

Release date: September 2021

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Table B4. Census region and division, number of buildings, 2018

	Number of buildings (thousand)									
	Northeast			Midwest		South			West	
	All buildings	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
All buildings	5,918	275	518	1,110	609	1,034	347	762	484	780
Building floorspace (square feet)										
1,001 to 5,000	2,833	143	230	539	271	540	164	373	203	370
5,001 to 10,000	1,359	59	98	250	166	192	89	178	128	199
10,001 to 25,000	981	47	98	180	108	165	55	118	91	118
25,001 to 50,000	386	13	44	80	35	63	18	47	32	53
50,001 to 100,000	218	7	23	39	18	45	12	31	18	23
100,001 to 200,000	93	4	15	12	7	19	8	9	8	10
200,001 to 500,000	40	1	7	8	2	8	2	4	2	5
Over 500,000	9	Q	2	2	1	2	Q	1	Q	1
Principal building activity										
Education	437	21	23	53	37	76	24	53	38	112
Food sales	163	Q	Q	47	Q	Q	Q	Q	Q	Q
Food service	286	Q	Q	55	Q	52	Q	40	36	40
Health care	137	6	17	15	Q	24	12	13	25	20
Inpatient	9	Q	1	1	Q	2	Q	1	Q	1
Outpatient	129	Q	16	13	Q	22	Q	Q	23	19
Lodging	207	16	18	46	22	29	11	15	14	36
Mercantile	517	Q	37	76	62	94	38	75	56	56
Retail (other than mall)	350	Q	28	40	57	63	35	40	38	28
Enclosed and strip malls	167	Q	9	36	Q	31	Q	35	18	27
Office	970	23	115	172	93	184	47	143	65	129
Public assembly	488	47	44	96	44	101	Q	56	31	57
Public order and safety	81	Q	Q	Q	Q	Q	Q	Q	Q	16
Religious worship	439	Q	48	80	42	106	44	50	Q	36
Service	867	45	99	184	120	110	29	98	77	104
Warehouse and storage	1,004	50	70	206	101	154	75	136	81	131
Other	113	Q	13	27	Q	11	Q	Q	Q	Q
Vacant	208	Q	Q	44	Q	50	Q	Q	Q	Q
Year constructed										
Before 1920	329	41	60	82	Q	48	Q	Q	Q	Q
1920 to 1945	379	27	43	90	53	57	Q	29	20	38
1946 to 1959	517	Q	59	93	42	90	30	49	43	89
1960 to 1969	685	33	88	167	41	86	44	75	41	111
1970 to 1979	831	22	57	154	102	140	56	116	85	100
1980 to 1989	794	35	57	90	90	186	39	105	77	115
1990 to 1999	921	41	66	146	91	164	41	149	81	142
2000 to 2009	924	32	50	183	99	177	77	123	81	102
2010 to 2018	537	Q	38	106	Q	86	28	102	38	61

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All buildings	5,918	275	518	1,110	609	1,034	347	762	484	780
Climate zone^a										
Cold or very cold	539	102	15	136	190	N	N	N	Q	Q
Cool	1,727	161	231	740	280	N	N	N	180	135
Mixed mild	1,216	Q	271	235	140	186	Q	Q	Q	Q
Warm	1,606	N	N	N	N	595	270	244	Q	411
Hot or very hot	831	N	N	N	N	253	Q	394	97	Q
Number of floors										
1	4,106	125	241	729	416	743	272	621	373	586
2	1,286	83	174	273	146	207	56	112	84	151
3	370	48	69	79	42	58	14	18	Q	25
4 to 9	142	19	28	27	6	23	4	10	9	16
10 or more	16	0	6	1	1	3	1	1	1	1
Elevators and escalators (more than one may apply)										
Any elevators	503	36	83	90	45	90	18	46	38	57
1 elevator	366	27	60	72	36	62	14	31	26	40
2 to 5 elevators	121	8	20	16	8	24	4	14	11	15
6 or more elevators	16	1	3	2	1	4	1	1	1	2
Any escalators	14	Q	2	Q	Q	2	Q	Q	Q	3
Number of workers (main shift)										
Fewer than 5	3,270	158	303	654	385	550	192	398	242	387
5 to 9	1,116	51	63	197	97	217	78	155	72	187
10 to 19	713	30	62	118	68	123	34	102	78	99
20 to 49	492	20	44	91	42	77	30	68	53	66
50 to 99	201	11	24	33	11	38	9	25	26	24
100 to 249	90	4	15	14	4	19	3	10	8	13
250 or more	37	1	7	4	2	8	2	4	4	5
Weekly operating hours										
Fewer than 40	1,370	Q	122	318	174	241	100	146	71	165
40 to 48	1,483	61	95	259	128	278	80	237	126	218
49 to 60	1,250	74	159	199	122	221	61	127	118	169
61 to 84	645	37	55	85	60	123	42	100	52	92
85 to 167	465	18	41	97	41	77	Q	57	48	57
Open continuously	705	52	46	152	85	92	35	95	69	79

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All buildings	5,918	275	518	1,110	609	1,034	347	762	484	780
Ownership and occupancy										
Nongovernment owned	4,982	253	455	955	529	870	285	648	396	592
Owner occupied	3,249	186	303	635	387	586	198	420	223	310
Leased to tenant or tenants	1,581	66	146	295	117	247	83	203	159	265
Unoccupied	152	Q	Q	Q	Q	Q	Q	Q	Q	Q
Government owned	937	22	63	155	81	164	62	114	88	188
Federal	70	Q	Q	6	Q	Q	Q	Q	Q	Q
State	256	Q	12	Q	14	50	24	33	27	60
Local	610	13	45	116	57	105	34	64	55	121
Party responsible for operation of energy systems										
Building owner	4,872	242	441	924	539	845	269	632	395	585
Business owner or tenant	831	24	68	143	56	155	66	106	65	147
Property management	97	Q	Q	Q	Q	20	Q	Q	Q	28
Other	118	Q	Q	33	Q	14	Q	Q	Q	Q
Provider of direct input on energy-related equipment purchases										
Building owner	5,127	236	473	972	549	896	288	666	415	631
Business owner or tenant	483	Q	32	63	41	91	37	60	39	97
Property management	49	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	260	Q	10	68	Q	40	Q	34	21	40
Number of establishments										
1	4,719	220	409	887	495	821	299	587	392	608
2 to 5	811	45	82	149	65	144	33	121	58	115
6 to 10	135	Q	13	28	15	15	Q	14	12	25
11 to 20	63	Q	5	6	Q	13	Q	12	Q	10
More than 20	19	Q	2	Q	Q	4	Q	2	Q	4
Currently unoccupied	170	Q	Q	Q	Q	Q	Q	Q	Q	Q
Campus or complex activity										
Not part of a campus or complex	3,622	143	351	732	367	680	210	460	296	384
Primary or secondary school	247	Q	4	16	Q	32	Q	42	20	102
College or university	103	Q	8	Q	Q	22	Q	Q	2	23
Office complex	141	Q	16	Q	14	17	Q	27	8	30
Retail complex	250	Q	19	43	Q	22	Q	42	32	47
Storage complex	418	Q	Q	72	Q	61	Q	55	Q	48
Religious campus or complex	253	Q	Q	38	Q	72	Q	33	Q	Q
Health care complex	60	Q	Q	8	4	11	Q	Q	10	4
Lodging or resort complex	102	Q	Q	Q	Q	12	Q	Q	Q	Q
Transportation complex	36	Q	Q	Q	Q	Q	Q	Q	Q	Q
Government complex	124	Q	Q	Q	Q	Q	Q	Q	Q	13
Other	563	37	64	112	70	84	Q	52	45	74

