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	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

Table C23. Total natural gas consumption and expenditures, 2012

	All buildings using natural gas	i		tural gas nsumption		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)	(million	
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		
West South Central	372	6,480	17.4	207	202		
West	707	12,732	18.0	491	479		
Mountain	218	3,766	17.3	163	159		
Pacific	489	8,966	18.3	328	320		
Climate region ¹							
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		
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		
61 to 84	454	11,494	25.3	469	458		
85 to 167	281	6,734	24.0	349	340		
Open continuously	282	12,827	45.4	705	688		
	202	12,021	73.4	,03			

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	Total (billion cubic feet)	(million
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	
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	
Property management	18	516	28.2	17	17	
Other	63	1,238	19.8		51	
Number of establishments						
One	2,244	37,156	16.6	1,527	1,490	11,567
2 to 5	514	12,432	24.2		418	
6 to 10	91	3,092	34.1	107	105	
11 to 20	47	2,762	58.2		110	
More than 20	11	2,862	253.7		65	
Currently unoccupied	26	420	16.3		6	
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		522	
Concrete panels	110	5,939	54.0		203	
Siding or shingles	355	2,888	8.1		131	
Metal panels	366	4,386	12.0		123	
Window glass	14	1,048	76.7		47	
Other	15	496	32.2		Q	
No one major type	16	453	28.3		14	
140 one major type		7.0	د.ن			

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 (billion cubic feet)	(million
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	
Lighting upgrade	641	19,298	30.1	810	790	6,007
Electrical upgrade	482	12,374	25.7	551	537	
Plumbing system upgrade	414	10,550	25.5	515	502	
Insulation upgrade	252	5,894	23.4	269	262	
Fire, safety, or security upgrade	415	13,227	31.9	569	555	
Structural upgrade	101	2,835	28.2	151	148	
Other	17	559	32.2		13	
No renovations	1,502	23,959	15.9		838	
Buildings constructed 2008 or later	138	3,821	27.7			

Table C23. Total natural gas consumption and expenditures, 2012

	All buildings using natural gas	i		Natural gas consumption		Natural gas expenditures
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion	Total (billion cubic feet)	(million
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		1,726	
Fuel oil	15	410	27.3		8	
District heat	17	2,791	165.2	106	103	730
Propane	Q	Q	Q	Q	Q	. 0
Other	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		2,068	
Buildings without cooling	233	1,826	7.8		68	
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		428	
Buildings without water heating	191	1,706	9.0		37	
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		200	
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		2,125	
Buildings with water heating	2,742	57,019	20.8		2,156	
Buildings with cooking	1,087	31,026	28.6		1,408	
Buildings with manufacturing	153	3,740	24.4		120	
Buildings with electricity						
generation	270	20,271	75.0	855	834	6,275

Table C23. Total natural gas consumption and expenditures, 2012

	All buildings using natural gas	;		atural gas onsumption		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)	(million	
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		
Individual space heaters	774	15,808	20.4	545	532		
District heat	17	2,833	166.8	108	105		
Boilers	409	20,019	48.9	984	960		
Packaged heating units	1,901	37,569	19.8	1,360	1,327		
Other	36	1,194	33.4	54	53		
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	

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)	(million	
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		
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 Building automation system (BAS) for	101	3,678	36.5	127	124	1,051	
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		
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		
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	

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	Total (billion cubic feet)	(million	
All buildings	2,933	58,725	20.0	2,248	2,193	17,279	

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).

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.

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.

Table C24. Natural gas consumption and expenditure intensities, 2012

Natural gas consumption

				Distribution building-leve					
		per		(cubic feet/s	quare foot)		Natural gas	expenditure	es
	per building (thousand cubic feet)	square foot (cubic	per	25th	Median	75th per- centile	(thousand	•	per thousand cubic feet (dollars)
All buildings	748	37.3	35.2	12.1	26.6	55.3	5.9	0.3	7.9
Building floorspace (square feet)									
1,001 to 5,000	199	66.4	45.6	17.0	35.6	73.2	1.7	0.6	8.7
5,001 to 10,000	366	50.2	42.3	10.8	24.8	52.8	3.0	0.4	8.1
10,001 to 25,000	541	33.6	28.9	8.8	20.2	42.3	4.7	0.3	8.6
25,001 to 50,000	1,220	34.0	31.8	9.2	21.3	44.5	9.3	0.3	7.6
50,001 to 100,000	2,327	33.2	37.5	9.2	22.2	42.7	18.5	0.3	8.0
100,001 to 200,000	4,198	30.1	34.0	6.5	18.8	39.0	33.5	0.2	8.0
200,001 to 500,000	10,330	36.4	38.6	8.0	21.6	44.1	73.9	0.3	7.2
Over 500,000	35,203	38.6	29.5	3.1	12.4	41.7	242.4	0.3	6.9
Principal building activity									
Education	1,215	29.8	33.1	. 10.7	23.8	49.1	9.4	0.2	7.8
Food sales	634	61.3	63.6	18.3	46.4	75.9	5.1	0.5	8.1
Food service	783	159.2	80.8	51.3	132.5	255.3	6.0	1.2	7.7
Health care	2,714	78.5	43.5	12.1	21.6	47.1	19.1	0.6	7.0
Inpatient	26,609	101.1	55.6	21.2	85.0	129.0	179.5	0.7	6.8
Outpatient	514	38.0	21.3	11.2	21.0	42.9	4.3	0.3	8.4
Lodging	2,169	43.8	83.7	19.5	36.0	65.5	16.4	0.3	7.6
Mercantile	799	33.5	42.6	12.0	25.4	50.1	6.7	0.3	8.4
Retail (other than mall)	312	21.5	30.7	10.8	20.8	39.2	2.6	0.2	8.4
Enclosed and strip malls	1,714	41.3	49.1	16.4	42.7	93.4	14.5	0.4	8.4
Office	463	26.8	12.4	10.4	22.8	40.0	3.9	0.2	8.4
Public assembly	643	33.9	60.4	13.6	28.4	46.7	5.2	0.3	8.1
Public order and safety	751	39.5	32.2	16.6	25.9	47.7	5.9	0.3	7.8
Religious worship	371	28.1	67.8	10.6	21.7	44.7	3.0	0.2	8.2
Service	351	42.7	43.6	13.6	29.9	63.5	2.8	0.3	8.0
Warehouse and storage	520	19.4	34.0	5.6	14.6	29.9	4.3	0.2	8.3
Other	1,334	57.2	64.6	13.8	28.8	72.5	9.7	0.4	7.3
Vacant	281	13.9	82.8		16.5	29.5		0.1	8.8
Year constructed									
Before 1920	422	36.8	38.7	13.6	29.4	58.6	3.7	0.3	8.9
1920 to 1945	492	37.3	33.6	15.0	37.0	63.6	4.1	0.3	8.3
1946 to 1959	582	36.1	39.8	12.9	27.1	50.0	4.8	0.3	8.2
1960 to 1969	765	40.6	42.1	11.7	26.8	59.2	6.0	0.3	7.8
1970 to 1979	816	41.6	33.9	12.9	29.8	62.7	6.3	0.3	7.7
1980 to 1989	757	33.0	27.8	10.8	24.9	47.9	6.1	0.3	8.0
1990 to 1999	812	36.0	34.3	11.7	24.1	54.0	6.2	0.3	7.7
2000 to 2003	845	32.6	30.7	10.7	23.5	49.7	6.6	0.3	7.8
2004 to 2007	1,163	40.9			26.2	54.9		0.3	7.7
2008 to 2012	1,128	40.7	38.8		19.3	61.1		0.3	7.6
						-			

Table C24. Natural gas consumption and expenditure intensities, 2012

Natural gas consumption

			ı	Distribution	of				
				building-leve					
		per		cubic feet/s	quare foot)		Natural gas	expenditure	es
	per	square	per				per	per	per
	building	foot		25th		75th	building	square	
	(thousand	-	(thousand	per- centile	Median	per- centile	(thousand dollars)	foot (dollars)	cubic feet (dollars)
	cubic feet)	feet)	cubic feet)	Certule	Median	Centile	uoliaisj	(uollais)	(uoliais)
All buildings	748	37.3	35.2	12.1	26.6	55.3	5.9	0.3	7.9
Census region and division									
Northeast	1,125	44.0	36.4	16.1	35.1	63.5	10.6	0.4	9.4
New England	1,104	48.1	46.6	12.6	26.0	45.2	10.9	0.5	9.9
Middle Atlantic	1,131	43.0	34.2	17.6	39.2	73.2	10.5	0.4	9.3
Midwest	743	41.7	43.9	17.0	32.0	56.0	5.2	0.3	7.0
East North Central	835	44.6	45.8	18.9	34.3	59.1	5.8	0.3	6.9
West North Central	545	34.3	38.5	13.5	24.3	49.9	3.9	0.3	7.2
South	632	30.2	30.6	8.9	22.1	52.3	5.0	0.2	8.0
South Atlantic	770	29.8	30.2	9.6	24.1	62.7	6.8	0.3	8.9
East South Central	529	29.4	32.2	9.6	21.6	33.1	4.1	0.2	7.8
West South Central	542	31.1	30.6	8.0	20.2	52.0	3.7	0.2	6.8
West	678	37.6	31.7	8.1	23.8	53.7	5.0	0.3	7.3
Mountain	731	42.3	43.6	15.6	30.4	59.0	4.9	0.3	6.7
Pacific	654	35.7	27.9	6.5	20.4	49.7	5.0	0.3	7.6
Climate region ¹									
Very cold/Cold	847	43.7	43.3	18.0	34.0	59.0	6.5	0.3	7.7
Mixed-humid	688	33.1	32.1	11.9	24.3	56.5	5.8	0.3	8.5
Mixed-dry/Hot-dry	582	33.1	27.7	6.0	15.5	40.1	4.0	0.2	6.9
Hot-humid	776	31.4	27.3	6.7	19.4	55.4	5.9	0.2	7.6
Marine	706	32.7	26.0	9.2	21.1	46.4	6.3	0.3	8.9
Number of floors									
One	489	36.6	37.8	12.3	27.5	59.6	4.0	0.3	8.2
Two	689	34.0	34.1	11.9	24.0	48.5	5.5	0.3	7.9
Three	894	36.0	36.6	13.4	29.4	53.6	6.9	0.3	7.8
Four to nine	3,478	44.3	36.9	10.4	29.1	56.5	26.0	0.3	7.5
Ten or more	17,357	39.7	23.2	4.6	26.6	43.2	127.7	0.3	7.4
Number of workers (main shift)									
Fewer than 5	211	32.8	96.6	14.1	27.9	54.0	1.8	0.3	8.6
5 to 9	325	36.8	51.1	10.8	24.2	55.4	2.8	0.3	8.5
10 to 19	583	42.8	44.6	12.1	28.3	69.0	4.6	0.3	7.9
20 to 49	1,061	34.8	36.2	11.7	26.2	55.7	8.5	0.3	8.0
50 to 99	2,283	34.1	34.9	8.5	21.2	47.9	18.2	0.3	8.0
100 to 249	4,449	37.0	31.8	9.5	29.8	56.5	34.4	0.3	7.7
250 or more	14,690	44.7	21.2	6.5	21.7	54.2	102.4	0.3	7.0
Weekly operating hours									
Fewer than 40	219	25.6	46.7	12.1	24.8	44.7	1.8	0.2	8.3
40 to 48	347	25.3	21.6	10.6	22.6	40.7	2.9	0.2	8.4
49 to 60	476	25.7	21.4	10.5	22.7	46.7	3.9	0.2	8.2
61 to 84	1,009	39.9	39.1	14.0	33.9	89.1	8.3	0.3	8.2
85 to 167	1,211	50.5	55.5	19.7	54.2	155.0	9.6	0.4	7.9
Open continuously	2,437	53.6	49.2	17.7	34.9	71.0	17.7	0.4	7.3

Table C24. Natural gas consumption and expenditure intensities, 2012

	Natural gas c									
				Distribution building-leve (cubic feet/s	el intensities		Natural gas expenditures			
	per building (thousand cubic feet)	-	per worker (thousand cubic feet)	25th	Median	75th per- centile	(thousand	per square foot (dollars)	per thousand cubic feet (dollars)	
All buildings	748	37.3	35.2	12.1	26.6	55.3	5.9	0.3	7.9	
Ownership and occupancy										
Nongovernment owned	685	38.3	35.4	11.9	27.0	56.8	5.4	0.3	7.9	
Owner occupied	659	42.3	47.2	13.6	28.7	57.1	5.0	0.3	7.6	
Leased to tenant(s)	650	35.6	27.4	11.5	27.1	64.3	5.4	0.3	8.4	
Owner occupied and leased	1,077	34.1	29.8		17.7	38.2	8.3	0.3	7.7	
Unoccupied	177	12.5	N		18.9	29.5		0.1	9.0	
Government owned	1,102	34.3	34.2		25.5	48.6		0.3	7.8	
Federal	1,395	34.0	23.2		22.9	37.9		0.3	7.7	
State	1,644	42.0	40.3		28.2	53.3		0.3	7.6	
Local	913	31.2	33.0		25.6	48.6		0.2	7.8	
Party responsible for operation										
and maintenance of energy										
systems										
Building owner	741	36.8	34.5	12.2	26.4	53.3	5.8	0.3	7.8	
Business owner or tenant	774	40.6	40.3		27.5	69.8		0.3	8.3	
Property management	869	33.3	22.0		30.4	72.3		0.3	8.0	
Other	814	43.0	45.9		42.2	83.7		0.3	7.8	
Provider of direct input on energy- related equipment purchases										
Building owner	736	36.7	34.4	12.2	26.4	53.1	5.8	0.3	7.8	
Business owner or tenant	822	42.8	40.4	10.8	32.2	75.3	6.7	0.4	8.1	
Property management	911	32.3	29.1		43.0	155.0		0.2	7.2	
Other	811	40.9	44.9		25.0	76.9		0.4	8.6	
Number of establishments										
One	664	40.1	40.0		28.2	59.6		0.3	7.8	
2 to 5	814	33.6	31.4		22.7	45.6		0.3	8.0	
6 to 10	1,153	33.8	26.7		24.5	43.0		0.3	8.4	
11 to 20	2,310	39.7	29.3		32.6	57.2		0.3	8.0	
More than 20	5,786	22.8	15.9		22.5	60.5		0.2	8.5	
Currently unoccupied	231	14.1	N	5.8	20.7	30.5	1.9	0.1	8.3	
Predominant exterior wall material										
Brick, stone, or stucco	793	39.0	37.0	13.0	29.4	63.0	6.3	0.3	7.9	
Concrete (block or poured)	827	35.9	34.9	10.6	26.1	52.2	6.6	0.3	8.0	
Concrete panels	1,850	34.2	32.8	4.0	17.4	55.4	12.9	0.2	7.0	
Siding or shingles	368	45.3	43.3	16.1	29.8	58.2	3.1	0.4	8.4	
Metal panels	336	28.0	34.6	11.8	20.4	44.2	2.8	0.2	8.4	
Window glass	3,407	44.4	22.2	18.4	77.5	344.5		0.4	8.3	
Other	Q	46.0	44.9	11.9	20.2	30.1	Q	0.3	6.6	
No one major type	865	30.6	Q	20.5	36.0	53.0	6.9	0.3	8.0	

Table C24. Natural gas consumption and expenditure intensities, 2012

558

1,128

No renovations

Buildings constructed 2008 or later

35.0

40.7

34.7

38.8

11.7

10.0

25.4

19.3

53.1

61.1

4.5

8.6

0.3

0.3

8.0

7.6

	Natural gas consumption								
				Distribution building-leve (cubic feet/s	l intensities		Natural gas expenditures		
	per building (thousand cubic feet)	•	per worker (thousand cubic feet)	25th per-	Median	75th per- centile	per building (thousand dollars)	per square foot (dollars)	per thousand cubic feet (dollars)
All buildings	748	37.3	35.2	12.1	26.6	55.3	5.9	0.3	7.9
Predominant roof material									
Metal surfacing	365	30.1	34.8	11.8	23.5	47.6	3.1	0.3	8.4
Synthetic or rubber	1,334	41.9	39.4	14.6	29.6	62.0	10.4	0.3	7.8
Built-up	1,102	35.5	31.6	9.2	24.9	55.5	8.3	0.3	7.6
Slate or tile shingles	506	39.7	41.8	14.8	38.2	73.2	4.1	0.3	8.1
Wooden materials (including									
shingles)	506	65.7	63.2	11.3	34.0	72.7	3.6	0.5	7.2
Asphalt, fiberglass, or									
other shingles	445	36.3	32.1	12.1	28.3	54.9	3.6	0.3	8.1
Concrete	1,271	27.5	16.1	4.0	18.6	38.7	9.8	0.2	7.7
Other	1,065	32.8	38.9	10.7	20.2	40.6	8.8	0.3	8.3
No one major type	939	23.5	Q	15.2	19.1	53.6	9.1	0.2	9.7
Roof characteristics									
Roof tilt									
Flat	1,199	39.6	33.5	11.6	27.9	65.1	9.2	0.3	7.7
Shallow pitch	460	32.4	36.1	11.1	24.5	49.7	3.7	0.3	8.1
Steeper pitch	418	36.2	43.2	14.4	28.5	52.1	3.5	0.3	8.3
Cool roof	1,314	40.9	37.0	12.6	28.4	61.6	10.1	0.3	7.7
Renovations in buildings constructed before 2008									
(more than one may apply)									
Any type of renovation	928	38.8	35.1		28.7	58.2	7.3	0.3	7.8
Addition or annex	1,619	45.2	46.2		28.7	56.9	12.0	0.3	7.4
Reduction in floorspace	1,627	49.0	31.6	11.9	36.0	67.6	11.9	0.4	7.3
Roof replacement	1,059	41.1	36.9		26.8	55.9	8.3	0.3	7.8
Exterior wall replacement	1,054	37.2	35.5		23.9	48.6	8.1	0.3	7.7
Interior wall reconfiguration	1,073	39.1	30.6		24.9	47.9	8.3	0.3	7.7
Window replacement	1,023	40.7	35.0		27.9	55.9	7.9	0.3	7.8
HVAC equipment upgrade	1,143	40.2	35.7		27.1	56.5	8.8	0.3	7.7
Lighting upgrade	1,233	40.9	37.2		29.8	58.3	9.4	0.3	7.6
Electrical upgrade	1,114	43.4	38.6		28.5	60.3	8.6	0.3	7.7
Plumbing system upgrade	1,214	47.6	40.4		30.5	72.1	9.3	0.4	7.7
Insulation upgrade	1,040	44.5	39.7		26.8	49.7	8.1	0.4	7.8
Fire, safety, or security upgrade	1,336	41.9	35.9	12.0	26.8	56.5	10.2	0.3	7.6
Structural upgrade	1,469	52.1	53.7		25.2	44.7	10.6	0.4	7.2
Other	770	23.9	19.9	16.1	42.5	77.4	6.2	0.2	8.0

Table C24. Natural gas consumption and expenditure intensities, 2012

Other excluding natural gas

Buildings without cooking

	Natural gas c	onsumptio	on						
				Distribution building-leve (cubic feet/s	el intensities		Natural gas e	expenditure	es
	per building (thousand cubic feet)	•	per worker (thousand cubic feet)	25th per-	Median	75th per- centile	per building (thousand dollars)	per square foot (dollars)	per thousand cubic feet (dollars)
All buildings	748	37.3	35.2	12.1	26.6	55.3	5.9	0.3	7.9
Energy sources (more than one may apply)									
Electricity	748	37.3	35.2	12.1	26.6	55.3	5.9	0.3	7.9
Natural gas	748	37.3	35.2	12.1	26.6	55.3	5.9	0.3	7.9
Fuel oil	3,713	44.5	34.1	10.8	28.3	58.7	27.2	0.3	7.3
District heat	6,206	36.9	23.3	2.3	11.9	49.1	44.0	0.3	7.1
District chilled water	6,245	53.5	40.9	4.8	29.5	106.3	44.2	0.4	7.1
Propane	2,053	42.0	58.1	7.3	22.7	52.3	14.9	0.3	7.3
Other	1,470	40.1	41.1	8.8	22.8	43.1	11.4	0.3	7.8
Space-heating energy sources									
Natural gas	736	38.8	37.2	13.0	27.1	54.0	5.8	0.3	7.8
Natural gas main	743	40.2	38.7	14.0	28.5	55.0	5.8	0.3	7.8
Natural gas secondary	681	30.2	27.7	7.2	18.8	43.0	5.3	0.2	7.7
Other excluding natural gas	890	28.5	24.3	5.8	22.4	68.2	7.3	0.2	8.2
Buildings without heating	541	41.1	48.0	2.2	25.8	118.9	4.6	0.4	8.5
Primary space-heating energy source									
Electricity	643	28.3	27.2	7.0	21.9	55.4	5.3	0.2	8.3
Natural gas	743	40.2	38.7	14.0	28.5	55.0	5.8	0.3	7.8
Fuel oil	520	19.0	16.4	7.6	22.4	52.2	5.0	0.2	9.6
District heat	6,122	37.1	23.6	2.2	11.9	49.1	43.2	0.3	7.1
Propane	Q	Q	Q	Q	Q	Q	Q	Q	C
Other	Q	Q	Q	Q	Q	Q	Q	Q	С
Cooling energy sources									
Natural gas	4,790	77.9	54.4	27.0	41.6	53.7	35.6	0.6	7.4
Other excluding natural gas	769	36.8	34.4	12.1	26.3	55.3	6.0	0.3	7.9
Buildings without cooling	293	37.3	58.8	13.6	32.7	54.5	2.6	0.3	9.0
Water-heating energy sources									
Natural gas	983	43.7	41.2	14.1	30.9	67.6	7.6	0.3	7.7
Other excluding natural gas	435	24.5	21.9	10.8	23.5	43.8	3.7	0.2	8.4
Buildings without water heating	197	22.0	42.2	8.5	18.9	48.2	1.5	0.2	7.8
Cooking energy sources									
Natural gas	1,632	48.7	46.7	20.9	49.4	127.2	12.5	0.4	7.7

32.0

28.4

577

426

29.3

26.5

10.8

10.5

24.5

22.8

46.1

43.4

4.6

3.5

0.3

0.2

7.9

8.2

Table C24. Natural gas consumption and expenditure intensities, 2012

	Natural gas o	onsumptio	on						
				Distribution building-leve (cubic feet/s	el intensities		Natural gas o	expenditure	es
	per building (thousand cubic feet)	-	•	25th per-	Median	75th per- centile	per building (thousand dollars)	•	per thousand cubic feet (dollars)
All buildings	748	37.3	35.2	12.1	26.6	55.3	5.9	0.3	7.9
Energy end uses (more than one may apply)									
Buildings with space heating	751	37.3	35.1	12.3	26.6	54.5	5.9	0.3	7.9
Buildings with cooling	787	37.4	34.7	12.1	26.5	55.3	6.2	0.3	7.8
Buildings with water heating	786	37.8	35.1	12.6	27.1	55.8	6.2	0.3	7.9
Buildings with cooking	1,295	45.4			38.7	93.1		0.4	7.7
Buildings with manufacturing	785	32.2	32.1		19.8	40.0		0.3	8.5
Buildings with electricity									
generation	3,088	41.1	35.3	12.2	28.4	55.7	23.2	0.3	7.5
Percent of floorspace heated									
Not heated	541	41.1	48.0	2.2	25.8	118.9	4.6	0.4	8.5
1 to 50	373	21.0	34.0	5.6	13.6	31.8	3.0	0.2	8.2
51 to 99	930	38.8	37.6	11.3	25.0	59.8	7.4	0.3	7.9
100	770	39.2	34.5	14.9	29.8	58.2	6.0	0.3	7.8
Percent of floorspace cooled									
Not cooled	293	37.3	58.8	13.6	32.7	54.5	2.6	0.3	9.0
1 to 50	586	31.3	46.7	10.1	24.6	49.9	4.7	0.3	8.0
51 to 99	1,100	38.0	35.1	12.6	26.3	60.8	8.7	0.3	7.9
100	755	39.8	31.4	13.3	28.4	57.0	5.8	0.3	7.7
Heating equipment (more than one may apply)									
Heat pumps	1,037	31.9	30.1	7.4	18.5	48.2	8.5	0.3	8.2
Furnaces	434	33.8	33.6		23.4	44.3		0.3	8.4
Individual space heaters	687	33.6	36.4		27.9	53.5		0.3	7.9
District heat	6,207	37.2	23.6		11.9	49.1		0.3	7.1
Boilers	2,347	48.0	41.7		39.2	68.0		0.4	7.7
Packaged heating units	698	35.3	35.0		26.2	55.2		0.3	7.9
Other	1,472	44.1	58.3		29.9	56.0		0.4	8.6
Cooling equipment									
(more than one may apply)									
Residential-type central air		22 =	22 -	40 -	2- 2		2.5	2 -	~ -
conditioners	401	38.7	38.3		25.2	54.4	3.3	0.3	8.2
Heat pumps	943	31.2	29.2		20.9	55.2		0.3	8.3
Individual air conditioners	947	40.0	40.7		29.7	56.8		0.3	8.2
District chilled water	6,245	53.5	40.9		29.5	106.3	44.2	0.4	7.1
Central chillers	4,608	42.5	33.1		29.6	53.7	33.6	0.3	7.3
Packaged air conditioning units	981	36.8	35.4		26.5	56.0		0.3	7.8
Swamp coolers	1,007	45.1	50.5		43.0	123.9		0.3	7.5
Other	Q	35.0	34.8	7.3	18.1	52.0	Q	0.3	8.5
Main equipment replaced since 1990 (more than one may apply)									
Heating	642	36.6	35.6	12.6	28.0	60.0	5.1	0.3	8.0
Cooling	692	37.2	34.9	13.1	28.3	59.2	5.5	0.3	8.0

Table C24. Natural gas consumption and expenditure intensities, 2012

	Natural gas c	onsumptio	on						
				Distribution building-leve (cubic feet/s	el intensities		Natural gas	expenditure	es
	per building (thousand cubic feet)	•	per	25th per-	Median	75th per- centile	per building (thousand	per square	per thousand cubic feet (dollars)
All buildings	748	37.3	35.2	12.1	26.6	55.3	5.9	0.3	7.9
Water-heating equipment									
Centralized system	666	40.6	37.9	13.6	28.5	58.1	5.2	0.3	7.9
Distributed system	646	30.5	28.7	8.6	21.1	47.9	5.2	0.2	8.0
Combination of centralized and									
distributed system	1,867	35.5	32.2	12.3	25.1	57.8	14.7	0.3	7.9
Food preparation or serving areas in non-food service buildings (more than one may apply)									
Snack bar or concession stand	3,691	45.2	43.2	10.4	27.5	67.5	27.6	0.3	7.5
Fast food or small restaurant	2,745	43.4			47.9	93.4		0.3	7.8
Cafeteria or large restaurant	5,511	43.9	38.1		27.7	53.0		0.3	7.4
Commercial kitchen/									
food preparation area	2,974	46.6	49.0	15.5	32.4	66.3	22.4	0.4	7.5
Small kitchen area	868	36.7	39.4	10.7	24.3	46.9	6.9	0.3	8.0
HVAC conservation features									
(more than one may apply)									
Economizer cycle	2,248	40.1	35.5	11.4	26.9	59.6	17.1	0.3	7.6
Regular HVAC maintenance	975	38.3	34.2	12.6	28.4	58.7	7.6	0.3	7.8
Building automation system (BAS) ²	2,069	38.6	34.1	9.6	24.5	49.1	15.6	0.3	7.5
Window and interior lighting features (more than one may apply)									
Multipaned windows	923	39.0	37.3	13.2	28.2	56.1	7.2	0.3	7.8
Tinted window glass	1,082	38.6	33.6	10.0	24.5	54.2	8.3	0.3	7.7
Reflective window glass	1,458	43.8	36.7	9.3	24.2	58.9	11.1	0.3	7.6
External overhangs or awnings	898	43.3	41.3	13.1	30.0	71.0	7.0	0.3	7.8
Skylights or atriums	1,821	39.7	40.3	9.2	23.8	49.1	14.0	0.3	7.7
Light scheduling	1,492	39.2	34.2	12.1	27.5	57.9	11.6	0.3	7.8
Occupancy sensors	1,875	38.6	34.2	10.5	28.6	52.2	14.5	0.3	7.7
Multi-level lighting or dimming	2,132	47.8	42.6	16.7	42.3	89.6	16.1	0.4	7.5
Daylight harvesting	2,505	39.1	31.7	17.4	29.8	59.8	19.7	0.3	7.9
Demand responsive lighting Building automation system (BAS) for	1,230	33.7	33.6	12.5	27.5	55.4	10.4	0.3	8.5
lighting ²	2,305	34.8	33.2	10.8	24.0	56.7	17.9	0.3	7.8
Equipment usage reduced when building not in full use									
(more than one may apply)	707	24.0	22.0	44.0	35.0	F4 F	F.C	0.0	0.0
Heating	707	34.9	32.9		25.6	51.5		0.3	8.0
Cooling	735	35.1			25.3	51.6		0.3	8.0
Lighting	740	37.3	34.7	12.3	26.6	54.5	5.9	0.3	7.9

Table C24. Natural gas consumption and expenditure intensities, 2012

	Natural gas co	onsumptio	n						
		per		Distribution building-leve (cubic feet/s	el intensities		Natural gas e	expenditure	es
	per building (thousand cubic feet)	square foot (cubic	per worker (thousand cubic feet)	25th per-	Median	75th per- centile	(thousand	per square foot (dollars)	per thousand cubic feet (dollars)
All buildings	748	37.3	35.2	12.1	26.6	55.3	5.9	0.3	7.9
Annual consumption (hundred cubic feet)									
1,000 or less	50	7.4	7.0	4.9	11.6	22.7	0.6	0.1	12.3
1,001 to 5,000	239	20.6	18.7	17.8	31.5	58.1	2.2	0.2	9.2
5,001 to 10,000	713	29.0	29.7	24.5	50.7	112.0	5.9	0.2	8.3
10,001 to 25,000	1,550	40.1	37.4	32.4	68.6	175.8	12.1	0.3	7.8
25,001 to 50,000	3,449	42.4	43.4	35.3	56.5	121.7	26.6	0.3	7.7

54.6

71.4

39.5

58.6

67.4

106.3

124.4

140.2

50.8

185.9

0.4

0.6

7.6

7.0

6,711

26,592

52.7

88.3

50,001 to 100,000

Over 100,000

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.

