

Table C17. Natural Gas Consumption and Conditional Energy Intensity by Census Region, 1999

	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)			
	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
All Buildings	291	689	601	385	7,305	13,506	14,199	10,515	39.8	51.0	42.3	36.6
Building Floorspace (Square Feet)												
1,001 to 5,000	Q	115	91	68	Q	1,210	951	991	Q	94.8	95.7	68.9
5,001 to 10,000	Q	79	Q	57	564	1,676	1,674	1,175	80.3	47.1	Q	48.5
10,001 to 25,000	53	96	Q	39	918	2,218	2,338	1,526	58.0	43.2	Q	25.5
25,001 to 50,000	29	63	71	64	927	1,480	2,054	1,944	31.4	42.7	34.4	33.1
50,001 to 100,000	31	80	68	65	979	2,077	2,343	1,767	31.2	38.3	29.2	36.6
100,001 to 200,000	32	100	60	31	938	1,866	1,902	1,209	33.8	53.7	31.8	25.5
200,001 to 500,000	29	111	52	38	911	1,776	1,628	967	32.3	62.3	32.1	39.3
Over 500,000	42	46	33	23	1,653	1,203	1,310	937	25.1	38.2	25.6	24.9
Principal Building Activity												
Education	42	83	45	50	1,223	1,863	1,757	1,726	34.7	44.5	25.3	29.2
Food Sales	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Food Service	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Health Care	44	55	67	46	352	668	760	505	124.6	82.1	87.5	90.2
Inpatient	43	47	62	Q	330	488	567	Q	131.5	95.5	108.7	Q
Outpatient	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Lodging	18	43	67	49	306	758	1,258	1,225	57.4	56.2	53.5	39.8
Mercantile	35	78	43	24	1,322	2,471	2,686	1,408	26.7	31.5	16.0	17.4
Retail (Other Than Mall)	24	51	23	Q	602	1,507	995	Q	39.9	33.9	23.5	Q
Enclosed and Strip Malls	Q	27	20	16	Q	964	1,692	993	Q	27.6	11.6	16.4
Office	28	77	57	52	1,210	2,136	2,188	1,821	22.7	35.9	26.0	28.6
Public Assembly	14	29	24	Q	504	899	991	595	27.1	32.0	23.7	46.5
Public Order and Safety	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Religious Worship	Q	22	12	16	Q	659	677	839	Q	32.8	17.5	19.7
Service	Q	64	145	Q	Q	753	738	297	Q	85.3	196.4	44.8
Warehouse and Storage	28	136	41	Q	1,166	2,001	1,948	1,096	23.6	68.0	21.3	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Vacant	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Year Constructed												
1919 or Before	28	64	8	18	674	1,260	413	419	40.8	51.0	18.5	41.9
1920 to 1945	29	95	39	26	911	1,837	944	566	32.0	51.6	41.7	45.7
1946 to 1959	76	86	47	40	1,274	1,779	1,676	1,310	59.5	48.2	28.3	30.2
1960 to 1969	48	110	116	87	1,140	2,144	2,300	1,928	42.4	51.4	50.5	44.9
1970 to 1979	32	87	107	91	960	1,881	2,600	2,639	33.0	46.4	41.1	34.5
1980 to 1989	46	111	177	45	1,288	2,236	3,481	1,789	35.7	49.8	50.9	25.4
1990 to 1999	32	136	106	79	1,056	2,369	2,785	1,865	30.2	57.3	38.2	42.6
Climate Zone: 45-Year Average												
Under 2,000 CDD and --												
More than 7,000 HDD	Q	192	N	29	Q	3,579	N	458	Q	53.7	N	62.4
5,500-7,000 HDD	142	399	N	83	3,467	7,330	N	1,776	41.0	54.4	N	46.7
4,000-5,499 HDD	147	98	205	54	3,812	2,597	2,804	1,242	38.7	37.9	73.1	43.8
Fewer than 4,000 HDD	N	N	240	173	N	N	6,222	5,927	N	N	38.5	29.2
2,000 CDD or More and --												
Fewer than 4,000 HDD	N	N	156	46	N	N	5,173	1,112	N	N	30.2	41.6
Workers (main shift)												
Fewer than 5	30	107	79	57	614	2,576	2,180	1,738	48.2	41.4	36.3	32.7
5 to 9	19	80	35	55	701	1,542	1,083	1,307	27.0	51.9	32.5	42.0
10 to 19	46	96	90	41	950	1,766	1,726	1,147	48.6	54.3	52.4	35.6
20 to 49	53	103	193	74	885	2,110	2,883	1,858	59.6	48.6	67.0	39.9
50 to 99	45	70	59	41	1,062	1,671	1,990	1,555	42.2	42.1	29.6	26.5
100 to 249	38	94	63	50	1,102	1,854	2,009	1,182	34.7	50.5	31.3	42.1
250 or More	60	140	81	67	1,990	1,988	2,328	1,728	30.1	70.5	34.9	39.0

