

Release date: September 2021

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Table B21. Energy end uses, number of buildings, 2018

	Number of buildings (thousand)							
	Energy used for (more than one may apply)							
	All buildings	Space heating	Cooling	Water heating	Cooking	Manu- facturing	Electricity gener- ation	Lighting
All buildings	5,918	4,901	4,631	4,595	1,738	322	706	5,503
Building floorspace (square feet)								
1,001 to 5,000	2,833	2,229	2,033	1,984	695	139	189	2,577
5,001 to 10,000	1,359	1,093	1,032	1,053	390	56	156	1,238
10,001 to 25,000	981	869	853	848	307	65	152	948
25,001 to 50,000	386	366	363	363	159	35	80	382
50,001 to 100,000	218	208	211	209	103	17	66	217
100,001 to 200,000	93	90	90	90	55	6	37	92
200,001 to 500,000	40	39	38	39	24	3	20	40
Over 500,000	9	9	9	9	6	1	6	9
Principal building activity								
Education	437	413	413	378	176	3	62	437
Food sales	163	139	157	157	101	Q	17	163
Food service	286	265	274	286	280	Q	Q	286
Health care	137	136	136	136	23	Q	30	137
Inpatient	9	8	9	9	7	Q	9	9
Outpatient	129	127	128	127	16	Q	21	129
Lodging	207	199	205	205	150	Q	53	207
Mercantile	517	486	479	452	149	21	44	513
Retail (other than mall)	350	322	313	285	46	Q	15	346
Enclosed and strip malls	167	164	167	167	103	Q	29	167
Office	970	925	939	902	198	24	139	970
Public assembly	488	444	412	449	197	Q	68	488
Public order and safety	81	77	76	79	55	Q	37	81
Religious worship	439	426	421	409	275	Q	19	439
Service	867	686	512	590	49	100	106	853
Warehouse and storage	1,004	549	473	425	60	113	70	707
Other	113	78	73	78	16	14	34	103
Vacant	208	78	58	48	Q	Q	Q	118
Year constructed								
Before 1920	329	306	253	288	125	Q	27	320
1920 to 1945	379	329	309	291	129	Q	40	362
1946 to 1959	517	462	416	430	157	38	29	478
1960 to 1969	685	598	552	573	211	23	65	663
1970 to 1979	831	661	650	635	209	58	115	784
1980 to 1989	794	668	653	632	225	34	83	752
1990 to 1999	921	724	686	634	240	47	130	824
2000 to 2009	924	729	715	699	284	53	136	839
2010 to 2018	537	425	396	412	158	38	81	481

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	Energy used for (more than one may apply)							
	All buildings	Space heating	Cooling	Water heating	Cooking	Manu-facturing	Electricity gener-ation	Lighting
All buildings	5,918	4,901	4,631	4,595	1,738	322	706	5,503
Census region and division								
Northeast	793	710	585	655	242	34	140	758
New England	275	249	187	225	101	Q	63	274
Middle Atlantic	518	461	398	430	141	23	77	484
Midwest	1,719	1,417	1,209	1,284	499	106	195	1,591
East North Central	1,110	921	807	862	337	70	118	1,029
West North Central	609	497	403	422	162	36	77	562
South	2,143	1,755	1,865	1,690	615	101	236	1,981
South Atlantic	1,034	857	913	839	305	44	114	971
East South Central	347	291	295	271	97	16	36	303
West South Central	762	607	657	580	213	41	86	708
West	1,264	1,019	972	966	382	81	135	1,174
Mountain	484	391	379	354	128	38	55	430
Pacific	780	628	593	612	255	43	81	744
Climate zone^a								
Cold or very cold	539	456	321	405	128	31	59	499
Cool	1,727	1,442	1,211	1,325	545	106	242	1,603
Mixed mild	1,216	1,080	998	1,021	369	51	144	1,141
Warm	1,606	1,373	1,360	1,250	452	79	169	1,474
Hot or very hot	831	551	740	594	244	54	92	787
Number of workers (main shift)								
Fewer than 5	3,270	2,439	2,114	2,099	727	145	246	2,859
5 to 9	1,116	1,016	1,029	1,023	355	60	124	1,113
10 to 19	713	654	676	673	289	60	102	713
20 to 49	492	476	486	485	213	36	107	492
50 to 99	201	192	199	190	87	10	65	201
100 to 249	90	89	89	89	48	8	39	90
250 or more	37	36	36	36	19	1	24	37
Weekly operating hours								
Fewer than 40	1,370	1,030	882	876	353	52	67	1,186
40 to 48	1,483	1,311	1,257	1,183	291	117	188	1,464
49 to 60	1,250	1,123	1,051	1,093	334	80	139	1,231
61 to 84	645	548	540	549	238	35	80	618
85 to 167	465	370	385	379	208	26	72	406
Open continuously	705	519	517	514	312	12	161	600

