

Table C38. District Heat Consumption and Expenditure Intensities for Non-Mall Buildings, 2003

	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)
All Buildings*	9,475	116.44	62.2	108.3	1.33	11.43
Building Floorspace (Square Feet)						
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	Q	Q	Q	Q	Q	Q
50,001 to 100,000	Q	Q	Q	Q	Q	Q
100,001 to 200,000	17,452	118.10	Q	Q	Q	Q
200,001 to 500,000	34,658	121.16	143.2	Q	Q	Q
Over 500,000	85,182	99.92	52.4	911.2	1.07	10.70
Principal Building Activity						
Education	5,223	116.63	Q	Q	Q	Q
Food Sales	N	N	N	N	N	N
Food Service	Q	Q	Q	Q	Q	Q
Health Care	Q	Q	Q	Q	Q	Q
Inpatient	Q	Q	Q	Q	Q	Q
Outpatient	Q	Q	Q	Q	Q	Q
Lodging	Q	Q	Q	Q	Q	Q
Retail (Other Than Mall)	Q	Q	Q	Q	Q	Q
Office	7,933	81.53	35.7	89.4	0.92	11.27
Public Assembly	Q	Q	Q	Q	Q	Q
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
Year Constructed						
Before 1920	Q	Q	Q	Q	Q	Q
1920 to 1945	10,610	107.03	130.0	116.9	1.18	11.02
1946 to 1959	Q	Q	Q	Q	Q	Q
1960 to 1969	8,787	137.56	108.5	Q	Q	Q
1970 to 1979	13,255	131.66	80.8	Q	Q	Q
1980 to 1989	Q	Q	Q	Q	Q	Q
1990 to 1999	Q	Q	Q	Q	Q	Q
2000 to 2003	Q	Q	Q	Q	Q	Q
Census Region and Division						
Northeast	9,423	120.80	67.0	Q	1.57	12.97
New England	Q	Q	Q	Q	Q	Q
Middle Atlantic	Q	Q	Q	Q	Q	Q
Midwest	17,217	136.50	158.8	Q	1.41	10.35
East North Central	25,607	135.33	166.7	Q	Q	Q
West North Central	Q	Q	Q	Q	Q	Q
South	8,547	102.81	33.5	Q	1.17	11.36
South Atlantic	8,059	94.14	Q	Q	Q	Q
East South Central	Q	Q	Q	Q	Q	Q
West South Central	Q	Q	Q	Q	Q	Q
West	Q	Q	Q	Q	Q	Q
Mountain	Q	Q	Q	Q	Q	Q
Pacific	Q	Q	Q	Q	Q	Q

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All Buildings*	9,475	116.44	62.2	108.3	1.33	11.43
Climate Zone: 30-Year Average						
Under 2,000 CDD and --						
More than 7,000 HDD	Q	106.35	123.8	Q	Q	Q
5,500-7,000 HDD	9,453	142.89	132.6	Q	Q	Q
4,000-5,499 HDD	10,354	103.48	54.8	128.9	1.29	12.45
Fewer than 4,000 HDD	7,681	98.14	84.1	Q	Q	Q
2,000 CDD or More and --						
Fewer than 4,000 HDD	Q	Q	Q	Q	Q	Q
Number of Floors						
One	Q	Q	Q	Q	Q	Q
Two	Q	Q	Q	Q	Q	Q
Three	Q	Q	Q	Q	Q	Q
Four to Nine	15,573	124.37	50.3	175.3	1.40	11.26
Ten or More	44,811	90.27	43.9	528.5	1.06	11.79
Number of Workers (main shift)						
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	5,854	143.70	191.2	Q	Q	Q
50 to 99	Q	Q	Q	Q	Q	Q
100 to 249	13,794	118.34	91.9	Q	Q	Q
250 or More	42,936	105.81	30.2	463.4	1.14	10.79
Weekly Operating Hours						
Fewer than 40	Q	Q	Q	Q	Q	Q
40 to 48	Q	Q	Q	Q	Q	Q
49 to 60	9,574	110.41	75.1	111.3	1.28	11.62
61 to 84	6,414	92.92	92.0	Q	Q	Q
85 to 167	10,530	115.52	Q	Q	Q	Q
Open Continuously	18,825	130.78	86.8	Q	1.55	11.84
Ownership and Occupancy						
Nongovernment Owned	10,055	114.95	70.9	111.8	1.28	11.12
Owner Occupied	11,348	129.95	76.9	127.7	1.46	11.26
Nonowner Occupied	Q	Q	Q	Q	Q	Q
Unoccupied	Q	Q	.	Q	Q	Q
Government Owned	9,139	117.42	57.7	106.3	1.37	11.63
Federal	Q	Q	Q	Q	Q	11.62
State	6,986	110.99	36.7	Q	Q	Q
Local	Q	Q	Q	Q	Q	Q
Vacancy Status						
Completely Vacant	Q	Q	Q	Q	Q	Q
Mostly Vacant.....	N	N	N	N	N	N
Partially Vacant	13,117	110.42	53.8	136.8	1.15	10.43
Not At All Vacant	8,535	120.21	64.5	100.5	1.42	11.77
Number of Establishments						
One	8,549	125.34	116.3	97.1	1.42	11.36
2 to 5	10,135	119.61	92.8	Q	Q	Q
6 to 10	Q	Q	Q	Q	Q	Q
11 to 20	Q	Q	Q	Q	Q	Q
More than 20	Q	Q	Q	Q	Q	Q
Currently Unoccupied	Q	Q	Q	Q	Q	Q

