

Release date: September 2021

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Table B20. Energy sources, floorspace, 2018

	Total floorspace (million square feet)									
	All buildings	Buildings using any energy source	Electricity	Natural gas	Fuel oil	District heat	District chilled water	Propane	Solar	Wood, coal, and other
All buildings	96,423	94,865	94,844	67,722	21,185	6,745	4,288	10,157	3,820	2,113
Building floorspace (square feet)										
1,001 to 5,000	8,025	7,475	7,471	3,292	726	Q	Q	1,047	Q	218
5,001 to 10,000	10,204	9,660	9,644	5,200	774	Q	Q	995	Q	505
10,001 to 25,000	15,838	15,464	15,464	9,523	1,827	Q	Q	1,700	467	Q
25,001 to 50,000	13,957	13,935	13,935	10,467	1,774	390	295	1,336	389	Q
50,001 to 100,000	15,302	15,269	15,269	11,988	2,893	1,117	831	1,325	391	Q
100,001 to 200,000	13,003	12,983	12,983	10,516	3,266	952	757	1,198	675	Q
200,001 to 500,000	11,776	11,761	11,761	9,674	4,541	1,450	988	1,256	661	Q
Over 500,000	8,317	8,317	8,317	7,062	5,383	2,281	1,155	1,299	978	Q
Principal building activity										
Education	13,623	13,623	13,623	10,254	2,709	1,375	1,049	1,182	847	Q
Food sales	1,006	1,006	1,006	662	Q	N	N	Q	Q	Q
Food service	1,385	1,385	1,385	987	Q	Q	Q	219	Q	Q
Health care	4,018	4,018	4,018	3,370	2,499	887	665	234	Q	Q
Inpatient	2,259	2,259	2,259	2,105	2,040	743	535	186	Q	Q
Outpatient	1,760	1,760	1,760	1,265	458	Q	Q	Q	Q	Q
Lodging	6,976	6,976	6,976	5,842	2,161	813	371	1,101	Q	Q
Mercantile	10,781	10,781	10,776	8,992	925	Q	N	807	501	Q
Retail (other than mall)	5,193	5,193	5,188	3,585	442	Q	N	Q	Q	Q
Enclosed and strip malls	5,588	5,588	5,588	5,407	Q	N	N	495	Q	Q
Office	16,662	16,662	16,662	11,283	5,419	1,853	786	664	724	Q
Public assembly	7,192	7,192	7,192	5,233	1,359	942	916	844	553	Q
Public order and safety	1,538	1,538	1,538	1,271	896	Q	Q	Q	Q	N
Religious worship	5,471	5,471	5,471	4,083	393	Q	Q	730	Q	Q
Service	6,240	6,208	6,208	3,343	1,463	Q	N	681	Q	590
Warehouse and storage	17,483	16,351	16,335	10,309	2,098	Q	Q	2,749	412	Q
Other	2,435	2,407	2,407	1,596	736	433	283	Q	Q	Q
Vacant	1,612	1,246	1,246	497	Q	Q	Q	Q	Q	N
Year constructed										
Before 1920	3,600	3,568	3,568	2,459	748	333	Q	385	Q	Q
1920 to 1945	5,646	5,581	5,581	3,859	1,594	1,023	316	523	Q	Q
1946 to 1959	6,937	6,823	6,823	5,019	1,346	686	296	771	Q	Q
1960 to 1969	10,360	10,258	10,258	7,811	1,858	1,174	711	1,013	414	Q
1970 to 1979	13,061	12,902	12,902	9,088	2,842	985	661	1,604	323	342
1980 to 1989	13,465	13,298	13,298	8,770	3,200	727	469	1,557	544	Q
1990 to 1999	15,535	15,066	15,066	10,386	3,031	585	562	1,524	623	Q
2000 to 2009	17,500	17,254	17,254	12,833	4,069	721	569	1,540	817	Q
2010 to 2018	10,319	10,115	10,094	7,498	2,498	511	500	1,241	529	Q

