

**Table C23. Total Natural Gas Consumption and Expenditures in Non-Mall Buildings, 2003**

	All Buildings* Using Natural Gas			Natural Gas Consumption		Natural Gas Expenditures
	Number of Buildings (thousand)	Floorspace (million square feet)	Floorspace per Building (thousand square feet)	Total (trillion Btu)	Total (billion cubic feet)	Total (million dollars)
<b>All Buildings*</b> .....	2,391	43,468	18.2	1,928	1,870	14,525
<b>Building Floorspace (Square Feet)</b>						
1,001 to 5,000 .....	1,110	3,084	2.8	250	243	2,155
5,001 to 10,000 .....	496	3,692	7.4	209	202	1,689
10,001 to 25,000 .....	450	7,053	15.7	309	300	2,524
25,001 to 50,000 .....	168	6,025	35.8	258	250	1,865
50,001 to 100,000 .....	95	6,683	70.6	244	236	1,868
100,001 to 200,000 .....	48	6,645	138.4	249	241	1,737
200,001 to 500,000 .....	19	5,679	292.6	205	199	1,343
Over 500,000 .....	5	4,606	919.5	204	198	1,344
<b>Principal Building Activity</b>						
Education .....	213	7,045	33.1	268	260	1,889
Food Sales .....	98	747	7.6	39	37	332
Food Service .....	226	1,396	6.2	203	197	1,615
Health Care .....	72	2,544	35.5	243	235	1,538
Inpatient .....	7	1,805	257.0	204	198	1,241
Outpatient .....	65	739	11.4	38	37	297
Lodging .....	86	4,256	49.7	215	208	1,581
Retail (Other Than Mall).....	245	2,866	11.7	91	89	719
Office .....	488	8,208	16.8	269	261	2,201
Public Assembly .....	146	2,723	18.6	102	99	775
Public Order and Safety .....	36	637	17.7	29	28	234
Religious Worship .....	220	2,629	11.9	82	80	664
Service .....	281	2,496	8.9	139	135	1,096
Warehouse and Storage .....	187	5,494	29.4	132	128	976
Other .....	45	1,252	27.9	87	85	684
Vacant .....	49	1,176	24.2	28	27	220
<b>Year Constructed</b>						
Before 1920 .....	200	2,759	13.8	143	139	1,134
1920 to 1945 .....	338	4,679	13.9	229	223	1,708
1946 to 1959 .....	313	4,659	14.9	216	210	1,610
1960 to 1969 .....	309	5,635	18.2	255	248	1,872
1970 to 1979 .....	391	7,659	19.6	351	341	2,466
1980 to 1989 .....	303	6,469	21.3	291	282	2,270
1990 to 1999 .....	419	8,177	19.5	314	305	2,452
2000 to 2003 .....	118	3,431	29.1	127	123	1,012
<b>Census Region and Division</b>						
Northeast .....	397	9,181	23.1	428	415	3,553
New England .....	74	1,465	19.8	75	73	673
Middle Atlantic .....	323	7,716	23.9	353	343	2,880
Midwest .....	802	13,163	16.4	705	683	4,844
East North Central .....	546	9,570	17.5	528	512	3,649
West North Central .....	255	3,593	14.1	177	171	1,195
South .....	714	13,311	18.6	474	460	3,866
South Atlantic .....	308	6,326	20.5	217	210	1,934
East South Central .....	155	2,281	14.7	102	99	817
West South Central .....	251	4,704	18.7	156	151	1,115
West .....	479	7,813	16.3	320	311	2,261
Mountain .....	190	2,797	14.7	167	162	1,089
Pacific .....	289	5,016	17.4	153	149	1,172

