

Table C10. Consumption and Gross Energy Intensity by Climate Zone^a for Non-Mall Buildings, 2003

	Sum of Major Fuel Consumption (trillion Btu)					Total Floorspace of Buildings (million square feet)					Energy Intensity for Sum of Major Fuels (thousand Btu/square foot)				
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
All Buildings*	990	1,761	1,134	1,213	724	10,622	17,335	11,504	15,739	9,584	93.2	101.6	98.5	77.0	75.5
Building Floorspace (Square Feet)															
1,001 to 5,000	143	187	90	170	95	1,313	1,709	1,010	1,915	975	108.7	109.6	88.8	89.0	97.9
5,001 to 10,000	110	137	91	156	69	1,248	1,725	1,077	2,024	959	88.1	79.3	84.6	77.1	71.7
10,001 to 25,000	183	286	146	166	118	2,406	3,506	1,498	3,176	2,073	75.9	81.6	97.6	52.3	56.9
25,001 to 50,000	146	212	125	152	107	1,547	2,424	1,382	2,381	1,647	94.4	87.6	90.3	63.7	64.8
50,001 to 100,000	149	273	183	191	118	1,480	2,780	2,011	2,352	1,668	100.8	98.0	90.8	81.2	70.6
100,001 to 200,000	117	336	187	283	141	1,311	2,889	1,881	2,597	1,538	89.4	116.3	99.2	109.1	91.7
200,001 to 500,000	129	226	168	136	94	1,150	2,007	1,678	1,612	1,047	111.8	112.5	99.8	84.1	89.6
Over 500,000	Q	272	254	132	Q	1,073	1,766	1,966	1,573	1,282	Q	153.8	129.4	83.9	Q
Principal Building Activity															
Education	141	238	131	186	123	1,537	2,800	1,403	2,435	1,698	91.6	85.2	93.5	76.6	72.6
Food Sales	Q	Q	Q	Q	Q	271	368	Q	273	Q	Q	Q	Q	Q	Q
Food Service	52	96	Q	134	Q	227	400	219	440	366	230.1	238.7	Q	305.4	Q
Health Care	96	161	108	145	83	475	784	564	844	496	202.4	205.8	191.4	171.9	167.7
Inpatient	65	127	Q	127	Q	262	450	323	592	278	246.1	283.3	Q	215.0	Q
Outpatient	Q	34	Q	Q	Q	213	334	240	252	218	Q	101.5	Q	Q	Q
Lodging	69	174	110	104	Q	768	1,314	1,132	1,275	608	90.1	132.1	Q	81.4	Q
Retail (Other Than Mall).....	73	64	54	74	55	710	865	695	1,454	592	103.0	73.5	77.7	50.7	92.0
Office	145	364	298	162	165	1,593	3,165	3,125	2,341	1,985	90.7	114.9	95.4	69.3	83.2
Public Assembly	90	74	70	101	35	876	818	806	910	529	102.2	90.8	Q	111.1	65.8
