

Table E11. District Heat Consumption (Btu) and Energy Intensities by End Use for Non-Mall Buildings, 2003

	Total District Heat Consumption (trillion Btu)					District Heat Energy Intensity (thousand Btu/square foot)				
	Total	Space Heating	Water Heating	Cooking	Other	Total	Space Heating	Water Heating	Cooking	Other
All Buildings*	634	578	46	1	Q	116.4	106.3	8.4	0.2	Q
Building Floorspace (Square Feet)										
1,001 to 5,000	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
5,001 to 10,000	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
10,001 to 25,000	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
25,001 to 50,000	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
50,001 to 100,000	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
100,001 to 200,000	165	154	10	Q	Q	118.1	109.9	Q	Q	Q
200,001 to 500,000	123	112	11	Q	Q	121.2	110.2	10.5	Q	Q
Over 500,000	169	146	16	Q	Q	99.9	86.2	9.5	Q	Q
Principal Building Activity										
Education	134	122	8	Q	Q	116.6	106.6	6.9	Q	Q
Food Service	N	N	N	N	N	N	N	N	N	N
Health Care	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Inpatient	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Outpatient	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Lodging	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Retail (Other Than Mall).....	Q	Q	(*)	(*)	(*)	Q	Q	(*)	(*)	(*)
Office	128	122	3	Q	Q	81.5	77.6	2.2	Q	Q
Public Assembly	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Public Order and Safety	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Religious Worship	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Service	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Warehouse and Storage	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Vacant	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Year Constructed										
Before 1920	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
1920 to 1945	129	117	7	Q	Q	107.0	96.8	6.1	Q	Q
1946 to 1959	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
1960 to 1969	117	105	Q	Q	Q	137.6	122.5	Q	Q	Q
1970 to 1979	77	66	10	Q	Q	131.7	112.2	16.6	Q	Q
1980 to 1989	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
1990 to 1999	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
2000 to 2003	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Census Region and Division										
Northeast	165	Q	15	Q	Q	120.8	Q	10.6	Q	Q
New England	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Middle Atlantic	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Midwest	225	210	9	Q	Q	136.5	127.5	5.7	Q	Q
East North Central	192	182	5	Q	Q	135.3	128.2	3.7	Q	Q
West North Central	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
South	182	166	14	Q	Q	102.8	94.0	7.9	Q	Q
South Atlantic	117	105	10	Q	Q	94.1	84.8	8.2	Q	Q
East South Central	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
West South Central	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
West	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Mountain	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Pacific	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q

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	Total	Space Heating	Water Heating	Cooking	Other	Total	Space Heating	Water Heating	Cooking	Other
All Buildings*	634	578	46	1	Q	116.4	106.3	8.4	0.2	Q
Climate Zone: 30-Year Average										
Under 2,000 CDD and --										
More than 7,000 HDD	88	80	8	Q	(*)	106.3	96.7	9.4	Q	(*)
5,500-7,000 HDD	255	241	9	Q	Q	142.9	135.0	4.8	Q	Q
4,000-5,499 HDD	140	120	Q	Q	Q	103.5	88.9	12.0	Q	Q
Fewer than 4,000 HDD	101	90	10	Q	(*)	98.1	88.2	9.8	Q	(*)
2,000 CDD or More and --										
Fewer than 4,000 HDD	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Number of Floors										
One	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Two	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Three	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Four to Nine	308	279	23	Q	Q	124.4	112.8	9.5	Q	Q
Ten or More	123	104	16	(*)	Q	90.3	75.9	11.8	0.1	Q
Number of Workers (main shift)										
Fewer than 5	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
5 to 9	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
10 to 19	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
20 to 49	96	87	Q	Q	(*)	143.7	130.3	Q	Q	(*)
50 to 99	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
100 to 249	124	116	6	Q	Q	118.3	110.9	6.2	Q	Q
250 or More	232	201	23	Q	Q	105.8	91.8	10.6	Q	Q
Weekly Operating Hours										
Fewer than 40	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
40 to 48	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
49 to 60	176	173	2	Q	Q	110.4	109.0	1.3	Q	Q
61 to 84	73	66	Q	Q	Q	92.9	83.7	4.5	Q	Q
85 to 167	91	87	4	(*)	Q	115.5	110.4	Q	0.2	Q
Open Continuously	210	171	36	Q	Q	130.8	106.8	22.2	Q	Q
Ownership and Occupancy										
Nongovernment Owned.....	247	221	22	(*)	Q	114.9	102.7	10.1	0.1	2.0
Owner Occupied	185	172	11	Q	Q	129.9	121.4	7.5	Q	Q
Nonowner Occupied	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Unoccupied	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Government Owned	387	358	24	Q	Q	117.4	108.5	7.4	Q	Q
Federal	Q	126	Q	Q	Q	Q	Q	Q	Q	Q
State	188	172	16	Q	Q	111.0	101.3	9.3	Q	Q
Local	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Vacancy Status										
Completely Vacant	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Mostly Vacant.....	N	N	N	N	N	N	N	N	N	N
Partially Vacant	164	150	Q	Q	Q	110.4	101.2	Q	Q	Q
Not At All Vacant	461	419	36	Q	Q	120.2	109.3	9.3	Q	Q
Number of Establishments										
One	384	348	30	Q	Q	125.3	113.6	9.9	Q	Q
2 to 5	156	142	Q	Q	Q	119.6	109.1	Q	Q	Q
6 to 10	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
11 to 20	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
More than 20	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Currently Unoccupied	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q