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	All Buildings* Using Natural Gas			Natural Gas Consumption		Natural Gas Expenditures
	Number of Buildings (thousand)	Floorspace (million square feet)	Floorspace per Building (thousand square feet)	Total (trillion Btu)	Total (billion cubic feet)	Total (million dollars)
<b>All Buildings*</b> .....	2,391	43,468	18.2	1,928	1,870	14,525
<b>Climate Zone: 30-Year Average</b>						
Under 2,000 CDD and --						
More than 7,000 HDD .....	493	7,645	15.5	431	418	3,076
5,500-7,000 HDD .....	718	12,850	17.9	679	659	4,901
4,000-5,499 HDD .....	347	8,113	23.4	337	327	2,702
Fewer than 4,000 HDD .....	646	10,509	16.3	358	347	2,920
2,000 CDD or More and --						
Fewer than 4,000 HDD .....	187	4,350	23.2	122	119	925
<b>Number of Floors</b>						
One .....	1,431	14,940	10.4	664	644	5,406
Two .....	617	11,441	18.5	491	476	3,627
Three .....	242	5,668	23.5	241	234	1,816
Four to Nine .....	93	7,670	82.1	378	367	2,560
Ten or More .....	9	3,749	437.6	154	149	1,116
<b>Number of Workers (main shift)</b>						
Fewer than 5 .....	1,082	7,023	6.5	272	264	2,308
5 to 9 .....	474	4,084	8.6	198	192	1,666
10 to 19 .....	359	5,317	14.8	242	235	1,841
20 to 49 .....	289	8,212	28.5	395	383	2,951
50 to 99 .....	113	6,156	54.7	241	234	1,780
100 to 249 .....	52	5,127	98.1	235	228	1,652
250 or More .....	23	7,549	333.2	344	334	2,327
<b>Weekly Operating Hours</b>						
Fewer than 40 .....	382	3,259	8.5	107	104	892
40 to 48 .....	569	6,913	12.1	249	242	2,018
49 to 60 .....	607	10,191	16.8	374	363	2,928
61 to 84 .....	374	7,468	20.0	314	305	2,373
85 to 167 .....	233	5,225	22.4	257	249	1,906
Open Continuously .....	225	10,411	46.2	626	607	4,407
<b>Ownership and Occupancy</b>						
Nongovernment Owned .....	2,078	33,317	16.0	1,503	1,458	11,558
Owner Occupied .....	1,044	16,548	15.8	708	686	5,361
Nonowner Occupied .....	997	15,886	15.9	779	756	6,070
Unoccupied .....	Q	Q	Q	Q	Q	Q
Government Owned .....	313	10,150	32.4	425	412	2,967
Federal .....	23	1,083	46.3	35	34	226
State .....	72	2,438	33.8	98	95	748
Local .....	218	6,630	30.4	291	283	1,993
<b>Vacancy Status</b>						
Completely Vacant .....	37	933	25.6	18	18	142
Mostly Vacant .....	Q	Q	Q	Q	Q	Q
Partially Vacant .....	264	8,446	32.0	318	308	2,477
Not At All Vacant .....	2,079	33,845	16.3	1,582	1,534	11,828

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	All Buildings* Using Natural Gas			Natural Gas Consumption		Natural Gas Expenditures
	Number of Buildings (thousand)	Floorspace (million square feet)	Floorspace per Building (thousand square feet)	Total (trillion Btu)	Total (billion cubic feet)	Total (million dollars)
<b>All Buildings*</b> .....	2,391	43,468	18.2	1,928	1,870	14,525
<b>Number of Establishments</b>						
One .....	1,912	30,518	16.0	1,462	1,418	10,950
2 to 5 .....	382	7,593	19.9	307	298	2,377
6 to 10 .....	39	1,355	34.5	48	47	366
11 to 20 .....	12	1,271	102.6	34	33	248
More than 20 .....	9	1,797	Q	58	56	441
Currently Unoccupied .....	37	933	25.6	18	18	142
<b>Predominant Exterior Wall Material</b>						
Brick, Stone or Stucco .....	1,292	23,551	18.2	1,127	1,093	8,403
Concrete (Block or Poured) .....	423	7,323	17.3	351	340	2,622
Concrete Panels .....	83	4,680	56.4	180	174	1,326
Siding or Shingles .....	261	1,997	7.7	85	83	735
Metal Panels .....	276	4,023	14.6	130	126	1,059
Window Glass .....	11	696	65.0	14	14	83
Other .....	33	898	26.9	35	34	248
No One Major Type .....	Q	Q	Q	Q	Q	Q
<b>Predominant Roof Material</b>						
Built-Up .....	649	15,208	23.4	743	720	5,529
Shingles (Not Wood) .....	677	6,519	9.6	310	301	2,482
Metal Surfacing .....	436	5,781	13.2	194	188	1,516
Synthetic or Rubber .....	363	11,838	32.7	542	526	3,905
Slate or Tile .....	152	1,574	10.4	67	65	562
Wooden Materials .....	59	526	8.9	21	20	160
Concrete .....	34	Q	Q	24	23	168
Other .....	Q	Q	Q	Q	Q	Q
No One Major Type .....	13	378	29.1	16	16	124
<b>Renovations in Buildings Constructed Before 1980 (more than one may apply)</b>						
Any Type of Renovation						
Since 1980 .....	641	13,270	20.7	684	663	4,851
Addition or Annex .....	158	5,036	31.8	304	295	1,982
Reduction In Floorspace .....	18	964	53.6	52	50	390
Cosmetic Improvements .....	477	10,073	21.1	497	482	3,587
Wall or Roof Replacement .....	234	6,328	27.0	278	270	1,966
Interior Wall						
Re-Configuration .....	278	7,019	25.2	342	331	2,430
HVAC Equipment Upgrade .....	306	8,482	27.7	467	453	3,281
Lighting Upgrade .....	304	8,104	26.7	397	386	2,868
Window Replacement .....	195	5,000	25.6	242	235	1,734
Plumbing System Upgrade .....	213	5,714	26.8	287	278	2,051
Insulation Upgrade .....	142	2,960	20.8	132	128	978
Other Renovation .....	12	443	37.4	26	25	Q
No Renovations Since 1980 .....	910	12,120	13.3	512	497	3,939
Building Newer than 1980 .....	840	18,077	21.5	732	710	5,734

