Release date: April 2015 Revised date: May 2016

Table B42. Water-heating equipment, number of buildings and floorspace, 2012

	Number of buildings (thousand)						Total floorspace (million square feet)					
	Type of water-heating equipment							g				
	All buildings	Buildings with water heating	Central- ized system	Distrib- uted system	Both central- ized and distrib- uted systems		Buildings with water heating	Central- ized system	Distrib- uted system	Both central- ized and distrib- uted systems		
All buildings	5,557	4,423	3,348	690	385	87,093	79,015	47,534	12,688	18,793		
Building floorspace (square feet)												
1,001 to 5,000	2,777	2,032	1,653	322	57	8,041	6,102	4,906	1,011	185		
5,001 to 10,000	1,229	992	789	120	82	8,900	7,236	5,731	890	615		
10,001 to 25,000	884	775	538	143	93		12,401	8,549	2,318	1,534		
25,001 to 50,000	332	307	198	57	51		11,007	7,125	1,983	1,899		
50,001 to 100,000	199	186	103	28	55		13,063	7,181	1,904	3,978		
100,001 to 200,000	90	86	45	13	29		11,903	6,120	1,846	3,937		
200,001 to 500,000	38	36	17	5	14		10,351	4,924	1,516	3,911		
Over 500,000	8	8	4	1	3		6,951	2,998	1,220	2,734		
Principal building activity												
Education	389	332	244	51	38	12,239	11,905	7,580	1,269	3,057		
Food sales	177	177	155	Q	Q	1,252	1,252	883	Q	Q		
Food service	380	379	307	33	39		1,817	1,449	130	237		
Health care	157	156	124	22	10		4,153	2,630	449	1,074		
Inpatient	10	10	6	Q	2		2,374	1,419	Q	860		
Outpatient	147	146	118	21	Q		1,779	1,211	354	Q		
Lodging	158	158	132	7	19		5,821	4,418	369	1,034		
Mercantile	602	531	342	90	99	11,330	10,960	4,705	1,492	4,763		
Retail (other than mall)	438	367	270	80	17		5,070	2,932	1,013	1,125		
Enclosed and strip malls	164	164	72	10	82		5,890	1,773	479	3,638		
Office	1,012	943	713	160	71		15,663	8,724	2,934	4,006		
Public assembly	352	317	248	41	28		5,318	3,389	514	1,415		
Public order and safety	84	80	72	Q	Q		1,341	1,139	Q	Q		
Religious worship	412	383	290	70	23		4,337	2,850	711	776		
Service	619	442	347	80	Q	4,630	3,763	2,695	669	Q		
Warehouse and storage	796	370	252	93	26		10,041	5,204	3,449	1,388		
Other	125	98	81	Q	Q	2,002	1,614	1,170	Q	Q		
Vacant	296	56	44	Q	Q	3,256	1,031	700	Q	Q		
Year constructed												
Before 1920	362	286	232	39	15	3,983	3,403	2,287	526	590		
1920 to 1945	488	383	288	69	26	6,025	5,299	2,918	743	1,638		
1946 to 1959	599	460	356	78	26	7,381	6,410	4,305	943	1,162		
1960 to 1969	639	540	427	60	53	10,362	9,699	6,252	1,005	2,442		
1970 to 1979	684	577	435	87	55	10,846	10,158	6,298	1,773	2,087		
1980 to 1989	915	727	527	139	61	15,230	13,831	7,338	2,888	3,605		
1990 to 1999	845	631	498	86	48	13,803	12,209	7,417	1,724	3,069		
2000 to 2003	375	312	235	45	32	7,215	6,889	4,098	1,145	1,646		
2004 to 2007	347	275	190	47	38	6,524	5,955	3,445	1,007	1,503		
2008 to 2012	303	231	161	39	30	5,723	5,162	3,176	933	1,053		