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All buildings	5,918	275	518	1,110	609	1,034	347	762	484	780
Renovations since 2000 (more than one may apply)										
Any type of renovation	2,032	116	227	365	200	359	123	266	149	227
Addition or annex	327	Q	28	68	44	56	22	37	20	24
Reduction in floorspace	35	Q	5	5	Q	Q	Q	Q	Q	Q
Roof replacement	847	59	103	142	61	166	61	123	53	80
Interior wall reconfiguration	709	30	73	134	78	116	37	109	53	78
Window replacement	484	45	59	93	Q	74	24	47	27	56
HVAC equipment upgrade	1,006	64	117	159	94	198	72	122	68	111
Lighting upgrade	1,012	77	116	205	98	155	52	118	82	111
Electrical upgrade	565	52	58	95	Q	106	39	65	47	54
Plumbing system upgrade	584	43	70	83	68	114	38	66	41	62
Insulation upgrade	307	26	53	45	32	52	25	35	21	18
Fire, safety, or security upgrade	570	47	73	94	56	102	27	70	38	63
Structural upgrade	147	Q	25	13	11	29	Q	14	Q	10
Other	43	Q	Q	Q	Q	Q	Q	Q	Q	Q
No renovations	3,530	149	266	682	366	622	202	438	302	504
Buildings constructed 2013 or later	357	Q	25	63	Q	53	22	59	33	49
Energy sources (more than one may apply)										
Electricity	5,613	274	496	1,074	573	987	313	711	431	755
Natural gas	2,974	65	308	712	270	361	200	333	292	433
Fuel oil	583	103	127	69	Q	83	18	42	45	44
District heat	86	16	13	10	Q	Q	Q	8	3	14
District chilled water	55	Q	3	3	Q	18	Q	11	2	12
Propane	676	101	56	86	139	138	25	56	18	57
Solar	99	9	11	4	Q	5	Q	Q	Q	47
Wood, coal, and other	180	Q	Q	37	Q	27	Q	Q	Q	Q
Space-heating energy sources (more than one may apply)										
Electricity	2,563	85	179	333	202	612	177	396	200	380
Natural gas	2,587	54	280	679	251	280	185	247	259	352
Fuel oil	266	88	95	Q	Q	26	Q	Q	Q	Q
District heat	83	16	13	10	Q	Q	Q	Q	3	14
Propane	431	60	Q	71	120	77	Q	Q	Q	26
Other sources ^b	127	Q	Q	Q	Q	Q	Q	Q	Q	Q
Primary space-heating energy source										
Electricity	1,856	47	87	190	138	530	107	352	133	271
Natural gas	2,344	48	264	633	245	232	165	218	238	300
Fuel oil	222	83	79	Q	N	15	Q	Q	Q	Q
District heat	78	16	13	9	Q	Q	Q	Q	3	13
Propane	338	48	Q	62	101	55	Q	Q	Q	Q
Other sources ^b	63	Q	Q	Q	Q	Q	N	Q	Q	Q

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All buildings	5,918	275	518	1,110	609	1,034	347	762	484	780
Cooling energy sources (more than one may apply)										
Electricity	4,584	184	396	804	403	897	293	647	378	582
Natural gas	4	Q	Q	Q	Q	Q	Q	N	Q	Q
District chilled water	55	Q	3	3	Q	18	Q	11	2	12
Water-heating energy sources (more than one may apply)										
Electricity	2,785	130	238	453	260	628	175	381	165	356
Natural gas	1,885	32	183	458	155	233	101	223	207	293
Fuel oil	72	42	Q	Q	Q	Q	Q	Q	Q	Q
District heat	38	Q	8	5	Q	Q	Q	6	Q	4
Propane	145	32	Q	Q	Q	34	Q	Q	Q	Q
Cooking energy sources (more than one may apply)										
Electricity	1,216	70	82	247	135	229	76	140	93	144
Natural gas	727	20	74	152	45	99	37	87	76	137
Propane	159	28	Q	Q	Q	47	Q	Q	Q	35
Energy end uses (more than one may apply)										
Buildings with space heating	4,901	249	461	921	497	857	291	607	391	628
Buildings with cooling	4,631	187	398	807	403	913	295	657	379	593
Buildings with water heating	4,595	225	430	862	422	839	271	580	354	612
Buildings with cooking	1,738	101	141	337	162	305	97	213	128	255
Buildings with manufacturing	322	Q	23	70	36	44	16	41	38	43
Buildings with electricity generation	706	63	77	118	77	114	36	86	55	81
Buildings with lighting	5,503	274	484	1,029	562	971	303	708	430	744
Percentage of floorspace heated										
Not heated	1,017	Q	57	189	113	176	56	155	93	152
1 to 50%	693	Q	52	114	Q	154	37	79	43	122
51 to 99%	905	46	85	142	51	163	66	133	100	118
100%	3,303	169	323	665	388	540	188	395	248	388
Percentage of floorspace cooled										
Not cooled	1,288	88	120	303	207	120	53	105	105	186
1 to 50%	1,111	63	106	211	100	207	72	114	81	155
51 to 99%	998	58	110	195	52	188	54	146	86	109
100%	2,522	65	181	401	251	518	169	397	212	329

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All buildings	5,918	275	518	1,110	609	1,034	347	762	484	780
Percentage lit when open										
0%	Q	N	N	Q	Q	Q	Q	Q	Q	Q
1 to 50%	1,280	70	133	311	144	190	56	179	89	108
51 to 99%	1,784	95	154	352	148	306	83	222	133	291
100%	2,272	109	184	325	222	442	160	297	206	326
Building never open or electricity not used	513	Q	46	86	Q	89	Q	60	Q	Q
Percentage lit during off hours										
0%	2,062	123	180	426	214	305	127	226	139	322
1 to 50%	3,246	141	287	585	319	622	167	455	274	395
51 to 100%	240	Q	20	46	36	45	15	27	11	31
Building always open with no off hours	64	Q	8	17	Q	14	Q	Q	Q	Q
Electricity not used	305	Q	Q	Q	Q	Q	Q	Q	Q	Q
Heating equipment (more than one may apply)										
Packaged heating units	2,187	51	161	294	173	428	177	359	225	320
Furnaces	1,621	78	143	474	269	151	77	175	111	142
Individual space heaters	1,246	60	125	282	110	182	84	114	96	192
Boilers	703	95	131	167	50	63	20	47	66	65
Heat pumps	673	32	58	70	42	231	29	54	40	117
District heat	83	16	13	10	Q	Q	Q	Q	3	14
Duct reheat	134	Q	Q	19	Q	39	Q	22	Q	15
Other	17	Q	Q	Q	Q	Q	Q	Q	Q	Q
Cooling equipment (more than one may apply)										
Packaged air-conditioning units	2,565	84	215	367	202	498	189	402	252	355
Residential-type central air conditioners	1,309	52	80	360	181	217	55	188	79	97
Individual air conditioners	735	59	109	128	41	124	55	79	36	104
Central chillers	202	9	28	46	8	35	15	15	16	31
Heat pumps	492	27	57	48	Q	158	36	23	26	79
District chilled water	55	Q	3	3	Q	18	Q	11	2	12
Swamp coolers	85	Q	Q	Q	Q	Q	Q	Q	36	28
Other	Q	N	Q	N	N	Q	Q	Q	Q	Q