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	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
Weekly Operating Hours												
39 or Fewer	Q	30	21	16	Q	789	971	792	Q	38.1	21.9	20.6
40 to 48	38	92	70	62	934	2,460	2,837	1,966	41.2	37.4	24.5	31.4
49 to 60	37	131	133	75	1,394	3,146	2,771	2,403	26.9	41.7	Q	31.1
61 to 84	76	113	Q	55	1,805	2,622	2,656	1,924	42.1	43.0	Q	28.7
85 to 167	37	134	111	57	1,146	2,160	1,910	1,232	31.9	61.9	58.3	46.1
Open Continuously	90	189	161	120	1,754	2,329	3,054	2,198	51.2	81.3	52.9	54.8
Ownership and Occupancy												
Nongovernment Owned	242	571	494	305	5,622	11,152	11,727	8,525	43.1	51.2	42.2	35.7
Owner Occupied	193	396	369	211	4,056	7,868	7,959	5,714	47.5	50.4	46.3	36.9
Nonowner Occupied	49	172	120	94	1,537	3,200	3,501	2,730	32.1	53.7	34.3	34.3
Unoccupied	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Government Owned	48	118	107	81	1,683	2,354	2,473	1,990	28.7	50.1	43.1	40.5
Federal	Q	Q	9	11	Q	Q	275	239	Q	Q	34.3	45.5
State	Q	34	Q	21	Q	678	693	545	Q	50.5	Q	37.8
Local	36	71	50	49	1,093	1,447	1,504	1,206	33.0	49.3	33.0	40.7
Vacancy Status												
Completely Vacant	N	Q	Q	Q	N	Q	Q	Q	N	Q	Q	Q
Mostly Vacant	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	19.7	Q
Partially Vacant	39	123	80	55	1,798	3,253	3,333	2,341	21.8	37.9	23.9	23.6
Not At All Vacant	250	554	519	327	5,407	10,007	10,754	8,006	46.3	55.3	48.2	40.8
Number of Establishments												
One	210	518	480	291	4,482	9,194	9,096	6,945	46.8	56.4	52.8	41.8
2 to 5	43	115	58	50	1,237	2,533	2,008	1,661	35.1	45.3	28.7	30.1
6 to 10	Q	14	31	19	Q	470	897	726	Q	30.8	35.1	26.7
11 to 20	Q	19	13	8	Q	444	642	363	Q	43.8	20.2	23.1
More than 20	11	19	13	15	850	743	1,283	720	Q	25.6	10.3	21.0
Currently Unoccupied	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Energy Sources (more than one may apply)												
Electricity	291	689	601	385	7,305	13,506	14,199	10,486	39.8	51.0	42.3	36.7
Natural Gas	291	689	601	385	7,305	13,506	14,199	10,515	39.8	51.0	42.3	36.6
Fuel Oil	78	165	111	61	2,569	1,945	2,269	1,306	30.5	85.1	49.0	46.8
District Heat	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
District Chilled Water	Q	9	18	Q	Q	290	518	Q	Q	30.2	34.9	Q
Propane	Q	Q	17	Q	Q	628	701	Q	Q	Q	Q	Q
Other	Q	29	Q	Q	Q	507	Q	Q	Q	56.7	Q	Q
Space-Heating Energy Source												
Natural Gas	268	663	444	339	5,703	12,467	10,904	8,828	47.0	53.2	40.7	38.4
Natural Gas Main	239	624	394	300	4,913	11,348	8,815	7,653	48.7	55.0	44.7	39.2
Natural Gas Secondary	29	39	50	39	790	1,118	2,089	1,175	36.6	35.2	23.8	33.4
Other Excluding Natural Gas	19	21	110	34	1,545	986	2,616	1,345	12.5	21.4	42.0	25.4
Buildings without Heating	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Primary Space-Heating Energy Source												
Electricity	27	50	135	62	693	1,497	4,037	2,210	38.4	33.6	33.5	28.0
Natural Gas	239	624	394	300	4,913	11,348	8,815	7,653	48.7	55.0	44.7	39.2
Fuel Oil	13	Q	Q	Q	664	Q	Q	Q	19.5	Q	Q	Q
District Heat	8	Q	22	Q	884	507	468	Q	Q	13.2	46.2	Q
Propane	Q	Q	N	N	Q	Q	N	N	Q	Q	N	N
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	12.9	Q

