

**Table C25. Total District Heat Consumption and Expenditures, 1999**

	All Buildings Using District Heat			District Heat Consumption	District Heat Expenditures
	Number of Buildings (thousand)	Floorspace (million square feet)	Floorspace per Building (thousand square feet)	Total (trillion Btu)	Total (million dollars)
<b>All Buildings</b> .....	117	5,891	50	433	3,564
<b>Building Floorspace (Square Feet)</b>					
1,001 to 5,000 .....	Q	Q	Q	Q	Q
5,001 to 10,000 .....	Q	Q	Q	Q	Q
10,001 to 25,000 .....	Q	Q	Q	Q	Q
25,001 to 50,000 .....	19	660	35	61	496
50,001 to 100,000 .....	13	933	72	97	667
100,001 to 200,000 .....	7	903	133	72	598
200,001 to 500,000 .....	3	1,003	314	57	504
Over 500,000 .....	2	1,707	964	84	775
<b>Principal Building Activity</b>					
Education .....	37	1,159	31	117	879
Food Sales .....	Q	Q	Q	Q	Q
Food Service .....	Q	Q	Q	Q	Q
Health Care .....	3	744	217	46	Q
Inpatient .....	Q	Q	Q	Q	Q
Outpatient .....	Q	Q	Q	Q	Q
Lodging .....	18	629	34	68	482
Mercantile .....	Q	Q	Q	Q	Q
Retail (Other Than Mall) .....	Q	Q	Q	Q	Q
Office .....	Q	1,536	76	74	709
Public Assembly .....	Q	848	55	59	487
Public Order and Safety .....	Q	Q	Q	Q	Q
Religious Worship .....	Q	Q	Q	Q	Q
Service .....	Q	Q	Q	Q	Q
Warehouse and Storage .....	Q	Q	Q	Q	Q
Other .....	Q	Q	Q	Q	Q
Vacant .....	Q	Q	Q	Q	Q
<b>Year Constructed</b>					
1919 or Before .....	Q	486	25	Q	268
1920 to 1945 .....	9	764	82	60	535
1946 to 1959 .....	21	1,088	52	76	652
1960 to 1969 .....	18	1,406	78	100	815
1970 to 1979 .....	19	788	41	69	538
1980 to 1989 .....	Q	682	Q	47	Q
1990 to 1999 .....	15	677	46	Q	Q
<b>Census Region and Division</b>					
Northeast .....	Q	1,898	61	136	1,264
New England .....	Q	Q	Q	Q	Q
Middle Atlantic .....	Q	1,718	59	121	1,154
Midwest .....	Q	1,521	61	132	1,021
East North Central .....	Q	799	71	80	618
West North Central .....	Q	722	53	52	Q
South .....	39	1,265	32	67	554
South Atlantic .....	Q	Q	Q	Q	Q
East South Central .....	Q	Q	Q	Q	Q
West South Central .....	Q	Q	Q	Q	Q
West .....	22	1,207	Q	98	724
Mountain .....	9	Q	Q	Q	Q
Pacific .....	Q	Q	Q	Q	Q