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.

Table C25. Natural gas consumption and conditional energy intensity by Census region, 2012

	Total nat consump	tion		ŀ	Total floors ouildings us million squ	sing natura	al gas	•	Natural ga energy int cubic fee	ensity	foot)	
	North-	Mid-			North-	Mid-			North-	Mid-		
	east	west	South	West	east	west	South	West	east	west	South	West
All buildings	487	627	600	479	11,068	15,025	19,900	12,732	44.0	41.7	30.2	37.6
Building floorspace (square feet)												
1,001 to 5,000	40	65	91	54	478	1,126	1,266	888	83.1	57.5	71.6	61.1
5,001 to 10,000	32	71	83	55	630	1,378	1,536	1,273	51.2	51.3	54.3	43.5
10,001 to 25,000	59	81	83	74	1,608	2,185	2,632	2,398	36.4	37.2	31.4	31.0
25,001 to 50,000	46	100	74	57	1,134	2,628	2,639	1,747	40.6	38.0	28.0	32.6
50,001 to 100,000	85	100	97	48	2,119	2,181	4,004	1,631	40.2	45.7	24.2	29.4
100,001 to 200,000	101	69	56	57	2,155	1,866	3,479	1,915	46.8	37.1	16.0	30.0
200,001 to 500,000	75	92	56	79	1,717	2,391	2,378	1,808	43.9	38.3	23.6	43.8
Over 500,000	49	50	61	Q	1,226	1,270	1,967	1,071	40.0	39.2	31.1	50.1
Principal building activity												
Education	77	106	61	40	1,645	2,735	3,715	1,426	46.6	38.8	16.5	27.9
Food sales	Q	Q	10	Q	Q	Q	169	Q	Q	Q	59.1	Q
Food service	26	49	103	45	196	300	577	320	130.7	162.4	178.0	139.7
Health care	62	62	78	57	898	722	1,010	662	68.8	85.7	77.0	86.0
Inpatient	46	48	73	46	431	427	830	424	107.4	111.7	88.3	109.0
Outpatient	15	14	4	11	466	295	180	239	33.1	48.0	24.8	45.2
Lodging	34	41	66	74	785	838	1,982	1,314	43.9	49.3	33.1	56.3
Mercantile	52	80	77	75	1,290	1,853	2,957	2,394	40.4	43.0	26.1	31.4
Retail (other than mall)	13	29	14	16	506	869	935	1,060	25.1	33.9	15.1	15.2
Enclosed and strip malls	39	50	63	59	784	984	2,021	1,334	50.3	50.9	31.2	44.4
Office	93	84	47	52	2,704	2,535	2,718	2,333	34.3	33.2	17.2	22.2
Public assembly	28	53	28	23	664	1,316	1,061	847	42.6	40.5	26.0	26.7
Public order and safety	Q	Q	10	Q	Q	Q	419	Q	Q	Q	23.4	Q
Religious worship	19	27	24	15	730	705	1,081	501	25.8	38.9	22.2	29.1
Service	18	47	42	12	286	1,223	934	348	64.8	38.1	44.6	35.3
Warehouse and storage	31	37	29	39	1,134	1,819	2,526	1,528	27.6	20.3	11.3	25.5
Other	Q	Q	24	Q	Q	Q	584	313	Q	Q	41.6	74.0
Vacant	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Year constructed												
Before 1920	34	27	20	4	988	743	379	210	34.1	36.9	53.3	18.8
1920 to 1945	49	53	20	19	1,239	1,280	773	500	39.4	41.7	25.8	38.7
1946 to 1959	56	61	40	37	1,021	1,447	1,819	1,105	54.9	42.3	22.0	33.7
1960 to 1969	65	92	79	71	1,741	2,238	2,108	1,466	37.5	41.0	37.3	48.4
1970 to 1979	87	93	89	62	1,552	2,110	2,314	2,003	55.9	44.3	38.6	31.0
1980 to 1989	43	99	113	71	1,148	2,143	4,045	2,551	37.1	46.3	28.0	28.0
1990 to 1999	75	80	95	80	1,551	2,253	3,282	2,075	48.5	35.3	29.0	38.6
2000 to 2003	36	42	43	32	841	1,168	1,810	904	43.2	36.4	23.8	35.5
2004 to 2007	20	36	53	Q	333	977	1,711	1,074	58.6	36.9	30.7	55.2
2008 to 2012	23	42	48	Q	652	666	1,660	843	35.1	63.0	28.9	50.6
Climate region ¹												
Very cold/Cold	323	561	N	186	7,259	13,130	N	4,123	44.5	42.7	N	45.2
Mixed-humid	164	65	411	N	3,809	1,895	13,656	N	43.1	34.5	30.1	N
Mixed-dry/Hot-dry	N	N	Q	226	N	N	Q	6,576	N	N	24.0	34.4
Hot-humid	N	N	167	N	N	N	5,300	N	N	N	31.4	N
Marine	N	N	N	67	N	N	N	2,033	N	N	N	32.7

Table C25. Natural gas consumption and conditional energy intensity by Census region, 2012

	Total nat consump (billion consump	tion)	k	Total floors buildings us million squ	sing natura	ıl gas	•	Natural ga energy int cubic feet	ensity	foot)	
	North- east	Mid- west	South	West	North- east	Mid- west	South	West	North- east	Mid- west	South	West
All buildings	487	627	600	479	11,068	15,025	19,900	12,732	44.0	41.7	30.2	37.6
Number of floors												
One	120	262	300	214	2,569	6,030	9,737	6,160	46.7	43.5	30.8	34.8
Two	142	141	111	105	3,146	4,042	4,304	3,172	45.0	35.0	25.7	33.1
Three	56	92	46	25	1,609	2,112	1,572	791	34.9	43.6	29.1	31.5
Four to nine	132	102	110	89	2,664	2,124	3,277	1,699	49.5	47.9	33.6	52.1
Ten or more	38	29	34	Q	1,080	716	1,010	909	34.9	40.8	33.6	Q
Number of workers (main shift)												
Fewer than 5	50	87	72	49	1,238	2,532	2,515	1,573	40.0	34.4	28.8	31.2
5 to 9	34	54	64	44	859	1,475	1,783	1,238	39.8	36.9	35.9	35.8
10 to 19	37	89	101	64	1,063	1,622	2,254	1,860	34.6	54.6	44.8	34.6
20 to 49	59	117	107	87	1,436	2,898	3,564	2,714	40.9	40.3	30.0	32.0
50 to 99	92	105	101	54	1,782	2,409	4,346	1,783	51.6	43.6	23.1	30.4
100 to 249	100	83	67	79	2,198	2,128	3,000	1,555	45.5	39.0	22.2	51.0
250 or more	116	92	89	101	2,492	1,961	2,438	2,010	46.5	46.8	36.5	50.4
Weekly operating hours												
Fewer than 40	14	36	25	19	485	1,208	1,242	770	29.9	29.9	20.4	24.5
40 to 48	44	83	64	62	1,453	2,547	3,761	2,198	30.3	32.6	16.9	28.0
49 to 60	72	121	95	72	2,473	3,581	4,870	3,081	29.2	33.8	19.5	23.4
61 to 84	114	144	115	85	2,600	3,144	3,180	2,570	44.0	45.8	36.1	33.1
85 to 167	96	88	101	55	1,547	1,797	2,049	1,341	62.0	48.8	49.5	41.0
Open continuously	146	155	201	186	2,510	2,748	4,798	2,771	58.2	56.4	41.8	67.2
Ownership and occupancy												
Nongovernment owned	358	474	472	400	8,516	11,040	14,603	10,322	42.0	42.9	32.3	38.8
Owner occupied	170	265	227	206	3,786	5,701	6,778	4,276	45.0	46.5	33.4	48.2
Leased to tenant(s)	130	140	196	152	3,304	3,668	5,930	4,459	39.5	38.1	33.0	34.2
Owner occupied and leased	56	67	50	41	1,366	1,546	1,861	1,482	41.2	43.4	26.6	27.3
Unoccupied	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Government owned	129	153	128	79	2,552	3,986	5,298	2,409	50.7	38.3	24.2	32.8
Federal	Q	Q	11	Q	Q	Q	422	Q	Q	Q	25.2	Q
State	Q	36	42	27	895	821	1,434	788	66.6	44.4	29.5	34.1
Local	67	109	75	43	1,597	2,920	3,441	1,478	41.9	37.5	21.8	29.1
Party responsible for operation and maintenance of energy												
systems Puilding owner	207	FFO	472	207	0.249	12 000	16 264	10 200	42.5	42.0	20.0	27.6
Building owner Business owner or tenant	397 74	550 66	472 111	387 83	9,348 1,421	13,080 1,573	16,364 3,011	10,308 2,235	42.5 52.2	42.0	28.9 37.0	37.6 37.2
Property management		00 Q	10	03 Q	1,421 Q	1,5/3 Q	3,011	2,235 Q	32.2 Q	41.7 Q	29.4	37.2 Q
Other	Q Q	Q Q	10 Q	Q Q	Q	Q	343 Q	Q Q	Q	Q	29.4 Q	Q
	<u>4</u>	a	<u> </u>	<u>~</u>	<u>~</u>	-	-	<u>«</u>	-	<u>~</u>	-	<u> </u>
Provider of direct input on energy- related equipment purchases												
Building owner	406	564	486	412	9,496	13,446	16,985	11,019	42.7	41.9	28.6	37.4
Business owner or tenant	58	49	90	61	1,084	1,150	2,314	1,477	54.0	42.4	38.9	41.2
Property management	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	22	Q	Q	328	481	Q	Q	30.4	45.1	Q

Table C25. Natural gas consumption and conditional energy intensity by Census region, 2012

Total natural gas Total floorspace of Natural gas consumption buildings using natural gas energy intensity (billion cubic feet) (million square feet) (cubic feet/square foot) North-Mid-North-Mid-North-Mideast west South West east west South West east west South West 487 600 30.2 All buildings 627 479 11,068 15,025 19,900 12,732 44.0 41.7 37.6 **Number of establishments** 329 417 417 327 6,832 9,780 12,802 7,742 48.2 42.6 32.6 42.2 One 2 to 5 93 79 2,206 2,584 42.1 30.7 142 104 3,459 4,184 41.1 24.8 6 to 10 27 30 977 831 36.4 36.0 21 26 575 709 38.5 27.1 637 11 to 20 27 23 36 24 719 436 970 37.0 53.5 37.2 37.1 More than 20 17 16 16 17 675 518 869 801 25.0 30.2 18.8 20.6 Q Q Q Q Q Currently unoccupied Q Q Q Q Q Q Q Predominant exterior wall material Brick, stone, or stucco 258 344 329 202 6,045 7,489 10,487 4,978 42.6 45.9 31.3 40.5 Concrete (block or poured) 134 117 2,711 3,379 3,609 43.4 39.6 32.4 118 153 4,818 31.8 Concrete panels 35 62 41 Q 656 1,351 1,892 2,039 53.3 46.1 21.6 31.9 Siding or shingles 24 37 29 42 629 920 455 884 38.1 39.7 63.2 47.0 Metal panels Q 39 41 22 443 1,325 1,870 748 Q 29.1 22.0 28.8 Window glass Q Q Q 14 Q Q Q 250 Q Q Q 57.3 Other Q 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 Predominant roof material 22 62 101 50 744 2,093 3,450 1,538 28.9 29.7 29.4 32.6 Metal surfacing 5,503 Synthetic or rubber 257 179 4,618 6,049 3,620 46.1 42.5 49.5 213 181 32.8 Built-up 137 151 164 116 2,947 3,437 5,926 3,716 46.6 43.8 27.7 31.3 Slate or tile shingles 30 29 795 47.2 39.3 13 40 627 330 1,048 Q 50.2 Wooden materials (including shingles) Q Q 16 Q Q 195 246 Q Q 80.5 44.9 11 Asphalt, fiberglass, or 64 130 95 69 1,695 2,677 3,242 2,283 37.8 48.6 29.5 30.3 other shingles Concrete 8 Q Q 5 211 256 37.0 Q 20.6 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 Q Q **Roof characteristics** Roof tilt Flat 357 387 371 304 7,900 8,833 11,477 7,623 45.2 43.9 32.3 39.9 74 1,456 3,847 3,604 Shallow pitch 133 139 124 5,593 51.0 34.5 24.8 34.3 Steeper pitch 56 106 90 51 1,712 2,345 2,831 1,505 32.7 45.3 31.9 34.2 5,104 Cool roof 127 143 2,397 3,655 155 162 3,196 53.1 44.8 30.4 44.3

Table C25. Natural gas consumption and conditional energy intensity by Census region, 2012

	Total nat consump (billion cu	tion		ı	Fotal floors buildings u	sing natura	al gas	•	Natural ga energy int cubic feet	ensity	foot)	
	North-	Mid-	South	West	North-	Mid-	South	West	North-	Mid-	South	West
	east	west			east	west			east	west		
All buildings	487	627	600	479	11,068	15,025	19,900	12,732	44.0	41.7	30.2	37.6
Renovations in buildings constructed before 2008												
(more than one may apply)												
Any type of renovation	309	340	304	247	6,944	8,306	9,919	5,776	44.4	40.9	30.7	42.8
Addition or annex	98	141	127	91	1,948	3,337	3,299	1,521	50.1	42.4	38.4	59.8
Reduction in floorspace	Q	11	18	Q	Q	233	454	Q	Q	46.2	40.0	Q
Roof replacement	192	196	160	117	4,074	4,496	5,024	2,558	47.0	43.5	31.9	45.6
Exterior wall replacement	23	34	37	33	730	881	1,061	723	31.4	38.1	34.6	45.6
Interior wall reconfiguration	156	176	147	150	3,991	4,278	4,356	3,450	39.2	41.1	33.8	43.4
Window replacement	93	101	98	86	2,362	2,568	2,559	1,798	39.5	39.4	38.2	47.6
HVAC equipment upgrade	216	217	207	181	5,000	5,473	6,252	3,712	43.2	39.7	33.2	48.7
Lighting upgrade	197	223	190	180	4,618	5,090	5,830	3,760	42.7	43.8	32.7	47.8
Electrical upgrade	139	142	124	133	3,155	3,163	3,728	2,328	44.0	44.8	33.2	57.2
Plumbing system upgrade	131	121	126	125	2,679	2,818	3,040	2,012	48.8	42.8	41.4	62.1
Insulation upgrade	61	67	67	Q	1,378	1,784	1,615	1,116	44.2	37.5	41.8	60.0
Fire, safety, or security upgrade	151	142	146	116	3,540	3,138	4,102	2,447	42.6	45.2	35.6	47.4
Structural upgrade	16	27	40	Q	481	733	735	885	33.2	37.3	54.9	72.3
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
No renovations	156	245	248	189	3,472	6,053	8,321	6,112	44.9	40.5	29.8	31.0
Buildings constructed 2008 or later	23	42	48	Q	652	666	1,660	843	35.1	63.0	28.9	50.6
Energy sources (more than one may apply)												
Electricity	487	627	600	479	11,068	15,025	19,900	12,732	44.0	41.7	30.2	37.6
Natural gas	487	627	600	479	11,068	15,025	19,900	12,732	44.0	41.7	30.2	37.6
Fuel oil	154	151	156	148	3,508	3,071	4,455	2,629	43.8	49.1	35.0	56.2
District heat	Q	5	16	Q	1,042	367	903	548	Q	14.0	Q	87.7
District chilled water	Q	5	26	Q	Q	329	1,100	483	86.7	15.4	23.7	111.8
Propane	17	40	36	Q	534	945	971	946	32.3	42.0	37.4	Q
Other	40	19	13	33	805	631	471	730	49.7	30.3	28.6	45.4
Space-heating energy sources												
Natural gas	440	614	483	386	9,352	14,031	15,438	10,690	47.0	43.7	31.3	36.1
Natural gas main	417	584	396	329	8,366	13,084	12,312	9,226	49.8	44.7	32.1	35.7
Natural gas secondary	23	29	87	57	986	947	3,126	1,464	23.4	31.0	27.9	39.2
Other excluding natural gas	Q	13	106	81	1,709	971	4,106	1,832	26.8	13.0	25.9	44.3
Buildings without heating	Q	Q	11	Q	Q	Q	357	Q	Q	Q	31.2	Q
Primary space-heating energy source												
Electricity	28	35	176	88	1,238	1,385	6,271	2,655	22.4	25.6	28.0	33.3
Natural gas	417	584	396	329	8,366	13,084	12,312	9,226	49.8	44.7	32.1	35.7
Fuel oil	41 <i>7</i> 5	584 N	396 Q	329 Q	369	13,084 N	12,312 Q	9,226 Q	49.8 14.8	44.7 N	32.1 Q	35.7 Q
District heat		4	16	Q Q	1,015	352	892	532	14.8 Q	12.2	Q Q	90.3
Propane	Q Q	4 Q	16 Q	Q	1,015 Q	332 Q	892 Q	332 Q	Q Q	12.2 Q	Q	90.3 Q
Other	Q Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q Q	Q
	<u>Q</u>	Q	<u>u</u>	<u>u</u>	<u>Q</u>		Q	<u>u</u>	Q	Q	u	Q
Cooling energy sources	27				205				00.0			
Natural gas	27	Q	Q	Q	305	Q	Q	Q	89.6	Q	Q 20.2	Q 27.0
Other excluding natural gas	442	589	590	447	10,294	14,233	19,570	12,069	42.9	41.4	30.2	37.0
Buildings without cooling	18	19	5	27	469	572	212	574	37.8	32.9	23.0	46.6

Table C25. Natural gas consumption and conditional energy intensity by Census region, 2012

	Total nat consump (billion c	tion		I	Total floors buildings us (million squ	sing natura	ıl gas	•	Natural ga energy int cubic feet	ensity	foot)	
	North- east	Mid- west	South	West	North-	Mid- west	South	West	North- east	Mid- west	South	West
All buildings	487	west 627	600	479	east 11,068	15,025	19,900	12,732	44.0	41.7	30.2	37.6
Water-heating energy sources							<u></u>					
Natural gas	410	512	456	350	7,533	10,615	12,258	9,116	54.4	48.2	37.2	38.4
Other excluding natural gas	74	108	130	116	3,360	4,102	6,871	3,163	22.1	26.4	18.9	36.6
Buildings without water heating	Q	7	14	13	Q	308	771	452	Q	21.2	18.6	29.4
Cooking energy sources												
Natural gas	281	295	358	274	5,357	5,642	8,572	5,200	52.5	52.2	41.7	52.6
Other excluding natural gas	32	78	50	40	1,112	1,919	2,076	1,151	29.0	40.5	24.3	34.5
Buildings without cooking	173	254	192	166	4,600	7,465	9,253	6,381	37.7	34.1	20.8	26.0
Energy end uses (more than one may apply)												
Buildings with space heating	486	626	589	468	11,061	15,002	19,544	12,522	43.9	41.8	30.1	37.3
Buildings with cooling	469	608	595	452	10,599	14,454	19,688	12,157	44.3	42.1	30.2	37.2
Buildings with water heating	484	620	586	466	10,894	14,717	19,129	12,279	44.4	42.1	30.6	37.9
Buildings with cooking	314	372	408	313	6,468	7,560	10,647	6,351	48.5	49.3	38.3	49.3
Buildings with manufacturing	40	29	33	18	745	1,008	1,271	715	53.4	28.5	26.3	25.6
Buildings with electricity generation	240	203	196	194	4,859	4,757	6,620	4,034	49.5	42.7	29.7	48.2
Percent of floorspace heated												
Not heated	Q	Q	11	Q	Q	Q	357	Q	Q	Q	31.2	Q
1 to 50	17	14	35	54	605	895	1,902	2,314	28.2	15.2	18.5	23.4
51 to 99	102	86	153	91	2,095	1,954	4,333	2,766	48.8	44.0	35.3	32.8
100	366	527	401	322	8,361	12,153	13,309	7,442	43.8	43.4	30.1	43.3
Percent of floorspace cooled												
Not cooled	18	19	5	27	469	572	212	574	37.8	32.9	23.0	46.6
1 to 50	109	149	71	79	2,704	4,207	3,483	2,636	40.5	35.5	20.3	29.8
51 to 99	179	175	172	126	3,700	4,089	5,664	3,653	48.3	42.7	30.3	34.5
100	181	284	353	248	4,195	6,157	10,541	5,868	43.2	46.1	33.5	42.3
Heating equipment (more than one may apply)												
Heat pumps	44	26	103	69	1,094	772	4,063	1,631	39.8	34.0	25.3	42.1
Furnaces	36	84	73	46	1,088	2,095	2,479	1,384	32.8	40.1	29.3	33.3
Individual space heaters	135	175	123	98	3,528	4,833	4,618	2,829	38.2	36.3	26.7	34.7
District heat	Q	5	16	Q	1,042	367	892	532	Q	14.0	Q	90.3
Boilers	284	306	198	172	5,187	6,183	5,311	3,338	54.7	49.5	37.3	51.6
Packaged heating units	241	391	400	294	6,080	9,395	13,512	8,582	39.6	41.6	29.6	34.3
Other	Q	Q	10	12	Q	Q	414	244	Q	Q	24.1	48.2
Cooling equipment												
(more than one may apply)												
Residential-type central air		4.47	400	00	4 24 4	2.044	2 255	2 000	40.5	20.2	22.4	40.4
conditioners	64	147	108	88	1,314	3,844	3,255	2,090	48.5	38.2	33.1	42.1
Heat pumps	44	28	116	62	1,192	710	4,299	1,817	37.0	39.9	26.9	34.2
Individual air conditioners	145	91	85	44	2,837	2,220	2,887	1,194	51.2	40.8	29.4	37.3
District chilled water	Q 128	195	26 160	Q 102	Q 2 720	329	1,100	483	86.7	15.4	23.7	111.8
Central chillers	128	185	169	102	2,739	3,786	4,921	2,299	46.7	48.9	34.4	44.2
Packaged air conditioning units Swamp coolers	272	379	370	265 52	6,786	8,615	12,062	7,454	40.1	43.9	30.7	35.5
	Q	Q	Q		Q	Q	Q	1,104	Q	Q	Q	46.8
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q

Table C25. Natural gas consumption and conditional energy intensity by Census region, 2012

	Total nat consump (billion cu	tion		ŀ	Total floors ouildings us million squ	sing natura	al gas	•	Natural ga energy int cubic feet	ensity	foot)	
	North- east	Mid- west	South	West	North- east	Mid- west	South	West	North- east	Mid- west	South	West
All buildings	487	627	600	479	11,068	15,025	19,900	12,732	44.0	41.7	30.2	37.6
Main equipment replaced since 1990 (more than one may apply)												
Heating	175	231	233	132	4,060	5,843	6,981	4,174	43.1	39.5	33.3	31.7
Cooling	194	267	257	143	4,819	6,303	7,780	4,191	40.3	42.3	33.0	34.0
Water-heating equipment												
	315	426	369	269	6,761	9,489	10,764	6,990	46.5	44.9	34.3	38.5
Centralized system												
Distributed system	61	67	53	69	1,675	2,054	2,575	1,908	36.3	32.8	20.7	36.1
Combination of centralized and distributed system	108	126	163	128	2,457	3,174	5,791	3,381	44.1	39.8	28.2	37.7
Food preparation or serving areas in non-food service buildings (more than one may apply)												
Snack bar or concession stand	77	91	93	94	1,465	1,950	2,725	1,727	52.6	46.4	34.3	54.7
Fast food or small restaurant	69	79	112	103	1,523	1,548	2,973	2,300	45.1	51.0	37.6	44.8
Cafeteria or large restaurant	148	143	158	123	2,993	3,118	4,935	1,998	49.5	45.9	32.0	61.6
Commercial kitchen/												
food preparation area	164	178	169	146	2,725	3,656	5,103	2,598	60.1	48.8	33.1	56.2
Small kitchen area	95	124	93	87	2,430	3,048	3,368	2,038	39.1	40.7	27.6	42.6
HVAC conservation features (more than one may apply)												
Economizer cycle	262	290	197	241	5,650	6,831	6,384	5,817	46.4	42.5	30.9	41.4
Regular HVAC maintenance	442	561	514	425	9,847	12,918	16,835	11,091	44.9	43.4	30.5	38.4
Building automation system (BAS) ²	246	285	275	268	5,485	6,567	9,665	6,105	44.8	43.4	28.4	43.9
Window and interior lighting features (more than one may apply)												
Multipaned windows	380	537	446	347	8,464	12,564	14,525	8,221	44.8	42.7	30.7	42.2
Tinted window glass	252	331	375	301	5,185	7,534	12,054	7,858	48.6	43.9	31.1	38.3
Reflective window glass	95	147	123	163	1,813	3,378	3,540	3,320	52.6	43.4	34.8	49.0
External overhangs or awnings	191	261	292	262	3,425	5,578	8,398	5,818	55.6	46.7	34.8	45.0
Skylights or atriums	164	143	163	194	3,298	3,615	5,266	4,566	49.6	39.6	30.9	42.5
Light scheduling	212	251	214	227	4,785	5,765	6,876	5,684	44.4	43.5	31.2	40.0
Occupancy sensors	271	287	230	253	6,006	6,646	7,989	6,332	45.2	43.2	28.8	39.9
Multi-level lighting or dimming	97	134	150	179	1,967	2,607	3,924	3,205	49.5	51.3	38.1	55.8
Daylight harvesting	53	47	36	57	894	1,311	1,348	1,368	59.0	36.2	26.5	41.3
Demand responsive lighting Building automation system (BAS) for	25	31	36	32	468	878	1,093	1,240	52.6	35.3	33.2	25.9
lighting ²	90	86	71	80	1,823	2,124	2,991	2,461	49.3	40.6	23.6	32.5
Equipment usage reduced when building not in full use (more than one may apply)												
Heating	385	498	422	330	9,195	11,986	15,384	10,253	41.8	41.6	27.4	32.2
Cooling	378	474	431	320	8,855	11,394	15,634	9,844	42.7	41.6	27.6	32.5
Lighting	457	594	553	449	10,410	14,154	18,539	11,930	43.9	42.0	29.8	37.7

Table C25. Natural gas consumption and conditional energy intensity by Census region, 2012

	Total nat consump (billion co	tion			Total floors buildings us (million squ	sing natura	al gas		0,	cural gas orgy intensity bic feet/square foot)		
	North- east	Mid- west	South	West	North- east	Mid- west	South	West	North- east	Mid- west	South	West
All buildings	487	627	600	479	11,068	15,025	19,900	12,732	44.0	41.7	30.2	37.6
Annual consumption (hundred cubic feet)												
1,000 or less	5	16	17	13	686	1,244	3,078	1,945	7.7	13.0	5.6	6.4
1,001 to 5,000	49	83	83	60	2,125	3,218	4,932	3,061	22.9	25.7	16.9	19.7
5,001 to 10,000	43	60	81	47	1,478	1,737	3,363	1,408	29.2	34.7	24.1	33.6
10,001 to 25,000	65	129	141	113	1,832	3,193	3,682	2,450	35.5	40.4	38.4	45.9
25,001 to 50,000	72	95	82	56	1,657	1,895	2,138	1,466	43.5	49.9	38.2	37.9
50,001 to 100,000	73	84	70	50	1,387	1,668	1,300	924	52.6	50.5	54.1	54.7
Over 100,000	180	160	125	140	1,904	2,070	1,407	1,479	94.6	77.2	89.1	94.8

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).