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	Total	Space Heating	Water Heating	Cooking	Other	Total	Space Heating	Water Heating	Cooking	Other
All Buildings*	634	578	46	1	Q	116.4	106.3	8.4	0.2	Q
Predominant Exterior Wall Material										
Brick, Stone or Stucco	408	373	29	Q	Q	120.7	110.3	8.5	Q	Q
Concrete (Block or Poured)	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Concrete Panels	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Siding or Shingles	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Metal Panels	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Window Glass	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
No One Major Type	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Predominant Roof Material										
Built-Up	263	231	26	Q	Q	100.9	88.7	9.9	Q	Q
Shingles (Not Wood)	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Metal Surfacing	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Synthetic or Rubber	171	153	16	Q	Q	127.6	114.4	11.7	Q	Q
Slate or Tile	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Wooden Materials	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Concrete	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
No One Major Type	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Renovations in Buildings Constructed Before 1980 (more than one may apply)										
Any Type of Renovation										
Since 1980	197	168	21	Q	Q	111.1	94.5	12.0	Q	Q
Addition or Annex	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Reduction In Floorspace	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Cosmetic Improvements.....	143	121	15	Q	Q	110.3	93.2	11.8	Q	Q
Wall or Roof Replacement.....	99	86	10	(*)	Q	110.3	95.8	11.0	Q	Q
Interior Wall										
Re-Configuration	124	101	16	Q	Q	113.6	92.7	14.8	Q	Q
HVAC Equipment Upgrade.....	128	105	18	Q	Q	93.0	76.1	12.8	Q	Q
Lighting Upgrade	157	133	17	Q	Q	110.9	93.8	12.3	Q	Q
Window Replacement	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Plumbing System Upgrade.....	103	87	13	(*)	Q	107.3	90.1	13.8	0.2	Q
Insulation Upgrade	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other Renovation	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
No Renovations Since 1980.....	229	215	13	Q	Q	122.0	114.7	6.9	Q	Q
Building Newer than 1980	208	196	12	Q	Q	115.9	109.0	6.6	Q	Q
Energy Sources (more than one may apply)										
Electricity	634	578	46	1	Q	116.4	106.3	8.4	Q	Q
Natural Gas	305	270	27	Q	Q	124.6	110.5	11.1	Q	Q
Fuel Oil	177	153	20	Q	Q	102.3	88.4	11.7	Q	Q
District Heat	634	578	46	1	Q	116.4	106.3	8.4	0.2	Q
District Chilled Water	309	285	24	Q	Q	133.9	123.4	10.2	Q	Q
Propane	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Space-Heating Energy Source										
District Heat	633	578	45	1	Q	121.8	111.3	8.7	0.3	Q
District Heat Main	618	570	41	Q	Q	125.8	116.2	8.4	Q	1.0
District Heat Secondary	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other Excl District Heat	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Buildings without Heating	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q