Public Order and Safety	Q	Q	Q	Q	Q	Q	360	Q	Q	Q	Q	Q	Q	Q	Q
Religious Worship	26	62	26	31	19	408	1,320	499	1,039	488	62.9	46.9	52.8	29.4	38.2
Service	95	84	64	49	Q	944	1,185	644	969	308	100.4	71.2	99.5	50.3	Q
Warehouse and Storage	78	201	73	73	31	1,704	2,639	1,479	2,419	1,836	45.7	76.1	49.5	30.1	16.9
Other	Q	Q	Q	Q	Q	334	467	Q	Q	Q	Q	Q	Q	Q	Q
Vacant	Q	Q	Q	Q	Q	543	849	Q	569	318	Q	Q	Q	Q	Q
Year Constructed															
Before 1920	109	99	Q	Q	Q	1,227	1,413	731	290	Q	88.6	70.2	89.0	Q	Q
1920 to 1945	86	262	199	57	Q	1,089	2,266	1,985	1,239	405	79.3	115.5	100.2	45.7	Q
1946 to 1959	86	236	124	114	28	1,093	2,508	1,446	1,663	552	78.7	94.2	86.0	68.3	49.9
1960 to 1969	156	254	158	141	81	1,447	2,576	1,576	1,997	1,046	108.0	98.8	100.3	70.5	77.7
1970 to 1979	274	344	212	217	143	2,496	3,259	1,942	2,783	1,796	109.8	105.7	109.2	77.9	79.9
1980 to 1989	110	343	222	354	217	1,123	2,808	2,110	3,850	2,576	98.2	122.2	105.3	91.9	84.3
1990 to 1999	195	266	164	371	264	2,120	2,655	1,764	4,207	3,235	92.2	100.3	93.1	88.3	81.6
2000 to 2003	69	124	98	112	108	934	1,322	949	1,601	1,456	73.6	93.5	103.3	70.0	74.4
Census Region and Division															
Northeast	211	597	588	N	N	2,567	5,989	5,440	N	N	82.2	99.8	108.0	N	N
New England	62	282	N	N	N	Q	2,463	N	N	N	63.1	114.5	N	N	N
Middle Atlantic	Q	315	588	N	N	1,577	3,526	5,440	N	N	94.2	89.4	108.0	N	N
Midwest	573	1,112	114	N	N	5,910	10,584	1,609	N	N	97.0	105.1	70.5	N	N
East North Central	333	1,010	N	N	N	3,208	9,215	N	N	N	103.8	109.6	N	N	N
West North Central	240	102	114	N	N	2,702	Q	1,609	N	N	88.9	74.6	70.5	N	N
South	N	N	472	997	796	N	N	4,736	11,506	10,497	N	N	99.7	86.6	75.8
South Atlantic	N	N	311	635	296	N	N	3,065	7,126	3,807	N	N	101.4	89.0	77.7
East South Central	N	N	Q	Q	Q	N	N	Q	Q	Q	N	N	112.3	78.5	98.9
West South Central	N	N	Q	195	457	N	N	Q	2,255	6,258	N	N	Q	86.7	73.0
West	302	219	Q	389	84	3,052	2,234	718	6,125	692	99.0	98.2	96.4	63.5	121.0
Mountain	244	136	N	N	65	2,446	1,181	N	N	580	99.9	115.5	N	N	112.9
Pacific	Q	83	Q	389	Q	Q	Q	718	6,125	Q	95.1	78.8	96.4	63.5	Q

