

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)	Sum of major fuels	Electricity		Natural gas	Fuel oil	District heat
				Primary	Site			
All buildings	5,557	87,093	6,963	12,934	4,241	2,248	134	341
Building floorspace (square feet)								
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
Principal building activity								
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
Year constructed								
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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				Primary	Site			
All buildings	5,557	87,093	6,963	12,934	4,241	2,248	134	341
Census region and division								
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
Climate region¹								
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
Number of floors								
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
Elevators and escalators (more than one may apply)								
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
Number of workers (main shift)								
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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				Primary	Site			
All buildings	5,557	87,093	6,963	12,934	4,241	2,248	134	341
Weekly operating hours								
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
Ownership and occupancy								
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
Party responsible for operation and maintenance of energy systems								
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
Provider of direct input on energy-related equipment purchases								
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
Number of establishments								
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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				Primary	Site			
All buildings	5,557	87,093	6,963	12,934	4,241	2,248	134	341
Predominant exterior wall material								
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
Predominant roof material								
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
Roof characteristics								
Roof tilt								
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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All buildings	5,557	87,093	6,963	12,934	4,241	2,248	134	341
Renovations in buildings constructed before 2008 (more than one may apply)								
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
Energy sources (more than one may apply)								
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
Space-heating energy sources (more than one may apply)								
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
Primary space-heating energy source								
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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All buildings	5,557	87,093	6,963	12,934	4,241	2,248	134	341
Cooling energy sources (more than one may apply)								
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
Water-heating energy sources (more than one may apply)								
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
Cooking energy sources (more than one may apply)								
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
Energy end uses (more than one may apply)								
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
Percent of floorspace heated								
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
Percent of floorspace cooled								
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
Percent lit when open								
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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All buildings	5,557	87,093	6,963	12,934	4,241	2,248	134	341
Percent lit during off hours								
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
Heating equipment (more than one may apply)								
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
Cooling equipment (more than one may apply)								
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
Main equipment replaced since 1990 (more than one may apply)								
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
Water-heating equipment								
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
Lighting equipment types (more than one may apply)								
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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All buildings	5,557	87,093	6,963	12,934	4,241	2,248	134	341
Refrigeration equipment (more than one may apply)								
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
Office equipment (more than one may apply)								
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
Number of desktop computers								
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
Number of laptop computers								
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)	Sum of major fuels	Electricity		Natural gas	Fuel oil	District heat
				Primary	Site			
All buildings	5,557	87,093	6,963	12,934	4,241	2,248	134	341
Number of dedicated servers								
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
Number of photocopiers								
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
Number of TVs or video displays								
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
Food preparation or serving areas in non-food service buildings (more than one may apply)								
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
Separate computer areas (more than one may apply)								
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
HVAC conservation features (more than one may apply)								
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) ²	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)	Sum of major fuels	Electricity		Natural gas	Fuel oil	District heat
				Primary	Site			
All buildings	5,557	87,093	6,963	12,934	4,241	2,248	134	341
Window and interior lighting features (more than one may apply)								
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 ²	208	12,068	1,201	2,488	816	335	10	40
Equipment usage reduced when building not in full use (more than one may apply)								
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

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

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

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

N = No cases in reporting sample.