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	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
Cooling Energy Source												
Natural Gas	31	38	Q	20	446	550	Q	652	69.1	69.0	Q	30.5
Other Excluding Natural Gas	241	590	526	326	6,275	11,750	13,532	8,676	38.5	50.2	38.9	37.6
Buildings without Cooling	18	62	Q	39	583	1,206	402	1,187	31.5	51.0	Q	32.8
Water-Heating Energy Source												
Natural Gas	197	444	447	321	4,074	8,323	8,943	7,856	48.4	53.4	50.0	40.9
Other Excluding Natural Gas	81	153	121	46	2,827	3,350	3,973	2,020	28.8	45.7	30.4	23.0
Buildings without Water Heating	12	92	33	18	404	1,833	1,283	640	29.8	50.1	25.6	27.8
Cooking Energy Source												
Natural Gas	132	255	242	172	3,380	4,445	5,345	3,614	39.0	57.3	45.3	47.5
Other Excluding Natural Gas	25	40	35	14	537	913	1,213	409	46.5	44.2	28.9	33.9
Buildings without Cooking	134	394	324	200	3,388	8,148	7,641	6,492	39.5	48.4	42.4	30.8
Energy End Uses (more than one may apply)												
Buildings with Space Heating	287	684	554	374	7,248	13,452	13,511	10,173	39.6	50.9	41.0	36.7
Buildings with Cooling	272	628	536	346	6,721	12,300	13,798	9,328	40.5	51.0	38.9	37.1
Buildings with Water Heating	278	597	568	367	6,901	11,673	12,916	9,875	40.4	51.2	44.0	37.2
Buildings with Cooking	157	295	277	186	3,917	5,358	6,558	4,024	40.0	55.0	42.2	46.1
Buildings with Manufacturing	Q	Q	30	13	Q	777	675	458	Q	69.3	44.0	29.4
Buildings with Electricity	76	172	123	86	2,132	2,355	2,997	1,635	35.5	73.1	41.1	52.6
Percent of Floorspace Heated												
Not Heated	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
1 to 50	Q	32	Q	35	Q	1,305	1,373	1,638	Q	24.7	Q	21.4
51 to 99	29	70	Q	61	1,086	2,123	2,960	1,884	27.0	32.8	Q	32.6
100	245	582	333	277	5,606	10,024	9,178	6,652	43.7	58.1	36.3	41.7
Percent of Floorspace Cooled												
Not Cooled	18	62	Q	39	583	1,206	402	1,187	31.5	51.0	Q	32.8
1 to 50	99	258	Q	62	2,476	4,570	2,640	2,382	40.1	56.5	Q	26.1
51 to 99	99	193	166	115	2,161	4,147	3,889	2,496	45.6	46.5	42.6	46.2
100	74	176	245	169	2,084	3,583	7,269	4,449	35.6	49.2	33.7	38.0
Heating Equipment (more than one may apply)												
Heat Pumps	28	39	173	44	928	691	2,732	1,276	30.6	57.0	63.2	34.2
Furnaces	68	285	Q	69	1,480	5,153	3,101	2,226	46.0	55.3	41.5	31.0
Individual Space Heaters	91	200	124	99	2,550	4,207	3,847	2,956	35.6	47.6	32.3	33.6
District Heat	26	11	27	12	998	579	560	295	26.4	19.9	48.7	41.4
Boilers	137	329	171	181	3,552	5,701	3,641	3,694	38.5	57.6	47.0	49.0
Packaged Heating Units	101	266	266	171	3,039	4,717	7,108	5,179	33.1	56.4	37.4	33.0
Other	Q	Q	13	Q	Q	953	786	501	Q	Q	16.9	45.4
Cooling Equipment (more than one may apply)												
Residential-Type Central												
Air Conditioners	35	125	91	Q	800	2,626	2,376	1,004	44.3	47.5	38.3	35.4
Heat Pumps	26	38	174	45	962	742	2,753	1,313	26.9	51.4	63.1	34.6
Individual Air Conditioners	105	187	117	63	2,608	3,352	3,152	1,603	40.3	55.8	37.1	39.6
District Chilled Water	Q	9	18	Q	Q	290	518	Q	Q	30.2	34.9	Q
Central Chillers	71	175	139	122	1,967	2,621	3,338	2,220	36.1	67.0	41.7	54.9
Packaged Air Conditioning												
Units	198	435	316	210	4,777	7,564	9,287	6,359	41.5	57.5	34.0	33.0
Swamp Coolers	Q	Q	Q	65	Q	Q	Q	1,413	Q	Q	Q	45.9
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q

