

Table C33. Total fuel oil consumption and expenditures, 2012

	All buildings using fuel oil			Fuel oil expenditures		
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (million gallons)	Total (million dollars)
All buildings	467	20,200	43.3	134	974	3,230
Building floorspace (square feet)						
1,001 to 5,000	204	604	3.0	21	151	522
5,001 to 10,000	74	559	7.6	10	74	253
10,001 to 25,000	67	1,123	16.7	20	147	494
25,001 to 50,000	39	1,490	38.3	14	102	329
50,001 to 100,000	39	2,822	71.5	23	171	559
100,001 to 200,000	19	2,858	148.6	20	147	461
200,001 to 500,000	18	5,370	303.4	14	98	329
Over 500,000	6	5,374	924.0	12	84	284
Principal building activity						
Education	30	2,185	71.9	28	205	658
Food sales	Q	Q	Q	Q	Q	Q
Food service	Q	Q	Q	Q	Q	Q
Health care	23	2,776	118.5	20	142	444
Inpatient	9	2,257	264.4	16	117	362
Outpatient	15	520	34.9	Q	Q	Q
Lodging	28	2,051	74.0	8	61	204
Mercantile	44	1,119	25.6	9	69	241
Retail (other than mall)	37	454	12.3	7	53	188
Enclosed and strip malls	7	665	97.8	Q	Q	Q
Office	86	5,328	62.2	18	131	449
Public assembly	27	1,663	Q	7	48	160
Public order and safety	34	908	26.9	2	17	59
Religious worship	23	391	16.6	5	39	134
Service	86	733	8.6	16	118	394
Warehouse and storage	26	1,773	68.1	5	38	129
Other	28	738	26.5	10	71	243
Vacant	Q	Q	Q	Q	Q	Q
Year constructed						
Before 1920	56	1,099	19.7	16	119	398
1920 to 1945	44	1,447	32.8	14	105	355
1946 to 1959	53	1,530	28.9	18	133	428
1960 to 1969	75	2,407	32.2	20	144	478
1970 to 1979	58	2,614	45.1	16	118	383
1980 to 1989	50	3,806	75.5	16	114	385
1990 to 1999	51	3,201	62.4	14	98	330
2000 to 2003	35	1,467	42.4	10	75	253
2004 to 2007	18	1,497	82.0	3	22	74
2008 to 2012	27	1,133	42.7	6	46	145

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All buildings	467	20,200	43.3	134	974	3,230
Census region and division						
Northeast	217	6,079	28.1	90	652	2,146
New England	115	1,866	16.3	47	344	1,119
Middle Atlantic	102	4,213	41.4	42	308	1,027
Midwest	77	3,935	51.1	15	108	367
East North Central	46	2,619	57.3	10	70	237
West North Central	31	1,316	42.1	5	38	130
South	131	7,051	54.0	23	167	553
South Atlantic	69	4,419	64.0	16	118	387
East South Central	30	797	27.0	3	21	73
West South Central	32	1,835	57.5	4	28	94
West	43	3,135	73.6	7	48	164
Mountain	8	1,092	Q	Q	Q	Q
Pacific	35	2,043	59.2	5	34	117
Climate region¹						
Very cold/Cold	271	8,008	29.6	81	592	1,967
Mixed-humid	131	7,287	55.5	43	314	1,043
Mixed-dry/Hot-dry	22	1,605	72.7	2	18	62
Hot-humid	36	2,597	72.6	6	43	133
Marine	7	703	100.0	1	8	26
Number of floors						
One	256	4,139	16.1	42	306	1,009
Two	105	3,375	32.0	32	233	783
Three	58	2,091	36.2	23	167	553
Four to nine	38	6,246	164.6	28	207	679
Ten or more	9	4,349	477.7	8	62	207
Number of workers (main shift)						
Fewer than 5	214	1,489	7.0	31	227	767
5 to 9	73	717	9.8	9	65	222
10 to 19	45	765	17.0	11	83	270
20 to 49	44	1,824	41.2	17	122	409
50 to 99	39	3,137	79.6	21	153	514
100 to 249	30	4,040	136.5	22	161	526
250 or more	21	8,229	389.8	22	162	523
Weekly operating hours						
Fewer than 40	58	538	9.3	10	70	241
40 to 48	125	2,668	21.3	27	194	635
49 to 60	102	3,910	38.4	25	181	604
61 to 84	49	3,104	63.4	20	143	477
85 to 167	30	1,868	62.0	9	64	211
Open continuously	102	8,113	79.2	44	322	1,062

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All buildings	467	20,200	43.3	134	974	3,230
Ownership and occupancy						
Nongovernment owned	365	14,057	38.5	91	663	2,224
Owner occupied	223	6,308	28.3	56	411	1,372
Leased to tenant(s)	108	4,749	43.8	23	171	578
Owner occupied and leased	29	2,928	101.6	11	79	267
Unoccupied	Q	Q	Q	Q	Q	Q
Government owned	101	6,143	60.6	43	311	1,007
Federal	Q	1,083	Q	Q	Q	Q
State	15	1,400	95.8	5	39	125
Local	83	3,660	44.2	34	250	808
Party responsible for operation and maintenance of energy systems						
Building owner	412	18,105	43.9	121	879	2,911
Business owner or tenant	41	1,420	34.5	10	70	233
Property management	3	454	Q	1	7	24
Other	Q	Q	Q	Q	Q	Q
Provider of direct input on energy-related equipment purchases						
Building owner	418	18,292	43.8	123	895	2,964
Business owner or tenant	29	1,142	39.1	6	47	156
Property management	4	353	83.1	2	12	41
Other	15	414	26.9	3	20	69
Number of establishments						
One	356	11,534	32.4	98	716	2,368
2 to 5	89	4,944	55.7	25	179	589
6 to 10	7	873	129.1	5	38	124
11 to 20	4	884	203.4	1	8	26
More than 20	5	1,893	391.8	4	32	116
Currently unoccupied	Q	Q	Q	Q	Q	Q
Predominant exterior wall material						
Brick, stone, or stucco	156	8,798	56.3	59	432	1,418
Concrete (block or poured)	106	4,462	42.2	28	203	678
Concrete panels	12	3,015	245.5	7	51	163
Siding or shingles	108	1,092	10.1	21	154	525
Metal panels	73	1,195	16.4	13	98	330
Window glass	4	865	221.8	2	16	53
Other	Q	491	Q	Q	Q	Q
No one major type	Q	Q	Q	Q	Q	Q

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All buildings	467	20,200	43.3	134	974	3,230
Predominant roof material						
Metal surfacing	124	2,024	16.4	23	167	562
Synthetic or rubber	104	7,980	76.9	40	288	958
Built-up	63	5,780	92.2	31	229	748
Slate or tile shingles	18	724	40.6	4	32	117
Wooden materials (including shingles)	Q	Q	Q	Q	Q	Q
Asphalt, fiberglass, or other shingles	139	2,569	18.5	27	195	655
Concrete	3	620	195.7	3	22	60
Other	Q	Q	Q	Q	Q	Q
No one major type	Q	Q	Q	Q	Q	Q
Roof characteristics						
Roof tilt						
Flat	171	14,380	84.3	68	496	1,644
Shallow pitch	155	3,891	25.1	34	248	822
Steeper pitch	141	1,929	13.7	32	230	764
Cool roof	80	6,090	76.6	33	237	791
Renovations in buildings constructed before 2008 (more than one may apply)						
Any type of renovation	233	12,546	53.8	80	584	1,934
Addition or annex	65	4,629	71.6	34	248	795
Reduction in floorspace	9	549	Q	Q	Q	Q
Roof replacement	130	7,374	56.7	55	398	1,313
Exterior wall replacement	22	1,636	72.8	11	82	263
Interior wall reconfiguration	107	7,620	71.4	39	283	920
Window replacement	70	4,239	60.4	35	255	824
HVAC equipment upgrade	112	8,810	78.7	48	350	1,151
Lighting upgrade	105	8,632	82.0	52	378	1,245
Electrical upgrade	82	5,588	68.4	38	277	911
Plumbing system upgrade	69	4,912	70.8	33	243	818
Insulation upgrade	34	2,510	74.0	13	96	320
Fire, safety, or security upgrade	79	6,775	86.1	39	283	932
Structural upgrade	23	1,737	75.0	9	68	226
Other	Q	371	Q	Q	Q	Q
No renovations	207	6,521	31.5	47	344	1,151
Buildings constructed 2008 or later	27	1,133	42.7	6	46	145