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/

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.

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.

[•] 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.

Table C26. Natural gas expenditures by Census region, 2012

Resignation	Mid- west South 0.29 0.24 0.47 0.62 0.38 0.44 0.29 0.26 0.27 0.21 0.29 0.20	0.28 0.50 0.34
Real March	west South 0.29 0.24 0.47 0.62 0.38 0.44 0.29 0.26 0.27 0.21	0.28 0.50 0.34
Building floorspace (square feet) 1,001 to 5,000	0.47	0.50
1,001 to 5,000	0.38 0.44 0.29 0.26 0.27 0.21	0.34
5,001 to 10,000 336 519 670 432 10,41 7.34 8.03 7.81 0.53 1 10,001 to 25,000 631 639 681 598 10,77 7.87 8.25 8.06 0.39 2 5,001 to 50,000 426 704 553 417 9.26 7.05 7.48 7.33 0.38 0.39 10,001 to 50,000 835 638 795 353 9.79 6.40 8.21 7.36 0.39 10,001 to 20,000 645 585 421 510 8.56 6.39 7.51 6.44 0.38 0 0,001 to 50,000 645 585 421 510 8.56 6.39 7.51 6.44 0.38 0 0,000 to 50,000 437 288 409 9.36 6.87 7.53 6.30 0.36 0 0 48.3 20 0 8.32 7.9 0.44 9.36 6.87 7.53 7.30 0.44 9 9.36 6.87 7.53	0.38 0.44 0.29 0.26 0.27 0.21	0.34
10,001 to 25,000 631 639 681 598 10.77 7.87 8.25 8.06 0.39 12,5001 to 50,000 426 704 553 417 9.26 7.05 7.48 7.33 0.38 8.50,001 to 100,000 835 638 795 833 9.79 6.40 8.21 7.36 0.39 12,000 10,000 883 483 481 413 8.75 6.99 8.63 7.20 0.41 12,000 10,000 645 585 421 510 8.56 6.39 7.51 6.44 0.38 14 12,000 10,000 645 585 421 510 8.56 6.39 7.51 6.44 0.38 14,000 10,00	0.29 0.26 0.27 0.21	
25,001 to 50,000	0.27 0.21	U ጋር
50,001 to 100,000 835 638 795 353 9.79 6.40 8.21 7.36 0.39 100,001 to 200,000 883 483 481 413 8.75 6.99 8.63 7.20 0.41 1 200,001 to 500,000 645 585 421 510 8.56 6.39 7.51 6.44 0.38 0 0 8.91 5.79 6.67 6.30 0.36 0 0 0 0 8.91 5.79 6.67 6.30 0.36 0 0 0 0 6.67 6.30 0.36 0 0 0 6.67 6.53 7.51 6.44 0.38 0 0 6.67 6.53 6.60 0.36 0 0 0 6.67 6.53 7.51 6.44 0.38 0 0 0 6.67 6.53 7.51 6.44 0.38 0 0 0 0.44 4 0 0 0 0 0 0		0.23
100,001 to 200,000	0.29 0.20	0.24
200,001 to 500,000 645 585 421 510 8.56 6.39 7.51 6.44 0.38 0.00 0.00 0.30		0.22
200,001 to 500,000 645 585 421 510 8.56 6.39 7.51 6.44 0.38 0.000 0.36 0.3	0.26 0.14	0.22
Over 500,000 437 288 409 Q 8.91 5.79 6.67 6.30 0.36 Principal building activity Education 718 729 463 290 9.36 6.87 7.53 7.30 0.44 6 Food sales Q Q 83 Q Q 8.32 Q Q Food service 238 336 781 344 9.31 6.89 7.60 7.70 1.22 Health care 560 384 511 364 9.07 6.20 6.57 6.39 0.62 1 Inpatient 395 285 476 285 8.52 5.98 6.49 6.17 0.91 0.91 Outpatient 165 98 35 79 10.71 6.95 7.79 7.34 0.35 1 Lodging 314 311 504 499 9.10 7.54 7.67 6.75 0.40 0 </td <td>0.24 0.18</td> <td>0.28</td>	0.24 0.18	0.28
Education 718 729 463 290 9.36 6.87 7.53 7.30 0.44 Food sales Q Q 83 Q Q R.32 Q Q R.32 Q Q R.32 Q Q Q R.32 Q Q Q R.33 Q Q Q 8.32 Q Q Q R.32 Q Q Q R.33 Q Q Q 8.32 Q Q Q R.32 Q Q Q R.32 Q Q Q A.33 A 9 A.30 6.89 7.50 7.50 0.60 0.62 Q D	0.23 0.21	0.32
Food sales Q Q 83 Q Q 8.32 Q Q Food service 238 336 781 344 9.31 6.89 7.60 7.70 1.22 1.22 Health care 560 384 511 364 9.07 6.20 6.57 6.39 0.62 6.71 0.91 6.01 1.01 0.91 6.01 0.91 0.91 0.01 6.95 7.79 7.34 0.35 0.02 1.01 0.95 7.79 7.34 0.35 0.03 0.03 0.01 0.01 0.95 7.79 7.34 0.35 0.03 0.01		
Food sales Q Q 83 Q Q 8.32 Q Q Food service 238 336 781 344 9.31 6.89 7.60 7.70 1.22 Health care 560 384 511 364 9.07 6.20 6.57 6.39 0.62 6.71 0.91 6.71 0.91 6.71 0.91 6.71 0.91 6.71 0.91 6.71 0.91 6.71 0.91 6.71 0.91 6.71 0.91 6.71 0.91 6.72 6.73 7.03 0.62 6.72 6.73 0.02 6.72 6.73 0.02 6.72 6.73 0.02 6.72 6.73 0.03 6.72 6.73 7.74 0.51 6.75 6.75 0.03 6.72 8.03 0.74 7.50 7.50 7.53 0.43 0.03 6.73 8.04 8.01 8.01 8.01 8.00 0.30 6.73 6.73 7.01 8.01	0.27 0.12	0.20
Health care	Q 0.49	C
Inpatient 395 285 476 285 8.52 5.98 6.49 6.17 0.91 0 0 0 0 0 0 0 0 0	1.12 1.35	1.08
Inpatient 395 285 476 285 8.52 5.98 6.49 6.17 0.91 0 0 0 0 0 0 0 0 0	0.53 0.51	0.55
Outpatient 165 98 35 79 10.71 6.95 7.79 7.34 0.35 Cologing Lodging 314 311 504 499 9.10 7.54 7.67 6.75 0.40 0 Mercantile 552 573 701 567 10.57 7.20 9.09 7.53 0.43 0 Retail (other than mall) 153 206 119 129 11.98 7.01 8.45 8.00 0.30 0 Enclosed and strip malls 399 366 582 438 10.12 7.31 9.23 7.40 0.51 0 Office 856 609 426 416 9.23 7.24 9.12 8.02 0.32 0 Public assembly 295 364 220 184 10.42 6.82 7.99 8.13 0.44 0 Public order and safety Q Q 87 Q Q 9.59 7.53	0.67 0.57	0.67
Lodging 314 311 504 499 9.10 7.54 7.67 6.75 0.40 0 Mercantile 552 573 701 567 10.57 7.20 9.09 7.53 0.43 0 1 Retail (other than mall) 153 206 119 129 11.98 7.01 8.45 8.00 0.30 0	0.33 0.19	0.33
Mercantile 552 573 701 567 10.57 7.20 9.09 7.53 0.43 Q Retail (other than mall) 153 206 119 129 11.98 7.01 8.45 8.00 0.30 0 Enclosed and strip malls 399 366 582 438 10.12 7.31 9.23 7.40 0.51 0 Office 856 609 426 416 9.23 7.24 9.12 8.02 0.32 0 Public assembly 295 364 220 184 10.42 6.82 7.99 8.13 0.44 0 Public order and safety Q Q 87 Q Q Q 8.89 Q Q Q Religious worship 180 206 179 125 9.59 7.53 7.47 8.59 0.25 0 0 Q Q Q Q Q Q Q Q Q <t< td=""><td>0.37 0.25</td><td>0.38</td></t<>	0.37 0.25	0.38
Retail (other than mall) 153 206 119 129 11.98 7.01 8.45 8.00 0.30 Enclosed and strip malls Enclosed and strip malls 399 366 582 438 10.12 7.31 9.23 7.40 0.51 0.61 Office 856 609 426 416 9.23 7.24 9.12 8.02 0.32 0.02 0.02 0.032	0.31 0.24	0.24
Enclosed and strip malls 399 366 582 438 10.12 7.31 9.23 7.40 0.51 0 Office 856 609 426 416 9.23 7.24 9.12 8.02 0.32 0 Public assembly 295 364 220 184 10.42 6.82 7.99 8.13 0.44 0 Public order and safety Q Q 87 Q Q Q 8.89 Q Q Religious worship 180 206 179 125 9.59 7.53 7.47 8.59 0.25 0 Service 169 347 336 99 9.11 7.44 8.05 8.07 0.59 0 Warehouse and storage 312 271 275 263 9.95 7.34 9.63 6.73 0.27 0 Other Q Q Q Q Q Q Q Q Q Q </td <td>0.24 0.13</td> <td>0.12</td>	0.24 0.13	0.12
Office 856 609 426 416 9.23 7.24 9.12 8.02 0.32 Public assembly 295 364 220 184 10.42 6.82 7.99 8.13 0.44 0 Public order and safety Q Q 87 Q Q Q 8.89 Q Q Religious worship 180 206 179 125 9.59 7.53 7.47 8.59 0.25 0 Service 169 347 336 99 9.11 7.44 8.05 8.07 0.59 0 Warehouse and storage 312 271 275 263 9.95 7.34 9.63 6.73 0.27 0 Other Q	0.37 0.29	0.33
Public assembly 295 364 220 184 10.42 6.82 7.99 8.13 0.44 Q Public order and safety Q Q 87 Q Q Q 8.89 Q Q Religious worship 180 206 179 125 9.59 7.53 7.47 8.59 0.25	0.24 0.16	0.18
Public order and safety Q Q 87 Q Q Q 8.89 Q Q Religious worship 180 206 179 125 9.59 7.53 7.47 8.59 0.25 0 Service 169 347 336 99 9.11 7.44 8.05 8.07 0.59 0 Warehouse and storage 312 271 275 263 9.95 7.34 9.63 6.73 0.27 0 Other Q<	0.24 0.10	0.10
Religious worship 180 206 179 125 9.59 7.53 7.47 8.59 0.25 0.25 Service 169 347 336 99 9.11 7.44 8.05 8.07 0.59 0.27 0 0.63 6.73 0.27 0 0.64 0.27 0 0 0 0.27 0	Q 0.21	0.22 C
Service 169 347 336 99 9.11 7.44 8.05 8.07 0.59 0.00 0	0.29 0.17	0.25
Warehouse and storage 312 271 275 263 9.95 7.34 9.63 6.73 0.27 0.27 Other Q Q 201 Q Q Q 2.25 6.45 Q Vacant Q </td <td></td> <td></td>		
Other Q Q 201 Q Q Q 8.25 6.45 Q Vacant Q	0.28 0.36	0.28
Vacant Q <td>0.15 0.11</td> <td>0.17</td>	0.15 0.11	0.17
Year constructed Before 1920 345 209 170 34 10.21 7.63 8.39 8.65 0.35 0.40 <td>Q 0.34</td> <td>0.48</td>	Q 0.34	0.48
Before 1920 345 209 170 34 10.21 7.63 8.39 8.65 0.35 0.35 1920 to 1945 495 374 161 137 10.14 7.01 8.06 7.09 0.40 0.40 1946 to 1959 554 429 316 297 9.88 7.01 7.89 7.96 0.54 0.54 1960 to 1969 641 649 593 515 9.83 7.07 7.53 7.25 0.37 0.37 1970 to 1979 765 651 653 472 8.81 6.97 7.32 7.62 0.49 0.49	Q Q	C
1920 to 1945 495 374 161 137 10.14 7.01 8.06 7.09 0.40 0.40 1946 to 1959 554 429 316 297 9.88 7.01 7.89 7.96 0.54 0.54 1960 to 1969 641 649 593 515 9.83 7.07 7.53 7.25 0.37 0.97 1970 to 1979 765 651 653 472 8.81 6.97 7.32 7.62 0.49 0.49		
1946 to 1959 554 429 316 297 9.88 7.01 7.89 7.96 0.54 6 1960 to 1969 641 649 593 515 9.83 7.07 7.53 7.25 0.37 6 1970 to 1979 765 651 653 472 8.81 6.97 7.32 7.62 0.49 6	0.28 0.45	0.16
1960 to 1969 641 649 593 515 9.83 7.07 7.53 7.25 0.37 0 1970 to 1979 765 651 653 472 8.81 6.97 7.32 7.62 0.49 0	0.29 0.21	0.27
1970 to 1979 765 651 653 472 8.81 6.97 7.32 7.62 0.49	0.30 0.17	0.27
	0.29 0.28	0.35
1980 to 1989 409 697 980 538 9.59 7.02 8.66 7.54 0.36 (0.31 0.28	0.24
	0.33 0.24	0.21
	0.26 0.22	0.28
	0.24 0.19	0.26
2004 to 2007 170 248 455 Q 8.69 6.88 8.65 6.93 0.51	0.25 0.27	0.38
2008 to 2012 220 265 402 292 9.63 6.32 8.37 6.85 0.34 0	0.40 0.24	0.35
Climate region ¹		
	0.30 N	0.32
	0.26 0.25	N
Mixed-dry/Hot-dry N N Q 1,590 N N 5.86 7.03 N	N 0.14	0.24
Hot-humid N N 1,262 N N N 7.58 N N		N
Marine N N N 593 N N N 8.91 N	N 0.24	0.29

Table C26. Natural gas expenditures by Census region, 2012

					Natural g	as exper	nditures (dollars)				
	Total natura (million dol	• .	enditures		per thous	and cub	ic feet		per squar	e foot		
	North-	Mid-	Courth	Most	North-	Mid-	Cauth	Most	North-	Mid-	South	Mod
	east	west	South	West	east	west	South	West	east	west		West
All buildings	4,599	4,383	4,793	3,503	9.44	6.99	7.98	7.31	0.42	0.29	0.24	0.28
Number of floors												
One	1,188	1,954	2,514	1,648	9.91	7.45	8.39	7.70	0.46	0.32	0.26	0.27
Two	1,291	973	893	799	9.12	6.88	8.06	7.62	0.41	0.24	0.21	0.25
Three	563	613	344	180	10.03	6.65	7.51	7.24	0.35	0.29	0.22	0.23
Four to nine	1,210 347	655 189	793 248	574 Q	9.18	6.44	7.20	6.48	0.45	0.31	0.24	0.34
Ten or more	347	109	246	Q	9.20	0.40	7.33	0.40	0.32	0.26	0.25	Q
Number of workers (main shift)		702	607	200	10.50	0.07	0.20	7.01	0.42	0.20	0.24	0.25
Fewer than 5	523	702	607	388	10.56	8.07	8.39	7.91	0.42	0.28	0.24	0.25
5 to 9	385	435	503	354	11.27	8.00	7.86	8.00	0.45	0.30	0.28	0.29
10 to 19	375	600	801	520	10.19 9.52	6.78	7.92	8.09	0.35	0.37	0.36	0.28
20 to 49 50 to 99	560	855 693	889	651	9.52	7.32	8.31	7.50	0.39	0.30	0.25	0.24
100 to 249	873 910	543	849 561	393 533	9.50	6.60	8.44 8.43	7.27 6.72	0.49	0.29	0.20	0.22
250 or more	973	554	584	664	8.40	6.03	6.57	6.55	0.41	0.28	0.19	0.34
	9/3		304	004	0.40	0.03	0.57	0.33	0.59	0.26	0.24	0.55
Weekly operating hours												
Fewer than 40	154	287	193	149	10.61	7.94	7.64	7.91	0.32	0.24	0.16	0.19
40 to 48	438	638	567	476	9.93	7.69	8.91	7.72	0.30	0.25	0.15	0.22
49 to 60	735	875	772	579	10.16	7.23	8.13	8.01	0.30	0.24	0.16	0.19
61 to 84	1,121	986	1,004	636	9.80	6.85	8.75	7.48	0.43	0.31	0.32	0.25
85 to 167 Open continuously	881 1,271	576 1,022	785 1,472	1,221	9.19 8.70	6.56	7.75	8.03 6.56	0.57	0.32	0.38	0.33
						0.33					0.31	
Ownership and occupancy	2 206	2 245	2 021	2 022	0.40	7.06	8.09	7.30	0.40	0.30	0.26	0.20
Nongovernment owned	3,396	3,345	3,821	2,922	9.49		7.57		0.40		0.25	0.28
Owner occupied Leased to tenant(s)	1,593	1,854	1,714	1,468	9.34	6.99		7.13	0.42	0.33		0.34
	1,274	1,026	1,714 391	1,158 284	9.77	7.34 6.73	8.75 7.89	7.60	0.39	0.28	0.29	0.26
Owner occupied and leased Unoccupied	521 Q	451 Q	Q	204 Q	9.25 Q	0.73 Q	7.89 Q	7.00 Q	0.38 Q	0.29 Q	0.21 Q	0.19 Q
Government owned	1,203	1,038	972	581	9.29	6.80	7.59	7.35	0.47	0.26	0.18	0.24
Federal	1,203 Q	Q	98	Q	9.29 Q	0.80 Q	9.24	7.33 Q	Q.47	0.20 Q	0.18	0.24 Q
State	Q	237	295	202	8.82	6.49	6.96	7.51	0.59	0.29	0.23	0.26
Local	654	753	580	320	9.76	6.88	7.72	7.46	0.41	0.25	0.21	0.22
Party responsible for operation and maintenance of energy systems												
Building owner	3,741	3,834	3,685	2,833	9.41	6.97	7.80	7.32	0.40	0.29	0.23	0.27
Business owner or tenant	728	477	966	606	9.80	7.26	8.67	7.28	0.40	0.23	0.23	0.27
Property management	Q	Q	Q	Q		7. <u>2</u> 0	8.68	7. <u>2</u> 0 Q	Q.31	0.30 Q	0.26	0.27
Other	Q	Q	Q	Q		Q	Q	Q	Q	Q	Q	a
Provider of direct input on energy- related equipment purchases												
Building owner	3,829	3,941	3,840	3,009	9.43	6.99	7.89	7.30	0.40	0.29	0.23	0.27
Business owner or tenant	569	341	744	447	9.73	6.99	8.27	7.35	0.53	0.30	0.32	0.30
Property management	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	194	Q	Q	7.14	8.93	Q	Q	0.22	0.40	Q

Table C26. Natural gas expenditures by Census region, 2012

	Total natural gas expenditures				Natural gas expenditures (dollars)							
					per thous	and cub	ic feet		per squar			
	North-	Mid-			North-	Mid-			North-	Mid-		
	east	west	South	West	east	west	South	West	east	west	South	West
All buildings	4,599	4,383	4,793	3,503	9.44	6.99	7.98	7.31	0.42	0.29	0.24	0.28
Number of establishments												
One	3,071	2,911	3,212	2,374	9.33	6.99	7.70	7.26	0.45	0.30	0.25	0.31
2 to 5	904	981	884	583	9.73	6.91	8.51	7.35	0.41	0.28	0.21	0.23
6 to 10	204	203	235	235	9.73	7.44	8.89	7.84	0.35	0.29	0.24	0.28
11 to 20	250	163	292	174	9.41	7.01	8.10	7.35	0.35	0.38	0.30	0.27
More than 20	161	111	167	114	9.56	7.12	10.25	6.88	0.24	0.21	0.19	0.14
Currently unoccupied	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Predominant exterior wall material												
Brick, stone, or stucco	2,469	2,420	2,585	1,450	9.58	7.05	7.87	7.19	0.41	0.32	0.25	0.29
Concrete (block or poured)	1,063	936	1,286	881	9.03	7.00	8.39	7.53	0.39	0.28	0.27	0.24
Concrete panels	275	385	301	Q	7.86	6.18	7.38	7.04	0.42	0.28	0.16	0.22
Siding or shingles	282	271	221	321	11.77	7.41	7.67	7.72	0.45	0.29	0.49	0.36
Metal panels	Q	292	331	175	10.60	7.58	8.07	8.10	0.52	0.22	0.18	0.23
Window glass	Q	Q	Q	105	Q	Q	Q	7.29	Q	Q	Q	0.42
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	239	475	861	394	11.08	7.64	8.48	7.87	0.32	0.23	0.25	0.26
Synthetic or rubber	2,051	1,752	1,437	1,248	9.63	6.82	7.96	6.97	0.44	0.29	0.26	0.34
Built-up	1,199	994	1,253	856	8.73	6.60	7.64	7.37	0.41	0.29	0.21	0.23
Slate or tile shingles	274	105	223	299	9.25	8.08	7.81	7.50	0.44	0.32	0.21	0.38
Wooden materials (including												
shingles)	Q	Q	102	76	Q	Q	6.53	6.89	Q	Q	0.53	0.31
Asphalt, fiberglass, or												
other shingles	657	940	797	523	10.25	7.23	8.34	7.56	0.39	0.35	0.25	0.23
Concrete	61	Q	Q	38	7.82	Q	Q	7.29	0.29	Q	Q	0.15
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
Roof characteristics												
Roof tilt												
Flat	3,312	2,611	2,843	2,184	9.28	6.74	7.66	7.18	0.42	0.30	0.25	0.29
Shallow pitch	706	957	1,222	927	9.51	7.20	8.80	7.49	0.49	0.25	0.22	0.26
Steeper pitch	581	815	728	393	10.39	7.67	8.05	7.63	0.34	0.35	0.26	0.26
Cool roof	1,165	988	1,211	1,143	9.14	6.91	7.79	7.06	0.49	0.31	0.24	0.31

Table C26. Natural gas expenditures by Census region, 2012

	Total natura	_	Natural gas expenditures (dollars)									
	(million dollars)				per thousand cubic feet			<u>F</u>	er squar	e foot		
	North- east	Mid- west	South	West	North- east	Mid- west	South	West	North- east	Mid- west	South	West
All buildings	4,599	4,383	4,793	3,503	9.44	6.99	7.98	7.31	0.42	0.29	0.24	0.28
Renovations in buildings constructed before 2008												
(more than one may apply)												
Any type of renovation	2,892	2,349	2,381	1,786	9.37	6.91	7.82	7.22	0.42	0.28	0.24	0.31
Addition or annex	913	960	896	607	9.35	6.79	7.06	6.67	0.47	0.29	0.27	0.40
Reduction in floorspace	Q	71	127	Q	7.82	6.58	6.99	Q	0.49	0.30	0.28	Q
Roof replacement	1,806	1,341	1,230	825	9.42	6.85	7.67	7.07	0.44	0.30	0.24	0.32
Exterior wall replacement	240	237	277	220	10.48	7.06	7.54	6.66	0.33	0.27	0.26	0.30
Interior wall reconfiguration	1,506	1,172	1,113	1,059	9.64	6.67	7.57	7.07	0.38	0.27	0.26	0.31
Window replacement	928	683	722	594	9.96	6.74	7.38	6.94	0.39	0.27	0.28	0.33
HVAC equipment upgrade	2,024	1,504	1,547	1,265	9.36	6.92	7.46	7.00	0.40	0.27	0.25	0.34
Lighting upgrade	1,837	1,490	1,421	1,260	9.32	6.68	7.46	7.01	0.40	0.29	0.24	0.34
Electrical upgrade	1,304	965	960	910	9.40	6.80	7.77	6.84	0.41	0.30	0.26	0.39
Plumbing system upgrade	1,226	828	944	851	9.38	6.85	7.49	6.81	0.46	0.29	0.31	0.42
Insulation upgrade	600	483	502	450	9.85	7.22	7.44	6.72	0.44	0.27	0.31	0.40
Fire, safety, or security upgrade	1,435	933	1,061	805	9.51	6.57	7.27	6.94	0.41	0.30	0.26	0.33
Structural upgrade	156	184	312	Q	9.73	6.74	7.73	6.53	0.32	0.25	0.42	0.47
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
No renovations	1,488	1,769	2,010	1,425	9.55	7.22	8.11	7.53	0.43	0.29	0.24	0.23
Buildings constructed 2008 or later	220	265	402	292	9.63	6.32	8.37	6.85	0.34	0.40	0.24	0.35
Energy sources (more than one may apply)												
Electricity	4,599	4,383	4,793	3,503	9.44	6.99	7.98	7.31	0.42	0.29	0.24	0.28
Natural gas	4,599	4,383	4,793	3,503	9.44	6.99	7.98	7.31	0.42	0.29	0.24	0.28
Fuel oil	1,389	919	1,172	976	9.03	6.10	7.52	6.61	0.40	0.30	0.26	0.37
District heat	Q	31	105	Q	8.49	6.04	6.65	6.26	Q	0.08	Q	0.55
District chilled water	Q	32	177	Q	8.08	6.23	6.80	6.45	0.70	0.10	0.16	0.72
Propane	171	245	276	Q	9.89	6.16	7.61	6.95	0.32	0.26	0.28	0.36
Other	360	133	97	232	8.99	6.94	7.17	6.99	0.45	0.21	0.21	0.32
Space-heating energy sources												
Natural gas	4,165	4,287	3,747	2,856	9.47	6.98	7.76	7.39	0.45	0.31	0.24	0.27
Natural gas main	3,946	4,074	3,057	2,453	9.47	6.97	7.72	7.45	0.47	0.31	0.25	0.27
Natural gas secondary	219	213	691	403	9.48	7.25	7.92	7.02	0.22	0.22	0.22	0.28
Other excluding natural gas	419	94	941	562	9.14	7.42	8.86	6.93	0.24	0.10	0.23	0.31
Buildings without heating	Q	Q	105	Q	Q	Q	9.39	Q	Q	Q	0.29	Q
Primary space-heating energy source												
Electricity	276	266	1,509	649	9.99	7.51	8.58	7.34	0.22	0.19	0.24	0.24
Natural gas	3,946	4,074	3,057	2,453	9.47	6.97	7.72	7.45	0.47	0.31	0.25	0.27
Fuel oil	54	N	Q	2, 133 Q	9.99	N	QQ	,, is	0.15	N	Q.23	Q.27
District heat	Q	24	104	Q	8.50	5.68	6.64	6.26	Q	0.07		0.57
Propane	Q	Q	Q	Q	Q	Q.	Q	Q	Q	Q	Q	Q.57
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Cooling energy sources												
Natural gas	243	Q	Q	Q	8.88	Q	Q	Q	0.80	Q	Q	Q
Other excluding natural gas	4,168	4,133	4,704	3,238	9.43	7.02	7.97	7.25	0.40	0.29	0.24	0.27
Buildings without cooling	189	151	39	234	10.63	8.04	7.94	8.74	0.40	0.26	0.18	0.41

