

Table C29. Natural gas consumption and conditional energy intensity by Census division (part 3), 2012

	Total natural gas consumption (billion cubic feet)			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/square foot)		
	West South Central	Mountain	Pacific	West South Central	Mountain	Pacific	West South Central	Mountain	Pacific
All buildings	202	159	320	6,480	3,766	8,966	31.1	42.3	35.7
Building floorspace (square feet)									
1,001 to 5,000	36	17	37	521	327	560	68.2	51.9	66.5
5,001 to 10,000	31	21	34	657	372	902	46.7	57.1	37.8
10,001 to 25,000	26	23	51	916	665	1,733	28.6	34.7	29.5
25,001 to 50,000	25	10	47	987	312	1,435	25.1	30.8	33.0
50,001 to 100,000	35	18	30	1,310	536	1,095	26.4	33.6	27.4
100,001 to 200,000	13	12	46	989	379	1,536	13.2	30.6	29.8
200,001 to 500,000	14	22	57	586	684	1,124	24.0	32.0	51.0
Over 500,000	23	Q	17	515	Q	581	44.2	Q	28.7
Principal building activity									
Education	25	18	22	1,463	635	791	16.8	27.7	28.1
Food sales	Q	Q	Q	Q	Q	Q	Q	Q	Q
Food service	38	Q	33	185	Q	241	205.3	Q	137.6
Health care	29	19	38	335	232	430	85.5	83.4	87.4
Inpatient	26	12	Q	263	118	306	99.5	102.6	111.5
Outpatient	Q	Q	4	Q	Q	124	Q	Q	28.2
Lodging	16	Q	32	535	503	810	29.6	83.2	39.5
Mercantile	24	14	61	805	606	1,788	29.4	23.8	34.0
Retail (other than mall)	5	Q	11	355	Q	806	13.6	Q	13.2
Enclosed and strip malls	19	9	50	450	351	983	41.8	25.6	51.1
Office	15	18	34	904	616	1,716	16.3	29.6	19.6
Public assembly	Q	Q	15	368	Q	593	Q	Q	25.9
Public order and safety	Q	Q	Q	Q	Q	Q	Q	Q	Q
Religious worship	4	Q	Q	256	Q	311	15.2	Q	Q
Service	10	Q	9	287	Q	271	36.3	Q	33.5
Warehouse and storage	9	Q	26	901	Q	1,143	10.2	34.3	22.6
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
Vacant	Q	Q	Q	Q	Q	Q	Q	Q	Q
Year constructed									
Before 1920	Q	Q	Q	Q	Q	Q	Q	Q	Q
1920 to 1945	9	Q	16	381	Q	388	22.6	Q	40.2
1946 to 1959	14	12	25	593	273	832	23.9	45.5	29.9
1960 to 1969	25	14	57	587	370	1,096	43.4	37.5	52.1
1970 to 1979	35	25	37	980	650	1,352	35.7	37.8	27.7
1980 to 1989	44	22	49	1,280	616	1,935	34.5	36.3	25.4
1990 to 1999	33	22	58	1,124	642	1,434	29.3	34.1	40.6
2000 to 2003	17	15	18	617	303	601	27.4	48.0	29.2
2004 to 2007	11	Q	23	345	501	573	30.5	Q	40.5
2008 to 2012	10	Q	Q	507	Q	613	20.4	Q	55.9