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All buildings	467	20,200	43.3	134	974	3,230
Energy sources (more than one may apply)						
Electricity	467	20,200	43.3	134	974	3,230
Natural gas	164	13,663	83.4	41	298	1,002
Fuel oil	467	20,200	43.3	134	974	3,230
District heat	10	3,110	307.5	6	47	159
District chilled water	8	2,134	263.2	4	32	108
Propane	90	3,080	34.3	43	314	1,008
Other	41	1,133	27.6	8	59	201
Space-heating energy sources						
Fuel oil	270	4,351	16.1	104	753	2,484
Fuel oil main	205	2,542	12.4	98	715	2,357
Fuel oil secondary	65	1,809	28.0	5	39	127
Other excluding fuel oil	185	15,319	82.8	29	207	692
Buildings without heating	12	530	Q	2	13	54
Primary space-heating energy source						
Electricity	85	4,651	54.4	10	71	226
Natural gas	114	9,022	79.0	16	117	396
Fuel oil	205	2,542	12.4	98	715	2,357
District heat	10	2,991	304.7	5	38	130
Propane	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q
Cooling energy sources						
Fuel oil	Q	Q	Q	Q	Q	Q
Other excluding fuel oil	360	19,241	53.4	109	794	2,635
Buildings without cooling	106	891	8.4	22	161	541
Water-heating energy sources						
Fuel oil	77	1,911	24.7	60	433	1,401
Other excluding fuel oil	334	17,797	53.3	66	477	1,632
Buildings without water heating	56	492	8.9	9	64	198
Cooking energy sources						
Fuel oil	Q	Q	Q	Q	Q	Q
Other excluding fuel oil	163	12,628	77.5	74	540	1,772
Buildings without cooking	300	7,506	25.0	58	423	1,422
Energy end uses (more than one may apply)						
Buildings with space heating	455	19,670	43.2	132	961	3,176
Buildings with cooling	360	19,309	53.6	112	813	2,689
Buildings with water heating	411	19,708	47.9	125	911	3,032
Buildings with cooking	166	12,694	76.3	76	551	1,808
Buildings with manufacturing	25	863	35.0	6	47	152
Buildings with electricity generation	214	17,073	79.8	68	491	1,613

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All buildings	467	20,200	43.3	134	974	3,230
Percent of floorspace heated						
Not heated	12	530	Q	2	13	54
1 to 50	65	2,005	30.9	10	69	218
51 to 99	58	3,815	65.8	18	132	439
100	332	13,849	41.7	104	759	2,519
Heating equipment (more than one may apply)						
Heat pumps	44	3,047	68.9	12	88	292
Furnaces	42	870	20.8	7	54	184
Individual space heaters	177	5,874	33.1	38	275	912
District heat	10	3,088	306.8	6	44	150
Boilers	139	9,340	67.3	80	583	1,897
Packaged heating units	218	9,580	44.0	46	335	1,126
Other	Q	Q	Q	Q	Q	Q
Water-heating equipment						
Centralized system	314	10,979	34.9	85	616	2,072
Distributed system	52	2,510	48.4	13	98	324
Combination of centralized and distributed system	45	6,219	138.0	27	197	636
Food preparation or serving areas in non-food service buildings (more than one may apply)						
Snack bar or concession stand	24	4,868	202.6	16	114	384
Fast food or small restaurant	19	3,624	192.9	8	60	200
Cafeteria or large restaurant	35	7,093	204.0	42	306	1,002
Commercial kitchen/food preparation area	49	6,678	135.2	33	237	783
Small kitchen area	82	4,666	57.2	31	225	745
HVAC conservation features (more than one may apply)						
Economizer cycle	86	11,271	131.6	43	313	1,026
Regular HVAC maintenance	318	18,901	59.5	111	809	2,681
Building automation system (BAS) ²	119	13,867	116.3	58	423	1,371
Equipment usage reduced when building not in full use (more than one may apply)						
Heating	320	14,165	44.3	92	673	2,233
Cooling	254	13,963	54.9	78	566	1,880
Lighting	427	18,903	44.3	123	897	2,971

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All buildings	467	20,200	43.3	134	974	3,230
Annual consumption (gallons)						
1,000 or less	311	9,042	29.0	14	99	349
1,001 to 5,000	111	4,830	43.6	33	239	810
5,001 to 10,000	29	2,528	86.9	26	190	620
10,001 to 25,000	10	2,302	226.7	21	156	519
Over 25,000	5	1,498	280.4	40	291	932

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 F of the 2012 Commercial Buildings Energy Consumption Survey.

Table C34. Fuel oil consumption and expenditure intensities, 2012

	Fuel oil consumption			Fuel oil expenditures		
	per building (gallons)	per square foot (gallons)	per worker (gallons)	per building (thousand dollars)	per square foot (dollars)	per gallon (dollars)
All buildings	2,087	0.05	38.0	6.9	0.16	3.32
Building floorspace (square feet)						
1,001 to 5,000	740	0.25	190.3	2.6	0.86	3.45
5,001 to 10,000	1,011	0.13	159.7	3.4	0.45	3.39
10,001 to 25,000	2,179	0.13	101.5	7.3	0.44	3.36
25,001 to 50,000	2,607	0.07	64.3	8.4	0.22	3.24
50,001 to 100,000	4,325	0.06	47.7	14.2	0.20	3.27
100,001 to 200,000	7,620	0.05	39.1	24.0	0.16	3.15
200,001 to 500,000	5,551	0.02	14.7	18.6	0.06	3.35
Over 500,000	14,515	0.02	11.5	48.8	0.05	3.36
Principal building activity						
Education	6,763	0.09	123.6	21.7	0.30	3.20
Food sales	Q	Q	Q	Q	Q	Q
Food service	Q	Q	Q	Q	Q	Q
Health care	6,075	0.05	28.4	19.0	0.16	3.12
Inpatient	13,711	0.05	28.6	42.4	0.16	3.09
Outpatient	Q	0.05	Q	Q	0.16	3.24
Lodging	2,206	0.03	49.6	7.4	0.10	3.34
Mercantile	1,574	0.06	70.5	5.5	0.22	3.51
Retail (other than mall)	1,434	0.12	Q	5.1	0.41	3.55
Enclosed and strip malls	Q	Q	Q	Q	Q	3.38
Office	1,533	0.02	10.9	5.2	0.08	3.42
Public assembly	1,758	0.03	49.5	5.9	0.10	3.34
Public order and safety	497	0.02	14.2	1.7	0.06	3.51
Religious worship	1,656	0.10	238.1	5.7	0.34	3.44
Service	1,385	0.16	219.8	4.6	0.54	3.33
Warehouse and storage	1,474	0.02	50.5	5.0	0.07	3.37
Other	2,545	0.10	110.0	8.7	0.33	3.42
Vacant	Q	Q	Q	Q	Q	Q
Year constructed						
Before 1920	2,133	0.11	125.3	7.1	0.36	3.35
1920 to 1945	2,368	0.07	49.3	8.0	0.25	3.39
1946 to 1959	2,505	0.09	83.4	8.1	0.28	3.22
1960 to 1969	1,923	0.06	51.2	6.4	0.20	3.33
1970 to 1979	2,043	0.05	27.6	6.6	0.15	3.24
1980 to 1989	2,260	0.03	21.4	7.6	0.10	3.38
1990 to 1999	1,918	0.03	25.3	6.4	0.10	3.36
2000 to 2003	2,175	0.05	44.4	7.3	0.17	3.36
2004 to 2007	1,215	0.01	15.2	4.1	0.05	3.36
2008 to 2012	1,736	0.04	30.7	5.5	0.13	3.15

