

**Table C28. Natural Gas Consumption and Conditional Energy Intensity by Census Division for Non-Mall Buildings, 2003: Part 2**

	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 North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central
<b>All Buildings*</b> .....	171	210	99	3,593	6,326	2,281	47.6	33.2	43.3
<b>Building Floorspace (Square Feet)</b>									
1,001 to 5,000 .....	23	25	11	346	325	209	66.6	75.3	53.5
5,001 to 10,000 .....	13	34	Q	305	620	Q	44.0	54.9	Q
10,001 to 25,000 .....	29	28	Q	756	987	565	37.9	28.6	Q
25,001 to 50,000 .....	44	17	12	840	714	363	52.6	24.4	Q
50,001 to 100,000 .....	Q	27	Q	Q	806	Q	Q	33.1	Q
100,001 to 200,000 .....	19	Q	Q	512	1,238	Q	37.8	30.8	Q
200,001 to 500,000 .....	Q	23	Q	Q	786	Q	Q	28.9	Q
Over 500,000 .....	Q	18	Q	Q	Q	Q	Q	21.6	Q
<b>Principal Building Activity</b>									
Education .....	14	25	Q	380	1,274	Q	38.1	19.6	Q
Food Sales .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
Food Service .....	Q	42	Q	Q	339	Q	Q	123.8	Q
Health Care .....	Q	Q	17	Q	508	196	Q	87.5	86.2
Inpatient .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
Outpatient .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
Lodging .....	27	25	Q	508	630	Q	52.6	39.9	Q
Retail (Other Than Mall).....	Q	9	Q	Q	465	Q	Q	20.4	Q
Office .....	19	12	Q	518	821	321	37.4	14.7	28.5
Public Assembly .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
Public Order and Safety .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
Religious Worship .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
Service .....	13	Q	Q	211	Q	Q	60.7	Q	Q
Warehouse and Storage .....	Q	Q	Q	662	Q	Q	41.8	Q	Q
Other .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
Vacant .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Year Constructed</b>									
Before 1920 .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
1920 to 1945 .....	Q	Q	Q	385	Q	Q	73.1	Q	Q
1946 to 1959 .....	18	Q	Q	321	496	Q	56.7	Q	Q
1960 to 1969 .....	26	20	Q	603	556	Q	43.3	35.6	Q
1970 to 1979 .....	28	22	22	758	815	459	36.5	27.3	47.7
1980 to 1989 .....	Q	35	Q	Q	1,055	346	Q	32.8	73.0
1990 to 1999 .....	31	65	17	723	2,249	610	42.7	29.1	27.7
2000 to 2003 .....	Q	20	Q	Q	654	Q	Q	30.9	Q
<b>Climate Zone: 30-Year Average</b>									
Under 2,000 CDD and --									
More than 7,000 HDD .....	84	N	N	1,722	N	N	48.8	N	N
5,500-7,000 HDD .....	43	N	N	Q	N	N	Q	N	N
4,000-5,499 HDD .....	44	58	Q	834	1,705	Q	52.3	33.9	Q
Fewer than 4,000 HDD .....	N	131	Q	N	3,643	Q	N	35.9	34.9
2,000 CDD or More and --									
Fewer than 4,000 HDD .....	N	Q	Q	N	Q	Q	N	22.1	43.7
<b>Number of Floors</b>									
One .....	50	82	31	1,095	2,590	978	45.7	31.8	31.8
Two .....	64	46	34	1,461	1,439	571	43.7	31.9	58.9
Three .....	23	Q	Q	581	600	Q	39.2	Q	Q
Four to Nine .....	33	41	Q	417	1,182	Q	78.0	35.1	Q
Ten or More .....	Q	Q	Q	Q	Q	Q	Q	Q	Q

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**Table C28. Natural Gas Consumption and Conditional Energy Intensity by Census Division for Non-Mall Buildings, 2003: Part 2**

