

Table B38. Heating Equipment, Number of Buildings for Non-Mall Buildings, 2003

	Number of Buildings (thousand)								
	All Buildings*	Heated Buildings	Heating Equipment (more than one may apply)						
			Heat Pumps	Furnaces	Individual Space Heaters	District Heat	Boilers	Packaged Heating Units	Other
All Buildings*	4,645	3,982	476	1,864	819	65	579	953	205
Building Floorspace (Square Feet)									
1,001 to 5,000	2,552	2,100	258	1,039	415	Q	162	423	121
5,001 to 10,000	889	782	63	391	170	Q	105	214	Q
10,001 to 25,000	738	659	86	307	142	18	138	170	28
25,001 to 50,000	241	225	33	76	49	9	78	69	13
50,001 to 100,000	129	123	21	30	25	8	49	47	6
100,001 to 200,000	65	62	9	15	12	9	31	20	Q
200,001 to 500,000	25	24	5	5	5	4	13	7	2
Over 500,000	7	6	1	1	1	2	3	2	Q
Principal Building Activity									
Education	386	382	66	111	67	25	84	99	Q
Food Sales	226	188	Q	77	Q	N	Q	46	Q
Food Service	297	282	26	125	28	Q	36	103	Q
Health Care	129	124	22	61	21	1	22	28	Q
Inpatient	8	8	Q	Q	1	1	6	3	Q
Outpatient	121	116	19	58	19	Q	16	25	Q
Lodging	142	142	25	31	57	Q	42	31	Q
Retail (Other Than Mall).....	443	408	42	227	75	Q	30	97	Q
Office	824	802	113	362	157	16	123	214	33
Public Assembly	277	258	24	120	46	6	48	56	Q
Public Order and Safety	71	70	Q	41	Q	Q	13	16	Q
Religious Worship	370	359	54	193	71	Q	73	63	Q
Service	622	515	29	288	131	Q	49	96	60
Warehouse and Storage	597	316	32	156	98	Q	25	68	Q
Other	79	67	Q	35	17	Q	16	20	Q
Vacant	182	69	Q	36	Q	Q	Q	Q	Q
Year Constructed									
Before 1920	330	302	Q	151	65	Q	105	25	Q
1920 to 1945	527	442	31	235	72	12	103	63	Q
1946 to 1959	562	493	44	259	120	13	98	79	Q
1960 to 1969	579	524	50	242	114	13	82	106	24
1970 to 1979	731	648	82	330	130	6	65	176	40
1980 to 1989	707	618	102	252	119	4	43	209	40
1990 to 1999	876	719	120	299	152	8	56	226	35
2000 to 2003	334	236	39	96	47	Q	27	70	15
Census Region									
Northeast	726	672	47	310	122	17	227	95	22
Midwest	1,266	1,112	45	736	242	13	175	151	80
South	1,775	1,462	304	467	271	20	88	532	56
West	878	735	80	352	185	15	89	175	47
Climate Zone: 30-Year Average									
Under 2,000 CDD and --									
More than 7,000 HDD	855	752	28	474	172	6	178	90	60
5,500-7,000 HDD	1,173	1,055	68	615	215	27	198	147	54
4,000-5,499 HDD	673	626	81	297	149	13	112	122	Q
Fewer than 4,000 HDD	1,276	1,051	213	368	220	12	64	356	45
2,000 CDD or More and --									
Fewer than 4,000 HDD	669	498	86	110	64	7	27	238	22