Table B20. Energy sources, floorspace, 2018

Total floorspace (million square feet)

	Energy sources used (more than one may apply)									
	All buildings	Buildings using any energy source	Electricity	Natural gas	Fuel oil	District heat	District chilled water	Propane	Solar	Wood, coal, and other
All buildings	96,423	94,865	94,844	67,722	21,185	6,745	4,288	10,157	3,820	2,113
Census region and division										
Northeast	15,951	15,816	15,811	11,331	5,930	1,823	520	2,470	1,214	415
New England	3,749	3,737	3,737	1,861	1,639	394	Q	1,154	268	Q
Middle Atlantic	12,202	12,079	12,074	9,470	4,291	1,430	365	1,316	947	Q
Midwest	25,932	25,488	25,488	20,410	4,585	1,507	746	2,381	650	617
East North Central	17,561	17,374	17,374	14,491	2,913	1,204	656	1,293	425	412
West North Central	8,372	8,114	8,114	5,919	1,672	303	Q	1,088	Q	Q
South	34,907	34,353	34,353	21,895	6,794	2,130	2,059	3,358	531	676
South Atlantic	17,923	17,732	17,732	10,285	4,355	1,234	1,027	2,260	378	404
East South Central	5,404	5,272	5,272	4,122	803	294	Q	376	Q	Q
West South Central	11,580	11,349	11,349	7,488	1,637	Q	721	722	Q	Q
West	19,633	19,208	19,192	14,086	3,875	1,284	963	1,948	1,424	405
Mountain	7,680	7,411	7,411	5,948	1,899	401	267	700	396	Q
Pacific	11,952	11,797	11,781	8,138	1,976	883	696	1,248	1,028	Q
Climate zone^a										
Cold or very cold	7,044	6,950	6,934	4,971	1,624	372	Q	1,339	Q	Q
Cool	26,768	26,343	26,339	20,476	5,783	1,677	838	2,725	698	781
Mixed mild	25,096	24,731	24,731	18,756	7,834	2,747	1,273	2,853	1,614	406
Warm	25,085	24,605	24,605	17,686	3,526	1,588	1,344	1,867	753	459
Hot or very hot	12,429	12,235	12,235	5,833	2,418	360	731	1,374	578	Q
Number of workers (main shift)										
Fewer than 5	21,065	19,556	19,535	9,828	1,835	Q	Q	2,102	376	597
5 to 9	10,323	10,285	10,285	6,877	968	352	Q	1,203	Q	Q
10 to 19	11,348	11,346	11,346	7,981	1,000	387	Q	1,507	Q	Q
20 to 49	16,132	16,132	16,132	12,607	2,868	737	539	1,863	582	439
50 to 99	12,961	12,961	12,961	10,039	2,811	1,019	884	1,361	638	Q
100 to 249	12,442	12,433	12,433	10,867	3,839	930	608	1,072	767	Q
250 or more	12,152	12,152	12,152	9,523	7,864	2,934	1,703	1,049	1,131	Q
Weekly operating hours										
Fewer than 40	10,766	10,196	10,191	6,020	1,110	Q	Q	1,235	Q	Q
40 to 48	18,826	18,744	18,744	12,381	2,800	560	521	1,918	545	414
49 to 60	22,845	22,739	22,739	16,045	4,410	1,253	677	1,875	956	474
61 to 84	14,736	14,613	14,613	11,214	2,839	1,235	1,001	1,327	704	376
85 to 167	10,038	9,803	9,803	7,378	2,330	654	477	1,515	559	Q
Open continuously	19,213	18,770	18,754	14,684	7,696	2,821	1,424	2,286	934	442
Ownership and occupancy										
Nongovernment owned	74,728	73,221	73,201	51,735	14,809	3,637	1,937	8,634	2,121	1,813
Owner occupied	45,355	44,637	44,617	31,586	9,593	2,933	1,553	5,362	1,239	1,318
Leased to tenant or tenants	28,382	27,937	27,937	19,934	5,162	688	352	3,157	878	495
Unoccupied	990	647	647	Q	Q	Q	Q	Q	Q	N
Government owned	21,695	21,644	21,644	15,987	6,375	3,107	2,351	1,523	1,699	300
Federal	1,946	1,946	1,946	1,323	793	475	141	Q	253	Q
State	6,888	6,854	6,854	4,940	1,768	2,007	1,577	537	510	Q
Local	12,861	12,843	12,843	9,725	3,814	625	633	796	935	Q