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Table C10. Consumption and Gross Energy Intensity by Climate Zone^a for Non-Mall Buildings, 2003

	Sum of Major Fuel Consumption (trillion Btu)					Total Floorspace of Buildings (million square feet)					Energy Intensity for Sum of Major Fuels (thousand Btu/square foot)				
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
All Buildings*	990	1,761	1,134	1,213	724	10,622	17,335	11,504	15,739	9,584	93.2	101.6	98.5	77.0	75.5
Number of Floors															
One	320	588	247	484	298	3,750	6,253	3,156	8,011	4,810	85.4	94.1	78.2	60.4	61.9
Two	275	383	243	271	139	3,146	4,867	2,623	3,423	2,210	87.5	78.7	92.5	79.1	62.9
Three	143	220	101	123	32	1,664	2,643	1,228	1,473	492	86.1	83.4	82.6	83.4	64.0
Four to Nine	206	393	328	264	145	1,731	2,525	2,744	1,982	1,103	119.3	155.7	119.5	133.2	131.2
Ten or More	Q	176	215	71	Q	330	1,047	1,752	850	968	Q	168.0	122.5	83.5	Q
Elevators and Escalators (more than one may apply)															
Any Elevators	422	842	659	556	348	4,047	6,462	5,728	4,967	3,413	104.2	130.3	115.0	111.9	101.9
Number of Elevators															
One	162	246	146	114	63	1,714	2,647	1,539	1,272	1,048	94.5	93.1	95.0	89.5	60.4
Two to Five	185	335	234	272	131	1,906	2,479	2,282	2,263	1,199	97.3	135.2	102.5	120.3	109.2
Six or More	74	261	278	170	154	427	1,336	1,908	1,431	1,166	173.9	195.1	146.0	118.5	131.8
Any Escalators	Q	Q	Q	Q	Q	Q	Q	788	Q	Q	Q	Q	Q	Q	Q
Number of Workers (main shift)															
Fewer than 5	164	348	93	140	72	2,699	4,857	1,755	4,076	2,106	60.9	71.7	53.1	34.2	34.1
5 to 9	83	139	79	109	59	1,035	1,529	1,013	1,646	944	79.9	91.0	77.9	65.9	62.9
10 to 19	124	166	103	112	89	1,374	2,155	1,359	1,599	1,317	90.5	76.8	75.9	70.3	67.6
20 to 49	220	254	232	226	118	2,014	2,709	2,132	2,498	1,635	109.3	93.6	109.0	90.4	72.2
50 to 99	152	222	128	157	68	1,673	2,166	1,316	1,812	966	91.2	102.4	97.3	86.5	70.7
100 to 249	118	232	145	262	81	996	1,561	1,434	2,109	771	118.0	148.9	100.9	124.4	104.5
250 or More	128	399	353	207	237	832	2,357	2,495	1,999	1,845	154.2	169.5	141.6	103.6	128.3
Weekly Operating Hours															
Fewer than 40	43	83	24	48	28	977	2,330	658	1,903	994	44.5	35.6	37.1	25.4	28.5
40 to 48	113	282	122	162	94	1,549	3,147	1,983	3,017	1,926	73.1	89.6	61.5	53.6	49.1
49 to 60	222	400	206	201	150	3,094	4,123	2,380	3,589	2,537	71.8	97.0	86.6	56.0	59.2
61 to 84	168	260	177	212	107	1,586	2,887	1,897	2,557	1,407	106.1	90.2	93.2	82.8	76.1
85 to 167	199	218	174	180	118	1,552	1,665	1,386	1,384	1,105	128.2	131.0	125.7	130.0	107.0
Open Continuously	244	517	430	410	225	1,863	3,184	3,200	3,288	1,615	130.9	162.5	134.4	124.7	139.5
Ownership and Occupancy															
Nongovernment Owned	704	1,177	885	904	533	8,063	12,350	9,204	12,409	7,396	87.3	95.3	96.1	72.9	72.0
Owner Occupied	314	633	464	415	235	3,894	6,510	4,791	5,496	2,899	80.5	97.2	96.8	75.6	81.0
Nonowner Occupied	388	529	414	487	297	3,972	5,030	4,244	6,439	4,228	97.6	105.2	97.6	75.6	70.1
Unoccupied	Q	Q	Q	Q	Q	Q	810	Q	473	Q	Q	Q	Q	Q	Q
Government Owned	285	583	249	309	191	2,558	4,985	2,300	3,330	2,189	111.6	117.0	108.1	92.6	87.3
Federal	Q	Q	Q	Q	Q	167	1,135	Q	144	Q	Q	Q	169.3	Q	Q
State	115	101	80	153	Q	696	709	692	1,247	Q	165.0	142.6	115.5	123.0	Q
Local	151	290	97	142	120	1,695	3,141	1,182	1,939	1,642	89.4	92.3	81.8	73.3	73.2
Vacancy Status															
Completely Vacant	Q	Q	Q	Q	Q	Q	821	Q	491	303	Q	Q	Q	Q	Q
Mostly Vacant	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Partially Vacant	188	362	243	134	158	2,295	3,261	2,606	2,179	2,041	82.1	111.0	93.2	61.6	77.6
Not At All Vacant	882	1,547	986	1,249	719	8,690	14,697	9,609	14,882	8,830	101.4	105.3	102.6	83.9	81.4
Number of Establishments															
One	696	1,333	777	896	465	7,138	12,514	7,713	11,616	6,163	97.6	106.5	100.7	77.1	75.5
2 to 5	252	321	196	276	117	2,527	3,217	2,021	3,008	1,792	99.8	99.6	96.8	91.6	65.4
6 to 10	57	117	60	51	93	584	867	530	586	791	97.8	135.0	113.5	86.7	117.6
11 to 20	Q	80	64	72	68	Q	747	793	694	723	Q	106.9	80.5	104.3	94.7
More than 20	Q	Q	Q	89	134	538	641	1,227	1,236	1,417	Q	Q	Q	72.4	94.7
Currently Unoccupied	Q	Q	Q	Q	Q	Q	821	Q	491	303	Q	Q	Q	Q	Q

