

**Table E1. Major Fuel Consumption (Btu) by End Use for Non-Mall Buildings, 2003**

	Total Major Fuel Consumption (trillion Btu)										
	Total	Space Heating	Cooling	Ventilation	Water Heating	Lighting	Cooking	Refrigeration	Office Equipment	Computers	Other
<b>All Buildings*</b> .....	5,820	2,203	431	384	448	1,143	167	354	64	148	478
<b>Building Floorspace (Square Feet)</b>											
1,001 to 5,000 .....	672	207	45	18	48	93	48	137	8	12	55
5,001 to 10,000 .....	516	198	36	17	40	83	35	56	6	9	39
10,001 to 25,000 .....	776	324	47	44	43	151	25	53	9	19	62
25,001 to 50,000 .....	673	262	57	50	55	121	13	34	7	16	58
50,001 to 100,000 .....	759	293	59	65	55	158	11	29	6	18	64
100,001 to 200,000 .....	934	374	64	80	72	195	8	24	Q	31	73
200,001 to 500,000 .....	725	280	55	54	67	162	14	9	8	19	58
Over 500,000 .....	766	265	68	56	69	181	13	12	Q	23	70
<b>Principal Building Activity</b>											
Education .....	820	389	79	83	57	113	8	16	4	32	39
Food Sales .....	251	36	12	7	4	46	11	119	2	2	11
Food Service .....	427	71	29	24	67	42	105	70	2	2	16
Health Care .....	594	223	44	42	95	105	11	8	4	10	51
Inpatient .....	475	175	35	38	92	76	11	4	2	7	34
Outpatient .....	119	48	9	4	3	28	Q	4	2	3	17
Lodging .....	510	113	25	14	160	124	16	12	Q	6	36
Retail (Other Than Mall).....	319	107	25	16	5	111	3	22	3	4	24
Office .....	1,134	400	109	63	24	281	4	35	32	74	110
Public Assembly .....	370	196	38	63	4	27	3	9	Q	Q	26
Public Order and Safety .....	126	54	10	10	15	18	1	3	1	2	12
Religious Worship .....	163	98	11	5	3	17	3	6	(*)	1	19
Service .....	312	145	16	24	4	63	Q	9	1	3	46
Warehouse and Storage .....	456	194	14	20	6	132	Q	36	2	5	48
Other .....	286	138	18	11	4	59	Q	10	Q	5	33
Vacant .....	54	37	2	1	(*)	4	Q	Q	Q	(*)	8
<b>Year Constructed</b>											
Before 1920 .....	302	180	7	11	17	34	17	Q	2	4	15
1920 to 1945 .....	620	315	25	30	42	89	20	26	3	8	62
1946 to 1959 .....	565	277	31	34	44	87	13	26	4	11	38
1960 to 1969 .....	737	336	45	50	64	113	12	40	6	18	52
1970 to 1979 .....	1,023	356	79	74	90	220	26	58	12	27	80
1980 to 1989 .....	1,034	315	95	66	86	236	26	66	15	37	92
1990 to 1999 .....	1,098	317	104	88	70	246	36	85	17	35	100
2000 to 2003 .....	441	106	45	32	35	116	18	38	4	9	38
<b>Census Region and Division</b>											
Northeast .....	1,271	634	48	67	84	206	34	58	12	30	98
New England .....	294	167	8	12	16	42	Q	19	2	6	16
Middle Atlantic .....	978	467	40	55	68	164	28	39	10	24	81
Midwest .....	1,690	830	62	103	101	287	35	89	15	35	133
East North Central .....	1,254	643	42	77	72	208	25	59	11	27	90
West North Central .....	436	187	20	25	29	79	10	29	4	9	43
South .....	1,948	473	251	153	166	449	70	154	18	55	159
South Atlantic .....	1,064	249	132	85	86	258	35	87	11	35	85
East South Central .....	309	107	23	22	29	63	7	24	2	5	26
West South Central .....	575	117	96	46	50	128	28	43	5	14	49
West .....	911	266	70	61	97	200	28	53	19	28	88
Mountain .....	381	149	26	23	36	78	5	18	Q	8	32
Pacific .....	530	117	44	38	61	122	24	35	Q	20	56

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	Total Major Fuel Consumption (trillion Btu)										
	Total	Space Heating	Cooling	Ventilation	Water Heating	Lighting	Cooking	Refrigeration	Office Equipment	Computers	Other
<b>All Buildings*</b> .....	5,820	2,203	431	384	448	1,143	167	354	64	148	478
<b>Climate Zone: 30-Year Average</b>											
Under 2,000 CDD and --											
More than 7,000 HDD .....	990	517	24	60	61	157	18	59	8	18	68
5,500-7,000 HDD .....	1,761	853	66	98	116	309	42	88	16	39	132
4,000-5,499 HDD .....	1,134	431	70	69	87	230	32	61	18	31	104
Fewer than 4,000 HDD .....	1,213	302	119	94	120	275	48	93	14	33	115
2,000 CDD or More and --											
Fewer than 4,000 HDD .....	724	99	152	62	65	172	27	53	7	27	59
<b>Number of Floors</b>											
One .....	1,937	649	159	110	116	384	84	230	17	34	154
Two .....	1,311	516	91	98	81	254	32	70	18	32	120
Three .....	619	277	34	40	48	113	16	22	7	16	48
Four to Nine .....	1,336	571	95	99	130	240	24	25	13	41	100
Ten or More .....	617	191	52	38	73	152	12	8	Q	25	57
<b>Elevators and Escalators (more than one may apply)</b>											
Any Elevators .....	2,826	1,081	223	221	257	581	41	53	38	96	235
Number of Elevators											
One .....	732	341	48	61	37	134	7	20	7	22	54
Two to Five .....	1,157	438	86	89	115	234	17	22	19	43	96
Six or More .....	937	303	88	70	104	214	18	12	12	31	85
Any Escalators .....	282	53	35	30	Q	80	6	4	Q	11	31
<b>Number of Workers (main shift)</b>											
Fewer than 5 .....	817	396	39	28	39	119	18	92	3	5	77
5 to 9 .....	468	168	33	21	39	78	30	56	4	6	34
10 to 19 .....	594	223	40	31	53	103	39	52	5	9	40
20 to 49 .....	1,050	419	73	69	77	191	36	67	Q	21	83
50 to 99 .....	728	261	58	67	57	151	14	37	8	19	55
100 to 249 .....	838	310	70	68	65	188	11	27	9	25	64
250 or More .....	1,325	425	119	100	118	313	19	22	20	63	124
<b>Weekly Operating Hours</b>											
Fewer than 40 .....	228	130	17	7	7	22	5	12	1	2	25
40 to 48 .....	773	364	71	42	18	133	7	33	10	25	70
49 to 60 .....	1,179	529	85	71	36	229	20	50	15	34	111
61 to 84 .....	924	352	66	67	44	184	35	64	9	24	78
85 to 167 .....	889	280	55	77	50	167	55	119	5	22	57
Open Continuously .....	1,827	547	137	119	292	408	44	76	23	41	137
<b>Ownership and Occupancy</b>											
Nongovernment Owned.....	4,203	1,438	303	224	347	897	151	319	54	102	368
Owner Occupied .....	2,060	786	150	116	141	424	47	135	28	51	183
Nonowner Occupied .....	2,115	632	152	108	207	471	104	184	25	51	181
Unoccupied .....	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Government Owned .....	1,617	765	129	160	101	246	16	35	10	47	110
Federal .....	303	161	14	24	9	63	Q	3	2	5	21
State .....	513	271	27	53	31	62	3	9	3	20	33
Local .....	800	333	88	83	61	120	11	23	5	21	56
<b>Vacancy Status</b>											
Completely Vacant .....	37	28	Q	(*)	Q	3	Q	Q	Q	Q	5
Mostly Vacant .....	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Partially Vacant .....	1,086	432	89	68	61	240	17	30	13	42	95
Not At All Vacant .....	4,681	1,733	341	315	387	899	149	324	51	107	375