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Total floorspace (million square feet)

	Energy sources used (more than one may apply)									
	All buildings	Buildings using any energy source	Electricity	Natural gas	Fuel oil	District heat	District chilled water	Propane	Solar	Wood, coal, and other
All buildings	96,423	94,865	94,844	67,722	21,185	6,745	4,288	10,157	3,820	2,113
Energy sources (more than one may apply)										
Electricity	94,844	94,844	94,844	67,722	21,185	6,745	4,288	10,152	3,803	2,113
Natural gas	67,722	67,722	67,722	67,722	14,958	4,333	2,925	4,568	3,321	1,282
Fuel oil	21,185	21,185	21,185	14,958	21,185	2,990	1,859	3,144	1,025	615
District heat	6,745	6,745	6,745	4,333	2,990	6,745	3,471	327	664	Q
District chilled water	4,288	4,288	4,288	2,925	1,859	3,471	4,288	Q	428	Q
Propane	10,157	10,157	10,152	4,568	3,144	327	Q	10,157	349	588
Solar	3,820	3,820	3,803	3,321	1,025	664	428	349	3,820	Q
Wood, coal, and other	2,113	2,113	2,113	1,282	615	Q	Q	588	Q	2,113
Energy end uses (more than one may apply)										
Buildings with space heating	88,661	88,661	88,661	67,111	20,667	6,726	4,239	9,406	3,624	2,028
Buildings with cooling	87,506	87,506	87,506	65,200	20,304	6,554	4,288	9,237	3,743	1,807
Buildings with water heating	87,717	87,717	87,712	66,205	20,659	6,657	4,232	9,525	3,669	1,897
Buildings with cooking	43,580	43,580	43,580	36,167	12,946	3,553	2,041	5,559	2,558	930
Buildings with manufacturing	6,871	6,871	6,871	5,261	1,356	284	Q	1,319	Q	Q
Buildings with electricity generation	29,457	29,457	29,441	23,977	18,298	3,848	2,298	3,533	3,784	1,272
Buildings with lighting	94,103	94,103	94,103	67,507	21,185	6,745	4,288	10,131	3,803	2,113
Food preparation or serving areas in non-food service buildings (more than one may apply)										
Snack bar, concession stand, or coffee shop	10,361	10,361	10,361	9,183	4,763	1,722	1,138	1,276	1,034	Q
Fast food or small restaurant	9,759	9,759	9,759	8,725	3,272	1,064	798	1,153	838	Q
Cafeteria or large restaurant	14,531	14,531	14,531	12,499	6,481	2,009	1,216	1,620	1,236	Q
Commercial kitchen or food preparation area	17,698	17,698	17,698	16,013	6,549	1,960	1,238	2,477	1,266	555
Small kitchen area	20,519	20,519	20,519	16,505	6,252	1,725	1,054	2,993	1,176	Q

Data 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.