Notes: • Because of rounding, data may not sum to totals. • See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from <http://www.eia.gov/consumption/commercial/data/2012/> • Site electricity is the amount of electricity delivered to commercial buildings. Primary electricity, which is not included in the *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)				
	Number of buildings (thousand)	Total 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
Building floorspace (square feet)							
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
Principal building activity							
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
Year constructed							
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
All buildings	5,557	87,093	149,059	121,875	17,279	3,230	6,675
Census region and division							
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
Climate region¹							
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
Number of floors							
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
Elevators and escalators (more than one may apply)							
Any elevators	405	32,120	66,070	51,427	7,059	1,348	6,236
Number of elevators							
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
Number of workers (main shift)							
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
All buildings	5,557	87,093	149,059	121,875	17,279	3,230	6,675
Weekly operating hours							
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
Ownership and occupancy							
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
Party responsible for operation and maintenance of energy systems							
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
Provider of direct input on energy-related equipment purchases							
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
Number of establishments							
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
All buildings	5,557	87,093	149,059	121,875	17,279	3,230	6,675
Predominant exterior wall material							
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
Predominant roof material							
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
Roof characteristics							
Roof tilt							
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)				
	Number of buildings (thousand)	Total 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
Renovations in buildings constructed before 2008 (more than one may apply)							
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
Energy sources (more than one may apply)							
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
Space-heating energy sources (more than one may apply)							
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
Primary space-heating energy source							
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)				
	Number of buildings (thousand)	Total 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
Cooling energy sources (more than one may apply)							
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
Water-heating energy sources (more than one may apply)							
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
Cooking energy sources (more than one may apply)							
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
Energy end uses (more than one may apply)							
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
Percent of floorspace heated							
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
Percent of floorspace cooled							
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
Percent lit when open							
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
All buildings	5,557	87,093	149,059	121,875	17,279	3,230	6,675
Percent lit during off hours							
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
Heating equipment (more than one may apply)							
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
Cooling equipment (more than one may apply)							
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
Main equipment replaced since 1990 (more than one may apply)							
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
Water-heating equipment							
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	Electricity	Natural gas	Fuel oil	District heat
All buildings	5,557	87,093	149,059	121,875	17,279	3,230	6,675
Lighting equipment types (more than one may apply)							
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
Refrigeration equipment (more than one may apply)							
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
Office equipment (more than one may apply)							
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
Number of desktop computers							
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	Electricity	Natural gas	Fuel oil	District heat
All buildings	5,557	87,093	149,059	121,875	17,279	3,230	6,675
Number of laptop computers							
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
Number of dedicated servers							
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
Number of photocopiers							
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
Number of TVs or video displays							
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
Food preparation or serving areas in non-food service buildings (more than one may apply)							
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)				
	Number of buildings (thousand)	Total 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
Separate computer areas (more than one may apply)							
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
HVAC conservation features (more than one may apply)							
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) ²	781	37,051	78,304	63,815	8,094	1,371	5,023
Window and interior lighting features (more than one may apply)							
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 ²	208	12,068	26,570	23,034	2,536	228	771
Equipment usage reduced when building not in full use (more than one may apply)							
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

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

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

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

N = No cases in reporting sample.

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

			All buildings	Sum of major fuel consumption	Sum of major fuel expenditures
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (million dollars)
All buildings	5,557	87,093	15.7	6,963	149,059
Building floorspace (square feet)					
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
Principal building activity					
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
Year constructed					
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

			All buildings	Sum of major fuel consumption	Sum of major fuel expenditures
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (million dollars)
All buildings	5,557	87,093	15.7	6,963	149,059
Census region and division					
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
Climate region¹					
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
Number of floors					
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
Elevators and escalators (more than one may apply)					
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
Number of workers (main shift)					
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

			All buildings	Sum of major fuel consumption	Sum of major fuel expenditures
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (million dollars)
All buildings	5,557	87,093	15.7	6,963	149,059
Weekly operating hours					
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
Ownership and occupancy					
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
Party responsible for operation and maintenance of energy systems					
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
Provider of direct input on energy-related equipment purchases					
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
Number of establishments					
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

			All buildings	Sum of major fuel consumption	Sum of major fuel expenditures
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (million dollars)
All buildings	5,557	87,093	15.7	6,963	149,059
Predominant exterior wall material					
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
Predominant roof material					
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
Roof characteristics					
Roof tilt					
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

			All buildings	Sum of major fuel consumption	Sum of major fuel expenditures
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (million dollars)
All buildings	5,557	87,093	15.7	6,963	149,059
Renovations in buildings constructed before 2008 (more than one may apply)					
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
Energy sources (more than one may apply)					
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
Space-heating energy sources (more than one may apply)					
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
Primary space-heating energy source					
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

