	989	414	273	52	43.7	28.5	10.5	14.4	8.5
Other excluding natural gas	428	283	N	111	34	24.5	21.6	N	19.3	12.2
Buildings without water heating	37	35	N	Q	Q	22.0	20.8	N	Q	Q
<b>Cooking energy sources</b>										
Natural gas	1,208	528	259	384	36	48.7	27.5	13.6	15.5	7.8
Other excluding natural gas	200	151	45	N	4	32.0	27.8	10.6	N	4.7
Buildings without cooking	786	627	110	N	48	28.4	25.2	6.8	N	13.8

**Table E8. Natural gas consumption and conditional energy intensities (cubic feet) by end use, 2012**

	Total natural gas consumption (billion cubic feet)					Natural gas energy intensity <sup>1</sup> (cubic feet/square foot in buildings using natural gas for the end use)				
	Total	Space heating	Water heating	Cooking	Other	Total	Space heating	Water heating	Cooking	Other
<b>All buildings</b>	2,193	1,307	414	384	89	37.3	26.4	10.5	15.5	9.8
<b>Energy end uses (more than one may apply)</b>										
Buildings with space heating	2,169	1,307	400	376	86	37.3	26.4	10.2	15.4	9.6
Buildings with cooling	2,125	1,256	402	381	86	37.4	26.3	10.4	15.6	9.6
Buildings with water heating	2,156	1,271	414	384	87	37.8	26.6	10.5	15.5	9.7
Buildings with cooking	1,408	679	304	384	40	45.4	27.6	13.1	15.5	7.3
Buildings with manufacturing	120	77	12	11	20	32.2	22.7	6.4	14.2	20.8
Buildings with electricity generation	834	480	156	134	65	41.1	30.3	10.9	11.3	8.1
<b>Percent of floorspace heated</b>										
Not heated	25	N	14	8	Q	41.1	N	32.2	23.9	Q
1 to 50	120	59	23	35	3	21.0	11.9	6.7	30.5	11.5
51 to 99	432	249	74	92	16	38.8	26.8	10.2	15.7	10.1
100	1,617	999	302	248	67	39.2	28.3	10.6	14.3	9.4
<b>Percent of floorspace cooled</b>										
Not cooled	68	50	12	4	Q	37.3	30.0	11.2	10.8	Q
1 to 50	408	308	50	40	11	31.3	25.7	6.3	13.4	7.3
51 to 99	651	391	122	114	23	38.0	27.1	10.3	12.6	8.7
100	1,066	557	230	227	52	39.8	26.0	12.3	18.3	10.9
<b>Heating equipment (more than one may apply)</b>										
Heat pumps	241	106	69	55	11	31.9	17.9	13.6	13.9	9.3
Furnaces	238	158	34	43	4	33.8	23.0	7.1	18.9	6.2
Individual space heaters	532	364	97	53	17	33.6	26.2	9.5	8.8	6.9
District heat	105	13	Q	Q	Q	37.2	36.8	Q	Q	Q
Boilers	960	650	189	83	39	48.0	34.4	11.2	7.3	8.8
Packaged heating units	1,327	785	233	268	41	35.3	23.8	9.3	16.8	8.2
Other	53	25	11	14	3	44.1	22.6	9.7	14.9	7.7
<b>Cooling equipment (more than one may apply)</b>										
Residential-type central air conditioners	406	234	73	82	Q	38.7	24.7	10.1	25.0	Q
Heat pumps	250	115	71	52	12	31.2	17.6	13.3	12.2	9.6
Individual air conditioners	365	217	90	43	15	40.0	29.2	14.1	8.9	10.0
District chilled water	130	33	Q	Q	Q	53.5	46.2	25.4	Q	Q
Central chillers	584	381	115	58	29	42.5	34.1	10.5	6.8	8.5
Packaged air conditioning units	1,286	774	224	242	45	36.8	25.6	9.6	14.9	8.4
Swamp coolers	69	36	15	16	Q	45.1	25.8	11.7	21.1	Q
Other	10	Q	Q	Q	Q	35.0	Q	Q	Q	Q
<b>Main equipment replaced since 1990 (more than one may apply)</b>										
Heating	771	469	157	126	19	36.6	25.2	11.3	14.1	6.5
Cooling	860	519	177	142	22	37.2	26.1	11.5	14.0	7.2

**Table E8. Natural gas consumption and conditional energy intensities (cubic feet) by end use, 2012**

	Total natural gas consumption (billion cubic feet)					Natural gas energy intensity <sup>1</sup> (cubic feet/square foot in buildings using natural gas for the end use)				
	Total	Space heating	Water heating	Cooking	Other	Total	Space heating	Water heating	Cooking	Other
<b>All buildings</b>	2,193	1,307	414	384	89	37.3	26.4	10.5	15.5	9.8
<b>Water-heating equipment</b>										
Centralized system	1,380	819	276	251	34	40.6	28.1	11.1	19.1	6.7
Distributed system	251	150	37	36	Q	30.5	22.4	9.0	14.6	24.8
Combination of centralized and distributed system	526	303	101	97	24	35.5	25.3	9.5	10.6	9.0
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>										
Snack bar or concession stand	355	192	59	91	15	45.2	31.4	10.0	13.5	7.7
Fast food or small restaurant	363	162	70	118	12	43.4	26.6	13.1	15.8	7.9
Cafeteria or large restaurant	572	297	134	120	21	43.9	29.6	12.9	10.5	7.1
Commercial kitchen/food preparation area	657	327	167	138	25	46.6	29.3	14.7	10.8	7.7
Small kitchen area	399	237	72	78	12	36.7	26.8	9.1	10.6	6.1
<b>HVAC conservation features (more than one may apply)</b>										
Economizer cycle	991	587	168	173	63	40.1	28.0	9.5	12.7	11.7
Regular HVAC maintenance	1,942	1,148	367	343	84	38.3	26.8	10.5	14.8	9.8
Building automation system (BAS) <sup>3</sup>	1,073	628	194	181	70	38.6	27.9	9.7	11.4	11.1
<b>Window and interior lighting features (more than one may apply)</b>										
Multipaned windows	1,709	1,028	310	304	67	39.0	27.6	10.4	15.6	9.0
Tinted window glass	1,259	725	237	234	63	38.6	26.1	10.5	15.6	12.5
Reflective window glass	528	290	94	124	20	43.8	28.8	10.9	19.4	9.7
External overhangs or awnings	1,005	534	192	240	40	43.3	27.5	12.1	20.5	11.5
Skylights or atriums	664	368	114	134	48	39.7	27.3	10.3	15.3	13.4
Light scheduling	905	525	157	184	39	39.2	27.4	9.6	14.3	8.7
Occupancy sensors	1,041	631	173	171	66	38.6	28.1	9.4	12.3	11.7
Multi-level lighting or dimming	560	267	112	151	30	47.8	27.9	12.9	19.0	16.2
Daylight harvesting	192	114	25	32	Q	39.1	28.0	7.5	9.9	17.6
Demand responsive lighting	124	64	27	27	6	33.7	19.9	10.5	12.6	7.8
Building automation system (BAS) for lighting <sup>3</sup>	327	200	50	59	17	34.8	25.2	7.3	9.6	7.3
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>										
Heating	1,635	1,013	276	277	69	34.9	25.0	8.6	13.8	9.1
Cooling	1,604	972	286	280	66	35.1	25.0	9.2	14.1	9.1
Lighting	2,054	1,236	377	357	83	37.3	26.4	10.1	15.5	9.8