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All Buildings*	634	578	46	1	Q	116.4	106.3	8.4	0.2	Q
Primary Space-Heating Energy Source										
Electricity	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Natural Gas	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Fuel Oil.....	N	N	N	N	N	N	N	N	N	N
District Heat	618	570	41	Q	Q	125.8	116.2	8.4	Q	1.0
Propane.....	N	N	N	N	N	N	N	N	N	N
Other.....	N	N	N	N	N	N	N	N	N	N
Cooling Energy Source										
District Heat	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other Excl District Heat	493	455	36	Q	(*)	117.2	108.4	8.6	Q	(*)
Buildings without Cooling	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Water-Heating Energy Source										
District Heat	329	274	46	1	Q	106.5	88.6	14.9	0.4	2.6
Other Excluding District Heat	194	194	(*)	(*)	Q	125.9	125.8	(*)	(*)	Q
Bldgs without Water Heating	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Cooking Energy Source										
District Heat	77	59	13	1	Q	130.3	100.6	21.4	2.2	Q
Other Excl District Heat	142	129	Q	(*)	Q	106.4	96.2	Q	(*)	Q
Buildings without Cooking	415	390	21	(*)	Q	118.0	111.0	6.1	(*)	Q
Energy End Uses (more than one may apply)										
Buildings with Space Heating	634	578	46	1	Q	117.8	107.5	8.5	0.2	Q
Buildings with Cooling	535	484	41	1	Q	114.9	104.0	8.9	0.3	Q
Buildings with Water Heating	523	468	46	1	Q	113.0	101.0	9.9	0.3	Q
Buildings with Cooking	219	188	25	1	Q	113.7	97.5	12.8	0.7	Q
Buildings with Manufacturing	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Buildings with Electricity Generation	237	209	21	Q	Q	112.0	98.5	10.0	Q	Q
Percent of Floorspace Heated										
Not Heated	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
1 to 50	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
51 to 99	57	53	Q	Q	Q	90.5	83.3	6.9	Q	Q
100	575	524	41	Q	Q	121.9	111.1	8.8	Q	Q
Heating Equipment (more than one may apply)										
Heat Pumps	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Packaged Heat Pumps	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Split-System Heat Pumps	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Individual Room Heat Pumps ..	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Furnaces	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Individual Space Heaters	50	45	Q	Q	Q	82.5	74.8	Q	0.1	Q
District Heat	628	574	45	1	Q	121.6	111.1	8.7	0.3	Q
Boilers	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Packaged Heating Units	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Water Heating Equipment										
Centralized System	286	252	30	(*)	Q	107.1	94.3	11.3	Q	Q
Distributed System	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Combination of Centralized and Distributed System	170	153	Q	Q	Q	115.2	103.4	Q	Q	Q

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All Buildings*	634	578	46	1	Q	116.4	106.3	8.4	0.2	Q
Energy-Related Space Functions										
Commercial Food										
Commercial Food Preparation....	219	188	25	1	Q	113.7	97.5	12.8	0.7	Q
Activities with Large										
Amounts of Hot Water	273	233	34	1	Q	120.8	103.1	15.0	0.5	Q
Separate Computer Area	374	332	34	Q	Q	114.5	101.6	10.4	Q	Q
HVAC Conservation Features (more than one may apply)										
Variable Air-Volume System.....	368	330	29	Q	Q	121.9	109.4	9.7	Q	Q
Economizer Cycle	334	297	28	Q	Q	109.6	97.4	9.3	Q	Q
HVAC Maintenance	612	558	45	1	Q	118.7	108.2	8.7	0.2	Q
Energy Management and										
Control System (EMCS)	320	288	25	Q	Q	115.0	103.4	9.0	Q	Q
Equipment Usage Reduced When Building Not In Full Use (more than one may apply)										
Heating	356	324	24	Q	Q	113.4	103.1	7.8	Q	Q
Cooling	390	357	25	Q	Q	115.4	105.7	7.3	Q	Q
Lighting	406	389	10	Q	Q	111.9	107.3	2.9	Q	Q
Office Equipment	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q

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

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

Q=Data withheld because fewer than 20 buildings were sampled for any cell, or because the Relative Standard Error (RSE) was greater than 50 percent for a cell in the "Total" column.

N=No responding cases in sample that used district heat.

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

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