			All buildings	Sum of major fuel consumption	Sum of major fuel expenditures
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (million dollars)
All buildings	5,557	87,093	15.7	6,963	149,059
Cooling energy sources (more than one may apply)					
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
Water-heating energy sources (more than one may apply)					
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
Cooking energy sources (more than one may apply)					
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
Energy end uses (more than one may apply)					
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
Percent of floorspace heated					
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
Percent of floorspace cooled					
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
Percent lit when open					
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

			All buildings	Sum of major fuel consumption	Sum of major fuel expenditures
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (million dollars)
All buildings	5,557	87,093	15.7	6,963	149,059
Percent lit during off hours					
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
Heating equipment (more than one may apply)					
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
Cooling equipment (more than one may apply)					
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
Main equipment replaced since 1990 (more than one may apply)					
Heating	1,874	27,558	14.7	2,164	45,544
Cooling	1,971	30,702	15.6	2,521	54,227
Water-heating equipment					
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

			All buildings	Sum of major fuel consumption	Sum of major fuel expenditures
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (million dollars)
All buildings	5,557	87,093	15.7	6,963	149,059
Lighting equipment types (more than one may apply)					
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
Refrigeration equipment (more than one may apply)					
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
Office equipment (more than one may apply)					
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
Number of desktop computers					
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

			All buildings	Sum of major fuel consumption	Sum of major fuel expenditures
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (million dollars)
All buildings	5,557	87,093	15.7	6,963	149,059
Number of laptop computers					
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
Number of dedicated servers					
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
Number of photocopiers					
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
Number of TVs or video displays					
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
Food preparation or serving areas in non-food service buildings (more than one may apply)					
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

			All buildings	Sum of major fuel consumption	Sum of major fuel expenditures
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (million dollars)
All buildings	5,557	87,093	15.7	6,963	149,059
Separate computer areas (more than one may apply)					
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
HVAC conservation features (more than one may apply)					
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) ²	781	37,051	47.5	3,709	78,304
Window and interior lighting features (more than one may apply)					
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 ²	208	12,068	57.9	1,201	26,570
Equipment usage reduced when building not in full use (more than one may apply)					
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

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

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

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

N = No cases in reporting sample.

Notes: • Because of rounding, data may not sum to totals. • See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from <http://www.eia.gov/consumption/commercial/data/2012/>. • 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 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 percentile	Median	75th percentile			
All buildings	1,253	80.0	79.0	18.9	45.9	89.0	26.8	1.7	21.4
Building floorspace (square feet)									
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
Principal building activity									
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
Year constructed									
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		
	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 percentile	Median	75th percentile			
All buildings	1,253	80.0	79.0	18.9	45.9	89.0	26.8	1.7	21.4
Census region and division									
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
Climate region¹									
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
Number of floors									
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
Elevators and escalators (more than one may apply)									
Any elevators	7,855	99.1	79.6	43.7	69.9	106.3	163.0	2.1	20.8
Number of elevators									
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
Number of workers (main shift)									
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		
	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 percentile	Median	75th percentile			
All buildings	1,253	80.0	79.0	18.9	45.9	89.0	26.8	1.7	21.4
Weekly operating hours									
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
Ownership and occupancy									
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
Party responsible for operation and maintenance of energy systems									
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
Provider of direct input on energy-related equipment purchases									
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
Number of establishments									
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		
	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 percentile	Median	75th percentile			
All buildings	1,253	80.0	79.0	18.9	45.9	89.0	26.8	1.7	21.4
Predominant exterior wall material									
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
Predominant roof material									
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
Roof characteristics									
Roof tilt									
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		
	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 percentile	Median	75th percentile			
All buildings	1,253	80.0	79.0	18.9	45.9	89.0	26.8	1.7	21.4
Renovations in buildings constructed before 2008 (more than one may apply)									
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
Energy sources (more than one may apply)									
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
Space-heating energy sources (more than one may apply)									
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		
	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 percentile	Median	75th percentile			
All buildings	1,253	80.0	79.0	18.9	45.9	89.0	26.8	1.7	21.4
Primary space-heating energy source									
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
Cooling energy sources (more than one may apply)									
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
Water-heating energy sources (more than one may apply)									
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
Cooking energy sources (more than one may apply)									
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
Energy end uses (more than one may apply)									
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
Percent of floorspace heated									
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		
	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 percentile	Median	75th percentile			
All buildings	1,253	80.0	79.0	18.9	45.9	89.0	26.8	1.7	21.4
Percent of floorspace cooled									
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
Percent lit when open									
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
Percent lit during off hours									
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	
Heating equipment (more than one may apply)									
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
Cooling equipment (more than one may apply)									
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 percentile	Median	75th percentile			
All buildings	1,253	80.0	79.0	18.9	45.9	89.0	26.8	1.7	21.4
Main equipment replaced since 1990 (more than one may apply)									
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
Water-heating equipment									
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
Lighting equipment types (more than one may apply)									
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
Refrigeration equipment (more than one may apply)									
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
Office equipment (more than one may apply)									
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 percentile	Median	75th percentile			
All buildings	1,253	80.0	79.0	18.9	45.9	89.0	26.8	1.7	21.4
Number of desktop computers									
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
Number of laptop computers									
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
Number of dedicated servers									
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
Number of photocopiers									
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
Number of TVs or video displays									
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		
	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 percentile	Median	75th percentile			
All buildings	1,253	80.0	79.0	18.9	45.9	89.0	26.8	1.7	21.4
Food preparation or serving areas in non-food service buildings (more than one may apply)									
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
Separate computer areas (more than one may apply)									
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
HVAC conservation features (more than one may apply)									
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) ²	4,752	100.1	87.6	37.1	65.8	111.6	100.3	2.1	21.1
Window and interior lighting features (more than one may apply)									
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 ²	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		
	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 percentile	Median	75th percentile			
All buildings	1,253	80.0	79.0	18.9	45.9	89.0	26.8	1.7	21.4
Equipment usage reduced when building not in full use (more than one may apply)									
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