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	Number of Buildings (thousand)	Floorspace (million square feet)	Floorspace per Building (thousand square feet)	Total (trillion Btu)	Total (million dollars)
<b>Climate Zone: 45-Year Average</b>					
Under 2,000 CDD and --					
More than 7,000 HDD .....	Q	Q	Q	Q	Q
5,500-7,000 HDD .....	22	1,743	78	160	1,219
4,000-5,499 HDD .....	Q	2,443	54	166	1,492
Fewer than 4,000 HDD .....	14	875	63	34	314
2,000 CDD or More and --					
Fewer than 4,000 HDD .....	Q	Q	Q	Q	Q
<b>Workers (main shift)</b>					
Fewer than 5 .....	Q	Q	Q	Q	Q
5 to 9 .....	Q	Q	Q	Q	Q
10 to 19 .....	Q	Q	Q	Q	Q
20 to 49 .....	12	544	Q	45	Q
50 to 99 .....	19	696	37	57	485
100 to 249 .....	9	1,052	123	79	671
250 or More .....	7	2,431	346	138	1,185
<b>Weekly Operating Hours</b>					
39 or Fewer .....	Q	Q	Q	Q	Q
40 to 48 .....	Q	796	20	55	Q
49 to 60 .....	Q	945	52	57	466
61 to 84 .....	17	943	54	73	605
85 to 167 .....	14	915	66	73	516
Open Continuously .....	26	2,254	87	173	1,449
<b>Ownership and Occupancy</b>					
Nongovernment Owned .....	67	3,333	50	250	2,110
Owner Occupied .....	53	2,907	55	226	1,848
Nonowner Occupied .....	Q	Q	Q	Q	Q
Unoccupied.....	N	N	N	N	N
Government Owned .....	50	2,559	51	184	1,454
Federal .....	Q	827	73	55	336
State .....	20	1,187	60	96	828
Local .....	Q	Q	Q	Q	Q
<b>Vacancy Status</b>					
Completely Vacant.....	N	N	N	N	N
Mostly Vacant .....	Q	Q	Q	Q	Q
Partially Vacant .....	Q	1,311	57	71	737
Not At All Vacant .....	94	4,570	48	362	2,824
<b>Number of Establishments</b>					
One .....	101	4,149	41	347	2,680
2 to 5 .....	7	559	83	33	Q
6 to 10 .....	Q	Q	Q	Q	Q
11 to 20 .....	Q	Q	Q	Q	Q
More than 20 .....	1	681	517	33	379
<b>Energy Sources (more than one may apply)</b>					
Electricity .....	117	5,891	50	433	3,564
Natural Gas .....	Q	2,683	51	182	1,461
Fuel Oil .....	8	1,839	Q	107	948
District Heat .....	117	5,891	50	433	3,564
District Chilled Water .....	43	2,354	54	185	1,349
Propane .....	Q	Q	Q	Q	Q
Other .....	Q	Q	Q	Q	Q

**Table C25. Total District Heat Consumption and Expenditures, 1999**

	All Buildings Using District Heat			District Heat Consumption	District Heat Expenditures
	Number of Buildings (thousand)	Floorspace (million square feet)	Floorspace per Building (thousand square feet)	Total (trillion Btu)	Total (million dollars)
<b>Space-Heating Energy Source</b>					
District Heat .....	96	5,534	58	412	3,371
District Heat Main .....	77	5,077	66	402	3,277
District Heat Secondary .....	Q	Q	Q	Q	Q
Other Excluding District Heat.....	Q	Q	Q	Q	Q
Buildings without Heating .....	Q	Q	Q	Q	Q
<b>Primary Space-Heating Energy Source</b>					
Electricity .....	Q	Q	Q	Q	Q
Natural Gas .....	Q	Q	Q	Q	Q
Fuel Oil .....	Q	Q	Q	Q	Q
District Heat .....	77	5,077	66	402	3,277
Propane.....	N	N	N	N	N
Other.....	N	N	N	N	N
<b>Cooling Energy Source</b>					
District Heat .....	Q	Q	Q	Q	Q
Other Excluding District Heat.....	96	4,691	49	337	2,703
Buildings without Cooling .....	Q	726	36	Q	Q
<b>Water-Heating Energy Source</b>					
District Heat .....	62	4,182	67	341	2,868
Other Excluding District Heat .....	Q	1,119	28	50	Q
Buildings without Water Heating .....	Q	Q	Q	Q	Q
<b>Cooking Energy Source</b>					
District Heat .....	9	815	88	53	Q
Other Excluding District Heat.....	19	1,672	89	96	814
Buildings without Cooking .....	89	3,404	38	285	2,284
<b>Energy End Uses (more than one may apply)</b>					
Buildings with Space Heating .....	116	5,862	51	431	3,556
Buildings with Cooling .....	97	5,165	53	369	3,028
Buildings with Water Heating .....	101	5,301	52	392	3,283
Buildings with Cooking .....	28	2,487	88	149	1,279
Buildings with Manufacturing .....	Q	Q	Q	Q	Q
Buildings with Electricity .....	15	2,083	137	139	1,159
<b>Percent of Floorspace Heated</b>					
Not Heated .....	Q	Q	Q	Q	Q
1 to 50 .....	Q	Q	Q	Q	Q
51 to 99 .....	Q	986	46	57	534
100 .....	90	4,708	52	371	2,990
<b>Heating Equipment (more than one may apply)</b>					
Heat Pumps .....	Q	Q	Q	Q	Q
Furnaces .....	Q	Q	Q	Q	Q
Individual Space Heaters .....	12	1,314	112	79	697
District Heat .....	96	5,534	58	412	3,371
Boilers .....	Q	Q	Q	Q	Q
Packaged Heating Units .....	20	847	42	49	459
Other .....	Q	Q	Q	Q	Q