**Table E8. Natural gas consumption and conditional energy intensities (cubic feet) by end use, 2012**

	Total natural gas consumption (billion cubic feet)					Natural gas energy intensity <sup>1</sup> (cubic feet/square foot in buildings using natural gas for the end use)				
	Total	Space heating	Water heating	Cooking	Other	Total	Space heating	Water heating	Cooking	Other
<b>All buildings</b>	2,193	1,307	414	384	89	37.3	26.4	10.5	15.5	9.8
<b>Annual consumption (hundred cubic feet)</b>										
1,000 or less	51	43	5	2	1	7.4	8.1	1.6	3.3	Q
1,001 to 5,000	275	207	34	30	4	20.6	18.0	4.3	10.6	3.8
5,001 to 10,000	232	141	40	46	4	29.0	21.7	8.0	16.0	4.6
10,001 to 25,000	448	237	97	104	10	40.1	25.5	12.5	18.4	6.3
25,001 to 50,000	304	187	66	43	9	42.4	30.1	11.7	11.4	6.0
50,001 to 100,000	278	150	61	53	14	52.7	31.3	13.7	14.2	9.4
Over 100,000	606	342	111	105	47	88.3	57.9	19.8	20.5	27.4

<sup>1</sup> The natural gas intensity calculation (natural gas consumption for the end use divided by the floorspace in buildings that use natural gas for the particular end use) differs from the calculation used in the 2003 CBECS tables, in which the intensities were not conditional on the presence of the end use; the 2003 CBECS denominator was total floorspace in all buildings that used natural gas. In this table, the intensities for each end use do not sum to the total natural gas intensity, whereas they did in the 2003 CBECS table.

<sup>2</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>3</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/> • 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 C of the 2012 Commercial Buildings Energy Consumption Survey.

**Table E9. Fuel oil consumption and energy intensities (Btu) by end use, 2012**

	Total fuel oil consumption (trillion Btu)				Fuel oil energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using fuel oil for the end use)			
	Total	Space heating	Water heating	Other	Total	Space heating	Water heating	Other
<b>All buildings</b>	133.9	92.5	0.8	40.6	6.6	21.5	0.4	2.5
<b>Building floorspace (square feet)</b>								
1,001 to 5,000	20.8	19.3	Q	Q	34.4	46.8	Q	Q
5,001 to 10,000	10.2	9.7	Q	0.6	18.3	26.4	Q	2.8
10,001 to 25,000	20.2	17.6	Q	2.5	18.0	24.7	Q	6.4
25,001 to 50,000	14.0	9.7	Q	4.2	9.4	17.1	Q	4.2
50,001 to 100,000	23.5	16.4	Q	6.9	8.3	23.6	Q	3.0
100,001 to 200,000	20.1	14.1	0.1	5.9	7.1	25.8	0.4	2.5
200,001 to 500,000	13.5	2.8	(*)	10.7	2.5	4.6	Q	2.2
Over 500,000	11.6	2.9	(*)	8.7	2.2	7.6	0.1	1.7
<b>Principal building activity</b>								
Education	28.2	22.6	0.1	5.5	12.9	21.5	0.2	4.0
Food sales	Q	Q	Q	Q	Q	Q	Q	Q
Food service	Q	Q	Q	Q	Q	Q	Q	Q
Health care	19.6	11.0	0.1	8.5	7.0	22.9	0.3	3.3
Inpatient	16.1	9.5	0.1	6.5	7.1	23.4	0.5	3.1
Outpatient	Q	Q	Q	Q	6.7	Q	Q	Q
Lodging	8.4	Q	Q	3.6	4.1	Q	Q	2.0
Mercantile	9.4	8.0	Q	1.4	8.4	27.4	Q	1.9
Retail (other than mall)	7.3	6.9	Q	Q	16.0	28.3	Q	Q
Enclosed and strip malls	Q	Q	Q	1.0	Q	Q	Q	1.8
Office	18.1	9.0	Q	9.1	3.4	16.1	Q	1.9
Public assembly	6.6	Q	Q	2.4	3.9	Q	Q	1.6
Public order and safety	2.3	Q	Q	1.7	2.5	Q	Q	1.9
Religious worship	5.3	Q	Q	Q	13.7	Q	Q	Q
Service	16.3	15.4	Q	0.9	22.2	39.3	Q	2.3
Warehouse and storage	5.3	Q	Q	2.5	3.0	Q	Q	2.0
Other	9.8	Q	Q	3.3	13.2	Q	Q	6.8
Vacant	Q	Q	Q	Q	Q	Q	Q	Q
<b>Year constructed</b>								
Before 1920	16.4	15.5	Q	0.5	14.9	24.9	Q	1.3
1920 to 1945	14.4	10.7	Q	3.6	9.9	19.4	Q	3.6
1946 to 1959	18.3	15.3	0.1	2.9	11.9	25.8	0.2	2.9
1960 to 1969	19.7	15.5	0.1	4.1	8.2	22.3	0.3	2.3
1970 to 1979	16.3	9.8	Q	6.4	6.2	16.7	Q	2.9
1980 to 1989	15.7	7.5	Q	8.0	4.1	17.9	Q	2.4
1990 to 1999	13.5	7.4	Q	6.0	4.2	20.3	Q	2.1
2000 to 2003	10.3	Q	Q	2.9	7.0	Q	Q	2.3
2004 to 2007	3.0	Q	Q	2.3	2.0	Q	Q	1.7
2008 to 2012	6.3	Q	Q	3.7	5.6	Q	Q	3.8

**Table E9. Fuel oil consumption and energy intensities (Btu) by end use, 2012**

	Total fuel oil consumption (trillion Btu)				Fuel oil energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using fuel oil for the end use)			
	Total	Space heating	Water heating	Other	Total	Space heating	Water heating	Other
<b>All buildings</b>	133.9	92.5	0.8	40.6	6.6	21.5	0.4	2.5
<b>Census region and division</b>								
Northeast	89.6	73.2	0.4	16.0	14.7	25.9	0.3	4.3
New England	47.3	41.9	0.2	5.2	25.3	33.0	0.3	6.1
Middle Atlantic	42.3	31.3	0.2	10.8	10.1	20.1	0.3	3.7
Midwest	14.8	9.1	Q	5.7	3.8	13.6	Q	1.7
East North Central	9.6	Q	Q	3.7	3.7	Q	Q	1.6
West North Central	5.3	3.2	Q	2.0	4.0	Q	Q	2.0
South	22.9	8.8	Q	13.8	3.2	12.1	Q	2.2
South Atlantic	16.2	6.8	Q	9.0	3.7	15.8	Q	2.3
East South Central	2.9	Q	Q	1.3	3.7	Q	Q	1.8
West South Central	3.8	Q	Q	3.5	2.1	Q	Q	2.1
West	6.6	Q	Q	5.1	2.1	Q	Q	1.7
Mountain	Q	Q	Q	Q	1.8	Q	Q	1.7
Pacific	4.7	Q	Q	3.4	2.3	Q	Q	1.7
<b>Climate region<sup>2</sup></b>								
Very cold/Cold	81.4	63.1	0.3	18.0	10.2	26.6	0.3	3.0
Mixed-humid	43.2	29.3	0.5	13.4	5.9	17.6	0.7	2.3
Mixed-dry/Hot-dry	2.5	Q	Q	2.5	1.5	Q	Q	1.6
Hot-humid	5.8	Q	Q	5.8	2.3	Q	Q	2.5
Marine	1.0	Q	Q	1.0	1.5	Q	Q	1.5
<b>Number of floors</b>								
One	42.1	31.3	Q	10.6	10.2	22.9	0.5	3.6
Two	32.0	24.5	0.1	7.4	9.5	25.4	0.2	2.9
Three	22.9	19.2	0.1	3.6	11.0	26.6	0.3	2.6
Four to nine	28.5	15.2	Q	12.9	4.6	15.9	Q	2.4
Ten or more	8.5	Q	Q	6.2	2.0	8.2	Q	1.6
<b>Number of workers (main shift)</b>								
Fewer than 5	31.2	29.3	Q	1.8	21.0	29.4	0.1	3.8
5 to 9	8.9	8.1	Q	0.4	12.5	23.3	Q	1.3
10 to 19	11.4	9.1	Q	Q	14.9	29.4	Q	4.5
20 to 49	16.8	11.3	Q	5.4	9.2	20.9	Q	3.9
50 to 99	21.1	13.9	Q	7.0	6.7	17.8	Q	2.8
100 to 249	22.2	12.3	0.1	9.9	5.5	17.8	0.2	2.8
250 or more	22.3	8.4	0.1	13.8	2.7	13.5	0.3	1.8
<b>Weekly operating hours</b>								
Fewer than 40	9.6	8.6	Q	Q	17.9	25.5	Q	Q
40 to 48	26.6	21.3	(*)	5.3	10.0	21.2	0.1	3.0
49 to 60	24.9	18.5	Q	6.3	6.4	19.9	Q	2.2
61 to 84	19.6	14.2	Q	5.4	6.3	17.5	Q	2.3
85 to 167	8.8	Q	Q	4.5	4.7	Q	Q	2.7
Open continuously	44.3	25.5	0.6	18.2	5.5	26.4	1.1	2.4