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	North-east	Mid-west	South	West	North-east	Mid-west	South	West	North-east	Mid-west	South	West
Main Equipment Replaced Since 1995 (more than one may apply)												
Heating	60	140	125	94	1,233	3,072	3,477	2,545	48.5	45.6	35.9	37.0
Cooling	80	188	173	101	1,979	3,505	4,651	2,728	40.3	53.6	37.2	37.1
Water Heating Equipment												
Centralized System	207	362	400	253	4,691	7,688	7,742	6,357	44.2	47.1	51.6	39.8
Distributed System	23	119	74	55	1,055	1,977	2,740	1,812	21.4	60.0	26.9	30.6
Combination of Centralized and Distributed System	48	116	95	59	1,154	2,007	2,435	1,706	41.9	58.0	38.9	34.7
Annual Consumption (hundred cubic feet)												
1,000 or Less	2	10	16	10	392	946	1,867	1,392	4.5	10.5	8.7	7.4
1,001 to 5,000	40	108	78	74	1,413	3,280	3,635	2,865	28.5	32.9	21.5	25.8
5,001 to 10,000	33	90	69	47	1,091	1,807	2,411	1,530	30.4	49.9	28.6	30.9
10,001 to 25,000	87	132	104	92	1,694	2,799	2,510	2,169	51.1	47.2	41.5	42.6
25,001 to 50,000	26	69	77	44	834	1,569	1,510	1,001	30.8	44.2	50.9	44.2
50,001 to 100,000	26	73	Q	32	779	1,308	842	547	33.7	56.0	134.7	59.3
Over 100,000	77	206	143	85	1,101	1,796	1,425	1,011	69.7	114.9	100.4	83.6
Provider of Natural Gas (more than one may apply)												
Local Utility	223	593	529	337	6,102	11,915	13,151	9,597	36.5	49.7	40.2	35.1
Some Other Provider	64	93	71	Q	954	1,534	917	861	67.3	60.5	77.5	59.1

Q=Data withheld because the Relative Standard Error (RSE) was greater than 50 percent, or fewer than 20 buildings were sampled.

N=No responding cases in sample.

Notes: * Statistics for the "energy end uses" represent consumption in buildings that have the end use, not consumption for a particular fuel for a particular end use. * Due to rounding, data may not sum to totals.

Source: Energy Information Administration, Office of Energy Markets and End Use, Form EIA-871A of the 1999 Commercial Buildings Energy Consumption Survey.