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	All Buildings* Using Natural Gas			Natural Gas Consumption		Natural Gas Expenditures
	Number of Buildings (thousand)	Floorspace (million square feet)	Floorspace per Building (thousand square feet)	Total (trillion Btu)	Total (billion cubic feet)	Total (million dollars)
<b>All Buildings*</b> .....	2,391	43,468	18.2	1,928	1,870	14,525
<b>Energy Sources (more than one may apply)</b>						
Electricity .....	2,390	43,461	18.2	1,927	1,869	14,523
Natural Gas .....	2,391	43,468	18.2	1,928	1,870	14,525
Fuel Oil .....	129	10,383	80.4	507	492	3,539
District Heat .....	25	2,444	99.5	47	46	323
District Chilled Water .....	17	1,765	101.7	35	34	244
Propane .....	47	2,470	52.7	106	103	751
Other .....	39	903	23.4	47	46	330
<b>Space-Heating Energy Sources</b>						
Natural Gas .....	2,165	36,959	17.1	1,803	1,749	13,515
Natural Gas Main .....	1,999	32,970	16.5	1,687	1,636	12,586
Natural Gas Secondary .....	166	3,989	24.0	116	113	929
Other Excluding Natural Gas .....	179	6,015	33.6	106	103	862
Buildings without Heating .....	47	494	10.6	Q	Q	Q
<b>Primary Space-Heating Energy Source</b>						
Electricity .....	281	6,162	21.9	177	171	1,434
Natural Gas .....	1,999	32,970	16.5	1,687	1,636	12,586
Fuel Oil .....	38	Q	42.3	20	20	162
District Heat .....	24	2,117	90.0	23	22	172
Propane .....	Q	Q	Q	Q	Q	Q
Other .....	Q	Q	Q	Q	Q	Q
<b>Cooling Energy Sources</b>						
Natural Gas .....	17	1,018	58.9	92	89	672
Other Excluding Natural Gas .....	2,136	40,006	18.7	1,729	1,677	13,046
Buildings without Cooling .....	238	2,444	10.3	107	104	807
<b>Water-Heating Energy Sources</b>						
Natural Gas .....	1,445	28,820	19.9	1,509	1,463	11,092
Other Excluding Natural Gas .....	681	12,313	18.1	361	350	2,933
Bldgs without Water Heating .....	265	2,334	8.8	57	56	500
<b>Cooking Energy Sources</b>						
Natural Gas .....	457	15,438	33.8	856	830	6,157
Other Excluding Natural Gas .....	107	3,218	30.0	141	137	1,007
Buildings without Cooking .....	1,827	24,812	13.6	931	903	7,361
<b>Energy End Uses (more than one may apply)</b>						
Buildings with Space Heating .....	2,344	42,974	18.3	1,909	1,852	14,377
Buildings with Cooling .....	2,153	41,023	19.1	1,821	1,766	13,718
Buildings with Water Heating .....	2,126	41,134	19.3	1,870	1,814	14,025
Buildings with Cooking .....	564	18,656	33.1	997	967	7,163
Buildings with Manufacturing .....	70	2,301	33.1	100	97	718
Buildings with Electricity Generation .....	104	10,402	99.7	534	518	3,718

