

Table B41. Cooling equipment, floorspace, 2012

	Total floorspace (million square feet)									
	Cooling equipment (more than one may apply)									
	All buildings	Buildings with cooling	Residential-type central air conditioners	Heat pumps	Individual air conditioners	District chilled water	Central chillers	Packaged air conditioning units	Swamp coolers	Other
All buildings	87,093	79,294	14,765	12,538	12,420	4,608	17,041	45,153	1,918	328
Building floorspace (square feet)										
1,001 to 5,000	8,041	6,124	2,350	983	1,027	Q	Q	2,154	155	Q
5,001 to 10,000	8,900	7,304	2,968	1,193	972	Q	Q	3,082	Q	N
10,001 to 25,000	14,105	12,357	3,883	1,457	1,855	145	631	6,557	Q	Q
25,001 to 50,000	11,917	10,813	2,526	1,866	1,606	Q	1,095	6,466	Q	Q
50,001 to 100,000	13,918	13,069	1,395	2,825	1,956	567	2,724	8,705	441	Q
100,001 to 200,000	12,415	12,152	895	1,718	1,652	1,273	3,211	7,447	Q	Q
200,001 to 500,000	10,724	10,518	610	1,422	2,091	1,064	5,127	6,702	Q	Q
Over 500,000	7,074	6,958	Q	1,073	1,262	1,306	4,145	4,039	Q	Q
Principal building activity										
Education	12,239	11,811	912	2,304	2,074	1,292	4,127	5,934	Q	Q
Food sales	1,252	1,190	357	Q	Q	N	Q	748	Q	N
Food service	1,819	1,712	471	189	204	Q	Q	954	85	N
Health care	4,155	4,148	415	738	615	523	2,455	2,374	Q	Q
Inpatient	2,374	2,374	Q	515	537	477	1,883	1,385	Q	Q
Outpatient	1,781	1,774	349	223	Q	Q	572	989	Q	Q
Lodging	5,826	5,700	749	1,124	2,349	Q	1,658	2,379	Q	Q
Mercantile	11,330	11,121	2,510	1,716	763	N	419	9,094	415	N
Retail (other than mall)	5,439	5,230	921	506	432	N	Q	3,606	Q	N
Enclosed and strip malls	5,890	5,890	1,589	1,210	331	N	Q	5,487	Q	N
Office	15,952	15,882	2,270	2,913	2,184	1,096	5,050	7,993	Q	Q
Public assembly	5,559	5,235	948	661	628	880	1,038	2,672	Q	Q
Public order and safety	1,440	1,384	248	Q	Q	Q	416	804	Q	Q
Religious worship	4,557	4,271	1,632	714	712	Q	Q	2,229	Q	Q
Service	4,630	3,773	1,143	414	701	N	Q	1,854	Q	Q
Warehouse and storage	13,077	10,120	2,567	1,216	1,566	N	465	6,472	Q	Q
Other	2,002	1,820	382	Q	Q	Q	479	969	Q	Q
Vacant	3,256	1,125	Q	Q	Q	Q	Q	678	Q	Q
Year constructed										
Before 1920	3,983	3,087	755	333	1,069	Q	404	1,430	Q	N
1920 to 1945	6,025	5,215	1,311	775	1,424	Q	1,370	2,711	Q	Q
1946 to 1959	7,381	6,679	996	1,097	1,485	203	1,755	3,674	Q	Q
1960 to 1969	10,362	9,634	2,075	1,300	1,740	923	2,052	5,552	299	Q
1970 to 1979	10,846	10,031	2,044	1,330	1,649	811	2,371	5,445	207	Q
1980 to 1989	15,230	14,011	2,503	2,556	1,768	310	3,210	8,585	267	Q
1990 to 1999	13,803	12,402	2,386	2,214	1,425	664	2,276	7,222	344	Q
2000 to 2003	7,215	6,939	1,102	800	614	Q	1,311	4,000	Q	Q
2004 to 2007	6,524	6,071	805	1,195	744	418	1,122	3,644	Q	Q
2008 to 2012	5,723	5,225	786	939	503	Q	1,169	2,890	Q	N

