

**Table B33. Heating Equipment, Floorspace, 1999**

	Total Floorspace (million square feet)								
	All Buildings	All Heated Buildings	Heating Equipment (more than one may apply)						
			Heat Pumps	Furnaces	Individual Space Heaters	District Heat	Boilers	Packaged Heating Units	Other
<b>All Buildings</b> .....	67,338	61,602	8,923	14,449	17,349	5,534	19,522	25,743	4,073
<b>Building Floorspace (Square Feet)</b>									
1,001 to 5,000 .....	6,774	5,684	679	2,271	1,183	Q	463	1,779	250
5,001 to 10,000 .....	8,238	7,090	745	2,848	1,350	Q	1,040	2,301	Q
10,001 to 25,000 .....	11,153	9,865	1,288	3,047	3,021	307	2,047	3,994	401
25,001 to 50,000 .....	9,311	8,565	1,376	1,674	2,218	617	2,591	3,695	510
50,001 to 100,000 .....	10,112	9,597	1,493	1,718	2,492	905	3,698	4,262	511
100,001 to 200,000 .....	8,271	7,893	1,095	1,283	2,467	883	3,334	3,811	450
200,001 to 500,000 .....	6,851	6,445	996	807	1,974	963	3,268	2,943	782
Over 500,000 .....	6,628	6,465	1,250	802	2,643	1,698	3,081	2,959	903
<b>Principal Building Activity</b>									
Education .....	8,651	8,612	1,184	1,040	1,869	1,086	5,048	2,710	Q
Food Sales .....	994	880	Q	263	Q	Q	Q	402	Q
Food Service .....	1,851	1,721	Q	583	261	Q	Q	895	Q
Health Care .....	2,918	2,918	648	368	676	736	1,494	1,159	335
Inpatient .....	1,865	1,865	486	Q	560	641	1,235	761	Q
Outpatient .....	1,053	1,053	Q	264	Q	Q	259	398	Q
Lodging .....	4,521	4,424	1,068	649	1,659	527	1,814	1,688	Q
Mercantile .....	10,398	9,848	1,340	2,234	2,448	Q	1,291	6,664	701
Retail (Other Than Mall) .....	4,766	4,615	218	1,620	1,199	Q	536	2,171	Q
Enclosed and Strip Malls .....	5,631	5,233	1,122	614	1,249	N	755	4,493	Q
Office .....	12,044	11,810	1,949	1,807	2,631	1,487	4,211	4,304	1,244
Public Assembly .....	4,393	4,015	582	787	1,163	841	1,409	1,368	Q
Public Order and Safety .....	1,168	1,021	Q	Q	232	297	541	251	Q
Religious Worship .....	3,405	3,383	327	1,701	1,021	Q	1,010	1,047	Q
Service .....	3,388	3,027	381	1,129	1,165	Q	532	1,184	224
Warehouse and Storage .....	10,477	8,104	888	3,270	3,560	Q	1,369	3,542	428
Other .....	1,222	1,086	Q	309	257	Q	247	383	Q
Vacant .....	1,908	754	Q	218	Q	Q	Q	Q	Q
<b>Year Constructed</b>									
1919 or Before .....	4,034	3,593	251	1,214	1,042	480	1,397	428	Q
1920 to 1945 .....	6,445	5,559	449	1,552	1,772	764	2,264	1,476	Q
1946 to 1959 .....	9,127	8,402	1,064	2,082	2,551	1,065	2,762	2,917	563
1960 to 1969 .....	10,866	9,966	1,129	2,053	2,496	1,351	4,231	3,961	560
1970 to 1979 .....	11,840	10,916	1,651	2,235	3,345	769	3,275	4,899	684
1980 to 1989 .....	13,931	12,566	2,583	2,927	3,428	606	3,114	6,379	1,012
1990 to 1999 .....	11,094	10,600	1,796	2,387	2,715	499	2,479	5,684	786
<b>Census Region</b>									
Northeast .....	12,360	11,667	1,193	2,257	3,555	1,876	5,469	4,033	769
Midwest .....	16,761	15,916	1,015	5,767	4,667	1,514	5,961	5,081	1,113
South .....	23,485	20,598	4,580	3,949	5,471	1,022	4,209	10,455	1,391
West .....	14,731	13,421	2,135	2,476	3,657	1,121	3,883	6,175	800
<b>Climate Zone: 45-Year Average</b>									
Under 2,000 CDD and --									
More than 7,000 HDD .....	5,890	5,669	283	1,736	1,754	250	2,815	1,436	362
5,500-7,000 HDD .....	17,083	16,206	1,135	4,996	4,866	1,736	6,733	5,623	1,222
4,000-5,499 HDD .....	16,243	15,292	2,827	4,004	4,750	2,405	5,072	4,851	1,026
Fewer than 4,000 HDD .....	16,333	14,923	3,015	2,197	3,915	677	3,480	8,600	786
2,000 CDD or More and --									
Fewer than 4,000 HDD .....	11,788	9,512	1,663	1,516	2,064	466	1,422	5,233	676