Table C26. Natural gas expenditures by Census region, 2012

					Natural gas expenditures (dollars)							
	Total natural gas expenditures (million dollars)				per thous	and cub	ic feet	per square foot				
	North- east	Mid- west	South	West	North- east	Mid- west	South	West	North- east	Mid- west	South	West
All buildings	4,599	4,383	4,793	3,503	9.44	6.99	7.98	7.31	0.42	0.29	0.24	0.28
Water-heating energy sources												
Natural gas	3,801	3,496	3,540	2,542	9.28	6.83	7.75	7.26	0.50	0.33	0.29	0.28
Other excluding natural gas	758	829	1,154	865	10.21	7.65	8.91	7.47	0.23	0.20	0.17	0.27
Buildings without water heating	Q	58	99	95	Q	8.86	6.92	7.16	Q	0.19	0.13	0.21
Cooking energy sources												
Natural gas	2,559	2,013	2,795	1,915	9.09	6.83	7.81	7.00	0.48	0.36	0.33	0.37
Other excluding natural gas	307	542	422	307	9.51	6.97	8.38	7.73	0.28	0.28	0.20	0.27
Buildings without cooking	1,734	1,828	1,576	1,281	9.99	7.19	8.20	7.73	0.38	0.24	0.17	0.20
Energy end uses												
(more than one may apply)												
Buildings with space heating	4,584	4,381	4,688	3,418	9.44	6.99	7.96	7.31	0.41	0.29	0.24	0.27
Buildings with cooling	4,411	4,232	4,754	3,270	9.40	6.96	7.98	7.23	0.42	0.29	0.24	0.27
Buildings with water heating	4,559	4,325	4,694	3,408	9.42	6.97	8.01	7.32	0.42	0.29	0.25	0.28
Buildings with cooking	2,866	2,555	3,217	2,222	9.13	6.86	7.88	7.09	0.44	0.34	0.30	0.35
Buildings with manufacturing	335	214	310	161	8.42	7.43	9.27	8.80	0.45	0.21	0.24	0.22
Buildings with electricity												
generation	2,172	1,298	1,489	1,315	9.04	6.39	7.59	6.77	0.45	0.27	0.22	0.33
Percent of floorspace heated												
Not heated	Q	Q	105	Q	Q	Q	9.39	Q	Q	Q	0.29	Q
1 to 50	191	108	275	405	11.23	7.92	7.81	7.45	0.32	0.12	0.14	0.17
51 to 99	998	598	1,172	663	9.76	6.96	7.66	7.30	0.48	0.31	0.27	0.24
100	3,394	3,675	3,241	2,351	9.27	6.97	8.08	7.29	0.41	0.30	0.24	0.32
Percent of floorspace cooled												
Not cooled	189	151	39	234	10.63	8.04	7.94	8.74	0.40	0.26	0.18	0.41
1 to 50	1,037	1,060	585	574	9.48	7.09	8.27	7.32	0.38	0.25	0.17	0.22
51 to 99	1,683	1,183	1,339	957	9.41	6.78	7.80	7.60	0.45	0.29	0.24	0.26
100	1,691	1,989	2,831	1,738	9.34	7.01	8.01	7.01	0.40	0.32	0.27	0.30
Heating equipment												
(more than one may apply)	421	172	915	475	9.66	6.57	8.90	6.93	0.38	0.22	0.23	0.29
Heat pumps	384	620	643	346	10.77	7.38	8.84	7.50	0.38	0.22	0.23	0.25
Furnaces Individual space heaters	1,268	1,237	971	734	9.40	7.06	7.86	7.30	0.35	0.30	0.20	0.25
District heat	1,208 Q	31	104	73 4 Q	8.49	6.04	6.64	6.26	0.30 Q	0.28	0.21 Q	0.20
Boilers	2,653	2,018	1,501	1,180	9.35	6.59	7.57	6.85	0.51	0.33	0.28	0.37
Packaged heating units	2,033	2,758	3,238	2,196	9.53	7.06	8.09	7.46	0.31	0.33	0.24	0.33
Other	2,295 Q	2,736 Q	3,236 98	2,190	9.55 Q	7.00 Q	9.82	8.11	0.36 Q	0.29 Q	0.24	0.39
Cooling equipment												
(more than one may apply)												
Residential-type central air												
conditioners	635	1,128	956	612	9.96	7.69	8.89	6.96	0.48	0.29	0.29	0.29
Heat pumps	420	198	992	457	9.52	6.98	8.57	7.35	0.35	0.28	0.23	0.25
Individual air conditioners	1,345	627	705	315	9.25	6.92	8.31	7.07	0.47	0.28	0.24	0.26
District chilled water	Q	32	177	Q	8.08	6.23	6.80	6.45	0.70	0.10	0.16	0.72
Central chillers	1,180	1,169	1,243	667	9.22	6.31	7.35	6.57	0.43	0.31	0.25	0.29
Packaged air conditioning units	2,551	2,557	2,945	1,942	9.37	6.75	7.96	7.33	0.38	0.30	0.24	0.26
Swamp coolers	Q	Q	Q	369	Q	Q	Q	7.14	Q	Q	Q	0.33
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q

Table C26. Natural gas expenditures by Census region, 2012

	Total natural gas expenditures				Natural gas expenditures (dollars)							
	Total natural gas expenditures (million dollars)				per thous	and cub	ic feet		per squar			
_	North- east	Mid- west	South	West	North- east	Mid- west	South	West	North- east	Mid- west	South	West
All buildings	4,599	4,383	4,793	3,503	9.44	6.99	7.98	7.31	0.42	0.29	0.24	0.28
Main equipment replaced since												
1990 (more than one may apply)												
Heating	1,704	1,637	1,813	995	9.74	7.09	7.79	7.52	0.42	0.28	0.26	0.24
Cooling	1,910	1,876	2,032	1,062	9.84	7.04	7.92	7.44	0.40	0.30	0.26	0.25
Water-heating equipment												
Centralized system	2,930	2,970	2,938	1,997	9.31	6.96	7.95	7.42	0.43	0.31	0.27	0.29
Distributed system	602	493	442	475	9.89	7.31	8.28	6.89	0.36	0.24	0.17	0.25
Combination of centralized and												
distributed system	1,027	862	1,314	936	9.47	6.83	8.04	7.33	0.42	0.27	0.23	0.28
Food preparation or serving areas in non-food service buildings												
(more than one may apply)												
Snack bar or concession stand	689	602	739	631	8.94	6.65	7.91	6.68	0.47	0.31	0.27	0.37
Fast food or small restaurant	622	535	935	720	9.04	6.76	8.37	6.98	0.41	0.35	0.31	0.31
Cafeteria or large restaurant	1,315	953	1,136	802	8.87	6.66	7.19	6.51	0.44	0.31	0.23	0.40
Commercial kitchen/												
food preparation area	1,464	1,209	1,287	982	8.94	6.78	7.63	6.73	0.54	0.33	0.25	0.38
Small kitchen area	914	859	786	630	9.62	6.93	8.46	7.25	0.38	0.28	0.23	0.31
HVAC conservation features												
(more than one may apply)												
Economizer cycle	2,314	1,924	1,594	1,688	8.82	6.64	8.07	7.01	0.41	0.28	0.25	0.29
Regular HVAC maintenance	4,119	3,844	4,103	3,067	9.32	6.85	7.98	7.21	0.42	0.30	0.24	0.28
Building automation system (BAS) ²	2,204	1,902	2,107	1,881	8.97	6.68	7.68	7.02	0.40	0.29	0.22	0.31
Window and interior lighting features (more than one may apply)												
Multipaned windows	3,548	3,725	3,583	2,551	9.35	6.94	8.04	7.35	0.42	0.30	0.25	0.31
Tinted window glass	2,302	2,237	2,946	2,189	9.13	6.76	7.85	7.28	0.44	0.30	0.24	0.28
Reflective window glass	888	1,007	993	1,142	9.32	6.86	8.06	7.02	0.49	0.30	0.28	0.34
External overhangs or awnings	1,804	1,791	2,380	1,881	9.47	6.87	8.15	7.18	0.53	0.32	0.28	0.32
Skylights or atriums	1,514	950	1,273	1,374	9.25	6.63	7.81	7.08	0.46	0.26	0.24	0.30
Light scheduling	1,958	1,691	1,754	1,628	9.21	6.74	8.19	7.16	0.41	0.29	0.26	0.29
Occupancy sensors	2,491	1,905	1,863	1,802	9.17	6.63	8.11	7.13	0.41	0.29	0.23	0.28
Multi-level lighting or dimming	908	893	1,218	1,199	9.32	6.68	8.14	6.70	0.46	0.34	0.31	0.37
Daylight harvesting	522	311	293	390	9.89	6.57	8.19	6.89	0.58	0.24	0.22	0.28
Demand responsive lighting Building automation system (BAS) for	256	219	342	235	10.40	7.05	9.41	7.31	0.55	0.25	0.31	0.19
lighting ²	791	564	594	588	8.79	6.53	8.41	7.36	0.43	0.27	0.20	0.24
Equipment usage reduced when building not in full use (more than one may apply)												
Heating	3,648	3,503	3,423	2,434	9.49	7.03	8.11	7.38	0.40	0.29	0.22	0.24
Cooling	3,572	3,315	3,511	2,354	9.45	6.99	8.15	7.35	0.40	0.29	0.22	0.24
Lighting	4,333	4,155	4,466	3,298	9.48	6.99	8.08	7.34	0.42	0.29	0.24	0.28

Table C26. Natural gas expenditures by Census region, 2012

								Natural gas expenditures (dollars)								
		Total natural gas expenditures (million dollars)				per thousand cubic feet					per square foot					
	North- east	Mid- west	South	West	North- east	Mid- west	South	West	North- east	Mid- west	South	West				
All buildings	4,599	4,383	4,793	3,503	9.44	6.99	7.98	7.31	0.42	0.29	0.24	0.28				
Annual consumption (hundred cubic feet)																
1,000 or less	88	185	224	132	16.54	11.44	13.03	10.53	0.13	0.15	0.07	0.07				
1,001 to 5,000	569	668	769	519	11.71	8.09	9.22	8.59	0.27	0.21	0.16	0.17				
5,001 to 10,000	438	458	676	359	10.16	7.59	8.35	7.58	0.30	0.26	0.20	0.25				
10,001 to 25,000	608	923	1,113	867	9.35	7.16	7.87	7.70	0.33	0.29	0.30	0.35				
25,001 to 50,000	693	640	625	388	9.63	6.77	7.65	6.98	0.42	0.34	0.29	0.26				
50,001 to 100,000	659	553	533	358	9.04	6.57	7.58	7.10	0.48	0.33	0.41	0.39				
Over 100,000	1,544	956	853	880	8.57	5.98	6.81	6.28	0.81	0.46	0.61	0.60				

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.

Table C27. Natural gas consumption and conditional energy intensity by Census division (part 1), 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)

	(billion cubic	feet)		million squa	re feet)	(cubic feet/s	quare foot)	
			East			East			East
	New	Middle	North	New	Middle	North	New	Middle	North
	England	Atlantic	Central	England	Atlantic	Central	England	Atlantic	Central
All buildings	108	379	482	2,241	8,827	10,790	48.1	43.0	44.6
Building floorspace (square feet)									
1,001 to 5,000	Q	35	43	Q	384	745	Q	90.5	57.5
5,001 to 10,000	Q	25	55	Q	449	931	Q	55.6	59.5
10,001 to 25,000	12	47	58	459	1,149	1,530	25.6	40.7	38.0
25,001 to 50,000	Q	30	85	Q	830	1,928	Q	36.2	43.9
50,001 to 100,000	14	71	73	330	1,789	1,485	41.9	39.9	49.4
100,001 to 200,000	8	93	49	230	1,925	1,344	35.9	48.1	36.6
200,001 to 500,000	34	42	78	492	1,225	1,886	68.2	34.1	41.6
Over 500,000	Q	37	40	Q	1,077	941	Q	34.3	42.1
Principal building activity									
Education	Q	60	84	Q	1,247	1,979	Q	48.5	42.5
Food sales	Q	Q	Q	Q	Q	Q	Q	Q	Q
Food service	Q	20	35	Q	116	208	Q	169.4	170.2
Health care	Q	50	41	Q	745	460	Q	66.8	88.4
Inpatient	Q	36	36	Q	337	306	Q	106.1	116.3
Outpatient	Q	14	5	Q	407	154	Q	34.2	33.2
Lodging	Q	28	32	Q	681	620	Q	41.0	51.5
Mercantile	Q	43	68	Q	1,000	1,429	Q	43.3	47.4
Retail (other than mall)	Q	12	26	Q	495	689	Q	25.2	37.3
Enclosed and strip malls	Q	31	42	Q	505	740	Q	61.0	56.7
Office	11	82	68	399	2,304	1,969	28.1	35.4	34.6
Public assembly	Q	22	42	Q	523	993	Q	42.4	41.8
Public order and safety	Q	Q	Q	Q	Q	Q	Q	Q	Q
Religious worship	Q	15	21	Q	560	484	Q	26.3	43.2
Service	Q	17	34	Q	222	803	Q	76.8	41.8
Warehouse and storage	Q	17	29	Q	949	1,169	Q	17.9	24.7
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	17	22	Q	725	491	Q	24.0	44.7
1920 to 1945	Q	44	40	Q	1,048	998	Q	41.6	40.4
1946 to 1959	Q	50	47	Q	876	1,078	Q	57.4	43.6
1960 to 1969	Q	52	63	Q	1,464	1,346	Q	35.5	46.5
1970 to 1979	11	76	73	287	1,266	1,562	39.1	59.7	46.5
1980 to 1989	10	32	80	326	822	1,541	31.9	39.2	52.2
1990 to 1999	Q	63	62	Q	1,282	1,619	Q	48.8	38.1
2000 to 2003	Q	18	35	Q	563	874	Q	31.6	40.2
2004 to 2007	Q	Q	27	Q	Q	743	Q	Q	36.9
2008 to 2012	Q		32	Q	Q	539	Q	Q	60.1
	<u>«</u>	-		-	·		<u> </u>	-	

Table C27. Natural gas consumption and conditional energy intensity by Census division (part 1), 2012

Total floorspace of

Natural gas

Total natural gas

consumption buildings using natural gas energy intensity (million square feet) (billion cubic feet) (cubic feet/square foot) East East East Middle North Middle North Middle North New New New England Atlantic Central **England** Atlantic Central England **Atlantic** Central All buildings 108 379 482 2,241 8,827 10,790 48.1 43.0 44.6 Climate region¹ Very cold/Cold 108 215 452 2,241 5,018 9,944 48.1 42.9 45.5 Mixed-humid Ν 164 Q Ν 3,809 Q N 43.1 34.9 N N Ν Ν Ν N Ν Mixed-dry/Hot-dry Ν Ν N Hot-humid Ν Ν Ν Ν Ν Ν Ν Ν Marine Ν Ν Ν Ν Ν Ν Ν Number of floors One 22 98 204 426 2,144 4,366 51.7 45.7 46.6 37.6 Two 29 113 108 789 2,357 2,863 36.2 48.0 49.5 Three 13 43 69 379 1.231 1.402 34.3 35.0 Four to nine 35 97 75 523 2,140 1,519 66.1 45.5 49.6 26 Q 28 Q Q 40.0 Ten or more 955 640 29.2 Number of workers (main shift) 5 44 240 44.4 36.1 Fewer than 5 63 998 1,734 21.7 5 to 9 Q 25 39 213 646 1,004 45.3 38.0 38.6 59.7 10 to 19 Q 70 844 28 Q 1,174 Q 33.4 20 to 49 Q 44 92 Q 1,045 2,094 Q 42.4 43.8 50 to 99 Q 68 89 1,443 1,843 Q 47.2 48.1 Q 100 to 249 25 75 52 527 1,671 1,422 48.3 44.7 36.9 21 95 77 312 2,180 66.4 43.7 50.9 250 or more 1,518 Weekly operating hours Q 30.1 33.9 Fewer than 40 12 28 Q 411 828 Q 40 to 48 6 38 64 256 1,197 1,832 24.9 31.5 34.8 90 49 to 60 13 60 521 1,952 2,468 24.5 30.5 36.5 61 to 84 27 87 115 694 1,906 2,301 39.0 45.9 49.9 Q 55.2 85 to 167 66 65 Q 1,236 1,185 Q 53.7 30 119 386 77.9 54.9 Open continuously 116 2,124 2,175 54.6 Ownership and occupancy Nongovernment owned 86 272 368 1,711 6,805 7,865 50.4 39.9 46.8 28 198 45.8 44.9 50.1 Owner occupied 143 601 3,185 3,945 41.8 30 101 113 661 2,643 2,714 44.8 38.1 Leased to tenant(s) 56 Owner occupied and leased 29 27 69.0 49.3 421 945 1,127 28.9 Unoccupied Q Q Q Q Q Q Q Q Q 530 40.9 22 108 114 2,924 53.3 38.9 Government owned 2,022 Federal Ν Q Q Ν Q Q N Q Q State Q Q 31 Q 809 667 Q 71.7 46.6 20 47 78 444 2,063 45.1 40.7 37.6 Local 1,154 Party responsible for operation and maintenance of energy systems 309 45.1 Building owner 88 423 1,807 7,541 9,384 48.9 41.0 Business owner or tenant 12 63 51 347 1,074 1,153 33.2 58.4 44.3 Q Property management Q Q Q Q Q Q Q Q Other Q Q Q Q Q Q Q Q Q

Table C27. Natural gas consumption and conditional energy intensity by Census division (part 1), 2012

Total floorspace of

Natural gas

Total natural gas

consumption buildings using natural gas energy intensity (million square feet) (cubic feet/square foot) (billion cubic feet) East East East Middle North New Middle North Middle North New New England Atlantic Central **England** Atlantic Central England Atlantic Central All buildings 108 379 482 10,790 43.0 44.6 2,241 8,827 48.1 Provider of direct input on energyrelated equipment purchases Building owner 91 315 431 1,867 7,629 9,569 48.8 41.3 45.1 Business owner or tenant Q 51 38 830 884 Q 61.2 43.5 Q Q Property management Q Q Q Q Q Q Q Q Other Q Q Q Q Q Q Q Q Q **Number of establishments** 275 1,235 5,598 7,021 49.2 45.0 One 54 316 43.8 60.9 2 to 5 31 62 112 511 1,694 2,396 36.5 46.9 6 to 10 Q 12 20 435 518 Q 27.6 38.6 Q 11 to 20 Q 19 21 Q 458 354 41.8 59.5 Q Q Q 610 420 26.3 More than 20 11 11 Q 17.6 Currently unoccupied Q Q Q Q Q Q Q Q Q Predominant exterior wall material 65 48.0 41.1 50.0 Brick, stone, or stucco 193 269 1,351 4,694 5,371 Concrete (block or poured) 18 99 108 423 2,289 43.6 43.4 40.2 2,684 Q 47 46.7 48.2 Concrete panels 26 Q 556 968 Q Siding or shingles Q 13 29 Q 366 653 Q 35.8 44.5 Metal panels Q Q 18 Q 388 625 28.4 Q Q Window glass Q Q Q Q Q Q Q Q Q Other Ν Q Q Ν Q Q Ν Q Q No one major type Q Q Q Q Q Q Q Q Q **Predominant roof material** 34.3 Metal surfacing Q 18 41 Q 683 1,187 Q 26.7 Synthetic or rubber 76 137 202 1,385 3,233 4,463 55.1 42.3 45.3 Built-up 11 126 110 305 2,642 2,519 36.2 47.8 43.5 39.4 Slate or tile shingles Q 24 10 Q 442 254 Q 54.2 Wooden materials (including Q Q shingles) Q Q Q Q Q Q Q Asphalt, fiberglass, or other shingles 10 54 107 268 1,427 2,041 38.2 37.8 52.2 Concrete Q Q Q Q Q Q Q Q Q Other Q Q Q Q Q Q Q Q Q No one major type Q Q Q Q Q Q Q Q Q **Roof characteristics** Roof tilt Flat 284 293 1,572 6,328 46.5 44.9 46.1 73 6,373 100 38.3 Shallow pitch 23 52 339 1,117 2,612 66.9 46.2 Steeper pitch Q 44 88 329 1,382 1,805 36.5 31.8 48.7 109 Cool roof 18 1,970 48.4 113 427 2,337 43.1 55.3

Table C27. Natural gas consumption and conditional energy intensity by Census division (part 1), 2012

England Atlantic Central England Atlantic Ce	East North entral 0,790	New England	Middle Atlantic 43.0	East North Central
	5,758	48.1	43.0	44.6
All buildings 108 379 482 2,241 8,827 1				
Renovations in buildings constructed before 2008 (more than one may apply)				
·		50.1	42.8	44.1
	2,171		48.2	46.6
Reduction in floorspace Q Q Q Q Q	Q		Q	Q
	2,932		44.2	48.1
Exterior wall replacement Q 17 19 Q 554	525		30.9	37.0
	3,008		39.8	43.3
	1,821		34.9	40.1
	4,023		43.6	40.1
	3,625		38.9	45.5
	2,182		43.0	45.8
	2,027		47.4	43.8
	1,032		48.8	43.2
	2,333		40.5	44.0
Structural upgrade Q 11 16 Q 310 Other Q Q Q Q Q	509		36.0	31.7
	Q		Q	Q
	4,493		44.7	43.5
Buildings constructed 2008 or later Q Q 32 Q Q Energy sources (more than one may apply)	539	Q	Q	60.1
Electricity 108 379 482 2,241 8,827 1	0,790	48.1	43.0	44.6
Natural gas 108 379 482 2,241 8,827 1	0,790	48.1	43.0	44.6
Fuel oil 38 115 106 558 2,950	2,036	68.6	39.1	52.2
District heat Q Q Q Q 897	220	Q	Q	18.2
District chilled water Q Q 5 Q Q	220	Q	Q	20.8
Propane Q 13 32 Q 419	555	Q	30.4	57.5
Other Q Q 15 Q 598	439	Q	48.4	33.4
Space-heating energy sources				
Natural gas 103 337 473 1,990 7,362 1	0,122	51.7	45.8	46.7
Natural gas main 98 318 453 1,811 6,555	9,587	54.3	48.6	47.3
Natural gas secondary Q 19 19 Q 806	535	Q	23.0	36.2
Other excluding natural gas 5 Q 9 251 1,458	645	20.0	Q	13.7
Buildings without heating N 2 (*) N 7	23	N	214.2	10.1
Primary space-heating				
energy source				
Electricity Q 21 25 Q 1,007	934		21.4	26.4
	9,587		48.6	47.3
Fuel oil Q 4 N Q 336	N	Q	Q	N
District heat Q Q Q Q 870	205	Q	Q	Q
Propane Q Q N Q Q	N	Q	Q	N
Other Q Q Q Q Q	Q	Q	Q	Q

Table C27. Natural gas consumption and conditional energy intensity by Census division (part 1), 2012

Total floorspace of

Natural gas

Total natural gas

consumption buildings using natural gas energy intensity (million square feet) (cubic feet/square foot) (billion cubic feet) East East East Middle North New Middle North Middle North New New England Atlantic Central **England** Atlantic Central England Atlantic Central All buildings 108 379 482 44.6 2,241 8,827 10,790 48.1 43.0 **Cooling energy sources** Natural gas Q 20 Q Q 216 Q Q 93.6 Q Other excluding natural gas 98 344 448 2,071 8,223 10,148 47.2 41.9 44.2 **Buildings** without cooling Q 15 15 Q 387 425 Q 38.2 35.5 Water-heating energy sources 90 320 400 1,492 6,042 7,910 60.0 53.0 50.6 Natural gas Other excluding natural gas 17 57 78 684 2,676 2,716 25.5 21.2 28.6 Buildings without water heating Q Q 4 Q Q 163 Q Q 22.5 Cooking energy sources Natural gas 52 229 231 1,015 4,341 4,293 51.4 52.8 53.7 Q 40.3 Other excluding natural gas 27 53 Q 935 Q 28.9 1,316 **Buildings** without cooking 50 123 198 1,049 3,550 48.1 34.6 38.2 5,181 **Energy end uses** (more than one may apply) 108 378 481 2,241 8,819 10,767 48.1 42.8 44.7 Buildings with space heating 48.6 43.2 45.0 Buildings with cooling 105 365 466 2,160 8,439 10,364 Buildings with water heating 107 377 478 8,718 10,626 49.2 43.2 45.0 2,176 **Buildings** with cooking 57 256 284 1,192 5,276 5,609 48.2 48.6 50.6 Q **Buildings with manufacturing** 28.0 15 18 Q 462 657 Q 33.2 **Buildings** with electricity generation 59 182 154 918 3,941 3,510 63.9 46.1 43.9 Percent of floorspace heated Not heated Ν Q Q Q Ν Q Q Ν Q 1 to 50 Q 13 10 Q 508 503 Q 26.0 19.2 51 to 99 40 68 444 1,478 91.1 37.5 45.8 62 1,651 100 64 303 404 1,701 6,660 8,786 37.4 45.4 46.0 Percent of floorspace cooled Not cooled Q 15 15 Q 387 425 Q 38.2 35.5 1 to 50 36 74 123 615 2,089 3,006 58.0 35.3 41.0 51 to 99 39 140 144 722 2,978 53.6 47.1 45.3 3,188 31 199 823 37.1 44.7 47.7 100 151 3,372 4,171 **Heating equipment** (more than one may apply) 13 31 20 291 803 493 43.0 38.7 39.7 Heat pumps 70 Q 27 Q 43.3 **Furnaces** Q 812 1,615 32.8 Individual space heaters 43 92 129 2,698 51.8 34.1 38.2 830 3,361 District heat Q 897 220 18.2 Q Q Q Q Q 50.9 **Boilers** 67 217 244 4,149 4,787 64.2 52.3 1,038 183 299 1,359 4,721 42.4 38.8 45.3 Packaged heating units 58 6,585 Other Q Q Q Q Q Q Q Q Q

Table C27. Natural gas consumption and conditional energy intensity by Census division (part 1), 2012

Total natural gas Total floorspace of Natural gas consumption buildings using natural gas energy intensity (billion cubic feet) (million square feet) (cubic feet/square foot) East East East Middle North New Middle North Middle North New New England Atlantic Central England Atlantic Central England Atlantic Central All buildings 108 379 482 8,827 10,790 48.1 43.0 44.6 2,241 **Cooling equipment** (more than one may apply) Residential-type central air conditioners 10 54 113 240 1,074 2,760 40.2 50.4 41.1 47.8 Heat pumps 13 32 22 309 884 458 41.0 35.7 Individual air conditioners 43 103 71 2,256 73.2 42.5 581 1,660 45.6 District chilled water 20.8 Q Q 5 Q Q 220 Q Q Central chillers 31 97 142 59.9 43.7 47.2 511 2,228 3,021 Packaged air conditioning units 73 299 5,388 48.2 200 1,399 6,192 52.0 37.0 184.1 81.3 Swamp coolers Ν 3 6 Ν 18 74 Ν Q Q Other Q Q Q Q Q Q Q Main equipment replaced since 1990 (more than one may apply) 142 170 919 3,140 3,901 36.2 45.1 43.5 Heating 33 Cooling 36 158 199 942 3,877 4,336 38.2 40.8 45.9 Water-heating equipment Centralized system 50 264 324 1,306 5,455 38.6 48.4 47.5 6,813 Distributed system Q 28.4 37.2 38 56 Q 1,343 1,502 Q Combination of centralized and 98 539 distributed system 34 74 1,919 2,311 63.0 38.8 42.5 Food preparation or serving areas in non-food service buildings (more than one may apply) 47.6 Snack bar or concession stand 49.3 Q 64 72 Q 1,354 1,452 Q Fast food or small restaurant Q 57 59 Q 1,263 1,154 Q 45.0 51.0 27 Cafeteria or large restaurant 121 107 2,458 49.4 45.7 535 2,336 50.1 Commercial kitchen/ food preparation area 37 127 140 696 2,029 2,853 52.9 62.5 49.1 Small kitchen area 16 79 90 368 2,062 2,120 43.9 38.3 42.6 **HVAC** conservation features (more than one may apply) Economizer cycle 52 211 218 1,032 4,618 4,910 50.2 45.6 44.5 Regular HVAC maintenance 101 341 439 2,003 7,844 9,446 50.5 43.4 46.4 Building automation system (BAS)² 62 184 216 1,208 4,277 4,817 51.2 43.0 44.8

Table C27. Natural gas consumption and conditional energy intensity by Census division (part 1), 2012

Total natural gas Total floorspace of Natural gas consumption buildings using natural gas energy intensity (billion cubic feet) (million square feet) (cubic feet/square foot) East East East Middle North Middle North Middle North New New New England Atlantic Central **England** Atlantic Central England **Atlantic** Central All buildings 108 379 482 43.0 44.6 2,241 8,827 10,790 48.1 Window and interior lighting features (more than one may apply) Multipaned windows 98 281 407 1,955 6,509 8,803 50.3 43.2 46.2 47 205 43.5 50.0 46.4 Tinted window glass 252 1,076 4,109 5,434 Reflective window glass 83 302 1,510 2,465 40.5 55.0 45.1 12 111 External overhangs or awnings 28 162 200 721 2,704 39.3 60.0 52.3 3,833 Skylights or atriums 41 112 1,006 2,292 40.9 53.5 44.4 123 2,534 Light scheduling 59 154 206 1,019 3,766 4,570 57.4 40.9 45.0 Occupancy sensors 82 189 231 1,474 4,532 5,106 55.7 41.8 45.2 Multi-level lighting or dimming 25 73 106 474 1,493 52.3 48.6 53.6 1,972 Daylight harvesting Q 38 38 Q 654 987 Q 58.3 38.3 Demand responsive lighting Q 22 22 Q 405 491 Q 54.6 44.1 Building automation system (BAS) for lighting² 24 66 64 409 1,415 1,555 57.6 47.0 41.3 Equipment usage reduced when building not in full use (more than one may apply) 44.5 Heating 74 310 390 1.869 7.326 8.751 39.7 42.4 42.3 44.6 Cooling 81 298 369 1,813 7,042 8,263 44.5 Lighting 107 350 455 2,193 8,217 10,107 49.0 42.6 45.0 **Annual consumption** (hundred cubic feet) 1,000 or less 4 209 476 789 5.5 8.7 13.4 1 11 1.001 to 5.000 12 37 56 578 1.546 2.121 20.5 23.8 26.2 5,001 to 10,000 Q 36 45 Q 1,300 1,264 Q 27.4 35.3 93 43.3 10,001 to 25,000 13 52 276 1,556 2,159 47.9 33.3 25,001 to 50,000 52.3 Q 63 83 Q 1,361 1,586 Q 46.1 50,001 to 100,000 Q 53 62 Q 1,075 1,218 Q 49.0 50.7 Over 100,000 45 136 133 391 1,513 1,653 114.0 89.6 80.2

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.

