

Table C23. Total natural gas consumption and expenditures, 2012

	All buildings using natural gas			Natural gas consumption		Natural gas expenditures
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (billion cubic feet)	Total (million dollars)
All buildings	2,933	58,725	20.0	2,248	2,193	17,279
Building floorspace (square feet)						
1,001 to 5,000	1,253	3,757	3.0	256	249	2,157
5,001 to 10,000	660	4,817	7.3	248	242	1,957
10,001 to 25,000	548	8,823	16.1	304	297	2,549
25,001 to 50,000	227	8,148	35.9	284	277	2,101
50,001 to 100,000	142	9,935	70.1	338	330	2,621
100,001 to 200,000	67	9,416	139.6	290	283	2,261
200,001 to 500,000	29	8,293	283.5	310	302	2,161
Over 500,000	6	5,535	911.1	219	214	1,473
Principal building activity						
Education	234	9,520	40.7	291	284	2,200
Food sales	82	846	10.3	53	52	420
Food service	283	1,394	4.9	227	222	1,700
Health care	95	3,292	34.6	265	258	1,818
Inpatient	8	2,113	263.2	219	214	1,441
Outpatient	87	1,179	13.5	46	45	377
Lodging	99	4,918	49.5	221	215	1,628
Mercantile	356	8,493	23.9	291	284	2,392
Retail (other than mall)	232	3,371	14.5	74	72	607
Enclosed and strip malls	124	5,123	41.5	217	212	1,785
Office	595	10,290	17.3	282	275	2,306
Public assembly	205	3,888	19.0	135	132	1,063
Public order and safety	53	1,007	19.0	41	40	310
Religious worship	229	3,016	13.2	87	85	691
Service	339	2,790	8.2	122	119	950
Warehouse and storage	261	7,007	26.8	139	136	1,120
Other	59	1,378	23.3	81	79	571
Vacant	44	886	20.2	13	12	108
Year constructed						
Before 1920	202	2,320	11.5	87	85	757
1920 to 1945	288	3,792	13.2	145	141	1,167
1946 to 1959	334	5,393	16.1	199	195	1,595
1960 to 1969	401	7,553	18.8	314	307	2,398
1970 to 1979	406	7,979	19.6	340	332	2,542
1980 to 1989	431	9,887	22.9	335	327	2,624
1990 to 1999	407	9,162	22.5	338	330	2,535
2000 to 2003	182	4,723	25.9	158	154	1,198
2004 to 2007	144	4,096	28.4	172	167	1,284
2008 to 2012	138	3,821	27.7	159	156	1,180

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All buildings	2,933	58,725	20.0	2,248	2,193	17,279
Census region and division						
Northeast	433	11,068	25.6	499	487	4,599
New England	98	2,241	22.9	111	108	1,067
Middle Atlantic	335	8,827	26.3	389	379	3,533
Midwest	843	15,025	17.8	642	627	4,383
East North Central	577	10,790	18.7	494	482	3,344
West North Central	266	4,236	15.9	149	145	1,039
South	950	19,900	21.0	615	600	4,793
South Atlantic	387	9,984	25.8	305	298	2,641
East South Central	191	3,436	18.0	104	101	790
West South Central	372	6,480	17.4	207	202	1,362
West	707	12,732	18.0	491	479	3,503
Mountain	218	3,766	17.3	163	159	1,075
Pacific	489	8,966	18.3	328	320	2,428
Climate region¹						
Very cold/Cold	1,264	24,511	19.4	1,097	1,070	8,269
Mixed-humid	932	19,361	20.8	657	641	5,432
Mixed-dry/Hot-dry	428	7,520	17.6	255	249	1,723
Hot-humid	215	5,300	24.7	171	167	1,262
Marine	94	2,033	21.6	68	67	593
Number of floors						
One	1,832	24,497	13.4	918	896	7,305
Two	723	14,665	20.3	511	499	3,956
Three	245	6,084	24.8	224	219	1,700
Four to nine	124	9,764	78.5	443	432	3,233
Ten or more	8	3,715	437.3	151	147	1,085
Number of workers (main shift)						
Fewer than 5	1,225	7,858	6.4	264	258	2,221
5 to 9	606	5,355	8.8	202	197	1,678
10 to 19	498	6,799	13.6	298	291	2,296
20 to 49	348	10,613	30.5	379	369	2,954
50 to 99	154	10,320	67.0	360	352	2,808
100 to 249	74	8,880	120.1	337	329	2,546
250 or more	27	8,900	328.6	408	398	2,775
Weekly operating hours						
Fewer than 40	433	3,705	8.6	97	95	783
40 to 48	726	9,960	13.7	259	252	2,118
49 to 60	757	14,006	18.5	369	360	2,960
61 to 84	454	11,494	25.3	469	458	3,747
85 to 167	281	6,734	24.0	349	340	2,684
Open continuously	282	12,827	45.4	705	688	4,986