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All Buildings*	9,475	116.44	62.2	108.3	1.33	11.43
Predominant Exterior Wall Material						
Brick, Stone or Stucco	7,715	120.66	105.9	89.4	1.40	11.59
Concrete (Block or Poured)	Q	Q	Q	Q	Q	Q
Concrete Panels	Q	Q	Q	Q	Q	Q
Siding or Shingles	Q	Q	Q	Q	Q	Q
Metal Panels	Q	Q	Q	Q	Q	Q
Window Glass	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q
No One Major Type	Q	Q	Q	Q	Q	Q
Predominant Roof Material						
Built-Up	11,269	100.88	66.0	134.7	1.21	11.95
Shingles (Not Wood)	Q	Q	Q	Q	Q	Q
Metal Surfacing	Q	Q	Q	Q	Q	Q
Synthetic or Rubber	9,814	127.60	Q	Q	Q	Q
Slate or Tile	Q	Q	Q	Q	Q	Q
Wooden Materials	Q	Q	Q	Q	Q	Q
Concrete	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q
No One Major Type	Q	Q	Q	Q	Q	Q
Renovations in Buildings Constructed Before 1980 (more than one may apply)						
Any Type of Renovation						
Since 1980	10,177	111.11	70.6	112.1	1.22	11.01
Addition or Annex	Q	Q	Q	Q	Q	Q
Reduction In Floorspace	Q	Q	Q	Q	Q	Q
Cosmetic Improvements	12,076	110.29	66.5	134.5	1.23	11.14
Wall or Roof Replacement	Q	110.32	60.4	Q	1.27	Q
Interior Wall						
Re-Configuration	17,959	113.58	71.2	191.0	1.21	10.64
HVAC Equipment Upgrade	12,723	93.03	58.0	150.5	1.10	11.83
Lighting Upgrade	9,807	110.92	75.6	106.8	1.21	10.89
Window Replacement	Q	Q	Q	Q	Q	Q
Plumbing System Upgrade	Q	107.28	59.6	Q	1.26	11.72
Insulation Upgrade	Q	Q	Q	Q	Q	Q
Other Renovation	Q	Q	Q	Q	Q	Q
No Renovations Since 1980	6,959	122.02	137.9	Q	Q	12.17
Building Newer than 1980	14,178	115.89	Q	Q	Q	Q
Energy Sources (more than one may apply)						
Electricity	9,475	116.44	62.2	108.3	1.33	11.43
Natural Gas	Q	124.63	43.8	Q	1.46	11.74
Fuel Oil	40,191	102.33	61.1	444.6	1.13	11.06
District Heat	9,475	116.44	62.2	108.3	1.33	11.43
District Chilled Water	12,509	133.95	47.5	Q	Q	12.03
Propane	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q