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All buildings	5,918	275	518	1,110	609	1,034	347	762	484	780
HVAC features (more than one may apply)										
Economizer cycle	747	36	80	135	67	100	17	82	68	161
Variable air volume (VAV) system	698	22	52	141	77	119	22	106	68	90
Dedicated outside air system (DOAS)	249	14	25	29	32	40	20	22	11	54
Demand controlled ventilation (DCV)	349	18	51	61	19	71	12	31	28	57
Regular HVAC maintenance	3,554	182	314	573	330	707	197	460	313	478
Building automation system (BAS) controls heating or cooling										
Internet-connected or smart thermostat	933	48	85	151	78	161	28	144	86	153
Programmable thermostat	325	Q	26	29	24	57	19	72	40	42
	1,545	59	187	280	125	267	86	164	146	232
Main equipment replaced since 2000 (more than one may apply)										
Heating	1,937	112	194	339	218	377	118	200	124	253
Cooling	1,269	87	156	249	116	234	71	144	83	130
Water-heating equipment										
Centralized system	3,538	151	332	708	337	674	217	406	276	438
Distributed system	782	Q	80	110	63	116	32	136	62	125
Combination of centralized and distributed systems	274	16	17	45	22	49	Q	38	16	50
Generation technologies (more than one may apply)										
Reciprocating engine generators	580	49	64	106	Q	102	34	78	46	35
Solar panels	94	9	11	4	Q	5	Q	Q	Q	42
Other generation technology	43	Q	4	11	Q	Q	Q	Q	Q	5
Lighting equipment types (more than one may apply)										
Incandescent	1,100	64	128	243	138	184	67	107	43	127
Standard fluorescent	4,012	202	350	759	369	732	247	514	319	520
Compact fluorescent	1,130	71	111	269	94	177	37	137	77	157
High-intensity discharge (HID)	238	Q	33	51	23	40	18	14	17	32
Halogen	552	27	44	79	Q	102	22	98	41	89
LED	2,593	156	283	495	221	432	126	294	198	389
Other	Q	N	N	Q	N	Q	N	Q	N	Q

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Refrigeration equipment (more than one may apply)										
Any refrigeration	3,850	190	343	712	349	731	213	509	302	501
Walk-in units	706	41	60	144	57	127	40	71	73	93
Cases or cabinets	837	35	72	182	61	162	44	112	61	107
Large cold storage areas	69	Q	7	Q	Q	13	Q	11	Q	8
Commercial ice makers	872	35	53	162	58	175	47	125	105	112
Residential-type or compact units	3,321	168	293	625	313	637	174	450	240	421
Vending machines	800	35	70	138	69	170	57	110	84	66
No refrigeration	2,068	85	174	398	260	302	134	253	182	279
Office equipment (more than one may apply)										
Desktop computers	3,804	170	355	652	327	705	223	521	307	544
With multiple monitors	1,504	60	152	282	139	274	75	194	116	212
Laptop computers	2,786	131	263	546	249	501	161	376	197	361
Dedicated servers	1,400	55	136	239	122	218	74	220	128	207
Tablets charged in building	1,556	88	146	284	125	270	79	228	128	208
Large floor-standing office devices ^c	1,456	53	164	267	114	280	84	193	116	184
Smaller desktop office devices ^c	3,560	176	332	659	303	658	187	499	277	469
Interactive whiteboards	262	Q	19	48	19	50	25	18	29	39
Televisions or video displays	2,451	100	247	452	212	433	142	365	197	304
Point-of-sale devices or cash registers	1,420	73	124	243	133	259	76	197	153	163
Food preparation or serving areas in non-food service buildings (more than one may apply)										
Snack bar, concession stand, or coffee shop	144	5	6	33	13	23	Q	21	10	28
Fast food, small restaurant	160	8	10	37	11	28	3	17	11	35
Cafeteria or large restaurant	129	12	16	22	17	19	7	12	11	14
Commercial kitchen or food preparation area	284	18	33	41	27	60	18	29	18	40
Small kitchen area	1,018	63	86	202	113	173	54	118	66	142
Separate computer areas (more than one may apply)										
Server closet	1,237	41	118	216	110	228	59	194	107	164
Data center	116	9	15	12	5	18	Q	20	Q	17
Computer-based training room	228	5	18	33	21	46	10	33	24	37
Student or public computer center	236	5	17	36	16	45	13	34	16	54

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All buildings	5,918	275	518	1,110	609	1,034	347	762	484	780
Window and interior lighting features (more than one may apply)										
Multipaned windows	3,527	175	337	704	404	602	182	408	292	424
Tinted window glass	1,679	43	103	247	139	332	108	284	135	289
Reflective window glass	497	15	35	99	38	77	21	66	53	93
External overhangs or awnings	1,513	45	86	244	135	292	98	211	113	290
Skylights or atriums	509	24	42	79	26	104	19	66	38	111
Light scheduling	910	42	90	162	65	161	47	107	97	139
Occupancy sensors	1,025	52	97	219	84	156	29	105	88	194
Multilevel lighting or dimming	332	25	31	60	Q	57	15	34	36	41
Daylight harvesting	138	Q	7	21	11	34	6	14	15	23
Plug-load control	58	Q	Q	11	Q	Q	Q	Q	Q	15
Demand responsive lighting	98	Q	Q	Q	Q	9	Q	Q	Q	15
Building automation system (BAS) for lighting	317	8	23	35	23	58	10	56	27	77
Electric vehicle (EV) charging										
Charging stations associated with the building	132	9	12	19	5	25	Q	Q	11	35

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>.

^bOther sources includes wood, coal, solar, and all other energy sources.

^cOffice devices refers to any combination of printers, copiers, scanners, or FAX machines.

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.