Table B21. Energy end uses, number of buildings, 2018

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	All buildings	Space heating	Cooling	Water heating	Cooking	Manu- facturing	Electricity gener- ation	Lighting
All buildings	5,918	4,901	4,631	4,595	1,738	322	706	5,503
Ownership and occupancy								
Nongovernment owned	4,982	4,103	3,861	3,850	1,457	300	510	4,588
Owner occupied	3,249	2,747	2,548	2,564	1,043	189	381	3,052
Leased to tenant or tenants	1,581	1,304	1,280	1,252	411	110	129	1,464
Unoccupied	152	52	33	Q	Q	N	Q	72
Government owned	937	798	769	744	281	22	196	916
Federal	70	69	57	60	14	Q	7	70
State	256	206	206	205	76	1	51	246
Local	610	524	506	480	191	19	137	600
Energy sources (more than one may apply)								
Electricity	5,613	4,901	4,631	4,590	1,738	322	704	5,503
Natural gas	2,974	2,933	2,728	2,786	1,168	187	462	2,952
Fuel oil	583	561	455	501	199	52	343	583
District heat	86	85	74	84	19	1	20	86
District chilled water	55	49	55	51	10	Q	14	55
Propane	676	621	526	564	285	48	98	665
Solar	99	84	95	88	52	Q	94	97
Wood, coal, and other	180	178	122	129	34	Q	68	180
Energy end uses (more than one may apply)								
Buildings with space heating	4,901	4,901	4,390	4,367	1,653	286	671	4,869
Buildings with cooling	4,631	4,390	4,631	4,190	1,671	267	638	4,617
Buildings with water heating	4,595	4,367	4,190	4,595	1,727	256	626	4,567
Buildings with cooking	1,738	1,653	1,671	1,727	1,738	89	307	1,735
Buildings with manufacturing	322	286	267	256	89	322	37	322
Buildings with electricity generation	706	671	638	626	307	37	706	701
Buildings with lighting	5,503	4,869	4,617	4,567	1,735	322	701	5,503
Food preparation or serving areas in non-food service buildings (more than one may apply)								
Snack bar, concession stand, or coffee shop	144	134	139	144	144	7	41	144
Fast food or small restaurant	160	156	157	160	160	Q	40	160
Cafeteria or large restaurant	129	126	123	129	127	2	43	129
Commercial kitchen or food preparation area	284	276	274	284	283	13	85	284
Small kitchen area	1,018	975	984	1,007	1,014	49	168	1,015

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	All buildings	Space heating	Cooling	Water heating	Cooking	Manu- facturing	Electricity gener- ation	Lighting
All buildings	5,918	4,901	4,631	4,595	1,738	322	706	5,503
Separate computer areas (more than one may apply)								
Server closet	1,237	1,195	1,213	1,203	435	77	263	1,237
Data center or server farm	116	112	116	106	44	Q	55	116
Computer-based training room	228	214	227	216	111	8	69	228
Student or public computer center	236	230	225	230	117	3	59	236

Source: U.S. Energy Information Administration, Form EIA-871A of the *2018 Commercial Buildings Energy Consumption Survey*

Notes: Because of rounding, data may not sum to totals. The *Guide to the 2018 CBECS Tables* and *CBECS Terminology* contain definitions of terms used in these tables and comparisons between previous CBECS tables. You can access both references from <http://www.eia.gov/consumption/commercial/data/2018/>.