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	per building (gallons)	per square foot (gallons)	per worker (gallons)	per building (thousand dollars)	per square foot (dollars)	per gallon (dollars)
All buildings	2,087	0.05	38.0	6.9	0.16	3.32
Census region and division						
Northeast	3,008	0.11	79.8	9.9	0.35	3.29
New England	2,994	0.18	184.4	9.7	0.60	3.25
Middle Atlantic	3,023	0.07	48.8	10.1	0.24	3.34
Midwest	1,400	0.03	22.4	4.8	0.09	3.41
East North Central	1,521	0.03	21.4	5.2	0.09	3.40
West North Central	1,222	0.03	24.7	4.2	0.10	3.41
South	1,277	0.02	19.5	4.2	0.08	3.32
South Atlantic	1,706	0.03	22.6	5.6	0.09	3.28
East South Central	722	0.03	22.5	2.5	0.09	3.41
West South Central	863	0.02	11.5	2.9	0.05	3.40
West	1,128	0.02	11.7	3.9	0.05	3.42
Mountain	Q	0.01	12.8	Q	0.04	3.38
Pacific	987	0.02	11.3	3.4	0.06	3.43
Climate region¹						
Very cold/Cold	2,189	0.07	60.7	7.3	0.25	3.32
Mixed-humid	2,391	0.04	33.7	7.9	0.14	3.32
Mixed-dry/Hot-dry	811	0.01	8.8	2.8	0.04	3.44
Hot-humid	1,189	0.02	12.2	3.7	0.05	3.13
Marine	1,084	0.01	7.5	3.7	0.04	3.44
Number of floors						
One	1,193	0.07	78.4	3.9	0.24	3.30
Two	2,208	0.07	69.7	7.4	0.23	3.36
Three	2,887	0.08	76.7	9.6	0.26	3.32
Four to nine	5,455	0.03	23.7	17.9	0.11	3.28
Ten or more	6,786	0.01	8.3	22.7	0.05	3.35
Number of workers (main shift)						
Fewer than 5	1,060	0.15	546.4	3.6	0.52	3.38
5 to 9	887	0.09	141.3	3.0	0.31	3.41
10 to 19	1,838	0.11	140.4	6.0	0.35	3.26
20 to 49	2,766	0.07	90.0	9.2	0.22	3.34
50 to 99	3,891	0.05	58.8	13.0	0.16	3.35
100 to 249	5,453	0.04	37.8	17.8	0.13	3.26
250 or more	7,694	0.02	10.2	24.8	0.06	3.22
Weekly operating hours						
Fewer than 40	1,207	0.13	218.0	4.1	0.45	3.44
40 to 48	1,544	0.07	61.5	5.1	0.24	3.28
49 to 60	1,782	0.05	26.8	5.9	0.15	3.33
61 to 84	2,919	0.05	35.7	9.7	0.15	3.34
85 to 167	2,128	0.03	40.3	7.0	0.11	3.29
Open continuously	3,146	0.04	32.9	10.4	0.13	3.30

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	per building (gallons)	per square foot (gallons)	per worker (gallons)	per building (thousand dollars)	per square foot (dollars)	per gallon (dollars)
All buildings	2,087	0.05	38.0	6.9	0.16	3.32
Ownership and occupancy						
Nongovernment owned	1,815	0.05	35.5	6.1	0.16	3.35
Owner occupied	1,846	0.07	58.3	6.2	0.22	3.34
Leased to tenant(s)	1,576	0.04	21.7	5.3	0.12	3.38
Owner occupied and leased	2,743	0.03	21.1	9.3	0.09	3.37
Unoccupied	Q	Q	N	Q	Q	Q
Government owned	3,070	0.05	44.7	9.9	0.16	3.23
Federal	Q	Q	Q	Q	Q	3.31
State	2,649	0.03	27.1	8.5	0.09	3.22
Local	3,026	0.07	61.5	9.8	0.22	3.23
Party responsible for operation and maintenance of energy systems						
Building owner	2,130	0.05	37.9	7.1	0.16	3.31
Business owner or tenant	1,700	0.05	48.1	5.7	0.16	3.33
Property management	Q	0.02	9.2	Q	0.05	3.47
Other	Q	Q	Q	Q	Q	Q
Provider of direct input on energy-related equipment purchases						
Building owner	2,143	0.05	38.2	7.1	0.16	3.31
Business owner or tenant	1,599	0.04	37.2	5.4	0.14	3.35
Property management	2,803	0.03	27.0	9.6	0.12	3.43
Other	1,315	0.05	41.7	4.5	0.17	3.44
Number of establishments						
One	2,008	0.06	55.0	6.6	0.21	3.31
2 to 5	2,015	0.04	30.6	6.6	0.12	3.29
6 to 10	5,561	0.04	21.9	18.3	0.14	3.30
11 to 20	1,765	0.01	4.7	6.0	0.03	3.39
More than 20	6,690	0.02	9.5	23.9	0.06	3.58
Currently unoccupied	Q	Q	N	Q	Q	Q
Predominant exterior wall material						
Brick, stone, or stucco	2,762	0.05	37.4	9.1	0.16	3.28
Concrete (block or poured)	1,923	0.05	42.4	6.4	0.15	3.34
Concrete panels	4,192	0.02	12.4	13.3	0.05	3.17
Siding or shingles	1,429	0.14	131.9	4.9	0.48	3.41
Metal panels	1,344	0.08	77.9	4.5	0.28	3.37
Window glass	4,168	0.02	8.2	13.7	0.06	3.28
Other	1,677	0.03	Q	5.3	0.08	3.17
No one major type	Q	Q	Q	Q	Q	Q

Table C34. Fuel oil consumption and expenditure intensities, 2012

	Fuel oil consumption			Fuel oil expenditures		
	per building (gallons)	per square foot (gallons)	per worker (gallons)	per building (thousand dollars)	per square foot (dollars)	per gallon (dollars)
All buildings	2,087	0.05	38.0	6.9	0.16	3.32
Predominant roof material						
Metal surfacing	1,349	0.08	88.0	4.5	0.28	3.37
Synthetic or rubber	2,774	0.04	29.1	9.2	0.12	3.33
Built-up	3,655	0.04	27.3	11.9	0.13	3.27
Slate or tile shingles	1,820	0.04	35.4	6.5	0.16	3.60
Wooden materials (including shingles)	Q	Q	Q	Q	Q	Q
Asphalt, fiberglass, or other shingles	1,404	0.08	61.7	4.7	0.26	3.36
Concrete	7,045	0.04	21.6	18.9	0.10	2.68
Other	Q	Q	Q	Q	Q	Q
No one major type	Q	Q	Q	Q	Q	Q
Roof characteristics						
Roof tilt						
Flat	2,909	0.03	24.8	9.6	0.11	3.31
Shallow pitch	1,598	0.06	67.7	5.3	0.21	3.32
Steeper pitch	1,632	0.12	118.5	5.4	0.40	3.32
Cool roof	2,983	0.04	30.8	9.9	0.13	3.34
Renovations in buildings constructed before 2008 (more than one may apply)						
Any type of renovation	2,503	0.05	34.5	8.3	0.15	3.31
Addition or annex	3,836	0.05	47.1	12.3	0.17	3.21
Reduction in floorspace	Q	Q	Q	Q	Q	3.32
Roof replacement	3,058	0.05	41.5	10.1	0.18	3.30
Exterior wall replacement	3,640	0.05	42.1	11.7	0.16	3.22
Interior wall reconfiguration	2,651	0.04	23.6	8.6	0.12	3.25
Window replacement	3,634	0.06	46.2	11.7	0.19	3.23
HVAC equipment upgrade	3,124	0.04	27.7	10.3	0.13	3.29
Lighting upgrade	3,591	0.04	31.7	11.8	0.14	3.29
Electrical upgrade	3,396	0.05	35.5	11.2	0.16	3.28
Plumbing system upgrade	3,503	0.05	35.6	11.8	0.17	3.37
Insulation upgrade	2,836	0.04	32.0	9.4	0.13	3.33
Fire, safety, or security upgrade	3,602	0.04	29.0	11.8	0.14	3.29
Structural upgrade	2,914	0.04	36.9	9.7	0.13	3.34
Other	Q	Q	Q	Q	Q	3.55
No renovations	1,663	0.05	47.8	5.6	0.18	3.34
Buildings constructed 2008 or later	1,736	0.04	30.7	5.5	0.13	3.15