Release date: September 2021

Revised date: December 2022

Relative standard errors (RSEs) for Table B4. Census region and division, number of buildings, 2018

RSEs for number of buildings

	Northeast		Midwest		South		West			
	All buildings	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
All buildings	3.9	17.8	12.0	13.1	21.0	11.0	18.0	14.7	15.9	9.0
Building floorspace (square feet)										
1,001 to 5,000	4.9	21.9	16.2	15.1	27.8	15.0	16.7	15.6	19.3	10.7
5,001 to 10,000	5.9	18.5	20.7	14.7	36.1	13.4	19.9	19.7	21.0	10.3
10,001 to 25,000	5.6	25.4	13.7	18.7	15.3	12.5	34.8	20.0	15.8	16.2
25,001 to 50,000	5.6	28.6	13.8	14.9	26.4	12.3	26.7	18.8	21.4	14.5
50,001 to 100,000	5.3	31.9	13.2	15.8	28.6	12.0	20.6	14.9	14.4	14.0
100,001 to 200,000	5.6	22.1	12.5	16.0	12.6	11.6	33.3	12.5	16.8	17.8
200,001 to 500,000	5.0	24.6	13.1	14.1	18.2	10.7	17.6	13.2	23.3	12.8
Over 500,000	7.8	30.7	16.2	15.7	26.3	20.0	51.0	15.8	53.5	26.1
Principal building activity										
Education	7.8	30.0	18.3	27.5	30.0	21.6	31.2	24.9	30.0	14.2
Food sales	14.3	79.4	57.1	26.0	61.6	30.4	37.7	43.1	35.2	56.1
Food service	7.7	27.0	32.8	17.2	27.3	17.1	25.5	26.9	22.7	24.5
Health care	9.8	44.0	23.9	37.0	60.5	16.8	40.2	34.3	14.3	36.6
Inpatient	19.4	78.7	20.0	23.3	35.0	39.6	44.2	33.0	70.9	19.1
Outpatient	10.3	44.6	24.7	39.9	66.1	16.7	40.3	35.6	15.7	38.3
Lodging	9.4	33.2	31.0	21.0	38.7	23.9	39.9	31.1	18.3	22.3
Mercantile	7.3	22.3	27.3	25.5	36.8	15.5	33.7	17.0	18.0	18.3
Retail (other than mall)	10.1	23.4	36.8	29.6	40.3	18.4	36.9	29.9	24.4	29.2
Enclosed and strip malls	7.6	47.4	27.6	28.9	74.3	30.7	48.2	22.4	22.7	28.3
Office	7.2	32.8	25.1	21.1	36.1	16.6	14.7	22.8	21.5	16.7
Public assembly	9.1	20.7	42.3	13.8	43.9	26.8	35.6	21.3	30.4	12.3
Public order and safety	20.2	96.6	60.4	46.4	90.5	72.7	64.4	37.9	43.1	40.0
Religious worship	9.5	53.3	24.9	19.5	24.3	20.8	45.4	24.2	25.9	37.4
Service	7.4	31.2	16.7	17.0	34.5	17.2	28.7	28.8	19.4	17.3
Warehouse and storage	7.4	32.5	23.8	21.9	19.8	24.6	29.7	19.0	30.6	15.7
Other	17.1	66.3	28.2	38.2	51.3	36.9	44.8	56.1	53.3	67.3
Vacant	17.2	100.0	40.2	35.8	56.8	30.0	62.0	63.1	61.6	45.5
Year constructed										
Before 1920	12.8	32.5	26.7	33.8	63.7	21.7	31.0	48.6	46.3	42.8
1920 to 1945	10.7	28.5	28.7	28.1	42.8	26.3	39.0	41.0	37.2	19.2
1946 to 1959	8.1	45.4	23.3	15.5	40.6	20.6	27.0	25.7	41.6	17.2
1960 to 1969	6.4	46.0	20.9	12.4	43.5	19.2	32.4	12.6	29.3	15.3
1970 to 1979	7.4	36.5	23.9	21.6	24.7	17.3	17.2	31.2	26.6	19.3
1980 to 1989	7.0	19.5	20.5	26.4	19.9	18.8	22.9	23.5	18.4	11.9
1990 to 1999	7.5	29.9	19.6	16.0	35.3	20.5	45.7	18.9	13.5	17.3
2000 to 2009	8.0	47.2	22.8	19.0	26.0	16.5	39.6	29.0	22.0	20.5
2010 to 2018	11.0	26.4	32.6	20.3	61.6	20.2	33.0	32.2	29.9	24.7

Relative standard errors (RSEs) for Table B4. Census region and division, number of buildings, 2018

RSEs for number of buildings

	Northeast		Midwest		South		West			
	All buildings	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain Pacific	
All buildings	3.9	17.8	12.0	13.1	21.0	11.0	18.0	14.7	15.9	9.0
Climate zone^a										
Cold or very cold	18.8	31.5	24.3	43.1	34.1	0.0	0.0	0.0	54.6	66.0
Cool	11.8	22.2	19.6	21.5	39.9	0.0	0.0	0.0	17.4	37.7
Mixed mild	15.1	70.5	16.6	42.6	21.7	22.2	50.0	76.8	55.7	79.1
Warm	11.4	0.0	0.0	0.0	0.0	12.6	33.4	48.9	70.1	14.1
Hot or very hot	18.8	0.0	0.0	0.0	0.0	29.8	70.9	30.3	20.3	77.8
Number of floors										
1	4.3	25.0	12.8	13.2	19.7	12.8	16.3	16.7	17.1	9.1
2	5.8	20.2	15.2	16.2	24.7	11.6	32.5	21.8	22.2	17.1
3	10.5	17.1	19.6	35.5	34.6	28.6	34.3	33.1	54.9	24.1
4 to 9	9.4	39.7	16.3	27.5	38.5	21.5	30.6	26.3	26.9	19.9
10 or more	9.8	32.6	17.5	21.2	44.3	26.4	29.3	27.8	20.2	27.4
Elevators and escalators (more than one may apply)										
Any elevators	6.5	37.1	13.1	12.5	27.3	18.4	23.0	28.5	19.1	14.5
1 elevator	7.7	47.2	13.7	14.1	32.5	23.0	30.6	33.9	21.5	19.6
2 to 5 elevators	6.7	24.0	17.6	16.5	11.2	17.7	16.6	24.5	21.7	15.2
6 or more elevators	7.8	33.1	18.2	17.3	18.8	20.9	34.8	15.8	37.8	18.2
Any escalators	28.9	59.7	27.4	83.3	25.1	38.5	31.9	53.7	63.9	13.3
Number of workers (main shift)										
Fewer than 5	5.5	23.8	17.3	14.2	32.0	15.6	14.9	18.0	23.1	11.5
5 to 9	6.1	20.6	17.7	20.6	10.6	11.2	32.7	20.6	20.6	12.3
10 to 19	6.5	19.6	21.3	16.9	18.2	18.0	32.6	24.8	18.3	16.9
20 to 49	6.3	22.4	12.9	11.1	35.1	15.3	32.1	23.5	15.7	12.3
50 to 99	6.7	33.0	17.6	19.7	17.6	14.9	32.6	27.4	20.7	17.6
100 to 249	7.1	32.6	15.9	26.2	10.0	15.9	22.6	15.9	30.5	17.1
250 or more	7.2	33.6	16.0	14.0	17.1	18.4	27.9	27.8	20.5	14.3
Weekly operating hours										
Fewer than 40	6.1	37.5	18.2	13.1	25.9	18.6	21.4	18.9	28.1	16.3
40 to 48	6.2	20.0	23.1	21.9	34.2	11.1	18.6	23.6	24.5	11.9
49 to 60	5.2	21.5	14.8	17.0	16.4	10.0	28.5	25.2	16.1	10.2
61 to 84	7.6	22.9	29.7	20.5	45.4	12.9	32.5	26.6	22.6	12.9
85 to 167	8.6	32.2	19.0	18.6	22.5	28.3	50.7	21.1	25.1	23.1
Open continuously	8.1	30.2	10.4	22.6	29.4	18.6	26.6	17.0	31.1	21.2