**Table E9. Fuel oil consumption and energy intensities (Btu) by end use, 2012**

**Table E9. Fuel oil consumption and energy intensities (Btu) by end use, 2012**

	Total fuel oil consumption (trillion Btu)				Fuel oil energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using fuel oil for the end use)			
	Total	Space heating	Water heating	Other	Total	Space heating	Water heating	Other
<b>All buildings</b>	133.9	92.5	0.8	40.6	6.6	21.5	0.4	2.5
<b>Predominant roof material</b>								
Metal surfacing	23.0	20.2	Q	2.7	11.3	25.9	Q	2.1
Synthetic or rubber	39.6	24.3	0.1	15.2	5.0	18.2	0.1	2.3
Built-up	31.5	18.6	0.4	12.5	5.4	18.1	Q	2.5
Slate or tile shingles	4.5	Q	Q	1.5	6.2	Q	Q	2.4
Wooden materials (including shingles)	Q	Q	Q	Q	Q	Q	Q	Q
Asphalt, fiberglass, or other shingles	26.8	20.8	0.2	5.8	10.4	26.2	0.5	3.2
Concrete	3.1	Q	Q	Q	4.9	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q
No one major type	Q	Q	Q	Q	Q	Q	Q	Q
<b>Roof characteristics</b>								
<b>Roof tilt</b>								
Flat	68.2	38.7	0.6	28.9	4.7	15.3	0.5	2.4
Shallow pitch	34.0	26.0	Q	8.0	8.7	27.1	0.5	2.7
Steeper pitch	31.7	27.8	Q	3.7	16.4	34.4	Q	3.2
Cool roof	32.6	21.0	0.1	11.5	5.4	23.2	0.2	2.2
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>								
Any type of renovation	80.3	54.3	0.7	25.3	6.4	20.4	0.5	2.5
Addition or annex	34.1	22.4	0.2	11.6	7.4	20.5	0.3	2.9
Reduction in floorspace	Q	Q	Q	1.0	Q	Q	Q	2.6
Roof replacement	54.7	39.8	0.2	14.7	7.4	21.3	0.2	2.6
Exterior wall replacement	11.2	8.4	Q	2.8	6.9	19.2	Q	2.2
Interior wall reconfiguration	38.9	22.1	0.5	16.4	5.1	17.0	0.6	2.5
Window replacement	35.0	26.2	0.5	8.4	8.3	23.7	0.6	2.6
HVAC equipment upgrade	48.1	27.4	0.6	20.1	5.5	17.7	0.6	2.7
Lighting upgrade	52.0	31.9	0.5	19.6	6.0	21.2	0.5	2.6
Electrical upgrade	38.1	23.9	0.4	13.8	6.8	19.8	0.6	2.9
Plumbing system upgrade	33.4	22.7	0.4	10.3	6.8	22.2	0.7	2.6
Insulation upgrade	13.2	7.5	Q	5.4	5.3	14.0	Q	2.5
Fire, safety, or security upgrade	39.0	23.5	0.5	15.0	5.8	19.0	0.7	2.6
Structural upgrade	9.3	5.1	Q	4.2	5.3	13.8	Q	2.7
Other	Q	Q	Q	Q	Q	Q	Q	Q
No renovations	47.3	35.5	0.1	11.7	7.3	23.2	0.2	2.3
Buildings constructed 2008 or later	6.3	Q	Q	3.7	5.6	Q	Q	3.8

**Table E9. Fuel oil consumption and energy intensities (Btu) by end use, 2012**

	Total fuel oil consumption (trillion Btu)				Fuel oil energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using fuel oil for the end use)			
	Total	Space heating	Water heating	Other	Total	Space heating	Water heating	Other
<b>All buildings</b>	133.9	92.5	0.8	40.6	6.6	21.5	0.4	2.5
<b>Energy sources</b> (more than one may apply)								
Electricity	133.9	92.5	0.8	40.6	6.6	21.5	0.4	2.5
Natural gas	41.0	17.5	0.1	23.4	3.0	9.4	0.2	2.0
Fuel oil	133.9	92.5	0.8	40.6	6.6	21.5	0.4	2.5
District heat	6.4	Q	Q	6.1	2.1	Q	Q	2.0
District chilled water	4.4	Q	Q	4.3	2.0	Q	Q	2.1
Propane	43.1	32.0	0.6	10.5	14.0	25.5	0.7	4.8
Other	8.1	4.1	Q	3.9	7.2	13.3	Q	4.3
<b>Space-heating energy sources</b>								
Fuel oil	103.6	92.5	0.4	10.7	23.8	21.5	0.2	8.3
Fuel oil main	98.3	88.6	0.4	9.3	38.7	34.8	0.3	16.3
Fuel oil secondary	5.3	3.9	Q	1.4	2.9	2.2	Q	1.9
Other excluding fuel oil	28.5	N	Q	28.1	1.9	N	Q	1.9
Buildings without heating	1.8	N	Q	1.8	3.5	N	Q	4.3
<b>Primary space-heating energy source</b>								
Electricity	9.7	0.4	Q	8.9	2.1	1.0	Q	2.1
Natural gas	16.0	2.1	(*)	13.9	1.8	2.0	0.1	1.8
Fuel oil	98.3	88.6	0.4	9.3	38.7	34.8	0.3	16.3
District heat	5.2	Q	Q	5.2	1.7	Q	Q	1.8
Propane	Q	Q	N	Q	Q	Q	N	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q
<b>Cooling energy sources</b>								
Fuel oil	Q	Q	Q	Q	Q	Q	Q	Q
Other excluding fuel oil	109.2	69.8	0.7	38.7	5.7	19.7	0.4	2.4
Buildings without cooling	22.2	21.6	Q	Q	24.9	31.2	Q	Q
<b>Water-heating energy sources</b>								
Fuel oil	59.6	48.5	0.8	10.3	31.2	30.0	0.4	11.5
Other excluding fuel oil	65.6	36.8	N	28.8	3.7	15.0	N	1.9
Buildings without water heating	8.7	7.2	N	Q	17.7	33.8	N	Q
<b>Cooking energy sources</b>								
Fuel oil	Q	Q	Q	Q	Q	Q	Q	Q
Other excluding fuel oil	74.3	49.6	0.7	23.9	5.9	20.9	0.5	2.3
Buildings without cooking	58.2	42.3	Q	15.8	7.8	22.3	Q	2.8
<b>Energy end uses</b> (more than one may apply)								
Buildings with space heating	132.1	92.5	0.8	38.8	6.7	21.5	0.4	2.4
Buildings with cooling	111.7	70.9	0.7	40.1	5.8	19.7	0.4	2.5
Buildings with water heating	125.2	85.3	0.8	39.1	6.4	20.9	0.4	2.4
Buildings with cooking	75.7	50.2	0.7	24.8	6.0	21.0	0.5	2.3
Buildings with manufacturing	6.4	Q	Q	3.4	7.4	Q	Q	6.5
Buildings with electricity generation	67.6	28.9	0.3	38.4	4.0	18.1	0.3	2.4