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	Total Major Fuel Consumption (trillion Btu)										
	Total	Space Heating	Cooling	Ventilation	Water Heating	Lighting	Cooking	Refrigeration	Office Equipment	Computers	Other
<b>All Buildings*</b> .....	5,820	2,203	431	384	448	1,143	167	354	64	148	478
<b>Number of Establishments</b>											
One .....	4,167	1,562	289	272	362	790	139	290	42	87	334
2 to 5 .....	992	412	70	64	62	199	21	49	12	24	79
6 to 10 .....	216	93	16	14	7	43	Q	5	3	16	16
11 to 20 .....	152	50	16	12	Q	37	Q	Q	2	7	15
More than 20 .....	257	57	39	22	11	72	2	5	5	15	29
Currently Unoccupied .....	37	28	Q	(*)	Q	3	Q	Q	Q	Q	5
<b>Predominant Exterior Wall Material</b>											
Brick, Stone or Stucco .....	3,186	1,307	229	207	276	530	109	180	30	73	244
Concrete (Block or Poured) .....	974	339	78	62	81	202	26	72	Q	18	83
Concrete Panels .....	667	219	52	46	Q	185	10	22	10	28	58
Siding or Shingles .....	276	104	17	14	24	49	12	29	3	6	20
Metal Panels .....	463	151	28	35	12	120	Q	44	4	11	52
Window Glass .....	95	24	11	7	5	25	Q	2	2	6	10
Other .....	121	48	10	7	11	25	Q	4	1	4	8
No One Major Type .....	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Predominant Roof Material</b>											
Built-Up .....	2,083	781	158	134	184	405	56	107	23	57	178
Shingles (Not Wood) .....	823	326	54	41	68	134	33	79	9	15	63
Metal Surfacing .....	630	211	49	48	23	150	17	47	5	13	68
Synthetic or Rubber .....	1,649	607	126	126	127	329	38	91	22	53	130
Slate or Tile .....	207	79	16	11	19	34	11	17	2	4	13
Wooden Materials .....	68	23	6	4	9	14	Q	4	1	1	5
Concrete .....	236	121	11	13	13	48	Q	5	1	3	14
Other .....	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
No One Major Type .....	40	15	3	4	2	6	Q	2	(*)	Q	3
<b>Renovations in Buildings Constructed Before 1980 (more than one may apply)</b>											
<b>Any Type of Renovation</b>											
Since 1980 .....	1,766	767	103	112	158	298	47	88	15	42	136
Addition or Annex .....	733	316	42	55	79	121	16	31	4	14	55
Reduction In Floorspace .....	117	46	5	9	14	22	Q	2	1	3	10
Cosmetic Improvements .....	1,317	557	79	84	114	230	38	70	12	33	99
Wall or Roof Replacement .....	777	341	47	53	67	140	16	27	7	22	57
Interior Wall											
Re-Configuration .....	911	399	57	61	80	162	17	32	8	24	71
HVAC Equipment Upgrade.....	1,156	470	73	81	117	206	29	45	11	32	92
Lighting Upgrade .....	1,085	485	62	75	92	184	24	49	10	28	76
Window Replacement .....	613	288	32	37	54	100	13	26	5	16	41
Plumbing System Upgrade .....	748	334	42	50	69	129	19	25	5	19	55
Insulation Upgrade .....	381	167	23	30	28	64	11	15	3	11	28
Other Renovation .....	50	22	Q	2	5	7	Q	2	(*)	1	4
No Renovations Since 1980.....	1,482	698	84	87	99	246	41	78	12	26	112
Building Newer than 1980 .....	2,573	738	245	185	191	599	79	188	36	80	231
<b>Energy Sources (more than one may apply)</b>											
Electricity .....	5,820	2,202	431	384	448	1,143	167	354	64	148	478
Natural Gas .....	4,492	1,731	301	295	399	842	160	239	43	108	373
Fuel Oil .....	1,760	657	128	121	195	359	33	43	24	51	148
District Heat .....	1,017	606	32	69	59	147	Q	12	5	29	49
District Chilled Water .....	538	308	16	49	34	68	Q	7	3	20	26
Propane .....	584	201	38	40	39	141	9	51	5	9	50
Other .....	139	48	Q	Q	11	30	2	6	2	4	11

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	Total	Space Heating	Cooling	Ventilation	Water Heating	Lighting	Cooking	Refrigeration	Office Equipment	Computers	Other
<b>All Buildings*</b> .....	5,820	2,203	431	384	448	1,143	167	354	64	148	478
<b>Space-Heating Energy Sources<sup>a</sup></b> (more than one may apply)											
Electricity .....	2,354	617	238	155	216	571	72	164	36	70	215
Natural Gas .....	3,679	1,432	244	245	299	705	112	204	37	83	319
Fuel Oil .....	591	305	29	33	55	80	14	18	3	10	43
District Heat .....	994	599	30	67	59	140	Q	11	5	28	46
Propane .....	160	26	14	14	16	39	3	24	Q	4	18
Other .....	61	16	Q	Q	3	17	Q	4	(*)	1	6
<b>Primary Space-Heating Energy Source</b>											
Electricity .....	1,089	142	153	68	108	303	44	111	21	37	100
Natural Gas .....	3,280	1,286	216	219	262	620	98	179	34	75	291
Fuel Oil .....	294	190	7	13	17	29	10	13	1	4	11
District Heat .....	951	580	26	65	50	135	Q	11	4	27	43
Propane .....	71	2	7	9	1	18	Q	19	Q	Q	11
Other .....	19	3	1	2	Q	7	(*)	2	Q	Q	3
<b>Cooling Energy Sources<sup>b</sup></b> (more than one may apply)											
Electricity .....	5,020	1,745	420	326	399	1,032	158	335	61	126	418
Natural Gas .....	159	43	30	Q	16	26	2	3	1	3	19
District Chilled Water .....	538	308	16	49	34	68	Q	7	3	20	26
<b>Water-Heating Energy Sources</b> (more than one may apply)											
Electricity .....	2,145	727	205	142	87	487	46	157	33	66	196
Natural Gas .....	3,206	1,170	222	221	348	587	119	171	30	75	262
Fuel Oil .....	206	109	7	9	23	25	9	7	1	3	13
District Heat .....	563	293	26	43	52	88	Q	7	3	15	30
Propane .....	81	17	9	9	1	18	Q	14	Q	Q	8
<b>Cooking Energy Sources</b> (more than one may apply)											
Electricity .....	1,579	510	131	125	181	294	73	103	14	36	112
Natural Gas .....	2,074	647	157	152	279	367	155	122	16	37	140
Propane .....	114	26	12	10	10	24	2	18	Q	Q	8
<b>Energy End Uses (more than one may apply)</b>											
Buildings with Space Heating ....	5,705	2,203	411	376	440	1,113	160	335	63	146	458
Buildings with Cooling .....	5,464	1,982	431	369	428	1,095	162	341	63	147	447
Buildings with Water Heating ....	5,498	2,025	416	370	448	1,080	166	336	62	145	450
Buildings with Cooking .....	2,712	868	218	203	320	487	167	184	23	55	188
Buildings with Manufacturing ....	254	77	10	17	7	64	Q	10	2	6	56
Buildings with Electricity Generation .....	1,693	553	139	129	178	367	24	42	28	56	176
<b>Percent of Floorspace Heated</b>											
Not Heated .....	115	(*)	20	8	8	29	Q	19	1	2	20
1 to 50 .....	299	82	14	18	14	69	Q	39	Q	4	40
51 to 99 .....	746	264	56	49	61	152	29	54	6	16	60
100 .....	4,660	1,857	341	309	365	892	121	242	49	127	357
<b>Percent of Floorspace Cooled</b>											
Not Cooled .....	356	221	(*)	15	20	48	4	14	1	2	31
1 to 50 .....	1,026	503	25	56	44	195	20	64	5	12	102
51 to 99 .....	1,413	513	107	97	112	273	46	104	13	38	110
100 .....	3,026	965	300	215	272	627	97	173	45	96	235