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			Heat Pumps	Furnaces	Individual Space Heaters	District Heat	Boilers	Packaged Heating Units	Other
All Buildings*	4,645	3,982	476	1,864	819	65	579	953	205
Number of Floors									
One	3,136	2,566	334	1,193	550	14	190	682	140
Two	1,031	960	97	487	174	19	194	207	50
Three	339	319	31	155	68	10	119	41	Q
Four to Nine	128	125	11	28	25	19	69	20	4
Ten or More	12	12	3	Q	2	3	6	3	1
Number of Workers (main shift)									
Fewer than 5	2,653	2,080	236	1,013	470	Q	216	366	125
5 to 9	778	733	89	399	120	Q	88	186	Q
10 to 19	563	536	64	244	102	Q	81	165	28
20 to 49	398	387	42	152	86	16	94	137	19
50 to 99	147	141	23	40	22	7	51	58	5
100 to 249	77	76	16	12	14	9	34	33	Q
250 or More	30	29	5	4	5	5	15	9	3
Weekly Operating Hours									
Fewer than 40	1,002	751	89	375	161	Q	72	132	40
40 to 48	1,117	1,037	131	506	236	12	145	227	55
49 to 60	1,062	965	102	481	197	18	141	226	48
61 to 84	591	535	67	255	84	11	93	132	25
85 to 167	400	331	31	122	48	9	49	129	Q
Open Continuously	475	364	55	125	93	10	79	107	24
Multibuilding Facility									
Not Part of a Multibuilding									
Facility	3,169	2,835	281	1,434	563	Q	405	696	153
College or University	83	80	10	Q	6	29	26	6	Q
Primary or Secondary School	254	243	47	68	59	Q	31	67	Q
Office Complex	111	101	21	31	17	Q	16	31	Q
Retail Complex	151	110	Q	51	34	N	Q	19	Q
Religious Campus or Complex	195	186	33	73	28	Q	42	42	Q
Health Care Complex	39	36	7	14	4	Q	10	10	Q
Lodging or Resort Complex	61	58	9	Q	23	Q	7	16	Q
Government Complex	87	70	Q	28	15	4	14	21	Q
Other	496	262	45	137	69	Q	23	44	18
Renovations in Buildings Constructed Before 1980 (more than one may apply)									
Any Type of Renovation									
Since 1980	1,018	953	95	471	217	18	221	206	37
Addition or Annex	256	246	29	135	61	2	62	59	Q
Reduction In Floorspace	22	22	Q	Q	Q	Q	8	Q	Q
Cosmetic Improvements	741	699	79	344	156	10	171	159	23
Wall or Roof Replacement	370	348	33	161	70	9	96	82	Q
Interior Wall									
Re-Configuration	411	395	29	204	106	7	106	84	Q
HVAC Equipment Upgrade	442	427	48	214	97	9	126	100	10
Lighting Upgrade	455	425	44	198	97	15	124	101	12
Window Replacement	310	295	26	145	89	6	91	55	Q
Plumbing System Upgrade	315	300	26	151	72	8	85	69	Q
Insulation Upgrade	227	217	15	128	45	3	48	40	Q
Other Renovation	19	19	Q	Q	Q	Q	9	Q	N
No Renovations Since 1980	1,710	1,455	119	746	284	33	232	242	78
Building Newer than 1980	1,917	1,573	261	647	318	14	126	504	89

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			Heat Pumps	Furnaces	Individual Space Heaters	District Heat	Boilers	Packaged Heating Units	Other
All Buildings*	4,645	3,982	476	1,864	819	65	579	953	205
Energy Sources (more than one may apply)									
Electricity	4,404	3,971	476	1,860	819	65	579	953	198
Natural Gas	2,391	2,344	152	1,314	429	24	432	586	85
Fuel Oil	451	443	21	211	94	4	178	54	40
District Heat	67	67	2	Q	5	65	Q	3	Q
District Chilled Water	33	32	Q	Q	Q	24	5	5	Q
Propane	502	489	44	259	162	Q	55	101	44
Other	132	132	Q	73	46	Q	24	17	48
Space-Heating Energy Sources (more than one may apply)									
Electricity	1,766	1,766	466	554	604	6	161	572	116
Natural Gas	2,165	2,165	124	1,273	399	4	397	529	80
Fuel Oil	360	360	6	188	79	Q	144	17	36
District Heat	65	65	2	Q	4	65	Q	3	Q
Propane	372	372	28	212	122	Q	30	79	40
Other	113	113	Q	65	40	N	18	Q	47
Primary Space-Heating Energy Source									
Electricity	1,258	1,258	371	296	305	Q	58	427	60
Natural Gas	1,999	1,999	85	1,212	361	Q	373	456	69
Fuel Oil	282	282	Q	145	39	N	121	Q	Q
District Heat	63	63	1	Q	4	63	Q	2	Q
Propane	308	308	Q	176	89	Q	Q	63	Q
Other	72	72	Q	Q	Q	N	Q	Q	Q
Energy End Uses (more than one may apply)									
Buildings with Space Heating	3,982	3,982	476	1,864	819	65	579	953	205
Buildings with Cooling	3,625	3,469	469	1,581	685	53	485	932	154
Buildings with Water Heating	3,472	3,337	397	1,585	657	59	546	828	172
Buildings with Cooking	801	764	92	314	131	9	184	241	30
Buildings with Manufacturing	119	111	9	57	39	Q	26	29	Q
Buildings with Electricity Generation	149	148	26	55	38	6	62	50	8
Percent of Floorspace Heated									
Not Heated	663	N	N	N	N	N	N	N	N
1 to 50	523	523	37	240	178	Q	30	109	29
51 to 99	498	498	61	241	114	5	77	138	22
100	2,962	2,962	378	1,383	527	58	472	706	153
Heating Equipment (more than one may apply)									
Heat Pumps	476	476	476	71	56	2	33	52	16
Packaged Heat Pumps	278	278	278	38	26	Q	18	36	Q
Split-System Heat Pumps	166	166	166	30	28	Q	9	17	Q
Individual Room Heat Pumps	58	58	58	9	9	Q	13	14	Q
Furnaces	1,864	1,864	71	1,864	334	Q	87	100	47
Individual Space Heaters	819	819	56	334	819	4	87	127	32
District Heat	65	65	2	Q	4	65	Q	3	Q
Boilers	579	579	33	87	87	Q	579	61	Q
Packaged Heating Units	953	953	52	100	127	3	61	953	19
Other	205	205	16	47	32	Q	Q	19	205

