

**Table C16.89p. Total Primary Consumption by End Use in Commercial Buildings, 1989**

Building Characteristics	End Uses (trillion Btu)										RSE Row Factors
	All End Uses	Space Heating	Water Heating	Cooling	Ventila- tion	Lighting	Cooking	Refrig- eration	Office Equip- ment	Other	
	RSE Column Factors:	1.0	NF	NF	NF	NF	NF	NF	NF	NF	
<b>All Buildings</b> .....	11,401	2,210	548	873	841	3,093	383	566	1,147	1,740	5.8
<b>Census Region</b>											
Northeast .....	2,540	614	122	112	171	687	69	106	278	379	12.5
Midwest .....	2,892	786	178	160	177	727	98	146	238	382	9.8
South .....	3,621	485	138	409	283	1,032	103	198	370	605	9.5
West .....	2,348	325	111	192	209	647	114	115	261	374	12.3
<b>Census Division</b>											
New England .....	531	134	37	23	38	138	17	23	49	73	17.3
Middle Atlantic .....	2,008	480	85	89	133	549	52	84	230	306	15.2
East North Central .....	1,894	527	114	86	111	485	66	104	163	239	12.3
West North Central .....	998	259	64	74	66	242	32	42	75	143	17.0
South Atlantic .....	1,523	190	47	185	130	444	35	76	166	251	13.1
East South Central .....	808	122	37	61	52	215	27	46	91	157	21.0
West South Central .....	1,290	173	54	163	100	373	41	77	113	197	14.5
Mountain .....	812	170	40	68	73	199	69	36	74	84	29.0
Pacific .....	1,536	155	72	124	137	448	45	79	187	290	15.4
<b>Principal Building Activity</b>											
Assembly .....	818	266	23	76	76	190	20	34	18	114	15.0
Education .....	1,143	397	44	61	73	345	54	31	32	105	13.9
Food Sales and Service .....	835	72	60	106	63	137	134	184	8	71	10.5
Health Care .....	761	85	128	96	63	205	55	19	16	94	18.5
Lodging .....	705	160	135	51	61	142	60	48	4	43	11.6
Mercantile and Service .....	2,161	383	64	156	79	607	32	38	347	456	10.5
Office .....	2,811	417	55	254	403	824	14	105	498	242	5.5
Warehouse .....	1,027	237	8	18	10	310	4	73	174	193	17.8
Other .....	964	153	24	48	10	292	10	29	44	355	30.8
Vacant .....	177	41	7	8	1	40	1	7	6	66	21.6
<b>Building Floorspace (square feet)</b>											
1,001 to 2,000 .....	415	87	32	40	30	83	25	29	52	37	8.9
2,001 to 5,000 .....	936	199	61	92	57	208	55	72	105	86	6.7
5,001 to 10,000 .....	1,065	248	59	100	63	251	28	49	123	144	10.6
10,001 to 25,000 .....	1,562	377	64	119	80	376	37	90	220	198	9.2
25,001 to 50,000 .....	1,426	351	47	103	78	384	35	82	139	207	10.2
50,001 to 100,000 .....	1,731	316	75	109	120	488	38	93	134	359	15.2
100,001 to 200,000 .....	1,561	290	69	107	131	464	48	58	141	253	12.7
200,001 to 500,000 .....	1,438	214	60	107	151	457	31	46	119	253	19.2
Over 500,000 .....	1,266	128	80	97	131	381	87	46	113	202	21.5
<b>Year Constructed</b>											
1899 or Before .....	178	89	13	5	8	26	6	8	9	14	17.4
1900 to 1919 .....	391	115	17	15	20	87	11	12	29	87	17.4
1920 to 1945 .....	1,062	309	67	74	88	231	39	41	71	141	14.3
1946 to 1959 .....	1,754	405	95	117	128	477	80	62	161	227	13.9
1960 to 1969 .....	2,467	500	125	187	166	661	59	98	217	456	12.5
1970 to 1979 .....	2,820	462	135	252	213	834	103	155	281	383	7.9
1980 to 1989 .....	2,728	330	95	223	218	777	85	189	379	431	9.9

NF = No applicable RSE row/column factor, estimates derived from a statistically adjusted engineering model.