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<b>All Buildings*</b> .....	5,820	2,203	431	384	448	1,143	167	354	64	148	478
<b>Percent Lit When Open</b>											
Zero .....	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
1 to 50 .....	540	256	33	29	52	63	15	28	Q	6	50
51 to 99 .....	1,736	666	130	125	135	328	46	87	21	58	140
100 .....	3,490	1,245	267	230	260	747	104	236	35	85	281
Building Never Open/ Electricity Not Used .....	46	33	1	(*)	Q	4	Q	1	Q	Q	7
<b>Percent Lit When Closed</b>											
Zero .....	1,132	524	75	69	42	173	40	74	10	30	95
1 to 50 .....	2,626	1,057	203	181	107	487	76	180	29	72	233
51 to 100 .....	235	73	16	14	7	75	6	24	2	5	13
Building Never Closed/ Electricity Not Used .....	1,827	548	137	119	292	408	44	76	23	41	137
<b>Heating Equipment (more than one may apply)</b>											
Heat Pumps .....	805	188	95	53	93	201	20	46	12	25	72
Packaged Heat Pumps .....	523	102	64	33	61	141	13	33	Q	17	49
Split-System Heat Pumps .....	198	49	25	18	16	51	Q	11	2	5	18
Individual Room Heat Pumps ..	255	67	30	17	39	60	7	7	2	8	18
Furnaces .....	1,493	588	86	84	103	287	56	123	13	27	126
Individual Space Heaters .....	1,024	379	67	65	79	225	18	61	10	26	94
District Heat .....	986	594	30	66	58	139	Q	11	4	28	46
Boilers .....	2,244	906	150	168	226	405	50	59	24	56	200
Packaged Heating Units .....	1,729	512	163	119	142	383	64	134	24	47	138
Other .....	231	62	22	20	8	64	3	18	3	8	22
<b>Cooling Equipment (more than one may apply)</b>											
Residential-Type Central											
Air Conditioners .....	924	355	67	67	77	158	40	59	8	15	78
Heat Pumps .....	837	195	99	55	92	209	22	54	12	25	75
Packaged Heat Pumps .....	529	109	62	32	60	142	13	36	9	17	50
Split-System Heat Pumps .....	204	50	26	19	16	50	Q	13	2	5	19
Individual Room Heat Pumps ..	278	67	35	19	39	68	7	11	3	8	20
Individual Air Conditioners .....	1,080	474	69	62	119	196	19	44	7	18	71
District Chilled Water .....	538	308	16	49	34	68	Q	7	3	20	26
Central Chillers .....	1,531	482	152	140	148	338	22	27	24	50	148
Packaged Air Conditioning											
Units .....	2,862	992	235	179	218	595	103	205	30	72	232
Swamp Coolers .....	158	52	9	9	21	28	8	12	1	2	16
Other .....	142	49	13	10	16	28	2	Q	1	4	9
<b>Main Equipment Replaced Since 1990 (more than one may apply)</b>											
Heating .....	1,367	505	96	84	122	258	42	83	17	37	122
Cooling .....	1,949	743	138	120	177	363	58	110	23	55	162
<b>Water Heating Equipment</b>											
Centralized System .....	3,432	1,281	238	227	298	630	123	250	35	79	272
Distributed System .....	835	314	77	54	33	179	24	52	9	23	70
Combination of Centralized and Distributed System .....	1,231	430	100	88	117	271	20	34	19	43	108

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<b>All Buildings*</b> .....	5,820	2,203	431	384	448	1,143	167	354	64	148	478
<b>Lighting Equipment Types (more than one may apply)</b>											
Incandescent .....	3,916	1,439	287	257	357	803	125	193	44	105	306
Standard Fluorescent .....	5,644	2,130	421	378	434	1,103	159	344	63	147	464
Compact Fluorescent .....	3,208	1,139	250	238	310	652	92	139	40	88	261
High Intensity Discharge .....	2,141	813	152	170	156	472	38	82	22	61	175
Halogen .....	1,982	666	153	139	185	453	60	94	22	50	159
Other .....	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Refrigeration Equipment (more than one may apply)</b>											
Any Refrigeration.....	5,213	1,880	392	350	430	1,030	166	354	59	137	415
Commercial Refrigeration .....	3,336	1,068	265	236	337	651	159	283	28	70	239
Walk-In Units .....	2,766	843	220	198	300	539	149	250	22	56	189
Cases or Cabinets .....	2,703	865	219	185	271	522	133	239	23	54	191
Residential-Type Units .....	3,466	1,354	265	236	288	681	70	161	34	98	278
Vending Machines .....	3,721	1,326	289	275	327	784	66	183	45	110	314
No Refrigeration .....	607	323	39	34	18	112	Q	(*)	5	11	63
<b>Office Equipment (more than one may apply)</b>											
Computers .....	5,376	2,022	411	370	409	1,077	141	299	63	148	434
With Flat Screen Monitors .....	2,966	1,071	243	223	234	614	61	112	46	109	253
Dedicated Servers .....	3,760	1,355	302	279	290	797	72	164	57	124	321
Laser Printers .....	3,009	1,149	227	197	243	569	80	182	38	76	248
Inkjet Printers .....	3,302	1,196	281	242	234	717	62	158	39	102	271
FAX Machines .....	5,092	1,885	392	352	390	1,036	140	277	62	142	414
Photocopiers .....	4,466	1,710	354	327	326	928	67	187	60	136	371
<b>Number of Computers</b>											
None .....	444	181	20	14	39	66	26	55	1	(*)	44
1 to 4 .....	1,015	388	60	45	75	166	68	133	5	5	70
5 to 9 .....	546	207	39	28	49	102	20	40	4	6	50
10 to 19 .....	515	191	40	33	34	108	13	40	5	9	43
20 to 49 .....	707	254	55	56	46	161	9	38	Q	16	59
50 to 99 .....	513	209	39	38	43	108	8	11	6	14	37
100 to 249 .....	714	292	59	61	53	142	7	16	7	25	52
250 or More .....	1,366	481	119	109	110	291	17	21	22	73	124
<b>Number of Dedicated Servers</b>											
None .....	2,060	847	129	105	158	346	95	191	7	25	158
1 to 4 .....	2,234	840	170	156	189	451	53	128	17	48	182
5 to 9 .....	405	118	41	40	21	100	Q	11	6	17	42
10 to 19 .....	432	182	33	35	26	83	3	12	5	23	30
20 to 49 .....	307	94	34	26	24	71	3	6	6	14	29
50 or More .....	382	122	24	23	Q	92	Q	7	22	21	38
<b>Number of Photocopiers</b>											
None .....	1,355	493	77	57	122	215	100	167	4	12	107
One .....	1,130	453	78	66	71	224	24	92	9	16	97
2 to 4 .....	1,334	522	102	104	100	270	17	59	19	34	106
5 to 9 .....	612	246	47	52	40	121	8	14	8	29	46
10 or More .....	1,389	489	127	105	115	312	17	21	25	56	122
<b>Energy-Related Space Functions (more than one may apply)</b>											
Commercial Food Preparation....	2,711	868	218	203	320	486	167	184	23	55	187
Activities with Large Amounts of Hot Water .....	2,465	853	179	174	327	463	111	99	18	50	192
Separate Computer Area .....	2,895	1,054	248	232	237	615	44	85	45	101	234

**Table E1. Major Fuel Consumption (Btu) by End Use for Non-Mall Buildings, 2003**

	Total Major Fuel Consumption (trillion Btu)										
	Total	Space Heating	Cooling	Ventilation	Water Heating	Lighting	Cooking	Refrigeration	Office Equipment	Computers	Other
<b>All Buildings*</b> .....	5,820	2,203	431	384	448	1,143	167	354	64	148	478
<b>HVAC Conservation Features (more than one may apply)</b>											
Variable Air-Volume System.....	2,380	857	206	176	190	498	48	71	35	85	213
Economizer Cycle .....	2,589	923	205	206	206	556	47	97	37	91	221
HVAC Maintenance .....	5,170	1,942	395	360	412	1,030	143	282	59	137	411
Energy Management and Control System (EMCS) .....	1,782	654	158	160	134	368	27	40	27	61	153
<b>Window and Interior Lighting Features (more than one may apply)</b>											
Multipaned Windows .....	3,929	1,501	269	263	330	774	110	222	46	98	316
Tinted Window Glass .....	3,098	1,122	256	221	228	663	71	135	41	95	264
Reflective Window Glass .....	927	302	85	71	84	211	18	33	11	29	82
External Overhangs or Awnings .....	1,737	553	129	121	167	339	78	140	25	47	138
Skylights or Atriums .....	1,307	481	94	96	124	273	31	35	20	33	119
Daylighting Sensors .....	377	112	31	30	43	79	9	12	Q	12	37
Specular Reflectors .....	2,829	1,071	219	207	210	596	58	113	34	81	240
Electronic Ballasts .....	4,746	1,783	365	336	366	937	115	262	56	132	393
Energy Management and Control System (EMCS) For Lighting .....	538	181	55	44	30	125	9	15	Q	19	50
<b>Equipment Usage Reduced When Building Not In Full Use (more than one may apply)</b>											
Heating .....	3,740	1,443	278	262	268	717	110	193	49	101	320
Cooling .....	3,844	1,430	304	275	275	755	122	198	45	111	330
Lighting .....	3,818	1,585	282	255	151	693	119	265	40	104	325
Office Equipment .....	1,465	668	112	97	57	258	33	81	13	26	120

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>.