Relative standard errors (RSEs) for Table B4. Census region and division, number of buildings, 2018

RSEs for number of buildings

	Northeast		Midwest		South		West			
	All buildings	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
All buildings	3.9	17.8	12.0	13.1	21.0	11.0	18.0	14.7	15.9	9.0
Ownership and occupancy										
Nongovernment owned	3.8	17.9	11.9	12.0	19.2	10.0	19.8	12.2	15.5	13.3
Owner occupied	4.3	18.7	15.6	10.9	24.6	11.6	21.2	14.9	19.0	10.3
Leased to tenant or tenants	5.5	21.7	12.2	15.6	13.8	10.4	17.0	13.5	17.7	18.2
Unoccupied	20.3	56.0	42.0	47.2	54.7	38.9	83.5	69.7	62.0	61.7
Government owned	9.5	24.8	22.9	31.0	37.6	32.2	15.1	36.0	19.7	13.4
Federal	26.0	62.3	52.2	49.0	91.9	74.1	63.1	70.2	75.4	54.7
State	12.9	48.7	47.3	51.0	49.0	36.7	22.7	43.3	25.5	20.8
Local	10.1	39.3	31.3	28.5	42.3	32.6	24.2	35.6	29.2	15.1
Party responsible for operation of energy systems										
Building owner	4.4	19.5	12.2	16.0	22.6	10.6	20.7	16.5	18.7	7.4
Business owner or tenant	6.5	31.6	23.1	15.0	19.5	15.1	31.3	17.3	16.1	17.7
Property management	20.7	86.8	47.2	52.6	28.2	43.2	69.1	48.5	77.0	30.4
Other	18.8	49.1	48.5	39.5	58.8	30.6	75.4	32.1	36.1	56.4
Provider of direct input on energy-related equipment purchases										
Building owner	4.4	19.5	12.3	15.3	22.6	10.8	23.9	16.3	17.7	8.9
Business owner or tenant	8.9	27.5	23.2	20.6	22.8	25.5	26.8	21.2	19.1	23.8
Property management	25.5	98.6	60.4	44.6	69.2	40.9	62.7	75.4	78.1	64.4
Other	10.5	44.8	33.2	23.1	50.6	18.6	55.1	22.7	44.3	12.4
Number of establishments										
1	4.6	20.4	12.2	13.9	24.8	12.3	17.6	18.7	17.1	9.5
2 to 5	6.0	23.0	19.2	14.7	29.6	10.7	16.1	16.3	27.7	17.0
6 to 10	11.5	45.1	19.8	31.9	32.0	26.0	51.5	34.9	30.8	37.2
11 to 20	18.0	52.7	27.7	21.2	95.5	28.7	41.6	43.4	53.5	29.3
More than 20	18.6	88.0	20.2	77.8	45.9	26.4	58.2	34.0	38.0	35.5
Currently unoccupied	18.7	56.0	40.3	39.2	54.7	38.8	62.0	67.6	61.6	52.8
Campus or complex activity										
Not part of a campus or complex	4.3	12.7	11.3	14.1	18.1	10.0	17.9	18.5	19.0	12.9
Primary or secondary school	12.1	40.9	27.6	39.3	64.6	36.0	66.5	38.0	36.3	18.5
College or university	21.8	72.6	35.0	79.8	60.9	45.4	59.8	60.5	42.1	34.3
Office complex	12.7	88.8	34.1	53.1	34.6	31.2	66.0	30.9	38.2	19.2
Retail complex	13.2	93.1	35.6	38.0	61.8	43.3	70.4	23.8	27.2	16.0
Storage complex	14.4	49.3	50.2	36.2	30.5	39.0	72.7	39.2	48.9	30.2
Religious campus or complex	11.5	48.0	38.8	18.7	56.5	27.3	39.2	29.2	32.4	30.7
Health care complex	18.0	103.0	50.1	39.2	48.9	43.6	48.1	72.1	48.1	34.4
Lodging or resort complex	15.1	66.6	57.0	57.3	50.2	38.4	11.8	60.5	44.3	33.5
Transportation complex	34.3	61.0	64.8	57.8	51.5	59.5	49.7	74.5	69.1	81.4
Government complex	18.1	54.0	85.4	29.7	74.9	61.3	40.2	79.2	67.1	43.9
Other	9.2	26.6	40.3	19.1	44.2	16.6	47.5	31.8	27.2	23.5

Relative standard errors (RSEs) for Table B4. Census region and division, number of buildings, 2018

RSEs for number of buildings

	Northeast		Midwest		South		West			
	All buildings	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
All buildings	3.9	17.8	12.0	13.1	21.0	11.0	18.0	14.7	15.9	9.0
Predominant exterior wall material										
Brick, stone, or stucco	5.3	23.4	16.5	13.0	25.8	10.7	27.3	19.5	17.0	13.7
Concrete (block or poured)	5.3	22.2	13.2	16.1	27.1	12.7	25.5	16.5	13.5	12.2
Concrete panels	12.1	43.2	31.4	35.1	32.0	30.1	29.6	31.4	44.3	23.9
Siding or shingles	7.3	21.1	15.6	14.4	32.6	20.7	30.4	33.6	30.6	21.9
Metal panels	7.6	37.5	36.4	26.3	18.7	22.0	24.6	12.7	37.6	21.7
Window glass	21.3	61.7	35.6	41.2	54.5	29.7	109.3	56.0	51.7	45.4
Other	14.7	40.4	44.8	27.3	91.3	37.5	53.2	56.8	32.1	35.7
Predominant roof material										
Metal surfacing	6.2	33.2	12.9	18.5	21.3	18.3	26.9	18.0	25.3	13.2
Synthetic or rubber	6.0	23.5	14.9	15.2	21.8	13.8	33.0	21.5	27.0	17.3
Built-up	7.7	37.5	24.2	25.2	32.7	19.6	20.2	20.4	34.6	14.4
Slate or tile shingles	10.1	42.9	20.0	34.1	46.7	27.9	17.9	28.4	30.4	16.2
Wooden materials (including shingles)	12.9	32.8	66.5	48.7	74.0	33.1	78.6	30.7	26.8	32.0
Asphalt, fiberglass, or other shingles	6.2	21.6	15.9	15.0	26.2	16.6	37.5	22.0	21.4	18.8
Concrete	20.6	65.1	80.8	47.5	102.8	33.4	87.0	51.1	59.6	28.6
Other	15.6	69.4	42.9	45.8	44.9	15.3	71.7	24.6	51.8	41.5
Roof tilt										
Flat	4.9	23.1	15.5	15.2	22.7	10.4	17.6	18.9	19.4	12.4
Shallow pitch	5.0	28.5	12.4	18.2	18.0	11.0	35.3	11.6	20.5	12.6
Steeper pitch	7.5	17.1	22.0	14.9	35.3	22.3	20.1	31.6	25.7	20.4
Cool roof characteristics (more than one may apply)										
White or reflective coating or paint	5.8	30.9	17.9	17.1	15.2	19.0	17.4	18.3	13.4	16.2
White or reflective tiles or shingles	15.4	74.6	32.0	29.3	42.6	25.2	50.3	55.8	48.8	41.8
Aluminum coating	8.8	31.1	33.6	18.2	49.4	16.4	27.0	18.6	37.5	40.8
Ballasted roof system	14.8	38.5	34.4	32.8	46.8	31.5	90.1	46.2	37.1	71.2
Other cool roof property	29.3	92.9	50.8	81.9	37.7	76.5	96.8	76.9	63.5	45.2