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

Q = Data withheld because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 20 buildings were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Form EIA-871 of the 1989 Nonresidential Buildings Energy Consumption Survey.

**Table C16.89s. Total Site Consumption by End Use in Commercial Buildings, 1989**

Building Characteristics	End Uses (trillion Btu)										RSE Row Factors
	All End Uses	Space Heating	Water Heating	Cooling	Ventila- tion	Lighting	Cooking	Refrig- eration	Office Equip- ment	Other	
	RSE Column Factors:	1.0	NF	NF	NF	NF	NF	NF	NF	NF	
<b>All Buildings</b> .....	5,788	2,017	499	303	278	1,023	271	187	379	832	6.1
<b>Census Region</b>											
Northeast .....	1,354	567	115	42	57	227	47	35	92	172	11.1
Midwest .....	1,659	733	166	56	59	241	69	48	79	209	11.1
South .....	1,648	423	113	136	93	341	63	65	122	291	11.1
West .....	1,126	294	104	69	69	214	Q	38	86	159	12.9
<b>Census Division</b>											
New England .....	298	126	36	8	13	46	11	8	16	36	19.8
Middle Atlantic .....	1,056	441	80	34	44	182	36	28	76	137	13.3
East North Central .....	1,086	494	106	30	37	160	47	34	54	125	12.7
West North Central .....	573	240	60	26	22	80	22	14	25	84	22.1
South Atlantic .....	682	164	36	61	43	147	21	25	55	130	16.4
East South Central .....	373	100	30	20	17	71	15	15	30	73	22.2
West South Central .....	594	158	48	54	33	123	26	25	37	88	15.1
Mountain .....	450	159	37	28	24	66	Q	12	24	38	28.6
Pacific .....	676	135	67	41	45	148	30	26	62	121	14.4
<b>Principal Building Activity</b>											
Assembly .....	441	227	20	25	25	63	18	11	6	44	12.6
Education .....	704	377	40	26	24	114	Q	10	10	49	17.1
Food Sales and Service .....	394	69	52	35	21	45	80	61	3	29	9.2
Health Care .....	449	79	123	33	21	68	45	6	5	69	25.0
Lodging .....	425	137	125	17	20	47	32	16	1	31	13.2
Mercantile and Service .....	1,048	358	56	53	26	201	23	12	115	204	10.2
Office .....	1,230	363	47	89	133	272	8	35	165	117	5.0
Warehouse .....	536	221	6	6	3	102	1	24	57	114	18.2
Other .....	464	147	23	16	3	96	Q	10	15	145	26.2
Vacant .....	98	40	Q	3	*	13	1	2	2	30	29.2
<b>Building Floorspace (square feet)</b>											
1,001 to 2,000 .....	210	76	26	13	10	28	15	10	17	16	9.2
2,001 to 5,000 .....	482	180	50	31	19	69	35	24	35	41	6.6
5,001 to 10,000 .....	567	229	53	33	21	83	17	16	41	75	9.9
10,001 to 25,000 .....	791	327	57	40	27	124	20	30	73	93	8.2
25,001 to 50,000 .....	756	319	43	34	26	127	22	27	46	113	10.1
50,001 to 100,000 .....	855	299	70	37	40	161	24	31	44	149	13.8
100,001 to 200,000 .....	777	266	65	36	43	153	37	19	47	109	13.6
200,001 to 500,000 .....	698	200	57	36	50	151	22	15	39	128	20.9
Over 500,000 .....	652	121	78	43	43	126	Q	15	37	109	27.2
<b>Year Constructed</b>											
1899 or Before .....	128	87	12	2	3	8	4	3	3	7	19.5
1900 to 1919 .....	239	111	16	5	7	29	9	4	10	Q	19.0
1920 to 1945 .....	636	285	64	26	29	76	28	14	23	89	19.0
1946 to 1959 .....	988	395	91	46	42	158	Q	21	53	114	15.5
1960 to 1969 .....	1,275	469	115	65	55	219	38	32	72	210	11.4
1970 to 1979 .....	1,342	399	117	85	70	276	71	51	93	179	8.9
1980 to 1989 .....	1,180	270	85	75	72	257	52	63	125	182	9.5