Table C28. Natural gas consumption and conditional energy intensity by Census division (part 2), 2012

	Total natural consumption (billion cubic	1	ŀ	Total floorsp buildings usi million squa	ng natural ga	is e	Natural gas energy intensity (cubic feet/square foot)			
	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central	
All buildings	145	298	101	4,236	9,984	3,436	34.3	29.8	29.4	
Building floorspace (square feet)										
1,001 to 5,000	22	45	11	381	487	258	57.6	91.6	40.8	
5,001 to 10,000	15	44	9	447	587	292	34.2	74.6	30.6	
10,001 to 25,000	23	37	19	656	1,119	597	35.1	33.1	32.4	
25,001 to 50,000	15	32	17	700	1,303	349	21.8	24.8	48.2	
50,001 to 100,000	26	46	Q	696	1,986	708	37.8	23.0	23.4	
100,001 to 200,000	20	35	8	522	2,036	455	38.4	17.1	17.3	
200,001 to 500,000	13	33	9	504	1,332	460	25.8	24.5	20.6	
Over 500,000	Q	27	12	Q	1,134	Q	Q	23.8	Q	
Principal building activity										
Education	22	28	9	755	1,867	384	29.1	15.1	22.5	
Food sales	Q	Q	Q	Q	Q	Q	Q	Q	Q	
Food service	13	50	14	93	296	96	144.9	170.0	149.8	
Health care	21	30	19	262	426	248	80.8	71.2	75.4	
Inpatient	Q	30	18	Q	383	184	Q	77.1	95.8	
Outpatient	Q	Q	Q	Q	Q	Q	Q	Q	Q	
Lodging	9	33	Q	218	1,023	Q	43.0	31.9	40.4	
Mercantile	12	44	10	424	1,628	523	28.1	27.0	18.2	
Retail (other than mall)	4	7	Q	180	365	Q	21.0	19.6	Q	
Enclosed and strip malls	Q	37	Q	Q	1,263	Q	Q	29.1	Q	
Office	16	22	10	566	1,427	388	28.1	15.7	24.7	
Public assembly	12	11	Q	323	497	Q	36.5	22.2	Q	
Public order and safety	Q	Q	Q	Q	Q	Q	Q	Q	Q	
Religious worship	6	Q	Q	220	399	Q	29.3	32.5	Q	
Service	13	24	Q	420	407	Q	31.2	58.9	Q	
Warehouse and storage	8	16	Q	651	1,269	Q	12.4	12.7	Q	
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	
Vacant	Q	Q	Q	Q	Q	Q	Q	Q	Q	
Year constructed										
Before 1920	5	9	Q	252	220	Q	21.6	41.3	Q	
1920 to 1945	13	8	Q	281	289	Q	46.3	28.1	Q	
1946 to 1959	14	20	6	369	1,009	218	38.2	19.7	27.2	
1960 to 1969	29	37	17	893	939	582	32.7	39.0	28.6	
1970 to 1979	21	35	19	548	931	404	38.0	37.7	47.5	
1980 to 1989	19	51	18	602	1,972	793	31.4	26.0	22.3	
1990 to 1999	18	43	19	634	1,322	836	28.3	32.6	23.0	
2000 to 2003	7	24	Q	294	1,070	Q	25.0	22.1	Q	
2004 to 2007	9	34	Q	234	1,185	Q	36.9	29.0	Q	
2008 to 2012	Q	36	Q	Q	1,048	Q	Q	34.7	Q	

Table C28. Natural gas consumption and conditional energy intensity by Census division (part 2), 2012

	Total natural gas consumption (billion cubic feet)			Total floorsp buildings usi (million squa	ng natural gas	S	Natural gas energy intensity (cubic feet/square foot)		
	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central	North	South Atlantic	East South Central
All buildings	145	298	101	4,236	9,984	3,436	34.3	29.8	29.4
Climate region ¹									
Very cold/Cold	109	N	N	3,185	N	N	34.3	N	N
Mixed-humid	36	251	79	1,050	8,542	2,813	34.3	29.4	28.0
Mixed-dry/Hot-dry	N	N	N	N	N	N	N	N	N
Hot-humid	N	47	Q	N	1,442	Q	N	32.5	35.6
Marine	N	N	N	N	N	N	N	N	N
Number of floors									
One	59	144	45	1,664	4,522	1,617	35.2	31.9	27.7
Two	34	52	21	1,180	2,133	901	28.7	24.4	23.4
Three	23	27	8	710	751	275	32.1	36.0	28.9
Four to nine	26	59	20	606	2,045	512	43.5	28.7	38.7
Ten or more	Q	15	Q	Q	532	Q	Q	28.9	Q
Number of workers (main shift)									
Fewer than 5	24	28	14	798	892	612	30.6	31.4	22.8
5 to 9	16	35	9	471	783	395		44.3	22.6
10 to 19	18	55	15	447	1,077	325		51.5	46.9
20 to 49	25	48	16	803	1,531	813		31.3	20.0
50 to 99	16	57	23	567	2,539	540		22.4	41.7
100 to 249	31	36	7	706	1,969	358		18.0	18.5
250 or more	15	39	18	443	1,193	392		32.8	44.7
Weekly operating hours									
Fewer than 40	8	Q	6	380	340	363	21.2	26.2	16.1
40 to 48	19	27	13	715	1,519	829	26.8	17.8	15.5
49 to 60	31	48	16	1,113	2,632	632	27.7	18.3	24.7
61 to 84	29	63	15	842	1,940	390	34.5	32.2	39.7
85 to 167	22	54	11	612	1,140	Q	36.5	47.0	Q
Open continuously	36	97	40	572	2,411	886	62.3	40.4	44.9
Ownership and occupancy									
Nongovernment owned	106	243	73	3,174	7,732	2,372	33.4	31.4	31.0
Owner occupied	67	112	46	1,757	3,144	1,270		35.5	36.0
Leased to tenant(s)	27	106	19	954	3,411	883		31.1	21.5
Owner occupied and leased	11	25	9	419	1,169	207	27.5	21.7	41.7
Unoccupied	Q	Q	Q	Q	Q	Q	Q	Q	Q
Government owned	39	55	28	1,061	2,253	1,064	36.7	24.3	25.9
Federal	Q	7	Q	Q	280	Q	Q	23.6	Q
State	Q	13	16	Q	345	Q	Q	38.7	29.7
Local	32	35	9	858	1,628	434	37.1	21.3	21.7
Party responsible for operation and maintenance of energy systems									
Building owner	127	222	85	3,695	7,789	2,874	34.3	28.5	29.5
Business owner or tenant	15	65	13	420	1,865	Q		34.9	29.8
Property management	Q	Q	Q	Q	Q	Q		Q	Q
Other	Q	Q	Q	Q	Q	Q		Q	Q

Table C28. Natural gas consumption and conditional energy intensity by Census division (part 2), 2012

	Total natural gas consumption (billion cubic feet)		b	otal floorsp uildings usi million squa	ng natural ga	ns	Natural gas energy intensity (cubic feet/square foot)		
	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central
All buildings	145	298	101	4,236	9,984	3,436	34.3	29.8	29.4
Provider of direct input on energy- related equipment purchases									
Building owner	132	234	88	3,877	8,220	3,008	34.1	28.4	29.1
Business owner or tenant	10	52	9	265	1,449	Q	38.8	35.8	Q
Property management	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
Number of establishments									
One	101	197	76	2,758	5,945	2,223	36.5	33.1	34.0
2 to 5	30	56	14	1,062	2,245	755	27.8	24.8	18.9
6 to 10	Q	15	Q	2,002 Q	552	Q		28.0	Q
11 to 20	Q	Q	Q	Q	Q	Q		31.4	Q
More than 20	Q	11	Q	Q	620	Q		17.2	Q
Currently unoccupied	Q	Q	Q	Q	Q	Q		Q	Q
Predominant exterior wall material	75	450	60	2.110	F 07C	4 005	25.2	24.2	24.2
Brick, stone, or stucco	75	158	68	2,118	5,076	1,995	35.3	31.2	34.2
Concrete (block or poured)	26	87	17	695	2,718	731	37.5	31.9	22.9
Concrete panels	16	24	Q	384	1,055	Q		22.4	Q
Siding or shingles	7	8	Q	267	168	Q		49.1	Q
Metal panels	21	15	8	699	712	281	29.7	20.6	27.0
Window glass	N	Q	Q	N	Q	Q		Q	Q
Other	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	21	39	19	906	1,258	683	23.6	31.2	27.3
Synthetic or rubber	55	97	39	1,586	2,958	1,153	34.5	32.7	33.7
Built-up	41	74	24	918	3,055	728	44.7	24.3	33.2
Slate or tile shingles	Q	14	Q	Q	699	Q	Q	Q	Q
Wooden materials (including	0	0		0	0		0	0	N.
shingles)	Q	Q	N	Q	Q	N	Q	Q	N
Asphalt, fiberglass, or other shingles	23	53	14	636	1,649	647	36.9	32.2	21.9
Concrete	Q Q	Q	Q	Q	1,049 Q	Q Q		32.2 Q	
Other	Q	Q	Q Q	Q	Q Q	Q		Q	Q Q
No one major type	Q	N	Q	Q	Q N	Q		Q N	Q
	<u>u</u>	IN	Q	Q	IN	Q	Q	IN	Q
Roof characteristics Roof tilt									
		107		2 400	C 104	1 ((2	ეი ე	20.2	27.4
Flat	94	187	62	2,460	6,194	1,662	38.2	30.2	37.1
Shallow pitch	33	64	21	1,235	2,553	1,002	26.5	25.2	21.2
Steeper pitch	18	46	18	540	1,238	773	34.0	37.4	23.4
Cool roof	30	67	37	859	2,480	1,107	34.7	26.9	33.8

Table C28. Natural gas consumption and conditional energy intensity by Census division (part 2), 2012

	Total natural consumption (billion cubic	1	Total floorspace of buildings using natural gas (million square feet)			s e ((
	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central
All buildings	145	298	101	4,236	9,984	3,436	34.3	29.8	29.4
Renovations in buildings constructed before 2008 (more than one may apply)									
Any type of renovation	86	127	68	2,548	4,501	2,101	33.7	28.3	32.2
Addition or annex	40	55	32	1,166	1,536	678	34.6	36.0	47.4
Reduction in floorspace	Q	9	Q	Q	273	Q	Q	34.1	Q
Roof replacement	55	59	43	1,564	1,916	1,359	34.9	30.9	31.8
Exterior wall replacement	14	13	Q	356	551	Q	39.9	24.3	Q
Interior wall reconfiguration	45	59	32	1,271	1,964	886	35.7	30.2	36.5
Window replacement	28	36	23	747	1,378	476	37.7	25.9	48.5
HVAC equipment upgrade	53	85	50	1,451	2,819	1,206	36.7	30.0	41.6
Lighting upgrade	58	72	47	1,465	2,661	1,116	39.8	27.1	42.3
Electrical upgrade	42	52	26	981	1,627	734	42.8	31.8	36.0
Plumbing system upgrade	32	45	33	792	1,418	618	40.3	32.1	53.1
Insulation upgrade	22	21	Q	752	779	Q	29.7	26.6	Q
Fire, safety, or security upgrade	39	58	36	805	1,806	650	48.8	31.9	55.6
Structural upgrade	11	14	Q	224	453	Q	50.0	30.1	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
No renovations	50	134	32	1,560	4,436	1,229	31.9	30.2	26.1
Buildings constructed 2008 or later	Q	36	Q	1,500 Q	1,048	Q	Q	34.7	Q
Energy sources (more than one may apply)									
Electricity	145	298	101	4,236	9,984	3,436	34.3	29.8	29.4
Natural gas	145	298	101	4,236	9,984	3,436	34.3	29.8	29.4
Fuel oil	44	80	26	1,035	2,732	574	42.9	29.2	45.2
District heat	Q	4	Q	Q	Q	Q	Q	Q	Q
District chilled water	Q	7	Q	Q	Q	Q	Q	Q	Q
Propane	Q	10	Q	Q	419	Q	Q	24.6	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
Space-heating energy sources									
Natural gas	141	227	92	3,909	7,309	2,662	36.1	31.0	34.6
Natural gas main	131	183	80	3,497	5,694	2,067	37.5	32.2	38.7
Natural gas secondary	10	43	12	412	1,615	595	24.3	26.7	20.3
Other excluding natural gas	4	61	9	326	2,405	773	11.8	25.4	11.6
Buildings without heating	N	10	(*)	N	270	2	N	36.3	25.8
Primary space-heating energy source									
Electricity	11	99	18	451	3,456	1,096	23.9	28.7	16.2
Natural gas	131	183	80	3,497	5,694	2,067	37.5	32.2	38.7
Fuel oil	N	1	(*)	3,497 N	9	25	37.5 N	116.0	9.5
District heat	Q	4	Q	Q	Q	Q	Q	110.0 Q	9.5 Q
Propane	Q Q		Q N	Q	Q N	Q	Q	N	N
	Q		1.4	~	1.4		~		

Table C28. Natural gas consumption and conditional energy intensity by Census division (part 2), 2012

	Total natural gas consumption (billion cubic feet)			Total floorsp buildings usi (million squa	ng natural g	as	Natural gas energy intensity (cubic feet/square foot)		
	West North Central	South Atlantic	East South Central	North	South Atlantic	East South Central	North	South Atlantic	East South Central
All buildings	145	298	101	4,236	9,984	3,436	34.3	29.8	29.4
Cooling energy sources									
Natural gas	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other excluding natural gas	141	292	99	4,085	9,807	3,364	34.5	29.7	29.5
Buildings without cooling	4	Q	Q	146	Q	Q	25.3	Q	Q
Water-heating energy sources									
Natural gas	112	219	79	2,705	5,651	2,103	41.2	38.8	37.7
Other excluding natural gas	31	69	21	1,386	3,860	1,228	22.2	17.8	16.8
Buildings without water heating	Q	Q	Q	Q	Q	Q	Q	Q	Q
Cooking energy sources									
Natural gas	64	185	58	1,349	4,427	1,487	47.4	41.9	39.0
Other excluding natural gas	25	22	11	602	1,145	344	41.0	19.4	33.2
Buildings without cooking	56	90	32	2,284	4,412	1,605	24.7	20.4	19.7
Energy end uses									
(more than one may apply)									
Buildings with space heating	145	288	101	4,236	9,714	3,434	34.3	29.6	29.4
Buildings with cooling	141	295	101	4,089	9,861	3,418	34.6	29.9	29.5
Buildings with water heating	142	288	100	4,090	9,511	3,331	34.8	30.3	30.0
Buildings with cooking	89	208	69	1,951	5,573	1,831	45.4	37.2	37.9
Buildings with manufacturing	10	9	Q	351	561	Q	29.5	15.5	Q
Buildings with electricity									
generation	49	104	38	1,247	4,207	832	39.3	24.7	45.6
Percent of floorspace heated									
Not heated	N	Q	Q	N	270	Q	N	36.3	Q
1 to 50	4	20	7	392	974	308	10.1	20.1	Q
51 to 99	18	73	20	476	2,212	867	38.3	32.9	22.6
100	123	196	74	3,368	6,528	2,259	36.5	30.0	32.9
Percent of floorspace cooled									
Not cooled	4	Q	Q	146	Q	Q	25.3	Q	Q
1 to 50	26	37	13	1,201	1,601	743	21.9	23.1	18.1
51 to 99	30	90	31	901	2,960	1,215	33.5	30.5	25.3
100	85	168	57	1,987	5,301	1,460	42.7	31.6	38.8
Heating equipment									
(more than one may apply)									
Heat pumps	7	64	11		2,640	492		24.1	21.8
Furnaces	14	32	15		928	434		34.8	35.5
Individual space heaters	47	51	26		2,322	922		21.9	28.5
District heat	Q	4	Q		Q	Q		Q	Q
Boilers	62	101	38		2,879	1,034		35.1	36.8
Packaged heating units	92	189	72		6,570	2,439		28.7	29.3
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q

Table C28. Natural gas consumption and conditional energy intensity by Census division (part 2), 2012

	consumption but (hillion cubic feet) (n			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/square foot)		
	West North Central	South Atlantic	East South Central	North	South Atlantic	East South Central	West North Central	South Atlantic	East South Central
All buildings	145	298	101	4,236	9,984	3,436	34.3	29.8	29.4
Cooling equipment (more than one may apply)									
Residential-type central air									
conditioners	33	44	19	1,084	1,114	662	30.8	39.5	29.1
Heat pumps	6	77	8	252	2,765	461	25.6	27.9	17.5
Individual air conditioners	20	47	22	560	1,636	644	35.9	28.8	34.7
District chilled water	Q	7	Q	Q	Q	Q	Q	Q	Q
Central chillers	43	86	31	765	2,820	749	55.9	30.6	41.3
Packaged air conditioning units	80	185	65	2,423	6,065	2,170	33.0	30.5	30.1
Swamp coolers	N	5	N	N	129	N	N	39.1	N
Other	Q	Q	N	Q	Q	N	Q	Q	N
Main equipment replaced since 1990 (more than one may apply)									
Heating	61	103	47	1,942	3,318	1,310	31.5	30.9	35.6
Cooling	68	116	51	1,967	3,882	1,407	34.4	29.8	36.2
Water-heating equipment									
Centralized system	103	178	64	2,676	5,148	1,869	38.3	34.6	34.3
Distributed system	12	25	4	552	1,282	300	20.9	19.7	13.4
Combination of centralized and									
distributed system	28	85	32	863	3,082	1,161	32.6	27.5	27.5
Food preparation or serving areas in non-food service buildings (more than one may apply)									
Snack bar or concession stand	19	52	13	498	1,735	277	37.9	30.1	47.1
Fast food or small restaurant	20	62	16	394	1,733	520	51.3	35.5	30.9
Cafeteria or large restaurant	36	81	29		2,799	591	46.5	29.0	49.5
Commercial kitchen/									
food preparation area	38	93	30	803	3,095	615	47.7	30.0	48.7
Small kitchen area	34	49	21	928	1,520	848	36.5	32.2	24.4
HVAC conservation features (more than one may apply)									
Economizer cycle	72	99	32	1,921	3,549	779	37.3	27.9	41.4
Regular HVAC maintenance	122	261	81		8,810	2,579	35.3	29.6	31.3
Building automation system (BAS) ²	69	134	39		5,137	1,497	39.5	26.1	26.4

Table C28. Natural gas consumption and conditional energy intensity by Census division (part 2), 2012

	Total natural consumption (billion cubic	1	ŀ	Total floorsp ouildings usi million squa	ng natural ga		Natural gas energy intensity (cubic feet/square foot)			
	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central	
All buildings	145	298	101	4,236	9,984	3,436	34.3	29.8	29.4	
Window and interior lighting features (more than one may apply)										
Multipaned windows	130	232	77	3,761	7,939	2,479	34.5	29.2	30.9	
Tinted window glass	79	182	62	2,099	6,128	1,860	37.6	29.7	33.6	
Reflective window glass	35	69	22	913	1,879	606	38.8	36.6	37.0	
External overhangs or awnings	60	158	46	1,745	4,489	1,381	34.5	35.1	33.5	
Skylights or atriums	31	83	25	1,081	3,049	729	28.5	27.2	33.9	
Light scheduling	45	107	28	1,196	3,740	981	37.7	28.5	28.6	
Occupancy sensors	56	126	30	1,540	4,604	1,036	36.5	27.4	29.1	
Multi-level lighting or dimming	28	93	26	635	2,385	701	44.0	39.2	37.2	
Daylight harvesting	10	22	Q	323	644	Q	29.7	34.3	Q	
Demand responsive lighting	9	31	Q	387	882	Q	24.2	34.9	Q	
Building automation system (BAS) for										
lighting ²	22	43	8	570	1,767	323	38.7	24.3	26.1	
Equipment usage reduced when building not in full use (more than one may apply)										
Heating	109	217	63	3,235	7,783	2,649	33.6	27.9	23.7	
Cooling	106	227	64	3,131	8,092	2,650	33.7	28.0	24.3	
Lighting	139	275	98	4,047	9,350	3,154	34.4	29.4	31.2	
Annual consumption (hundred cubic feet)										
1,000 or less	6	5	5	455	1,359	558	12.4	3.7	8.6	
1,001 to 5,000	27	36	15	1,097	2,387	848	24.5	15.2	17.4	
5,001 to 10,000	16	40	14	473	1,432	710	33.1	27.7	20.3	
10,001 to 25,000	36	84	15	1,034	2,073	573	34.4	40.7	26.3	
25,001 to 50,000	12	44	15	310	1,169	342	37.6	37.7	43.3	
50,001 to 100,000	22	35	Q	450	870	Q	49.9	39.7	Q	
Over 100,000	27	54	27	418	694	220	65.3	77.4	121.6	

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.

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

	Total natura consumptio (billion cubi	n		Total floors buildings us (million squ	ing natural gas		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

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

	Total nature consumption (billion cub	n		Total floors buildings us (million squ	ing natural gas		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
Climate region ¹									
Very cold/Cold	N	131	55	N	2,872	1,251	N	45.6	44.3
Mixed-humid	82	N	N	2,301	N	N	35.5	N	N
Mixed-dry/Hot-dry	Q	29	198	Q	894	5,681	24.0	31.9	34.8
Hot-humid	97	N	N	3,235	N	N	30.1	N	N
Marine	N	N	67	N	N	2,033	N	N	32.7
Number of floors									
One	111	65	149	3,598	1,838	4,322	30.7	35.2	34.6
Two	38	36	69	1,271	919	2,253		39.3	30.5
Three	11	8	16	545	227	564		37.4	29.1
	32	14	75	720	357	1,343		38.4	55.8
Four to nine Ten or more	11	Q	10	346	0 Q	484		36.4 Q	21.0
Number of workers (main shift)									
Fewer than 5	30	23	26	1,010	531	1,041	30.1	42.5	25.4
5 to 9	20	13	31	605	319	919	33.7	41.2	33.9
10 to 19	30	19	46	853	483	1,376		38.6	33.2
20 to 49	43	26	61	1,220	726	1,989	35.1	35.3	30.8
50 to 99	21	13	42	1,267	475	1,308		26.6	31.7
100 to 249	24	22	57	672	585	969		37.3	59.3
250 or more	32	Q	56	853	646	1,364		69.7	41.2
Weekly operating hours									
Fewer than 40	11	Q	9	539	Q	484	19.5	33.9	19.0
40 to 48	Q	23	38	1,413	723	1,475	16.8	32.0	26.1
49 to 60	31	29	43	1,605	878	2,203	19.4	33.4	19.5
61 to 84	37	14	72	850	571	1,999	43.1	23.8	35.8
85 to 167	36	18	37	572	360	981	63.4	49.0	38.1
Open continuously	63	66	120	1,501	947	1,824	42.1	69.8	65.9
Ownership and occupancy									
Nongovernment owned	156	129	271	4,499	2,747	7,576	34.6	47.0	35.8
Owner occupied	69	79	127	2,364	1,226	3,050	29.3	64.3	41.7
Leased to tenant(s)	71	33	119	1,635	1,070	3,389	43.3	31.2	35.1
Owner occupied and leased	15	17	24	484	452	1,030	32.0	37.5	22.9
Unoccupied	Q	N	Q	Q	N	Q	Q	N	Q
Government owned	46	30	49	1,981	1,019	1,390	23.1	29.8	35.0
Federal	Q	Q	Q	Q	Q	Q	Q	Q	Q
State	13	10	17	544	358	430	23.4	28.7	38.6
Local	31	15	28	1,380	605	874	22.5	25.5	31.5
Party responsible for operation and maintenance of energy									
systems Puilding owner	105	120	240	F 701	2 254	7.055	20.0	42.0	25.4
Building owner	165	139	248	5,701	3,254	7,055		42.9	35.1
Business owner or tenant	33	Q	64	717	Q	1,765		40.9	36.2
Property management	Q	Q	Q	Q	Q	Q			Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q

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

	consumptio	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
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		1,253	2,351	26.1	47.9	27.1
Steeper pitch	26	20	32		471	1,034		41.8	30.7
Cool roof	51	36	126	1,517	1,122	2,533	33.9	32.1	49.7

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

	consumptio	Total natural gas consumption (billion cubic feet)		Total floors buildings us (million squ	sing natural gas		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
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	104	110	267	F 4C7	2 100	7 500	20.0	27.6	25.5
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		47.7	37.1
Other excluding natural gas	36	Q	41	929	582	1,250		Q	32.9
Buildings without heating	Q	Q	Q	Q	Q	Q	Q	Q	Q
Primary space-heating									
energy source	59	22	<u></u>	1 710	F13	2 4 4 2	242	45.2	20.4
Electricity Natural gas		23	65	1,719	512	2,143	34.3	45.3	30.4
Natural gas	132 N	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 1	Q (*)	Q	N 25	Q 40		N 16 F	Q
Other	N	1	(*)	N	35	40	N	16.5	9.9

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

	Total natura consumptio (billion cubi	n		Total floors buildings us (million squ	ing natural gas		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	
Cooling energy sources										
Natural gas	Q	Q	Q	Q	Q	Q	Q	Q	Q	
Other excluding natural gas	199	152	295	6,400	3,558	8,511	31.1	42.7	34.7	
Buildings without cooling	Q	Q	21	Q	Q	417	Q	Q	50.9	
Water-heating energy sources										
Natural gas	158	106	244	4,504	2,665	6,452	35.1	39.9	37.8	
Other excluding natural gas	40	Q	70	1,783	963	2,200	22.4	Q	31.8	
Buildings without water heating	4	Q	6	193	Q	314	19.7	Q	19.7	
Cooking energy sources										
Natural gas	114	91	183	2,658	1,694	3,506	43.0	53.6	52.1	
Other excluding natural gas	17	12	27	586	408	743	28.7	30.2	36.8	
Buildings without cooking	71	56	109	3,237	1,664	4,716	21.8	33.8	23.2	
Energy end uses										
(more than one may apply)										
Buildings with space heating	200	159	308	6,396	3,763	8,759	31.3	42.4	35.2	
Buildings with cooling	200	154	298	6,409	3,609	8,548	31.2	42.7	34.9	
Buildings with water heating	198	152	313	6,288	3,628	8,651	31.5	42.0	36.2	
Buildings with cooking	131	103	210	3,244	2,102	4,249	40.4	49.1	49.5	
Buildings with manufacturing	22	Q	13	571	Q	586	38.6	Q	23.0	
Buildings with electricity										
generation	55	77	117	1,582	1,420	2,614	34.5	54.4	44.8	
Percent of floorspace heated										
Not heated	Q	Q	Q	Q	Q	Q	Q	Q	Q	
1 to 50	8	9	45	619	271	2,043	13.6	33.7	22.1	
51 to 99	61	14	77	1,255	564	2,202	48.4	25.2	34.8	
100	131	136	186	4,522	2,927	4,514	29.0	46.5	41.3	
Percent of floorspace cooled										
Not cooled	Q	Q	21	Q	Q	417	Q	Q	50.9	
1 to 50	20	20	59	1,139	540	2,097	17.8	36.3	28.1	
51 to 99	51	28	98		907	2,746		31.0	35.6	
100	129	106	142	3,780	2,163	3,706	34.1	49.1	38.2	
Heating equipment										
(more than one may apply)										
Heat pumps	29	10	58	931	333	1,298	30.7	31.6	44.8	
Furnaces	25	15	31	1,117	533	851	22.4	27.7	36.8	
Individual space heaters	46	39	59	1,373	1,011	1,818	33.7	38.9	32.4	
District heat	Q	Q	Q	124	Q	208	Q	Q	Q	
Boilers	59	54	118	1,398	1,070	2,269	42.4	50.3	52.2	
Packaged heating units	140	87	208	4,502	2,405	6,178	31.2	36.0	33.7	
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	

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

All buildings Cooling equipment (more than one may apply)	West South Central	Mountain 159	Pacific 320	West South Central	Mountain		West South		
Cooling equipment	202	159	320		iviountain	Pacific		Mountain	Pacific
				6,480	3,766	8,966	31.1	42.3	35.7
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

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

	Total natura consumptio (billion cubi	n		Total floors buildings us (million squ	ing natural gas		Natural gas energy inter (cubic feet/		
	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
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.