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

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

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

N = No cases in reporting sample.

Notes: • Because of rounding, data may not sum to totals. • See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from <http://www.eia.gov/consumption/commercial/data/2012/> • 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
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
Building floorspace (square feet)												
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
Principal building activity												
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
Year constructed												
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
Climate region¹												
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
Number of floors												
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
Elevators and escalators (more than one may apply)												
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
Number of workers (main shift)												
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
Weekly operating hours												
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
Ownership and occupancy												
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
Party responsible for operation and maintenance of energy systems												
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
Provider of direct input on energy-related equipment purchases												
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
Number of establishments												
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
Predominant exterior wall material												
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
Predominant roof material												
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
Roof characteristics												
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

	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
Cooling energy sources (more than one may apply)												
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
Water-heating energy sources (more than one may apply)												
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
Cooking energy sources (more than one may apply)												
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
Energy end uses (more than one may apply)												
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
Percent of floorspace heated												
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
Percent of floorspace cooled												
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
Percent lit when open												
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

	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
Refrigeration equipment (more than one may apply)												
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
Office equipment (more than one may apply)												
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
Number of desktop computers												
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
Number of laptop computers												
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
Number of dedicated servers												
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
Number of photocopiers												
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
Number of TVs or video displays												
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
Food preparation or serving areas in non-food service buildings (more than one may apply)												
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
Separate computer areas (more than one may apply)												
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
HVAC conservation features (more than one may apply)												
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) ²	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
Window and interior lighting features (more than one may apply)												
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 ²	267	251	395	287	2,159	2,448	4,507	2,953	123.7	102.7	87.7	97.1
Equipment usage reduced when building not in full use (more than one may apply)												
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

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

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

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

N = No cases in reporting sample.