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	Sum of Major Fuel Consumption (trillion Btu)					Total Floorspace of Buildings (million square feet)					Energy Intensity for Sum of Major Fuels (thousand Btu/square foot)				
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
All Buildings*	990	1,761	1,134	1,213	724	10,622	17,335	11,504	15,739	9,584	93.2	101.6	98.5	77.0	75.5
Predominant Exterior Wall Material															
Brick, Stone or Stucco	458	1,096	621	668	342	4,477	9,905	6,068	8,295	4,071	102.4	110.7	102.4	80.6	83.9
Concrete (Block or Poured)	216	222	213	191	132	2,023	2,599	1,840	2,428	1,942	106.6	85.4	115.9	78.8	68.0
Concrete Panels	109	160	121	124	154	895	1,252	1,219	1,431	1,762	121.7	127.4	99.2	86.9	87.1
Siding or Shingles	83	81	22	72	Q	1,294	1,319	443	849	214	64.3	61.6	49.0	84.3	Q
Metal Panels	102	112	84	134	32	1,665	1,492	1,287	2,394	1,074	61.0	74.8	65.2	56.1	29.5
Window Glass	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	351	Q	Q	Q	Q	Q	Q	Q	Q
No One Major Type	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Predominant Roof Material															
Built-Up	343	592	433	432	283	3,311	5,174	3,862	5,283	3,540	103.6	114.5	112.2	81.8	79.8
Shingles (Not Wood)	161	264	156	184	58	1,788	3,309	1,498	2,657	943	90.3	79.6	103.8	69.1	61.9
Metal Surfacing	146	128	88	184	84	2,396	2,091	1,620	3,390	2,448	60.9	61.2	54.4	54.2	34.3
Synthetic or Rubber	279	577	334	246	214	2,530	5,225	2,847	2,561	1,566	110.1	110.3	117.3	96.0	136.7
Slate or Tile	Q	50	40	72	30	145	478	451	972	416	Q	103.6	88.0	74.1	71.9
Wooden Materials	Q	Q	Q	Q	Q	Q	217	Q	254	Q	Q	Q	Q	Q	Q
Concrete	Q	Q	Q	Q	Q	Q	Q	Q	320	394	Q	Q	Q	Q	Q
Other	Q	Q	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	Q	Q	Q	Q
Renovations in Buildings Constructed Before 1980 (more than one may apply)															
Any Type of Renovation															
Since 1980	387	578	411	267	124	3,793	5,445	4,025	3,157	1,424	102.0	106.1	102.1	84.4	87.0
Addition or Annex	205	215	152	107	54	1,800	1,798	1,489	930	533	113.6	119.6	102.0	115.0	101.8
Reduction In Floorspace	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Cosmetic Improvements	307	418	304	196	93	2,780	3,719	3,124	2,449	1,047	110.5	112.3	97.2	80.0	88.7
Wall or Roof Replacement	182	233	211	97	54	1,723	2,178	2,280	1,316	573	105.7	107.1	92.5	73.7	94.5
Interior Wall															
Re-Configuration	219	285	224	125	58	1,983	2,300	2,297	1,388	550	110.4	124.1	97.4	89.8	106.2
HVAC Equipment Upgrade	262	345	292	187	72	2,415	3,076	2,660	1,879	738	108.4	112.0	109.6	99.4	97.2
Lighting Upgrade	274	339	263	148	61	2,492	3,124	2,353	1,707	600	110.1	108.6	111.7	86.8	101.1
Window Replacement	133	234	175	53	Q	1,384	2,142	1,938	650	241	96.0	109.1	90.1	81.3	Q
Plumbing System Upgrade	184	230	189	106	Q	1,616	1,939	1,948	1,204	437	113.5	118.7	97.1	88.1	Q
Insulation Upgrade	90	110	105	55	Q	907	1,181	1,079	583	265	99.5	93.3	97.6	93.8	Q
Other Renovation	Q	Q	Q	Q	N	Q	Q	Q	Q	N	Q	Q	Q	Q	N
No Renovations Since 1980	282	536	306	239	119	3,217	5,893	3,291	4,329	1,983	87.5	91.0	92.9	55.3	59.8
Building Newer than 1980	375	733	485	837	590	4,177	6,785	4,823	9,658	7,267	89.7	108.0	100.5	86.7	81.1
Energy Sources (more than one may apply)															
Electricity	1,086	1,929	1,243	1,386	879	11,300	18,549	12,374	17,064	10,894	96.1	104.0	100.4	81.2	80.7
Natural Gas	893	1,551	990	1,054	555	8,486	14,122	8,970	11,796	5,098	105.2	109.8	110.3	89.3	108.9
Fuel Oil	303	529	539	284	212	2,624	4,285	4,950	2,528	1,878	115.6	123.4	108.8	112.3	112.9
District Heat	Q	Q	228	Q	Q	825	1,917	1,349	1,025	460	Q	Q	168.7	Q	Q
District Chilled Water	Q	Q	Q	Q	Q	350	698	514	659	633	Q	Q	Q	Q	Q
Propane	118	214	71	123	57	1,607	2,036	1,102	1,403	928	73.7	105.2	64.7	87.8	61.9
Other	45	33	Q	Q	Q	483	378	268	223	Q	94.1	87.6	Q	Q	Q