Table B42. Water-heating equipment, number of buildings and floorspace, 2012

	Number of	buildings	(thousand)		Total floorspace (million square feet)						
	Type of water-heating equipment							Type of water-heating equipment			
	All buildings	Buildings with water heating	Central- ized system	Distrib- uted system	Both central- ized and distrib- uted systems			Central- ized system	Distrib- uted system	Both central- ized and distrib- uted systems	
All buildings	5,557	4,423	3,348	690	385	87,093	79,015	47,534	12,688	18,793	
Census region and division											
Northeast	805	671	493	123	56	15,534	14,633	9,128	2,383	3,122	
New England	302	235	166	40	30		3,915	2,487	586	843	
Middle Atlantic	504	436	327	83	26	11,232	10,718	6,641	1,797	2,279	
Midwest	1,237	1,014	806	133	76	18,919	17,592	11,316	2,335	3,942	
East North Central	735	629	490	90	49	12,742	12,082	7,606	1,671	2,804	
West North Central	502	385	316	43	27	6,178	5,510	3,710	663	1,137	
South	2,247	1,740	1,322	264	154	34,279	30,261	17,460	4,938	7,863	
South Atlantic	1,091	856	617	160	79	17,981	16,144	8,889	3,030	4,226	
East South Central	370	325	268	28	29	4,904	4,598	2,745	437	1,416	
West South Central	786	560	437	76	46	11,394	9,519	5,826	1,471	2,222	
West	1,267	997	728	170	99	18,360	16,529	9,631	3,032	3,866	
Mountain	338	260	195	36	29	4,981	4,440	2,573	699	1,168	
Pacific	929	737	533	135	69	13,379	12,089	7,058	2,333	2,698	
Climate region ¹											
Very cold/Cold	2,031	1,639	1,261	242	136	31,898	29,567	18,894	4,184	6,489	
Mixed-humid	1,743	1,445	1,120	201	124	27,873	25,772	15,231	3,619	6,922	
Mixed-dry/Hot-dry	837	635	457	124	54	12,037	10,585	6,259	2,221	2,105	
Hot-humid	799	590	431	104	55	12,831	10,837	5,983	2,298	2,556	
Marine	147	113	78	Q	16	2,454	2,255	1,168	366	721	
Number of floors											
One	3,836	2,862	2,179	451	231	39,809	33,591	20,177	6,094	7,321	
Two	1,158	1,039	786	156	97	20,206	19,088	11,762	3,133	4,194	
Three	374	344	259	58	26	8,140	7,932	5,148	1,181	1,602	
Four to nine	177	166	118	23	26	13,535	13,141	7,998	1,646	3,497	
Ten or more	13	12	6	2	5	5,404	5,264	2,450	635	2,179	
Number of workers (main shift)											
Fewer than 5	2,892	1,917	1,547	292	78	17,751	11,783	8,984	1,713	1,086	
5 to 9	1,085	977	777	140	61		8,205	6,262	1,188	755	
10 to 19	731	700	515	118	66		9,137	6,320	1,690	1,126	
20 to 49	513	495	319	78	98	14,514	14,097	7,957	2,282	3,859	
50 to 99	206	203	122	36	46	13,476	13,171	7,105	2,192	3,873	
100 to 249	93	93	51	20	23	10,941	10,912	5,614	1,893	3,404	
250 or more	37	37	17	6	14	11,815	11,711	5,292	1,730	4,689	