Table C34. Fuel oil consumption and expenditure intensities, 2012

	Fuel oil consumption			Fuel oil expenditures		
	per building (gallons)	per square foot (gallons)	per worker (gallons)	per building (thousand dollars)	per square foot (dollars)	per gallon (dollars)
All buildings	2,087	0.05	38.0	6.9	0.16	3.32
Energy sources (more than one may apply)						
Electricity	2,087	0.05	38.0	6.9	0.16	3.32
Natural gas	1,820	0.02	16.7	6.1	0.07	3.36
Fuel oil	2,087	0.05	38.0	6.9	0.16	3.32
District heat	4,605	0.01	10.5	15.7	0.05	3.41
District chilled water	3,924	0.01	11.4	13.3	0.05	3.40
Propane	3,493	0.10	139.6	11.2	0.33	3.21
Other	1,435	0.05	44.0	4.9	0.18	3.41
Space-heating energy sources						
Fuel oil	2,789	0.17	181.0	9.2	0.57	3.30
Fuel oil main	3,480	0.28	357.4	11.5	0.93	3.30
Fuel oil secondary	598	0.02	17.9	2.0	0.07	3.29
Other excluding fuel oil	1,121	0.01	9.9	3.7	0.05	3.34
Buildings without heating	1,155	0.03	32.2	4.6	0.10	4.02
Primary space-heating energy source						
Electricity	827	0.02	10.9	2.6	0.05	3.19
Natural gas	1,022	0.01	9.7	3.5	0.04	3.40
Fuel oil	3,480	0.28	357.4	11.5	0.93	3.30
District heat	3,857	0.01	8.8	13.2	0.04	3.43
Propane	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q
Cooling energy sources						
Fuel oil	Q	Q	Q	Q	Q	Q
Other excluding fuel oil	2,205	0.04	31.6	7.3	0.14	3.32
Buildings without cooling	1,519	0.18	377.0	5.1	0.61	3.35
Water-heating energy sources						
Fuel oil	5,595	0.23	266.4	18.1	0.73	3.23
Other excluding fuel oil	1,430	0.03	20.1	4.9	0.09	3.42
Buildings without water heating	1,142	0.13	250.7	3.6	0.40	3.12
Cooking energy sources						
Fuel oil	Q	Q	Q	Q	Q	Q
Other excluding fuel oil	3,313	0.04	32.7	10.9	0.14	3.28
Buildings without cooking	1,409	0.06	47.0	4.7	0.19	3.36
Energy end uses (more than one may apply)						
Buildings with space heating	2,111	0.05	38.1	7.0	0.16	3.31
Buildings with cooling	2,255	0.04	32.3	7.5	0.14	3.31
Buildings with water heating	2,215	0.05	35.9	7.4	0.15	3.33
Buildings with cooking	3,313	0.04	33.2	10.9	0.14	3.28
Buildings with manufacturing	1,891	0.05	43.4	6.2	0.18	3.27
Buildings with electricity generation	2,297	0.03	21.6	7.5	0.09	3.28

Table C34. Fuel oil consumption and expenditure intensities, 2012

	Fuel oil consumption			Fuel oil expenditures		
	per building (gallons)	per square foot (gallons)	per worker (gallons)	per building (thousand dollars)	per square foot (dollars)	per gallon (dollars)
All buildings	2,087	0.05	38.0	6.9	0.16	3.32
Percent of floorspace heated						
Not heated	1,155	0.03	32.2	4.6	0.10	4.02
1 to 50	1,067	0.03	67.2	3.4	0.11	3.15
51 to 99	2,283	0.03	24.4	7.6	0.12	3.32
100	2,285	0.05	40.5	7.6	0.18	3.32
Heating equipment (more than one may apply)						
Heat pumps	1,991	0.03	20.1	6.6	0.10	3.31
Furnaces	1,284	0.06	51.9	4.4	0.21	3.43
Individual space heaters	1,553	0.05	41.2	5.1	0.16	3.31
District heat	4,378	0.01	10.0	14.9	0.05	3.41
Boilers	4,197	0.06	45.6	13.7	0.20	3.25
Packaged heating units	1,541	0.04	29.0	5.2	0.12	3.36
Other	Q	Q	Q	Q	Q	Q
Water-heating equipment						
Centralized system	1,960	0.06	44.4	6.6	0.19	3.37
Distributed system	1,886	0.04	30.3	6.3	0.13	3.32
Combination of centralized and distributed system	4,374	0.03	23.8	14.1	0.10	3.23
Food preparation or serving areas in non-food service buildings (more than one may apply)						
Snack bar or concession stand	4,760	0.02	19.8	16.0	0.08	3.36
Fast food or small restaurant	3,176	0.02	12.8	10.6	0.06	3.35
Cafeteria or large restaurant	8,807	0.04	30.7	28.8	0.14	3.27
Commercial kitchen/food preparation area	4,790	0.04	32.0	15.9	0.12	3.31
Small kitchen area	2,756	0.05	38.1	9.1	0.16	3.31
HVAC conservation features (more than one may apply)						
Economizer cycle	3,658	0.03	20.8	12.0	0.09	3.28
Regular HVAC maintenance	2,545	0.04	32.5	8.4	0.14	3.31
Building automation system (BAS) ²	3,547	0.03	21.5	11.5	0.10	3.24
Equipment usage reduced when building not in full use (more than one may apply)						
Heating	2,103	0.05	36.1	7.0	0.16	3.32
Cooling	2,229	0.04	30.2	7.4	0.13	3.32
Lighting	2,103	0.05	37.0	7.0	0.16	3.31

Table C34. Fuel oil consumption and expenditure intensities, 2012

	Fuel oil consumption			Fuel oil expenditures		
	per building (gallons)	per square foot (gallons)	per worker (gallons)	per building (thousand dollars)	per square foot (dollars)	per gallon (dollars)
All buildings	2,087	0.05	38.0	6.9	0.16	3.32
Annual consumption (gallons)						
1,000 or less	316	0.01	8.3	1.1	0.04	3.54
1,001 to 5,000	2,157	0.05	38.1	7.3	0.17	3.39
5,001 to 10,000	6,522	0.08	62.6	21.3	0.25	3.27
10,001 to 25,000	15,386	0.07	57.6	51.1	0.23	3.32
Over 25,000	54,423	0.19	161.8	174.4	0.62	3.20

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 F of the 2012 Commercial Buildings Energy Consumption Survey.

Table C35. Fuel oil consumption and conditional energy intensity by Census region, 2012