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	All Buildings Using District Heat			District Heat Consumption	District Heat Expenditures
	Number of Buildings (thousand)	Floorspace (million square feet)	Floorspace per Building (thousand square feet)	Total (trillion Btu)	Total (million dollars)
<b>Water Heating Equipment</b>					
Centralized System .....	84	3,464	41	279	2,261
Distributed System .....	Q	Q	Q	Q	Q
Combination of Centralized and Distributed System .....	11	1,142	102	72	665

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: \* Statistics for the "energy end uses" represent consumption in buildings that have the end use, not consumption for a particular fuel for a particular end use. \* 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.

**Table C26. District Heat Consumption and Expenditure Intensities, 1999**

	District Heat Consumption			District Heat Expenditures		
	per Building (million Btu)	per Square Foot (thousand Btu)	per Worker (million Btu)	per Building (thousand dollars)	per Square Foot (dollars)	per Thousand Pounds (dollars)
<b>All Buildings</b> .....	3,692	73.55	50.1	30.4	0.60	8.22
<b>Building Floorspace (Square Feet)</b>						
1,001 to 5,000 .....	Q	Q	Q	Q	Q	Q
5,001 to 10,000 .....	Q	Q	Q	Q	Q	Q
10,001 to 25,000 .....	Q	Q	Q	Q	Q	Q
25,001 to 50,000 .....	3,272	92.85	129.6	26.5	0.75	8.10
50,001 to 100,000 .....	7,466	104.03	84.9	51.3	0.72	6.87
100,001 to 200,000 .....	10,653	79.80	52.2	88.3	0.66	8.29
200,001 to 500,000 .....	17,898	57.03	33.8	157.7	0.50	8.81
Over 500,000 .....	47,449	49.20	30.8	437.9	0.45	9.23
<b>Principal Building Activity</b>						
Education .....	3,151	100.60	87.3	23.8	0.76	7.54
Food Sales .....	Q	Q	Q	Q	Q	Q
Food Service .....	Q	Q	Q	Q	Q	Q
Health Care .....	13,465	62.10	35.4	Q	Q	Q
Inpatient .....	Q	Q	Q	Q	Q	Q
Outpatient .....	Q	Q	Q	Q	Q	Q
Lodging .....	3,658	107.51	Q	26.0	0.77	7.12
Mercantile .....	Q	Q	Q	Q	Q	Q
Retail (Other Than Mall) .....	Q	Q	Q	Q	Q	Q
Office .....	3,655	48.15	18.6	35.1	0.46	9.59
Public Assembly .....	3,853	69.86	147.9	Q	0.57	8.21
Public Order and Safety .....	Q	Q	Q	Q	Q	Q
Religious Worship .....	Q	Q	Q	Q	Q	Q
Service .....	Q	Q	Q	Q	Q	Q
Warehouse and Storage .....	Q	Q	Q	Q	Q	Q
Other .....	Q	Q	Q	Q	Q	Q
Vacant .....	Q	Q	Q	Q	Q	Q
<b>Year Constructed</b>						
1919 or Before .....	1,899	76.33	51.1	13.7	0.55	7.22
1920 to 1945 .....	6,475	Q	Q	57.8	0.70	8.92
1946 to 1959 .....	3,653	70.06	45.0	31.3	0.60	8.55
1960 to 1969 .....	5,547	70.90	49.3	45.4	0.58	8.18
1970 to 1979 .....	3,619	87.44	49.1	28.3	0.68	7.81
1980 to 1989 .....	Q	68.93	36.3	Q	Q	Q
1990 to 1999 .....	Q	Q	Q	Q	Q	Q
<b>Census Region and Division</b>						
Northeast .....	4,371	71.91	44.8	40.5	0.67	9.26
New England .....	Q	Q	Q	Q	Q	Q
Middle Atlantic .....	4,127	70.49	43.0	39.3	0.67	9.53
Midwest .....	5,291	87.08	71.2	40.8	0.67	7.71
East North Central .....	Q	100.48	90.3	Q	0.77	7.70
West North Central .....	3,806	72.25	53.8	Q	0.56	7.74
South .....	1,708	52.66	38.4	14.2	0.44	8.32
South Atlantic .....	Q	Q	Q	Q	Q	Q
East South Central .....	Q	Q	Q	Q	Q	Q
West South Central .....	Q	Q	Q	Q	Q	Q
West .....	Q	80.99	48.6	Q	0.60	7.40
Mountain .....	Q	85.64	Q	Q	0.55	6.43
Pacific .....	Q	Q	Q	Q	Q	Q