Notes: • Because of rounding, data may not sum to totals. • See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from <http://www.eia.gov/consumption/commercial/data/2012/> • 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)							
	North-east	Mid-west	South	West	per million Btu				per square foot			
					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
Building floorspace (square feet)												
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
Principal building activity												
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
Year constructed												
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
Climate region¹												
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)							
	North-east	Mid-west	South	West	per million Btu				per square foot			
					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
Number of floors												
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
Elevators and escalators (more than one may apply)												
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
Number of workers (main shift)												
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
Weekly operating hours												
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
Ownership and occupancy												
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
Party responsible for operation and maintenance of energy systems												
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)							
	North-east	Mid-west	South	West	per million Btu				per square foot			
					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
Provider of direct input on energy-related equipment purchases												
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
Number of establishments												
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
Predominant exterior wall material												
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
Predominant roof material												
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
Roof characteristics												
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)							
	North-east	Mid-west	South	West	per million Btu				per square foot			
					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
Renovations in buildings constructed before 2008 (more than one may apply)												
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
Energy sources (more than one may apply)												
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
Space-heating energy sources (more than one may apply)												
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
Primary space-heating energy source												
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)							
	North-east	Mid-west	South	West	per million Btu				per square foot			
					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
Cooling energy sources (more than one may apply)												
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
Water-heating energy sources (more than one may apply)												
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
Cooking energy sources (more than one may apply)												
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
Energy end uses (more than one may apply)												
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
Percent of floorspace heated												
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
Percent of floorspace cooled												
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
Percent lit when open												
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

	Sum of major fuel expenditures (million dollars)				Sum of major fuel expenditures (dollars)							
	North-east	Mid-west	South	West	per million Btu				per square foot			
					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
Refrigeration equipment (more than one may apply)												
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
Office equipment (more than one may apply)												
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
Number of desktop computers												
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
Number of laptop computers												
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
Number of dedicated servers												
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)							
	North-east	Mid-west	South	West	per million Btu				per square foot			
					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
Number of photocopiers												
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
Number of TVs or video displays												
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
Food preparation or serving areas in non-food service buildings (more than one may apply)												
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
Separate computer areas (more than one may apply)												
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
HVAC conservation features (more than one may apply)												
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) ²	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)							
	North-east	Mid-west	South	West	per million Btu				per square foot			
					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
Window and interior lighting features (more than one may apply)												
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 ²	6,195	4,480	9,148	6,747	23.20	17.81	23.14	23.52	2.87	1.83	2.03	2.29
Equipment usage reduced when building not in full use (more than one may apply)												
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

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

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

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

N = No cases in reporting sample.

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

● 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
Building floorspace (square feet)									
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
Principal building activity									
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
Year constructed									
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
All buildings	368	1,092	1,131	4,302	11,232	12,742	85.5	97.2	88.7
Climate region¹									
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
Number of floors									
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
Elevators and escalators (more than one may apply)									
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
Number of workers (main shift)									
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
Weekly operating hours									
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

	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
Predominant roof material									
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
Roof characteristics									
Roof tilt									
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
Renovations in buildings constructed before 2008 (more than one may apply)									
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
Energy sources (more than one may apply)									
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
Space-heating energy sources (more than one may apply)									
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
Primary space-heating energy source									
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
Cooling energy sources (more than one may apply)									
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
Water-heating energy sources (more than one may apply)									
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
Cooking energy sources (more than one may apply)									
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

	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
Cooling equipment (more than one may apply)									
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
Main equipment replaced since 1990 (more than one may apply)									
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
Water-heating equipment									
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
Lighting equipment types (more than one may apply)									
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
Refrigeration equipment (more than one may apply)									
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
Office equipment (more than one may apply)									
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
Number of desktop computers									
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
Number of laptop computers									
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
Number of dedicated servers									
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
Number of photocopiers									
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
Number of TVs or video displays									
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
Food preparation or serving areas in non-food service buildings (more than one may apply)									
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
Separate computer areas (more than one may apply)									
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
HVAC conservation features (more than one may apply)									
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) ²	200	582	578	1,734	5,199	5,646	115.5	111.8	102.4
Window and interior lighting features (more than one may apply)									
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 ²	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	New England	Middle Atlantic	East	New England	Middle Atlantic	East
			North Central			North Central			North Central
All buildings	368	1,092	1,131	4,302	11,232	12,742	85.5	97.2	88.7
Equipment usage reduced when building not in full use (more than one may apply)									
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

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

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

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

N = No cases in reporting sample.