	Total fuel oil consumption (million gallons)				Total floorspace of buildings using fuel oil (million square feet)				Fuel oil energy intensity (gallons/square foot)			
	North- east	Mid- west	South	West	North- east	Mid- west	South	West	North- east	Mid- west	South	West
All buildings	652	108	167.0	48	6,079	3,935	7,051	3,135	0.11	0.03	0.02	0.02
Building floorspace (square feet)												
1,001 to 10,000	160	23	32.0	Q	589	164	317	Q	0.27	0.14	0.10	Q
10,001 to 100,000	296	53	61.0	8	2,157	1,084	1,583	612	0.14	0.05	0.04	0.01
Over 100,000	196	31	74.0	28	3,334	2,688	5,151	2,429	0.06	0.01	0.01	0.01
Principal building activity												
Education	143	12	47.0	Q	957	544	500	Q	0.15	0.02	0.09	Q
Health care	107	10	18.0	7	718	592	992	474	0.15	0.02	0.02	0.02
Office	93	8	20.0	11	1,666	901	1,850	911	0.06	0.01	0.01	0.01
All others	309	77	81.0	27	2,738	1,899	3,709	1,566	0.11	0.04	0.02	0.02
Year constructed												
Before 1945	196	5	16.0	Q	1,530	352	589	Q	0.13	0.02	0.03	Q
1946 to 1979	299	31	51.0	15	2,296	1,355	1,942	958	0.13	0.02	0.03	0.02
1980 to 1999	122	26	45.0	19	1,620	1,232	2,741	1,413	0.08	0.02	0.02	0.01
2000 to 2012	35	Q	55.0	Q	633	997	1,779	689	0.06	Q	0.03	0.01
Climate region¹												
Very cold/Cold	478	91	N	23	3,495	3,505	N	1,008	0.14	0.03	N	0.02
Mixed-humid	173	Q	124.0	N	2,584	430	4,273	N	0.07	Q	0.03	N
Mixed-dry/Hot-dry	N	N	Q	13	N	N	Q	1,344	N	N	Q	0.01
Hot-humid	N	N	39.0	Q	N	N	2,516	Q	N	N	0.02	Q
Marine	N	N	N	8	N	N	N	703	N	N	N	0.01
Number of floors												
One	146	61	83.0	16	1,025	762	1,904	447	0.14	0.08	0.04	0.04
Two	177	17	31.0	8	1,088	808	907	572	0.16	0.02	0.03	0.01
Three	152	Q	7.0	2	868	494	577	151	0.17	Q	0.01	0.01
Four to nine	142	15	34.0	16	1,768	1,265	2,162	1,051	0.08	0.01	0.02	0.02
Ten or more	35	8	12.0	Q	1,329	607	1,500	913	0.03	0.01	0.01	Q
Number of workers (main shift)												
Fewer than 10	182	61	38.0	Q	980	522	624	Q	0.19	0.12	0.06	Q
10 to 99	263	20	65.0	11	1,834	1,043	1,957	892	0.14	0.02	0.03	0.01
100 or more	206	27	64.0	27	3,265	2,370	4,470	2,163	0.06	0.01	0.01	0.01
Weekly operating hours												
Fewer than 48	192	16	53.0	3	1,409	682	756	359	0.14	0.02	0.07	0.01
49 to 84	223	30	51.0	21	2,251	1,316	2,356	1,090	0.10	0.02	0.02	0.02
85 to 167	43	10	7.0	Q	487	573	597	Q	0.09	0.02	0.01	Q
Open continuously	194	51	56.0	20	1,932	1,364	3,342	1,475	0.10	0.04	0.02	0.01
Ownership and occupancy												
Nongovernment owned	464	63	99.0	37	4,182	2,568	4,841	2,467	0.11	0.02	0.02	0.02
Owner occupied	306	34	48.0	23	1,801	1,368	2,159	980	0.17	0.02	0.02	0.02
Leased to tenant(s)	110	18	36.0	8	1,532	643	1,760	815	0.07	0.03	0.02	0.01
Owner occupied and leased	48	10	15.0	7	829	519	908	672	0.06	0.02	0.02	0.01
Unoccupied	Q	Q	Q	N	Q	Q	Q	N	Q	Q	Q	N
Government owned	188	Q	68.0	11	1,897	1,367	2,210	668	0.10	Q	0.03	0.02
Federal	Q	Q	6.0	Q	Q	Q	661	Q	Q	Q	0.01	Q
State	Q	5	Q	Q	375	479	333	Q	Q	0.01	Q	Q
Local	155	Q	53.0	5	1,285	788	1,216	371	0.12	Q	0.04	0.01

Table C35. Fuel oil consumption and conditional energy intensity by Census region, 2012

	Total fuel oil consumption (million gallons)				Total floorspace of buildings using fuel oil (million square feet)				Fuel oil energy intensity (gallons/square foot)			
	North- east	Mid- west	South	West	North- east	Mid- west	South	West	North- east	Mid- west	South	West
All buildings	652	108	167.0	48	6,079	3,935	7,051	3,135	0.11	0.03	0.02	0.02
Party responsible for operation and maintenance of energy systems												
Building owner	591	99	145.0	44	5,509	3,574	6,223	2,799	0.11	0.03	0.02	0.02
Business owner or tenant	42	Q	18.0	Q	374	Q	590	Q	0.11	Q	0.03	Q
Property management	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Provider of direct input on energy-related equipment purchases												
Building owner	603	102	146.0	44	5,611	3,575	6,241	2,865	0.11	0.03	0.02	0.02
Business owner or tenant	Q	Q	12.0	Q	Q	Q	493	Q	Q	Q	0.02	Q
Property management	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Number of establishments												
One	519	55	113.0	29	3,393	2,426	4,063	1,652	0.15	0.02	0.03	0.02
2 to 5	77	Q	40.0	15	1,567	956	1,592	829	0.05	0.05	0.03	0.02
6 to 10	Q	Q	Q	Q	300	Q	242	Q	0.10	Q	0.01	Q
11 to 20	Q	Q	3.0	Q	Q	Q	409	Q	Q	Q	0.01	Q
More than 20	Q	Q	7.0	2	567	Q	731	442	Q	Q	0.01	0.01
Currently unoccupied	Q	Q	Q	N	Q	Q	Q	N	Q	Q	Q	N
Predominant exterior wall material												
Brick, stone, or stucco	301	22	92.0	16	2,913	1,698	3,265	922	0.10	0.01	0.03	0.02
Concrete (block or poured)	144	16	27.0	16	1,211	699	1,530	1,022	0.12	0.02	0.02	0.02
Concrete panels	15	9	19.0	9	326	788	1,291	610	0.04	0.01	0.01	0.02
Siding or shingles	126	Q	Q	Q	637	Q	Q	Q	0.20	Q	Q	Q
Metal panels	Q	35	20.0	Q	397	313	439	Q	0.11	0.11	0.04	Q
Window glass	Q	Q	3.0	Q	Q	Q	269	Q	Q	Q	0.01	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
No one major type	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Predominant roof material												
Metal surfacing	88	37	40.0	Q	526	641	752	Q	0.17	0.06	0.05	Q
Synthetic or rubber	186	Q	33.0	24	2,607	1,624	2,379	1,370	0.07	Q	0.01	0.02
Built-up	162	17	38.0	13	1,590	1,102	2,173	915	0.10	0.02	0.02	0.01
Slate or tile shingles	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Wooden materials (including shingles)	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Asphalt, fiberglass, or other shingles	147	6	38.0	4	796	386	1,076	311	0.19	0.02	0.03	0.01
Concrete	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	N	Q	Q	Q	N	Q	Q	Q	N
No one major type	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Roof characteristics												
Roof tilt												
Flat	345	40	79.0	33	4,315	2,801	4,919	2,345	0.08	0.01	0.02	0.01
Shallow pitch	115	Q	71.0	12	860	805	1,586	641	0.13	0.06	0.04	0.02
Steeper pitch	192	18	17.0	Q	904	330	546	Q	0.21	0.06	0.03	Q
Cool roof	146	26	45.0	20	1,584	1,166	2,306	1,033	0.09	0.02	0.02	0.02

Table C35. Fuel oil consumption and conditional energy intensity by Census region, 2012