Data are sample survey estimates with relative standard errors published in a tab on the Excel worksheet for this table.

^a*Climate zones* are based on ASHRAE Standard 169-2021; see <https://www.eia.gov/consumption/commercial/maps.php#defined>.

Q = Data withheld either because the relative standard error was greater than 50% or the reporting sample had fewer than 20 buildings.

N = No buildings in reporting sample.

Relative standard errors (RSEs) for Table B21. Energy end uses, number of buildings, 2018

RSEs for number of buildings

	Energy used for (more than one may apply)							
	All buildings	Space heating	Cooling	Water heating	Cooking	Manu- facturing	Electricity gener- ation	Lighting
All buildings	3.9	4.1	3.9	3.9	5.0	11.3	7.4	3.9
Building floorspace (square feet)								
1,001 to 5,000	4.9	5.6	5.6	5.8	8.1	21.5	13.5	5.2
5,001 to 10,000	5.9	6.6	5.9	6.3	8.7	26.0	22.0	5.8
10,001 to 25,000	5.6	5.8	5.6	5.5	8.2	18.9	12.4	5.6
25,001 to 50,000	5.6	5.7	5.8	5.7	8.1	22.9	12.5	5.5
50,001 to 100,000	5.3	5.3	5.1	5.3	6.5	15.4	7.0	5.3
100,001 to 200,000	5.6	5.6	5.6	5.6	6.8	15.0	7.5	5.6
200,001 to 500,000	5.0	5.1	4.8	5.0	5.0	14.8	6.0	5.0
Over 500,000	7.8	7.9	7.8	7.8	7.7	28.4	9.2	7.8
Principal building activity								
Education	7.8	8.2	8.2	8.1	10.6	29.0	22.8	7.8
Food sales	14.3	15.1	14.5	14.6	17.6	45.1	36.8	14.3
Food service	7.7	7.8	7.9	7.7	7.8	32.2	30.8	7.7
Health care	9.8	9.9	9.8	9.8	18.9	46.3	17.9	9.8
Inpatient	19.4	19.7	19.4	19.4	15.8	56.7	19.4	19.4
Outpatient	10.3	10.3	10.3	10.3	26.3	46.7	23.2	10.3
Lodging	9.4	9.6	9.4	9.3	12.8	38.9	16.6	9.4
Mercantile	7.3	7.4	6.9	7.5	9.9	29.9	16.9	7.3
Retail (other than mall)	10.1	10.5	9.6	11.1	16.4	33.5	27.0	10.0
Enclosed and strip malls	7.6	7.7	7.6	7.6	11.7	53.2	19.6	7.6
Office	7.2	7.1	6.9	6.8	12.7	40.5	13.4	7.2
Public assembly	9.1	9.8	9.5	8.8	10.6	68.0	18.3	9.1
Public order and safety	20.2	20.5	21.1	20.4	24.8	50.4	22.4	20.2
Religious worship	9.5	9.8	9.8	9.5	11.6	49.2	33.1	9.5
Service	7.4	8.7	8.6	7.8	25.0	19.3	23.6	7.3
Warehouse and storage	7.4	7.3	8.6	8.6	22.4	16.7	21.0	6.8
Other	17.1	22.6	22.9	22.2	42.2	43.6	38.7	18.5
Vacant	17.2	24.4	21.0	28.8	55.7	64.2	31.5	21.8
Year constructed								
Before 1920	12.8	13.0	13.7	12.7	15.7	31.4	36.4	13.0
1920 to 1945	10.7	11.8	12.5	11.8	16.0	51.5	24.8	10.8
1946 to 1959	8.1	8.3	8.1	8.8	12.9	36.5	18.5	8.3
1960 to 1969	6.4	6.1	6.4	6.6	11.7	31.9	18.3	6.3
1970 to 1979	7.4	7.5	6.8	7.6	11.7	24.1	24.0	7.2
1980 to 1989	7.0	7.3	7.3	7.1	10.9	29.5	16.1	6.7
1990 to 1999	7.5	7.4	6.9	8.1	12.2	30.6	17.1	6.9
2000 to 2009	8.0	9.2	8.7	8.6	10.5	24.5	13.5	8.5
2010 to 2018	11.0	11.8	12.2	12.4	14.8	34.6	17.9	11.2