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	Total Floorspace (million square feet)								
	All Buildings	All Heated Buildings	Heating Equipment (more than one may apply)						Other
			Heat Pumps	Furnaces	Individual Space Heaters	District Heat	Boilers	Packaged Heating Units	
<b>Workers (main shift)</b>									
Fewer than 5 .....	14,321	10,552	707	3,874	2,913	289	1,840	3,005	673
5 to 9 .....	6,325	6,020	655	2,510	1,680	292	1,285	1,788	178
10 to 19 .....	8,028	7,762	1,340	1,953	1,973	372	1,771	3,002	219
20 to 49 .....	10,814	10,347	1,761	2,631	2,538	534	2,739	4,935	451
50 to 99 .....	8,898	8,536	1,401	1,221	2,531	645	3,234	4,416	300
100 to 249 .....	8,356	8,053	1,105	1,164	2,376	1,031	3,706	4,172	608
250 or More .....	10,595	10,333	1,954	1,095	3,339	2,371	4,948	4,426	1,644
<b>Weekly Operating Hours</b>									
39 or Fewer .....	6,596	4,217	313	1,765	1,051	Q	1,140	1,200	Q
40 to 48 .....	13,105	12,090	1,863	3,664	3,321	730	3,170	4,093	472
49 to 60 .....	14,200	13,677	1,963	3,580	3,657	910	4,337	5,101	1,089
61 to 84 .....	12,458	11,787	1,501	2,183	3,086	911	3,542	5,835	915
85 to 167 .....	9,116	8,399	1,179	1,697	2,558	830	2,316	4,436	394
Open Continuously .....	11,863	11,432	2,105	1,560	3,677	2,114	5,018	5,077	1,025
<b>Multibuilding Facility Activity</b>									
Not Part of a Multibuilding									
Facility .....	41,289	38,071	5,574	10,209	11,297	1,366	11,936	15,861	2,689
College or University .....	2,605	2,585	Q	Q	319	1,757	566	266	Q
Primary or Secondary School .....	3,388	3,268	428	494	747	Q	1,724	1,515	Q
Office Complex .....	3,353	3,250	331	345	483	Q	1,392	1,333	309
Retail Complex .....	3,555	3,205	472	650	857	Q	Q	2,339	Q
Religious Campus or Complex .....	1,907	1,885	Q	832	584	Q	462	708	Q
Health Care Complex .....	2,339	2,302	604	Q	530	818	1,056	922	Q
Government Complex .....	1,513	1,348	Q	Q	437	740	429	200	Q
Other .....	7,389	5,690	862	1,655	2,096	491	1,677	2,599	346
<b>Energy Sources (more than one may apply)</b>									
Electricity .....	65,716	61,565	8,923	14,449	17,321	5,534	19,514	25,743	4,073
Natural Gas .....	45,525	44,385	5,627	11,960	13,561	2,431	16,588	20,043	2,680
Fuel Oil .....	13,285	13,074	2,263	2,090	4,351	1,787	7,485	4,237	1,463
District Heat .....	5,891	5,862	811	Q	1,314	5,534	301	847	285
District Chilled Water .....	2,750	2,739	376	Q	567	2,279	326	497	159
Propane .....	6,290	6,076	838	1,801	1,915	Q	2,153	2,562	451
Other .....	2,322	2,276	316	526	1,032	Q	1,044	1,018	483
<b>Space-Heating Energy Sources (more than one may apply)</b>									
Electricity .....	32,291	32,291	8,667	6,822	12,350	1,609	8,410	16,861	2,972
Natural Gas .....	37,902	37,893	4,466	11,524	11,488	678	15,131	17,324	1,982
Fuel Oil .....	5,611	5,611	532	1,295	1,444	Q	4,176	1,040	341
District Heat .....	5,534	5,534	730	Q	1,210	5,534	Q	767	249
Propane .....	2,728	2,728	204	1,075	1,051	Q	672	937	272
Other .....	945	945	Q	Q	534	Q	420	Q	315
<b>Primary Space-Heating Energy Source</b>									
Electricity .....	17,627	17,627	5,009	2,281	4,788	Q	2,171	10,090	1,807
Natural Gas .....	32,729	32,729	3,076	10,311	9,945	211	13,918	13,958	1,634
Fuel Oil .....	3,719	3,719	Q	821	683	Q	2,717	333	Q
District Heat .....	5,077	5,077	588	Q	1,042	5,077	Q	602	Q
Propane .....	2,107	2,107	Q	864	725	N	Q	623	Q
Other .....	343	343	Q	Q	Q	N	Q	Q	Q