NF = No applicable RSE row/column factor, estimates derived from a statistically adjusted engineering model.

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

Q = Data withheld because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 20 buildings were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.  
• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Form EIA-871 of the 1989 Nonresidential Buildings Energy Consumption Survey.

**Table C17.89p. Primary Electricity Consumption by End Use in Commercial Buildings, 1989**

Building Characteristics	End Uses (trillion Btu)										RSE Row Factors
	All End Uses	Space Heating	Water Heating	Cooling	Ventila- tion	Lighting	Cooking	Refrig- eration	Office Equip- ment	Other	
	RSE Column Factors:	1.0	NF	NF	NF	NF	NF	NF	NF	NF	
<b>All Buildings</b> .....	8,386	290	73	852	841	3,093	169	566	1,147	1,356	5.9
<b>Census Region</b>											
Northeast .....	1,771	70	9	105	171	687	33	106	278	309	14.0
Midwest .....	1,841	79	17	155	177	727	43	146	238	258	9.1
South .....	2,948	94	36	408	283	1,032	60	198	370	468	8.7
West .....	1,826	47	11	183	209	647	33	115	261	321	12.0
<b>Census Division</b>											
New England .....	349	12	2	22	38	138	9	23	49	56	14.8
Middle Atlantic .....	1,422	59	7	83	133	549	25	84	230	253	16.9
East North Central .....	1,208	50	12	84	111	485	28	104	163	171	11.9
West North Central .....	634	29	5	71	66	242	15	42	75	88	15.1
South Atlantic .....	1,257	38	17	185	130	444	20	76	166	181	11.7
East South Central .....	651	33	10	61	52	215	18	46	91	125	19.5
West South Central .....	1,040	23	9	162	100	373	21	77	113	163	15.1
Mountain .....	540	16	4	59	73	199	11	36	74	69	29.7
Pacific .....	1,285	31	7	124	137	448	22	79	187	252	16.2
<b>Principal Building Activity</b>											
Assembly .....	563	58	4	76	76	190	2	34	18	105	17.8
Education .....	655	31	5	53	73	345	2	31	32	84	9.3
Food Sales and Service .....	659	5	12	106	63	137	80	184	8	64	12.3
Health Care .....	465	9	7	94	63	205	14	19	16	37	13.9
Lodging .....	417	35	16	51	61	142	42	48	4	19	11.6
Mercantile and Service .....	1,662	38	12	154	79	607	13	38	347	376	10.8
Office .....	2,363	81	11	246	403	824	9	105	498	187	6.4
Warehouse .....	734	23	3	18	10	310	4	73	174	119	18.9
Other .....	747	9	2	48	10	292	2	29	44	313	35.9
Vacant .....	119	2	1	8	1	40	*	7	6	53	19.7
<b>Building Floorspace (square feet)</b>											
1,001 to 2,000 .....	306	16	9	40	30	83	14	29	52	32	9.5
2,001 to 5,000 .....	678	29	17	92	57	208	30	72	105	67	7.2
5,001 to 10,000 .....	745	28	9	99	63	251	17	49	123	104	12.3
10,001 to 25,000 .....	1,152	74	11	118	80	376	24	90	220	157	10.3
25,001 to 50,000 .....	1,001	49	7	103	78	384	19	82	139	140	10.9
50,001 to 100,000 .....	1,309	26	6	108	120	488	20	93	134	315	16.2
100,001 to 200,000 .....	1,171	35	6	105	131	464	16	58	141	214	12.8
200,001 to 500,000 .....	1,106	21	5	106	151	457	14	46	119	187	18.0
Over 500,000 .....	917	10	2	80	131	381	13	46	113	139	17.6
<b>Year Constructed</b>											
1899 or Before .....	75	3	2	5	8	26	3	8	9	11	17.0
1900 to 1919 .....	227	6	2	14	20	87	3	12	29	54	16.6
1920 to 1945 .....	637	36	4	72	88	231	16	41	71	77	12.3
1946 to 1959 .....	1,145	15	7	107	128	477	17	62	161	170	13.1
1960 to 1969 .....	1,781	46	14	182	166	661	30	98	217	367	15.0
1970 to 1979 .....	2,208	94	27	250	213	834	48	155	281	305	7.3
1980 to 1989 .....	2,312	89	16	221	218	777	50	189	379	372	10.1