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	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
All Buildings*	990	1,761	1,134	1,213	724	10,622	17,335	11,504	15,739	9,584	93.2	101.6	98.5	77.0	75.5
Space-Heating Energy Sources (more than one may apply)															
Electricity	406	663	577	615	551	4,620	6,930	5,818	8,674	7,156	88.0	95.7	99.2	70.9	77.0
Natural Gas	818	1,335	757	903	330	7,970	12,658	7,002	10,350	3,128	102.7	105.5	108.1	87.3	105.4
Fuel Oil	149	161	242	Q	Q	1,563	1,687	2,418	385	Q	95.3	95.7	Q	Q	Q
District Heat	Q	Q	222	Q	Q	818	1,882	1,281	918	432	Q	Q	173.0	Q	Q
Propane	34	24	Q	Q	Q	849	650	Q	755	Q	39.5	36.7	37.7	Q	Q
Other	Q	Q	Q	Q	Q	339	208	Q	Q	Q	79.7	Q	Q	Q	Q
Primary Space-Heating Energy Source															
Electricity	171	266	230	376	450	1,984	3,236	2,859	5,863	6,274	86.4	82.1	80.3	64.2	71.8
Natural Gas	738	1,209	688	781	280	7,264	11,744	6,310	8,738	2,616	101.6	103.0	109.0	89.4	107.2
Fuel Oil	79	99	Q	Q	Q	962	1,283	1,587	Q	Q	82.3	77.3	Q	Q	Q
District Heat	Q	Q	212	Q	Q	752	1,771	1,231	883	Q	Q	Q	172.6	Q	Q
Propane	11	14	Q	Q	Q	394	492	Q	423	Q	29.1	29.2	35.4	Q	Q
Other	Q	Q	Q	Q	N	Q	Q	Q	Q	N	Q	Q	Q	Q	N
Cooling Energy Sources (more than one may apply)															
Electricity	944	1,605	1,099	1,267	790	9,092	15,265	11,279	15,330	9,974	103.9	105.1	97.4	82.7	79.2
Natural Gas	Q	Q	Q	Q	Q	Q	358	Q	Q	Q	Q	Q	Q	Q	Q
District Chilled Water	Q	Q	Q	Q	Q	350	698	514	659	633	Q	Q	Q	Q	Q
Water-Heating Energy Sources (more than one may apply)															
Electricity	383	673	503	626	453	4,685	7,610	5,923	8,077	6,274	81.7	88.4	85.0	77.5	72.2
Natural Gas	663	1,067	661	797	416	6,152	9,299	5,421	8,047	3,393	107.8	114.7	121.9	99.1	122.5
Fuel Oil	48	53	Q	Q	Q	389	505	933	Q	Q	124.1	105.6	Q	Q	Q
District Heat	Q	Q	178	Q	Q	582	787	1,073	695	Q	Q	Q	165.9	Q	Q
Propane	Q	Q	Q	Q	Q	341	312	Q	260	Q	Q	Q	44.9	Q	Q
Cooking Energy Sources (more than one may apply)															
Electricity	256	513	279	288	243	2,123	4,210	2,235	2,472	2,120	120.6	121.8	125.0	116.3	114.8
Natural Gas	298	568	470	454	283	2,217	4,071	3,464	3,518	2,167	134.4	139.6	135.8	129.1	130.6
Propane	27	Q	Q	Q	Q	354	259	Q	387	Q	75.5	Q	Q	Q	Q
Energy End Uses (more than one may apply)															
Buildings with Space Heating	986	1,750	1,127	1,168	674	10,109	16,720	11,239	13,965	7,995	97.5	104.7	100.2	83.7	84.3
Buildings with Cooling	906	1,553	1,106	1,178	721	8,550	14,524	10,946	13,977	8,943	105.9	106.9	101.1	84.3	80.7
Buildings with Water Heating	966	1,571	1,116	1,160	686	9,474	15,160	10,785	13,192	7,867	102.0	103.6	103.4	87.9	87.2
Buildings with Cooking	408	805	586	538	374	3,302	6,369	4,736	4,621	3,208	123.7	126.4	123.8	116.5	116.6
Buildings with Manufacturing	61	64	79	44	Q	855	729	772	608	Q	71.5	88.2	102.9	73.1	Q
Buildings with Electricity Generation	240	571	396	296	190	1,764	3,862	2,973	2,583	1,639	135.9	147.8	133.3	114.7	115.8
Percent of Floorspace Heated															
Not Heated	100	178	116	217	205	1,420	2,088	1,263	3,665	3,194	70.5	85.5	91.9	59.3	64.3
1 to 50	42	62	73	84	37	1,111	1,109	1,325	1,845	1,460	38.2	56.0	55.3	45.3	25.3
51 to 99	139	168	160	180	100	1,377	1,735	1,713	2,349	932	100.6	96.6	93.5	76.6	107.4
100	805	1,521	893	905	537	7,620	13,876	8,202	9,772	5,602	105.6	109.6	108.9	92.6	95.9

