

Table E10. Fuel Oil Consumption (gallons) and Energy Intensities by End Use for Non-Mall Buildings, 2003

	Total Fuel Oil Consumption (million gallons)					Fuel Oil Energy Intensity (gallons/square foot)				
	Total	Space Heating	Water Heating	Cooking	Other	Total	Space Heating	Water Heating	Cooking	Other
All Buildings*	1,602	1,397	125	Q	69	0.11	0.09	0.01	Q	(*)
Building Floorspace (Square Feet)										
1,001 to 5,000	249	228	Q	(*)	Q	0.41	0.38	Q	(*)	Q
5,001 to 10,000	261	237	Q	1	Q	0.37	0.33	Q	(*)	Q
10,001 to 25,000	196	177	10	(*)	Q	0.20	0.18	0.01	(*)	Q
25,001 to 50,000	117	112	Q	(*)	4	0.14	0.14	Q	(*)	(*)
50,001 to 100,000	188	167	9	Q	7	0.11	0.10	0.01	Q	(*)
100,001 to 200,000	263	246	Q	Q	10	0.09	0.08	Q	Q	(*)
200,001 to 500,000	258	183	Q	Q	11	0.08	0.05	0.02	Q	(*)
Over 500,000	69	Q	Q	Q	14	0.02	Q	Q	Q	(*)
Principal Building Activity										
Education	342	322	11	Q	Q	0.18	0.17	0.01	Q	(*)
Food Sales	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Food Service	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Health Care	76	45	11	Q	18	0.04	0.02	0.01	Q	0.01
Inpatient	65	35	11	Q	17	0.04	0.02	0.01	Q	0.01
Outpatient	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Lodging	255	177	Q	3	5	0.12	0.08	Q	(*)	(*)
Retail (Other Than Mall).....	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Office	126	112	Q	Q	11	0.03	0.03	Q	Q	(*)
Public Assembly	208	201	Q	(*)	Q	0.22	0.21	Q	(*)	Q
Public Order and Safety	57	41	Q	(*)	Q	Q	Q	Q	Q	Q
Religious Worship	130	129	Q	(*)	Q	0.29	0.28	Q	(*)	Q
Service	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Warehouse and Storage	66	Q	Q	1	Q	0.05	0.05	Q	(*)	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Vacant	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Year Constructed										
Before 1920	273	253	Q	2	Q	0.28	0.26	Q	(*)	Q
1920 to 1945	390	320	65	Q	2	0.20	0.16	0.03	Q	(*)
1946 to 1959	347	323	Q	1	Q	0.17	0.16	Q	(*)	Q
1960 to 1969	Q	Q	Q	Q	Q	0.16	0.14	0.01	Q	(*)
1970 to 1979	161	137	9	Q	14	0.07	0.06	(*)	Q	0.01
1980 to 1989	66	46	5	Q	15	0.02	0.02	(*)	Q	(*)
1990 to 1999	65	46	Q	Q	15	0.03	0.02	Q	Q	0.01
2000 to 2003	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Census Region and Division										
Northeast	1,265	1,122	106	Q	30	0.21	0.18	0.02	Q	(*)
New England	501	464	32	1	4	0.32	0.29	0.02	(*)	Q
Middle Atlantic	764	658	Q	Q	26	0.17	0.15	Q	Q	0.01
Midwest	170	Q	4	Q	10	0.06	0.06	(*)	Q	(*)
East North Central	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
West North Central	Q	Q	Q	Q	Q	0.10	0.09	(*)	(*)	Q
South	104	73	Q	Q	22	0.03	0.02	Q	Q	0.01
South Atlantic	93	69	Q	Q	18	0.04	0.03	Q	Q	0.01
East South Central	7	3	(*)	2	1	0.02	0.01	(*)	0.01	(*)
West South Central	4	Q	Q	(*)	3	(*)	(*)	Q	(*)	(*)
West	63	Q	Q	Q	7	Q	Q	Q	Q	Q
Mountain	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Pacific	29	15	Q	(*)	5	0.02	0.01	Q	(*)	(*)