	Total fuel oil consumption (million gallons)				Total floorspace of buildings using fuel oil (million square feet)				Fuel oil energy intensity (gallons/square foot)			
	North- east	Mid- west	South	West	North- east	Mid- west	South	West	North- east	Mid- west	South	West
All buildings	652	108	167.0	48	6,079	3,935	7,051	3,135	0.11	0.03	0.02	0.02
Renovations in buildings constructed before 2008 (more than one may apply)												
Any type of renovation	401	62	86.0	35	4,012	2,310	4,220	2,004	0.10	0.03	0.02	0.02
Addition or annex	169	Q	30.0	12	1,309	1,094	1,494	732	0.13	Q	0.02	0.02
Reduction in floorspace	Q	Q	7.0	Q	Q	Q	246	Q	Q	Q	0.03	Q
Roof replacement	286	52	44.0	16	2,543	1,665	2,125	1,041	0.11	0.03	0.02	0.02
Exterior wall replacement	69	4	5.0	Q	499	346	510	Q	0.14	0.01	0.01	Q
Interior wall reconfiguration	190	15	57.0	20	2,197	1,420	2,504	1,499	0.09	0.01	0.02	0.01
Window replacement	210	9	28.0	Q	1,627	634	1,253	726	0.13	0.01	0.02	0.01
HVAC equipment upgrade	252	20	56.0	22	2,964	1,563	2,776	1,507	0.09	0.01	0.02	0.01
Lighting upgrade	271	28	58.0	21	2,731	1,553	2,881	1,467	0.10	0.02	0.02	0.01
Electrical upgrade	205	14	42.0	16	1,801	1,073	1,723	990	0.11	0.01	0.02	0.02
Plumbing system upgrade	172	Q	28.0	12	1,587	838	1,598	889	0.11	Q	0.02	0.01
Insulation upgrade	61	8	19.0	8	702	625	633	551	0.09	0.01	0.03	0.02
Fire, safety, or security upgrade	204	12	47.0	21	2,169	1,242	2,216	1,148	0.09	0.01	0.02	0.02
Structural upgrade	42	3	16.0	Q	366	293	563	514	0.11	0.01	0.03	0.01
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
No renovations	235	41	57.0	11	1,801	1,411	2,419	891	0.13	0.03	0.02	0.01
Buildings constructed 2008 or later	Q	Q	Q	Q	Q	Q	413	Q	Q	Q	0.06	Q
Energy sources (more than one may apply)												
Electricity	652	108	167.0	48	6,079	3,935	7,051	3,135	0.11	0.03	0.02	0.02
Natural gas	161	36	68.0	34	3,508	3,071	4,455	2,629	0.05	0.01	0.02	0.01
Fuel oil	652	108	167.0	48	6,079	3,935	7,051	3,135	0.11	0.03	0.02	0.02
District heat	12	9	17.0	9	966	428	1,198	517	0.01	0.02	0.01	0.02
District chilled water	5	Q	11.0	Q	279	352	1,084	Q	0.02	Q	0.01	0.02
Propane	229	Q	40.0	11	1,008	725	845	502	0.23	Q	0.05	0.02
Other	40	Q	Q	4	367	Q	329	211	0.11	Q	Q	0.02
Space-heating energy sources												
Fuel oil	595	68	80.0	Q	2,851	667	765	Q	0.21	0.10	0.10	Q
Fuel oil main	569	Q	74.0	Q	1,988	Q	299	Q	0.29	Q	0.25	Q
Fuel oil secondary	26	7	5.0	Q	863	436	466	Q	0.03	0.02	0.01	Q
Other excluding fuel oil	52	40	83.0	33	3,189	3,214	6,012	2,903	0.02	0.01	0.01	0.01
Buildings without heating	Q	Q	4.0	Q	Q	Q	274	Q	Q	Q	0.01	Q
Primary space-heating energy source												
Electricity	11	7	47.0	6	642	678	2,739	591	0.02	0.01	0.02	0.01
Natural gas	39	29	29.0	19	2,271	2,385	2,569	1,797	0.02	0.01	0.01	0.01
Fuel oil	569	Q	74.0	Q	1,988	Q	299	Q	0.29	Q	0.25	Q
District heat	11	8	12.0	Q	939	418	1,119	515	0.01	0.02	0.01	0.01
Propane	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Cooling energy sources												
Fuel oil	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other excluding fuel oil	513	77	161.0	43	5,440	3,735	6,996	3,070	0.09	0.02	0.02	0.01
Buildings without cooling	121	Q	Q	Q	Q	Q	Q	Q	0.21	Q	Q	Q

Table C35. Fuel oil consumption and conditional energy intensity by Census region, 2012

	Total fuel oil consumption (million gallons)				Total floorspace of buildings using fuel oil (million square feet)				Fuel oil energy intensity (gallons/square foot)			
	North- east	Mid- west	South	West	North- east	Mid- west	South	West	North- east	Mid- west	South	West
All buildings	652	108	167.0	48	6,079	3,935	7,051	3,135	0.11	0.03	0.02	0.02
Water-heating energy sources												
Fuel oil	383	Q	Q	Q	1,401	Q	Q	Q	0.27	Q	Q	Q
Other excluding fuel oil	235	87	114.0	42	4,487	3,662	6,715	2,933	0.05	0.02	0.02	0.01
Buildings without water heating	Q	Q	Q	Q	191	Q	Q	Q	Q	Q	Q	Q
Cooking energy sources												
Fuel oil	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other excluding fuel oil	373	36	100.0	32	3,847	2,519	4,159	2,103	0.10	0.01	0.02	0.02
Buildings without cooking	269	72	66.0	16	2,180	1,411	2,884	1,030	0.12	0.05	0.02	0.02
Energy end uses (more than one may apply)												
Buildings with space heating	647	108	163.0	43	6,040	3,882	6,777	2,971	0.11	0.03	0.02	0.01
Buildings with cooling	531	77	162.0	43	5,491	3,739	7,004	3,075	0.10	0.02	0.02	0.01
Buildings with water heating	617	91	156.0	46	5,888	3,864	6,923	3,032	0.10	0.02	0.02	0.02
Buildings with cooking	383	36	100.0	32	3,899	2,524	4,167	2,105	0.10	0.01	0.02	0.02
Buildings with manufacturing	36	Q	Q	Q	347	Q	Q	Q	0.10	Q	Q	Q
Buildings with electricity generation	285	42	128.0	37	3,980	3,427	6,605	3,061	0.07	0.01	0.02	0.01
Percent of floorspace heated												
Not heated	Q	Q	4.0	Q	Q	Q	274	Q	Q	Q	0.01	Q
1 to 50	35	Q	20.0	6	486	Q	670	520	0.07	Q	0.03	0.01
51 to 99	93	7	25.0	7	1,270	568	1,250	726	0.07	0.01	0.02	0.01
100	519	91	118.0	31	4,284	2,984	4,856	1,725	0.12	0.03	0.02	0.02
Heating equipment (more than one may apply)												
Heat pumps	46	4	33.0	5	704	376	1,387	580	0.07	0.01	0.02	0.01
Furnaces	Q	Q	Q	Q	164	222	291	Q	0.23	0.02	0.03	Q
Individual space heaters	185	33	43.0	Q	1,910	1,322	1,945	697	0.10	0.03	0.02	0.02
District heat	12	9	17.0	Q	966	428	1,178	515	0.01	0.02	0.01	0.01
Boilers	454	30	82.0	17	3,398	2,041	2,351	1,550	0.13	0.01	0.03	0.01
Packaged heating units	184	62	70.0	19	2,132	2,127	3,940	1,382	0.09	0.03	0.02	0.01
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Water-heating equipment												
Centralized system	421	71	91.0	33	3,556	2,224	3,575	1,624	0.12	0.03	0.03	0.02
Distributed system	71	6	16.0	4	869	417	813	411	0.08	0.02	0.02	0.01
Combination of centralized and distributed system	125	14	50.0	9	1,464	1,224	2,535	997	0.09	0.01	0.02	0.01
Food preparation or serving areas in non-food service buildings (more than one may apply)												
Snack bar or concession stand	52	11	37.0	15	1,131	990	1,862	886	0.05	0.01	0.02	0.02
Fast food or small restaurant	22	9	19.0	Q	749	689	1,381	804	0.03	0.01	0.01	0.01
Cafeteria or large restaurant	208	15	65.0	18	2,115	1,346	2,333	1,299	0.10	0.01	0.03	0.01
Commercial kitchen/ food preparation area	148	21	50.0	17	1,728	1,451	2,319	1,180	0.09	0.01	0.02	0.01
Small kitchen area	153	16	45.0	11	1,495	1,038	1,379	755	0.10	0.02	0.03	0.01

Table C35. Fuel oil consumption and conditional energy intensity by Census region, 2012

	Total fuel oil consumption (million gallons)				Total floorspace of buildings using fuel oil (million square feet)				Fuel oil energy intensity (gallons/square foot)			
	North- east	Mid- west	South	West	North- east	Mid- west	South	West	North- east	Mid- west	South	West
All buildings	652	108	167.0	48	6,079	3,935	7,051	3,135	0.11	0.03	0.02	0.02
HVAC conservation features (more than one may apply)												
Economizer cycle	180	31	76.0	26	2,974	2,495	3,546	2,257	0.06	0.01	0.02	0.01
Regular HVAC maintenance	550	75	142.0	41	5,603	3,565	6,687	3,046	0.10	0.02	0.02	0.01
Building automation system (BAS) ²	217	60	113.0	33	3,339	2,823	5,259	2,446	0.07	0.02	0.02	0.01
Equipment usage reduced when building not in full use (more than one may apply)												
Heating	460	57	123.0	33	4,707	2,843	4,513	2,103	0.10	0.02	0.03	0.02
Cooling	375	40	123.0	29	4,170	2,779	4,863	2,151	0.09	0.01	0.03	0.01
Lighting	614	84	155.0	44	5,596	3,719	6,609	2,980	0.11	0.02	0.02	0.01
Annual consumption (gallons)												
1,000 or less	43	17	29.0	9	1,964	2,000	3,466	1,612	0.02	0.01	0.01	0.01
1,001 to 5,000	144	Q	43.0	13	1,645	908	1,605	673	0.09	Q	0.03	0.02
5,001 to 10,000	117	33	28.0	12	837	451	835	406	0.14	0.07	0.03	0.03
10,001 to 25,000	120	Q	17.0	Q	905	436	794	Q	0.13	0.03	0.02	Q
Over 25,000	227	Q	50.0	Q	729	Q	351	Q	0.31	Q	0.14	Q

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 Fof the 2012 Commercial Buildings Energy Consumption Survey.