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All buildings	87,093	79,294	14,765	12,538	12,420	4,608	17,041	45,153	1,918	328
Census region and division										
Northeast	15,534	13,949	1,695	1,490	3,845	794	3,489	8,697	Q	Q
New England	4,302	3,482	451	388	1,035	Q	783	2,062	Q	Q
Middle Atlantic	11,232	10,467	1,244	1,103	2,810	656	2,706	6,635	Q	Q
Midwest	18,919	17,144	4,347	1,024	2,585	585	4,475	9,816	Q	Q
East North Central	12,742	11,675	2,854	604	1,806	420	3,484	6,839	Q	Q
West North Central	6,178	5,469	1,493	421	779	Q	991	2,977	N	Q
South	34,279	31,734	5,895	7,108	4,263	2,479	6,460	17,185	469	Q
South Atlantic	17,981	17,094	2,574	4,925	2,484	1,202	3,884	9,119	Q	Q
East South Central	4,904	4,710	891	839	808	Q	831	2,686	N	N
West South Central	11,394	9,931	2,429	1,344	971	773	1,746	5,379	Q	Q
West	18,360	16,467	2,828	2,916	1,727	749	2,617	9,455	1,340	Q
Mountain	4,981	4,489	668	672	565	Q	920	2,314	722	Q
Pacific	13,379	11,978	2,160	2,244	1,162	329	1,697	7,141	617	Q
Climate region¹										
Very cold/Cold	31,898	28,228	5,468	2,457	5,046	1,227	6,757	16,452	680	Q
Mixed-humid	27,873	26,365	4,620	6,173	4,683	2,027	5,913	14,627	Q	Q
Mixed-dry/Hot-dry	12,037	10,887	2,250	1,876	1,025	Q	1,348	6,306	710	Q
Hot-humid	12,831	11,624	2,319	1,451	1,344	752	2,474	6,449	Q	Q
Marine	2,454	2,190	Q	581	322	Q	549	1,318	Q	Q
Number of floors										
One	39,809	34,156	8,638	5,319	3,436	219	2,072	21,523	1,161	Q
Two	20,206	19,012	4,035	3,056	3,034	578	3,075	11,281	357	Q
Three	8,140	7,734	1,185	1,155	1,960	404	2,116	3,795	Q	Q
Four to nine	13,535	13,036	816	2,029	2,851	2,523	5,873	6,087	Q	Q
Ten or more	5,404	5,356	Q	979	1,138	883	3,905	2,466	Q	Q
Number of workers (main shift)										
Fewer than 5	17,751	11,595	3,835	1,498	1,963	Q	531	4,823	181	Q
5 to 9	8,973	8,238	2,699	1,127	1,204	Q	334	3,980	196	Q
10 to 19	9,623	9,190	2,854	1,442	1,348	Q	475	5,020	Q	Q
20 to 49	14,514	14,219	2,827	2,657	2,253	505	1,765	9,001	312	Q
50 to 99	13,476	13,323	1,445	2,538	1,630	683	3,087	9,135	461	Q
100 to 249	10,941	10,913	886	1,358	1,868	982	3,736	6,713	Q	Q
250 or more	11,815	11,815	218	1,918	2,153	1,986	7,112	6,481	Q	Q