	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 North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central
<b>All Buildings*</b> .....	171	210	99	3,593	6,326	2,281	47.6	33.2	43.3
<b>Number of Workers (main shift)</b>									
Fewer than 5 .....	29	26	Q	653	727	485	44.7	35.3	30.0
5 to 9 .....	19	23	10	447	616	393	42.4	37.5	24.9
10 to 19 .....	29	22	7	664	688	246	43.3	31.9	27.2
20 to 49 .....	46	36	31	764	900	498	59.6	40.4	62.8
50 to 99 .....	21	25	Q	572	1,067	Q	36.4	23.3	Q
100 to 249 .....	Q	Q	Q	Q	993	Q	Q	45.5	Q
250 or More .....	Q	33	Q	Q	1,335	Q	Q	24.8	Q
<b>Weekly Operating Hours</b>									
Fewer than 40 .....	Q	8	Q	Q	334	Q	Q	23.3	Q
40 to 48 .....	20	21	16	553	834	564	36.5	25.8	28.8
49 to 60 .....	51	24	Q	919	1,203	323	55.7	19.8	Q
61 to 84 .....	24	31	11	665	1,211	482	35.8	25.4	23.2
85 to 167 .....	Q	41	Q	Q	1,010	Q	Q	40.1	Q
Open Continuously .....	47	86	43	773	1,733	676	60.4	49.5	63.9
<b>Ownership and Occupancy</b>									
Nongovernment Owned .....	147	170	72	3,002	4,621	1,575	48.8	36.7	46.0
Owner Occupied .....	84	77	23	1,728	2,243	771	48.5	34.5	30.4
Nonowner Occupied .....	63	92	49	1,253	2,368	799	50.0	38.9	61.2
Unoccupied .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
Government Owned .....	25	41	26	591	1,705	706	41.7	23.8	37.2
Federal .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
State .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
Local .....	20	28	11	479	973	310	41.2	28.6	35.6
<b>Vacancy Status</b>									
Completely Vacant .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
Mostly Vacant .....	Q	Q	N	Q	Q	N	Q	Q	N
Partially Vacant .....	24	24	7	467	1,088	270	51.0	22.4	27.6
Not At All Vacant .....	142	186	91	3,023	5,212	2,006	47.0	35.6	45.4
<b>Number of Establishments</b>									
One .....	121	172	83	2,582	4,735	1,810	47.0	36.4	45.7
2 to 5 .....	36	25	Q	721	1,018	Q	50.3	24.7	Q
6 to 10 .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
11 to 20 .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
More than 20 .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
Currently Unoccupied .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Predominant Exterior Wall Material</b>									
Brick, Stone or Stucco .....	72	112	51	1,541	3,205	1,336	46.8	35.1	37.9
Concrete (Block or Poured) .....	48	Q	Q	776	1,055	467	61.3	Q	69.5
Concrete Panels .....	19	Q	Q	315	Q	Q	59.1	20.3	Q
Siding or Shingles .....	14	Q	Q	326	Q	Q	44.0	Q	Q
Metal Panels .....	17	22	Q	595	725	Q	29.1	30.7	Q
Window Glass .....	Q	Q	N	Q	Q	N	Q	Q	N
Other .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
No One Major Type .....	Q	Q	N	Q	Q	N	Q	Q	N

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**Table C28. Natural Gas Consumption and Conditional Energy Intensity by Census Division for Non-Mall Buildings, 2003: Part 2**

	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 North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central
<b>All Buildings*</b> .....	171	210	99	3,593	6,326	2,281	47.6	33.2	43.3
<b>Predominant Roof Material</b>									
Built-Up .....	55	80	47	1,081	2,076	635	51.4	38.5	74.6
Shingles (Not Wood) .....	30	35	15	714	1,009	458	42.6	34.5	33.7
Metal Surfacing .....	31	27	16	756	1,117	603	41.1	24.3	26.5
Synthetic or Rubber .....	42	57	16	779	1,792	483	53.7	31.7	33.6
Slate or Tile .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
Wooden Materials .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
Concrete .....	Q	Q	N	Q	Q	N	Q	Q	N
Other .....	N	Q	N	N	Q	N	N	Q	N
No One Major Type .....	N	Q	N	N	Q	N	N	Q	N
<b>Renovations in Buildings Constructed Before 1980 (more than one may apply)</b>									
Any Type of Renovation									
Since 1980 .....	75	59	29	1,481	1,279	613	50.9	46.5	47.1
Addition or Annex .....	Q	Q	14	577	Q	235	63.0	Q	61.6
Reduction In Floorspace .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
Cosmetic Improvements .....	50	32	24	1,112	814	508	45.0	39.1	46.4
Wall or Roof Replacement .....	28	20	Q	717	557	Q	39.1	35.9	Q
Interior Wall									
Re-Configuration .....	30	20	Q	717	665	Q	41.8	29.3	Q
HVAC Equipment Upgrade .....	54	Q	21	987	896	345	54.6	53.3	61.7
Lighting Upgrade .....	40	18	21	828	608	362	48.0	28.8	59.3
Window Replacement .....	19	Q	Q	461	Q	Q	40.7	Q	Q
Plumbing System Upgrade .....	25	16	Q	527	427	Q	47.3	37.6	Q
Insulation Upgrade .....	18	Q	Q	427	Q	Q	41.1	Q	Q
Other Renovation .....	N	Q	Q	N	Q	Q	N	Q	Q
No Renovations Since 1980 .....	43	31	21	943	1,089	537	46.1	28.0	38.2
Building Newer than 1980 .....	52	120	49	1,169	3,958	1,131	44.8	30.4	43.6
<b>Energy Sources (more than one may apply)</b>									
Electricity .....	171	210	99	3,593	6,326	2,281	47.6	33.2	43.3
Natural Gas .....	171	210	99	3,593	6,326	2,281	47.6	33.2	43.3
Fuel Oil .....	40	74	Q	629	1,696	Q	64.1	43.5	Q
District Heat .....	Q	Q	Q	Q	526	Q	Q	Q	Q
District Chilled Water .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
Propane .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Space-Heating Energy Sources</b>									
Natural Gas .....	167	183	94	3,422	4,852	2,110	48.8	37.7	44.4
Natural Gas Main .....	154	166	85	3,091	4,175	1,817	49.7	39.7	46.8
Natural Gas Secondary .....	Q	17	Q	Q	677	Q	Q	25.0	Q
Other Excluding Natural Gas .....	Q	27	Q	Q	1,398	Q	Q	19.2	Q
Buildings without Heating .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Primary Space-Heating Energy Source</b>									
Electricity .....	14	37	10	390	1,463	331	35.6	25.3	29.0
Natural Gas .....	154	166	85	3,091	4,175	1,817	49.7	39.7	46.8
Fuel Oil .....	Q	Q	N	Q	Q	N	Q	Q	N
District Heat .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
Propane .....	N	Q	N	N	Q	N	N	Q	N
Other .....	Q	Q	N	Q	Q	N	Q	Q	N