Relative standard errors (RSEs) for Table B4. Census region and division, number of buildings, 2018

RSEs for number of buildings

	Northeast		Midwest		South		West			
	All buildings	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
All buildings	3.9	17.8	12.0	13.1	21.0	11.0	18.0	14.7	15.9	9.0
Renovations since 2000 (more than one may apply)										
Any type of renovation	5.0	23.8	10.3	18.0	21.6	11.6	17.4	13.0	20.5	20.0
Addition or annex	9.4	62.6	19.1	26.3	19.2	16.4	31.6	28.2	31.1	20.5
Reduction in floorspace	22.2	74.1	46.1	44.7	86.0	54.1	41.1	79.5	82.8	71.3
Roof replacement	6.8	26.4	16.1	24.6	29.4	19.8	9.9	19.8	28.5	23.4
Interior wall reconfiguration	6.0	31.6	18.8	20.4	10.0	10.8	20.2	17.0	21.6	18.9
Window replacement	9.5	20.3	18.4	29.9	53.0	16.0	30.1	27.6	16.3	27.0
HVAC equipment upgrade	7.0	23.1	19.9	20.2	45.3	16.3	22.5	18.7	17.5	19.9
Lighting upgrade	5.9	19.5	15.6	20.2	29.5	12.2	19.1	11.7	17.0	21.3
Electrical upgrade	7.1	16.3	19.2	17.9	50.7	16.1	20.0	20.9	31.7	19.2
Plumbing system upgrade	7.8	25.1	17.8	31.0	39.9	17.1	17.0	16.7	21.0	23.0
Insulation upgrade	9.2	35.3	25.3	27.6	44.0	22.4	18.9	23.0	32.8	40.5
Fire, safety, or security upgrade	6.2	34.4	15.6	16.9	31.6	11.0	26.2	14.3	14.3	16.4
Structural upgrade	13.9	55.5	19.8	25.4	37.4	29.6	61.7	37.7	64.9	38.8
Other	29.5	80.9	38.9	105.6	84.5	55.5	43.0	63.1	93.5	47.5
No renovations	4.3	20.6	15.8	12.1	18.6	12.7	18.6	19.9	16.6	9.0
Buildings constructed 2013 or later	11.9	42.1	26.7	33.6	57.2	17.4	32.3	29.9	32.2	29.0
Energy sources (more than one may apply)										
Electricity	3.9	17.7	11.8	12.8	21.2	10.9	15.9	14.7	15.9	8.6
Natural gas	4.8	16.1	12.1	13.3	28.5	8.8	22.3	9.1	18.5	15.2
Fuel oil	9.7	20.9	21.8	22.4	72.4	12.8	19.4	36.0	26.9	13.2
District heat	14.7	35.8	27.8	33.3	54.5	54.9	74.3	49.4	47.5	31.3
District chilled water	20.1	52.3	45.4	38.1	54.1	46.3	66.3	49.1	34.4	35.2
Propane	10.0	24.5	21.2	28.4	29.8	23.9	25.2	41.2	39.5	25.3
Solar	15.5	42.1	46.5	28.1	46.1	46.1	106.2	70.5	51.8	24.4
Wood, coal, and other	17.3	45.6	40.0	42.6	63.9	25.0	63.2	77.6	41.1	51.2
Space-heating energy sources (more than one may apply)										
Electricity	4.7	17.7	12.0	17.3	25.6	14.6	9.8	15.4	12.8	7.9
Natural gas	5.2	20.1	11.5	13.0	29.7	8.4	21.5	13.0	18.8	14.6
Fuel oil	13.9	22.5	23.5	67.5	60.0	20.9	48.5	81.7	69.6	71.7
District heat	15.4	35.8	28.3	32.8	54.6	54.9	74.3	80.6	47.9	33.2
Propane	13.5	31.9	31.5	30.8	31.6	34.1	29.2	57.9	54.7	46.0
Other sources ^b	21.3	52.3	42.0	49.8	70.8	37.8	91.8	52.1	73.6	55.6
Primary space-heating energy source										
Electricity	6.4	24.4	12.6	19.4	36.2	15.5	17.3	18.8	15.1	13.3
Natural gas	5.5	24.6	11.6	13.4	29.0	10.9	20.2	14.1	20.0	16.2
Fuel oil	16.1	23.0	28.2	66.3	0.0	33.9	55.1	81.8	75.0	111.6
District heat	15.8	35.8	28.8	33.9	59.4	57.2	63.8	83.1	48.2	34.5
Propane	17.5	29.7	44.1	28.7	44.3	47.0	48.4	65.9	63.0	48.9
Other sources ^b	22.4	52.8	54.6	39.3	56.4	45.9	0.0	52.1	74.9	57.5

Relative standard errors (RSEs) for Table B4. Census region and division, number of buildings, 2018

RSEs for number of buildings

	Northeast		Midwest		South		West			
	All buildings	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
All buildings	3.9	17.8	12.0	13.1	21.0	11.0	18.0	14.7	15.9	9.0
Cooling energy sources (more than one may apply)										
Electricity	3.9	13.9	12.1	13.6	21.4	11.2	16.9	13.5	14.3	8.3
Natural gas	37.3	66.2	44.0	56.9	44.4	66.1	50.2	0.0	3.9	82.6
District chilled water	20.1	52.3	45.4	38.1	54.1	46.3	66.3	49.1	34.4	35.2
Water-heating energy sources (more than one may apply)										
Electricity	4.0	23.1	12.3	10.8	24.6	11.6	17.6	15.6	12.3	8.6
Natural gas	5.5	22.2	12.4	15.8	22.3	15.5	19.0	12.6	20.2	13.1
Fuel oil	24.0	23.2	65.6	82.5	48.4	42.9	50.1	111.3	74.8	98.4
District heat	17.4	54.1	36.8	43.1	63.2	61.8	93.5	49.0	69.7	36.9
Propane	15.8	30.5	92.9	81.9	32.5	33.9	63.2	64.5	74.4	47.0
Cooking energy sources (more than one may apply)										
Electricity	5.7	18.8	12.6	15.9	18.9	14.5	19.4	18.7	20.8	14.5
Natural gas	5.4	22.8	16.7	13.5	19.2	13.8	14.6	16.0	18.8	15.1
Propane	14.8	31.1	70.6	50.2	33.8	28.9	49.4	57.3	76.4	33.2
Energy end uses (more than one may apply)										
Buildings with space heating	4.1	17.7	11.6	12.1	24.3	13.0	18.0	12.8	14.3	8.5
Buildings with cooling	3.9	14.0	12.0	13.5	21.4	11.0	16.8	13.7	14.2	8.1
Buildings with water heating	3.9	17.4	11.3	12.1	22.1	12.0	15.7	12.6	14.3	9.3
Buildings with cooking	5.0	16.0	13.6	14.9	17.1	14.4	14.2	15.5	15.2	14.3
Buildings with manufacturing	11.3	38.5	33.5	21.0	35.9	28.4	40.5	38.8	37.7	40.0
Buildings with electricity generation	7.4	26.0	20.6	15.3	48.6	12.8	24.7	19.2	23.8	11.9
Buildings with lighting	3.9	17.7	11.8	12.6	22.6	10.9	15.9	14.7	15.8	8.5
Percentage of floorspace heated										
Not heated	8.2	22.5	24.6	23.4	15.8	13.5	32.6	37.5	30.7	16.9
1 to 50%	8.5	33.6	21.1	23.2	61.5	20.2	26.2	21.7	27.7	17.8
51 to 99%	6.7	25.7	18.9	15.6	30.5	15.5	28.7	19.5	22.6	17.6
100%	4.1	18.5	12.8	12.7	21.6	13.0	17.4	13.6	12.5	9.9
Percentage of floorspace cooled										
Not cooled	7.1	33.0	18.2	16.8	21.7	17.8	36.6	30.6	34.1	21.5
1 to 50%	5.9	21.1	17.3	18.3	25.9	13.6	10.9	24.0	17.7	23.1
51 to 99%	6.6	26.7	12.6	17.3	22.6	14.6	37.4	13.5	29.8	17.5
100%	4.3	23.6	17.8	13.1	23.4	11.8	19.9	15.0	14.8	10.3