Table C30. Natural gas consumption and conditional energy intensity by climate region, 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)

ery	ı	Vixed										Mixed-		
d /		dry/			Very		Mixed-			Very		dry/		
•	Mixed- humid	hot- dry	Hot- humid	Mar- ine	cold/ cold	Mixed- humid	dry/ hot-dry	Hot- humid	Mar- ine	•	Mixed- humid	hot- dry	Hot- humid	Mar- ine
70	641	249	167	67	24,511	19,361	7,520	5,300	2,033	43.7	33.1	33.1	31.4	32.7
96	93	30	24	6	1,618	1,299	453	269	Q	59.5	71.2	66.8	90.0	51.3
11	76	30	18	Q	2,088	1,367	875	354	Q	53.2	55.8	34.3	50.6	Q
46	76	33	26	16	3,895	2,431	1,493	623	381	37.4	31.2	22.1	42.1	41.3
41	74	35	17	Q	3,384	2,474	1,184	789	318	41.6	29.9	29.8	21.7	30.5
78	97	22	23	Q	4,034	3,719	870	941	Q	44.0	26.0	25.8	24.9	Q
28	99	35	16	Q	3,522	3,580	1,277	818	Q	36.3	27.6	27.2	19.8	Q
65	61	Q	18	8	3,818	2,437	941	798	298	43.2	25.1	53.5	22.5	26.5
06	66	13	23	Q	2,152	2,053	427	708	Q	49.4	32.0	30.1	33.2	Q
59	91	15	15	Q	3,873	3,615	842	1,077	Q	40.9	25.1	17.9	13.6	Q
28	12	Q	Q	Q	400	193	Q	Q	Q	70.4	64.6	Q	Q	Q
76	87	26	27	Q	503	487	186	151	Q	150.4	178.7	139.1	179.6	Q
11	83	Q	25	Q	1,436	1,032	346	388	Q	77.3	80.7	93.2	63.7	Q
78	75	Q	24	Q	720	746	262	316	Q	108.7	100.0	115.0	75.2	Q
33	9	Q	Q	Q	717	286	Q	Q	Q	45.7	30.6	Q	Q	Q
99	64	30	17	Q	1,684	1,617	812	676	Q	58.6	39.6	36.7	25.8	Q
36	62	44	32	Q	3,402	2,619	1,300	871	Q	39.9	23.8	34.2	37.1	Q
48	16	Q	Q	Q	1,517	975	Q	Q	Q	31.6	16.9	Q	Q	Q
88	46	40	30	Q	1,885	1,644	824	643	Q	46.6	28.0	48.5	47.4	Q
57	76	17	10	15	4,654	3,223	1,197	621	596	33.8	23.7	14.3	15.9	24.7
72	28	13	Q	Q	1,802	952	557	324	Q	39.9	29.5	24.0	Q	Q
19	12	Q	Q	Q	409	326	Q	Q	Q	45.6	36.4	Q	Q	Q
40	30	Q	Q	Q	1,181	1,208	284	Q	Q	33.6	24.5	Q	Q	Q
58	44	Q	Q	Q	1,400	932	Q	Q	Q	41.7	47.0	Q	Q	Q
75	31	25	Q	Q	2,773	2,485	1,111	526	Q	27.1	12.4	22.8	7.3	Q
34	Q	Q	Q	Q	541	Q	Q	Q	Q	63.5	Q	Q	Q	Q
7	Q	Q	N	Q	454	Q	Q	N	Q	15.8	Q	Q	N	Q
57	26	Q	Q	Q	1,432	724	Q	Q	Q	39.7	35.9	Q	Q	Q
68	53	14	Q	Q	1,677	1,418	388	Q	Q	40.6	37.1	35.0	Q	Q
17	49	15	10	Q	2,385	1,749	716	363	Q	49.0	28.0	21.6	26.5	Q
41	87	46	22	10	3,420	2,467	942	438	285	41.2	35.4	48.5	51.0	36.3
48	117	36	24	Q	3,337	2,363	1,330	768	Q	44.4	49.6	27.4	31.7	Q
52	77	35	46	17	3,484	3,054	1,337	1,415	598	43.5	25.3	25.9	32.8	27.7
55	99	38	28	11	3,857	2,963	1,099	947	295	40.1	33.5	34.2	29.1	38.6
82	40	16	12	Q	1,958	1,704	500	416	Q	41.9	23.5	32.6	28.2	Q
84	42	15	17	Q	1,547	1,489	471	397	Q	54.4	28.5	Q	42.8	Q
67	50	Q	Q	Q	1,414	1,430	661	Q	Q	47.4	35.0	50.5	Q	Q
	96 111 46 41 .78 .65 .06 .59 .28 .76 .11 .78 .33 .99 .36 .48 .88 .57 .72 .19 .40 .58 .75 .34	96 93 11 76 46 76 41 74 78 97 28 99 65 61 06 66 59 91 28 12 76 87 11 83 78 75 33 9 99 64 36 62 48 16 88 46 57 76 72 28 19 12 40 30 58 44 75 31 34 Q 7 Q 57 26 68 53 17 49 41 87 48 117 55 99 82 40 84 42	96 93 30 11 76 30 46 76 33 41 74 35 78 97 22 28 99 35 65 61 Q 06 66 13 59 91 15 28 12 Q 76 87 26 11 83 Q 78 75 Q 33 9 Q 99 64 30 36 62 44 48 16 Q 88 46 40 57 76 17 72 28 13 19 12 Q 40 30 Q 57 Q Q 57 46 Q 68 53 14 17 49 15 41 87 46 48 117 36 55 77 35 55 99 38 82 40 16 84 42 15	96 93 30 24 11 76 30 18 46 76 33 26 41 74 35 17 78 97 22 23 28 99 35 16 65 61 Q 18 06 66 13 23 59 91 15 15 28 12 Q Q 76 87 26 27 11 83 Q 25 78 75 Q 24 33 9 Q Q 99 64 30 17 36 62 44 32 48 16 Q Q 88 46 40 30 57 76 17 10 72 28 13 Q 99 12 Q 99 64 30 17 36 62 44 32 48 16 Q Q 88 46 40 30 57 76 17 10 72 28 13 Q 97 Q 98 44 Q Q 98 44 Q Q 99 64 Q 90 Q 90 Q 91 Q 91 Q 91 Q 92 Q 93 Q 94 Q 95 Q 96 Q 97 Q Q 98 Q 99 Q 99 Q 99 Q 99 Q 99 64 Q 90 Q 90 Q 91 Q 91 Q 92 Q 93 Q 94 Q 95 Q 95 Q 96 Q 97 Q Q 98 Q 99 Q 99 Q 90 Q 91 Q 91 Q 91 Q 92 Q 93 Q 94 Q 95 Q 95 Q 96 Q 96 Q 97 Q Q 98 Q 99 Q 99 Q 90 Q 90 Q 91 Q 91 Q 91 Q 91 Q 91 Q 92 Q 93 Q 94 Q 95 Q 96 Q 97 Q Q Q 98 Q 98 Q 99 Q Q Q 90 Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q	96 93 30 24 6 11 76 30 18 Q 46 76 33 26 16 41 74 35 17 Q 78 97 22 23 Q 28 99 35 16 Q 65 61 Q 18 8 06 66 13 23 Q 59 91 15 15 Q 28 12 Q Q Q Q 76 87 26 27 Q 11 83 Q 25 Q 12 Q Q Q Q 13 S 75 Q 24 Q 33 9 Q Q Q 99 64 30 17 Q 36 62 44 32 Q 48 16 Q Q Q 88 46 40 30 Q 57 76 17 10 15 72 28 13 Q Q 48 16 Q Q Q 40 30 Q Q Q 40 30 Q Q Q 58 44 Q Q Q 75 31 25 Q Q 34 Q Q Q 76 Q Q Q 58 44 Q Q Q 77 Q Q N Q 57 31 25 Q Q 34 Q Q Q 57 Q Q Q Q 58 44 Q Q Q 79 Q Q Q 40 30 Q Q Q 51 Q Q Q Q 52 Q Q Q Q 53 Q Q Q Q 54 Q Q Q Q Q 55 Q Q Q Q Q 66 53 14 Q Q Q 7 Q Q Q Q 67 Q Q Q Q 68 53 14 Q Q Q 7 Q Q Q Q 68 53 14 Q Q Q 7 Q Q Q Q 68 53 14 Q Q Q 7 Q Q Q Q 68 53 14 Q Q Q 7 Q Q Q Q 88 46 Q Q Q Q 88 46 Q Q Q Q 88 46 Q Q Q Q 88 47 Q Q Q Q 88 44 Q Q Q Q 99 64 S S S S S S S S S S S S S S S S S S	96 93 30 24 6 1,618 11 76 30 18 Q 2,088 46 76 33 26 16 3,895 41 74 35 17 Q 3,384 78 97 22 23 Q 4,034 28 99 35 16 Q 3,522 65 61 Q 18 8 3,818 06 66 13 23 Q 2,152 59 91 15 15 Q 3,873 28 12 Q Q Q 400 76 87 26 27 Q 503 11 83 Q 25 Q 1,436 78 75 Q 24 Q 720 33 9 Q Q Q 717 99 64 30 17 Q 1,684 36 62 44 32 Q 3,402 48 16 Q Q Q 1,517 88 46 40 30 Q 1,885 57 76 17 10 15 4,654 72 28 13 Q Q 1,802 19 12 Q Q Q 400 40 30 Q Q 1,181 58 44 Q Q Q 1,400 75 31 25 Q Q 2,773 34 Q Q Q Q 541 7 Q Q N Q 544 87 46 22 10 3,420 48 117 36 24 Q 3,337 55 77 35 46 17 3,484 55 99 38 28 11 3,857 82 40 16 12 Q 1,958 84 42 15 17 Q 1,547	96 93 30 24 6 1,618 1,299 11 76 30 18 Q 2,088 1,367 46 76 33 26 16 3,895 2,431 41 74 35 17 Q 3,384 2,474 78 97 22 23 Q 4,034 3,719 28 99 35 16 Q 3,522 3,580 65 61 Q 18 8 3,818 2,437 06 66 13 23 Q 2,152 2,053 59 91 15 15 Q 3,873 3,615 28 12 Q Q Q 400 193 76 87 26 27 Q 503 487 11 83 Q 25 Q 1,436 1,032 78 75 Q 24 Q 720 746 33 9 Q Q Q 717 286 99 64 30 17 Q 1,684 1,617 36 62 44 32 Q 3,402 2,619 48 16 Q Q Q 1,517 975 88 46 40 30 Q 1,885 1,644 57 76 17 10 15 4,654 3,223 72 28 13 Q Q 1,802 952 19 12 Q Q Q 409 326 40 30 Q Q 1,181 1,208 58 44 Q Q Q 1,181 1,208 58 44 Q Q Q 1,400 932 75 31 25 Q Q 2,773 2,485 34 Q Q Q 1,400 932 57 26 Q Q Q 1,432 724 68 53 14 Q Q 1,677 1,418 17 49 15 10 Q 2,385 1,749 41 87 46 22 10 3,420 2,467 48 117 36 24 Q 3,337 2,363 55 99 38 28 11 3,857 8,638 82 40 16 12 Q 1,958 1,704 84 42 15 17 Q 1,547 1,489	old humid dry humid ine cold humid hot-dry 070 641 249 167 67 24,511 19,361 7,520 96 93 30 24 6 1,618 1,299 453 11 76 30 18 Q 2,088 1,367 875 46 76 33 26 16 3,895 2,431 1,493 41 74 35 17 Q 3,384 2,474 1,184 78 97 22 23 Q 4,034 3,719 870 28 99 35 16 Q 3,522 3,580 1,277 65 61 Q 18 8 3,818 2,437 941 59 91 15 15 Q 3,873 3,615 842 28 12 Q Q Q 400 193 Q <t< td=""><td>old humid dry humid ine cold humid hot-dry humid 170 641 249 167 67 24,511 19,361 7,520 5,300 96 93 30 24 6 1,618 1,299 453 269 11 76 30 18 Q 2,088 1,367 875 354 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Table C30. Natural gas consumption and conditional energy intensity by climate region, 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)

	(billion	cubic fee	et)			(million s	quare te	et)			(cubic f	eet/squa	re toot	1)	
	.,		Mixed			.,					.,		Mixed		
	Very		dry/			Very		Mixed-			Very		dry/		
	•	Mixed- humid	hot- dry	Hot- humid	Mar- ine	cold/ cold	Mixed- humid	dry/ hot-dry	Hot- humid	Mar- ine	•	Mixed humid	hot- dry	Hot- humid	Mar- ine
All buildings	1,070	641	249	167	67	24,511	19,361	7,520	5,300	2,033	43.7	33.1	33.1	31.4	32.7
Census region and division															
Northeast	323	164	N	N	N	7,259	3,809	N	N	N	44.5	43.1	N	N	N
New England	108	N	N	N	N	2,241	N	N	N	N	48.1	N	N	N	N
Middle Atlantic	215	164	N	N	N	5,018	3,809	N	N	N	42.9	43.1	N	N	N
Midwest	561	65	N	N	N	13,130	1,895	N	N	N	42.7	34.5	N	N	N
East North Central	452	Q	N	N	N	9,944	Q	N	N	N	45.5	34.9	N	N	N
West North Central	109	36	N	N	N	3,185	1,050	N	N	N	34.3	34.3	N	N	N
South	N	411	23	167	N	N	13,656	944	5,300	N	N	30.1	24.0	31.4	N
South Atlantic	N	251	N	47	N	N	8,542	N	1,442	N	N	29.4	N	32.5	N
East South Central	N	79	N	22	N	N	2,813	N	623	N	N	28.0	N	35.6	N
West South Central	N	82	23	97	N	N	2,301	944	3,235	N	N	35.5	24.0	30.1	N
West	186	N	226	N	67	4,123	N	6,576	N	2,033	45.2	N	34.4	N	32.7
Mountain	131	N	29	N	N	2,872	N	894	N	N	45.6	N	31.9	N	N
Pacific	55	N	198	N	67	1,251	N	5,681	N	2,033	44.3	N	34.8	N	32.7
Number of floors															
One	399	260	122	86	29	9,104	8,144	3,965	2,540	744	43.9	31.9	30.7	34.0	38.3
Two	272	145	42	21	Q	6,764	4,589	1,651	1,027	634	40.3	31.5	25.6	20.9	28.2
Three	134	58	15	8	Q	3,265	1,858	494	339	Q	41.1	31.0	31.0	24.5	Q
Four to nine	185	133	61	41	13	4,022	3,323	1,064	1,025	330	46.0	40.0	57.3	39.8	37.9
Ten or more	79	46	9	10	Q	1,357	1,447	346	369	Q	58.4	31.7	24.8	25.9	Q
Number of workers (main shift)															
Fewer than 5	128	89	24	10	7	3,450	2,709	1,133	357	Q	37.1	32.8	21.3	28.6	32.4
5 to 9	84	64	26	17	Q	2,248	1,656	780	457	Q	37.2	38.5	33.1	36.3	Q
10 to 19	135	82	41	25	Q	2,811	2,055	1,171	503	Q	47.9	40.1	34.6	50.3	Q
20 to 49	178	102	39	32	18	4,577	3,229	1,382	906	520	39.0	31.6	28.0	35.6	34.2
50 to 99	196	99	25	23	Q	4,005	3,794	1,113	1,150	Q	48.9	26.0	22.6	19.8	Q
100 to 249	164	81	55	25	Q	3,766	3,010	1,060	878	Q	43.5	27.0	52.2	28.9	Q
250 or more	186	124	39	34	15	3,655	2,909	881	1,049	407	50.9	42.6	44.5	32.4	36.2
Weekly operating hours															
Fewer than 40	50	30	8	5	Q	1,533	1,226	503	352	Q	32.6	24.2	15.3	15.2	Q
40 to 48	135	64	39	8	7	3,911	3,506	1,529	654	360	34.5	18.3	25.3	11.5	19.2
49 to 60	205	100	18	20	17	6,012	4,648	1,489	1,188	669	34.1	21.5	12.4	17.1	25.4
61 to 84	222	132	55	37	12	5,156	3,480	1,542	936	380	43.1	37.9	35.5	39.9	30.5
85 to 167	177	99	21	30	Q	3,199	2,096	797	427	Q	55.3	47.2	26.8	70.0	Q
Open continuously	282	216	108	66	16	4,701	4,404	1,661	1,743	317	60.0	49.1	65.0	37.9	49.8
Ownership and occupancy															
Nongovernment owned	820	485	212	133	54	18,488	14,228	6,179	3,867	1,719	44.3	34.1	34.3	34.5	31.5
Owner occupied	430	253	103	62	21	8,997	6,294	2,716	1,917	618	47.8	40.2	38.0	32.2	33.3
Leased to tenant(s)	263	181	89	57	28	6,647	5,981	2,542	1,398	793	39.6	30.3	35.1	40.8	35.5
Owner occupied and leased	125	50	19	15	Q	2,672	1,914	836	552	Q	46.7	26.3	22.9	26.8	Q
Unoccupied	Q	Q	Q	N	Q	Q	Q	Q	N	Q	Q	Q	Q	N	Q
Government owned	251	156	37	33	12	6,023	5,133	1,341	1,433	315	41.6	30.5	27.5	23.0	39.3
Federal	13	11	Q	Q	Q	313	448	Q	Q	Q	42.8	24.9	Q	Q	Q
State	79	61	9	Q	Q	1,703	1,404	364	353	Q	46.1	43.8	26.1	28.5	Q
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Table C30. Natural gas consumption and conditional energy intensity by climate region, 2012

Total natural gas Total floorspace of Natural gas buildings using natural gas energy intensity consumption (billion cubic feet) (million square feet) (cubic feet/square foot) Mixed Mixed Mixed-Verv Verv drv Verv drv/ cold/ Mixedcold/ Mixed hot-Hot-Marcold/ Mixeddry/ Hot-Marhot-Hot-Marcold humid dry humid ine cold humid hot-dry humid ine cold humid dry humid ine All buildings 1,070 641 249 167 24,511 19,361 7,520 5,300 2,033 43.7 33.1 33.1 31.4 32.7 Party responsible for operation and maintenance of energy systems 5,997 918 510 192 20.953 15.877 4.512 1.760 43.8 32.1 32.0 29.6 30.4 **Building** owner 134 53 Business owner or tenant 132 108 Q 31 Q 3,093 2,830 1,395 666 256 42.8 38.1 36.5 46.4 48.5 Property management 6 13 Q Q Q 211 415 Q Q Q 29.0 32.1 Q Q Q Other Q Q Q Q Ν Q Q Q Q Ν Q Q Q Q Ν Provider of direct input on energyrelated equipment purchases 948 202 133 21 704 16,478 6,384 4,553 1,826 43.7 29 2 31 1 528 57 32 N 31 7 **Building** owner 94 28 2,156 2,111 978 587 Q 43.6 40.4 48.2 Q Business owner or tenant 85 Q Q 41.6 Property management 6 Q Q Q Ν 173 Q Q Q Ν 32.6 Q Q Q Ν Other 23 21 Q Q Q 478 532 Q Q Q 47.1 39.9 Q Q Q Number of establishments 4,794 One 703 475 15,702 12,336 3,284 1,040 30.2 38.9 172 99 40 44.8 38.5 35.8 2 to 5 240 90 36 38 14 5,352 3,948 1,384 1,159 588 44.9 22.8 25.9 32.6 24.2 6 to 10 50 25 13 Q Q 1,242 1,073 375 Q Q 40.1 23.4 33.9 Q Q 11 to 20 48 14 889 353 Q 42.7 36.3 40.4 Q Q 32 14 Q 1,117 330 More than 20 26 18 14 6 Q 895 1,012 529 315 Q 28.7 17.9 26.1 20.0 Q Currently unoccupied Q Q Q Ν Q Q Q Q N Q O Q Q Ν Q Predominant exterior wall material 375 11,912 10,651 3,191 2,570 675 35.2 34.9 26.5 36.9 Brick, stone, or stucco 552 111 68 0 46.3 Concrete (block or poured) 228 157 63 53 21 5,688 4,573 2,056 1,510 691 40.0 34.4 30.8 35.3 29.7 Concrete panels 131 30 17 18 1,507 299 54.6 19.7 14.3 32.8 24.6 2.405 1.175 552 Q Siding or shingles 62 24 Q Q Q 1.683 467 518 Q 36.9 50.6 53.9 Q Q 71 388 Metal panels 31 6 12 Q 1.957 1.610 304 Q 36.2 19.4 19.4 30.6 Q Window glass 14 Q Q Q Q 465 Q Q Q Q 29.3 Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Other No one major type Q Q Q Q Q Q Q Q Q Q 0 Q Q Q Q Predominant roof material Metal surfacing 101 82 16 29 Q 2,976 2,930 935 821 Q 33.8 27.9 16.8 35.0 Q Synthetic or rubber 495 205 72 41 16 10,464 6,015 1,506 1,212 593 47.3 34.1 47.8 33.8 27.8 197 49 Built-up 228 71 22 5,559 5,526 2,358 1,862 721 41.0 35.7 30.3 26.6 31.1 Slate or tile shingles 40 26 26 10 Q 832 1,001 637 206 Q 48.1 Q 40.3 50.7 Q Wooden materials (including shingles) 9 18 Q Q Q 160 169 Q Q Q 59.1 108.8 Q Q Q Asphalt, fiberglass, or 184 92 45 7 4.037 3.104 1.512 962 281 29.8 29.5 31.9 23.7 31 45.7 other shingles Q Q 35.4 Concrete Q 12 Q Q Q 332 Q Q Q Q Q Q Other Q Q Q Q Ν Q Q Q Q Ν Q Q Q Q Ν Q Q Q Ν Q Q Q Q Ν Q Q Q Q Ν Q No one major type Roof characteristics Roof tilt Flat 668 422 180 109 41 15,178 11,482 4.593 3,311 1.269 44.0 36.8 39.1 32.8 32.2 242 125 44 38 21 5,508 5,019 2,089 1,320 43.9 25.0 21.0 28.7 37.0 Shallow pitch 564 Steeper pitch 160 93 25 20 5 3,825 2,859 838 670 200 42.0 32.6 30.4 30.1 24.0 Cool roof 241 176 96 54 21 5,434 4,669 2,023 1,711 44.3 37.8 47.4 31.4 40.8 514

Table C30. Natural gas consumption and conditional energy intensity by climate region, 2012

Total natural gas Total floorspace of Natural gas buildings using natural gas consumption energy intensity (billion cubic feet) (million square feet) (cubic feet/square foot) Mixed Mixed Verv drv Verv Mixed-Verv drv/ cold/ Mixedhot-Hot-Marcold/ Mixeddry/ Hot-Marcold/ Mixedhot-Hot-Marine cold humid dry humid cold humid hot-dry humid ine cold humid dry humid ine All buildings 1,070 641 249 167 24.511 19,361 7.520 5,300 2,033 43.7 33.1 33.1 31.4 32.7 Renovations in buildings constructed before 2008 (more than one may apply) 108 13.747 2.847 2.759 1,154 45.0 38.0 32.5 31.2 Any type of renovation 618 348 90 36 10.438 33.3 Addition or annex 251 133 Q 37 Q 5,008 3,394 617 939 Q 50.1 39.1 46.1 39.9 Q Q Q Q 340 810 Q Q 46.4 57.7 Q Reduction in floorspace 16 Q a Q Q Roof replacement 344 196 60 47 16 7,356 5,378 1,286 1,606 526 46.8 36.4 47.0 29.5 31.2 Exterior wall replacement 47 40 Q 14 Q 1,224 1,129 491 407 Q 38.3 35.2 42.5 Q Q Interior wall reconfiguration 340 159 57 50 22 7.659 4.890 1.459 1.308 758 44.4 32.5 39.1 38.5 29.2 3.093 Window replacement 209 101 24 34 10 4.427 664 666 436 47.2 32.6 36.6 50.9 21.9 HVAC equipment upgrade 407 251 78 63 23 9,127 6,889 1,833 1,913 675 44.6 36.4 42.4 33.1 33.9 Lighting upgrade 430 199 77 61 23 8,992 6,177 1,849 1,645 635 47.9 32.2 41.7 37.1 36.0 288 136 41 15 5,654 1,221 491 51.0 35.0 51.4 33.6 29.5 Electrical upgrade 58 3,879 1,129 42 Plumbing system upgrade 256 134 58 14 4.749 3.489 1,079 816 418 53.8 38.3 53.5 50.9 32.9 Insulation upgrade 142 63 Q 29 Q 2,958 1,805 491 471 Q 48.0 35.1 41.9 62.4 Q 268 156 61 48 22 5,839 4,231 1,244 1,370 45.8 36.9 49.1 34.9 40.3 Fire, safety, or security upgrade 543 Structural upgrade 71 31 Q Q Q Q Q Q 1.325 677 352 Q 45.6 55.9 53.5 Q Q Q Q Q Other Q Q Q Q Q Q Q 0 0 0 No renovations 385 243 107 74 28 9.350 7.493 4,012 2,268 836 41.2 32.5 26.8 32.7 33.6 Buildings constructed 2008 or later 67 50 Q Q Q 1,414 1,430 661 Q Q 47.4 35.0 50.5 Q Q **Energy sources** (more than one may apply) 1.070 641 249 67 24.511 19.361 7.520 5.300 2.033 43.7 33.1 33.1 31.4 32.7 Electricity 167 Natural gas 1,070 641 5,300 43.7 31.4 32.7 249 167 67 24.511 19.361 7.520 2.033 33.1 33.1 53 290 179 607 53.8 36.9 56.9 32.2 30.9 Fuel oil 68 19 5.395 4.834 1.190 1.637 District heat Q Q Q Q Q 1,074 1,493 Q Q Q Q Q Q Q Q District chilled water Q Q Q Q Q 820 1,224 170 194 Q Q Q 134.5 66.1 Q Propane 86 29 10 16 Q 1,591 887 490 356 Q 54.1 33.0 19.7 44.5 Q Other 60 20 Q Q Q 1,438 643 341 Q Q 41.6 31.4 Q Q Q Space-heating energy sources 1,007 552 202 104 58 22,436 15,774 6,268 3,316 1,717 44.9 35.0 32.3 31.4 33.8 Natural gas 945 483 79 56 2,710 1,588 46.0 37.5 31.1 29.0 35.1 Natural gas main 163 20,554 12,884 5,252 Natural gas secondary 62 68 39 26 Q 1.882 2.890 1.016 607 Q 32.8 23.6 38.6 42.1 Q Other excluding natural gas 63 88 39 51 Q 2,044 3,578 1,086 1,629 280 30.9 24.5 36.0 31.5 16.5 **Buildings** without heating Q Q Q Q Q Q 11 Q Q 355 Q Q Q 31.3 Q **Primary space-heating** energy source 78 114 63 68 Q 2,526 4,582 1,979 2,141 321 30.7 24.9 31.8 31.7 14.4 Electricity 79 Natural gas 945 483 163 56 20.554 12.884 5,252 2,710 1,588 46.0 37.5 31.1 29.0 35.1 Fuel oil Q 5 Ν Ν Ν Q 360 Ν N Ν Q 15.1 Ν Ν Ν District heat Q 0 0 0 0 1.032 1,483 Q 0 Q Q 0 Q Q Q Q Q Q Ν Ν Ν Propane O Q O N N N Ω Q O Q Ν Ν Ν Other Q Q Ν Ν Ν Q Ν Ν Ν Q Q Cooling energy sources 30 22 Q Q Q 403 272 Q Q Q 74.9 80.9 Q Q Natural gas 0 995 607 244 58 22.970 1.868 32.4 33.3 31.2 30.8 Other excluding natural gas 165 18.728 7.325 5.276 43.3 **Buildings without cooling** 45 Q 39.4 12 2 Q Q 1,138 361 158 Q 33.9 12.0 Q Q Water-heating energy sources Natural gas 839 514 201 124 50 16,960 11,896 5,927 3,447 1,294 49.4 43.2 34.0 36.0 38.9 Other excluding natural gas 216 114 44 41 7.014 6.724 1.327 1.784 647 30.8 16.9 32.9 22.8 21.7 14 Buildings without water heating 16 14 4 Q Q 537 741 266 Q Q 29.7 18.2 14.6 Q Q