NF = No applicable RSE row/column factor, estimates derived from a statistically adjusted engineering model.

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

Q = Data withheld because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 20 buildings were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.  
• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Form EIA-871 of the 1989 Nonresidential Buildings Energy Consumption Survey.

**Table C17.89s. Site Electricity Consumption by End Use in Commercial Buildings, 1989**

Building Characteristics	End Uses (trillion Btu)										RSE Row Factors
	All End Uses	Space Heating	Water Heating	Cooling	Ventila- tion	Lighting	Cooking	Refrig- eration	Office Equip- ment	Other	
	RSE Column Factors:	1.0	NF	NF	NF	NF	NF	NF	NF	NF	
<b>All Buildings</b> .....	2,773	96	24	282	278	1,023	56	187	379	449	5.9
<b>Census Region</b>											
Northeast .....	586	23	3	35	57	227	11	35	92	102	14.0
Midwest .....	609	26	6	51	59	241	14	48	79	85	9.1
South .....	975	31	12	135	93	341	20	65	122	155	8.7
West .....	604	15	4	61	69	214	11	38	86	106	12.0
<b>Census Division</b>											
New England .....	115	4	1	7	13	46	3	8	16	19	14.8
Middle Atlantic .....	470	19	2	27	44	182	8	28	76	84	16.9
East North Central .....	399	17	4	28	37	160	9	34	54	56	11.9
West North Central .....	210	10	2	24	22	80	5	14	25	29	15.1
South Atlantic .....	416	13	6	61	43	147	7	25	55	60	11.7
East South Central .....	215	11	3	20	17	71	6	15	30	Q	19.5
West South Central .....	344	8	3	54	33	123	7	25	37	54	15.1
Mountain .....	179	5	1	20	24	66	4	12	24	23	29.7
Pacific .....	425	10	2	41	45	148	7	26	62	83	16.2
<b>Principal Building Activity</b>											
Assembly .....	186	19	1	25	25	63	1	11	6	35	17.8
Education .....	217	10	2	17	24	114	1	10	10	28	9.3
Food Sales and Service .....	218	2	4	35	21	45	26	61	3	21	12.3
Health Care .....	154	3	2	31	21	68	5	6	5	12	13.9
Lodging .....	138	11	5	17	20	47	14	16	1	6	11.6
Mercantile and Service .....	550	12	4	51	26	201	4	12	115	124	10.8
Office .....	781	27	4	81	133	272	3	35	165	62	6.4
Warehouse .....	243	8	1	6	3	102	1	24	57	39	18.9
Other .....	247	Q	1	16	3	96	1	10	15	103	35.9
Vacant .....	39	1	*	3	*	13	*	2	2	18	19.7
<b>Building Floorspace (square feet)</b>											
1,001 to 2,000 .....	101	5	3	13	10	28	5	10	17	11	9.5
2,001 to 5,000 .....	224	10	6	31	19	69	10	24	35	22	7.2
5,001 to 10,000 .....	246	9	3	33	21	83	6	16	41	34	12.3
10,001 to 25,000 .....	381	25	4	39	27	124	8	30	73	52	10.3
25,001 to 50,000 .....	331	16	2	34	26	127	6	27	46	46	10.9
50,001 to 100,000 .....	433	9	2	36	40	161	6	31	44	104	16.2
100,001 to 200,000 .....	387	12	2	35	43	153	5	19	47	71	12.8
200,001 to 500,000 .....	366	7	2	35	50	151	5	15	39	62	18.0
Over 500,000 .....	303	3	1	26	43	126	4	15	37	46	17.6
<b>Year Constructed</b>											
1899 or Before .....	25	1	Q	2	3	8	1	3	3	4	17.0
1900 to 1919 .....	75	2	1	5	7	29	1	4	10	18	16.6
1920 to 1945 .....	211	Q	1	24	29	76	5	14	23	25	12.3
1946 to 1959 .....	379	5	2	35	42	158	6	21	53	56	13.1
1960 to 1969 .....	589	15	5	60	55	219	10	32	72	121	15.0
1970 to 1979 .....	730	31	9	83	70	276	16	51	93	101	7.3
1980 to 1989 .....	765	29	5	73	72	257	17	63	125	123	10.1