**Table E9. Fuel oil consumption and energy intensities (Btu) by end use, 2012**

	Total fuel oil consumption (trillion Btu)				Fuel oil energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using fuel oil for the end use)			
	Total	Space heating	Water heating	Other	Total	Space heating	Water heating	Other
<b>All buildings</b>	133.9	92.5	0.8	40.6	6.6	21.5	0.4	2.5
<b>Percent of floorspace heated</b>								
Not heated	1.8	N	Q	1.8	3.5	N	Q	4.3
1 to 50	9.5	6.1	Q	3.4	4.7	8.1	Q	2.7
51 to 99	18.2	11.3	(*)	6.9	4.8	18.8	0.1	2.2
100	104.4	75.1	0.7	28.5	7.5	25.5	0.6	2.5
<b>Heating equipment (more than one may apply)</b>								
Heat pumps	12.1	4.4	Q	7.4	4.0	8.6	Q	2.7
Furnaces	7.4	5.9	Q	1.5	8.5	32.2	Q	2.1
Individual space heaters	37.8	27.1	0.1	10.6	6.4	16.6	0.3	2.3
District heat	6.1	Q	Q	5.8	2.0	Q	Q	1.9
Boilers	80.1	57.3	0.4	22.4	8.6	22.8	0.3	3.1
Packaged heating units	46.1	29.3	0.1	16.8	4.8	16.9	0.2	2.1
Other	Q	Q	Q	Q	Q	Q	Q	Q
<b>Water-heating equipment</b>								
Centralized system	84.6	63.3	0.7	20.6	7.7	22.3	0.5	2.5
Distributed system	13.5	7.4	Q	6.0	5.4	14.4	Q	3.0
Combination of centralized and distributed system	27.1	14.6	0.1	12.4	4.4	20.2	0.3	2.2
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>								
Snack bar or concession stand	15.7	7.3	0.1	8.3	3.2	13.9	0.2	1.9
Fast food or small restaurant	8.2	Q	Q	5.8	2.3	Q	Q	1.7
Cafeteria or large restaurant	42.1	26.6	0.3	15.2	5.9	20.1	0.3	2.5
Commercial kitchen/ food preparation area	32.5	18.4	0.5	13.6	4.9	16.5	0.8	2.3
Small kitchen area	30.9	22.5	0.1	8.4	6.6	24.7	0.2	2.2
<b>HVAC conservation features (more than one may apply)</b>								
Economizer cycle	43.1	19.9	0.1	23.0	3.8	13.9	0.2	2.3
Regular HVAC maintenance	111.2	70.9	0.8	39.5	5.9	20.5	0.4	2.5
Building automation system (BAS) <sup>3</sup>	58.1	28.8	0.2	29.1	4.2	18.3	0.3	2.3
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>								
Heating	92.5	66.9	0.6	25.1	6.5	20.9	0.4	2.3
Cooling	77.9	51.7	0.5	25.6	5.6	19.5	0.4	2.2
Lighting	123.3	85.0	0.7	37.6	6.5	21.0	0.4	2.5

**Table E9. Fuel oil consumption and energy intensities (Btu) by end use, 2012**

	Total fuel oil consumption (trillion Btu)			Fuel oil energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using fuel oil for the end use)				
	Total	Space heating	Water heating	Other	Total	Space heating	Water heating	Other
<b>All buildings</b>	133.9	92.5	0.8	40.6	6.6	21.5	0.4	2.5
<b>Annual consumption (gallons)</b>								
1,000 or less	13.5	8.1	Q	5.3	1.5	5.5	Q	0.8
1,001 to 5,000	32.8	23.8	Q	8.7	6.8	22.8	Q	2.2
5,001 to 10,000	26.1	17.8	Q	8.2	10.3	38.8	Q	3.7
10,001 to 25,000	21.5	13.7	(*)	7.7	9.3	26.8	0.1	3.9
Over 25,000	40.0	29.0	0.2	10.8	26.7	36.6	0.4	8.9

<sup>1</sup> The fuel oil intensity calculation (fuel oil consumption for the end use divided by the floorspace in buildings that use fuel oil for the particular end use) differs from the calculation used in the 2003 CBECS tables, in which the intensities were not conditional on the presence of the end use; the 2003 CBECS denominator was total floorspace in all buildings that used fuel oil. In this table, the intensities for each end use do not sum to the total fuel oil intensity, whereas they did in the 2003 CBECS table.

<sup>2</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>3</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 round 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/> • 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 F of the 2012 Commercial Buildings Energy Consumption Survey.

**Table E10. Fuel oil consumption and energy intensities (gallons) by end use, 2012**

	Total fuel oil consumption (million gallons)				Fuel oil energy intensity <sup>1</sup> (gallons/square foot in buildings using fuel oil for the end use)			
	Total	Space heating	Water heating	Other	Total	Space heating	Water heating	Other
<b>All buildings</b>	974.2	672.9	5.9	295.5	48.2	156.7	3.1	18.2
<b>Building floorspace (square feet)</b>								
1,001 to 5,000	151.3	140.3	Q	Q	250.4	340.6	Q	Q
5,001 to 10,000	74.5	70.3	Q	4.1	133.2	191.8	Q	20.6
10,001 to 25,000	146.9	127.9	Q	18.4	130.8	179.6	Q	46.5
25,001 to 50,000	101.5	70.9	Q	30.3	68.1	124.1	Q	30.9
50,001 to 100,000	170.8	119.5	Q	50.5	60.5	171.3	Q	22.0
100,001 to 200,000	146.5	102.6	0.7	43.3	51.3	187.4	2.8	18.1
200,001 to 500,000	98.2	20.2	0.3	77.8	18.3	33.5	Q	16.2
Over 500,000	84.4	21.1	0.2	63.1	15.7	55.0	1.0	12.6
<b>Principal building activity</b>								
Education	205.4	164.6	1.1	39.8	94.0	156.5	1.6	29.3
Food sales	Q	Q	Q	Q	Q	Q	Q	Q
Food service	Q	Q	Q	Q	Q	Q	Q	Q
Health care	142.4	79.7	0.8	61.8	51.3	166.9	2.4	24.2
Inpatient	117.0	68.9	0.8	47.3	51.9	169.9	3.3	22.8
Outpatient	Q	Q	Q	Q	48.7	Q	Q	Q
Lodging	61.1	Q	Q	26.5	29.8	Q	Q	14.4
Mercantile	68.7	58.3	Q	10.3	61.4	199.0	Q	13.7
Retail (other than mall)	52.9	50.1	Q	Q	116.5	206.1	Q	Q
Enclosed and strip malls	Q	Q	Q	7.6	Q	Q	Q	13.4
Office	131.4	65.4	Q	65.9	24.7	116.9	Q	14.0
Public assembly	47.8	Q	Q	17.8	28.7	Q	Q	11.9
Public order and safety	16.8	Q	Q	12.1	18.5	Q	Q	13.5
Religious worship	38.9	Q	Q	Q	99.5	Q	Q	Q
Service	118.5	112.3	Q	6.2	161.7	285.8	Q	16.5
Warehouse and storage	38.4	Q	Q	18.2	21.6	Q	Q	14.4
Other	71.0	Q	Q	23.8	96.2	Q	Q	49.1
Vacant	Q	Q	Q	Q	Q	Q	Q	Q
<b>Year constructed</b>								
Before 1920	119.0	112.9	Q	3.8	108.2	181.4	Q	9.6
1920 to 1945	104.6	77.8	Q	26.5	72.3	141.3	Q	26.1
1946 to 1959	132.8	111.1	0.5	21.2	86.8	188.0	1.7	20.9
1960 to 1969	143.6	112.8	0.8	30.1	59.7	162.3	2.1	16.8
1970 to 1979	118.4	71.0	Q	46.8	45.3	121.4	Q	21.4
1980 to 1989	113.9	54.8	Q	58.4	29.9	130.0	Q	17.6
1990 to 1999	98.4	54.1	Q	43.9	30.8	147.9	Q	14.9
2000 to 2003	75.2	Q	Q	21.2	51.3	Q	Q	16.8
2004 to 2007	22.2	Q	Q	17.0	14.8	Q	Q	12.3
2008 to 2012	46.1	Q	Q	26.6	40.6	Q	Q	27.3