Table C30. Natural gas consumption and conditional energy intensity by climate region, 2012

Total natural gas

buildings using natural gas consumption energy intensity (billion cubic feet) (million square feet) (cubic feet/square foot) Mixed Mixed Mixed-Verv Verv drv Verv drv/ cold/ cold/ Mixed-Marcold/ Mixed hot-Hot-Mar-Mixeddry/ Hothot-Hot-Marcold humid dry humid ine cold humid hot-dry humid ine cold humid dry humid ine All buildings 1,070 641 249 167 24,511 19,361 7,520 5,300 2,033 43.7 33.1 33.1 31.4 32.7 Cooking energy sources Natural gas 530 385 151 107 34 9.670 8,466 3.055 2.873 706 54.8 45.5 49.5 37.1 48.2 Other excluding natural gas 114 54 15 13 0 2.914 2.162 455 510 Q 39.0 25.1 32.0 25.4 Q **Buildings** without cooking 426 201 83 47 28 11,927 8,733 4,010 1,917 1,113 35.8 23.0 20.8 24.5 25.1 **Energy end uses** (more than one may apply) Buildings with space heating 1,070 639 242 155 63 24,480 19,352 7,355 4,945 1,997 43.7 33.0 32.8 31.4 31.4 **Buildings** with cooling 1,026 629 247 166 58 23,373 19.000 7.361 5.289 1.874 43.9 33.1 33.5 31.4 30.9 Buildings with water heating 31.5 33.1 1,055 627 245 165 64 23.974 18.620 7.254 5.231 1.940 44.0 33.7 33.8 Buildings with cooking 644 440 166 120 39 12,584 10,628 3,510 3,383 921 51.2 41.4 47.2 35.3 42.0 **Buildings with manufacturing** 68 19 Q Q Q 1,735 997 367 445 Q 39.0 18.6 Q 44.1 Q **Buildings** with electricity 1,989 generation 440 226 93 51 24 9.160 6.421 1.915 786 48.1 35.3 48.3 25.5 30.5 Percent of floorspace heated Not heated Q Q Q 11 Q Q Q Q 355 Q Q Q Q 31.3 Q 1 to 50 30 33 41 9 0 1.444 1.489 1,858 563 Q 20.8 22 N 22 2 15.7 Q 72 1,089 41.6 31.5 51 to 99 168 131 45 15 3.270 4.266 2.032 491 51.5 30.7 35.5 100 872 476 128 101 40 19,766 13,597 3,464 3,294 1,144 44.1 35.0 37.0 30.7 34.9 Percent of floorspace cooled Not cooled 45 12 2 O Q 1.138 361 158 Q Q 39.4 33.9 12.0 O Q 245 97 3,785 1,900 693 350 38.8 26.7 13.9 16.5 1 to 50 51 10 6 6.303 25.7 51 to 99 316 190 79 44 22 6,836 6,109 2,242 1,229 690 46.2 31.2 35.4 35.5 31.5 100 465 341 117 113 30 10,234 9,105 3,220 3,367 835 45.5 37.4 36.3 33.5 36.4 **Heating equipment** (more than one may apply) 61 102 50 1,584 4,001 1,122 494 358 38.8 25.4 44.2 35.1 31.7 17 11 Heat pumps 121 71 O 3.139 2.403 904 454 Q 38.4 29.4 33.0 33.2 Q Q 15 Furnaces 130 Individual space heaters 316 1,224 995 587 38.7 28.4 33.3 30.2 35 33 18 8,159 4,842 26.9 District heat Q Q Q Q Q 1.074 1.483 Q a Q Q Q Q Q Q **Boilers** 525 275 89 50 21 9,860 6,584 1,709 1,302 564 53.3 41.8 51.9 38.3 37.7 Packaged heating units 647 366 165 107 42 15,325 12,135 5,298 3,500 1,310 42.2 30.1 31.2 30.5 32.4 Other 32 Q Q Q Q 591 Q Q Q Q 53.5 Q Q Q Q Cooling equipment (more than one may apply) Residential-type central air 197 conditioners 110 66 30 Q 4,739 3,346 1,538 783 Q 41.6 33.0 42.9 37.9 Q 71 108 36 22 14 1,842 4,085 1,095 551 445 38.4 26.5 32.8 39.2 31.2 Heat pumps Individual air conditioners 129 25 Q 802 Q 40.0 22.8 Q 185 18 3.993 3.467 626 46.3 37.2 Q Q District chilled water Q Q Q 1,224 170 194 Q 66.1 Q Q 820 Q 134.5 36.9 Central chillers 290 171 56 48 19 5,752 4,526 1.230 1,727 510 50.4 37.8 45.3 28.0 Packaged air conditioning units 627 361 160 100 38 14,127 11,743 4,727 3,154 1,166 44.4 30.7 33.9 31.7 32.6 30 Q 26 Q Q 545 Q 582 Q Q 55.0 Q 44.1 Q Q Swamp coolers Other Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q

Total floorspace of

Natural gas

Table C30. Natural gas consumption and conditional energy intensity by climate region, 2012

Total natural gas Total floorspace of Natural gas buildings using natural gas energy intensity consumption (billion cubic feet) (million square feet) (cubic feet/square foot) Mived Mixed Mixed-Verv Verv drv/ Verv drv/ cold/ Mixedcold/ Mixed hot-Hot-Marcold/ Mixeddry/ Hot-Marhot-Hot-Marcold humid dry humid ine cold humid hot-dry humid ine cold humid dry humid ine All buildings 1,070 641 249 167 24,511 19,361 7,520 5,300 2,033 43.7 33.1 33.1 31.4 32.7 Main equipment replaced since 1990 (more than one may apply) Heating 371 248 73 57 22 8,831 6,974 2,789 1,725 739 42.0 35.6 26.1 33.3 29.3 Cooling 71 423 261 82 22 9.590 7,817 2.755 2,242 689 44 1 33.4 29.9 31.7 32.1 Water-heating equipment Centralized system 693 419 130 99 38 15,179 10,784 4,230 2,832 980 45.7 38.9 30.8 34.9 38.5 Distributed system 127 49 50 21 Q 2,299 933 Q 37.1 21.4 39.0 22.4 Q 3.427 1.275 Combination of centralized and distributed system 234 159 65 45 23 5,367 5,536 1,749 1,466 685 43.6 28.7 37.1 30.6 33.5 Food preparation or serving areas in non-food service buildings (more than one may apply) Snack bar or concession stand 182 92 38 33 10 3,283 2,630 839 844 271 55.6 35.1 45.2 38.5 37.5 Fast food or small restaurant 160 92 51 49 11 2,944 2.513 1.350 1,221 316 54.2 36.8 37.9 40.0 33.5 Cafeteria or large restaurant 259 193 59 45 16 4,911 5,239 1,073 1,495 325 52.8 36.9 54.6 30.3 49.7 Commercial kitchen/ food preparation area 317 205 67 50 18 5,862 4,702 1.403 1,763 352 54.0 43.6 47.8 28.3 51.5 Small kitchen area 223 110 31 27 8 4,820 3,527 1,102 1,154 279 46.3 31.3 27.8 23.3 26.9 **HVAC** conservation features (more than one may apply) Economizer cycle 524 254 124 57 11.676 7.198 3.058 1.615 1.137 44.8 35.3 40.4 35.0 29.0 33 Regular HVAC maintenance 965 553 221 149 55 21 395 16.426 6,449 4.755 1,666 45 1 33 6 34 2 31.3 33 1 8,783 Building automation system (BAS)² 531 262 150 99 31 11.678 3.369 2.934 1.056 45.4 29.9 44.5 33.7 29.8 Window and interior lighting features (more than one may apply) 925 473 147 115 20.517 14.990 3.905 3.075 1.287 37.6 37.5 38.3 Multipaned windows 49 45.1 31.5 Tinted window glass 1,450 556 382 157 115 49 12.194 10.966 4.817 3.203 45.6 34.9 32.5 35.8 33.6 Reflective window glass 258 133 78 38 21 5.332 3.314 1.816 1.137 452 48.4 40.1 43.2 33.1 45.6 External overhangs or awnings 440 311 126 90 39 9,079 7,538 3,145 2,495 962 48.4 41.2 39.9 36.0 40.8 305 60 32 6,592 1,494 838 40.5 38.5 Skylights or atriums 185 81 5,361 2,460 46.3 34.6 32.8 Light scheduling 462 215 113 80 36 9.885 6,723 3,262 2,266 973 46.7 31.9 34.7 35.1 36.6 Occupancy sensors 558 237 85 44 12,241 7,515 3,245 2,703 1,268 45.6 31.5 36.1 31.5 35.0 117 248 99 36 20 1,729 1,004 507 52.6 41.7 57.5 35.8 39.2 Multi-level lighting or dimming 156 4.712 3.751 Daylight harvesting 94 34 Q 43.4 40 17 0 2.168 1.205 784 601 33.4 43.7 28.2 0 Demand responsive lighting 47 40 23 11 1,216 1,124 973 268 Q 38.5 35.8 23.5 39.4 Q Q Building automation system (BAS) for lighting² 2,540 182 64 44 4,128 990 386 24 12 1,357 44.1 25.1 32.8 24.2 31.9 Equipment usage reduced when building not in full use (more than one may apply) Heating 820 482 181 103 19,735 15,659 6,228 3,592 1,603 41.6 30.8 29.0 28.7 29.9 787 470 18,722 15,340 4,017 42.0 30.7 29.9 29.0 30.9 Cooling 185 116 45 6.201 1.447 Lighting 1,015 23,235 18,079 6,910 4,850 1,959 43.7 30.9 32.4 596 230 150 64 32.9 33.2

Table C30. Natural gas consumption and conditional energy intensity by climate region, 2012

	consum	consumption				Total floorspace of buildings using natural gas (million square feet)					Natural gas energy intensity (cubic feet/square foot)				
	Very cold/ cold	Mixed- humid	dry/ hot-	Hot- humid	Mar- ine	•	Mixed- humid	Mixed- dry/ hot-dry	Hot- humid	Mar- ine	•	Mixed humid	Mixed dry/ hot- dry	Hot- humid	Mar- ine
All buildings	1,070	641	249	167	67	24,511	19,361	7,520	5,300	2,033	43.7	33.1	33.1	31.4	32.7
Annual consumption (hundred cubic feet)															
1,000 or less	21	17	8	4	1	1,757	2,491	1,649	906	Q	11.8	7.0	4.9	4.0	8.8
1,001 to 5,000	133	86	33	16	7	5,090	4,791	1,936	1,035	484	26.2	18.0	17.0	15.5	13.9
5,001 to 10,000	103	80	24	19	7	2,811	3,072	898	921	285	36.5	25.9	26.3	21.0	23.3
10,001 to 25,000	192	138	57	36	25	4,791	3,635	1,276	963	491	40.2	37.9	44.5	37.1	51.5
25,001 to 50,000	154	94	27	19	10	3,349	2,300	579	498	429	46.1	40.8	46.9	37.1	22.8
50,001 to 100,000	160	54	28	31	Q	3,061	1,235	476	455	Q	52.3	43.3	58.9	68.3	Q
Over 100,000	307	173	72	42	Q	3,652	1,836	705	523	Q	84.0	94.1	102.4	80.6	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).

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 Cof the 2012 Commercial Buildings Energy Consumption Survey.

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.

Table C31. Natural gas consumption and conditional energy intensity by building size, 2012

	Total natural consumption (billion cubic	1	b	Total floorsp ouildings usii million squa	ng natural gas		Natural gas energy inten (cubic feet/s	•	
	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet
All buildings	491	903	799	8,575	26,906	23,244	57.3	33.6	34.4
Principal building activity									
Education	14	140	130	376	4,483	4,661	37.1	31.1	28.0
Food sales	13	36	Q	229	484	Q	55.3	74.9	Q
Food service	184	37	N	1,087	307	N	169.7	121.8	N
Health care	10	40	208	307	821	2,164	31.8	48.9	96.3
Inpatient	N	17	197	N	234	1,878	N	71.4	104.8
Outpatient	10	23	12	307	587	286	31.8	39.9	40.7
Lodging	8	103	105	152	2,303	2,462	52.7	44.6	42.5
Mercantile	50	152	82	1,003	3,922	3,568	49.9	38.9	22.9
Retail (other than mall)	20	32	21	706	1,419	1,246	28.1	22.5	16.6
Enclosed and strip malls	30	121	61	298	2,503	2,322	101.7	48.2	26.2
Office	54	121	101	1,821	4,431	4,038	29.4	27.4	24.9
Public assembly	22	65	45	544	2,007	1,337	40.2	32.5	33.5
Public order and safety	9	15	16	169	490	348	50.6	30.8	46.2
Religious worship	29	53	Q	710	2,129	Q	40.7	24.8	Q
Service	70	47		1,118	1,614		62.5	28.9	
Warehouse and storage	16	55	65	737	2,779	3,490	21.2	19.7	18.8
Other	12	30	37	221	545	612	52.5	55.2	60.6
Vacant	Q	9	Q	Q	592	Q Q	Q Q	14.8	Q Q
	Q	9	<u>u</u>	Q		Q	<u>u</u>	14.0	Q
Year constructed									
Before 1920	28	33	24	635	1,009	677	43.9	32.7	36.1
1920 to 1945	48	55	38	838	1,778	1,175	57.6	30.8	32.7
1946 to 1959	47	79	68	959	2,585	1,849	49.5	30.4	37.0
1960 to 1969	61	142	104	1,235	3,790	2,529	49.4	37.5	41.0
1970 to 1979	80	122	130	1,256	3,393	3,330	63.4	36.0	38.9
1980 to 1989	70	148	108	1,289	4,346	4,252	54.6	34.1	25.4
1990 to 1999	69	137	124	1,191	4,276	3,694	58.0	32.1	33.6
2000 to 2003	29	62	63	456	1,963	2,303	63.3	31.6	27.4
2004 to 2007	27	56	84	323	1,980	1,793	84.7	28.5	46.8
2008 to 2012	31	69	56	392	1,786	1,643	79.3	38.5	33.9
Census region and division									
Northeast	72	190	225	1,108	4,861	5,098	65.0	39.1	44.2
New England	12	42	54	275	1,094	872	44.6	38.0	61.9
Middle Atlantic	60	148	171	833	3,767	4,226	71.7	39.4	40.5
Midwest	135	281	211	2,504	6,995	5,527	54.1	40.1	38.1
East North Central	98	216	167	1,676	4,943	4,171	58.6	43.7	40.1
West North Central	37	65	43	828	2,052	1,356	45.0	31.5	32.0
South	174	253	173	2,802	9,274	7,824	62.1	27.3	22.1
South Atlantic	88	115	94	1,074	4,409	4,502	82.3	26.1	21.0
East South Central	19	53	29	551	1,653	1,232	35.4	31.9	23.4
West South Central	66	86	50	1,177	3,212	2,091	56.2	26.6	23.9
West	110	179	190	2,161	5,776	4,795	50.7	31.0	39.7
Mountain	38	51	Q	699	1,513	1,554	54.7	33.5	45.4
Pacific	71	129	120	1,462	4,263	3,241	48.8	30.1	37.0
i aciiic	/1	129	120	1,402	4,203	ا+كر <i>د</i>	40.8	30.1	37.0

Table C31. Natural gas consumption and conditional energy intensity by building size, 2012

	Total natural consumption (billion cubic	1		Total floorspa buildings usin (million squa	ng natural gas		Natural gas energy inten (cubic feet/s		
	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	square	10,001 to 100,000 square feet	Over 100,000 feet
All buildings	491	903	799	8,575	26,906	23,244	57.3	33.6	34.4
Climate region ¹									
Very cold/Cold	207	464	399	3,706	11,313	9,492	55.9	41.0	42.0
Mixed-humid	169	246	226	2,666	8,624	8,071	63.3	28.6	28.0
Mixed-dry/Hot-dry	60	91	98	1,328	3,547	2,645	45.4	25.6	37.0
Hot-humid	42	67	58	623	2,353	2,324	67.7	28.4	24.8
Marine	13	35	19	252	1,070	712	50.3	32.8	26.4
Number of floors									
One	343	433	121	5,693	12,525	6,278	60.2	34.6	19.2
Two	110	251	137	2,166	8,148	4,350	51.0	30.8	31.5
Three	31	113	75	590	3,186	2,309	52.9	35.5	32.4
Four to nine	Q	102	323	Q	2,996	6,644	Q	34.1	48.7
Ten or more	N	Q	144	N	Q	3,663	N	Q	39.2
Number of workers (main shift)									
Fewer than 5	172	80	Q	3,898	3,458	Q	44.2	23.0	Q
5 to 9	119	74	Q	2,360	2,644	Q	50.4	28.1	Q
10 to 19	146	137	8	1,750	4,425	624	83.4	30.9	13.0
20 to 49	53	276	40	561	8,133	1,918	95.2	33.9	20.9
50 to 99	Q	220	131	Q	5,690	4,624	Q	38.7	28.3
100 to 249	N	109	220	N	2,329	6,551	N	46.7	33.6
250 or more	N	8	390	N	226	8,674	N	34.1	45.0
Weekly operating hours									
Fewer than 40	42	48	5	1,295	1,989	421	32.2	24.2	11.8
40 to 48	80	126	46	2,295	5,059	2,606	34.8	24.9	17.7
49 to 60	100	179	81	2,401	7,322	4,282	41.8	24.4	19.0
61 to 84	117	215	127	1,192	5,492	4,810	97.8	39.1	26.4
85 to 167	105	138	97	740	2,708	3,286	141.6	50.9	29.6
Open continuously	48	197	443	652	4,336	7,839	73.3	45.5	56.5
Ownership and occupancy									
Nongovernment owned	448	677	579	7,555	20,132	16,794	59.4	33.6	34.5
Owner occupied	245	320	303	4,137	9,422	6,983	59.3	34.0	43.3
Leased to tenant(s)	186	274	159	2,877	7,965	6,519	64.5	34.4	24.4
Owner occupied and leased	16	80	117	489	2,481	3,285	32.9	32.3	35.7
Unoccupied	Q	Q	Q	Q	Q	Q	Q	Q	Q
Government owned	43	226	220	1,020	6,774	6,450	41.8	33.4	34.2
Federal	Q	Q	19	Q	Q	450	Q	Q	41.2
State	8	73	84	141	1,729	2,068	54.0	42.4	40.8
Local	32	145	118	815	4,690	3,933	39.1	30.9	29.9
Party responsible for operation									
and maintenance of energy									
Systems Duilding owner	204	722	700	7 1 1 1	22 274	10 715	F4.0	22.5	25.5
Building owner	384	723	700	7,111	22,274	19,715		32.5	35.5
Business owner or tenant	95	153	86 	1,278	4,021	2,941		38.0	29.3
Property management Other	Q Q	Q 16	9	Q	Q 368	455		Q 42.5	20.6
Otilel	Q	то	Q	Q	368	Q	Q	42.5	Q

Table C31. Natural gas consumption and conditional energy intensity by building size, 2012

	Total natural consumption (billion cubic	_	b	otal floorspa uildings usir million squa	ng natural gas	i	Natural gas energy inten- (cubic feet/s	•	
	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	square	10,001 to 100,000 square feet	Over 100,000 feet
All buildings	491	903	799	8,575	26,906	23,244	57.3	33.6	34.4
Provider of direct input on energy- related equipment purchases									
Building owner	397	761	710	7,353	23,438	20,156	54.0	32.5	35.2
Business owner or tenant	73	116	69	968	2,798	2,258	75.9	41.4	30.4
Property management	Q	Q	8	Q	Q	369	Q	Q	21.6
Other	16	22	13	204	573	462	79.4	37.7	28.0
Number of establishments									
One	412	588	490	6,791	17,387	12,978	60.6	33.8	37.8
2 to 5	71	171	176	1,521	5,686	5,225	46.5	30.2	33.7
6 to 10	6	63	35	172	1,827	1,094	36.4	34.7	31.9
11 to 20	Q	60	48	Q	1,372	1,357	Q	44.0	35.7
More than 20	N	16	50	N	343	2,520	N	46.0	19.7
Currently unoccupied	Q	Q	Q	Q	Q	Q	. Q	Q	Q
Predominant exterior wall material									
Brick, stone, or stucco	269	494	369	4,110	14,475	10,414	65.4	34.1	35.4
Concrete (block or poured)	103	214	205	1,740	6,477	6,301	59.1	33.0	32.6
Concrete panels	8	70	126	168	1,881	3,889	47.0	37.1	32.3
Siding or shingles	57	51	Q	1,168	1,344	Q	48.7	37.6	Q
Metal panels	43	60	19	1,272	2,282	832	34.2	26.4	22.9
Window glass	Q	Q	Q	Q	Q	833	Q	Q	38.5
Other	Q	Q	Q	Q	Q	324	Q	Q	55.8
No one major type	Q	Q	Q	Q	Q	Q	Q	Q	Q
Predominant roof material									
Metal surfacing	112	95	28	2,161	3,971	1,694	51.6	24.0	16.8
Synthetic or rubber	107	345	377	1,530	8,539	9,721	70.0	40.4	38.8
Built-up	67	202	299	1,217	7,081	7,728	55.0	28.6	38.7
Slate or tile shingles	47	56	8	672	1,494	Q	69.5	37.5	Q
Wooden materials (including									
shingles)	24	Q	Q	312	Q	Q	77.1	Q	Q
Asphalt, fiberglass, or	128	175	r.c	2.560	г 012	2 222	50.0	34.9	24.0
other shingles Concrete	128 Q	1/5 Q	56 13	2,560 Q	5,013 Q	2,323		34.9 Q	24.0 25.2
Other	Q	Q	13 Q	Q	Q	Q		Q Q	25.2 Q
No one major type	Q Q	Q	Q	Q	Q	Q		Q	Q
							<u> </u>		
Roof characteristics Roof tilt									
Flat	207	573	640	2,947	15,811	17,074	70.1	36.3	37.5
Shallow pitch	166	179	125	3,244	6,462	4,794		27.7	26.0
Steeper pitch	119	151	35	2,384	4,632	1,376		32.5	25.3
Cool roof	80	208	300	1,175	4,821	8,357		43.2	35.8

Table C31. Natural gas consumption and conditional energy intensity by building size, 2012

	Total natural consumption (billion cubic	1	t	otal floorspa puildings usin million squa	ng natural gas		Natural gas energy inten (cubic feet/s	•	
	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet
All buildings	491	903	799	8,575	26,906	23,244	57.3	33.6	34.4
Renovations in buildings constructed before 2008 (more than one may apply)			00 00 00 00 00 00 00 00 00 00 00 00 00						
Any type of renovation	219	455	526	3,651	13,315	13,978	59.9	34.2	37.6
Addition or annex	50	133	273	768	3,942	5,396	65.3	33.8	50.7
Reduction in floorspace	9	8	Q	144	378	862	65.8	20.3	58.7
Roof replacement	94	247	323	1,796	6,469	7,887	52.6	38.2	40.9
Exterior wall replacement	23	34	70	316	1,286	1,793	71.7	26.3	38.9
Interior wall reconfiguration	90	224	315	1,623	6,683	7,769	55.6	33.4	40.5
Window replacement	66	129	183	1,020	4,026	4,239	64.9	31.9	43.2
HVAC equipment upgrade	120	292	409	1,959	8,407	10,072	61.3	34.8	40.6
Lighting upgrade	110	288	392	1,784	7,317	10,072	61.6	39.4	38.4
Electrical upgrade	92	156	289	1,415	4,559	6,400	65.1	34.3	45.1
Plumbing system upgrade	82	163	257	1,197	4,203	5,150	68.7	38.7	50.0
Insulation upgrade	42	80	141	755	2,375	2,764	55.0	33.5	51.1
Fire, safety, or security upgrade	70	181	304	1,177	4,833	7,217	59.2	37.5	42.1
Structural upgrade	23	37	88	309	1,078	1,447	74.4	34.3	60.6
Other	Q Q	Q	6	Q	1,078 Q	370	Q	Q Q	16.0
No renovations	241	379	218	4,531	11,805	7,623	53.2	32.1	28.5
Buildings constructed 2008 or later	31	69	56	392	1,786	1,643	79.3	38.5	33.9
Energy sources (more than one may apply)									
Electricity	491	903	799	8,575	26,906	23,244	57.3	33.6	34.4
Natural gas	491	903	799	8,575	26,906	23,244	57.3	33.6	34.4
Fuel oil	17	146	445	292	3,316	10,055	56.8	44.2	44.3
District heat	Q	6	99	Q	289	2,553	Q	19.2	38.6
District chilled water	Q	10	113	Q	338	2,071	Q	30.2	54.6
Propane	9	66	68	176	1,321	1,899	49.9	49.9	35.8
Other	8	43	55	157	1,132	1,349	51.0	37.8	40.8
Space-heating energy sources									
Natural gas	421	819	683	7,665	23,741	18,104	54.9	34.5	37.7
Natural gas main	364	738	623	6,851	19,975	16,161	53.2	37.0	38.6
Natural gas secondary	57	80	60	814	3,766	1,943	69.5	21.3	30.9
Other excluding natural gas	57	75	114	764	2,956	4,897	74.9	25.3	23.2
Buildings without heating	13	Q	Q	145	Q	Q	89.4	Q	Q
Primary space-heating energy source									
Electricity	109	143	75	1,469	5,956	4,124	74.3	24.0	18.2
Natural gas	364	738	623	6,851	19,975	16,161	53.2	37.0	38.6
Fuel oil	Q	Q	Q	Q	Q	Q	Q	Q	Q
District heat	Q	6	96	Q	289	2,484	Q	19.2	38.8
Propane	Q	Q	N	Q	Q	N	Q	Q	N
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
Cooling energy sources									
Natural gas	Q	Q	50	Q	Q	564	Q	Q	88.6
Other excluding natural gas	460	861	747	7,806	25,771	22,589	58.9	33.4	33.1
Buildings without cooling	30	36	Q	739	996	Q	40.4	36.0	Q

Table C31. Natural gas consumption and conditional energy intensity by building size, 2012

	Total natural consumption (billion cubic	1	ŀ	Total floorsp ouildings usii million squa	ng natural gas		Natural gas energy inten (cubic feet/s	•	
	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet
All buildings	491	903	799	8,575	26,906	23,244	57.3	33.6	34.4
Water-heating energy sources									
Natural gas	350	715	662	4,890	18,829	15,804	71.7	38.0	41.9
Other excluding natural gas	115	177	136	3,078	7,307	7,111	37.3	24.3	19.1
Buildings without water heating	26	10	Q	607	770	Q	42.4	13.2	Q
Cooking energy sources									
Natural gas	241	401	566	2,070	8,921	13,779	116.2	44.9	41.1
Other excluding natural gas	36	101	63	994	3,042	2,220	36.3	33.3	28.3
Buildings without cooking	214	401	170	5,510	14,943	7,246	38.9	26.8	23.5
Energy end uses									
(more than one may apply)									
Buildings with space heating	478	894	797	8,430	26,698	23,001	56.7	33.5	34.7
Buildings with cooling	461	867	797	7,836	25,910	23,153	58.9	33.5	34.4
Buildings with water heating	465	893	798	7,968	26,136	22,915	58.4	34.2	34.8
Buildings with cooking	277	502	629	3,065	11,963	15,998	90.3	41.9	39.3
Buildings with manufacturing	24	55	41	444	1,990	1,306	53.2	27.8	31.6
Buildings with electricity									
generation	31	241	561	518	5,673	14,080	60.7	42.5	39.9
Percent of floorspace heated	42			4.45			00.4		
Not heated	13	Q	Q	145	Q	Q	89.4	Q	Q
1 to 50	33	54	33	1,060	2,784	1,872	31.2	19.3	17.8
51 to 99	92	188	153	1,404	4,719	5,025	65.3	39.8	30.4
100	353	652	611	5,966	19,195	16,104	59.2	34.0	37.9
Percent of floorspace cooled									
Not cooled	30	36	Q	739	996	Q	40.4	36.0	Q
1 to 50	98	176	134	2,147	6,350	4,533	45.7	27.7	29.6
51 to 99	106	296	248	1,622	7,521	7,963	65.5	39.4	31.2
100	257	395	414	4,067	12,039	10,656	63.2	32.8	38.9
Heating equipment (more than one may apply)									
Heat pumps	44	84	114	565	3,730	3,266	78.2	22.4	34.8
Furnaces	70	115	54	1,813	3,890	1,343	38.7	29.5	39.9
Individual space heaters	111	220	201	2,244	6,828	6,735	49.3	32.3	29.8
District heat	Q	6	98	2,244 Q	289	2,526	43.3 Q	19.2	39.0
Boilers	70	358	532	716	8,322	10,981	98.2	43.0	48.5
Packaged heating units	332	596	399	5,514	18,291	13,763	60.1	32.6	29.0
Other	Q	31	18	3,314 Q	702	424	Q	44.5	41.8
Cooling equipment							<u>Q</u>		
(more than one may apply)									
Residential-type central air									
conditioners	165	181	61	3,413	5,569	1,522	48.2	32.4	39.9
Heat pumps	55	97	99	702	3,996	3,319	77.7	24.3	29.7
Individual air conditioners	47	155	164	1,021	3,850	4,266	45.8	40.1	38.4
District chilled water	Q	10	113	Q	338	2,071	Q	30.2	54.6
Central chillers	Q	147	432	Q	3,421	10,220	Q	42.9	42.3
Packaged air conditioning units	243	578	465	3,489	16,858	14,570	69.6	34.3	31.9
Swamp coolers	21	22	27	181	706	649	114.9	31.0	41.0
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
					-		<u>-</u> -		