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Table C10. Consumption and Gross Energy Intensity by Climate Zone^a for Non-Mall Buildings, 2003

	Sum of Major Fuel Consumption (trillion Btu)					Total Floorspace of Buildings (million square feet)					Energy Intensity for Sum of Major Fuels (thousand Btu/square foot)				
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
All Buildings*	990	1,761	1,134	1,213	724	10,622	17,335	11,504	15,739	9,584	93.2	101.6	98.5	77.0	75.5
Percent of Floorspace Cooled															
Not Cooled	180	376	137	208	158	2,979	4,283	1,557	3,654	2,245	60.5	87.8	87.7	56.8	70.4
1 to 50	270	325	218	166	49	3,133	4,657	3,422	3,480	1,906	86.0	69.7	63.6	47.6	25.5
51 to 99	255	425	375	233	126	2,327	3,568	3,297	2,803	1,215	109.5	119.0	113.6	83.2	103.3
100	381	804	514	779	547	3,089	6,300	4,227	7,693	5,822	123.5	127.6	121.6	101.3	94.0
Percent Lit When Open															
Zero	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
1 to 50	129	166	112	75	58	1,956	2,667	2,132	2,066	1,382	65.8	62.3	52.6	36.5	41.7
51 to 99	346	488	378	286	238	3,666	4,929	3,133	3,804	2,756	94.4	99.1	120.5	75.2	86.3
100	505	1,081	634	845	425	4,362	8,654	5,924	8,979	4,870	115.7	124.9	107.0	94.1	87.3
Building Never Open/ Electricity Not Used	Q	Q	Q	Q	Q	597	1,064	282	808	459	Q	Q	Q	Q	Q
Percent Lit When Closed															
Zero	236	396	148	212	141	3,536	4,589	2,252	4,370	2,637	66.7	86.2	65.7	48.5	53.5
1 to 50	478	777	502	557	312	4,772	8,916	5,541	7,172	4,546	100.2	87.1	90.6	77.7	68.6
51 to 100	Q	Q	Q	Q	45	263	409	442	478	501	Q	Q	Q	Q	90.7
Building Never Closed/ Electricity Not Used	244	518	430	410	225	2,051	3,421	3,269	3,718	1,899	119.0	151.3	131.6	110.3	118.6
Heating Equipment (more than one may apply)															
Heat Pumps	75	176	213	222	119	727	1,471	1,971	3,283	1,361	102.8	119.7	108.2	67.5	87.6
Packaged Heat Pumps	Q	Q	144	125	93	433	995	1,267	1,749	997	Q	112.6	113.5	71.2	93.4
Split-System Heat Pumps	Q	Q	Q	66	29	Q	227	686	1,140	419	Q	Q	112.4	58.0	69.1
Individual Room Heat Pumps	Q	Q	56	64	Q	Q	497	537	1,021	287	Q	Q	105.0	62.6	Q
Furnaces	370	512	207	286	118	4,587	6,411	2,648	4,313	1,658	80.6	79.9	78.0	66.4	71.1
Individual Space Heaters	236	314	247	166	60	3,014	3,582	2,524	2,569	856	78.4	87.7	98.0	64.5	70.2
District Heat	Q	Q	218	Q	Q	801	1,749	1,266	918	432	Q	Q	171.9	Q	Q
Boilers	435	740	533	381	155	4,060	6,835	4,693	3,334	1,500	107.1	108.3	113.5	114.3	103.6
Packaged Heating Units	239	441	326	435	287	2,126	3,708	3,204	5,619	3,365	112.5	119.0	101.6	77.5	85.4
Other	63	58	Q	25	48	816	674	497	525	750	77.4	85.4	Q	47.3	63.9
Cooling Equipment (more than one may apply)															
Residential-Type Central															
Air Conditioners	197	273	219	152	83	1,971	3,078	2,207	2,056	1,723	99.9	88.7	99.1	73.8	48.4
Heat Pumps	76	182	221	233	125	739	1,542	1,998	3,398	1,365	102.8	118.1	110.5	68.6	91.7
Packaged Heat Pumps	50	Q	155	118	90	453	1,033	1,337	1,679	924	110.3	112.8	115.6	70.2	97.0
Split-System Heat Pumps	Q	Q	Q	70	31	Q	247	703	1,127	458	Q	Q	111.6	61.7	68.0
Individual Room Heat Pumps	Q	Q	55	78	Q	377	510	523	1,190	340	Q	Q	104.7	65.2	Q
Individual Air Conditioners	234	358	210	192	86	2,321	3,633	2,786	2,565	1,253	100.8	98.5	75.5	74.7	68.7
District Chilled Water	Q	Q	Q	Q	Q	350	698	514	659	633	Q	Q	Q	Q	Q
Central Chillers	200	433	348	326	225	1,604	2,658	2,473	2,695	2,205	124.7	162.8	140.7	120.9	101.8
Packaged Air Conditioning															
Units	505	858	588	600	312	4,565	7,740	6,076	7,703	3,884	110.6	110.8	96.8	77.8	80.4
Swamp Coolers	57	38	Q	Q	Q	515	468	Q	346	Q	111.7	81.6	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	336	Q	Q	Q	Q	Q	Q	Q	Q
Main Equipment Replaced Since 1990 (more than one may apply)															
Heating	263	481	273	229	122	3,263	4,981	3,204	3,195	1,759	80.5	96.5	85.1	71.7	69.4
Cooling	361	656	452	288	192	3,555	5,895	4,827	4,112	2,606	101.7	111.2	93.6	70.0	73.7

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Table C10. Consumption and Gross Energy Intensity by Climate Zone^a for Non-Mall Buildings, 2003