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			Heat Pumps	Furnaces	Individual Space Heaters	District Heat	Boilers	Packaged Heating Units	Other
All Buildings*	4,645	3,982	476	1,864	819	65	579	953	205
Cooling Equipment (more than one may apply)									
Residential-Type Central									
Air Conditioners	1,006	963	36	675	171	Q	127	184	29
Heat Pumps	492	481	448	85	57	2	39	51	16
Packaged Heat Pumps	288	287	263	48	27	Q	22	37	Q
Split-System Heat Pumps	174	163	154	34	28	Q	10	14	Q
Individual Room Heat Pumps	58	58	57	9	9	Q	14	14	Q
Individual Air Conditioners	742	718	41	302	321	12	169	102	47
District Chilled Water	33	32	Q	Q	Q	24	5	5	Q
Central Chillers	111	106	11	9	12	14	73	20	10
Packaged Air Conditioning									
Units	1,613	1,539	68	689	255	7	207	738	55
Swamp Coolers	122	103	Q	65	36	Q	22	16	Q
Other	40	39	Q	Q	Q	Q	9	Q	Q
Main Equipment Replaced Since 1990 (more than one may apply)									
Heating	1,197	1,197	145	602	268	Q	179	288	49
Cooling	1,356	1,315	156	642	288	13	249	299	50
HVAC Conservation Features (more than one may apply)									
Variable Air-Volume System	466	441	51	167	78	25	110	142	20
Economizer Cycle	508	497	68	155	83	21	133	186	25
HVAC Maintenance	2,581	2,491	334	1,167	375	59	468	650	104
Energy Management and Control System (EMCS)	252	245	52	43	39	17	72	85	17
Equipment Usage Reduced When Building Not In Full Use (more than one may apply)^a									
Heating	2,878	2,878	336	1,385	648	30	396	695	143
Cooling	2,761	2,650	343	1,221	571	28	369	719	111
Lighting	3,685	3,397	402	1,649	685	49	481	800	156
Office Equipment	1,504	1,445	184	707	284	22	211	361	70

See "Guide to the Tables" or "Glossary" for further explanations of the terms used in this table. Both can be accessed from the CBECS web site - <http://www.eia.doe.gov/emeu/cbecs>.

* Figures in this table do not include enclosed malls and strip malls. Mall buildings add an estimated 213 thousand buildings comprising 6.9 billion square feet.

^a The definition for one or more of these row items has changed and may not be directly comparable with past CBECS estimates. See "Guide to the Tables" for discussion of the differences.

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

N=No responding cases in sample.

Notes: • HVAC = Heating, Ventilation, and Air Conditioning. • Due to rounding, data may not sum to totals.

Source: Energy Information Administration, Office of Energy Markets and End Use, Form EIA-871A of the 2003 Commercial Buildings Energy Consumption Survey.