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All buildings	2,933	58,725	20.0	2,248	2,193	17,279
Ownership and occupancy						
Nongovernment owned	2,489	44,481	17.9	1,747	1,704	13,484
Owner occupied	1,317	20,542	15.6	890	868	6,629
Leased to tenant(s)	951	17,361	18.3	634	618	5,172
Owner occupied and leased	198	6,254	31.5	219	213	1,647
Unoccupied	23	325	14.1	4	4	37
Government owned	444	14,244	32.1	501	489	3,794
Federal	21	868	41.1	30	29	228
State	100	3,939	39.2	169	165	1,259
Local	322	9,438	29.3	302	294	2,307
Party responsible for operation and maintenance of energy systems						
Building owner	2,439	49,100	20.1	1,852	1,807	14,092
Business owner or tenant	432	8,240	19.1	343	334	2,776
Property management	30	778	26.1	27	26	206
Other	32	607	18.9	27	26	204
Provider of direct input on energy-related equipment purchases						
Building owner	2,538	50,946	20.1	1,915	1,868	14,619
Business owner or tenant	314	6,025	19.2	264	258	2,101
Property management	18	516	28.2	17	17	121
Other	63	1,238	19.8	52	51	438
Number of establishments						
One	2,244	37,156	16.6	1,527	1,490	11,567
2 to 5	514	12,432	24.2	429	418	3,352
6 to 10	91	3,092	34.1	107	105	877
11 to 20	47	2,762	58.2	112	110	880
More than 20	11	2,862	253.7	67	65	553
Currently unoccupied	26	420	16.3	6	6	49
Predominant exterior wall material						
Brick, stone, or stucco	1,427	28,999	20.3	1,160	1,131	8,924
Concrete (block or poured)	631	14,517	23.0	535	522	4,166
Concrete panels	110	5,939	54.0	208	203	1,420
Siding or shingles	355	2,888	8.1	134	131	1,094
Metal panels	366	4,386	12.0	126	123	1,028
Window glass	14	1,048	76.7	48	47	385
Other	15	496	32.2	Q	Q	Q
No one major type	16	453	28.3	14	14	111

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All buildings	2,933	58,725	20.0	2,248	2,193	17,279
Predominant roof material						
Metal surfacing	645	7,825	12.1	241	235	1,968
Synthetic or rubber	622	19,790	31.8	850	830	6,488
Built-up	516	16,026	31.1	582	568	4,301
Slate or tile shingles	220	2,800	12.8	114	111	901
Wooden materials (including shingles)	79	611	7.7	41	40	289
Asphalt, fiberglass, or other shingles	807	9,896	12.3	368	359	2,916
Concrete	18	838	46.2	24	23	177
Other	17	539	32.4	18	18	146
No one major type	10	400	40.0	10	9	92
Roof characteristics						
Roof tilt						
Flat	1,184	35,833	30.3	1,455	1,420	10,950
Shallow pitch	1,021	14,500	14.2	481	470	3,811
Steeper pitch	728	8,392	11.5	312	304	2,518
Cool roof	447	14,352	32.1	602	588	4,507
Renovations in buildings constructed before 2008 (more than one may apply)						
Any type of renovation	1,293	30,945	23.9	1,230	1,200	9,407
Addition or annex	282	10,105	35.8	468	457	3,376
Reduction in floorspace	42	1,385	33.2	70	68	497
Roof replacement	627	16,151	25.8	681	664	5,201
Exterior wall replacement	120	3,395	28.4	129	126	974
Interior wall reconfiguration	586	16,075	27.4	644	629	4,851
Window replacement	369	9,286	25.2	387	378	2,926
HVAC equipment upgrade	719	20,438	28.4	842	822	6,341
Lighting upgrade	641	19,298	30.1	810	790	6,007
Electrical upgrade	482	12,374	25.7	551	537	4,139
Plumbing system upgrade	414	10,550	25.5	515	502	3,849
Insulation upgrade	252	5,894	23.4	269	262	2,036
Fire, safety, or security upgrade	415	13,227	31.9	569	555	4,234
Structural upgrade	101	2,835	28.2	151	148	1,070
Other	17	559	32.2	14	13	107
No renovations	1,502	23,959	15.9	859	838	6,692
Buildings constructed 2008 or later	138	3,821	27.7	159	156	1,180