**Table E10. Fuel oil consumption and energy intensities (gallons) by end use, 2012**

	Total fuel oil consumption (million gallons)				Fuel oil energy intensity <sup>1</sup> (gallons/square foot in buildings using fuel oil for the end use)			
	Total	Space heating	Water heating	Other	Total	Space heating	Water heating	Other
<b>All buildings</b>	974.2	672.9	5.9	295.5	48.2	156.7	3.1	18.2
<b>Census region and division</b>								
Northeast	651.8	532.5	3.2	116.1	107.2	188.2	2.3	31.2
New England	343.7	304.6	1.5	37.6	184.2	240.0	2.2	44.3
Middle Atlantic	308.0	227.9	1.7	78.5	73.1	146.1	2.4	27.3
Midwest	107.8	65.9	Q	41.6	27.4	98.8	Q	12.7
East North Central	69.6	Q	Q	26.8	26.6	Q	Q	11.8
West North Central	38.2	23.2	Q	14.8	29.0	Q	Q	14.8
South	166.7	63.9	Q	100.4	23.6	87.7	Q	16.0
South Atlantic	117.8	49.7	Q	65.7	26.7	115.3	Q	16.7
East South Central	21.3	Q	Q	9.5	26.7	Q	Q	13.4
West South Central	27.5	Q	Q	25.2	15.0	Q	Q	15.4
West	48.0	Q	Q	37.3	15.3	Q	Q	12.4
Mountain	Q	Q	Q	Q	12.8	Q	Q	12.0
Pacific	34.1	Q	Q	24.8	16.7	Q	Q	12.6
<b>Climate region<sup>2</sup></b>								
Very cold/Cold	592.2	459.3	2.1	130.8	74.0	193.4	1.9	21.9
Mixed-humid	313.9	213.0	3.7	97.2	43.1	127.7	5.2	17.0
Mixed-dry/Hot-dry	17.9	Q	Q	17.9	11.2	Q	Q	11.4
Hot-humid	42.5	Q	Q	42.2	16.4	Q	Q	18.1
Marine	7.6	Q	Q	7.3	10.8	Q	Q	10.9
<b>Number of floors</b>								
One	305.9	227.4	Q	77.2	73.9	166.2	3.6	25.9
Two	232.9	178.2	0.7	54.0	69.0	184.9	1.8	21.4
Three	166.5	139.6	1.0	25.9	79.7	193.7	2.0	18.8
Four to nine	207.0	110.7	Q	93.5	33.1	115.6	Q	17.2
Ten or more	61.8	Q	Q	44.8	14.2	59.7	Q	11.4
<b>Number of workers (main shift)</b>								
Fewer than 5	226.9	213.3	Q	13.3	152.4	213.7	1.0	27.9
5 to 9	65.0	59.1	Q	3.0	90.7	169.7	Q	9.7
10 to 19	82.8	66.4	Q	Q	108.3	213.6	Q	33.0
20 to 49	122.4	82.5	Q	39.4	67.1	152.2	Q	28.3
50 to 99	153.3	101.2	Q	51.2	48.9	129.6	Q	20.4
100 to 249	161.3	89.1	0.5	71.7	39.9	129.6	1.5	20.4
250 or more	162.4	61.3	0.7	100.5	19.7	98.0	2.0	13.3
<b>Weekly operating hours</b>								
Fewer than 40	70.1	62.8	Q	Q	130.3	185.2	Q	Q
40 to 48	193.8	155.0	0.3	38.5	72.6	154.1	0.8	22.0
49 to 60	181.2	134.9	Q	45.7	46.3	144.9	Q	15.9
61 to 84	142.9	103.5	Q	38.9	46.0	127.1	Q	16.6
85 to 167	64.1	Q	Q	32.6	34.3	Q	Q	19.4
Open continuously	322.2	185.2	4.4	132.6	39.7	192.3	8.0	17.8

**Table E10. Fuel oil consumption and energy intensities (gallons) by end use, 2012**

**Table E10. Fuel oil consumption and energy intensities (gallons) by end use, 2012**

	Total fuel oil consumption (million gallons)				Fuel oil energy intensity <sup>1</sup> (gallons/square foot in buildings using fuel oil for the end use)			
	Total	Space heating	Water heating	Other	Total	Space heating	Water heating	Other
<b>All buildings</b>	974.2	672.9	5.9	295.5	48.2	156.7	3.1	18.2
<b>Predominant roof material</b>								
Metal surfacing	166.9	146.7	Q	19.7	82.5	188.6	Q	15.0
Synthetic or rubber	287.9	176.7	0.7	110.4	36.1	132.1	0.9	16.4
Built-up	229.1	135.1	3.2	90.8	39.6	131.6	Q	18.5
Slate or tile shingles	32.4	Q	Q	10.7	44.8	Q	Q	17.3
Wooden materials (including shingles)	Q	Q	Q	Q	Q	Q	Q	Q
Asphalt, fiberglass, or other shingles	195.1	151.5	1.2	42.4	75.9	190.7	3.9	23.0
Concrete	22.3	Q	Q	Q	36.0	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q
No one major type	Q	Q	Q	Q	Q	Q	Q	Q
<b>Roof characteristics</b>								
<b>Roof tilt</b>								
Flat	496.2	281.8	4.0	210.4	34.5	111.6	3.3	17.4
Shallow pitch	247.5	188.9	Q	57.8	63.6	196.8	3.3	19.4
Steeper pitch	230.4	202.2	Q	27.2	119.5	250.3	Q	23.0
Cool roof	237.3	153.0	0.5	83.9	39.0	169.0	1.1	15.7
<b>Renovations in buildings constructed before 2008 (more than one may apply)</b>								
Any type of renovation	583.9	394.8	5.1	183.9	46.5	148.0	3.9	18.0
Addition or annex	248.1	162.8	1.3	84.1	53.6	149.2	1.8	21.0
Reduction in floorspace	Q	Q	Q	7.6	Q	Q	Q	19.0
Roof replacement	397.8	289.2	1.5	107.1	53.9	154.9	1.5	18.6
Exterior wall replacement	81.8	61.0	Q	20.2	50.0	139.7	Q	16.0
Interior wall reconfiguration	283.1	160.6	3.4	119.2	37.2	123.7	4.5	18.4
Window replacement	254.9	190.7	3.4	60.9	60.1	172.6	4.6	18.6
HVAC equipment upgrade	349.9	199.6	4.3	145.9	39.7	128.5	4.5	19.5
Lighting upgrade	378.2	231.7	3.8	142.8	43.8	154.0	4.0	19.1
Electrical upgrade	277.3	173.6	3.2	100.5	49.6	144.0	4.1	21.2
Plumbing system upgrade	243.1	164.8	3.2	75.1	49.5	161.1	4.9	18.7
Insulation upgrade	96.2	54.6	Q	39.0	38.3	101.6	Q	17.9
Fire, safety, or security upgrade	283.5	171.0	3.6	108.8	41.8	138.1	4.7	19.0
Structural upgrade	67.5	36.8	Q	30.5	38.9	100.7	Q	19.8
Other	Q	Q	Q	Q	Q	Q	Q	Q
No renovations	344.2	258.6	0.8	84.9	52.8	168.6	1.3	16.7
Buildings constructed 2008 or later	46.1	Q	Q	26.6	40.6	Q	Q	27.3