	Sum of Major Fuel Consumption (trillion Btu)					Total Floorspace of Buildings (million square feet)					Energy Intensity for Sum of Major Fuels (thousand Btu/square foot)				
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
All Buildings*	990	1,761	1,134	1,213	724	10,622	17,335	11,504	15,739	9,584	93.2	101.6	98.5	77.0	75.5
Water Heating Equipment															
Centralized System	684	958	683	697	411	6,315	9,553	6,774	7,444	4,585	108.4	100.3	100.8	93.6	89.6
Distributed System	102	244	167	187	134	1,468	2,954	2,015	3,009	2,094	69.8	82.6	83.0	62.2	64.2
Combination of Centralized and Distributed System	180	369	266	276	141	1,691	2,654	1,996	2,739	1,187	106.1	139.0	133.2	100.7	118.4
Lighting Equipment Types (more than one may apply)															
Incandescent	674	1,156	854	770	461	7,016	10,308	8,192	7,939	5,073	96.1	112.2	104.3	97.0	90.9
Standard Fluorescent	965	1,696	1,107	1,178	698	9,783	16,090	10,871	14,316	8,627	98.7	105.4	101.8	82.3	80.9
Compact Fluorescent	529	882	745	693	358	4,667	6,835	6,292	6,439	3,339	113.5	129.1	118.5	107.6	107.3
High Intensity Discharge	395	738	439	343	226	3,955	6,149	4,385	3,863	2,292	99.9	120.0	100.0	88.9	98.7
Halogen	356	550	417	434	225	2,762	4,485	3,903	4,117	2,435	128.8	122.5	106.9	105.5	92.2
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	142.6	198.5	Q
Refrigeration Equipment (more than one may apply)^p															
Any Refrigeration.....	887	1,526	1,030	1,102	669	8,673	14,438	9,893	12,329	7,640	102.2	105.7	104.1	89.4	87.6
Commercial Refrigeration	504	975	705	711	441	4,106	7,355	5,702	5,784	3,821	122.8	132.5	123.7	122.9	115.3
Walk-In Units	408	788	565	630	375	3,188	5,353	4,341	4,490	2,882	127.9	147.2	130.2	140.3	130.0
Cases or Cabinets	401	776	575	572	378	2,950	5,523	4,191	4,586	3,174	135.9	140.5	137.3	124.8	119.0
Residential-Type Units	632	1,076	689	635	435	6,713	10,957	7,367	8,479	5,369	94.1	98.2	93.6	74.8	80.9
Vending Machines	609	1,102	729	782	499	5,824	9,186	6,729	8,220	5,375	104.7	119.9	108.3	95.1	92.8
No Refrigeration	103	235	104	111	55	1,949	2,897	1,611	3,410	1,944	53.0	81.1	64.3	32.5	28.1
Office Equipment (more than one may apply)															
Computers	919	1,595	1,078	1,100	684	8,976	14,756	10,556	13,086	8,253	102.3	108.1	102.2	84.0	82.8
With Flat Screen Monitors	413	828	742	585	398	3,629	6,548	6,204	6,118	3,919	113.9	126.5	119.5	95.6	101.5
Dedicated Servers	592	1,099	851	762	456	5,673	9,426	7,813	8,157	5,269	104.4	116.6	108.9	93.4	86.6
Laser Printers	558	924	565	585	377	5,811	8,950	5,910	7,675	4,666	95.9	103.3	95.6	76.2	80.9
Inkjet Printers	599	861	696	706	440	5,523	7,781	6,220	7,556	5,130	108.5	110.7	111.8	93.4	85.8
FAX Machines	865	1,450	1,056	1,067	653	8,446	13,443	10,336	12,438	7,710	102.5	107.8	102.2	85.8	84.7
Photocopiers	744	1,312	935	919	555	7,181	12,244	9,222	10,780	6,828	103.6	107.1	101.4	85.3	81.3
Number of Computers															
None	71	165	55	113	40	1,646	2,579	948	2,652	1,331	43.2	64.1	58.1	42.6	30.1
1 to 4	201	324	134	220	136	2,242	3,537	1,801	3,206	1,608	89.6	91.6	74.5	68.6	84.8
5 to 9	123	157	96	95	74	1,392	1,946	1,206	1,572	1,063	88.3	80.5	80.0	60.7	69.8
10 to 19	106	153	90	106	59	1,057	1,724	1,032	1,568	1,228	100.4	89.0	87.2	67.6	48.4
20 to 49	126	186	154	168	71	1,239	2,045	1,441	1,729	960	102.1	91.2	107.0	97.4	74.5
50 to 99	84	119	93	148	69	740	1,124	1,078	1,547	887	113.1	105.9	Q	95.9	77.3
100 to 249	141	191	148	160	74	1,266	1,554	1,389	1,626	855	111.3	123.2	106.3	98.5	86.1
250 or More	138	464	363	201	200	1,040	2,825	2,610	1,837	1,652	132.5	164.4	139.1	109.6	121.0
Number of Dedicated Servers															
None	398	662	283	450	268	4,949	7,909	3,691	7,581	4,315	80.3	83.7	76.6	59.4	62.0
1 to 4	433	600	471	492	237	4,305	6,249	4,591	5,624	3,346	100.6	96.0	102.6	87.6	70.9
5 to 9	35	117	Q	90	Q	516	980	1,078	884	405	67.7	119.5	112.8	101.3	Q
10 to 19	62	160	59	82	Q	412	965	455	724	472	150.2	165.6	129.6	113.0	Q
20 to 49	Q	Q	Q	Q	Q	252	428	586	604	713	Q	Q	Q	Q	Q
50 or More	Q	155	119	Q	Q	Q	804	1,102	321	Q	Q	192.7	107.7	Q	Q

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Table C10. Consumption and Gross Energy Intensity by Climate Zone^a for Non-Mall Buildings, 2003