Notes: • Because of rounding, data may not sum to totals. • See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from <http://www.eia.gov/consumption/commercial/data/2012/> • 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
Building floorspace (square feet)									
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
Principal building activity									
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
Year constructed									
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
Climate region¹									
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
Number of floors									
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
Elevators and escalators (more than one may apply)									
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
Number of workers (main shift)									
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
Weekly operating hours									
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

	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
Predominant roof material									
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
Roof characteristics									
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
Renovations in buildings constructed before 2008 (more than one may apply)									
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
Energy sources (more than one may apply)									
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
Space-heating energy sources (more than one may apply)									
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
Primary space-heating energy source									
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
Cooling energy sources (more than one may apply)									
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
Water-heating energy sources (more than one may apply)									
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
Cooking energy sources (more than one may apply)									
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

	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
Cooling equipment (more than one may apply)									
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
Main equipment replaced since 1990 (more than one may apply)									
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
Water-heating equipment									
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
Lighting equipment types (more than one may apply)									
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
Refrigeration equipment (more than one may apply)									
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 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
Office equipment (more than one may apply)									
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
Number of desktop computers									
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
Number of laptop computers									
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
Number of dedicated servers									
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
Number of photocopiers									
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
Number of TVs or video displays									
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
Food preparation or serving areas in non-food service buildings (more than one may apply)									
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
Separate computer areas (more than one may apply)									
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
HVAC conservation features (more than one may apply)									
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) ²	228	744	170	2,350	8,070	1,880	97.0	92.1	90.3
Window and interior lighting features (more than one may apply)									
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 ²	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
Equipment usage reduced when building not in full use (more than one may apply)									
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

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

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

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

N = No cases in reporting sample.

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

<http://www.eia.gov/consumption/commercial/data/2012/> • Site electricity is the amount of electricity delivered to commercial buildings. Primary electricity, which is not included in the *Total of major fuels* category, is site electricity plus the conversion losses in the generation, transmission, and distribution processes. • Statistics for the *Energy end uses* category represent total consumption in buildings that have the end use, not consumption specifically for that particular end use. • HVAC = Heating, ventilation, and air conditioning.

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

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 South central	Mountain	Pacific	West South central	Mountain	Pacific	West South central	Mountain	Pacific
All buildings	839	417	954	11,394	4,981	13,379	73.6	83.8	71.3
Building floorspace (square feet)									
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
Principal building activity									
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
Year constructed									
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 South central	Mountain	Pacific	West South central	Mountain	Pacific	West South central	Mountain	Pacific
All buildings	839	417	954	11,394	4,981	13,379	73.6	83.8	71.3
Climate region¹									
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
Number of floors									
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
Elevators and escalators (more than one may apply)									
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
Number of workers (main shift)									
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
Weekly operating hours									
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

	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 South central	Mountain	Pacific	West South central	Mountain	Pacific	West South central	Mountain	Pacific
All buildings	839	417	954	11,394	4,981	13,379	73.6	83.8	71.3
Predominant roof material									
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
Roof characteristics									
Roof tilt									
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
Renovations in buildings constructed before 2008 (more than one may apply)									
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

	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 South central	Mountain	Pacific	West South central	Mountain	Pacific	West South central	Mountain	Pacific
All buildings	839	417	954	11,394	4,981	13,379	73.6	83.8	71.3
Energy end uses (more than one may apply)									
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
Percent of floorspace heated									
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
Percent of floorspace cooled									
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
Percent lit when open									
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
Percent lit during off hours									
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
Heating equipment (more than one may apply)									
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 South central	Mountain	Pacific	West South central	Mountain	Pacific	West South central	Mountain	Pacific
All buildings	839	417	954	11,394	4,981	13,379	73.6	83.8	71.3
Cooling equipment (more than one may apply)									
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
Main equipment replaced since 1990 (more than one may apply)									
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
Water-heating equipment									
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
Lighting equipment types (more than one may apply)									
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
Refrigeration equipment (more than one may apply)									
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