**Table E10. Fuel oil consumption and energy intensities (gallons) by end use, 2012**

	Total fuel oil consumption (million gallons)				Fuel oil energy intensity <sup>1</sup> (gallons/square foot in buildings using fuel oil for the end use)			
	Total	Space heating	Water heating	Other	Total	Space heating	Water heating	Other
<b>All buildings</b>	974.2	672.9	5.9	295.5	48.2	156.7	3.1	18.2
<b>Energy sources (more than one may apply)</b>								
Electricity	974.2	672.9	5.9	295.5	48.2	156.7	3.1	18.2
Natural gas	298.1	127.1	0.9	170.0	21.8	68.5	1.4	14.3
Fuel oil	974.2	672.9	5.9	295.5	48.2	156.7	3.1	18.2
District heat	46.6	Q	Q	44.5	15.0	Q	Q	14.9
District chilled water	31.8	Q	Q	31.6	14.9	Q	Q	15.1
Propane	313.5	232.9	4.0	76.5	101.8	185.3	4.9	35.1
Other	58.9	30.1	Q	28.4	52.0	96.8	Q	31.0
<b>Space-heating energy sources</b>								
Fuel oil	753.4	672.9	2.9	77.7	173.1	156.7	1.8	60.3
Fuel oil main	714.8	644.3	2.6	67.9	281.2	253.4	2.1	118.3
Fuel oil secondary	38.7	28.6	Q	9.8	21.4	16.3	Q	13.8
Other excluding fuel oil	207.4	N	Q	204.4	13.5	N	Q	14.0
Buildings without heating	13.4	N	Q	13.3	25.3	N	Q	30.9
<b>Primary space-heating energy source</b>								
Electricity	70.7	3.0	Q	65.0	15.2	7.2	Q	15.3
Natural gas	116.6	15.4	0.2	101.1	12.9	14.4	0.4	12.8
Fuel oil	714.8	644.3	2.6	67.9	281.2	253.4	2.1	118.3
District heat	37.9	Q	Q	37.7	12.7	Q	Q	13.1
Propane	Q	Q	N	Q	Q	Q	N	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q
<b>Cooling energy sources</b>								
Fuel oil	Q	Q	Q	Q	Q	Q	Q	Q
Other excluding fuel oil	794.2	507.7	5.3	281.2	41.3	143.2	3.2	17.5
Buildings without cooling	161.5	157.1	Q	Q	181.2	227.2	Q	Q
<b>Water-heating energy sources</b>								
Fuel oil	433.5	352.5	5.9	75.0	226.8	218.0	3.1	83.3
Other excluding fuel oil	477.2	268.0	N	209.2	26.8	108.8	N	13.8
Buildings without water heating	63.6	52.3	N	Q	129.1	245.7	N	Q
<b>Cooking energy sources</b>								
Fuel oil	Q	Q	Q	Q	Q	Q	Q	Q
Other excluding fuel oil	540.1	361.0	5.0	174.1	42.8	152.3	3.6	16.4
Buildings without cooking	423.2	307.5	Q	114.9	56.4	162.1	Q	20.6
<b>Energy end uses (more than one may apply)</b>								
Buildings with space heating	960.8	672.9	5.8	282.1	48.8	156.7	3.2	17.8
Buildings with cooling	812.7	515.7	5.4	291.7	42.1	143.2	3.1	18.1
Buildings with water heating	910.7	620.6	5.9	284.2	46.2	152.1	3.1	17.7
Buildings with cooking	551.0	365.4	5.1	180.5	43.4	152.5	3.6	16.9
Buildings with manufacturing	46.6	Q	Q	24.5	54.0	Q	Q	47.3
Buildings with electricity generation	491.5	210.5	1.9	279.1	28.8	131.7	1.9	17.5

**Table E10. Fuel oil consumption and energy intensities (gallons) by end use, 2012**

	Total fuel oil consumption (million gallons)				Fuel oil energy intensity <sup>1</sup> (gallons/square foot in buildings using fuel oil for the end use)			
	Total	Space heating	Water heating	Other	Total	Space heating	Water heating	Other
<b>All buildings</b>	974.2	672.9	5.9	295.5	48.2	156.7	3.1	18.2
<b>Percent of floorspace heated</b>								
Not heated	13.4	N	Q	13.3	25.3	N	Q	30.9
1 to 50	69.3	44.2	Q	25.0	34.5	58.8	Q	19.3
51 to 99	132.4	82.1	0.3	49.9	34.7	136.7	0.8	15.7
100	759.2	546.5	5.4	207.2	54.8	185.8	4.2	18.2
<b>Heating equipment (more than one may apply)</b>								
Heat pumps	88.1	31.7	Q	53.6	28.9	62.7	Q	19.4
Furnaces	53.7	42.9	Q	10.7	61.8	234.3	Q	14.9
Individual space heaters	275.3	196.8	1.1	77.4	46.9	121.1	2.0	17.0
District heat	44.1	Q	Q	42.0	14.3	Q	Q	14.1
Boilers	582.7	417.0	2.8	162.9	62.4	165.8	1.9	22.3
Packaged heating units	335.5	212.9	0.8	121.8	35.0	123.2	1.5	14.9
Other	Q	Q	Q	Q	Q	Q	Q	Q
<b>Water-heating equipment</b>								
Centralized system	615.7	460.7	4.8	150.2	56.1	161.9	3.6	17.9
Distributed system	97.8	53.9	Q	43.8	39.0	105.1	Q	22.1
Combination of centralized and distributed system	197.1	105.9	1.1	90.2	31.7	146.9	2.3	16.0
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>								
Snack bar or concession stand	114.4	53.2	0.6	60.6	23.5	101.1	1.5	13.7
Fast food or small restaurant	59.7	Q	Q	41.8	16.5	Q	Q	12.6
Cafeteria or large restaurant	306.3	193.6	2.0	110.7	43.2	146.5	2.3	18.5
Commercial kitchen/ food preparation area	236.7	133.8	3.6	99.3	35.4	120.2	5.5	17.0
Small kitchen area	224.8	163.3	0.7	60.8	48.2	179.5	1.4	15.7
<b>HVAC conservation features (more than one may apply)</b>								
Economizer cycle	313.2	145.1	1.1	167.0	27.8	101.4	1.4	16.4
Regular HVAC maintenance	809.0	515.9	5.6	287.6	42.8	148.9	3.1	18.1
Building automation system (BAS) <sup>3</sup>	422.8	209.6	1.6	211.7	30.5	133.1	1.9	16.9
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>								
Heating	672.7	486.4	4.1	182.2	47.5	152.1	2.9	16.6
Cooling	566.4	376.1	3.9	186.4	40.6	142.0	3.0	16.3
Lighting	896.9	618.3	5.4	273.2	47.4	153.0	2.9	18.0

**Table E10. Fuel oil consumption and energy intensities (gallons) by end use, 2012**

	Total fuel oil consumption (million gallons)				Fuel oil energy intensity <sup>1</sup> (gallons/square foot in buildings using fuel oil for the end use)			
	Total	Space heating	Water heating	Other	Total	Space heating	Water heating	Other
<b>All buildings</b>	974.2	672.9	5.9	295.5	48.2	156.7	3.1	18.2
<b>Annual consumption (gallons)</b>								
1,000 or less	98.5	59.1	Q	38.4	10.9	39.8	Q	5.5
1,001 to 5,000	238.9	173.2	Q	63.2	49.5	165.9	Q	16.1
5,001 to 10,000	189.7	129.7	Q	59.5	75.1	282.0	Q	26.9
10,001 to 25,000	156.3	99.9	0.3	56.1	67.9	194.7	0.8	28.7
Over 25,000	290.8	210.9	1.6	78.3	194.1	266.5	3.1	64.6

<sup>1</sup>The fuel oil intensity calculation (fuel oil consumption for the end use divided by the floorspace in buildings that use fuel oil for the particular end use) differs from the calculation used in the 2003 CBECS tables, in which the intensities were not conditional on the presence of the end use; the 2003 CBECS denominator was total floorspace in all buildings that used fuel oil. In this table, the intensities for each end use do not sum to the total fuel oil intensity, whereas they did in the 2003 CBECS table.