Table C36. Fuel oil expenditures by Census region, 2012

	Total fuel oil expenditures (million dollars)				Fuel oil expenditures (dollars)							
					per gallon				per square foot			
	North- east	Mid- west	South	West	North- east	Mid- west	South	West	North- east	Mid- west	South	West
All buildings	2,146	367	553	164	3.29	3.41	3.32	3.42	0.35	0.09	0.08	0.05
Building floorspace (square feet)												
1,001 to 10,000	551	79	106	Q	3.45	3.43	3.34	Q	0.94	0.48	0.33	Q
10,001 to 100,000	977	182	194	29	3.29	3.40	3.19	3.44	0.45	0.17	0.12	0.05
Over 100,000	619	106	253	97	3.16	3.40	3.42	3.42	0.19	0.04	0.05	0.04
Principal building activity												
Education	460	42	148	Q	3.22	3.35	3.11	Q	0.48	0.08	0.30	Q
Health care	321	36	61	26	3.01	3.47	3.45	3.49	0.45	0.06	0.06	0.05
Office	316	28	68	37	3.42	3.42	3.40	3.41	0.19	0.03	0.04	0.04
All others	1,048	262	276	93	3.39	3.40	3.39	3.40	0.38	0.14	0.07	0.06
Year constructed												
Before 1945	662	19	51	Q	3.37	3.54	3.23	Q	0.43	0.06	0.09	Q
1946 to 1979	961	106	172	50	3.22	3.41	3.41	3.42	0.42	0.08	0.09	0.05
1980 to 1999	408	89	153	65	3.34	3.39	3.41	3.42	0.25	0.07	0.06	0.05
2000 to 2012	115	Q	176	Q	3.29	3.40	3.18	3.44	0.18	Q	0.10	0.04
Climate region¹												
Very cold/Cold	1,579	310	N	78	3.30	3.41	N	3.38	0.45	0.09	N	0.08
Mixed-humid	567	Q	418	N	3.27	3.36	3.38	N	0.22	Q	0.10	N
Mixed-dry/Hot-dry	N	N	Q	46	N	N	Q	3.46	N	N	Q	0.03
Hot-humid	N	N	120	Q	N	N	3.10	Q	N	N	0.05	Q
Marine	N	N	N	26	N	N	N	3.44	N	N	N	0.04
Number of floors												
One	481	207	266	55	3.29	3.40	3.22	3.39	0.47	0.27	0.14	0.12
Two	591	60	107	26	3.33	3.45	3.49	3.39	0.54	0.07	0.12	0.04
Three	503	Q	23	5	3.31	3.37	3.38	3.43	0.58	Q	0.04	0.03
Four to nine	457	50	116	56	3.22	3.41	3.37	3.46	0.26	0.04	0.05	0.05
Ten or more	114	28	42	Q	3.31	3.40	3.39	3.40	0.09	0.05	0.03	Q
Number of workers (main shift)												
Fewer than 10	617	209	128	Q	3.38	3.42	3.37	Q	0.63	0.40	0.21	Q
10 to 99	882	67	207	36	3.35	3.35	3.19	3.43	0.48	0.06	0.11	0.04
100 or more	647	91	218	92	3.14	3.42	3.42	3.42	0.20	0.04	0.05	0.04
Weekly operating hours												
Fewer than 48	643	56	166	11	3.35	3.47	3.15	3.42	0.46	0.08	0.22	0.03
49 to 84	735	102	173	70	3.30	3.40	3.41	3.42	0.33	0.08	0.07	0.06
85 to 167	139	34	24	Q	3.23	3.40	3.41	Q	0.29	0.06	0.04	Q
Open continuously	629	174	190	69	3.23	3.39	3.39	3.43	0.33	0.13	0.06	0.05

Table C36. Fuel oil expenditures by Census region, 2012

	Total fuel oil expenditures (million dollars)				Fuel oil expenditures (dollars)							
					per gallon				per square foot			
	North- east	Mid- west	South	West	North- east	Mid- west	South	West	North- east	Mid- west	South	West
All buildings	2,146	367	553	164	3.29	3.41	3.32	3.42	0.35	0.09	0.08	0.05
Predominant roof material												
Metal surfacing	295	126	134	Q	3.34	3.40	3.38	Q	0.56	0.20	0.18	Q
Synthetic or rubber	612	Q	114	82	3.29	3.38	3.40	3.40	0.23	Q	0.05	0.06
Built-up	518	58	128	44	3.21	3.46	3.39	3.39	0.33	0.05	0.06	0.05
Slate or tile shingles	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Wooden materials (including shingles)	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Asphalt, fiberglass, or other shingles	492	22	128	13	3.34	3.46	3.41	3.52	0.62	0.06	0.12	0.04
Concrete	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	N	Q	Q	Q	N	Q	Q	Q	N
No one major type	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Roof characteristics												
Roof tilt												
Flat	1,129	135	267	112	3.27	3.41	3.39	3.42	0.26	0.05	0.05	0.05
Shallow pitch	383	Q	229	40	3.34	3.42	3.22	3.39	0.45	0.21	0.14	0.06
Steeper pitch	633	62	57	Q	3.30	3.36	3.39	Q	0.70	0.19	0.10	Q
Cool roof	480	89	154	68	3.28	3.42	3.42	3.41	0.30	0.08	0.07	0.07
Renovations in buildings constructed before 2008 (more than one may apply)												
Any type of renovation	1,315	210	289	120	3.28	3.39	3.37	3.41	0.33	0.09	0.07	0.06
Addition or annex	527	Q	101	42	3.12	3.38	3.41	3.39	0.40	Q	0.07	0.06
Reduction in floorspace	Q	Q	25	Q	Q	Q	3.52	Q	Q	Q	0.10	Q
Roof replacement	933	178	149	53	3.27	3.40	3.39	3.38	0.37	0.11	0.07	0.05
Exterior wall replacement	220	15	19	Q	3.17	3.41	3.60	Q	0.44	0.04	0.04	Q
Interior wall reconfiguration	606	52	192	69	3.19	3.42	3.36	3.40	0.28	0.04	0.08	0.05
Window replacement	672	32	93	Q	3.20	3.44	3.34	3.39	0.41	0.05	0.07	0.04
HVAC equipment upgrade	820	68	188	75	3.26	3.41	3.36	3.41	0.28	0.04	0.07	0.05
Lighting upgrade	884	94	194	73	3.26	3.41	3.35	3.41	0.32	0.06	0.07	0.05
Electrical upgrade	667	49	140	55	3.26	3.41	3.35	3.39	0.37	0.05	0.08	0.06
Plumbing system upgrade	579	Q	92	40	3.37	3.40	3.31	3.39	0.36	Q	0.06	0.04
Insulation upgrade	203	26	63	28	3.31	3.44	3.35	3.37	0.29	0.04	0.10	0.05
Fire, safety, or security upgrade	663	40	157	71	3.25	3.43	3.36	3.39	0.31	0.03	0.07	0.06
Structural upgrade	138	9	54	Q	3.30	3.41	3.42	3.41	0.38	0.03	0.10	0.05
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
No renovations	779	140	196	37	3.31	3.42	3.42	3.41	0.43	0.10	0.08	0.04
Buildings constructed 2008 or later	Q	Q	Q	Q	Q	Q	2.90	Q	Q	Q	0.17	Q
Energy sources (more than one may apply)												
Electricity	2,146	367	553	164	3.29	3.41	3.32	3.42	0.35	0.09	0.08	0.05
Natural gas	532	121	233	115	3.31	3.40	3.42	3.42	0.15	0.04	0.05	0.04
Fuel oil	2,146	367	553	164	3.29	3.41	3.32	3.42	0.35	0.09	0.08	0.05
District heat	41	29	58	31	3.51	3.36	3.36	3.40	0.04	0.07	0.05	0.06
District chilled water	16	Q	38	Q	3.48	3.38	3.40	3.37	0.06	Q	0.03	0.07
Propane	725	Q	134	37	3.16	3.39	3.35	3.39	0.72	Q	0.16	0.07
Other	137	Q	Q	12	3.41	Q	3.34	3.46	0.37	Q	Q	0.06