\* Data in this table do not include enclosed malls and strip malls. In the 1999 CBECS, malls represented 6.6 percent of total consumption.

<sup>a</sup> Totals in the "Electricity" and "Natural Gas" rows have been revised and values do not match published values in consumption Table C1 ([http://www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed\\_tables\\_2003/detailed\\_tables\\_2003.html](http://www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed_tables_2003/detailed_tables_2003.html)).

<sup>b</sup> The total in the "Electricity" row has been revised and does not match published value in consumption Table C1.

(\*)=Value rounds to zero in the units displayed.

Q=Data withheld because fewer than 20 buildings were sampled for any cell, or because the Relative Standard Error (RSE) was greater than 50 percent for a cell in the "Total" column.

Notes: ● Due to rounding, data may not sum to totals. ● HVAC = Heating, Ventilation, and Air Conditioning.

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

**Table E2. Major Fuel Consumption (Btu) Intensities by End Use for Non-Mall Buildings, 2003**

	Major Fuel Energy Intensity (thousand Btu/square foot)										
	Total	Space Heating	Cooling	Ventilation	Water Heating	Lighting	Cooking	Refrigeration	Office Equipment	Computers	Other
<b>All Buildings*</b> .....	89.8	34.0	6.7	5.9	6.9	17.6	2.6	5.5	1.0	1.0	7.4
<b>Building Floorspace (Square Feet)</b>											
1,001 to 5,000 .....	98.9	30.5	6.7	2.7	7.1	13.7	7.1	20.2	1.2	1.0	8.1
5,001 to 10,000 .....	78.3	30.0	5.4	2.6	6.1	12.5	5.2	8.4	0.8	1.0	5.9
10,001 to 25,000 .....	67.3	28.1	4.1	3.9	3.7	13.1	2.1	4.6	0.8	1.0	5.3
25,001 to 50,000 .....	77.6	30.2	6.6	5.8	6.3	13.9	1.6	3.9	0.8	1.0	6.7
50,001 to 100,000 .....	83.8	32.4	6.5	7.2	6.0	17.4	1.2	3.3	0.7	1.0	7.1
100,001 to 200,000 .....	103.0	41.3	7.1	8.8	7.9	21.5	0.9	2.7	Q	1.0	8.0
200,001 to 500,000 .....	101.0	39.0	7.6	7.5	9.4	22.6	1.9	1.2	1.1	1.0	8.1
Over 500,000 .....	129.7	44.9	11.5	9.5	11.7	30.6	2.2	2.1	Q	1.0	11.9
<b>Principal Building Activity</b>											
Education .....	83.1	39.4	8.0	8.4	5.8	11.5	0.8	1.6	0.4	1.0	4.0
Food Sales .....	199.7	28.9	9.8	5.9	2.9	36.7	8.6	94.8	1.6	1.0	9.1
Food Service .....	258.3	43.1	17.4	14.8	40.4	25.4	63.5	42.1	1.0	1.0	9.5
Health Care .....	187.7	70.4	14.1	13.3	30.2	33.1	3.5	2.6	1.2	1.0	16.1
Inpatient .....	249.2	91.8	18.6	20.0	48.4	40.1	5.6	2.0	1.1	1.0	18.1
Outpatient .....	94.6	38.1	7.2	3.3	2.5	22.6	Q	3.5	1.3	1.0	13.2
Lodging .....	100.0	22.2	4.9	2.7	31.4	24.3	3.2	2.3	Q	1.0	7.0
Retail (Other Than Mall).....	73.9	24.8	5.9	3.7	1.1	25.7	0.6	5.0	0.6	1.0	5.6
Office .....	92.9	32.8	8.9	5.2	2.0	23.1	0.3	2.9	2.6	1.0	9.0
Public Assembly .....	93.9	49.7	9.6	15.9	1.0	7.0	0.8	2.2	Q	1.0	6.5
Public Order and Safety .....	115.8	49.9	8.9	9.5	14.0	16.5	1.3	2.9	0.6	1.0	10.6
Religious Worship .....	43.5	26.2	2.9	1.4	0.8	4.4	0.8	1.7	0.1	1.0	4.9
Service .....	77.0	35.9	3.8	6.0	1.0	15.6	Q	2.1	0.3	1.0	11.4
Warehouse and Storage .....	45.2	19.3	1.3	2.0	0.6	13.1	Q	3.5	0.2	1.0	4.8
Other .....	164.4	79.4	10.5	6.1	2.1	34.1	Q	6.0	Q	1.0	18.9
Vacant .....	20.9	14.4	0.6	0.4	0.1	1.7	Q	Q	Q	1.0	Q
<b>Year Constructed</b>											
Before 1920 .....	80.2	47.8	1.8	2.9	4.4	9.1	4.4	4.5	0.5	1.0	3.9
1920 to 1945 .....	90.3	45.9	3.7	4.3	6.2	12.9	2.9	3.7	0.4	1.0	9.0
1946 to 1959 .....	80.3	39.4	4.3	4.8	6.3	12.4	1.8	3.6	0.6	1.0	5.5
1960 to 1969 .....	90.9	41.5	5.5	6.1	7.9	14.0	1.5	4.9	0.8	1.0	6.4
1970 to 1979 .....	95.0	33.0	7.4	6.9	8.3	20.4	2.4	5.4	1.2	1.0	7.4
1980 to 1989 .....	100.1	30.5	9.2	6.4	8.4	22.9	2.5	6.4	1.5	1.0	8.9
1990 to 1999 .....	88.8	25.6	8.4	7.1	5.7	19.9	2.9	6.9	1.4	1.0	8.1
2000 to 2003 .....	79.7	19.2	8.2	5.7	6.3	21.0	3.2	6.8	0.7	1.0	6.9
<b>Census Region and Division</b>											
Northeast .....	98.5	49.1	3.7	5.2	6.5	15.9	2.6	4.5	0.9	1.0	7.6
New England .....	99.0	56.2	2.7	4.0	5.3	14.1	1.8	6.5	0.7	1.0	5.5
Middle Atlantic .....	98.3	47.0	4.0	5.5	6.9	16.5	2.9	3.9	1.0	1.0	8.2
Midwest .....	98.9	48.6	3.6	6.0	5.9	16.8	2.0	5.2	0.9	1.0	7.8
East North Central .....	108.1	55.4	3.6	6.7	6.2	18.0	2.1	5.1	1.0	1.0	7.7
West North Central .....	79.5	34.2	3.7	4.6	5.3	14.4	1.8	5.4	0.6	1.0	7.9
South .....	82.9	20.1	10.7	6.5	7.1	19.1	3.0	6.6	0.8	1.0	6.8
South Atlantic .....	86.8	20.3	10.7	6.9	7.0	21.1	2.9	7.1	0.9	1.0	6.9
East South Central .....	91.1	31.4	6.9	6.6	8.7	18.6	2.2	7.1	0.6	1.0	7.6
West South Central .....	73.4	14.9	12.3	5.9	6.4	16.3	3.5	5.5	0.6	1.0	6.2
West .....	80.6	23.5	6.2	5.4	8.6	17.7	2.5	4.7	1.7	1.0	7.8
Mountain .....	103.8	40.7	7.0	6.3	9.9	21.3	1.3	4.9	Q	1.0	8.6
Pacific .....	69.4	15.3	5.7	5.0	8.0	16.0	3.1	4.6	Q	1.0	7.4