<sup>2</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>3</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/> • 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 F of the 2012 Commercial Buildings Energy Consumption Survey.

**Table E11. District heat consumption and energy intensities (Btu) by end use, 2012**

	Total district heat consumption (trillion Btu)					District heat energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using district heat for the end use)				
	Total	Space heating	Water heating	Cooking	Other	Total	Space heating	Water heating	Cooking	Other
All buildings	341	240	60	29	Q	57.1	40.5	13.2	30.5	48.8
<b>Building floorspace (square feet)</b>										
1,001 to 25,000	13	11	Q	Q	N	75.0	67.1	Q	Q	N
25,001 to 100,000	69	51	11	Q	Q	74.8	56.1	19.1	Q	Q
100,001 to 500,000	165	118	30	Q	Q	57.5	41.3	13.2	33.9	Q
Over 500,000	94	58	18	15	Q	46.9	29.6	10.9	28.4	Q
<b>Principal building activity</b>										
Education	65	54	10	Q	Q	56.2	47.0	12.3	Q	Q
Health care	68	36	19	11	Q	99.3	53.6	33.7	38.9	Q
Lodging	31	9	20	Q	Q	49.4	13.8	35.2	Q	Q
Office	76	56	5	Q	Q	42.3	31.5	3.4	Q	Q
Public assembly	64	58	1	Q	Q	71.8	65.4	1.1	Q	Q
All others	37	26	Q	Q	Q	45.6	33.2	Q	Q	Q
<b>Year constructed</b>										
Before 1945	65	51	8	Q	Q	45.7	36.0	6.7	Q	Q
1946 to 1979	168	112	28	Q	Q	70.8	47.2	15.1	34.3	Q
1980 to 1999	40	27	8	Q	Q	36.3	25.1	12.5	Q	Q
2000 to 2012	68	49	16	Q	Q	63.2	47.1	18.5	Q	Q
<b>Census region</b>										
Northeast	119	83	17	Q	Q	60.0	41.8	10.2	34.6	Q
Midwest	58	40	13	Q	Q	63.8	44.1	17.2	Q	Q
South	119	87	17	10	Q	54.2	40.0	10.8	28.8	Q
West	45	30	Q	Q	Q	51.0	34.8	22.5	Q	Q
<b>Climate region<sup>2</sup></b>										
Very cold/Cold	137	102	26	8	Q	71.3	52.8	17.3	29.5	Q
Mixed-humid	152	103	25	Q	Q	50.4	34.2	10.7	30.7	Q
Mixed-dry/Hot-dry	Q	Q	Q	Q	N	53.8	Q	Q	Q	N
Hot-humid	18	10	3	Q	Q	48.8	27.1	Q	Q	Q
Marine	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Number of floors</b>										
One	Q	Q	Q	Q	N	Q	Q	Q	Q	N
Two	Q	Q	Q	Q	N	67.7	46.5	Q	Q	N
Three	47	39	4	Q	Q	87.3	71.1	12.2	Q	Q
Four to nine	173	123	31	13	Q	61.1	44.2	13.6	32.9	Q
Ten or more	77	46	22	6	Q	40.7	24.3	14.3	22.3	Q
<b>Number of workers (main shift)</b>										
Fewer than 10	10	8	Q	N	N	34.5	25.5	Q	N	N
10 to 99	93	73	14	Q	Q	62.3	49.5	15.8	Q	Q
100 or more	238	159	43	27	Q	56.9	38.3	12.2	30.6	Q

**Table E11. District heat consumption and energy intensities (Btu) by end use, 2012**

	Total district heat consumption (trillion Btu)					District heat energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using district heat for the end use)				
	Total	Space heating	Water heating	Cooking	Other	Total	Space heating	Water heating	Cooking	Other
<b>All buildings</b>	341	240	60	29	Q	57.1	40.5	13.2	30.5	48.8
<b>Weekly operating hours</b>										
Fewer than 48	22	21	Q	N	Q	38.0	35.7	Q	N	Q
49 to 84	81	66	11	Q	Q	41.5	34.4	7.9	Q	Q
85 to 167	58	49	4	Q	Q	92.6	77.7	7.5	Q	Q
Open continuously	180	104	44	25	Q	63.8	37.2	18.6	32.9	Q
<b>Ownership and occupancy</b>										
Nongovernment owned	168	116	39	10	Q	53.5	37.1	15.1	32.3	Q
Owner occupied	115	82	26	5	Q	62.5	45.1	16.4	31.6	Q
Leased to tenant(s)	25	15	Q	Q	Q	34.8	21.2	Q	Q	Q
Owner occupied and leased	27	18	6	Q	Q	48.9	31.8	11.9	Q	Q
Unoccupied	Q	Q	N	N	N	Q	Q	N	N	N
Government owned	173	124	21	Q	Q	61.1	44.2	10.6	29.5	Q
Federal	27	17	3	Q	Q	37.5	24.7	3.7	Q	Q
State	105	79	14	Q	Q	68.2	51.9	13.4	Q	Q
Local	41	28	Q	Q	Q	70.9	47.5	17.4	Q	Q
<b>Party responsible for operation and maintenance of energy systems</b>										
Building owner	324	232	58	26	Q	56.1	40.4	13.2	29.7	Q
Business owner or tenant	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Property management	Q	Q	Q	Q	N	Q	Q	Q	Q	N
Other	Q	Q	Q	N	N	Q	Q	Q	N	N
<b>Provider of direct input on energy- related equipment purchases</b>										
Building owner	325	233	58	26	Q	56.6	40.9	13.3	31.1	Q
Business owner or tenant	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Property management	Q	Q	Q	N	N	Q	Q	Q	N	N
Other	Q	Q	Q	Q	N	Q	Q	Q	Q	N
<b>Number of establishments</b>										
One	208	148	38	Q	Q	61.1	43.7	14.3	26.9	Q
2 to 5	98	66	18	9	Q	67.5	45.6	14.8	36.6	Q
6 to 10	11	6	Q	Q	N	30.4	17.9	Q	Q	N
11 to 20	Q	Q	Q	Q	N	Q	Q	Q	Q	N
More than 20	15	12	Q	N	Q	33.9	27.8	Q	N	Q
Currently unoccupied	Q	Q	N	N	N	Q	Q	N	N	N
<b>Predominant exterior wall material</b>										
Brick, stone, or stucco	203	149	35	16	Q	59.3	44.0	12.8	29.0	Q
Concrete (block or poured)	56	36	5	Q	Q	48.1	31.1	6.4	Q	Q
Concrete panels	38	20	Q	Q	Q	51.7	27.4	25.4	Q	Q
Siding or shingles	Q	Q	N	N	N	Q	Q	N	N	N
Metal panels	Q	Q	Q	Q	N	Q	Q	Q	Q	N
Window glass	13	13	Q	N	Q	62.4	59.2	Q	N	Q
Other	Q	Q	Q	N	Q	Q	Q	Q	N	Q
No one major type	Q	Q	Q	N	N	Q	Q	N	N	N