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All buildings	202	159	320	6,480	3,766	8,966	31.1	42.3	35.7
Provider of direct input on energy-related equipment purchases									
Building owner	165	149	263	5,758	3,442	7,577	28.7	43.2	34.7
Business owner or tenant	29	10	51	587	248	1,229	48.7	38.7	41.6
Property management	Q	N	Q	Q	N	Q	Q	N	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
Number of establishments									
One	145	113	213	4,634	2,313	5,429	31.3	49.1	39.3
2 to 5	34	31	48	1,184	912	1,672	28.7	34.5	28.6
6 to 10	Q	Q	26	Q	Q	668	Q	Q	38.7
11 to 20	Q	Q	18	Q	Q	478	Q	Q	37.1
More than 20	Q	Q	13	Q	Q	593	Q	Q	22.1
Currently unoccupied	Q	Q	Q	Q	Q	Q	Q	Q	Q
Predominant exterior wall material									
Brick, stone, or stucco	102	74	127	3,416	1,803	3,175	29.8	41.1	40.1
Concrete (block or poured)	50	30	87	1,369	923	2,687	36.3	33.0	32.2
Concrete panels	13	Q	29	522	Q	1,551	25.3	Q	18.8
Siding or shingles	16	Q	37	201	Q	719	Q	Q	51.5
Metal panels	19	11	10	877	321	427	21.4	35.3	23.9
Window glass	Q	Q	13	Q	Q	208	Q	Q	60.8
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
No one major type	Q	Q	Q	Q	Q	Q	Q	Q	Q
Predominant roof material									
Metal surfacing	44	21	29	1,508	580	958	28.9	36.4	30.2
Synthetic or rubber	45	80	99	1,393	1,553	2,067	32.3	51.5	48.0
Built-up	65	29	87	2,144	871	2,844	30.5	33.7	30.5
Slate or tile shingles	12	Q	34	302	Q	686	40.4	Q	48.9
Wooden materials (including shingles)	Q	Q	Q	Q	Q	Q	Q	Q	Q
Asphalt, fiberglass, or other shingles	28	19	50	945	576	1,707	29.9	32.8	29.5
Concrete	Q	Q	4	Q	Q	229	Q	Q	19.6
Other	N	Q	Q	N	Q	Q	N	Q	Q
No one major type	Q	N	Q	Q	N	Q	Q	N	Q
Roof characteristics									
Roof tilt									
Flat	122	80	224	3,621	2,042	5,581	33.8	39.0	40.2
Shallow pitch	53	Q	64	2,039	1,253	2,351	26.1	47.9	27.1
Steeper pitch	26	20	32	820	471	1,034	31.8	41.8	30.7
Cool roof	51	36	126	1,517	1,122	2,533	33.9	32.1	49.7

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All buildings	202	159	320	6,480	3,766	8,966	31.1	42.3	35.7
Renovations in buildings constructed before 2008 (more than one may apply)									
Any type of renovation	109	96	151	3,317	1,945	3,830	33.0	49.3	39.5
Addition or annex	39	Q	38	1,084	824	696	36.3	64.4	54.5
Reduction in floorspace	Q	Q	Q	Q	Q	Q	Q	Q	Q
Roof replacement	58	38	78	1,749	945	1,612	33.0	40.4	48.7
Exterior wall replacement	Q	Q	Q	266	Q	565	Q	Q	41.4
Interior wall reconfiguration	55	Q	84	1,506	1,227	2,223	36.7	53.9	37.6
Window replacement	39	Q	33	705	718	1,080	55.3	72.5	31.0
HVAC equipment upgrade	73	74	107	2,227	1,385	2,328	32.6	53.4	45.9
Lighting upgrade	71	72	108	2,053	1,317	2,443	34.6	54.5	44.1
Electrical upgrade	46	Q	76	1,367	873	1,455	33.3	65.9	51.9
Plumbing system upgrade	48	Q	72	1,005	634	1,378	47.5	83.1	52.4
Insulation upgrade	33	Q	30	614	Q	676	53.9	Q	43.9
Fire, safety, or security upgrade	52	35	81	1,646	831	1,615	31.6	42.1	50.1
Structural upgrade	Q	Q	27	Q	Q	547	Q	Q	50.1
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
No renovations	82	55	134	2,656	1,590	4,523	30.8	34.6	29.7
Buildings constructed 2008 or later	10	Q	Q	507	Q	613	20.4	Q	55.9
Energy sources (more than one may apply)									
Electricity	202	159	320	6,480	3,766	8,966	31.1	42.3	35.7
Natural gas	202	159	320	6,480	3,766	8,966	31.1	42.3	35.7
Fuel oil	50	Q	88	1,150	916	1,713	43.7	65.6	51.1
District heat	Q	Q	Q	124	Q	225	Q	Q	Q
District chilled water	Q	Q	Q	244	Q	186	Q	Q	133.9
Propane	Q	Q	17	Q	Q	587	Q	Q	29.4
Other	Q	9	Q	Q	305	425	Q	28.0	57.9
Space-heating energy sources									
Natural gas	164	119	267	5,467	3,180	7,509	30.0	37.6	35.5
Natural gas main	132	106	223	4,551	2,893	6,333	29.1	36.6	35.3
Natural gas secondary	32	14	44	916	288	1,176	34.8	47.7	37.1
Other excluding natural gas	36	Q	41	929	582	1,250	39.0	Q	32.9
Buildings without heating	Q	Q	Q	Q	Q	Q	Q	Q	Q
Primary space-heating energy source									
Electricity	59	23	65	1,719	512	2,143	34.3	45.3	30.4
Natural gas	132	106	223	4,551	2,893	6,333	29.1	36.6	35.3
Fuel oil	N	N	1	N	N	6	N	N	165.1
District heat	Q	Q	Q	124	Q	208	Q	Q	Q
Propane	Q	N	Q	Q	N	Q	Q	N	Q
Other	N	1	(*)	N	35	40	N	16.5	9.9