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	per Building (million Btu)	per Square Foot (thousand Btu)	per Worker (million Btu)	per Building (thousand dollars)	per Square Foot (dollars)	per Thousand Pounds (dollars)
<b>Climate Zone: 45-Year Average</b>						
Under 2,000 CDD and --						
More than 7,000 HDD .....	Q	Q	Q	Q	Q	Q
5,500-7,000 HDD .....	7,163	91.65	85.0	54.7	0.70	7.63
4,000-5,499 HDD .....	3,641	67.90	40.0	32.8	0.61	9.00
Fewer than 4,000 HDD .....	2,412	38.49	26.6	22.5	0.36	9.33
2,000 CDD or More and --						
Fewer than 4,000 HDD .....	Q	Q	Q	Q	Q	Q
<b>Workers (main shift)</b>						
Fewer than 5 .....	Q	Q	Q	Q	Q	Q
5 to 9 .....	Q	Q	Q	Q	Q	Q
10 to 19 .....	Q	Q	Q	Q	Q	Q
20 to 49 .....	Q	83.09	Q	Q	Q	Q
50 to 99 .....	3,023	82.51	49.9	25.5	0.70	8.44
100 to 249 .....	9,155	74.70	64.3	78.2	0.64	8.54
250 or More .....	19,617	56.62	24.7	168.9	0.49	8.61
<b>Weekly Operating Hours</b>						
39 or Fewer .....	Q	Q	Q	Q	Q	Q
40 to 48 .....	1,356	69.11	55.6	Q	Q	Q
49 to 60 .....	3,114	59.93	25.6	25.6	0.49	8.23
61 to 84 .....	4,179	77.06	44.8	34.8	0.64	8.33
85 to 167 .....	5,264	80.08	67.6	37.0	0.56	7.04
Open Continuously .....	6,666	76.70	63.0	55.9	0.64	8.38
<b>Ownership and Occupancy</b>						
Nongovernment Owned .....	3,709	74.91	47.0	31.3	0.63	8.45
Owner Occupied .....	4,266	77.84	51.1	34.8	0.64	8.17
Nonowner Occupied .....	Q	Q	Q	Q	Q	Q
Unoccupied.....	N	N	N	N	N	N
Government Owned .....	3,668	71.78	54.9	29.0	0.57	7.92
Federal .....	4,826	66.48	35.1	29.5	0.41	6.12
State .....	4,813	80.51	90.4	41.7	0.70	8.67
Local .....	Q	Q	Q	Q	Q	Q
<b>Vacancy Status</b>						
Completely Vacant.....	N	N	N	N	N	N
Mostly Vacant .....	Q	Q	Q	Q	Q	Q
Partially Vacant .....	3,104	54.03	34.0	32.3	0.56	10.41
Not At All Vacant .....	3,837	79.27	55.1	29.9	0.62	7.80
<b>Number of Establishments</b>						
One .....	3,448	83.73	65.5	26.6	0.65	7.71
2 to 5 .....	4,928	59.66	42.8	Q	Q	Q
6 to 10 .....	Q	Q	Q	Q	Q	Q
11 to 20 .....	Q	Q	Q	Q	Q	Q
More than 20 .....	24,895	48.20	24.5	287.4	0.56	11.54
<b>Energy Sources (more than one may apply)</b>						
Electricity .....	3,692	73.55	50.1	30.4	0.60	8.22
Natural Gas .....	3,479	67.90	43.3	27.9	0.54	8.02
Fuel Oil .....	13,995	58.04	29.9	124.3	0.52	8.88
District Heat .....	3,692	73.55	50.1	30.4	0.60	8.22
District Chilled Water .....	4,272	78.43	47.3	31.2	0.57	7.30
Propane .....	Q	Q	Q	Q	Q	Q
Other .....	Q	Q	Q	Q	Q	Q