Relative standard errors (RSEs) for Table B21. Energy end uses, number of buildings, 2018

RSEs for number of buildings

	Energy used for (more than one may apply)							
	All buildings	Space heating	Cooling	Water heating	Cooking	Manu- facturing	Electricity gener- ation	Lighting
All buildings	3.9	4.1	3.9	3.9	5.0	11.3	7.4	3.9
Census region and division								
Northeast	9.9	9.6	9.3	9.6	10.5	25.9	16.5	9.8
New England	17.8	17.7	14.0	17.4	16.0	38.5	26.0	17.7
Middle Atlantic	12.0	11.6	12.0	11.3	13.6	33.5	20.6	11.8
Midwest	10.9	11.3	11.2	10.6	11.3	18.2	21.3	11.0
East North Central	13.1	12.1	13.5	12.1	14.9	21.0	15.3	12.6
West North Central	21.0	24.3	21.4	22.1	17.1	35.9	48.6	22.6
South	7.7	8.1	7.5	7.6	9.0	20.9	9.8	7.7
South Atlantic	11.0	13.0	11.0	12.0	14.4	28.4	12.8	10.9
East South Central	18.0	18.0	16.8	15.7	14.2	40.5	24.7	15.9
West South Central	14.7	12.8	13.7	12.6	15.5	38.8	19.2	14.7
West	8.1	7.5	7.3	7.7	10.7	27.5	11.9	7.8
Mountain	15.9	14.3	14.2	14.3	15.2	37.7	23.8	15.8
Pacific	9.0	8.5	8.1	9.3	14.3	40.0	11.9	8.5
Climate zone^a								
Cold or very cold	18.8	20.5	18.2	18.7	18.1	34.8	19.1	20.6
Cool	11.8	11.6	11.9	11.3	11.1	18.3	18.9	11.5
Mixed mild	15.1	15.1	14.9	15.0	17.4	26.4	19.6	15.3
Warm	11.4	11.6	11.4	11.6	12.4	25.7	14.6	11.2
Hot or very hot	18.8	19.5	16.4	17.6	16.5	35.3	20.2	17.2
Number of workers (main shift)								
Fewer than 5	5.5	6.3	6.0	6.0	7.3	21.2	16.5	5.8
5 to 9	6.1	6.0	6.2	6.7	9.4	22.9	16.5	6.1
10 to 19	6.5	6.3	6.3	6.1	8.5	18.7	16.1	6.5
20 to 49	6.3	6.4	6.4	6.4	8.9	19.9	10.9	6.3
50 to 99	6.7	6.7	6.7	6.8	6.9	25.0	10.1	6.7
100 to 249	7.1	7.1	7.2	7.2	7.8	17.6	9.1	7.1
250 or more	7.2	7.3	7.2	7.4	7.3	22.3	8.4	7.2
Weekly operating hours								
Fewer than 40	6.1	7.2	7.7	7.3	11.5	27.9	22.3	6.6
40 to 48	6.2	6.1	5.8	6.1	10.4	18.9	16.8	6.2
49 to 60	5.2	5.2	5.2	5.1	7.7	20.6	12.5	5.4
61 to 84	7.6	7.8	7.5	7.2	10.5	25.4	18.2	7.4
85 to 167	8.6	7.6	7.5	7.5	9.4	31.9	15.4	7.4
Open continuously	8.1	7.3	6.8	7.2	9.1	36.5	13.0	7.4

Relative standard errors (RSEs) for Table B21. Energy end uses, number of buildings, 2018