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All buildings	2,933	58,725	20.0	2,248	2,193	17,279
Energy sources (more than one may apply)						
Electricity	2,933	58,725	20.0	2,248	2,193	17,279
Natural gas	2,933	58,725	20.0	2,248	2,193	17,279
Fuel oil	164	13,663	83.4	623	608	4,456
District heat	17	2,860	168.1	108	106	748
District chilled water	21	2,431	116.6	133	130	921
Propane	69	3,396	48.9	146	143	1,035
Other	72	2,637	36.7	108	106	821
Space-heating energy sources						
Natural gas	2,612	49,511	19.0	1,971	1,923	15,055
Natural gas main	2,322	42,988	18.5	1,769	1,726	13,530
Natural gas secondary	289	6,524	22.6	202	197	1,525
Other excluding natural gas	276	8,617	31.2	252	246	2,016
Buildings without heating	45	597	13.1	25	25	208
Primary space-heating energy source						
Electricity	509	11,549	22.7	335	327	2,700
Natural gas	2,322	42,988	18.5	1,769	1,726	13,530
Fuel oil	15	410	27.3	8	8	75
District heat	17	2,791	165.2	106	103	730
Propane	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q
Cooling energy sources						
Natural gas	12	732	61.5	58	57	423
Other excluding natural gas	2,688	56,167	20.9	2,120	2,068	16,243
Buildings without cooling	233	1,826	7.8	70	68	612
Water-heating energy sources						
Natural gas	1,758	39,523	22.5	1,771	1,728	13,379
Other excluding natural gas	985	17,496	17.8	439	428	3,606
Buildings without water heating	191	1,706	9.0	38	37	293
Cooking energy sources						
Natural gas	740	24,770	33.5	1,238	1,208	9,283
Other excluding natural gas	347	6,256	18.0	205	200	1,578
Buildings without cooking	1,846	27,699	15.0	805	786	6,418
Energy end uses (more than one may apply)						
Buildings with space heating	2,888	58,129	20.1	2,223	2,169	17,071
Buildings with cooling	2,700	56,899	21.1	2,178	2,125	16,667
Buildings with water heating	2,742	57,019	20.8	2,210	2,156	16,986
Buildings with cooking	1,087	31,026	28.6	1,443	1,408	10,861
Buildings with manufacturing	153	3,740	24.4	123	120	1,020
Buildings with electricity generation	270	20,271	75.0	855	834	6,275