	Sum of Major Fuel Consumption (trillion Btu)					Total Floorspace of Buildings (million square feet)					Energy Intensity for Sum of Major Fuels (thousand Btu/square foot)				
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
All Buildings*	990	1,761	1,134	1,213	724	10,622	17,335	11,504	15,739	9,584	93.2	101.6	98.5	77.0	75.5
Number of Photocopiers															
None	246	449	198	293	168	3,440	5,090	2,281	4,958	2,756	71.4	88.1	86.9	59.2	61.1
One	243	343	177	246	121	2,653	4,546	2,337	3,806	2,133	91.6	75.4	75.6	64.7	56.9
2 to 4	256	369	244	302	164	2,655	3,694	2,833	3,554	2,345	96.2	99.9	86.0	85.0	69.9
5 to 9	95	181	119	132	85	863	1,386	1,219	1,326	721	110.2	130.5	97.4	99.7	117.8
10 or More	150	419	396	239	185	1,010	2,619	2,833	2,093	1,629	148.9	160.1	139.9	113.9	113.5
Energy-Related Space Functions (more than one may apply)															
Commercial Food Preparation	408	804	586	538	374	3,302	6,358	4,736	4,620	3,208	123.7	126.4	123.8	116.5	116.6
Activities with Large Amounts of Hot Water	424	727	485	570	259	3,451	5,260	4,091	4,479	2,200	122.8	138.2	118.5	127.4	117.9
Separate Computer Area	414	877	683	580	340	3,713	7,143	5,988	6,266	3,763	111.6	122.8	114.0	92.6	90.5
HVAC Conservation Features (more than one may apply)															
Variable Air-Volume System	364	672	516	488	340	2,985	4,852	4,086	4,201	3,473	122.0	138.5	126.3	116.1	98.0
Economizer Cycle	447	780	591	489	282	3,804	5,533	4,736	4,630	2,406	117.5	141.0	124.8	105.6	117.1
HVAC Maintenance	829	1,595	1,017	1,064	665	8,045	14,309	9,597	11,542	7,670	103.0	111.5	105.9	92.2	86.7
Energy Management and Control System (EMCS)	282	495	424	327	254	2,438	3,834	3,284	3,546	2,528	115.8	129.2	129.2	92.1	100.4
Window and Interior Lighting Features (more than one may apply)															
Multipaned Windows	811	1,288	787	696	348	8,109	11,763	7,855	7,264	3,919	100.0	109.5	100.2	95.8	88.9
Tinted Window Glass	417	941	629	648	464	3,628	7,587	5,356	7,883	5,434	114.9	124.0	117.4	82.2	85.3
Reflective Window Glass	127	258	217	194	131	1,259	2,139	1,733	2,066	1,347	100.5	120.6	125.4	94.0	96.9
External Overhangs or Awnings	288	486	304	401	257	2,640	4,510	3,003	4,424	2,665	109.1	107.8	101.3	90.6	96.5
Skylights or Atriums	253	407	278	213	156	2,164	3,572	2,573	2,596	1,640	116.8	114.0	108.1	82.0	95.1
Daylighting Sensors	80	Q	Q	60	Q	574	837	413	618	426	138.6	147.4	Q	97.6	Q
Specular Reflectors	493	931	603	521	281	4,446	7,579	5,238	5,892	2,961	110.9	122.8	115.2	88.4	94.7
Electronic Ballasts	859	1,357	948	975	608	8,390	11,771	8,922	10,876	6,923	102.3	115.3	106.2	89.7	87.8
Energy Management and Control System (EMCS) For Lighting	84	148	134	77	95	756	1,249	881	899	997	111.8	118.8	151.8	85.4	95.5
Equipment Usage Reduced When Building Not In Full Use (more than one may apply)^b															
Heating	635	1,096	843	736	431	6,995	11,651	8,469	10,227	5,380	90.7	94.1	99.5	71.9	80.1
Cooling	621	1,053	858	777	535	6,309	10,745	8,843	10,627	6,681	98.4	98.0	97.1	73.1	80.1
Lighting	711	1,203	662	771	471	7,959	12,889	7,802	11,312	7,025	89.3	93.3	84.9	68.2	67.1
Office Equipment	296	489	257	254	168	3,401	5,473	3,238	4,319	2,966	87.0	89.4	79.5	58.9	56.8

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Table C10. Consumption and Gross Energy Intensity by Climate Zone^a for Non-Mall Buildings, 2003

	Sum of Major Fuel Consumption (trillion Btu)					Total Floorspace of Buildings (million square feet)					Energy Intensity for Sum of Major Fuels (thousand Btu/square foot)				
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
All Buildings*	990	1,761	1,134	1,213	724	10,622	17,335	11,504	15,739	9,584	93.2	101.6	98.5	77.0	75.5

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 6.6 percent of total consumption.

^a Climate zone (30-year average) definitions: Zone 1 = Under 2,000 CDD and more than 7,000 HDD; Zone 2 = Under 2,000 CDD and 5,500-7,000 HDD; Zone 3 = Under 2,000 CDD and 4,000-5,499 HDD; Zone 4 = Under 2,000 CDD and fewer than 4,000 HDD; Zone 5 = 2,000 CDD or more and fewer than 4,000 HDD. (See "Glossary" for definitions of CDD and HDD.)

^b 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.

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.