Relative standard errors (RSEs) for Table B4. Census region and division, number of buildings, 2018

RSEs for number of buildings

	Northeast		Midwest		South		West			
	All buildings	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
All buildings	3.9	17.8	12.0	13.1	21.0	11.0	18.0	14.7	15.9	9.0
Percentage lit when open										
0%	35.1	0.0	0.0	54.5	50.8	71.5	59.3	111.2	70.2	109.5
1 to 50%	6.7	26.7	23.2	19.7	24.5	13.7	13.2	20.6	31.5	16.2
51 to 99%	4.8	17.8	12.2	14.0	18.1	13.2	24.3	14.7	20.5	10.5
100%	4.7	21.6	11.2	14.4	31.8	12.1	24.4	14.2	15.2	11.1
Building never open or electricity not used	11.6	66.4	31.9	31.7	30.0	31.4	57.0	42.8	39.1	27.9
Percentage lit during off hours										
0%	6.5	25.9	17.9	15.6	31.3	18.0	24.9	22.9	24.7	18.1
1 to 50%	3.8	22.7	12.9	12.7	17.5	9.5	17.1	13.8	13.3	7.5
51 to 100%	10.6	54.1	25.7	28.1	39.9	18.4	36.4	23.8	27.1	34.0
Building always open with no off hours	15.2	98.2	31.1	29.8	64.5	36.7	47.5	52.9	49.0	58.8
Electricity not used	16.0	70.9	40.2	44.6	47.9	35.7	62.2	51.6	39.5	45.0
Heating equipment (more than one may apply)										
Packaged heating units	4.0	14.5	10.0	12.8	18.5	13.2	25.2	11.0	15.2	8.1
Furnaces	7.2	34.0	22.9	14.2	27.9	29.3	18.3	19.2	18.0	15.5
Individual space heaters	5.9	23.9	13.3	14.6	24.6	15.9	24.2	22.0	27.8	13.6
Boilers	6.2	17.6	18.3	17.9	16.4	17.3	16.2	23.4	12.8	16.1
Heat pumps	7.7	23.2	20.6	13.7	43.9	15.1	26.1	28.1	28.5	19.5
District heat	15.4	35.8	28.3	32.8	54.6	54.9	74.3	80.6	47.9	33.2
Duct reheat	12.6	64.9	62.1	31.1	52.2	25.7	43.8	18.2	55.5	39.9
Other	46.4	99.3	73.2	46.3	111.8	41.0	50.7	99.2	20.0	110.3
Cooling equipment (more than one may apply)										
Packaged air-conditioning units	4.3	15.8	13.3	14.4	16.8	13.0	22.1	14.9	15.4	8.1
Residential-type central air conditioners	7.6	24.1	24.9	14.5	24.3	28.9	20.6	18.9	25.8	19.3
Individual air conditioners	6.6	22.0	19.1	25.1	28.9	15.3	19.9	10.5	30.1	16.3
Central chillers	9.0	36.5	20.8	28.1	28.9	16.6	19.7	17.1	33.4	16.3
Heat pumps	11.0	33.9	27.6	21.6	50.6	21.9	27.9	33.1	25.2	33.3
District chilled water	20.1	52.3	45.4	38.1	54.1	46.3	66.3	49.1	34.4	35.2
Swamp coolers	12.8	60.6	66.7	54.5	66.1	47.8	72.9	69.6	15.4	17.7
Other	53.2	0.0	70.2	0.0	0.0	84.6	50.9	85.2	94.0	24.5

Relative standard errors (RSEs) for Table B4. Census region and division, number of buildings, 2018

RSEs for number of buildings

	Northeast		Midwest		South		West			
	All buildings	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
All buildings	3.9	17.8	12.0	13.1	21.0	11.0	18.0	14.7	15.9	9.0
HVAC features (more than one may apply)										
Economizer cycle	5.6	12.4	18.7	12.2	17.9	17.8	25.3	24.9	13.8	15.7
Variable air volume (VAV) system	8.4	25.0	19.1	19.9	28.6	17.7	24.5	37.9	19.9	16.3
Dedicated outside air system (DOAS)	11.0	22.1	40.0	30.9	32.7	40.2	29.4	33.1	38.8	18.9
Demand controlled ventilation (DCV)	8.8	43.9	23.8	30.4	34.4	17.2	25.1	33.6	28.6	25.4
Regular HVAC maintenance	4.2	18.8	11.7	13.6	17.3	10.8	23.0	16.6	16.8	9.8
Building automation system (BAS) controls heating or cooling	6.4	22.0	17.4	11.7	20.0	10.1	22.3	30.5	15.5	13.6
Internet-connected or smart thermostat	12.2	44.2	30.6	32.2	43.9	17.9	33.2	43.2	34.1	19.4
Programmable thermostat	4.7	26.0	15.3	13.0	20.4	13.2	26.2	20.9	15.6	10.9
Main equipment replaced since 2000 (more than one may apply)										
Heating	4.9	21.7	11.5	14.4	26.0	13.5	22.3	13.0	10.7	12.7
Cooling	4.8	14.7	16.8	18.8	29.2	9.9	9.0	10.0	11.8	11.2
Water-heating equipment										
Centralized system	4.4	19.6	12.0	12.1	20.9	14.6	12.4	10.8	13.2	10.1
Distributed system	8.9	53.5	18.5	24.8	42.5	14.3	37.2	32.7	21.9	19.4
Combination of centralized and distributed systems	8.8	19.5	31.1	17.6	22.6	20.2	58.9	23.5	30.4	24.1
Generation technologies (more than one may apply)										
Reciprocating engine generators	8.8	27.7	22.8	16.4	59.9	12.6	25.8	19.3	25.1	26.4
Solar panels	15.4	42.2	46.5	28.7	46.1	46.6	106.2	70.5	51.8	24.3
Other generation technology	21.4	52.5	33.5	47.0	2.8	57.3	74.3	32.5	60.3	44.1
Lighting equipment types (more than one may apply)										
Incandescent	7.8	19.9	18.0	11.8	46.8	16.5	26.8	12.6	22.4	21.8
Standard fluorescent	4.2	18.2	12.9	13.0	17.3	12.6	16.9	14.1	16.0	10.7
Compact fluorescent	5.2	21.8	15.1	11.9	18.4	17.5	17.5	18.2	14.3	11.6
High-intensity discharge (HID)	9.8	53.0	26.2	13.9	46.8	23.1	30.5	18.7	38.9	27.7
Halogen	8.0	19.1	20.9	30.8	53.3	15.6	26.3	22.9	13.9	12.8
LED	3.6	18.2	12.5	10.6	26.1	9.1	18.2	12.3	9.3	7.1
Other	57.3	0.0	0.0	64.3	0.0	70.9	0.0	70.9	0.0	51.3