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All buildings	2,933	58,725	20.0	2,248	2,193	17,279
Percent of floorspace heated						
Not heated	45	597	13.1	25	25	208
1 to 50	322	5,716	17.7	123	120	978
51 to 99	465	11,147	24.0	443	432	3,431
100	2,101	41,265	19.6	1,657	1,617	12,661
Percent of floorspace cooled						
Not cooled	233	1,826	7.8	70	68	612
1 to 50	697	13,031	18.7	418	408	3,257
51 to 99	592	17,106	28.9	667	651	5,161
100	1,411	26,762	19.0	1,093	1,066	8,248
Heating equipment (more than one may apply)						
Heat pumps	233	7,560	32.5	247	241	1,984
Furnaces	550	7,046	12.8	244	238	1,993
Individual space heaters	774	15,808	20.4	545	532	4,209
District heat	17	2,833	166.8	108	105	746
Boilers	409	20,019	48.9	984	960	7,351
Packaged heating units	1,901	37,569	19.8	1,360	1,327	10,488
Other	36	1,194	33.4	54	53	451
Cooling equipment (more than one may apply)						
Residential-type central air conditioners	1,012	10,504	10.4	416	406	3,330
Heat pumps	265	8,017	30.2	257	250	2,067
Individual air conditioners	385	9,137	23.7	374	365	2,992
District chilled water	21	2,431	116.6	133	130	921
Central chillers	127	13,745	108.5	598	584	4,259
Packaged air conditioning units	1,311	34,917	26.6	1,318	1,286	9,995
Swamp coolers	69	1,536	22.3	71	69	519
Other	Q	290	Q	10	10	86
Main equipment replaced since 1990 (more than one may apply)						
Heating	1,201	21,058	17.5	790	771	6,149
Cooling	1,243	23,093	18.6	882	860	6,880
Water-heating equipment						
Centralized system	2,073	34,005	16.4	1,414	1,380	10,835
Distributed system	388	8,211	21.2	257	251	2,012
Combination of centralized and distributed system	282	14,803	52.6	539	526	4,139

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All buildings	2,933	58,725	20.0	2,248	2,193	17,279
Food preparation or serving areas in non-food service buildings (more than one may apply)						
Snack bar or concession stand	96	7,867	81.7	364	355	2,660
Fast food or small restaurant	132	8,345	63.2	372	363	2,811
Cafeteria or large restaurant	104	13,043	125.6	587	572	4,206
Commercial kitchen/food preparation area	221	14,082	63.8	673	657	4,943
Small kitchen area	459	10,883	23.7	409	399	3,190
HVAC conservation features (more than one may apply)						
Economizer cycle	441	24,683	56.0	1,015	991	7,520
Regular HVAC maintenance	1,993	50,691	25.4	1,991	1,942	15,133
Building automation system (BAS) ²	519	27,821	53.6	1,100	1,073	8,094
Window and interior lighting features (more than one may apply)						
Multipaned windows	1,852	43,774	23.6	1,752	1,709	13,407
Tinted window glass	1,163	32,631	28.1	1,290	1,259	9,673
Reflective window glass	362	12,051	33.3	541	528	4,030
External overhangs or awnings	1,119	23,220	20.7	1,030	1,005	7,857
Skylights or atriums	365	16,745	45.9	681	664	5,111
Light scheduling	607	23,109	38.1	927	905	7,031
Occupancy sensors	555	26,972	48.6	1,067	1,041	8,061
Multi-level lighting or dimming	262	11,703	44.6	573	560	4,218
Daylight harvesting	77	4,920	64.0	197	192	1,516
Demand responsive lighting	101	3,678	36.5	127	124	1,051
Building automation system (BAS) for lighting ²	142	9,400	66.3	335	327	2,536
Equipment usage reduced when building not in full use (more than one may apply)						
Heating	2,313	46,818	20.2	1,675	1,635	13,009
Cooling	2,183	45,726	20.9	1,644	1,604	12,753
Lighting	2,774	55,033	19.8	2,105	2,054	16,253
Annual consumption (hundred cubic feet)						
1,000 or less	1,016	6,952	6.8	53	51	629
1,001 to 5,000	1,151	13,335	11.6	282	275	2,526
5,001 to 10,000	325	7,987	24.6	238	232	1,931
10,001 to 25,000	289	11,157	38.6	459	448	3,510
25,001 to 50,000	88	7,156	81.3	311	304	2,346
50,001 to 100,000	41	5,278	127.4	285	278	2,104
Over 100,000	23	6,860	301.2	621	606	4,234

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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 C of the 2012 Commercial Buildings Energy Consumption Survey.