**Table C26. District Heat Consumption and Expenditure Intensities, 1999**

	District Heat Consumption			District Heat Expenditures		
	per Building (million Btu)	per Square Foot (thousand Btu)	per Worker (million Btu)	per Building (thousand dollars)	per Square Foot (dollars)	per Thousand Pounds (dollars)
<b>Space-Heating Energy Source</b>						
District Heat .....	4,294	74.45	50.8	35.1	0.61	8.18
District Heat Main .....	5,233	79.25	57.4	42.6	0.65	8.14
District Heat Secondary .....	Q	Q	Q	Q	Q	Q
Other Excluding District Heat.....	Q	Q	Q	Q	Q	Q
Buildings without Heating .....	Q	Q	Q	Q	Q	Q
<b>Primary Space-Heating Energy Source</b>						
Electricity .....	Q	Q	Q	Q	Q	Q
Natural Gas .....	Q	Q	Q	Q	Q	Q
Fuel Oil .....	Q	Q	Q	Q	Q	Q
District Heat .....	5,233	79.25	57.4	42.6	0.65	8.14
Propane.....	N	N	N	N	N	N
Other.....	N	N	N	N	N	N
<b>Cooling Energy Source</b>						
District Heat .....	Q	Q	Q	Q	Q	Q
Other Excluding District Heat.....	3,510	71.86	46.0	28.2	0.58	8.02
Buildings without Cooling .....	Q	88.92	258.7	Q	Q	Q
<b>Water-Heating Energy Source</b>						
District Heat .....	5,505	81.60	58.1	46.3	0.69	8.40
Other Excluding District Heat .....	1,279	44.98	27.0	10.6	0.37	8.25
Buildings without Water Heating .....	Q	Q	Q	Q	Q	Q
<b>Cooking Energy Source</b>						
District Heat .....	5,736	65.34	41.4	Q	Q	Q
Other Excluding District Heat.....	5,068	57.12	33.4	43.2	0.49	8.52
Buildings without Cooking .....	3,188	83.59	63.2	25.6	0.67	8.03
<b>Energy End Uses (more than one may apply)</b>						
Buildings with Space Heating .....	3,718	73.53	50.2	30.7	0.61	8.25
Buildings with Cooling .....	3,789	71.39	43.9	31.1	0.59	8.21
Buildings with Water Heating .....	3,865	73.87	50.6	32.4	0.62	8.38
Buildings with Cooking .....	5,288	59.81	35.9	45.5	0.51	8.60
Buildings with Manufacturing .....	Q	Q	Q	Q	Q	Q
Buildings with Electricity .....	Q	Q	Q	Q	Q	Q
Generation .....	9,187	66.82	36.6	76.5	0.56	8.33
<b>Percent of Floorspace Heated</b>						
Not Heated .....	Q	Q	Q	Q	Q	Q
1 to 50 .....	Q	Q	Q	Q	Q	Q
51 to 99 .....	2,639	57.77	38.4	24.8	0.54	9.38
100 .....	4,130	78.77	53.1	33.3	0.64	8.06
<b>Heating Equipment (more than one may apply)</b>						
Heat Pumps .....	Q	Q	Q	Q	Q	Q
Furnaces .....	Q	Q	Q	Q	Q	Q
Individual Space Heaters .....	6,747	60.15	32.3	59.5	0.53	8.81
District Heat .....	4,294	74.45	50.8	35.1	0.61	8.18
Boilers .....	Q	Q	Q	Q	Q	Q
Packaged Heating Units .....	2,407	57.50	45.1	22.7	0.54	9.42
Other .....	Q	Q	Q	Q	Q	Q

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<b>Water Heating Equipment</b>						
Centralized System .....	3,343	80.61	58.3	27.1	0.65	8.10
Distributed System .....	Q	Q	Q	Q	Q	Q
Combination of Centralized and Distributed System .....	6,437	63.28	34.4	59.2	0.58	9.20

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: \* Statistics for the "energy end uses" represent consumption in buildings that have the end use, not consumption for a particular fuel for a particular end use. \* Due to rounding, data may not sum to totals.

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