^aClimate 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 B20. Energy sources, floorspace, 2018

RSEs for total floorspace

	Energy sources used (more than one may apply)									
	All buildings	Buildings using any energy source	Electricity	Natural gas	Fuel oil	District heat	District chilled water	Propane	Solar	Wood, coal, and other
All buildings	3.1	3.0	3.0	3.4	5.4	11.4	13.7	7.6	11.5	14.0
Census region and division										
Northeast	7.2	7.1	7.1	8.2	10.3	9.5	18.4	13.8	24.6	33.3
New England	10.8	10.8	10.8	11.8	16.7	29.5	40.2	16.2	24.0	48.6
Middle Atlantic	8.8	8.7	8.8	9.6	12.6	9.4	20.0	21.5	30.9	45.1
Midwest	7.4	7.3	7.3	7.5	10.3	18.6	25.4	14.8	19.0	30.7
East North Central	10.4	10.3	10.3	9.3	13.2	24.2	27.3	18.7	22.2	32.5
West North Central	7.9	7.7	7.7	13.6	17.9	17.2	41.2	23.0	36.6	65.2
South	6.1	6.0	6.0	6.3	7.9	30.2	26.8	13.9	26.4	18.5
South Atlantic	6.8	6.7	6.7	7.1	10.2	44.2	40.5	18.5	32.9	21.0
East South Central	20.3	20.1	20.1	22.3	24.2	49.6	51.2	26.6	58.9	43.2
West South Central	11.5	11.7	11.7	8.6	13.4	53.4	47.5	25.5	47.8	53.0
West	7.1	7.0	7.0	8.6	17.2	16.5	17.1	22.7	16.2	33.9
Mountain	13.1	13.4	13.4	16.2	31.4	33.8	31.0	40.8	31.9	46.6
Pacific	8.1	7.7	7.7	8.9	15.7	18.4	20.5	27.3	18.7	48.7
Climate zone^a										
Cold or very cold	17.0	17.3	17.3	23.3	16.4	24.8	44.4	15.8	42.5	43.2
Cool	8.3	8.2	8.2	8.9	11.1	20.6	21.4	14.2	21.4	26.3
Mixed mild	10.5	10.6	10.6	10.8	12.4	17.9	31.8	21.5	23.3	35.6
Warm	10.0	10.0	10.0	11.1	11.1	31.8	31.2	17.3	12.7	21.6
Hot or very hot	14.1	13.6	13.6	13.3	13.6	25.5	17.0	15.5	27.5	39.4
Number of workers (main shift)										
Fewer than 5	5.9	5.9	5.9	8.1	14.7	26.8	38.3	12.2	24.7	25.5
5 to 9	6.9	6.9	6.9	9.0	18.7	24.8	44.1	19.1	41.8	28.8
10 to 19	7.4	7.4	7.4	8.6	18.3	25.6	32.3	14.4	35.7	68.8
20 to 49	4.8	4.8	4.8	5.6	10.3	23.1	29.8	12.5	20.7	28.7
50 to 99	5.9	5.9	5.9	6.4	9.0	26.1	29.4	17.0	22.8	39.1
100 to 249	5.6	5.6	5.6	6.1	8.8	17.4	21.7	13.3	20.0	45.1
250 or more	6.4	6.4	6.4	6.9	8.5	12.0	11.4	32.2	21.7	44.4
Weekly operating hours										
Fewer than 40	6.6	6.7	6.8	9.5	13.7	27.7	41.7	14.2	56.2	45.0
40 to 48	5.1	5.0	5.0	5.8	10.0	25.2	28.4	13.1	25.7	32.2
49 to 60	4.3	4.4	4.4	5.2	9.8	20.9	22.6	14.8	17.1	22.6
61 to 84	5.3	5.3	5.3	5.3	10.4	26.8	31.1	18.8	19.3	35.7
85 to 167	6.2	6.2	6.2	6.5	14.1	18.1	21.8	17.7	18.3	29.8
Open continuously	5.0	5.0	5.0	5.6	7.7	13.5	14.2	15.5	26.9	31.3
Ownership and occupancy										
Nongovernment owned	3.3	3.3	3.3	3.9	6.2	13.0	20.8	8.1	14.8	14.2
Owner occupied	3.3	3.3	3.3	4.2	7.5	14.1	24.9	9.0	17.6	16.8
Leased to tenant or tenants	4.8	4.7	4.7	5.1	8.4	19.7	25.8	12.0	18.1	27.1
Unoccupied	19.2	22.9	22.9	36.0	45.1	51.6	79.1	62.6	2.7	0.0
Government owned	6.0	6.0	6.0	5.8	6.9	17.3	18.3	15.5	16.2	38.7
Federal	16.1	16.1	16.1	18.5	29.1	34.9	30.2	36.3	33.9	58.7
State	11.8	11.9	11.9	11.0	12.1	26.0	26.7	30.0	30.6	95.0
Local	6.0	6.0	6.0	7.0	8.9	17.8	15.7	15.1	19.7	49.8

