

Table C37. Total district heat consumption and expenditures, 2012

	All buildings using district heat			District heat consumption	District heat expenditures
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (million dollars)
All buildings	48	5,964	124.9	341	6,675
Building floorspace (square feet)					
1,001 to 25,000	16	169	10.7	13	272
25,001 to 50,000	6	213	36.8	17	320
50,001 to 100,000	10	704	68.2	52	870
100,001 to 200,000	9	1,313	146.7	77	1,678
200,001 to 500,000	5	1,565	309.9	88	1,683
Over 500,000	2	2,001	1054.3	94	1,852
Principal building activity					
Education	12	1,155	92.8	65	1,068
Food sales	N	N	N	N	N
Food service	Q	Q	Q	Q	Q
Health care	2	684	333.6	68	1,225
Inpatient	1	576	458.0	62	1,136
Outpatient	Q	Q	Q	Q	Q
Lodging	4	630	156.5	31	667
Mercantile	Q	Q	Q	Q	Q
Retail (other than mall)	Q	Q	Q	Q	Q
Enclosed and strip malls	Q	Q	Q	Q	Q
Office	12	1,794	144.9	76	1,787
Public assembly	7	888	132.5	64	1,106
Public order and safety	Q	Q	Q	Q	Q
Religious worship	N	N	N	N	N
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
Year constructed					
Before 1920	5	540	106.8	25	523
1920 to 1945	7	888	122.7	40	898
1946 to 1959	5	446	89.7	29	538
1960 to 1969	9	1,002	111.9	66	1,185
1970 to 1979	10	930	96.1	73	1,655
1980 to 1989	2	449	257.8	17	321
1990 to 1999	3	642	218.8	23	420
2000 to 2003	4	Q	116.7	Q	Q
2004 to 2007	2	Q	Q	23	Q
2008 to 2012	Q	Q	Q	Q	Q

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All buildings	48	5,964	124.9	341	6,675
Census region and division					
Northeast	16	1,981	127.8	119	3,049
New England	Q	Q	Q	Q	Q
Middle Atlantic	9	1,628	184.9	81	2,414
Midwest	7	906	134.2	58	912
East North Central	3	574	192.9	32	461
West North Central	4	332	87.9	Q	Q
South	18	2,191	119.5	119	1,960
South Atlantic	9	1,159	135.9	59	1,013
East South Central	Q	Q	88.1	Q	Q
West South Central	5	646	119.2	Q	557
West	7	886	123.7	45	753
Mountain	Q	482	Q	23	Q
Pacific	5	404	76.1	22	404
Climate region¹					
Very cold/Cold	18	1,926	109.8	137	2,271
Mixed-humid	20	3,012	147.2	152	3,589
Mixed-dry/Hot-dry	4	Q	138.1	Q	Q
Hot-humid	Q	374	83.2	18	319
Marine	Q	Q	Q	Q	Q
Number of floors					
One	Q	Q	Q	Q	Q
Two	11	Q	44.5	Q	Q
Three	10	544	56.7	47	784
Four to nine	18	2,830	160.5	173	2,973
Ten or more	3	1,900	564.0	77	1,834
Number of workers (main shift)					
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	11	623	56.8	43	813
50 to 99	7	669	93.3	38	585
100 to 249	7	1,096	159.8	67	1,040
250 or more	7	3,082	472.6	171	3,808
Weekly operating hours					
Fewer than 40	Q	Q	Q	Q	Q
40 to 48	7	403	56.8	19	369
49 to 60	11	1,099	95.9	50	869
61 to 84	9	844	97.6	31	607
85 to 167	6	631	98.3	58	1,072
Open continuously	11	2,815	245.6	180	3,722

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All buildings	48	5,964	124.9	341	6,675
Ownership and occupancy					
Nongovernment owned	22	3,135	145.6	168	3,244
Owner occupied	13	1,842	139.5	115	1,997
Leased to tenant(s)	Q	730	Q	25	649
Owner occupied and leased	2	557	237.6	27	597
Unoccupied	Q	Q	Q	Q	Q
Government owned	26	2,829	107.9	173	3,431
Federal	1	708	647.1	27	550
State	18	1,538	84.0	105	2,023
Local	7	584	85.6	41	858
Party responsible for operation and maintenance of energy systems					
Building owner	46	5,776	126.9	324	6,273
Business owner or tenant	Q	Q	Q	Q	Q
Property management	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q
Provider of direct input on energy-related equipment purchases					
Building owner	46	5,733	125.8	325	6,263
Business owner or tenant	Q	Q	Q	Q	Q
Property management	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q
Number of establishments					
One	36	3,410	95.2	208	3,958
2 to 5	8	1,457	180.0	98	1,940
6 to 10	Q	357	232.3	11	267
11 to 20	Q	Q	Q	Q	Q
More than 20	1	447	771.9	15	315
Currently unoccupied	Q	Q	Q	Q	Q
Predominant exterior wall material					
Brick, stone, or stucco	32	3,423	107.9	203	3,569
Concrete (block or poured)	9	1,166	134.8	56	1,506
Concrete panels	2	730	321.9	38	747
Siding or shingles	Q	Q	Q	Q	Q
Metal panels	Q	Q	Q	Q	Q
Window glass	Q	214	Q	13	199
Other	Q	Q	Q	Q	Q
No one major type	Q	Q	Q	Q	Q