NF = No applicable RSE row/column factor, estimates derived from a statistically adjusted engineering model.

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

Q = Data withheld because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 20 buildings were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.  
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Source: Energy Information Administration, Office of Energy Markets and End Use, Form EIA-871 of the 1989 Nonresidential Buildings Energy Consumption Survey.

**Table C18.89. Natural Gas Consumption by End Use in Commercial Buildings, 1989**

Building Characteristics	End Uses (trillion Btu)					RSE Row Factors
	All End Uses	Space Heating	Water Heating	Cooking	Other	
	RSE Column Factors:	1.0	NF	NF	NF	NF
<b>All Buildings</b> .....	2,073	1,265	320	198	290	7.3
<b>Census Region</b>						
Northeast .....	353	235	52	30	36	17.2
Midwest .....	831	579	101	46	105	10.1
South .....	498	263	84	42	108	17.8
West .....	391	189	82	Q	41	14.8
<b>Census Division</b>						
New England .....	39	19	Q	4	4	22.8
Middle Atlantic .....	314	215	40	26	Q	19.4
East North Central .....	561	398	73	36	54	12.2
West North Central .....	270	180	28	11	Q	20.0
South Atlantic .....	198	106	24	15	Q	31.5
East South Central .....	126	64	25	9	28	29.2
West South Central .....	174	94	34	19	27	19.6
Mountain .....	197	97	28	Q	13	25.7
Pacific .....	195	91	54	21	28	14.8
<b>Principal Building Activity</b>						
Assembly .....	174	135	13	17	8	9.7
Education .....	323	237	15	Q	20	19.0
Food Sales and Service .....	155	50	44	53	7	10.5
Health Care .....	186	45	71	29	Q	25.4
Lodging .....	187	78	84	17	9	13.8
Mercantile and Service .....	417	275	47	19	76	12.8
Office .....	238	171	27	4	36	11.6
Warehouse .....	206	156	4	Q	Q	24.5
Other .....	137	86	9	Q	36	23.4
Vacant .....	49	31	Q	Q	Q	45.1
<b>Building Floorspace (square feet)</b>						
1,001 to 2,000 .....	89	53	21	10	5	13.5
2,001 to 5,000 .....	213	130	41	24	18	7.8
5,001 to 10,000 .....	265	174	43	11	37	12.2
10,001 to 25,000 .....	278	200	43	12	24	8.9
25,001 to 50,000 .....	309	207	31	15	56	12.9
50,001 to 100,000 .....	249	186	31	12	20	12.4
100,001 to 200,000 .....	238	153	42	28	16	18.9
200,001 to 500,000 .....	228	110	43	17	Q	31.3
Over 500,000 .....	203	53	26	Q	Q	37.6
<b>Year Constructed</b>						
1899 or Before .....	53	43	5	2	2	27.8
1900 to 1919 .....	123	74	12	7	Q	26.0
1920 to 1945 .....	244	155	20	19	Q	20.9
1946 to 1959 .....	411	234	71	Q	46	16.8
1960 to 1969 .....	458	309	62	25	62	13.1
1970 to 1979 .....	441	261	87	50	44	13.1
1980 to 1989 .....	344	190	64	34	55	9.5