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	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 North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central
<b>All Buildings*</b> .....	171	210	99	3,593	6,326	2,281	47.6	33.2	43.3
<b>Cooling Energy Sources</b>									
Natural Gas .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other Excluding Natural Gas .....	155	195	97	3,269	6,147	2,245	47.5	31.8	43.2
Buildings without Cooling .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Water-Heating Energy Sources</b>									
Natural Gas .....	123	157	81	2,382	3,649	1,456	51.7	43.0	55.5
Other Excluding Natural Gas .....	41	48	15	952	2,425	715	43.5	19.6	21.6
Bldgs without Water Heating .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Cooking Energy Sources</b>									
Natural Gas .....	60	131	47	913	2,741	786	65.4	47.6	59.8
Other Excluding Natural Gas .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
Buildings without Cooking .....	104	70	48	2,496	3,208	1,320	41.8	21.9	36.1
<b>Energy End Uses (more than one may apply)</b>									
Buildings with Space Heating .....	171	210	99	3,591	6,250	2,256	47.7	33.5	43.7
Buildings with Cooling .....	163	207	98	3,368	6,258	2,254	48.4	33.1	43.3
Buildings with Water Heating .....	165	204	96	3,334	6,074	2,171	49.4	33.6	44.3
Buildings with Cooking .....	67	140	51	1,097	3,118	961	61.0	44.9	53.2
Buildings with Manufacturing .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
Buildings with Electricity Generation .....	39	73	24	591	1,672	301	66.2	43.5	80.1
<b>Percent of Floorspace Heated</b>									
Not Heated .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
1 to 50 .....	Q	19	Q	Q	525	Q	Q	35.3	Q
51 to 99 .....	14	26	10	292	1,201	224	49.0	21.9	42.4
100 .....	154	165	82	3,109	4,525	1,774	49.6	36.4	46.2
<b>Percent of Floorspace Cooled</b>									
Not Cooled .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
1 to 50 .....	48	36	8	1,033	1,570	391	46.2	23.2	21.5
51 to 99 .....	57	37	14	1,051	1,611	312	54.1	23.0	44.0
100 .....	58	134	75	1,284	3,076	1,551	45.5	43.5	48.6
<b>Heating Equipment (more than one may apply)</b>									
Heat Pumps .....	Q	66	17	Q	1,947	373	Q	33.8	45.1
Packaged Heat Pumps .....	Q	Q	Q	Q	1,057	Q	Q	Q	Q
Split-System Heat Pumps .....	Q	20	Q	Q	737	Q	Q	27.8	Q
Individual Room Heat Pumps .....	Q	19	Q	Q	736	Q	Q	25.4	Q
Furnaces .....	87	64	21	1,981	2,050	784	43.8	31.5	26.2
Individual Space Heaters .....	56	31	12	1,072	1,195	399	51.9	25.5	29.8
District Heat .....	Q	Q	Q	Q	514	Q	Q	Q	Q
Boilers .....	78	93	58	1,454	1,795	767	53.9	51.8	75.6
Packaged Heating Units .....	39	92	34	907	2,361	966	42.8	39.1	35.2
Other .....	Q	Q	Q	Q	Q	Q	Q	Q	Q