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	All Buildings	All Heated Buildings	Heating Equipment (more than one may apply)						
			Heat Pumps	Furnaces	Individual Space Heaters	District Heat	Boilers	Packaged Heating Units	Other
<b>Energy End Uses (more than one may apply)</b>									
Buildings with Space Heating .....	61,602	61,602	8,923	14,449	17,349	5,534	19,522	25,743	4,073
Buildings with Cooling .....	58,474	56,361	8,766	12,819	15,708	4,844	17,947	25,134	3,592
Buildings with Water Heating .....	56,115	54,204	8,106	12,265	15,163	4,943	18,615	23,491	3,669
Buildings with Cooking .....	24,681	23,813	4,313	3,576	7,145	2,337	11,111	11,346	1,705
Buildings with Manufacturing .....	3,126	3,031	348	1,162	1,355	Q	730	1,349	Q
Buildings with Electricity Generation .....	11,882	11,643	2,396	1,437	4,275	1,986	5,704	5,016	1,444
<b>Percent of Floorspace Heated</b>									
Not Heated .....	5,736	N	N	N	N	N	N	N	N
1 to 50 .....	7,593	7,593	1,098	2,718	2,432	Q	1,203	2,702	607
51 to 99 .....	10,745	10,745	1,797	3,042	3,332	886	2,977	4,661	774
100 .....	43,264	43,264	6,028	8,689	11,585	4,575	15,343	18,380	2,692
<b>Heating Equipment (more than one may apply)</b>									
Heat Pumps .....	8,923	8,923	8,923	1,585	2,644	730	2,634	3,828	444
Furnaces .....	14,449	14,449	1,585	14,449	4,460	Q	2,256	3,698	418
Individual Space Heaters .....	17,349	17,349	2,644	4,460	17,349	1,210	5,356	7,654	1,096
District Heat .....	5,534	5,534	730	Q	1,210	5,534	Q	767	249
Boilers .....	19,522	19,522	2,634	2,256	5,356	Q	19,522	5,277	795
Packaged Heating Units .....	25,743	25,743	3,828	3,698	7,654	767	5,277	25,743	1,193
Other .....	4,073	4,073	444	418	1,096	249	795	1,193	4,073
<b>Cooling Equipment (more than one may apply)</b>									
Residential-Type Central									
Air Conditioners .....	8,329	8,010	1,362	4,975	2,810	303	2,282	2,617	646
Heat Pumps .....	9,147	9,052	8,243	1,601	2,750	701	2,749	3,799	528
Individual Air Conditioners .....	14,276	13,754	2,378	3,655	6,603	1,140	6,406	5,127	887
District Chilled Water .....	2,750	2,739	376	Q	567	2,279	326	497	159
Central Chillers .....	12,909	12,560	2,109	1,259	3,863	2,069	8,549	4,425	1,679
Packaged Air Conditioning									
Units .....	36,527	35,247	4,709	7,240	10,774	1,884	10,047	23,495	2,138
Swamp Coolers .....	2,219	2,190	483	756	835	Q	823	1,253	Q
Other .....	1,312	1,257	285	225	285	Q	637	385	468
<b>Main Equipment Replaced Since 1995 (more than one may apply)</b>									
Heating .....	13,220	13,220	2,392	3,550	3,797	Q	2,857	6,833	623
Cooling .....	17,390	16,386	2,859	4,009	4,781	826	5,240	7,755	716
<b>Building Shell Conservation Features (more than one may apply)</b>									
Multipaned Windows .....	38,193	36,962	6,068	8,881	10,930	3,233	13,442	15,101	2,752
Tinted, Reflective, or Shading Glass .....	29,915	28,777	4,617	5,194	7,488	2,904	9,604	14,049	2,303
<b>HVAC Conservation Features (more than one may apply)</b>									
Variable Air-Volume System .....	19,387	18,942	2,773	2,473	5,022	2,780	8,355	8,506	1,734
Economizer Cycle .....	21,256	21,107	3,302	2,986	6,237	3,275	9,342	10,599	1,847
HVAC Maintenance .....	53,395	51,983	8,055	11,148	13,715	5,296	18,379	23,294	3,356
Energy Management and Control System (EMCS) .....	21,613	21,252	3,198	2,290	5,762	3,865	9,514	9,418	2,235

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	All Buildings	All Heated Buildings	Heating Equipment (more than one may apply)						Other
			Heat Pumps	Furnaces	Individual Space Heaters	District Heat	Boilers	Packaged Heating Units	
<b>Off-Hour Equipment Reduction (more than one may apply)</b>									
Heating .....	39,969	39,969	5,710	10,360	10,497	2,906	12,118	16,602	2,364
Cooling .....	39,161	37,743	5,413	9,450	10,062	2,538	11,606	16,697	2,173
Lighting .....	51,083	48,300	6,650	12,514	13,135	3,377	14,096	19,932	2,883
Office Equipment .....	9,063	8,802	1,242	1,469	2,181	725	4,222	3,587	412

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.

Note: 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 1999 Commercial Buildings Energy Consumption Survey.