Table C31. Natural gas consumption and conditional energy intensity by building size, 2012

	Total natural consumption (billion cubic	_	b	otal floorspa uildings usir million squa	ng natural gas		Natural gas energy intens (cubic feet/so	•	
	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet
All buildings	491	903	799	8,575	26,906	23,244	57.3	33.6	34.4
Main equipment replaced since									
1990 (more than one may apply)									
Heating	217	345	209	3,648	10,175	7,234	59.5	33.9	28.9
Cooling	223	350	287	3,734	10,478	8,880	59.7	33.4	32.3
Water-heating equipment									
Centralized system	374	567	439	6,349	16,787	10,869	58.9	33.7	40.4
Distributed system	48	111	92	1,043	3,636	3,532	45.6	30.5	26.1
Combination of centralized and									
distributed system	44	215	266	576	5,713	8,514	75.9	37.7	31.3
Food preparation or serving areas									
in non-food service buildings									
(more than one may apply)									
Snack bar or concession stand	11	67	278	173	1,475	6,219	61.8	45.5	44.6
Fast food or small restaurant	31	130	202	300	2,393	5,652	102.3	54.2	35.8
Cafeteria or large restaurant	Q	128	443	Q	3,359	9,663	Q	38.1	45.9
Commercial kitchen/									
food preparation area	14	217	425	367	4,851	8,864	38.4	44.8	48.0
Small kitchen area	46	156	196	1,300	4,701	4,882	35.6	33.2	40.2
HVAC conservation features (more than one may apply)									
Economizer cycle	75	330	585	746	8,815	15,122	101.2	37.4	38.7
Regular HVAC maintenance	357	805	780	5,425	23,040	22,226	65.8	35.0	35.1
Building automation system (BAS) ²	64	353	656	992	9,711	17,118	64.9	36.3	38.3
Window and interior lighting features (more than one may apply)									
Multipaned windows	332	710	666	5,349	20,051	18,374	62.1	35.4	36.3
Tinted window glass	193	488	577	3,140	14,413	15,078	61.4	33.9	38.3
Reflective window glass	52	191	285	984	4,845	6,221	52.4	39.4	45.8
External overhangs or awnings	221	405	380	3,286	10,445	9,489	67.2	38.8	40.0
Skylights or atriums	37	220	407	783	6,146	9,816	47.7	35.8	41.4
Light scheduling	116	352	437	1,574	9,154	12,381	73.6	38.5	35.3
Occupancy sensors	66	398	577	1,046	10,434	15,492	63.5	38.2	37.2
Multi-level lighting or dimming	60	206	294	583	4,359	6,762	102.9	47.2	43.4
Daylight harvesting	9	64	120	116	1,537	3,268	78.2	41.6	36.6
Demand responsive lighting	16	53	56	270	1,523	1,885	58.8	34.5	29.5
Building automation system (BAS) for									
lighting ²	17	126	184	240	3,116	6,045	70.5	40.5	30.4
Equipment usage reduced when building not in full use (more than one may apply)									
Heating	381	666	588	6,786	21,648	18,384	56.1	30.8	32.0
Cooling	367	655	582	6,401	20,876	18,450	57.3	31.4	31.5
Lighting	465	841	747	8,153	25,244	21,636	57.1	33.3	34.5

Table C31. Natural gas consumption and conditional energy intensity by building size, 2012

	Total natural consumption (billion cubic	_	ŀ	Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intens (cubic feet/so	•	
	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet	1,001 to 10,000 square feet	10,001 to 100,000 square feet	Over 100,000 feet
All buildings	491	903	799	8,575	26,906	23,244	57.3	33.6	34.4
Annual consumption (hundred cubic feet)									
1,000 or less	44	7	(*)	3,379	2,499	1,074	13.1	2.7	0.2
1,001 to 5,000	176	97	2	3,877	8,034	1,425	45.3	12.1	1.6
5,001 to 10,000	92	132	7	678	5,307	2,002	136.0	24.9	3.7
10,001 to 25,000	143	270	35	570	6,561	4,026	251.1	41.1	8.7
25,001 to 50,000	Q	202	78	Q	3,067	4,037	Q	65.9	19.4
50,001 to 100,000	Q	123	142	Q	1,048	4,211	Q	117.7	33.8
Over 100,000	N	Q	534	N	Q	6,469	N	Q	82.5

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).

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.

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.

Table C32. Natural gas consumption and conditional energy intensity by year constructed, 2012

	Total natural consumption (billion cubic	1	t	otal floorsp uildings usi million squa	ng natural g	as e	Natural gas s energy intensity (cubic feet/square foot)			
	1959 or before	1960 to 1989	1990 to 2012	1959 or before	1960 to 1989	1990 to 2012	1959 or before	1960 to 1989	1990 to 2012	
All buildings	421	965	807	11,504	25,420	21,801	36.6	38.0	37.0	
Building floorspace (square feet)										
1,001 to 5,000	69	98	82	1,196	1,475	1,086	58.0	66.4	75.5	
5,001 to 10,000	54	113	74	1,236	2,305	1,276	43.9	49.1	58.3	
10,001 to 25,000	59	152	86	2,187	3,785	2,852	27.0	40.0	30.2	
25,001 to 50,000	51	134	93	1,497	3,851	2,800	33.8	34.7	33.1	
50,001 to 100,000	57	127	146	1,688	3,893	4,354	33.7	32.7	33.5	
100,001 to 200,000	40	138	105	1,476	3,732	4,207	27.1	36.9	25.0	
200,001 to 500,000	65	115	122	1,549	3,800	2,944	42.1	30.2	41.5	
Over 500,000	26	89	99	675	2,578	2,281	38.5	34.4	43.4	
Principal building activity										
Education	79	114	91	2,357	3,729	3,434	33.5	30.6	26.5	
Food sales	Q	20	27	Q	317	421	Q	62.4	63.6	
Food service	47	95	80	409	532	453	114.4	179.0	176.3	
Health care	32	111	116	440	1,493	1,359	72.2	74.4	85.1	
Inpatient	25	96	93	245	1,045	822	101.1	91.7	113.0	
Outpatient	7	15	23	194	448	537	35.6	33.9	42.3	
Lodging	24	104	87	594	2,356	1,968	40.0	44.3	44.3	
Mercantile	23	139	121	863	3,679	3,952	27.0	37.9	30.7	
Retail (other than mall)	12	22	39	554	959	1,858	21.0	22.5	21.1	
Enclosed and strip malls	Q	118	82	Q	2,720	2,094	Q	43.3	39.2	
Office	79	135	62	2,220	5,169	2,901	35.5	26.1	21.2	
Public assembly	32	49	51	1,154	1,250	1,485	27.8	39.3	34.1	
Public order and safety	Q	15	17	Q	296	507	Q	50.2	33.4	
Religious worship	27	34	24	968	1,100	949	27.4	31.0	25.5	
Service	30	55	34	601	1,348	841	50.4	40.8	40.1	
Warehouse and storage	29	53	53	916	3,166	2,925	32.0	16.8	18.2	
Other	Q	33	42	Q	570	441	Q	58.5	94.2	
Vacant	3	6	Q	307	415	Q	8.9	15.2	Q	
Census region and division										
Northeast	139	195	154	3,248	4,442	3,378	42.7	43.8	45.6	
New England	27	35	46	599	890	752	45.6	39.3	60.6	
Middle Atlantic	111	160	108	2,649	3,552	2,626	42.0	45.0	41.3	
Midwest	142	285	200	3,470	6,491	5,064	40.9	43.8	39.5	
East North Central	109	216	157	2,568	4,448	3,774	42.6	48.5	41.5	
West North Central	33	69	44	902	2,042	1,291	36.1	33.8	33.8	
South	80	281	239	2,971	8,467	8,463	27.0	33.2	28.3	
South Atlantic	37	123	138	1,518	3,841	4,625	24.4	32.0	29.7	
East South Central	17	53	31	413	1,778	1,245	40.6	30.1	24.8	
West South Central	26	105	71	1,040	2,847	2,593	25.3	36.8	27.3	
West	61	204	214	1,815	6,020	4,897	33.4	33.9	43.7	
Mountain	18	61	81	453	1,636	1,677	39.4	37.1	48.2	
Pacific	43	144	133	1,362	4,384	3,220	31.4	32.8	41.4	
				<u>-</u>	<u></u>					

Table C32. Natural gas consumption and conditional energy intensity by year constructed, 2012

	Total natural consumption (billion cubic	1		Total floorspace of buildings using natural gas (million square feet)				Natural gas energy intensity (cubic feet/square foot)		
	1959 or before	1960 to 1989	1990 to 2012	1959 or before	1960 to 1989	1990 to 2012	1959 or before	1960 to 1989	1990 to 2012	
All buildings	421	965	807	11,504	25,420	21,801	36.6	38.0	37.0	
Climate region ¹										
Very cold/Cold	242	441	388	5,494	10,241	8,776	44.0	43.0	44.2	
Mixed-humid	128	282	232	3,891	7,885	7,585	32.8	35.7	30.5	
Mixed-dry/Hot-dry	30	117	102	1,179	3,609	2,731	25.6	32.4	37.3	
Hot-humid	14	93	59	645	2,621	2,034	22.4	35.5	29.0	
Marine	7	32	27	295	1,064	675	25.1	30.3	39.9	
Number of floors										
One	109	436	351	3,220	10,817	10,460	33.9	40.3	33.6	
Two	106	216	177	2,680	6,987	4,998	39.4	31.0	35.4	
Three	72	78	69	1,907	2,169	2,008	37.7	36.0	34.3	
Four to nine	113	161	159	2,957	3,304	3,504	38.1	48.7	45.4	
Ten or more	22	74	Q	742	2,142	831	29.7	34.5	62.0	
Number of workers (main shift)										
Fewer than 5	95	99	64	2,703	3,128	2,027	35.3	31.5	31.6	
5 to 9	42	97	58	1,204	2,450	1,702	34.5	39.7	34.1	
10 to 19	42	128	120	1,109	3,058	2,632	38.2	41.9	45.7	
20 to 49	53	188	128	1,558	4,792	4,262	34.0	39.2	30.1	
50 to 99	82	141	129	2,100	4,162	4,058	38.9	34.0	31.7	
100 to 249	46	129	153	1,379	3,442	4,059	33.5	37.6	37.7	
250 or more	61	182	155	1,451	4,388	3,062	42.2	41.5	50.6	
Weekly operating hours										
Fewer than 40	37	38	19	1,343	1,498	864	27.9	25.3	22.5	
40 to 48	63	109	80	2,590	4,055	3,315	24.3	27.0	24.1	
49 to 60	94	147	119	2,888	6,270	4,847	32.6	23.5	24.6	
61 to 84	79	207	172	1,990	5,167	4,337	39.6	40.2	39.6	
85 to 167	68	130	141	1,046	2,493	3,196	65.5	52.3	44.1	
Open continuously	80	332	276	1,647	5,937	5,243	48.3	56.0	52.6	
Ownership and occupancy										
Nongovernment owned	305	741	658	8,210	19,434	16,837	37.2	38.1	39.1	
Owner occupied	168	352	349	4,470	7,901	8,171	37.5	44.5	42.7	
Leased to tenant(s)	87	284	248	2,221	8,388	6,752	39.0	33.8	36.7	
Owner occupied and leased	50	103	60	1,419	3,011	1,823	35.1	34.3	33.2	
Unoccupied	Q	Q	Q	Q	Q	Q	Q	Q	Q	
Government owned	116	224	149	3,294	5,986	4,964	35.2	37.4	30.0	
Federal	6	11	12	174	328	365	36.9	34.0	32.5	
State	41	86	38	997	1,836	1,105	41.3	46.7	34.7	
Local	68	127	99	2,123	3,821	3,493	32.2	33.3	28.3	
Party responsible for operation and maintenance of energy										
systems Building owner	368	791	648	10,282	21,073	17,745	35.8	37.5	36.5	
	45	153	136	1,026	3,747	3,467	44.0	40.8	39.3	
Business owner or tenant	45 Q	13	136 9		3,747	3,467	44.0 Q	35.2	27.3	
Property management Other	Q	13 Q	Q	Q Q	Q	333 Q	Q	33.2 Q		
Outel		<u> </u>	U	ų	u	Ų.	ų	<u>u</u>	Q	

Table C32. Natural gas consumption and conditional energy intensity by year constructed, 2012

	Total natural consumption (billion cubic		Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intens (cubic feet/so			
	1959 or before	1960 to 1989	1990 to 2012		1960 to 1989	1990 to 2012	1959 or before	1960 to 1989	1990 to 2012
All buildings	421	965	807	11,504	25,420	21,801	36.6	38.0	37.0
Provider of direct input on energy- related equipment purchases									
Building owner	375	820	673	10,490	22,166	18,291	35.8	37.0	36.8
Business owner or tenant	38	117	103	789	2,564	2,672	47.8	45.7	38.6
Property management	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	21	24	Q	468	600	Q	44.1	40.7
Number of establishments									
One	294	630	566	7,344	15,383	14,430	40.0	40.9	39.3
2 to 5	94	185	139	2,794	5,174	4,463	33.7	35.7	31.1
6 to 10	15	49	41	575	1,540	977	25.8	32.0	41.5
11 to 20	Q	59	45	Q	1,269	1,259	Q	46.5	35.4
More than 20	11	38	16	452	1,829	581	24.1	21.0	27.6
Currently unoccupied	Q	Q	Q	Q	Q	Q	Q	Q	Q
Predominant exterior wall material									
Brick, stone, or stucco	281	483	367	7,889	11,765	9,345	35.6	41.1	39.3
Concrete (block or poured)	84	282	155	2,148	7,316	5,053	39.2	38.6	30.7
Concrete panels	7	70	125	233	2,446	3,260	32.1	28.8	38.5
Siding or shingles	28	52	51	839	1,027	1,022	33.4	50.7	49.6
Metal panels	Q	46	59	Q	2,032	2,121	Q	22.8	27.8
Window glass	Q	17	Q	Q	501	489	Q	33.0	Q
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	22	101	112	843	2,773	4,209	25.9	36.4	26.7
Synthetic or rubber	160	299	371	3,819	7,977	7,994	41.8	37.5	46.4
Built-up	97	317	154	2,911	8,611	4,503	33.5	36.8	34.1
Slate or tile shingles	47	34	31	1,057	844	900	44.3	39.8	Q
Wooden materials (including									
shingles)	Q	24	Q	Q	323	Q	Q	73.9	Q
Asphalt, fiberglass, or									
other shingles	78	165	116		3,978	3,497	32.2	41.4	33.1
Concrete	Q	10	10		436	321	Q	24.1	32.5
Other	Q	Q	Q		Q	Q		Q	Q
No one major type	Q	Q	Q	Q	Q	Q	Q	Q	Q
Roof characteristics									
Roof tilt									
Flat	260	674	485		17,364	11,473	37.2	38.8	42.3
Shallow pitch	83	180	206		5,550	6,757	38.0	32.5	30.5
Steeper pitch	78	110	116		2,506	3,571	33.6	43.9	32.6
Cool roof	96	233	258	2,249	5,907	6,196	42.6	39.5	41.7

Table C32. Natural gas consumption and conditional energy intensity by year constructed, 2012

	Total natural consumption (billion cubic	1	k	otal floorsp puildings usi million squa	ng natural ga	Natural gas energy inten- (cubic feet/se			
	1959 or before	1960 to 1989	1990 to 2012	1959 or before	1960 to 1989	1990 to 2012		1960 to 1989	1990 to 2012
All buildings	421	965	807	11,504	25,420	21,801	36.6	38.0	37.0
Renovations in buildings constructed before 2008 (more than one may apply)									
Any type of renovation	287	641	272	7,880	16,531	6,534	36.4	38.8	41.6
Addition or annex	92	230	134	2,139	5,167	2,799	43.2	44.6	47.9
Reduction in floorspace	11	Q	Q	312	929	Q	34.3	52.6	Q
Roof replacement	167	400	98	4,365	9,503	2,284	38.2	42.1	42.8
Exterior wall replacement	31	61	35	1,143	1,567	685	26.9	38.9	50.4
Interior wall reconfiguration	154	308	167	4,283	8,326	3,466	36.0	37.0	48.2
Window replacement	131	178	68	3,642	4,565	1,079	36.1	38.9	63.5
HVAC equipment upgrade	201	453	167	5,589	11,473	3,376	35.9	39.5	49.6
Lighting upgrade	206	412	172	5,374	10,406	3,518	38.4	39.6	48.9
Electrical upgrade	175	251	112	4,200	6,121	2,052	41.5	41.0	54.5
Plumbing system upgrade	147	246	109	3,418	5,200	1,931	42.9	47.4	56.5
Insulation upgrade	68	116	78	1,756	2,823	1,315	38.5	41.1	59.7
Fire, safety, or security upgrade	153	297	105	3,806	7,246	2,174	40.1	41.0	48.3
Structural upgrade	27	65	Q	706	1,333	796	38.1	48.4	70.8
Other	Q	9	Q	Q	371	Q	Q	23.0	Q
No renovations	135	323	380	3,624	8,888	11,446	37.1	36.4	33.2
Buildings constructed 2008 or later	N	N	156	N	N	3,821	N	N	40.7
Energy sources (more than one may apply)									
Electricity	421	965	807	11,504	25,420	21,801	36.6	38.0	37.0
Natural gas	421	965	807	11,504	25,420	21,801	36.6	38.0	37.0
Fuel oil	86	251	271	2,179	6,182	5,302	39.4	40.6	51.2
District heat	9	Q	Q	598	1,174	1,088	14.6	48.9	Q
District chilled water	5	61	Q	191	1,151	1,089	27.7	52.8	Q
Propane	13	53	77	318	1,387	1,692	40.9	38.2	45.3
Other	30	48	28	616	1,141	881	48.6	42.1	31.5
Space-heating energy sources									
Natural gas	395	836	692	10,080	21,118	18,313		39.6	37.8
Natural gas main	373	749	604	9,209	18,153	15,625		41.3	38.6
Natural gas secondary	22	87	88	871	2,965	2,688	25.0	29.3	32.8
Other excluding natural gas	21	117	108	1,328	3,964	3,325	16.0	29.5	32.4
Buildings without heating	Q	12	Q	Q	337	Q	Q	35.5	Q
Primary space-heating energy source									
Electricity	32	139	157	1,294	5,320	4,935	24.7	26.1	31.7
Natural gas	373	749	604	9,209	18,153	15,625		41.3	38.6
Fuel oil	Q	Q	N	Q	Q	N		Q	N
District heat	8	Q	Q	573	1,162	1,056		48.7	Q
Propane	Q	Q	Q	Q	Q	Q		Q	Q
Other	Q	Q	Q	Q	Q	Q		Q	Q

Table C32. Natural gas consumption and conditional energy intensity by year constructed, 2012

	Total natural consumption (billion cubic	1	b	Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/square foot)		
	1959 or before	1960 to 1989	1990 to 2012	1959 or before	1960 to 1989	1990 to 2012	1959 or before	1960 to 1989	1990 to 2012
All buildings	421	965	807	11,504	25,420	21,801	36.6	38.0	37.0
Cooling energy sources									
Natural gas	Q	22	Q	Q	282	Q	Q	79.4	Q
Other excluding natural gas	377	914	777	10,587	24,422	21,158	35.6	37.4	36.7
Buildings without cooling	24	29	16	666	716	444	35.5	40.1	35.6
Water-heating energy sources									
Natural gas	330	770	627	7,294	17,542	14,687	45.3	43.9	42.7
Other excluding natural gas	81	179	168	3,459	7,370	6,666	23.4	24.3	25.2
Buildings without water heating	10	16	12	751	507	448	13.1	30.8	26.9
Cooking energy sources									
Natural gas	212	534	462	4,443	10,793	9,534	47.7	49.5	48.4
Other excluding natural gas	50	81	69	1,606	2,226	2,425	31.4	36.4	28.3
Buildings without cooking	159	350	277	5,456	12,400	9,842	29.1	28.2	28.2
Energy end uses (more than one may apply)									
Buildings with space heating	416	953	800	11,408	25,082	21,639	36.5	38.0	36.9
Buildings with cooling	398	936	791	10,838	24,703	21,357	36.7	37.9	37.1
Buildings with water heating	411	949	795	10,753	24,912	21,353	38.3	38.1	37.2
Buildings with cooking	262	615	530	6,049	13,019	11,959	43.4	47.2	44.3
Buildings with manufacturing	29	51	41	929	1,708	1,102	30.9	29.8	36.9
Buildings with electricity									
generation	101	333	401	2,370	8,638	9,263	42.5	38.5	43.3
Percent of floorspace heated									
Not heated	Q	12	Q	Q	337	Q	Q	35.5	Q
1 to 50	25	52	43	1,225	2,815	1,676	20.5	18.5	25.7
51 to 99	90	180	161	2,596	4,465	4,086	34.8	40.4	39.5
100	301	720	595	7,586	17,802	15,877	39.7	40.5	37.5
Percent of floorspace cooled									
Not cooled	24	29	16	666	716	444	35.5	40.1	35.6
1 to 50	131	170	107	3,266	5,893	3,871	40.0	28.9	27.7
51 to 99	113	269	269	3,589	7,057	6,460	31.6	38.0	41.6
100	154	497	415	3,983	11,753	11,025	38.6	42.3	37.6
Heating equipment (more than one may apply)									
Heat pumps	45	97	99	1,372	3,133	3,055	33.0	30.9	32.5
Furnaces	51	107	80	1,384	3,372	2,290	36.8	31.9	35.0
Individual space heaters	129	247	156	3,778	6,951	5,079	34.2	35.5	30.6
District heat	9	Q	Q	581	1,174	1,078	14.9	48.9	Q
Boilers	226	403	330	5,001	8,675	6,342	45.3	46.5	52.1
Packaged heating units	215	601	511	6,313	16,317	14,940	34.0	36.8	34.2
Other	Q	18	31	Q	434	663	Q	42.4	46.4

Table C32. Natural gas consumption and conditional energy intensity by year constructed, 2012

	Total natural consumption (billion cubic			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy inten (cubic feet/s		
	1959 or before	1960 to 1989	1990 to 2012	1959 or before	1960 to 1989	1990 to 2012		1960 to 1989	1990 to 2012
All buildings	421	965	807	11,504	25,420	21,801	36.6	38.0	37.0
Cooling equipment (more than one may apply)									
Residential-type central air									
conditioners	89	192	124	2,359	4,918	3,226	37.8	39.1	38.5
Heat pumps	49	108	93	1,563	3,371	3,083	31.5	31.9	30.3
Individual air conditioners	121	171	73	2,976	3,997	2,164	40.7	42.8	33.7
District chilled water	5	61	Q	191	1,151	1,089	27.7	52.8	Q
Central chillers	102	261	221	2,549	6,386	4,810	40.0	40.8	46.0
Packaged air conditioning units	215	579	492	6,027	15,288	13,602	35.7	37.9	36.1
Swamp coolers	16	35	18	248	654	634	65.6	52.9	29.1
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
Main equipment replaced since 1990 (more than one may apply)									
Heating	228	543	N	6,646	14,412	N		37.7	N
Cooling	255	605	N	7,506	15,587	N	34.0	38.8	N
Water-heating equipment									
Centralized system	273	580	526	6,713	14,556	12,735	40.7	39.8	41.3
Distributed system	62	111	78	1,601	3,867	2,743	38.6	28.7	28.4
Combination of centralized and									
distributed system	76	259	191	2,439	6,489	5,875	31.3	39.8	32.5
Food preparation or serving areas in non-food service buildings (more than one may apply)									
Snack bar or concession stand	40	151	164	1,005	3,527	3,336	40.2	42.8	49.2
Fast food or small restaurant	31	163	169	835	3,777	3,733	36.7	43.1	45.4
Cafeteria or large restaurant	95	256	222	2,339	5,996	4,708	40.7	42.6	47.1
Commercial kitchen/									
food preparation area	102	294	261	2,336	6,195	5,552		47.4	47.0
Small kitchen area	100	159	140	2,801	4,183	3,899	35.7	38.0	36.0
HVAC conservation features (more than one may apply)									
Economizer cycle	129	412	450	3,553	10,587	10,543	36.2	38.9	42.7
Regular HVAC maintenance	343	862	738	8,859	22,036	19,796	38.7	39.1	37.3
Building automation system (BAS) ²	147	428	498	3,844	11,380	12,598	38.3	37.6	39.5

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	Total natural consumption (billion cubic			Total floorspace of buildings using natural gas (million square feet)			Natural gas energy intensity (cubic feet/square foot)		
	1959 or before	1960 to 1989	1990 to 2012	1959 or before	1960 to 1989	1990 to 20 12	1959 or before	1960 to 1989	1990 to 2012
All buildings	421	965	807	11,504	25,420	21,801	36.6	38.0	37.0
Window and interior lighting features (more than one may apply)									
Multipaned windows	284	704	721	7,427	17,931	18,416	38.2	39.3	39.2
Tinted window glass	186	575	498	4,794	14,758	13,079	38.7	39.0	38.1
Reflective window glass	63	207	258	1,552	5,264	5,234	40.7	39.3	49.2
External overhangs or awnings	149	459	397	3,300	10,776	9,143	45.3	42.6	43.4
Skylights or atriums	87	303	274	2,293	7,732	6,721	37.8	39.2	40.8
Light scheduling	130	376	399	3,256	9,678	10,175	39.8	38.8	39.3
Occupancy sensors	161	431	449	3,951	11,337	11,684	40.8	38.1	38.4
Multi-level lighting or dimming	68	215	277	1,580	4,699	5,425	42.7	45.7	51.1
Daylight harvesting	28	84	81	522	2,047	2,351	53.2	41.0	34.3
Demand responsive lighting Building automation system (BAS) for	21	57	47	383	1,722	1,574	54.7	32.9	29.6
lighting ²	45	114	168	847	3,612	4,942	52.8	31.6	34.0
Equipment usage reduced when building not in full use (more than one may apply)									
Heating	335	706	593	9,145	20,019	17,654	36.7	35.3	33.6
Cooling	319	695	590	8,684	19,680	17,362	36.7	35.3	34.0
Lighting	407	905	743	11,022	23,946	20,065	36.9	37.8	37.0
Annual consumption (hundred cubic feet)									
1,000 or less	17	21	13	1,561	3,247	2,143	10.9	6.6	6.0
1,001 to 5,000	82	113	81	3,106	5,498	4,731	26.4	20.5	17.0
5,001 to 10,000	54	109	68	1,945	3,411	2,631	27.9	32.0	26.0
10,001 to 25,000	78	195	175	1,849	4,816	4,491	42.2	40.4	39.0
25,001 to 50,000	51	139	114	1,234	2,948	2,974	41.2	47.1	38.4
50,001 to 100,000	32	131	115	664	2,339	2,275	47.5	56.2	50.6
Over 100,000	108	257	241	1,144	3,161	2,556	94.2	81.3	94.3

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.