**Table E2. Major Fuel Consumption (Btu) Intensities by End Use for Non-Mall Buildings, 2003**

	Major Fuel Energy Intensity (thousand Btu/square foot)										
	Total	Space Heating	Cooling	Ventilation	Water Heating	Lighting	Cooking	Refrigeration	Office Equipment	Computers	Other
<b>All Buildings*</b> .....	89.8	34.0	6.7	5.9	6.9	17.6	2.6	5.5	1.0	1.0	7.4
<b>Climate Zone: 30-Year Average</b>											
Under 2,000 CDD and --											
More than 7,000 HDD .....	93.2	48.7	2.2	5.7	5.7	14.8	1.7	5.5	0.8	1.0	6.4
5,500-7,000 HDD .....	101.6	49.2	3.8	5.7	6.7	17.8	2.4	5.1	0.9	1.0	7.6
4,000-5,499 HDD .....	98.5	37.5	6.1	6.0	7.5	20.0	2.8	5.3	1.6	1.0	9.0
Fewer than 4,000 HDD .....	77.0	19.2	7.6	6.0	7.6	17.5	3.0	5.9	0.9	1.0	7.3
2,000 CDD or More and --											
Fewer than 4,000 HDD .....	75.5	10.3	15.9	6.5	6.8	17.9	2.8	5.5	0.8	1.0	6.2
<b>Number of Floors</b>											
One .....	74.6	25.0	6.1	4.2	4.5	14.8	3.2	8.9	0.6	1.0	5.9
Two .....	80.6	31.7	5.6	6.0	5.0	15.6	2.0	4.3	1.1	1.0	7.4
Three .....	82.6	36.9	4.5	5.3	6.4	15.0	2.1	2.9	1.0	1.0	6.4
Four to Nine .....	132.5	56.6	9.4	9.8	12.8	23.8	2.3	2.5	1.2	1.0	9.9
Ten or More .....	124.6	38.6	10.6	7.6	14.9	30.7	2.3	1.5	Q	1.0	11.5
<b>Elevators and Escalators (more than one may apply)</b>											
Any Elevators .....	114.8	43.9	9.0	9.0	10.4	23.6	1.7	2.2	1.6	1.0	9.6
Number of Elevators											
One .....	89.0	41.4	5.9	7.4	4.5	16.3	0.8	2.5	0.9	1.0	6.6
Two to Five .....	114.3	43.2	8.5	8.8	11.4	23.1	1.7	2.1	1.8	1.0	9.5
Six or More .....	149.5	48.3	14.1	11.2	16.6	34.1	2.8	1.9	2.0	1.0	13.5
Any Escalators .....	120.0	22.7	14.9	12.7	Q	33.9	2.5	1.8	Q	1.0	13.3
<b>Number of Workers (main shift)</b>											
Fewer than 5 .....	52.8	25.6	2.5	1.8	2.5	7.7	1.2	6.0	0.2	1.0	5.0
5 to 9 .....	76.0	27.3	5.3	3.5	6.3	12.6	4.8	9.1	0.7	1.0	5.5
10 to 19 .....	76.2	28.6	5.1	3.9	6.8	13.2	5.0	6.7	0.6	1.0	5.1
20 to 49 .....	95.6	38.1	6.6	6.3	7.0	17.4	3.2	6.1	Q	1.0	7.6
50 to 99 .....	91.7	32.9	7.3	8.4	7.1	19.1	1.8	4.7	1.0	1.0	7.0
100 to 249 .....	121.9	45.1	10.2	9.8	9.4	27.3	1.7	4.0	1.3	1.0	9.4
250 or More .....	139.0	44.6	12.5	10.5	12.4	32.9	2.0	2.3	2.1	1.0	13.0
<b>Weekly Operating Hours</b>											
Fewer than 40 .....	33.2	18.9	2.5	1.0	1.1	3.2	0.7	1.7	0.1	1.0	3.6
40 to 48 .....	66.5	31.3	6.1	3.6	1.6	11.4	0.6	2.8	0.9	1.0	6.1
49 to 60 .....	75.0	33.6	5.4	4.5	2.3	14.5	1.3	3.2	1.0	1.0	7.1
61 to 84 .....	89.4	34.1	6.4	6.5	4.2	17.8	3.4	6.2	0.9	1.0	7.5
85 to 167 .....	125.4	39.5	7.8	10.9	7.1	23.5	7.8	16.8	0.7	1.0	8.1
Open Continuously .....	138.9	41.6	10.4	9.1	22.2	31.1	3.4	5.8	1.8	1.0	10.4
<b>Ownership and Occupancy</b>											
Nongovernment Owned.....	85.1	29.1	6.1	4.5	7.0	18.2	3.1	6.5	1.1	1.0	7.5
Owner Occupied .....	87.3	33.3	6.3	4.9	6.0	18.0	2.0	5.7	1.2	1.0	7.7
Nonowner Occupied .....	88.4	26.4	6.4	4.5	8.6	19.7	4.3	7.7	1.1	1.0	7.6
Unoccupied .....	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Government Owned .....	105.3	49.8	8.4	10.4	6.5	16.0	1.0	2.3	0.6	1.0	7.2
Federal .....	155.0	82.1	6.9	12.2	4.6	32.5	Q	1.6	0.8	1.0	10.6
State .....	134.8	71.3	7.1	14.0	8.1	16.2	0.8	2.5	0.8	1.0	8.8
Local .....	83.4	34.6	9.2	8.7	6.3	12.5	1.1	2.4	0.5	1.0	5.8
<b>Vacancy Status</b>											
Completely Vacant .....	17.2	12.8	Q	0.1	(*)	1.2	Q	Q	Q	1.0	Q
Mostly Vacant .....	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Partially Vacant .....	87.7	34.9	7.2	5.5	4.9	19.3	1.4	2.4	1.0	1.0	7.7
Not At All Vacant .....	93.9	34.8	6.8	6.3	7.8	18.0	3.0	6.5	1.0	1.0	7.5