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All buildings	87,093	79,294	14,765	12,538	12,420	4,608	17,041	45,153	1,918	328
Weekly operating hours										
Fewer than 40	8,220	5,083	1,601	590	947	Q	358	2,233	Q	Q
40 to 48	15,828	14,512	3,289	2,362	1,994	521	2,421	7,330	281	Q
49 to 60	20,529	19,297	3,857	3,546	2,510	805	4,040	10,475	489	Q
61 to 84	15,867	15,170	2,885	2,672	1,671	524	2,560	9,911	403	Q
85 to 167	9,395	8,864	1,300	793	1,140	606	1,764	6,117	364	Q
Open continuously	17,253	16,368	1,832	2,574	4,158	2,005	5,897	9,087	325	Q
Ownership and occupancy										
Nongovernment owned	67,550	60,960	12,846	9,142	9,115	2,104	10,175	36,119	1,373	Q
Owner occupied	30,637	28,174	6,442	4,113	4,591	1,478	4,184	15,037	643	Q
Leased to tenant(s)	26,115	23,907	4,937	3,345	2,856	297	3,678	15,687	576	Q
Owner occupied and leased	8,873	8,602	1,431	1,673	1,657	329	2,278	5,186	Q	Q
Unoccupied	1,925	278	Q	Q	Q	N	Q	Q	N	N
Government owned	19,543	18,334	1,919	3,396	3,305	2,504	6,866	9,034	545	Q
Federal	1,573	1,573	Q	Q	407	Q	932	682	Q	Q
State	5,539	5,252	511	636	761	1,448	1,798	2,246	Q	Q
Local	12,431	11,508	1,250	2,582	2,137	612	4,135	6,106	Q	Q
Party responsible for operation and maintenance of energy systems										
Building owner	73,702	66,684	11,848	10,780	10,852	4,482	15,919	36,215	1,665	288
Business owner or tenant	11,309	10,677	2,562	1,414	1,156	Q	628	7,879	Q	Q
Property management	1,250	1,172	Q	Q	Q	Q	427	651	Q	Q
Other	832	761	Q	Q	Q	Q	Q	407	N	Q
Provider of direct input on energy-related equipment purchases										
Building owner	76,271	69,045	12,623	11,056	11,040	4,441	15,966	37,841	1,743	303
Business owner or tenant	8,256	7,825	1,698	1,026	1,067	Q	528	5,763	Q	Q
Property management	880	840	Q	Q	Q	Q	Q	566	N	Q
Other	1,686	1,583	363	361	Q	Q	Q	982	Q	N