Table B42. Water-heating equipment, number of buildings and floorspace, 2012

	Number of	buildings	(thousand)		Total floorspace (million square feet)					
			Type of wa		g			Type of water-heating equipment		
	All buildings	Buildings with water heating	Central- ized system	Distrib- uted system	Both central- ized and distrib- uted systems	All buildings	Buildings with water heating	Central- ized system	Distrib- uted system	Both central- ized and distrib- uted systems
All buildings	5,557	4,423	3,348	690	385	87,093	79,015	47,534	12,688	18,793
Weekly operating hours										
Fewer than 40	1,149	703	575	97	31	8,220	5,137	3,777	659	701
40 to 48	1,346	1,107	843	193	71	15,828	14,388	9,155	2,631	2,602
49 to 60	1,244	1,063	789	184	89	20,529	18,878	11,623	3,487	3,768
61 to 84	764	676	467	111	98	15,867	15,304	7,601	2,621	5,082
85 to 167	479	428	315	67	46	9,395	8,937	5,247	1,470	2,220
Open continuously	575	447	359	38	49	17,253	16,371	10,131	1,820	4,420
Ownership and occupancy										
Nongovernment owned	4,781	3,791	2,851	617	323	67,550	60,645	35,837	11,091	13,717
Owner occupied	2,466	2,048	1,634	289	125	30,637	27,869	19,154	4,090	4,626
Leased to tenant(s)	1,745	1,401	1,001	251	149	26,115	23,900	12,749	4,804	6,347
Owner occupied and leased	349	316	195	75	46	8,873	8,544	3,698	2,181	2,665
Unoccupied	221	26	21	Q	Q	1,925	332	237	Q	Q
Government owned	776	632	497	72	62	19,543	18,370	11,697	1,596	5,076
Federal	33	33	29	Q	3	1,573	1,565	837	Q	626
State	185	146	106	22	19	5,539	5,270	3,188	746	1,336
Local	558	452	362	50	40	12,431	11,535	7,672	749	3,115
Party responsible for operation										
and maintenance of energy										
systems										
Building owner	4,715	3,706	2,841	580	285	73,702	66,462	41,135	10,474	14,852
Business owner or tenant	724	617	432	98	87	11,309	10,617	5,269	1,896	3,452
Property management	54	42	29	Q	7	1,250	1,177	600	Q	400
Other	64	57	46	Q	Q	832	759	531	Q	Q
Provider of direct input on energy-										
related equipment purchases										
Building owner	4,876	3,830	2,933	591	306	76,271	68,848		10,971	15,507
Business owner or tenant	540	466	317	85	64	8,256	7,779	3,962	1,345	2,471
Property management	35	29	23	Q	Q	880	784	378	Q	Q
Other	106	98	75	Q	12	1,686	1,605	824	Q	549

Table B42. Water-heating equipment, number of buildings and floorspace, 2012

	Number o	f buildings	(thousand)		Total floorspace (million square feet)						
	Type of water-heating equipment						Type of water-heating equipment				
	All buildings	Buildings with water heating	Central- ized system	Distrib- uted system	Both central- ized and distrib- uted systems	All buildings		Central- ized system	Distrib- uted system	Both central- ized and distrib- uted systems	
All buildings	5,557	4,423	3,348	690	385	87,093	79,015	47,534	12,688	18,793	
Campus or complex activity											
Not part of a campus or complex	3,683	3,084	2,369	467	248	52,275	47,942	29,176	8,061	10,705	
Primary or secondary school	237	165	115	32	19	4,616		2,522	496	1,196	
College or university	84	79	63	8	8	4,068		2,951	472	587	
Office complex	154	141	93	33	15	3,456		1,606	691	1,097	
Retail complex	258	218	139	26	53	5,159	4,921	2,014	482	2,425	
Storage complex	314	52	29	22	Q		1,284	643	545	Q	
Religious campus or complex	197	181	136	36	Q		1,810	1,159	344	Q	
Health care complex	52	50	42	Q	7		3,314	2,278	Q	912	
Lodging or resort complex	65	61	53	Q			1,275	1,048	Q		
Transportation complex	35	32	27	Q	(*)	554		193	Q		
Government complex	104	81	71	Q	2		1,886	1,359	Q	415	
Other	371	278	209	49	20	5,057	4,470	2,584	1,228	658	
Renovations in buildings constructed before 2008 (more than one may apply)	2 004	4.006	1 202	207	100	42.246	40.200	22 224	5 200	11.000	
Any type of renovation	2,094	1,886	1,393	297	196	42,216		22,231	6,390	11,668	
Addition or annex	444	424	296	74	54	13,022	12,835	7,022	1,819	3,994	
Reduction in floorspace	71	62	52	Q	5	1,753	1,715	935	Q	485	
Roof replacement	987	881	654	133	94	20,917	20,189	10,907	3,186	6,095	
Exterior wall replacement	194	174	130	27	17	4,230	4,144	2,261	788	1,096	
Interior wall reconfiguration	889	813	563	136	114	21,340		10,449	3,418	6,911	
Window replacement	560	526	352	107	66	12,265	11,984	6,237	1,983	3,765	
HVAC equipment upgrade	1,101	1,019	722	173	123	26,779	26,061	13,578	4,230	8,253	
Lighting upgrade	982	920	660	150	110	25,503	24,671	12,695	3,900	8,076	
Electrical upgrade	747	681	487	109	85	16,160	15,675	8,123	2,398	5,154	
Plumbing system upgrade	644	601	422	98	81	13,828	13,544	7,147	1,944	4,452	
Insulation upgrade	382	353	248	61	44	7,607	7,331	3,785	1,176	2,370	
Fire, safety, or security upgrade	616	585	407	101	77	17,196	16,864	8,874	2,709	5,281	
Structural upgrade	152	144	108	20	16	3,913	3,853	2,137	518	1,198	
Other	39	34	25	Q	Q	848	829	321	Q	Q	
No renovations	3,160	2,306	1,794	354	158	39,154	33,564	22,127	5,365	6,073	
Buildings constructed 2008 or later	303	231	161	39	30	5,723	5,162	3,176	933	1,053	
Energy sources (more than one may apply)											
Electricity	5,234	4,423	3,348	690	385	84,869	79,015	47,534	12,688	18,793	
Natural gas	2,933	2,742	2,073	388	282	58,725	57,019	34,005	8,211	14,803	
Fuel oil	467	411	314	52	45	20,200	19,708	10,979	2,510	6,219	
District heat	48	45	30	6	8	5,964	5,822	3,596	501	1,725	
District chilled water	54	51	24	19	7	4,608	4,511	2,907	450	1,154	
Propane	510	466	357	72	38	7,706	7,383	4,491	1,127	1,765	
Other	172	141	104	23	14	3,826	3,679	2,260	475	944	