**Table E2. Major Fuel Consumption (Btu) Intensities by End Use for Non-Mall Buildings, 2003**

	Major Fuel Energy Intensity (thousand Btu/square foot)										
	Total	Space Heating	Cooling	Ventilation	Water Heating	Lighting	Cooking	Refrigeration	Office Equipment	Computers	Other
<b>All Buildings*</b> .....	89.8	34.0	6.7	5.9	6.9	17.6	2.6	5.5	1.0	1.0	7.4
<b>Number of Establishments</b>											
One .....	92.3	34.6	6.4	6.0	8.0	17.5	3.1	6.4	0.9	1.0	7.4
2 to 5 .....	90.6	37.6	6.4	5.8	5.7	18.1	1.9	4.5	1.1	1.0	7.2
6 to 10 .....	110.1	47.5	8.2	7.1	3.6	22.1	Q	2.4	1.4	1.0	8.1
11 to 20 .....	77.6	25.9	8.2	6.3	2.9	19.1	Q	Q	1.0	1.0	7.7
More than 20 .....	98.5	22.0	15.0	8.4	4.2	27.4	0.9	1.8	2.0	1.0	11.0
Currently Unoccupied .....	17.2	12.8	Q	0.1	(*)	1.2	Q	Q	Q	1.0	Q
<b>Predominant Exterior Wall Material</b>											
Brick, Stone or Stucco .....	97.1	39.8	7.0	6.3	8.4	16.1	3.3	5.5	0.9	1.0	7.4
Concrete (Block or Poured) .....	89.9	31.3	7.2	5.8	7.5	18.6	2.4	6.7	Q	1.0	7.7
Concrete Panels .....	101.7	33.3	8.0	7.1	5.5	28.3	1.5	3.3	1.6	1.0	8.8
Siding or Shingles .....	67.1	25.2	4.1	3.3	5.8	11.9	2.8	7.0	0.8	1.0	4.9
Metal Panels .....	58.5	19.0	3.5	4.4	1.5	15.2	Q	5.6	0.5	1.0	6.6
Window Glass .....	92.3	23.7	10.4	7.2	4.9	24.7	Q	2.0	1.9	1.0	10.0
Other .....	108.7	43.1	8.7	5.9	10.1	22.8	2.1	3.7	1.3	1.0	7.2
No One Major Type .....	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Predominant Roof Material</b>											
Built-Up .....	98.4	36.9	7.5	6.3	8.7	19.1	2.6	5.1	1.1	1.0	8.4
Shingles (Not Wood) .....	80.7	32.0	5.3	4.0	6.7	13.2	3.2	7.7	0.9	1.0	6.2
Metal Surfacing .....	52.7	17.6	4.1	4.0	1.9	12.6	1.5	3.9	0.4	1.0	5.7
Synthetic or Rubber .....	112.0	41.2	8.6	8.6	8.6	22.3	2.6	6.2	1.5	1.0	8.8
Slate or Tile .....	84.2	32.3	6.6	4.4	7.7	13.9	Q	6.8	0.8	1.0	5.4
Wooden Materials .....	77.0	26.3	6.3	4.4	9.8	16.0	Q	4.7	0.7	1.0	5.2
Concrete .....	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other .....	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
No One Major Type .....	69.9	27.0	4.9	6.6	4.3	10.8	Q	Q	0.7	1.0	Q
<b>Renovations in Buildings Constructed Before 1980 (more than one may apply)</b>											
<b>Any Type of Renovation</b>											
Since 1980 .....	99.0	43.0	5.8	6.3	8.9	16.7	2.6	4.9	0.9	1.0	7.6
Addition or Annex .....	111.9	48.3	6.5	8.4	12.0	18.5	2.5	4.7	0.6	1.0	8.4
Reduction In Floorspace .....	115.2	45.5	5.4	8.9	14.3	22.0	2.5	2.3	0.9	1.0	10.3
Cosmetic Improvements .....	100.4	42.4	6.0	6.4	8.7	17.6	2.9	5.3	0.9	1.0	7.5
Wall or Roof Replacement .....	96.3	42.3	5.9	6.6	8.3	17.3	1.9	3.4	0.8	1.0	7.0
<b>Interior Wall</b>											
HVAC Equipment .....	107.0	46.8	6.7	7.2	9.4	19.0	2.0	3.8	0.9	1.0	8.4
HVAC Equipment Upgrade .....	107.4	43.6	6.7	7.5	10.9	19.1	2.7	4.2	1.1	1.0	8.6
Lighting Upgrade .....	105.6	47.2	6.1	7.3	9.0	17.9	2.3	4.7	1.0	1.0	7.4
Window Replacement .....	96.5	45.4	5.1	5.9	8.6	15.7	2.0	4.0	0.7	1.0	6.5
Plumbing System Upgrade .....	104.7	46.8	5.9	7.0	9.7	18.1	2.7	3.5	0.7	1.0	7.7
Insulation Upgrade .....	94.8	41.6	5.7	7.5	6.9	16.1	2.7	3.8	0.8	1.0	7.1
Other Renovation .....	94.9	42.8	Q	4.3	Q	13.8	Q	3.4	0.3	1.0	Q
No Renovations Since 1980 .....	79.2	37.3	4.5	4.6	5.3	13.1	2.2	4.2	0.7	1.0	6.0
Building Newer than 1980 .....	91.1	26.1	8.7	6.6	6.8	21.2	2.8	6.7	1.3	1.0	8.2
<b>Energy Sources (more than one may apply)</b>											
Electricity .....	91.9	34.8	6.8	6.1	7.1	18.1	2.6	5.6	1.0	1.0	7.6
Natural Gas .....	103.3	39.8	6.9	6.8	9.2	19.4	3.7	5.5	1.0	1.0	8.6
Fuel Oil .....	116.1	43.3	8.5	8.0	12.9	23.7	2.2	2.8	1.6	1.0	9.8
District Heat .....	186.8	111.3	5.9	12.8	10.9	26.9	Q	2.2	0.8	1.0	9.0
District Chilled Water .....	188.7	107.9	5.6	17.2	12.0	23.9	Q	2.6	1.0	1.0	9.1
Propane .....	82.6	28.5	5.4	5.7	5.6	19.9	1.3	7.2	0.7	1.0	7.1
Other .....	99.2	34.4	Q	10.0	7.8	21.6	1.3	4.6	1.8	1.0	8.2

**Table E2. Major Fuel Consumption (Btu) Intensities by End Use for Non-Mall Buildings, 2003**

	Major Fuel Energy Intensity (thousand Btu/square foot)										
	Total	Space Heating	Cooling	Ventilation	Water Heating	Lighting	Cooking	Refrigeration	Office Equipment	Computers	Other
<b>All Buildings*</b> .....	89.8	34.0	6.7	5.9	6.9	17.6	2.6	5.5	1.0	1.0	7.4
<b>Space-Heating Energy Sources<sup>a</sup></b> (more than one may apply)											
Electricity .....	82.5	21.6	8.3	5.4	7.6	20.0	2.5	5.7	1.3	1.0	7.5
Natural Gas .....	99.6	38.7	6.6	6.6	8.1	19.1	3.0	5.5	1.0	1.0	8.6
Fuel Oil .....	98.6	50.9	4.8	5.6	9.3	13.4	2.3	2.9	0.5	1.0	7.2
District Heat .....	191.2	115.2	5.9	13.0	11.3	26.9	Q	2.1	0.9	1.0	8.9
Propane .....	49.9	8.1	4.5	4.5	4.9	12.1	0.9	7.5	Q	1.0	5.6
Other .....	72.6	19.0	Q	Q	3.3	20.1	Q	4.3	0.6	1.0	7.7
<b>Primary Space-Heating Energy Source</b>											
Electricity .....	68.1	8.9	9.6	4.3	6.8	19.0	2.8	6.9	1.3	1.0	6.2
Natural Gas .....	99.5	39.0	6.6	6.6	8.0	18.8	3.0	5.4	1.0	1.0	8.8
Fuel Oil .....	77.1	49.8	1.8	3.4	4.5	7.5	2.5	3.3	0.3	1.0	2.8
District Heat .....	193.8	118.3	5.3	13.3	10.3	27.6	Q	2.2	0.9	1.0	8.8
Propane .....	36.6	0.9	3.8	4.4	0.5	9.3	Q	9.8	Q	1.0	5.5
Other .....	50.6	7.5	2.7	4.7	Q	19.4	0.7	5.8	0.5	1.0	Q
<b>Cooling Energy Sources<sup>b</sup></b> (more than one may apply)											
Electricity .....	92.5	32.1	7.7	6.0	7.3	19.0	2.9	6.2	1.1	1.0	7.7
Natural Gas .....	156.3	42.3	29.6	Q	16.1	25.9	2.4	3.1	0.8	1.0	18.4
District Chilled Water .....	188.7	107.9	5.6	17.2	12.0	23.9	Q	2.6	1.0	1.0	9.1
<b>Water-Heating Energy Sources</b> (more than one may apply)											
Electricity .....	78.0	26.4	7.4	5.2	3.2	17.7	1.7	5.7	1.2	1.0	7.1
Natural Gas .....	111.2	40.6	7.7	7.7	12.1	20.4	4.1	6.0	1.0	1.0	9.1
Fuel Oil .....	109.7	57.8	3.9	4.9	12.3	13.2	4.6	3.8	0.7	1.0	6.8
District Heat .....	182.3	94.9	8.3	13.9	16.9	28.4	Q	2.2	0.9	1.0	9.6
Propane .....	56.7	11.9	6.1	6.1	0.8	12.6	Q	10.2	Q	1.0	5.7
<b>Cooking Energy Sources</b> (more than one may apply)											
Electricity .....	120.0	38.8	9.9	9.5	13.7	22.3	5.5	7.8	1.1	1.0	8.5
Natural Gas .....	134.3	41.9	10.2	9.9	18.1	23.8	10.0	7.9	1.0	1.0	9.1
Propane .....	78.3	17.6	7.9	7.1	6.9	16.5	1.4	12.4	Q	1.0	5.5
<b>Energy End Uses (more than one may apply)</b>											
Buildings with Space Heating ....	95.0	36.7	6.8	6.3	7.3	18.5	2.7	5.6	1.0	1.0	7.6
Buildings with Cooling .....	96.0	34.8	7.6	6.5	7.5	19.2	2.9	6.0	1.1	1.0	7.9
Buildings with Water Heating .....	97.4	35.9	7.4	6.5	7.9	19.1	2.9	6.0	1.1	1.0	8.0
Buildings with Cooking .....	122.0	39.0	9.8	9.1	14.4	21.9	7.5	8.3	1.0	1.0	8.5
Buildings with Manufacturing .....	81.1	24.5	3.1	5.4	2.3	20.5	Q	3.2	0.6	1.0	18.0
Buildings with Electricity Generation .....	132.1	43.1	10.8	10.1	13.9	28.6	1.9	3.3	2.2	1.0	13.7
<b>Percent of Floorspace Heated</b>											
Not Heated .....	24.2	(*)	4.2	1.6	1.8	6.2	Q	4.0	0.2	1.0	4.3
1 to 50 .....	43.6	12.0	2.0	2.7	2.0	10.1	Q	5.6	Q	1.0	5.8
51 to 99 .....	92.1	32.5	6.9	6.0	7.5	18.7	3.6	6.7	0.8	1.0	7.4
100 .....	103.4	41.2	7.6	6.9	8.1	19.8	2.7	5.4	1.1	1.0	7.9