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All buildings	48	5,964	124.9	341	6,675
Predominant roof material					
Metal surfacing	Q	Q	Q	Q	Q
Synthetic or rubber	19	1,958	104.3	112	2,104
Built-up	13	1,893	145.1	98	2,357
Slate or tile shingles	6	Q	131.9	Q	775
Wooden materials (including shingles)	Q	Q	Q	Q	Q
Asphalt, fiberglass, or other shingles	5	552	101.9	40	768
Concrete	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q
No one major type	Q	Q	Q	Q	Q
Roof characteristics					
Roof tilt					
Flat	34	4,172	121.6	225	4,754
Shallow pitch	7	1,120	154.6	64	1,057
Steeper pitch	6	672	108.4	Q	863
Cool roof	10	1,779	177.0	94	2,187
Renovations in buildings constructed before 2008 (more than one may apply)					
Any type of renovation	27	3,993	145.7	240	4,905
Addition or annex	4	1,256	286.9	91	1,725
Reduction in floorspace	Q	Q	Q	Q	Q
Roof replacement	12	2,021	167.3	126	2,829
Exterior wall replacement	1	369	454.4	18	397
Interior wall reconfiguration	14	2,600	186.6	157	3,075
Window replacement	6	1,447	228.7	68	1,483
HVAC equipment upgrade	17	3,005	181.5	177	3,934
Lighting upgrade	18	3,055	168.8	180	3,279
Electrical upgrade	11	2,051	190.6	116	2,361
Plumbing system upgrade	8	1,724	213.5	90	1,852
Insulation upgrade	6	1,070	172.1	60	1,132
Fire, safety, or security upgrade	12	2,092	175.2	115	2,288
Structural upgrade	Q	697	Q	29	528
Other	Q	Q	Q	Q	Q
No renovations	19	1,770	92.9	87	1,499
Buildings constructed 2008 or later	Q	Q	Q	Q	Q

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All buildings	48	5,964	124.9	341	6,675
Energy sources (more than one may apply)					
Electricity	48	5,964	124.9	341	6,675
Natural gas	17	2,860	168.1	173	3,541
Fuel oil	10	3,110	307.5	171	3,319
District heat	48	5,964	124.9	341	6,675
District chilled water	26	3,730	144.5	236	4,417
Propane	Q	Q	Q	Q	Q
Other	1	335	265.1	15	259
Space-heating energy sources					
District heat	48	5,925	124.3	340	6,656
District heat main	47	5,797	122.9	338	6,627
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
Primary space-heating energy source					
Electricity	Q	Q	Q	Q	Q
Natural gas	Q	Q	Q	Q	Q
Fuel oil	Q	Q	Q	Q	Q
District heat	47	5,797	122.9	338	6,627
Propane	N	N	N	N	N
Other	N	N	N	N	N
Cooling energy sources					
District heat	1	251	269.9	23	570
Other excluding district heat	43	5,651	131.1	314	6,064
Buildings without cooling	Q	Q	Q	Q	Q
Water-heating energy sources					
District heat	25	4,551	179.7	279	5,437
Other excluding district heat	19	1,271	65.7	57	1,099
Buildings without water heating	Q	Q	Q	Q	Q
Cooking energy sources					
District heat	Q	942	Q	77	1,706
Other excluding district heat	10	2,212	231.1	94	1,868
Buildings without cooking	34	2,810	82.7	170	3,101

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All buildings	48	5,964	124.9	341	6,675
Energy end uses (more than one may apply)					
Buildings with space heating	48	5,962	124.9	341	6,673
Buildings with cooling	44	5,903	134.0	337	6,634
Buildings with water heating	45	5,822	130.4	336	6,537
Buildings with cooking	14	3,154	228.7	171	3,574
Buildings with manufacturing	Q	Q	Q	Q	Q
Buildings with electricity generation	15	3,749	248.2	208	3,879
Percent of floorspace heated					
Not heated	Q	Q	Q	Q	Q
1 to 50	Q	Q	Q	Q	Q
51 to 99	7	1,126	168.2	39	901
100	40	4,720	117.1	300	5,758
Heating equipment (more than one may apply)					
Heat pumps	3	556	210.3	27	536
Furnaces	Q	Q	Q	Q	Q
Individual space heaters	9	1,354	158.2	63	1,207
District heat	48	5,925	124.3	340	6,656
Boilers	Q	Q	Q	Q	Q
Packaged heating units	3	742	213.3	45	865
Other	Q	Q	Q	Q	Q
Water-heating equipment					
Centralized system	30	3,596	119.0	227	4,357
Distributed system	6	501	81.9	23	539
Combination of centralized and distributed system	8	1,725	207.5	86	1,641
Food preparation or serving areas in non-food service buildings (more than one may apply)					
Snack bar or concession stand	3	1,613	513.4	81	1,489
Fast food or small restaurant	2	1,195	527.7	61	1,142
Cafeteria or large restaurant	6	1,828	319.1	105	2,269
Commercial kitchen/food preparation area	4	1,562	387.2	97	2,170
Small kitchen area	3	1,138	362.6	55	1,001
HVAC conservation features (more than one may apply)					
Economizer cycle	23	4,090	181.3	245	5,088
Regular HVAC maintenance	41	5,630	138.8	319	6,375
Building automation system (BAS) ²	30	5,006	169.0	266	5,023

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All buildings	48	5,964	124.9	341	6,675
Equipment usage reduced when building not in full use (more than one may apply)					
Heating	32	4,027	124.2	208	4,494
Cooling	31	4,045	129.7	209	4,419
Lighting	45	5,507	122.9	318	6,240

¹These climate regions were created by the Building America program, sponsored by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE).

²In earlier CBECS publications, BAS was referred to as *Energy Management and Control System (EMCS)*.

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

N = No cases in reporting sample.

Notes: • Because of rounding, data may not sum to totals. • See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from <http://www.eia.gov/consumption/commercial/data/2012/> • 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.

Source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Forms EIA-871A and D of the 2012 Commercial Buildings Energy Consumption Survey.