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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)

	noillia)	cubic ree	t)			(million s	nillion square feet) (cubic feet/square foot)								
	Very	Mixed-	Mixed- dry/ hot-	Hot-	Mar-	Very cold/	Mixed-	Mixed- dry/	Hot-	Mar-	Very	Mixed-	Mixed- dry/ hot-	Hot-	Mar-
	•	humid		humid	ine	cold		hot-dry	humid	ine	•	humid		humid	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
Building floorspace (square feet)															
1,001 to 5,000	96	93	30	24	6	1,618	1,299	453	269	Q	59.5	71.2	66.8	90.0	51.3
5,001 to 10,000	111	76	30	18	Q	2,088	1,367	875	354	Q	53.2	55.8	34.3	50.6	Q
10,001 to 25,000	146	76	33	26	16	3,895	2,431	1,493	623	381	37.4	31.2	22.1	42.1	41.3
25,001 to 50,000	141	74	35	17	Q	3,384	2,474	1,184	789	318	41.6	29.9	29.8	21.7	30.5
50,001 to 100,000	178	97	22	23	Q	4,034	3,719	870	941	Q	44.0	26.0	25.8	24.9	Q
100,001 to 200,000	128	99	35	16	Q	3,522	3,580	1,277	818	Q	36.3	27.6	27.2	19.8	Q
200,001 to 500,000	165	61	Q	18	8	3,818	2,437	941	798	298	43.2	25.1	53.5	22.5	26.5
Over 500,000	106	66	13	23	Q	2,152	2,053	427	708	Q	49.4	32.0	30.1	33.2	Q
Principal building activity															
Education	159	91	15	15	Q	3,873	3,615	842	1,077	Q	40.9	25.1	17.9	13.6	Q
Food sales	28	12	Q	Q	Q	400	193	Q	Q	Q	70.4	64.6	Q	Q	Q
Food service	76	87	26	27	Q	503	487	186	151	Q	150.4	178.7	139.1	179.6	Q
Health care	111	83	Q	25	Q	1,436	1,032	346	388	Q	77.3	80.7	93.2	63.7	Q
Inpatient	78	75	Q	24	Q	720	746	262	316	Q	108.7	100.0	115.0	75.2	Q
Outpatient	33	9	Q	Q	Q	717	286	Q	Q	Q	45.7	30.6	Q	Q	Q
Lodging	99	64	30	17	Q	1,684	1,617	812	676	Q	58.6	39.6	36.7	25.8	Q
Mercantile	136	62	44	32	Q	3,402	2,619	1,300	871	Q	39.9	23.8	34.2	37.1	Q
Retail (other than mall)	48	16	Q	Q	Q	1,517	975	Q	Q	Q	31.6	16.9	Q	Q	Q
Enclosed and strip malls	88	46	40	30	Q	1,885	1,644	824	643	Q	46.6	28.0	48.5	47.4	Q
Office	157	76	17	10	15	4,654	3,223	1,197	621	596	33.8	23.7	14.3	15.9	24.7
Public assembly	72	28	13	Q	Q	1,802	952	557	324	Q	39.9	29.5	24.0	Q	Q
Public order and safety	19	12	Q	Q	Q	409	326	Q	Q	Q	45.6	36.4	Q	Q	Q
Religious worship	40	30	Q	Q	Q	1,181	1,208	284	Q	Q	33.6	24.5	Q	Q	Q
Service	58	44	Q	Q	Q	1,400	932	Q	Q	Q	41.7	47.0	Q	Q	Q
Warehouse and storage	75	31	25	Q	Q	2,773	2,485	1,111	526	Q	27.1	12.4	22.8	7.3	Q
Other	34	Q	Q	Q	Q	541	Q	Q	Q	Q	63.5	Q	Q	Q	Q
Vacant	7	Q	Q	N	Q	454	Q	Q	N	Q	15.8	Q	Q	N	Q
Year constructed															
Before 1920	57	26	Q	Q	Q	1,432	724	Q	Q	Q	39.7	35.9	Q	Q	Q
1920 to 1945	68	53	14	Q	Q	1,677	1,418	388	Q	Q	40.6	37.1	35.0	Q	Q
1946 to 1959	117	49	15	10	Q	2,385	1,749	716	363	Q	49.0	28.0	21.6	26.5	Q
1960 to 1969	141	87	46	22	10	3,420	2,467	942	438	285	41.2	35.4	48.5	51.0	36.3
1970 to 1979	148	117	36	24	Q	3,337	2,363	1,330	768	Q	44.4	49.6	27.4	31.7	Q
1980 to 1989	152	77	35	46	17	3,484	3,054	1,337	1,415	598	43.5	25.3	25.9	32.8	27.7
1990 to 1999	155	99	38	28	11	3,857	2,963	1,099	947	295	40.1	33.5	34.2	29.1	38.6
2000 to 2003	82	40	16	12	Q	1,958	1,704	500	416	Q	41.9	23.5	32.6	28.2	Q
2004 to 2007	84	42	15	17	Q	1,547	1,489	471	397	Q	54.4	28.5	Q	42.8	Q
2008 to 2012	67	50	Q	Q	Q	1,414	1,430	661	Q	Q	47.4	35.0	50.5	Q	Q

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		(cubic feet/square foot)							
	•	Mixed- humid	Mixed dry/ hot- dry	Hot- humid	Mar- ine	Very cold/ cold		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
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	ÝN	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		6,764			1,027	634	40.3	31.5	25.6	20.9	28.2
		58			Q		4,589	1,651				31.0			
Three	134	133	15	8	Q 13	3,265	1,858	494	339	Q 220	41.1	40.0	31.0	24.5 39.8	Q 27.0
Four to nine Ten or more	185 79	46	61	41 10	13 Q	4,022 1,357	3,323 1,447	1,064 346	1,025 369	330 Q	58.4	31.7	57.3 24.8	25.9	37.9 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		2,248	1,656	780	457	Q	37.2	38.5	33.1	36.3	Q
10 to 19	135	82	41	25	Q Q	2,811	2,055	1,171	503	Q 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
	100	124				3,033	2,303	001	1,043	407	30.5	42.0	44.3	32.4	30.2
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 247	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						40.00	44.55		200-	4				2.5	
Nongovernment owned	820		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		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		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		19	15	Q	2,672	1,914	836	552	Q	46.7	26.3	22.9	26.8	Q
Unoccupied	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		Q	Q	Q	313	448	Q	Q	Q	42.8	24.9	Q	Q	Q
State	79		9	Q	Q	1,703	1,404	364	353	Q	46.1	43.8	26.1	28.5	Q
Local	159	84	25	21	6	4,007	3,280	932	1,026	193	39.6	25.5	26.6	20.4	33.1

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	atural ga nption cubic fee				Total floorspace of buildings using natural gas (million square feet)						Natural gas energy intensity (cubic feet/square foot)				
	Very cold/ cold	Mixed- humid	Mixed dry/ hot- dry	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.