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	Total	Space Heating	Water Heating	Cooking	Other	Total	Space Heating	Water Heating	Cooking	Other
All Buildings*	1,602	1,397	125	Q	69	0.11	0.09	0.01	Q	(*)
Climate Zone: 30-Year Average										
Under 2,000 CDD and --										
More than 7,000 HDD	451	424	13	Q	13	0.18	0.17	0.01	Q	0.01
5,500-7,000 HDD	455	412	29	Q	14	0.11	0.10	0.01	Q	(*)
4,000-5,499 HDD	648	542	Q	Q	25	0.14	0.12	Q	Q	0.01
Fewer than 4,000 HDD	42	17	Q	Q	13	0.02	0.01	Q	Q	0.01
2,000 CDD or More and --										
Fewer than 4,000 HDD	6	Q	Q	(*)	4	(*)	(*)	Q	(*)	(*)
Number of Floors										
One	335	300	15	1	19	0.13	0.12	0.01	(*)	0.01
Two	496	463	Q	Q	11	0.18	0.17	Q	Q	(*)
Three	279	258	7	Q	Q	0.15	0.13	(*)	Q	(*)
Four to Nine	400	310	66	Q	22	0.10	0.08	0.02	Q	0.01
Ten or More	93	66	Q	Q	8	0.02	Q	Q	Q	(*)
Number of Workers (main shift)										
Fewer than 5	498	464	Q	1	Q	0.34	0.32	Q	(*)	Q
5 to 9	120	106	Q	(*)	Q	0.19	0.17	Q	(*)	Q
10 to 19	239	187	49	(*)	Q	0.23	0.18	0.05	(*)	(*)
20 to 49	257	241	6	(*)	Q	0.16	0.15	(*)	(*)	Q
50 to 99	195	177	10	3	5	0.09	0.08	(*)	(*)	(*)
100 to 249	138	120	4	Q	9	0.06	0.06	(*)	Q	(*)
250 or More	156	101	Q	Q	27	0.03	0.02	Q	Q	(*)
Weekly Operating Hours										
Fewer than 40	110	109	Q	(*)	Q	0.19	0.19	(*)	(*)	Q
40 to 48	416	408	3	(*)	5	0.21	0.20	(*)	(*)	(*)
49 to 60	228	205	Q	1	17	0.08	0.07	Q	(*)	0.01
61 to 84	288	266	Q	Q	5	0.14	0.13	Q	Q	(*)
85 to 167	132	118	7	Q	4	0.09	0.08	(*)	Q	(*)
Open Continuously	428	291	94	Q	37	0.07	0.05	0.02	Q	0.01
Ownership and Occupancy										
Nongovernment Owned.....	1,107	952	97	Q	52	0.10	0.08	0.01	Q	(*)
Owner Occupied	588	499	58	1	30	0.10	0.08	0.01	(*)	(*)
Nonowner Occupied	520	453	Q	Q	23	0.10	0.09	Q	Q	(*)
Unoccupied	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Government Owned	495	445	28	Q	16	0.13	0.12	0.01	Q	(*)
Federal	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
State	166	152	Q	Q	Q	0.17	Q	Q	Q	0.01
Local	284	253	20	Q	8	0.12	0.10	0.01	Q	(*)
Vacancy Status										
Completely Vacant	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Mostly Vacant	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Partially Vacant	213	192	15	Q	6	0.05	0.04	(*)	Q	(*)
Not At All Vacant	1,380	1,197	110	Q	62	0.13	0.11	0.01	Q	0.01
Number of Establishments										
One	1,318	1,160	99	Q	50	0.14	0.13	0.01	Q	0.01
2 to 5	198	164	21	(*)	13	0.07	0.06	0.01	(*)	0.01
6 to 10	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
11 to 20	Q	Q	Q	Q	Q	0.02	Q	Q	(*)	Q
More than 20	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Currently Unoccupied	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q