**Table E2. Major Fuel Consumption (Btu) Intensities by End Use for Non-Mall Buildings, 2003**

	Major Fuel Energy Intensity (thousand Btu/square foot)										
	Total	Space Heating	Cooling	Ventilation	Water Heating	Lighting	Cooking	Refrigeration	Office Equipment	Computers	Other
<b>All Buildings*</b> .....	89.8	34.0	6.7	5.9	6.9	17.6	2.6	5.5	1.0	1.0	7.4
<b>Percent of Floorspace Cooled</b>											
Not Cooled .....	45.4	28.2	(*)	2.0	2.6	6.1	0.6	1.7	0.1	1.0	4.0
1 to 50 .....	61.8	30.3	1.5	3.4	2.7	11.8	1.2	3.8	0.3	1.0	6.1
51 to 99 .....	106.9	38.8	8.1	7.4	8.5	20.7	3.5	7.9	1.0	1.0	8.3
100 .....	111.5	35.6	11.0	7.9	10.0	23.1	3.6	6.4	1.7	1.0	8.7
<b>Percent Lit When Open</b>											
Zero .....	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
1 to 50 .....	52.9	25.1	3.2	2.8	5.1	6.2	1.5	2.8	Q	1.0	4.9
51 to 99 .....	94.9	36.4	7.1	6.8	7.4	18.0	2.5	4.8	1.1	1.0	7.6
100 .....	106.4	38.0	8.1	7.0	7.9	22.8	3.2	7.2	1.1	1.0	8.6
Building Never Open/ Electricity Not Used .....	14.4	10.3	0.4	0.1	0.1	1.1	Q	0.2	Q	1.0	Q
<b>Percent Lit When Closed</b>											
Zero .....	65.1	30.2	4.3	4.0	2.4	10.0	2.3	4.2	0.5	1.0	5.5
1 to 50 .....	84.9	34.2	6.6	5.8	3.4	15.7	2.5	5.8	1.0	1.0	7.5
51 to 100 .....	112.3	35.0	7.8	6.8	3.2	35.6	3.0	11.5	0.8	1.0	6.4
Building Never Closed/ Electricity Not Used .....	127.2	38.2	9.5	8.3	20.4	28.5	3.1	5.3	1.6	1.0	9.5
<b>Heating Equipment (more than one may apply)</b>											
Heat Pumps .....	91.3	21.3	10.8	6.0	10.5	22.8	2.3	5.2	1.3	1.0	8.1
Packaged Heat Pumps .....	96.0	18.8	11.7	6.1	11.3	25.9	2.4	6.0	1.6	1.0	9.0
Split-System Heat Pumps .....	76.8	19.0	9.8	7.0	6.2	19.6	Q	4.3	0.8	1.0	6.9
Individual Room Heat Pumps ..	94.7	25.0	11.1	6.2	14.5	22.3	2.6	2.7	0.8	1.0	6.6
Furnaces .....	76.1	30.0	4.4	4.3	5.2	14.6	2.9	6.3	0.7	1.0	6.4
Individual Space Heaters .....	81.6	30.2	5.3	5.1	6.3	18.0	1.5	4.9	0.8	1.0	7.5
District Heat .....	190.8	115.1	5.8	12.8	11.2	26.9	Q	2.1	0.9	1.0	8.9
Boilers .....	109.9	44.4	7.3	8.2	11.1	19.9	2.5	2.9	1.2	1.0	9.8
Packaged Heating Units .....	95.9	28.4	9.1	6.6	7.9	21.3	3.6	7.4	1.4	1.0	7.7
Other .....	70.7	19.0	6.8	6.1	2.5	19.7	0.8	5.6	0.8	1.0	6.9
<b>Cooling Equipment (more than one may apply)</b>											
Residential-Type Central Air Conditioners .....	83.7	32.1	6.1	6.1	7.0	14.3	3.7	5.3	0.7	1.0	7.0
Heat Pumps .....	92.6	21.5	11.0	6.0	10.1	23.1	2.4	6.0	1.3	1.0	8.3
Packaged Heat Pumps .....	97.4	20.1	11.4	5.8	11.1	26.2	2.4	6.6	1.6	1.0	9.2
Split-System Heat Pumps .....	78.4	19.1	10.1	7.2	6.1	19.2	Q	5.0	0.8	1.0	7.1
Individual Room Heat Pumps ..	94.4	22.7	11.8	6.6	13.3	23.3	2.4	3.7	0.9	1.0	7.0
Individual Air Conditioners .....	86.0	37.8	5.5	5.0	9.5	15.6	1.5	3.5	0.5	1.0	5.7
District Chilled Water .....	188.7	107.9	5.6	17.2	12.0	23.9	Q	2.6	1.0	1.0	9.1
Central Chillers .....	131.6	41.4	13.0	12.0	12.7	29.1	1.9	2.3	2.0	1.0	12.7
Packaged Air Conditioning Units .....	95.5	33.1	7.9	6.0	7.3	19.9	3.5	6.8	1.0	1.0	7.7
Swamp Coolers .....	101.1	33.2	5.5	5.8	13.4	18.1	5.0	7.7	0.5	1.0	10.5
Other .....	115.1	39.8	10.3	8.4	13.4	23.0	1.7	Q	1.1	1.0	7.5
<b>Main Equipment Replaced Since 1990 (more than one may apply)</b>											
Heating .....	83.4	30.8	5.9	5.2	7.5	15.7	2.6	5.1	1.0	1.0	7.5
Cooling .....	92.8	35.4	6.6	5.7	8.4	17.3	2.8	5.2	1.1	1.0	7.7