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All buildings	202	159	320	6,480	3,766	8,966	31.1	42.3	35.7
Cooling equipment (more than one may apply)									
Residential-type central air conditioners	44	19	69	1,479	532	1,558	29.9	35.1	44.4
Heat pumps	31	12	51	1,073	410	1,407	28.5	28.2	35.9
Individual air conditioners	15	19	25	607	513	681	25.2	37.6	37.0
District chilled water	Q	Q	Q	244	Q	186	Q	Q	133.9
Central chillers	52	35	66	1,351	795	1,504	38.4	44.2	44.1
Packaged air conditioning units	120	73	192	3,827	1,955	5,499	31.2	37.5	34.8
Swamp coolers	Q	24	28	Q	571	533	Q	41.9	51.9
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
Main equipment replaced since 1990 (more than one may apply)									
Heating	84	44	89	2,353	1,160	3,014	35.5	37.6	29.4
Cooling	90	52	91	2,491	1,253	2,938	36.2	41.1	31.0
Water-heating equipment									
Centralized system	127	99	170	3,747	2,081	4,910	33.9	47.7	34.6
Distributed system	24	18	51	993	553	1,355	24.2	32.5	37.6
Combination of centralized and distributed system	47	35	92	1,548	994	2,387	30.2	35.3	38.7
Food preparation or serving areas in non-food service buildings (more than one may apply)									
Snack bar or concession stand	28	Q	45	713	679	1,048	39.5	72.2	43.4
Fast food or small restaurant	34	Q	58	720	794	1,505	47.3	Q	38.5
Cafeteria or large restaurant	48	Q	71	1,545	785	1,213	30.9	66.6	58.4
Commercial kitchen/food preparation area	46	Q	85	1,392	949	1,649	33.0	64.6	51.3
Small kitchen area	23	Q	37	1,000	773	1,265	23.2	Q	29.4
HVAC conservation features (more than one may apply)									
Economizer cycle	66	84	157	2,057	1,796	4,022	32.2	46.7	39.0
Regular HVAC maintenance	172	141	285	5,446	3,290	7,801	31.6	42.8	36.5
Building automation system (BAS) ²	101	84	184	3,030	1,876	4,229	33.4	44.8	43.5

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All buildings	202	159	320	6,480	3,766	8,966	31.1	42.3	35.7
Window and interior lighting features (more than one may apply)									
Multipaned windows	137	130	217	4,107	2,965	5,255	33.3	43.9	41.3
Tinted window glass	131	97	204	4,067	2,080	5,778	32.1	46.7	35.2
Reflective window glass	32	Q	103	1,055	992	2,328	30.3	60.5	44.1
External overhangs or awnings	88	91	171	2,528	1,830	3,988	34.9	49.5	43.0
Skylights or atriums	55	Q	127	1,487	1,261	3,305	37.2	53.4	38.3
Light scheduling	80	73	155	2,155	1,354	4,330	36.9	53.7	35.7
Occupancy sensors	74	Q	174	2,349	1,622	4,710	31.3	48.3	37.0
Multi-level lighting or dimming	30	Q	118	838	1,073	2,132	35.9	56.6	55.4
Daylight harvesting	10	15	41	499	433	935	19.9	35.3	44.1
Demand responsive lighting	Q	Q	27	Q	Q	1,103	Q	Q	24.3
Building automation system (BAS) for lighting ²	19	18	61	901	624	1,838	21.4	29.6	33.4
Equipment usage reduced when building not in full use (more than one may apply)									
Heating	142	104	226	4,952	2,952	7,300	28.6	35.2	30.9
Cooling	140	96	224	4,893	2,726	7,118	28.5	35.2	31.5
Lighting	179	153	296	6,034	3,641	8,289	29.7	42.1	35.7
Annual consumption (hundred cubic feet)									
1,000 or less	7	4	8	1,161	306	1,638	6.3	13.3	5.2
1,001 to 5,000	32	23	37	1,697	893	2,168	19.1	26.1	17.2
5,001 to 10,000	27	17	31	1,222	389	1,018	22.1	42.6	30.2
10,001 to 25,000	42	31	81	1,036	788	1,662	40.5	39.4	49.0
25,001 to 50,000	23	17	39	627	434	1,033	36.3	38.6	37.6
50,001 to 100,000	Q	13	38	Q	350	574	Q	36.8	65.5
Over 100,000	45	Q	85	494	Q	873	91.0	90.5	97.8

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.

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

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.