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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)		
	West South central	Mountain	Pacific	West South central	Mountain	Pacific	West South central	Mountain	Pacific
All buildings	839	417	954	11,394	4,981	13,379	73.6	83.8	71.3
Office equipment (more than one may apply)									
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
Number of desktop computers									
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
Number of laptop computers									
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
Number of dedicated servers									
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
Number of photocopiers									
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 South central	Mountain	Pacific	West South central	Mountain	Pacific	West South central	Mountain	Pacific
All buildings	839	417	954	11,394	4,981	13,379	73.6	83.8	71.3
Number of TVs or video displays									
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
Food preparation or serving areas in non-food service buildings (more than one may apply)									
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
Separate computer areas (more than one may apply)									
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
HVAC conservation features (more than one may apply)									
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) ²	438	242	528	4,628	2,310	5,233	94.6	104.8	101.0
Window and interior lighting features (more than one may apply)									
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 ²	103	72	215	1,298	807	2,146	79.4	89.5	100.0

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	West South central	Mountain	Pacific	West South central	Mountain	Pacific	West South central	Mountain	Pacific
All buildings	839	417	954	11,394	4,981	13,379	73.6	83.8	71.3
Equipment usage reduced when building not in full use (more than one may apply)									
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

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

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

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

N = No cases in reporting sample.

Notes: • Because of rounding, data may not sum to totals. • See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from <http://www.eia.gov/consumption/commercial/data/2012/> • Site electricity is the amount of electricity delivered to commercial buildings. Primary electricity, which is not included in the *Total of major fuels* category, is site electricity plus the conversion losses in the generation, transmission, and distribution processes. • Statistics for the *Energy end uses* category represent total consumption in buildings that have the end use, not consumption specifically for that particular end use. • HVAC = Heating, ventilation, and air conditioning.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

N = No cases in reporting sample.

Notes: • Because of rounding, data may not sum to totals. • See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from <http://www.eia.gov/consumption/commercial/data/2012/> • Site electricity is the amount of electricity delivered to commercial buildings. Primary electricity, which is not included in the *Total of major fuels* category, is site electricity plus the conversion losses in the generation, transmission, and distribution processes. • Statistics for the *Energy end uses* category represent total consumption in buildings that have the end use, not consumption specifically for that particular end use. • HVAC = Heating, ventilation, and air conditioning.

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

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 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	1,369	2,766	2,828	16,941	39,940	30,212	80.8	69.3	93.6
Principal building activity									
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
Year constructed									
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 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	1,369	2,766	2,828	16,941	39,940	30,212	80.8	69.3	93.6
Census region and division									
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
Climate region¹									
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
Number of floors									
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
Elevators and escalators (more than one may apply)									
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
Number of workers (main shift)									
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 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	1,369	2,766	2,828	16,941	39,940	30,212	80.8	69.3	93.6
Weekly operating hours									
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
Ownership and occupancy									
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
Party responsible for operation and maintenance of energy systems									
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
Provider of direct input on energy-related equipment purchases									
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
Number of establishments									
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 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	1,369	2,766	2,828	16,941	39,940	30,212	80.8	69.3	93.6
Predominant exterior wall material									
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
Predominant roof material									
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
Roof characteristics									
Roof tilt									
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 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	1,369	2,766	2,828	16,941	39,940	30,212	80.8	69.3	93.6
Renovations in buildings constructed before 2008 (more than one may apply)									
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
Energy sources (more than one may apply)									
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
Space-heating energy sources (more than one may apply)									
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
Primary space-heating energy source									
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 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	1,369	2,766	2,828	16,941	39,940	30,212	80.8	69.3	93.6
Cooling energy sources (more than one may apply)									
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
Water-heating energy sources (more than one may apply)									
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
Cooking energy sources (more than one may apply)									
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
Energy end uses (more than one may apply)									
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
Percent of floorspace heated									
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
Percent of floorspace cooled									
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
Percent lit when open									
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 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	1,369	2,766	2,828	16,941	39,940	30,212	80.8	69.3	93.6
Percent lit during off hours									
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
Heating equipment (more than one may apply)									
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
Cooling equipment (more than one may apply)									
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
Main equipment replaced since 1990 (more than one may apply)									
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
Water-heating equipment									
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 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	1,369	2,766	2,828	16,941	39,940	30,212	80.8	69.3	93.6
Lighting equipment types (more than one may apply)									
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
Refrigeration equipment (more than one may apply)									
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
Office equipment (more than one may apply)									
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
Number of desktop computers									
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 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	1,369	2,766	2,828	16,941	39,940	30,212	80.8	69.3	93.6
Number of laptop computers									
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
Number of dedicated servers									
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
Number of photocopiers									
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
Number of TVs or video displays									
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
Food preparation or serving areas in non-food service buildings (more than one may apply)									
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	93.6
Separate computer areas (more than one may apply)									
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
HVAC conservation features (more than one may apply)									
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) ²	175	1,202	2,332	1,601	13,348	22,101	109.3	90.1	105.5
Window and interior lighting features (more than one may apply)									
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 ²	52	418	730	423	4,003	7,641	122.3	104.5	95.6
Equipment usage reduced when building not in full use (more than one may apply)									
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