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All Buildings*	9,475	116.44	62.2	108.3	1.33	11.43
Space-Heating Energy Sources						
District Heat	9,709	121.82	63.7	111.0	1.39	11.43
District Heat Main	9,746	125.84	63.5	111.9	1.44	11.48
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
Primary Space-Heating Energy Source						
Electricity	Q	Q	Q	Q	Q	Q
Natural Gas	Q	Q	Q	Q	Q	Q
Fuel Oil.....	N	N	N	N	N	N
District Heat	9,746	125.84	63.5	111.9	1.44	11.48
Propane.....	N	N	N	N	N	N
Other.....	N	N	N	N	N	N
Cooling Energy Sources						
District Heat	Q	Q	Q	Q	Q	Q
Other Excluding District Heat	9,102	117.19	53.8	106.1	1.37	11.66
Buildings without Cooling	Q	Q	Q	Q	Q	Q
Water-Heating Energy Sources						
District Heat	12,041	106.49	78.4	135.1	1.19	11.22
Other Excluding District Heat	5,786	125.93	Q	Q	Q	11.81
Bldgs without Water Heating	Q	Q	Q	Q	Q	Q
Cooking Energy Sources						
District Heat	47,088	130.34	99.8	Q	Q	Q
Other Excluding District Heat	Q	106.36	55.2	Q	1.16	10.87
Buildings without Cooking	7,166	117.96	60.6	83.7	1.38	11.69
Energy End Uses (more than one may apply)						
Buildings with Space Heating	9,502	117.81	62.3	108.6	1.35	11.43
Buildings with Cooling	9,726	114.90	52.8	110.6	1.31	11.37
Buildings with Water Heating	8,591	112.97	52.6	98.3	1.29	11.44
Buildings with Cooking	Q	113.68	65.4	Q	1.24	10.95
Buildings with Manufacturing	Q	Q	Q	Q	Q	Q
Buildings with Electricity Generation	34,643	111.97	63.7	404.4	1.31	11.67
Percent of Floorspace Heated						
Not Heated	Q	Q	Q	Q	Q	Q
1 to 50	Q	Q	Q	Q	Q	Q
51 to 99	Q	90.46	57.2	Q	Q	Q
100	9,543	121.88	62.8	110.2	1.41	11.54

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All Buildings*	9,475	116.44	62.2	108.3	1.33	11.43
Heating Equipment (more than one may apply)						
Heat Pumps	Q	Q	Q	Q	Q	Q
Packaged Heat Pumps	Q	Q	Q	Q	Q	Q
Split-System Heat Pumps	Q	Q	Q	Q	Q	Q
Individual Room Heat Pumps	Q	Q	Q	Q	Q	Q
Furnaces	Q	Q	Q	Q	Q	Q
Individual Space Heaters	10,195	82.45	58.3	Q	Q	Q
District Heat	9,685	121.56	63.8	110.7	1.39	11.43
Boilers	Q	Q	Q	Q	Q	Q
Packaged Heating Units	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q
Water Heating Equipment						
Centralized System	6,647	107.14	86.4	75.9	1.22	11.41
Distributed System	Q	Q	Q	Q	Q	Q
Combination of Centralized and Distributed System	13,682	115.22	Q	145.6	1.23	10.64
Energy-Related Space Functions (more than one may apply)						
Commercial Food Preparation	Q	113.68	65.4	Q	1.24	10.95
Activities with Large Amounts of Hot Water	14,656	120.84	86.8	161.3	1.33	11.00
Separate Computer Area	19,658	114.53	68.8	224.9	1.31	11.44
HVAC Conservation Features (more than one may apply)						
Variable Air-Volume System	14,271	121.86	47.8	162.4	1.39	11.38
Economizer Cycle	15,337	109.59	43.7	179.1	1.28	11.68
HVAC Maintenance	10,171	118.71	60.9	116.2	1.36	11.42
Energy Management and Control System (EMCS)	18,226	115.02	76.7	207.1	1.31	11.36
Equipment Usage Reduced When Building Not In Full Use (more than one may apply)^a						
Heating	11,880	113.38	72.8	135.1	1.29	11.37
Cooling	13,500	115.39	46.4	154.5	1.32	11.44
Lighting	8,207	111.90	52.5	91.8	1.25	11.18
Office Equipment	Q	Q	Q	Q	Q	Q

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All Buildings*	9,475	116.44	62.2	108.3	1.33	11.43

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. In the 1999 CBECS, In the 1999 CBECS, there were no responding malls in the sample using district heat.

^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 that use district heat.

Notes: ● Statistics for the "Energy End Uses" category represent total consumption in buildings that have the end use, not consumption specifically for that particular end use. ● 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, Forms EIA-871A, C, and E of the 2003 Commercial Buildings Energy Consumption Survey.