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<b>All Buildings*</b> .....	2,391	43,468	18.2	1,928	1,870	14,525
<b>Percent of Floorspace Heated</b>						
Not Heated .....	47	494	10.6	Q	Q	Q
1 to 50 .....	231	4,006	17.4	97	94	831
51 to 99 .....	317	5,965	18.8	268	260	2,078
100 .....	1,796	33,002	18.4	1,544	1,498	11,468
<b>Percent of Floorspace Cooled</b>						
Not Cooled .....	238	2,444	10.3	107	104	807
1 to 50 .....	601	12,132	20	452	438	3,465
51 to 99 .....	402	9,732	24	451	438	3,341
100 .....	1,150	19,159	17	918	890	6,912
<b>Heating Equipment (more than one may apply)</b>						
Heat Pumps .....	152	5,552	37	224	217	1,804
Packaged Heat Pumps .....	86	3,323	39	140	135	1,115
Split-System Heat Pumps .....	50	1,453	29	42	41	361
Individual Room Heat Pumps .....	32	2,195	69	84	81	648
Furnaces .....	1,314	15,304	12	673	653	5,095
Individual Space Heaters .....	429	8,969	21	379	368	2,720
District Heat .....	24	2,291	95	39	38	269
Boilers .....	432	18,174	42	1,040	1,009	7,418
Packaged Heating Units .....	586	13,618	23	582	564	4,477
Other .....	85	1,801	21	47	46	368
<b>Cooling Equipment (more than one may apply)</b>						
Residential-Type Central						
Air Conditioners .....	652	7,982	12	391	379	2,867
Heat Pumps .....	176	5,832	33	234	227	1,887
Packaged Heat Pumps .....	100	3,352	33	145	141	1,163
Split-System Heat Pumps .....	59	1,489	25	45	43	382
Individual Room Heat Pumps .....	31	2,380	76	85	83	660
Individual Air Conditioners .....	392	9,114	23	410	398	3,040
District Chilled Water .....	17	1,765	102	35	34	244
Central Chillers .....	78	9,100	117	501	486	3,461
Packaged Air Conditioning						
Units .....	1,116	23,806	21	1,090	1,057	8,210
Swamp Coolers .....	78	1,265	16	81	78	520
Other .....	16	808	50	52	51	377
<b>Main Equipment Replaced Since 1990 (more than one may apply)</b>						
Heating .....	734	12,275	17	605	587	4,519
Cooling .....	873	16,047	18	779	756	5,761
<b>Water Heating Equipment</b>						
Centralized System .....	1,560	25,353	16	1,226	1,189	9,346
Distributed System .....	438	7,559	17	254	247	1,989
Combination of Centralized and Distributed System .....	128	8,222	64	390	378	2,691

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<b>All Buildings*</b> .....	2,391	43,468	18.2	1,928	1,870	14,525
<b>Energy-Related Space Functions (more than one may apply)</b>						
Commercial Food Preparation .....	563	18,644	33	996	966	7,156
Activities with Large Amounts of Hot Water .....	404	16,023	40	931	903	6,466
Separate Computer Area .....	373	20,615	55	875	849	6,230
<b>HVAC Conservation Features (more than one may apply)</b>						
Variable Air-Volume System .....	290	14,594	50	710	688	5,070
Economizer Cycle .....	348	16,655	48	805	781	5,703
HVAC Maintenance .....	1,576	36,984	24	1,659	1,609	12,356
Energy Management and Control System (EMCS) .....	155	11,626	75	477	463	3,318
<b>Equipment Usage Reduced When Building Not In Full Use (more than one may apply)<sup>a</sup></b>						
Heating .....	1,727	31,179	18	1,292	1,253	9,840
Cooling .....	1,676	31,437	19	1,288	1,249	9,785
Lighting .....	2,043	31,070	15	1,250	1,213	9,710
Office Equipment .....	863	12,670	15	476	462	3,666
<b>Annual Consumption (hundred cubic feet)</b>						
1,000 or Less .....	674	4,336	6	37	35	411
1,001 to 5,000 .....	1,011	9,732	10	249	242	2,223
5,001 to 10,000 .....	339	6,254	19	247	239	2,042
10,001 to 25,000 .....	232	7,767	34	360	349	2,796
25,001 to 50,000 .....	85	5,534	65	293	284	2,161
50,001 to 100,000 .....	30	3,969	132	218	211	1,450
Over 100,000 .....	21	5,875	285	525	510	3,441
<b>Provider of Natural Gas (more than one may apply)</b>						
Local Utility .....	2,255	38,362	17	1,631	1,582	12,577
Some Other Provider .....	149	6,372	43	389	377	2,537

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.