Table C36. Fuel oil expenditures by Census region, 2012

	Total fuel oil expenditures (million dollars)				Fuel oil expenditures (dollars)							
					per gallon				per square foot			
	North- east	Mid- west	South	West	North- east	Mid- west	South	West	North- east	Mid- west	South	West
All buildings	2,146	367	553	164	3.29	3.41	3.32	3.42	0.35	0.09	0.08	0.05
Space-heating energy sources												
Fuel oil	1,946	231	270	Q	3.27	3.41	3.40	Q	0.68	0.35	0.35	Q
Fuel oil main	1,863	Q	252	Q	3.27	Q	3.39	Q	0.94	Q	0.84	Q
Fuel oil secondary	82	24	18	Q	3.20	3.37	3.53	Q	0.10	0.05	0.04	Q
Other excluding fuel oil	176	136	269	111	3.41	3.41	3.23	3.42	0.06	0.04	0.04	0.04
Buildings without heating	Q	Q	14	Q	Q	Q	3.67	Q	Q	Q	0.05	Q
Primary space-heating energy source												
Electricity	36	22	145	22	3.34	3.43	3.09	3.42	0.06	0.03	0.05	0.04
Natural gas	132	98	100	66	3.34	3.41	3.43	3.43	0.06	0.04	0.04	0.04
Fuel oil	1,863	Q	252	Q	3.27	Q	3.39	Q	0.94	Q	0.84	Q
District heat	40	28	39	Q	3.52	3.36	3.39	3.41	0.04	0.07	0.03	0.04
Propane	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Cooling energy sources												
Fuel oil	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other excluding fuel oil	1,692	263	534	146	3.30	3.41	3.31	3.42	0.31	0.07	0.08	0.05
Buildings without cooling	403	Q	Q	Q	3.33	Q	Q	Q	0.68	Q	Q	Q
Water-heating energy sources												
Fuel oil	1,231	Q	Q	Q	3.22	Q	Q	Q	0.88	Q	Q	Q
Other excluding fuel oil	803	295	391	143	3.42	3.40	3.43	3.42	0.18	0.08	0.06	0.05
Buildings without water heating	Q	Q	Q	Q	3.26	Q	Q	Q	Q	Q	Q	Q
Cooking energy sources												
Fuel oil	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other excluding fuel oil	1,203	121	339	109	3.23	3.40	3.39	3.43	0.31	0.05	0.08	0.05
Buildings without cooking	909	245	213	55	3.38	3.41	3.22	3.39	0.42	0.17	0.07	0.05
Energy end uses (more than one may apply)												
Buildings with space heating	2,122	367	540	148	3.28	3.41	3.31	3.42	0.35	0.09	0.08	0.05
Buildings with cooling	1,743	264	536	146	3.28	3.41	3.31	3.42	0.32	0.07	0.08	0.05
Buildings with water heating	2,034	310	530	158	3.29	3.40	3.40	3.42	0.35	0.08	0.08	0.05
Buildings with cooking	1,237	122	340	109	3.23	3.40	3.39	3.43	0.32	0.05	0.08	0.05
Buildings with manufacturing	117	Q	Q	Q	3.23	Q	Q	Q	0.34	Q	Q	Q
Buildings with electricity generation	921	142	423	127	3.23	3.40	3.30	3.42	0.23	0.04	0.06	0.04
Percent of floorspace heated												
Not heated	Q	Q	14	Q	Q	Q	3.67	Q	Q	Q	0.05	Q
1 to 50	113	Q	52	19	3.26	Q	2.67	3.43	0.23	Q	0.08	0.04
51 to 99	307	24	84	24	3.28	3.41	3.38	3.45	0.24	0.04	0.07	0.03
100	1,702	309	403	105	3.28	3.39	3.40	3.40	0.40	0.10	0.08	0.06

Table C36. Fuel oil expenditures by Census region, 2012

	Total fuel oil expenditures (million dollars)				Fuel oil expenditures (dollars)							
					per gallon				per square foot			
	North- east	Mid- west	South	West	North- east	Mid- west	South	West	North- east	Mid- west	South	West
All buildings	2,146	367	553	164	3.29	3.41	3.32	3.42	0.35	0.09	0.08	0.05
Heating equipment (more than one may apply)												
Heat pumps	153	12	109	18	3.33	3.42	3.26	3.44	0.22	0.03	0.08	0.03
Furnaces	Q	Q	Q	Q	3.46	3.24	3.41	Q	0.79	0.06	0.11	Q
Individual space heaters	604	114	148	Q	3.26	3.44	3.40	3.41	0.32	0.09	0.08	0.07
District heat	41	29	57	Q	3.51	3.36	3.36	3.41	0.04	0.07	0.05	0.04
Boilers	1,470	103	265	59	3.24	3.44	3.23	3.44	0.43	0.05	0.11	0.04
Packaged heating units	612	208	240	66	3.32	3.38	3.42	3.40	0.29	0.10	0.06	0.05
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Water-heating equipment												
Centralized system	1,410	243	306	113	3.35	3.40	3.38	3.42	0.40	0.11	0.09	0.07
Distributed system	233	22	55	15	3.26	3.39	3.51	3.43	0.27	0.05	0.07	0.04
Combination of centralized and distributed system	391	46	170	30	3.12	3.38	3.41	3.41	0.27	0.04	0.07	0.03
Food preparation or serving areas in non-food service buildings (more than one may apply)												
Snack bar or concession stand	170	37	127	50	3.27	3.41	3.44	3.42	0.15	0.04	0.07	0.06
Fast food or small restaurant	68	30	67	Q	3.14	3.40	3.51	3.42	0.09	0.04	0.05	0.04
Cafeteria or large restaurant	664	52	223	62	3.20	3.46	3.41	3.44	0.31	0.04	0.10	0.05
Commercial kitchen/ food preparation area	482	71	171	59	3.25	3.39	3.39	3.43	0.28	0.05	0.07	0.05
Small kitchen area	499	55	154	37	3.27	3.39	3.41	3.41	0.33	0.05	0.11	0.05
HVAC conservation features (more than one may apply)												
Economizer cycle	572	105	260	90	3.17	3.42	3.42	3.41	0.19	0.04	0.07	0.04
Regular HVAC maintenance	1,813	256	470	142	3.30	3.40	3.30	3.42	0.32	0.07	0.07	0.05
Building automation system (BAS) ²	684	204	372	111	3.15	3.40	3.30	3.42	0.20	0.07	0.07	0.05
Equipment usage reduced when building not in full use (more than one may apply)												
Heating	1,525	192	403	113	3.32	3.39	3.28	3.40	0.32	0.07	0.09	0.05
Cooling	1,242	135	406	97	3.32	3.39	3.29	3.40	0.30	0.05	0.08	0.05
Lighting	2,021	286	514	150	3.29	3.41	3.32	3.42	0.36	0.08	0.08	0.05
Annual consumption (gallons)												
1,000 or less	155	59	102	33	3.63	3.48	3.47	3.51	0.08	0.03	0.03	0.02
1,001 to 5,000	490	Q	144	43	3.40	3.39	3.35	3.40	0.30	Q	0.09	0.06
5,001 to 10,000	390	111	80	40	3.32	3.37	2.89	3.38	0.47	0.25	0.10	0.10
10,001 to 25,000	395	Q	57	Q	3.29	3.45	3.42	Q	0.44	0.11	0.07	Q
Over 25,000	716	Q	170	Q	3.15	Q	3.40	Q	0.98	Q	0.48	Q

Table C36. Fuel oil expenditures by Census region, 2012

	Total fuel oil expenditures (million dollars)				Fuel oil expenditures (dollars)							
					per gallon				per square foot			
	North- east	Mid- west	South	West	North- east	Mid- west	South	West	North- east	Mid- west	South	West
All buildings	2,146	367	553	164	3.29	3.41	3.32	3.42	0.35	0.09	0.08	0.05

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 F of the 2012 Commercial Buildings Energy Consumption Survey.