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All buildings	87,093	79,294	14,765	12,538	12,420	4,608	17,041	45,153	1,918	328
Campus or complex activity										
Not part of a campus or complex	52,275	48,314	10,348	6,993	7,505	Q	9,588	28,415	1,188	Q
Primary or secondary school	4,616	4,381	411	1,077	988	187	1,204	2,533	Q	N
College or university	4,068	3,924	Q	333	Q	2,162	1,057	844	Q	Q
Office complex	3,456	3,361	288	800	342	Q	1,013	1,816	Q	Q
Retail complex	5,159	4,831	1,213	940	283	N	Q	3,998	Q	N
Storage complex	3,212	1,244	Q	Q	333	N	N	715	Q	N
Religious campus or complex	1,932	1,722	498	338	248	Q	Q	938	Q	Q
Health care complex	3,362	3,316	246	571	640	730	1,987	1,578	Q	Q
Lodging or resort complex	1,295	1,258	Q	Q	533	Q	361	341	N	N
Transportation complex	554	481	Q	Q	Q	Q	Q	213	N	Q
Government complex	2,107	1,953	Q	272	568	Q	748	1,063	Q	Q
Other	5,057	4,509	1,075	823	605	Q	586	2,699	Q	Q
Renovations in buildings constructed before 2008 (more than one may apply)										
Any type of renovation	42,216	40,191	6,835	6,446	7,346	2,626	10,705	24,655	929	261
Addition or annex	13,022	12,778	1,841	2,050	2,877	863	4,542	8,301	307	Q
Reduction in floorspace	1,753	1,701	349	335	420	Q	465	973	Q	N
Roof replacement	20,917	20,036	2,908	3,285	4,057	1,276	6,553	12,529	272	Q
Exterior wall replacement	4,230	4,119	699	675	1,057	Q	1,107	2,855	Q	N
Interior wall reconfiguration	21,340	20,820	3,124	3,355	4,020	1,798	6,349	13,163	622	Q
Window replacement	12,265	11,724	1,867	2,049	2,600	701	3,789	7,060	289	Q
HVAC equipment upgrade	26,779	26,091	4,185	4,569	4,840	1,907	8,124	16,638	652	Q
Lighting upgrade	25,503	24,754	3,602	4,161	4,695	2,002	7,670	15,750	672	Q
Electrical upgrade	16,160	15,609	2,917	2,896	3,337	1,335	5,048	9,705	530	Q
Plumbing system upgrade	13,828	13,453	2,391	2,454	2,870	1,029	4,254	8,468	402	Q
Insulation upgrade	7,607	7,262	1,477	1,486	1,500	710	2,117	4,318	Q	Q
Fire, safety, or security upgrade	17,196	16,710	2,318	3,277	3,656	1,343	6,233	10,322	572	Q
Structural upgrade	3,913	3,794	561	777	740	Q	1,156	2,231	Q	Q
Other	848	819	Q	Q	Q	Q	Q	512	Q	N
No renovations	39,154	33,877	7,144	5,152	4,571	1,802	5,166	17,608	896	Q
Buildings constructed 2008 or later	5,723	5,225	786	939	503	Q	1,169	2,890	Q	N
Energy sources (more than one may apply)										
Electricity	84,869	79,294	14,765	12,538	12,420	4,608	17,041	45,153	1,918	328
Natural gas	58,725	56,899	10,504	8,017	9,137	2,431	13,745	34,917	1,536	290
Fuel oil	20,200	19,309	1,335	2,873	4,046	2,134	9,596	11,023	519	Q
District heat	5,964	5,903	Q	575	902	3,730	1,958	2,072	Q	Q
District chilled water	4,608	4,608	Q	268	636	4,608	393	833	Q	Q
Propane	7,706	7,061	1,522	875	1,417	Q	1,122	4,277	316	Q
Other	3,826	3,573	550	540	623	Q	989	2,224	Q	Q

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All buildings	87,093	79,294	14,765	12,538	12,420	4,608	17,041	45,153	1,918	328
Main equipment replaced since 1990 (more than one may apply)										
Heating	27,558	26,409	5,304	5,000	5,084	Q	4,819	16,229	525	Q
Cooling	30,702	30,702	6,332	5,424	6,522	Q	6,679	18,251	593	Q
Separate computer areas (more than one may apply)										
Data center or server farm	11,105	11,093	453	2,215	2,279	1,682	5,842	6,206	204	Q
Computer-based training room	17,723	17,589	1,291	3,103	3,079	1,792	7,127	10,728	522	Q
Student or public computer center	14,341	14,090	1,483	2,607	2,774	1,793	5,379	7,523	371	Q
HVAC conservation features (more than one may apply)										
Economizer cycle	30,749	30,749	1,983	5,147	4,218	2,929	11,210	20,743	730	265
Regular HVAC maintenance	69,244	67,839	11,049	11,344	9,663	4,276	16,544	40,519	1,645	319
Building automation system (BAS) ²	37,051	36,692	2,808	5,759	4,350	3,944	14,272	22,155	913	288
Equipment usage reduced when building not in full use (more than one may apply)										
Heating	63,167	61,087	11,286	10,063	8,745	3,180	13,143	35,824	1,601	288
Cooling	62,516	62,516	11,810	10,190	8,973	3,070	13,606	36,602	1,515	275
Lighting	78,594	74,511	14,171	11,946	11,558	4,303	16,238	41,967	1,914	302

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)*.

³In versions of this table prior to January 2017, the row category labels for *Separate computer areas* and *HVAC conservation features* were reversed, i.e., the data in the *Separate computer areas* row category were actually for *HVAC conservation features* and vice versa.

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 *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definition 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/>

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