Relative standard errors (RSEs) for Table B20. Energy sources, floorspace, 2018

RSEs for total floorspace

Energy sources used (more than one may apply)

	All buildings	Buildings using any energy source	Electricity	Natural gas	Fuel oil	District heat	District chilled water	Propane	Solar	Wood, coal, and other
All buildings	3.1	3.0	3.0	3.4	5.4	11.4	13.7	7.6	11.5	14.0
Energy sources (more than one may apply)										
Electricity	3.0	3.0	3.0	3.4	5.4	11.4	13.7	7.6	11.6	14.0
Natural gas	3.4	3.4	3.4	3.4	6.2	12.0	13.4	11.4	12.1	18.6
Fuel oil	5.4	5.4	5.4	6.2	5.4	13.3	14.0	14.0	21.6	25.6
District heat	11.4	11.4	11.4	12.0	13.3	11.4	14.4	32.5	22.2	56.6
District chilled water	13.7	13.7	13.7	13.4	14.0	14.4	13.7	37.9	26.4	58.2
Propane	7.6	7.6	7.6	11.4	14.0	32.5	37.9	7.6	28.8	26.5
Solar	11.5	11.5	11.6	12.1	21.6	22.2	26.4	28.8	11.5	56.5
Wood, coal, and other	14.0	14.0	14.0	18.6	25.6	56.6	58.2	26.5	56.5	14.0
Energy end uses (more than one may apply)										
Buildings with space heating	3.0	3.0	3.0	3.4	5.5	11.4	13.9	8.2	11.9	14.2
Buildings with cooling	3.0	3.0	3.0	3.3	5.4	11.6	13.7	8.3	11.7	14.5
Buildings with water heating	2.9	2.9	2.9	3.3	5.5	11.5	13.8	7.8	11.8	14.7
Buildings with cooking	3.1	3.1	3.1	3.3	6.3	11.9	11.9	9.7	12.0	21.3
Buildings with manufacturing	7.9	7.9	7.9	9.2	18.2	29.5	34.6	14.1	33.4	35.3
Buildings with electricity generation	4.4	4.4	4.4	4.5	5.9	12.6	12.1	14.5	11.5	17.2
Buildings with lighting	3.0	3.0	3.0	3.3	5.4	11.4	13.7	7.7	11.6	14.0
Food preparation or serving areas in non-food service buildings (more than one may apply)										
Snack bar, concession stand, or coffee shop	6.7	6.7	6.7	7.1	11.6	18.9	16.1	26.6	17.9	39.8
Fast food or small restaurant	5.9	5.9	5.9	5.9	12.2	16.7	16.7	28.6	20.4	38.6
Cafeteria or large restaurant	4.6	4.6	4.6	5.0	8.8	13.7	13.6	20.1	17.5	37.3
Commercial kitchen or food preparation area	4.4	4.4	4.4	4.6	8.2	17.5	15.4	16.1	17.0	28.8
Small kitchen area	4.7	4.7	4.7	5.4	9.4	19.7	15.2	13.4	18.8	38.8

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>.