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	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central
<b>All Buildings*</b> .....	171	210	99	3,593	6,326	2,281	47.6	33.2	43.3
<b>Cooling Equipment (more than one may apply)</b>									
Residential-Type Central									
Air Conditioners .....	65	31	15	1,142	1,001	407	57.3	31.2	36.6
Heat Pumps .....	Q	68	16	Q	2,023	392	Q	33.4	42.0
Packaged Heat Pumps .....	Q	Q	Q	Q	1,045	Q	Q	Q	Q
Split-System Heat Pumps .....	Q	21	Q	Q	755	Q	Q	28.2	Q
Individual Room Heat Pumps .....	Q	20	Q	Q	776	Q	Q	25.2	Q
Individual Air Conditioners .....	38	45	17	809	1,232	484	47.4	36.6	35.0
District Chilled Water .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
Central Chillers .....	38	54	29	635	1,495	453	59.1	35.9	64.2
Packaged Air Conditioning									
Units .....	96	125	55	2,080	3,426	1,313	46.0	36.6	42.2
Swamp Coolers .....	N	Q	Q	N	Q	Q	N	Q	Q
Other .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Main Equipment Replaced Since 1990 (more than one may apply)</b>									
Heating .....	66	57	33	1,320	1,344	545	49.8	42.4	Q
Cooling .....	83	56	46	1,631	1,666	777	50.8	33.9	59.8
<b>Water Heating Equipment</b>									
Centralized System .....	100	123	58	2,109	3,334	1,495	47.5	36.8	38.6
Distributed System .....	25	30	7	576	1,005	260	43.7	29.5	27.2
Combination of Centralized and Distributed System .....	39	52	Q	649	1,735	416	60.6	29.9	75.4
<b>Energy-Related Space Functions (more than one may apply)</b>									
Commercial Food Preparation .....	67	140	51	1,097	3,118	961	61.0	44.9	53.2
Activities with Large Amounts of Hot Water .....	86	130	49	1,391	2,806	833	62.1	46.5	58.9
Separate Computer Area .....	63	89	37	1,345	3,137	900	46.7	28.3	41.1
<b>HVAC Conservation Features (more than one may apply)</b>									
Variable Air-Volume System .....	49	61	48	1,067	2,053	619	45.7	29.5	77.0
Economizer Cycle .....	60	74	37	1,258	2,413	608	47.9	30.8	61.0
HVAC Maintenance .....	127	187	83	2,776	5,494	1,767	45.8	34.0	46.7
Energy Management and Control System (EMCS) .....	30	49	22	735	1,805	488	40.4	27.4	45.9
<b>Equipment Usage Reduced When Building Not In Full Use (more than one may apply)<sup>a</sup></b>									
Heating .....	106	126	69	2,362	4,413	1,576	45.0	28.5	44.0
Cooling .....	108	128	73	2,347	4,811	1,635	45.9	26.7	44.7
Lighting .....	118	121	54	2,645	4,449	1,529	44.7	27.1	35.6
Office Equipment .....	58	41	11	1,323	1,369	421	44.1	29.8	26.7

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	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central	West North Central	South Atlantic	East South Central
<b>All Buildings*</b> .....	171	210	99	3,593	6,326	2,281	47.6	33.2	43.3
<b>Annual Consumption (hundred cubic feet)</b>									
1,000 or Less .....	4	5	2	272	639	225	15.7	8.1	8.9
1,001 to 5,000 .....	27	32	18	860	1,484	815	31.6	21.6	22.4
5,001 to 10,000 .....	23	27	Q	538	1,123	Q	43.2	23.6	Q
10,001 to 25,000 .....	33	38	16	678	1,074	463	49.1	35.7	35.1
25,001 to 50,000 .....	28	29	Q	534	629	Q	52.7	46.7	Q
50,001 to 100,000 .....	Q	Q	Q	Q	Q	Q	Q	Q	Q
Over 100,000 .....	Q	60	Q	Q	766	Q	Q	77.9	Q
<b>Provider of Natural Gas (more than one may apply)</b>									
Local Utility .....	153	190	94	3,356	5,730	2,205	45.6	33.2	42.5
Some Other Provider .....	22	27	Q	307	Q	Q	71.8	31.4	Q

See "Guide to the Tables" or "Glossary" for further explanations of the terms used in this table. Both can be accessed from the CBECS web site - <http://www.eia.doe.gov/emeu/cbecs>.

\* Figures in this table do not include enclosed malls and strip malls. Mall buildings add an estimated 213 thousand buildings comprising 6.9 billion square feet. In the 1999 CBECS, malls represented 3.8 percent of total natural gas consumption.

<sup>a</sup> The definition for one or more of these row items has changed and may not be directly comparable with past CBECS estimates. See "Guide to the Tables" for discussion of the differences.

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 that use natural gas.

Notes: • 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. • Due to rounding, data may not sum to totals.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-871A, C, and E of the 2003 Commercial Buildings Energy Consumption Survey.