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

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

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

N = No cases in reporting sample.

Notes: • Because of rounding, data may not sum to totals. • See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from <http://www.eia.gov/consumption/commercial/data/2012/> • Site electricity is the amount of electricity delivered to commercial buildings. Primary electricity, which is not included in the *Total of major fuels* category, is site electricity plus the conversion losses in the generation, transmission, and distribution processes. • Statistics for the *Energy end uses* category represent total consumption in buildings that have the end use, not consumption specifically for that particular end use. • HVAC = Heating, ventilation, and air conditioning.

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

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
Building floorspace (square feet)									
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
Principal building activity									
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
Census region and division									
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
Climate region¹									
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
Number of floors									
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
Elevators and escalators (more than one may apply)									
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
Number of workers (main shift)									
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
Weekly operating hours									
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
Ownership and occupancy									
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
Party responsible for operation and maintenance of energy systems									
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
Provider of direct input on energy-related equipment purchases									
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
Number of establishments									
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
Predominant exterior wall material									
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
Predominant roof material									
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
Roof characteristics									
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
Renovations in buildings constructed before 2008 (more than one may apply)									
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
Energy sources (more than one may apply)									
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
Space-heating energy sources (more than one may apply)									
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
Primary space-heating energy source									
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
Cooling energy sources (more than one may apply)									
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
Water-heating energy sources (more than one may apply)									
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
Cooking energy sources (more than one may apply)									
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
Energy end uses (more than one may apply)									
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
Percent of floorspace heated									
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
Percent of floorspace cooled									
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
Percent lit when open									
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
Percent lit during off hours									
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
Heating equipment (more than one may apply)									
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
Cooling equipment (more than one may apply)									
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
Main equipment replaced since 1990 (more than one may apply)									
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
Water-heating equipment									
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
Lighting equipment types (more than one may apply)									
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
Refrigeration equipment (more than one may apply)									
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
Office equipment (more than one may apply)									
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
Number of desktop computers									
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
Number of laptop computers									
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
Number of dedicated servers									
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
Number of photocopiers									
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
Number of TVs or video displays									
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
Food preparation or serving areas in non-food service buildings (more than one may apply)									
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

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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)		
	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
Separate computer areas (more than one may apply)									
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
HVAC conservation features (more than one may apply)									
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) ²	492	1,513	1,704	5,489	14,738	16,823	89.7	102.7	101.3
Window and interior lighting features (more than one may apply)									
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 ²	129	430	642	1,140	4,512	6,416	113.3	95.2	100.1
Equipment usage reduced when building not in full use (more than one may apply)									
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

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

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

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

N = No cases in reporting sample.

Notes: • Because of rounding, data may not sum to totals. • See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from <http://www.eia.gov/consumption/commercial/data/2012/> • Site electricity is the amount of electricity delivered to commercial buildings. Primary electricity, which is not included in the *Total of major fuels* category, is site electricity plus the conversion losses in the generation, transmission, and distribution processes. • Statistics for the *Energy end uses* category represent total consumption in buildings that have the end use, not consumption specifically for that particular end use. • HVAC = Heating, ventilation, and air conditioning.

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