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	Energy used for (more than one may apply)							
	All buildings	Space heating	Cooling	Water heating	Cooking	Manu- facturing	Electricity gener- ation	Lighting
All buildings	3.9	4.1	3.9	3.9	5.0	11.3	7.4	3.9
Ownership and occupancy								
Nongovernment owned	3.8	3.8	3.5	3.7	5.2	11.2	8.3	3.6
Owner occupied	4.3	4.5	4.3	4.2	5.6	11.2	9.4	4.2
Leased to tenant or tenants	5.5	5.2	4.8	5.3	8.0	16.9	11.4	5.1
Unoccupied	20.3	31.9	31.7	33.7	108.4	0.0	58.6	26.8
Government owned	9.5	10.2	9.9	9.3	10.1	43.1	12.3	9.6
Federal	26.0	26.1	27.7	26.6	49.4	87.4	30.9	26.0
State	12.9	13.8	13.9	14.2	16.3	40.1	22.1	13.0
Local	10.1	11.0	10.6	10.0	11.6	48.5	14.2	10.2
Energy sources (more than one may apply)								
Electricity	3.9	4.1	3.9	3.9	5.0	11.3	7.3	3.9
Natural gas	4.8	4.9	4.5	4.8	5.2	13.6	7.8	4.8
Fuel oil	9.7	10.1	8.6	8.3	11.4	29.4	12.5	9.7
District heat	14.7	15.1	15.7	14.6	20.1	27.5	16.0	14.7
District chilled water	20.1	21.9	20.1	20.9	24.0	29.8	20.0	20.1
Propane	10.0	10.6	10.2	9.7	12.2	22.4	16.4	10.2
Solar	15.5	16.7	15.9	16.7	21.5	39.3	15.4	15.9
Wood, coal, and other	17.3	17.4	16.4	16.5	29.7	50.8	21.6	17.3
Energy end uses (more than one may apply)								
Buildings with space heating	4.1	4.1	4.0	4.1	5.0	11.9	7.6	4.0
Buildings with cooling	3.9	4.0	3.9	3.9	4.8	11.7	6.8	3.8
Buildings with water heating	3.9	4.1	3.9	3.9	5.0	10.6	6.4	3.9
Buildings with cooking	5.0	5.0	4.8	5.0	5.0	17.7	8.9	5.0
Buildings with manufacturing	11.3	11.9	11.7	10.6	17.7	11.3	33.2	11.3
Buildings with electricity generation	7.4	7.6	6.8	6.4	8.9	33.2	7.4	7.3
Buildings with lighting	3.9	4.0	3.8	3.9	5.0	11.3	7.3	3.9
Food preparation or serving areas in non-food service buildings (more than one may apply)								
Snack bar, concession stand, or coffee shop	11.0	11.1	11.1	11.0	11.0	44.9	14.5	11.0
Fast food or small restaurant	9.4	9.5	9.6	9.4	9.4	57.3	18.8	9.4
Cafeteria or large restaurant	7.7	7.8	7.9	7.8	7.9	29.4	11.5	7.7
Commercial kitchen or food preparation area	8.5	8.8	8.7	8.5	8.5	30.9	11.4	8.5
Small kitchen area	6.5	6.8	6.4	6.6	6.5	25.4	12.7	6.5

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RSEs for number of buildings

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	All buildings	Space heating	Cooling	Water heating	Cooking	Manu- facturing	Electricity gener- ation	Lighting
All buildings	3.9	4.1	3.9	3.9	5.0	11.3	7.4	3.9
Separate computer areas (more than one may apply)								
Server closet	5.3	5.4	5.2	5.2	5.9	18.6	7.3	5.3
Data center or server farm	13.1	13.3	13.1	12.7	16.9	59.9	19.8	13.1
Computer-based training room	8.4	8.1	8.4	7.7	9.5	28.1	13.4	8.4
Student or public computer center	8.0	8.0	8.0	8.0	8.2	30.2	13.0	8.0

Data source: U.S. Energy Information Administration, Form EIA-871A of the 2018 Commercial Buildings Energy Consumption Survey

Note: RSE is a measure of the reliability or precision of a survey statistic. Variability occurs in survey statistics because the different samples that could be drawn would each produce different values for the survey statistics. *Estimation of Standard Errors* and *What is a Relative Standard Error (RSE)?* contain more information on how RSEs are estimated and used. Both references can be accessed from <https://www.eia.gov/consumption/commercial/survey-background-technical-information.php>.

^aClimate zones are based on ASHRAE Standard 169-2021; see <https://www.eia.gov/consumption/commercial/maps.php#defined>.