NF = No applicable RSE row/column factor, estimates derived from a statistically adjusted engineering model.

Q = Data withheld because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 20 buildings were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

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Source: Energy Information Administration, Office of Energy Markets and End Use, Form EIA-871 of the 1989 Nonresidential Buildings Energy Consumption Survey.

**Table C19.89. Fuel Oil and District Heat Consumption in Commercial Buildings, 1989**

Building Characteristics	Fuel Oil End Uses (trillion Btu)		District Heat End Uses (trillion Btu)		RSE Row Factors
	All End Uses	Space Heating	All End Uses	Space Heating	
	RSE Column Factors: 0.9	NF	1.2	NF	
<b>All Buildings</b> .....	357	301	585	355	16.8
<b>Census Region</b>					
Northeast .....	237	198	179	111	24.9
Midwest .....	61	58	159	70	29.7
South .....	50	38	126	90	35.0
West .....	9	Q	121	84	34.0
<b>Census Division</b>					
New England .....	92	79	Q	24	18.7
Middle Atlantic .....	145	119	127	87	27.7
East North Central .....	38	37	88	42	35.0
West North Central .....	23	21	71	28	50.2
South Atlantic .....	42	32	Q	Q	36.1
East South Central .....	6	5	Q	Q	0.0
West South Central .....	Q	Q	73	55	0.0
Mountain .....	Q	Q	73	55	0.0
Pacific .....	7	Q	49	29	0.0
<b>Principal Building Activity</b>					
Assembly .....	31	29	49	44	26.8
Education .....	71	68	93	62	28.9
Food Sales and Service .....	18	15	Q	Q	33.7
Health Care .....	17	7	92	23	45.3
Lodging .....	10	6	90	41	39.2
Mercantile and Service .....	75	68	6	Q	32.0
Office .....	43	38	167	127	25.1
Warehouse .....	53	39	Q	18	45.5
Other .....	30	24	49	33	42.7
Vacant .....	7	7	3	Q	40.7
<b>Building Floorspace (square feet)</b>					
1,001 to 2,000 .....	19	17	Q	Q	33.3
2,001 to 5,000 .....	40	36	Q	Q	24.9
5,001 to 10,000 .....	41	38	14	Q	43.1
10,001 to 25,000 .....	69	61	63	42	27.7
25,001 to 50,000 .....	47	44	69	52	23.0
50,001 to 100,000 .....	54	47	119	58	48.2
100,001 to 200,000 .....	46	31	106	71	38.9
200,001 to 500,000 .....	28	21	76	62	35.0
Over 500,000 .....	12	Q	133	58	40.8
<b>Year Constructed</b>					
1899 or Before .....	17	15	Q	Q	39.6
1900 to 1919 .....	26	23	15	12	28.2
1920 to 1945 .....	69	62	112	56	18.8
1946 to 1959 .....	77	73	121	83	28.5
1960 to 1969 .....	73	60	156	86	38.1
1970 to 1979 .....	61	40	110	67	31.9
1980 to 1989 .....	34	27	38	24	39.7

NF = No applicable RSE row/column factor, estimates derived from a statistically adjusted engineering model.

Q = Data withheld because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 20 buildings were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Form EIA-871 of the 1989 Nonresidential Buildings Energy Consumption Survey.