**Table E2. Major Fuel Consumption (Btu) Intensities by End Use for Non-Mall Buildings, 2003**

	Major Fuel Energy Intensity (thousand Btu/square foot)										
	Total	Space Heating	Cooling	Ventilation	Water Heating	Lighting	Cooking	Refrigeration	Office Equipment	Computers	Other
<b>All Buildings*</b> .....	89.8	34.0	6.7	5.9	6.9	17.6	2.6	5.5	1.0	1.0	7.4
<b>Water Heating Equipment</b>											
Centralized System .....	99.0	36.9	6.9	6.6	8.6	18.2	3.5	7.2	1.0	1.0	7.8
Distributed System .....	72.4	27.2	6.7	4.7	2.9	15.5	2.1	4.5	0.8	1.0	6.1
Combination of Centralized and Distributed System .....	119.9	41.9	9.7	8.6	11.4	26.4	2.0	3.3	1.8	1.0	10.5
<b>Lighting Equipment Types (more than one may apply)</b>											
Incandescent .....	101.6	37.4	7.4	6.7	9.3	20.9	3.2	5.0	1.2	1.0	7.9
Standard Fluorescent .....	94.6	35.7	7.1	6.3	7.3	18.5	2.7	5.8	1.1	1.0	7.8
Compact Fluorescent .....	116.4	41.3	9.1	8.6	11.2	23.6	3.3	5.0	1.5	1.0	9.4
High Intensity Discharge .....	103.7	39.4	7.4	8.2	7.6	22.9	1.8	4.0	1.1	1.0	8.5
Halogen .....	111.9	37.6	8.6	7.8	10.5	25.6	3.4	5.3	1.2	1.0	9.0
Other .....	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Refrigeration Equipment (more than one may apply)</b>											
Any Refrigeration.....	98.4	35.5	7.4	6.6	8.1	19.5	3.1	6.7	1.1	1.0	7.8
Commercial Refrigeration .....	124.6	39.9	9.9	8.8	12.6	24.3	5.9	10.6	1.0	1.0	8.9
Walk-In Units .....	136.6	41.6	10.9	9.8	14.8	26.6	7.4	12.3	1.1	1.0	9.3
Cases or Cabinets .....	132.3	42.3	10.7	9.1	13.3	25.6	6.5	11.7	1.1	1.0	9.4
Residential-Type Units .....	89.1	34.8	6.8	6.1	7.4	17.5	1.8	4.1	0.9	1.0	7.2
Vending Machines .....	105.3	37.5	8.2	7.8	9.2	22.2	1.9	5.2	1.3	1.0	8.9
No Refrigeration .....	51.4	27.3	3.3	2.9	1.6	9.5	Q	(*)	0.4	1.0	5.3
<b>Office Equipment (more than one may apply)</b>											
Computers .....	96.6	36.4	7.4	6.6	7.4	19.4	2.5	5.4	1.1	1.0	7.8
With Flat Screen Monitors .....	112.3	40.6	9.2	8.5	8.9	23.2	2.3	4.2	1.7	1.0	9.6
Dedicated Servers .....	103.5	37.3	8.3	7.7	8.0	21.9	2.0	4.5	1.6	1.0	8.8
Laser Printers .....	91.2	34.8	6.9	6.0	7.4	17.2	2.4	5.5	1.2	1.0	7.5
Inkjet Printers .....	102.5	37.1	8.7	7.5	7.3	22.3	1.9	4.9	1.2	1.0	8.4
FAX Machines .....	97.2	36.0	7.5	6.7	7.5	19.8	2.7	5.3	1.2	1.0	7.9
Photocopiers .....	96.5	37.0	7.6	7.1	7.1	20.1	1.4	4.0	1.3	1.0	8.0
<b>Number of Computers</b>											
None .....	48.5	19.7	2.2	1.6	4.2	7.2	2.8	6.0	0.1	.	N
1 to 4 .....	81.9	31.3	4.9	3.6	6.0	13.4	5.5	10.7	0.4	1.0	5.6
5 to 9 .....	76.0	28.8	5.4	3.8	6.8	14.1	2.8	5.6	0.6	1.0	7.0
10 to 19 .....	77.9	28.9	6.0	5.0	5.2	16.3	1.9	6.0	0.7	1.0	6.4
20 to 49 .....	95.3	34.3	7.4	7.6	6.2	21.7	1.2	5.1	Q	1.0	7.9
50 to 99 .....	95.4	38.8	7.2	7.1	8.0	20.1	1.5	2.1	1.1	1.0	6.8
100 to 249 .....	106.7	43.7	8.8	9.2	7.9	21.2	1.0	2.4	1.0	1.0	7.8
250 or More .....	137.1	48.2	12.0	11.0	11.0	29.2	1.7	2.1	2.2	1.0	12.4
<b>Number of Dedicated Servers</b>											
None .....	72.4	29.8	4.5	3.7	5.6	12.2	3.3	6.7	0.3	1.0	5.5
1 to 4 .....	92.6	34.8	7.0	6.5	7.8	18.7	2.2	5.3	0.7	1.0	7.5
5 to 9 .....	104.9	30.5	10.7	10.3	5.5	25.8	Q	2.9	1.6	1.0	10.9
10 to 19 .....	142.7	60.0	10.8	11.7	8.7	27.5	1.0	3.9	1.6	1.0	10.0
20 to 49 .....	118.9	36.4	13.3	9.9	9.2	27.3	1.3	2.2	2.4	1.0	11.1
50 or More .....	139.0	44.3	8.8	8.3	Q	33.6	Q	2.4	7.9	1.0	13.7
<b>Number of Photocopiers</b>											
None .....	73.1	26.6	4.2	3.1	6.6	11.6	5.4	9.0	0.2	1.0	5.8
One .....	73.0	29.3	5.0	4.3	4.6	14.5	1.6	6.0	0.6	1.0	6.3
2 to 4 .....	88.5	34.6	6.8	6.9	6.6	17.9	1.1	3.9	1.3	1.0	7.0
5 to 9 .....	110.9	44.5	8.5	9.4	7.3	22.0	1.5	2.6	1.4	1.0	8.4
10 or More .....	136.4	48.0	12.5	10.3	11.3	30.6	1.7	2.1	2.4	1.0	12.0

**Table E2. Major Fuel Consumption (Btu) Intensities by End Use for Non-Mall Buildings, 2003**

	Major Fuel Energy Intensity (thousand Btu/square foot)										
	Total	Space Heating	Cooling	Ventilation	Water Heating	Lighting	Cooking	Refrigeration	Office Equipment	Computers	Other
<b>All Buildings*</b> .....	89.8	34.0	6.7	5.9	6.9	17.6	2.6	5.5	1.0	1.0	7.4
<b>Energy-Related Space Functions (more than one may apply)</b>											
Commercial Food Preparation....	122.0	39.1	9.8	9.1	14.4	21.9	7.5	8.3	1.0	1.0	8.4
Activities with Large Amounts of Hot Water .....	126.6	43.8	9.2	8.9	16.8	23.8	5.7	5.1	0.9	1.0	9.8
Separate Computer Area .....	107.7	39.2	9.2	8.6	8.8	22.9	1.6	3.2	1.7	1.0	8.7
<b>HVAC Conservation Features (more than one may apply)</b>											
Variable Air-Volume System.....	121.4	43.7	10.5	9.0	9.7	25.4	2.5	3.6	1.8	1.0	10.9
Economizer Cycle .....	122.6	43.7	9.7	9.7	9.8	26.4	2.2	4.6	1.7	1.0	10.5
HVAC Maintenance .....	101.1	37.9	7.7	7.0	8.1	20.1	2.8	5.5	1.1	1.0	8.0
Energy Management and Control System (EMCS) .....	114.0	41.8	10.1	10.2	8.6	23.6	1.7	2.6	1.7	1.0	9.8
<b>Window and Interior Lighting Features (more than one may apply)</b>											
Multipaned Windows .....	101.0	38.6	6.9	6.8	8.5	19.9	2.8	5.7	1.2	1.0	8.1
Tinted Window Glass .....	103.6	37.5	8.6	7.4	7.6	22.2	2.4	4.5	1.4	1.0	8.8
Reflective Window Glass .....	108.5	35.4	9.9	8.3	9.8	24.7	2.1	3.9	1.3	1.0	9.6
External Overhangs or Awnings .....	100.7	32.1	7.5	7.0	9.7	19.7	4.5	8.1	1.4	1.0	8.0
Skylights or Atriums .....	104.2	38.3	7.5	7.7	9.9	21.8	2.5	2.8	1.6	1.0	9.5
Daylighting Sensors .....	131.4	38.9	10.7	10.3	15.0	27.7	3.1	4.3	Q	1.0	13.1
Specular Reflectors .....	108.3	41.0	8.4	7.9	8.0	22.8	2.2	4.3	1.3	1.0	9.2
Electronic Ballasts .....	101.2	38.0	7.8	7.2	7.8	20.0	2.5	5.6	1.2	1.0	8.4
Energy Management and Control System (EMCS) For Lighting .....	112.6	37.8	11.5	9.1	6.2	26.1	1.9	3.1	Q	1.0	10.5
<b>Equipment Usage Reduced When Building Not In Full Use (more than one may apply)</b>											
Heating .....	87.6	33.8	6.5	6.1	6.3	16.8	2.6	4.5	1.1	1.0	7.5
Cooling .....	89.0	33.1	7.0	6.4	6.4	17.5	2.8	4.6	1.0	1.0	7.6
Lighting .....	81.3	33.7	6.0	5.4	3.2	14.8	2.5	5.6	0.8	1.0	6.9
Office Equipment .....	75.5	34.4	5.8	5.0	3.0	13.3	1.7	4.2	0.7	1.0	6.2

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/cbeecs>.

\* Data in this table do not include enclosed malls and strip malls. In the 1999 CBECS, malls represented 6.6 percent of total consumption.

<sup>a</sup> The total in the "Electricity" row has been revised and does not match published value in consumption Table C3 ([http://www.eia.doe.gov/emeu/cbeecs/cbeecs2003/detailed\\_tables\\_2003/detailed\\_tables\\_2003.html](http://www.eia.doe.gov/emeu/cbeecs/cbeecs2003/detailed_tables_2003/detailed_tables_2003.html)).

<sup>b</sup> The total in the "Electricity" row has been revised and does not match published value in consumption Table C3.

(\*)=Value rounds to zero in the units displayed.

Q=Data withheld because fewer than 20 buildings were sampled for any cell, or because the Relative Standard Error (RSE) was greater than 50 percent for a cell in the "Total" column.

Notes: ● Due to rounding, data may not sum to totals. ● HVAC = Heating, Ventilation, and Air Conditioning.

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