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	Total	Space Heating	Water Heating	Cooking	Other	Total	Space Heating	Water Heating	Cooking	Other
All Buildings*	1,602	1,397	125	Q	69	0.11	0.09	0.01	Q	(*)
Predominant Exterior Wall Material										
Brick, Stone or Stucco	1,041	909	94	Q	31	0.13	0.12	0.01	Q	(*)
Concrete (Block or Poured)	175	133	Q	Q	26	0.07	0.05	Q	Q	0.01
Concrete Panels	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Siding or Shingles	295	281	Q	(*)	Q	0.39	0.37	Q	(*)	Q
Metal Panels	60	55	Q	Q	3	0.05	0.05	Q	Q	(*)
Window Glass	1	Q	Q	(*)	1	(*)	Q	Q	(*)	(*)
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
No One Major Type	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Predominant Roof Material										
Built-Up	264	220	Q	Q	17	0.05	0.04	Q	Q	(*)
Shingles (Not Wood)	453	415	25	1	Q	0.25	0.23	0.01	(*)	Q
Metal Surfacing	153	141	Q	Q	Q	0.12	0.11	Q	Q	0.01
Synthetic or Rubber	335	284	24	Q	25	0.07	0.06	0.01	Q	0.01
Slate or Tile	83	76	Q	2	1	0.18	0.17	Q	(*)	(*)
Wooden Materials	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Concrete	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
No One Major Type	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	757	686	38	Q	27	0.13	0.12	0.01	Q	(*)
Addition or Annex	Q	Q	Q	Q	Q	0.14	0.13	(*)	Q	(*)
Reduction In Floorspace	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Cosmetic Improvements	555	496	35	Q	21	0.13	0.12	0.01	Q	(*)
Wall or Roof Replacement	386	337	31	Q	14	0.13	0.11	0.01	Q	(*)
Interior Wall										
Re-Configuration	321	288	19	Q	13	0.10	0.09	0.01	Q	(*)
HVAC Equipment Upgrade.....	244	204	19	Q	17	0.07	0.06	0.01	Q	(*)
Lighting Upgrade	386	348	21	Q	15	0.11	0.10	0.01	Q	(*)
Window Replacement	362	332	20	Q	6	0.16	0.14	0.01	Q	(*)
Plumbing System Upgrade	321	288	19	Q	9	0.12	0.10	0.01	Q	(*)
Insulation Upgrade	151	127	14	2	7	0.11	0.09	0.01	(*)	0.01
Other Renovation	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
No Renovations Since 1980.....	677	590	Q	Q	Q	0.21	0.18	Q	Q	Q
Building Newer than 1980	168	121	Q	Q	33	0.03	0.02	Q	Q	0.01
Energy Sources (more than one may apply)										
Electricity	1,601	1,396	125	Q	69	0.11	0.09	0.01	Q	(*)
Natural Gas	712	593	70	Q	44	0.07	0.06	0.01	Q	(*)
Fuel Oil	1,602	1,397	125	Q	69	0.11	0.09	0.01	Q	(*)
District Heat	10	Q	Q	Q	6	0.01	Q	Q	Q	(*)
District Chilled Water	12	Q	Q	Q	Q	0.01	Q	Q	Q	(*)
Propane	387	342	23	Q	18	0.18	0.16	0.01	Q	0.01
Other	Q	Q	Q	Q	Q	0.06	0.05	Q	Q	(*)
Space-Heating Energy Source										
Fuel Oil	1,527	1,397	100	Q	19	0.25	0.23	0.02	Q	(*)
Fuel Oil Main	1,423	1,307	94	Q	11	0.37	0.34	0.02	Q	(*)
Fuel Oil Secondary	112	98	5	Q	8	0.05	0.04	(*)	Q	(*)
Other Excluding Fuel Oil	51	(*)	Q	Q	45	0.01	(*)	Q	Q	0.01
Buildings without Heating	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q