**Table E11. District heat consumption and energy intensities (Btu) by end use, 2012**

**Table E11. District heat consumption and energy intensities (Btu) by end use, 2012**

	Total district heat consumption (trillion Btu)					District heat energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using district heat for the end use)				
	Total	Space heating	Water heating	Cooking	Other	Total	Space heating	Water heating	Cooking	Other
<b>All buildings</b>	341	240	60	29	Q	57.1	40.5	13.2	30.5	48.8
<b>Energy sources</b> (more than one may apply)										
Electricity	341	240	60	29	Q	57.1	40.5	13.2	30.5	48.8
Natural gas	173	112	38	20	Q	60.5	39.5	17.3	33.3	Q
Fuel oil	171	110	34	16	Q	55.1	35.7	13.6	27.6	Q
District heat	341	240	60	29	Q	57.1	40.5	13.2	30.5	48.8
District chilled water	236	171	37	24	Q	63.2	45.9	13.3	32.8	Q
Propane	Q	Q	Q	Q	N	Q	Q	Q	Q	N
Other	15	10	Q	Q	N	44.0	30.7	Q	Q	N
<b>Space-heating energy sources</b>										
District heat	340	240	59	28	Q	57.3	40.5	13.2	30.4	48.8
District heat main	338	239	58	28	Q	58.3	41.2	13.1	30.4	48.8
District heat secondary	Q	Q	Q	Q	N	Q	Q	Q	Q	N
Other excluding district heat	Q	N	Q	Q	N	Q	N	Q	Q	N
Buildings without heating	Q	N	N	Q	N	Q	N	N	Q	N
<b>Primary space-heating energy source</b>										
Electricity	Q	Q	Q	N	N	Q	Q	Q	N	N
Natural gas	Q	Q	Q	Q	N	Q	Q	Q	Q	N
Fuel oil	Q	Q	N	N	N	Q	Q	N	N	N
District heat	338	239	58	28	Q	58.3	41.2	13.1	30.4	48.8
Propane	N	N	N	N	N	N	N	N	N	N
Other	N	N	N	N	N	N	N	N	N	N
<b>Cooling energy sources</b>										
District heat	23	7	3	Q	Q	91.8	28.5	Q	Q	48.8
Other excluding district heat	314	230	56	28	N	55.5	40.9	13.1	30.3	N
Buildings without cooling	Q	Q	Q	N	N	Q	Q	Q	N	N
<b>Water-heating energy sources</b>										
District heat	279	181	60	26	Q	61.3	40.0	13.2	30.0	48.8
Other excluding district heat	57	54	N	Q	N	45.0	43.0	N	Q	N
Buildings without water heating	Q	Q	N	Q	N	Q	Q	N	Q	N
<b>Cooking energy sources</b>										
District heat	77	37	11	29	Q	81.6	39.8	12.6	30.5	Q
Other excluding district heat	94	70	21	N	Q	42.5	32.1	12.0	N	Q
Buildings without cooking	170	133	28	N	Q	60.3	47.2	14.4	N	Q
<b>Energy end uses</b> (more than one may apply)										
Buildings with space heating	341	240	60	29	Q	57.1	40.5	13.2	30.5	48.8
Buildings with cooling	337	237	59	29	Q	57.1	40.4	13.1	30.5	48.8
Buildings with water heating	336	235	60	29	Q	57.7	40.7	13.2	30.7	48.8
Buildings with cooking	171	107	32	29	Q	54.2	34.4	12.2	30.5	Q
Buildings with manufacturing	Q	Q	Q	N	Q	Q	Q	Q	N	Q
Buildings with electricity generation	208	141	40	16	Q	55.5	38.0	12.8	27.0	Q

**Table E11. District heat consumption and energy intensities (Btu) by end use, 2012**

	Total district heat consumption (trillion Btu)					District heat energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using district heat for the end use)				
	Total	Space heating	Water heating	Cooking	Other	Total	Space heating	Water heating	Cooking	Other
<b>All buildings</b>	341	240	60	29	Q	57.1	40.5	13.2	30.5	48.8
<b>Percent of floorspace heated</b>										
Not heated	Q	N	N	Q	N	Q	N	N	Q	N
1 to 50	Q	Q	Q	N	N	Q	Q	Q	Q	N
51 to 99	39	25	10	Q	Q	35.0	21.9	13.8	Q	Q
100	300	214	50	25	Q	63.6	45.7	13.1	30.8	Q
<b>Heating equipment (more than one may apply)</b>										
Heat pumps	27	16	8	Q	Q	48.0	28.5	19.8	Q	Q
Furnaces	Q	Q	Q	N	N	Q	Q	Q	N	N
Individual space heaters	63	42	9	7	Q	46.3	31.2	8.6	28.8	Q
District heat	340	240	59	28	Q	57.3	40.5	13.2	30.4	48.8
Boilers	Q	Q	Q	Q	N	Q	Q	Q	Q	N
Packaged heating units	45	28	6	Q	Q	60.0	38.7	12.4	Q	Q
Other	Q	Q	Q	Q	N	Q	Q	Q	Q	N
<b>Water-heating equipment</b>										
Centralized system	227	155	40	22	Q	63.1	43.5	13.2	31.7	Q
Distributed system	23	19	2	Q	Q	46.4	38.8	7.3	Q	Q
Combination of centralized and distributed system	86	61	18	6	Q	49.8	35.3	14.6	26.7	Q
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>										
Snack bar or concession stand	81	51	16	12	Q	50.1	31.8	11.2	29.4	Q
Fast food or small restaurant	61	39	15	Q	Q	51.1	33.2	14.7	Q	Q
Cafeteria or large restaurant	105	55	21	26	Q	57.7	30.6	14.3	31.6	Q
Commercial kitchen/ food preparation area	97	50	20	25	Q	62.0	33.1	13.7	32.8	Q
Small kitchen area	55	34	Q	6	Q	48.0	30.9	12.3	25.5	Q
<b>HVAC conservation features (more than one may apply)</b>										
Economizer cycle	245	169	42	27	Q	59.9	41.5	13.1	31.6	Q
Regular HVAC maintenance	319	219	59	29	Q	56.7	39.1	13.3	30.5	48.8
Building automation system (BAS) <sup>3</sup>	266	186	53	19	Q	53.1	37.4	13.6	29.4	Q

**Table E11. District heat consumption and energy intensities (Btu) by end use, 2012**

	Total district heat consumption (trillion Btu)					District heat energy intensity <sup>1</sup> (thousand Btu/square foot in buildings using district heat for the end use)				
	Total	Space heating	Water heating	Cooking	Other	Total	Space heating	Water heating	Cooking	Other
<b>All buildings</b>	341	240	60	29	Q	57.1	40.5	13.2	30.5	48.8
<b>Equipment usage reduced when building not in full use (more than one may apply)</b>										
Heating	208	151	28	23	Q	51.6	37.6	9.5	29.7	Q
Cooling	209	154	26	22	Q	51.6	38.3	8.7	28.5	Q
Lighting	318	226	52	28	Q	57.7	41.4	12.0	30.8	Q

<sup>1</sup>The district heat intensity calculation (district heat consumption for the end use divided by the floorspace in buildings that use district heat for the particular end use) differs from the calculation used in the 2003 CBECS tables, in which the intensities were not conditional on the presence of the end use; the 2003 CBECS denominator was total floorspace in all buildings that used district heat. In this table, the intensities for each end use do not sum to the total district heat intensity, whereas they did in the 2003 CBECS table.

<sup>2</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>3</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/> • 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 D of the 2012 Commercial Buildings Energy Consumption Survey.