Table B42. Water-heating equipment, number of buildings and floorspace, 2012

	Number of	buildings	(thousand)		Total floorspace (million square feet)						
			Type of wa equipment		g			Type of water-heati		ng	
	All buildings	Buildings with water heating	Central- ized system	Distrib- uted system	Both central- ized and distrib- uted systems	All buildings	Buildings with water heating	Central- ized system	Distrib- uted system	Both central- ized and distrib- uted systems	
All buildings	5,557	4,423	3,348	690	385	87,093	79,015	47,534	12,688	18,793	
Water-heating energy sources (more than one may apply)											
Electricity	2,658	2,658	1,901	508	250	42,755	42,755	21,435	9,362	11,957	
Natural gas	1,758	1,758	1,367	182	209	39,523	39,523	24,806	4,088	10,629	
Fuel oil	77	77	63	Q	7	1,911	1,911	1,318	Q	467	
District heat	25	25	19	3	4	4,551	4,551	3,002	325	1,224	
Propane	142	142	106	Q	14	1,575	1,575	1,006	Q	348	
Energy end uses (more than one may apply)											
Buildings with space heating	4,722	4,237	3,229	634	374	80,078	76,584	46,147	11,914	18,523	
Buildings with cooling	4,461	4,097	3,093	631	374	79,294	76,414	45,554	12,198	18,662	
Buildings with water heating	4,423	4,423	3,348	690	385	79,015	79,015	47,534	12,688	18,793	
Buildings with cooking	1,589	1,573	1,190	176	208	38,546	38,389	21,608	4,102	12,679	
Buildings with manufacturing	259	228	150	55	22	5,078	4,570	2,431	1,148	990	
Buildings with electricity generation	410	395	292	34	69	25,642	25,280	14,045	2,858	8,378	
Food preparation or serving areas in non-food service buildings (more than one may apply)											
Snack bar or concession stand	153	150	95	17	38	9,884	9,864	4,357	899	4,608	
Fast food or small restaurant	173	173	97	13	63	9,787	9,778	3,500	1,131	5,147	
Cafeteria or large restaurant	130	130	81	12	38	15,222	15,219	8,204	1,429	5,587	
Commercial kitchen/											
food preparation area	282	282	181	41	60	16,150	16,150	8,757	1,491	5,901	
Small kitchen area	736	723	577	82	64	14,054	13,926	8,428	1,284	4,213	

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).

 $^{^{2}}$ In earlier CBECS publications, BAS was referred to as $\it Energy Management \ and \ Control \ System \ (EMCS)$.

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

N = No cases in reporting sample.

^{(*) =} Value rounds to zero in the units displayed.

Notes: • Because of rounding, data may not sum to totals. • See *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.