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	Total	Space Heating	Water Heating	Cooking	Other	Total	Space Heating	Water Heating	Cooking	Other
All Buildings*	1,602	1,397	125	Q	69	0.11	0.09	0.01	Q	(*)
Primary Space-Heating Energy Source										
Electricity	23	Q	Q	1	11	0.01	Q	Q	(*)	(*)
Natural Gas	109	72	6	Q	31	0.02	0.01	(*)	Q	(*)
Fuel Oil	1,423	1,307	94	Q	11	0.37	0.34	0.02	Q	(*)
District Heat	7	Q	Q	Q	5	(*)	Q	Q	Q	(*)
Propane	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Cooling Energy Source										
Fuel Oil	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other Excluding Fuel Oil	1,258	1,086	103	Q	58	0.09	0.08	0.01	Q	(*)
Buildings without Cooling	334	305	Q	(*)	Q	0.26	0.24	Q	(*)	Q
Water-Heating Energy Source										
Fuel Oil	786	638	125	Q	15	0.42	0.34	0.07	Q	0.01
Other Excluding Fuel Oil	748	695	(*)	Q	49	0.06	0.05	(*)	Q	(*)
Bldgs without Water Heating	69	64	(*)	(*)	Q	0.12	0.11	(*)	(*)	Q
Cooking Energy Source										
Fuel Oil	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other Excluding Fuel Oil	821	699	84	(*)	37	0.09	0.08	0.01	(*)	(*)
Buildings without Cooking	742	677	38	(*)	28	0.12	0.11	0.01	(*)	(*)
Energy End Uses (more than one may apply)										
Buildings with Space Heating	1,577	1,397	105	Q	65	0.11	0.09	0.01	Q	(*)
Buildings with Cooling	1,268	1,092	104	Q	61	0.09	0.08	0.01	Q	(*)
Buildings with Water Heating	1,533	1,333	125	Q	63	0.11	0.09	0.01	Q	(*)
Buildings with Cooking	860	720	87	Q	41	0.10	0.08	0.01	Q	(*)
Buildings with Manufacturing	49	Q	Q	1	Q	0.05	0.03	Q	(*)	Q
Buildings with Electricity Generation	227	151	20	Q	54	0.02	0.02	(*)	Q	0.01
Percent of Floorspace Heated										
Not Heated	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
1 to 50	94	81	Q	(*)	Q	0.07	0.06	Q	(*)	Q
51 to 99	187	160	Q	Q	8	0.08	0.06	Q	Q	(*)
100	1,297	1,157	81	Q	52	0.12	0.10	0.01	Q	(*)
Heating Equipment (more than one may apply)										
Heat Pumps	44	32	Q	Q	9	0.02	0.01	Q	Q	(*)
Packaged Heat Pumps	22	Q	1	Q	6	Q	Q	Q	Q	Q
Split-System Heat Pumps	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Individual Room Heat Pumps ..	Q	Q	Q	Q	Q	Q	Q	Q	Q	(*)
Furnaces	360	337	7	1	Q	0.11	0.10	(*)	(*)	Q
Individual Space Heaters	225	194	18	1	13	0.07	0.06	0.01	(*)	(*)
District Heat	8	Q	Q	Q	5	(*)	Q	Q	Q	(*)
Boilers	1,236	1,093	96	Q	37	0.14	0.12	0.01	Q	(*)
Packaged Heating Units	122	91	7	Q	22	0.03	0.02	(*)	Q	0.01
Other	36	31	Q	Q	Q	0.03	0.03	Q	Q	Q
Water Heating Equipment										
Centralized System	1,162	1,003	114	Q	40	0.14	0.12	0.01	Q	(*)
Distributed System	224	212	Q	(*)	Q	0.10	0.10	Q	(*)	Q
Combination of Centralized and Distributed System	147	119	9	Q	13	0.04	0.03	(*)	Q	(*)

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All Buildings*	1,602	1,397	125	Q	69	0.11	0.09	0.01	Q	(*)
Energy-Related Space Functions (more than one may apply)										
Commercial Food Preparation....	860	720	87	Q	41	0.10	0.08	0.01	Q	(*)
Activities with Large Amounts of Hot Water	685	546	92	Q	40	0.09	0.07	0.01	Q	0.01
Separate Computer Area	695	570	78	Q	40	0.07	0.06	0.01	Q	(*)
HVAC Conservation Features (more than one may apply)										
Variable Air-Volume System.....	254	199	19	Q	32	0.03	0.03	(*)	Q	(*)
Economizer Cycle	303	239	22	Q	37	0.04	0.03	(*)	Q	(*)
HVAC Maintenance	1,413	1,238	101	Q	62	0.10	0.09	0.01	Q	(*)
Energy Management and Control System (EMCS)	222	173	Q	Q	26	0.03	0.03	Q	Q	(*)
Equipment Usage Reduced When Building Not In Full Use (more than one may apply)										
Heating	1,166	1,035	75	Q	47	0.11	0.10	0.01	Q	(*)
Cooling	975	841	83	Q	41	0.09	0.08	0.01	Q	(*)
Lighting	1,127	1,061	30	Q	30	0.13	0.12	(*)	Q	(*)
Office Equipment	663	625	Q	Q	19	0.20	0.19	Q	Q	0.01
Annual Consumption (gallons)										
1,000 or Less	94	74	Q	Q	17	0.01	0.01	Q	Q	(*)
1,001 to 5,000	320	279	Q	Q	22	0.12	0.11	Q	Q	0.01
5,001 to 10,000	204	175	Q	(*)	Q	0.22	0.19	Q	(*)	0.01
10,001 to 25,000	219	209	3	1	7	0.24	0.23	(*)	(*)	0.01
Over 25,000	765	660	81	Q	15	0.36	0.31	0.04	Q	0.01

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>.

* Figures in this table do not include enclosed malls and strip malls. In the 1999 CBECS, total fuel oil consumption in malls was not statistically significant.

(*)=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.