Relative standard errors (RSEs) for Table B4. Census region and division, number of buildings, 2018

RSEs for number of buildings

	Northeast		Midwest		South		West			
	All buildings	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
All buildings	3.9	17.8	12.0	13.1	21.0	11.0	18.0	14.7	15.9	9.0
Refrigeration equipment (more than one may apply)										
Any refrigeration	4.1	15.6	13.2	12.4	20.7	11.4	21.3	15.0	13.3	10.9
Walk-in units	5.4	18.4	15.1	14.6	14.9	11.5	32.6	19.8	17.6	13.0
Cases or cabinets	5.8	35.6	16.4	13.7	33.7	14.4	22.8	18.8	22.7	12.6
Large cold storage areas	17.2	67.1	46.2	59.0	57.8	42.5	48.2	37.4	18.9	32.3
Commercial ice makers	5.5	16.8	17.0	14.1	12.5	11.3	28.7	15.8	18.9	18.3
Residential-type or compact units	4.3	15.4	14.0	12.8	20.1	10.8	23.5	16.7	15.0	12.1
Vending machines	6.1	18.0	13.6	14.2	26.8	13.7	37.1	16.7	24.5	17.2
No refrigeration	5.3	25.7	13.8	16.4	24.1	15.5	30.1	18.1	23.4	8.7
Office equipment (more than one may apply)										
Desktop computers	4.0	13.2	13.0	12.9	22.3	11.2	20.7	14.5	14.6	8.2
With multiple monitors	5.0	26.1	12.5	15.0	18.7	10.5	27.1	14.9	17.9	13.3
Laptop computers	4.0	15.8	12.9	11.1	27.8	10.2	15.0	14.2	13.8	6.1
Dedicated servers	4.9	22.5	13.7	16.8	19.4	12.4	22.5	10.5	12.3	15.0
Tablets charged in building	4.4	18.7	17.8	12.1	22.6	13.3	19.0	15.2	12.4	11.3
Large floor-standing office devices ^c	4.4	16.0	15.5	14.6	11.2	11.1	22.4	11.4	19.7	8.4
Smaller desktop office devices ^c	4.1	12.9	11.0	12.1	24.8	12.1	26.3	12.0	14.4	9.6
Interactive whiteboards	8.7	50.4	12.3	19.7	25.7	18.6	34.8	18.0	25.2	25.6
Televisions or video displays	3.8	19.6	12.2	11.2	17.5	10.2	17.8	14.1	14.2	10.3
Point-of-sale devices or cash registers	5.2	20.8	16.6	13.6	31.6	15.2	25.0	13.2	15.0	15.9
Food preparation or serving areas in non-food service buildings (more than one may apply)										
Snack bar, concession stand, or coffee shop	11.0	43.5	22.9	26.3	38.1	29.2	65.9	29.3	24.8	26.0
Fast food, small restaurant	9.4	41.3	18.5	18.7	19.0	30.9	34.4	25.7	36.2	24.0
Cafeteria or large restaurant	7.7	36.2	11.3	9.2	32.4	14.1	22.3	10.9	18.0	40.1
Commercial kitchen or food preparation area	8.5	29.6	26.9	22.5	25.0	21.4	40.6	23.1	22.0	23.1
Small kitchen area	6.5	24.3	13.9	20.8	18.4	16.4	26.4	20.5	19.8	17.5
Separate computer areas (more than one may apply)										
Server closet	5.3	20.0	18.3	19.4	13.0	14.6	18.3	13.9	18.0	14.9
Data center	13.1	27.2	18.4	21.1	30.5	26.0	59.1	46.3	53.4	33.7
Computer-based training room	8.4	41.9	13.1	20.1	25.3	22.7	19.6	19.7	26.2	29.5
Student or public computer center	8.0	26.2	21.9	30.7	26.4	23.9	16.5	21.1	29.1	15.5

Relative standard errors (RSEs) for Table B4. Census region and division, number of buildings, 2018

RSEs for number of buildings

	Northeast		Midwest		South		West			
	All buildings	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
All buildings	3.9	17.8	12.0	13.1	21.0	11.0	18.0	14.7	15.9	9.0
Window and interior lighting features (more than one may apply)										
Multipaned windows	4.2	19.3	11.3	12.5	22.0	11.3	30.4	13.9	12.0	7.9
Tinted window glass	4.2	30.3	14.2	13.5	16.6	10.1	18.4	13.1	11.9	13.0
Reflective window glass	7.0	28.8	23.9	19.9	35.1	13.5	24.3	22.7	15.0	14.7
External overhangs or awnings	5.0	22.5	16.6	12.3	17.2	12.1	21.0	18.6	14.5	8.4
Skylights or atriums	7.1	24.7	21.6	17.5	42.2	19.5	42.9	17.6	20.1	17.2
Light scheduling	5.2	13.2	17.8	15.2	18.6	11.4	20.3	19.0	14.5	13.6
Occupancy sensors	6.5	18.6	11.2	15.3	42.5	14.3	16.6	30.5	23.4	8.6
Multilevel lighting or dimming	10.0	44.2	23.6	17.7	51.8	27.2	19.4	26.9	23.5	20.5
Daylight harvesting	12.0	91.0	29.6	28.5	40.1	26.7	25.8	34.7	29.9	31.6
Plug-load control	18.4	46.7	44.7	27.6	40.7	55.1	51.0	45.5	45.7	47.6
Demand responsive lighting	30.7	50.0	83.1	56.7	101.1	46.8	99.2	61.5	68.5	43.2
Building automation system (BAS) for lighting	9.3	29.1	27.8	25.9	41.4	15.2	33.3	27.9	23.3	21.2
Electric vehicle (EV) charging										
Charging stations associated with the building	11.5	37.8	31.0	35.2	33.1	26.0	55.3	57.5	38.7	17.7

Data source: U.S. Energy Information Administration, Forms 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>.

^bOther sources includes wood, coal, solar, and all other energy sources.

^cOffice devices refers to any combination of printers, copiers, scanners, or FAX machines.