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**Table B17. Occupancy of nongovernment-owned and government-owned buildings, number of buildings, 2018**

Number of buildings (thousand)

	Nongovernment-owned buildings				Government-owned buildings				
	All buildings	All buildings	Owner occupied	Leased to tenant or tenants	Unoccupied	All buildings	Federal	State	Local
<b>All buildings</b>	5,918	4,982	3,249	1,581	152	937	70	256	610
<b>Building floorspace (square feet)</b>									
1,001 to 5,000	2,833	2,390	1,565	727	98	443	Q	113	290
5,001 to 10,000	1,359	1,174	791	339	Q	185	Q	Q	124
10,001 to 25,000	981	855	557	294	Q	126	Q	30	89
25,001 to 50,000	386	321	203	115	Q	65	Q	19	38
50,001 to 100,000	218	143	82	59	Q	75	Q	28	43
100,001 to 200,000	93	63	34	28	Q	30	Q	9	19
200,001 to 500,000	40	29	13	15	Q	11	1	4	6
Over 500,000	9	7	4	3	Q	2	1	1	1
<b>Principal building activity</b>									
Education	437	166	142	24	N	271	Q	92	169
Food sales	163	163	126	37	N	N	N	N	N
Food service	286	260	162	98	N	Q	Q	Q	Q
Health care	137	130	74	56	N	7	Q	Q	Q
Inpatient	9	7	6	Q	N	Q	Q	Q	Q
Outpatient	129	123	68	55	N	Q	Q	Q	Q
Lodging	207	197	130	67	N	Q	Q	Q	Q
Mercantile	517	515	236	279	N	Q	Q	Q	Q
Retail (other than mall)	350	348	201	147	N	Q	Q	Q	Q
Enclosed and strip malls	167	167	34	132	N	N	N	N	N
Office	970	796	485	311	N	175	11	34	129
Public assembly	488	327	278	48	N	162	Q	36	120
Public order and safety	81	Q	Q	Q	N	57	Q	Q	43
Religious worship	439	439	412	Q	N	N	N	N	N
Service	867	726	465	261	N	141	33	Q	75
Warehouse and storage	1,004	963	633	330	N	42	3	Q	Q
Other	113	88	73	15	N	25	Q	10	Q
Vacant	208	189	Q	17	152	Q	Q	Q	Q
<b>Year constructed</b>									
Before 1920	329	278	212	57	Q	51	Q	Q	34
1920 to 1945	379	315	222	85	Q	65	1	Q	42
1946 to 1959	517	442	310	108	Q	75	Q	21	53
1960 to 1969	685	592	377	203	Q	94	9	30	54
1970 to 1979	831	690	440	213	Q	141	Q	33	95
1980 to 1989	794	682	405	236	Q	112	Q	33	74
1990 to 1999	921	772	528	231	Q	149	8	34	107
2000 to 2009	924	760	486	270	Q	164	Q	49	93
2010 to 2018	537	452	269	178	Q	86	Q	20	58

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	Nongovernment-owned buildings					Government-owned buildings			
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<b>All buildings</b>	5,918	4,982	3,249	1,581	152	937	70	256	610
<b>Census region</b>									
Northeast	793	708	490	212	Q	85	10	16	58
Midwest	1,719	1,483	1,022	412	Q	236	Q	47	173
South	2,143	1,803	1,204	533	66	340	31	106	203
West	1,264	988	533	424	Q	276	13	87	176
<b>Climate zone<sup>a</sup></b>									
Cold or very cold	539	478	331	145	Q	61	Q	Q	33
Cool	1,727	1,481	1,020	409	Q	246	9	61	176
Mixed mild	1,216	1,040	661	355	Q	176	Q	39	121
Warm	1,606	1,291	826	412	53	314	22	90	202
Hot or very hot	831	691	411	260	Q	140	Q	53	79
<b>Number of floors</b>									
1	4,106	3,428	2,184	1,124	120	678	55	184	439
2	1,286	1,132	745	364	Q	154	9	26	119
3	370	292	224	60	Q	77	Q	32	41
4 to 9	142	116	88	26	Q	25	1	13	11
10 or more	16	13	7	6	Q	2	Q	1	1
<b>Elevators and escalators (more than one may apply)</b>									
Any elevators	503	378	270	101	Q	125	10	41	74
1 elevator	366	278	211	62	Q	88	7	26	55
2 to 5 elevators	121	88	51	34	Q	33	2	14	17
6 or more elevators	16	13	8	5	Q	4	1	1	2
Any escalators	14	11	4	Q	Q	3	Q	Q	1
<b>Number of workers (main shift)</b>									
Fewer than 5	3,270	2,792	1,887	753	152	478	Q	129	319
5 to 9	1,116	943	614	329	N	173	Q	48	116
10 to 19	713	624	416	209	N	89	Q	27	49
20 to 49	492	399	228	171	N	92	Q	17	67
50 to 99	201	133	62	71	N	68	Q	23	38
100 to 249	90	62	28	34	N	28	3	8	17
250 or more	37	27	15	13	N	9	1	4	5
<b>Weekly operating hours</b>									
Fewer than 40	1,370	1,164	784	228	152	206	Q	60	140
40 to 48	1,483	1,162	776	386	N	322	27	84	211
49 to 60	1,250	1,035	667	369	N	215	9	48	158
61 to 84	645	589	358	232	N	56	Q	23	28
85 to 167	465	437	282	155	N	27	Q	9	10
Open continuously	705	594	383	211	N	111	Q	33	64

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<b>All buildings</b>	5,918	4,982	3,249	1,581	152	937	70	256	610
<b>Party responsible for operation of energy systems</b>									
Building owner	4,872	3,986	3,082	768	135	886	68	244	574
Business owner or tenant	831	811	128	666	Q	21	Q	Q	17
Property management	97	87	22	65	N	Q	Q	Q	Q
Other	118	98	17	81	N	20	Q	Q	Q
<b>Provider of direct input on energy-related equipment purchases</b>									
Building owner	5,127	4,245	3,128	984	132	882	67	236	579
Business owner or tenant	483	469	57	393	Q	13	Q	Q	Q
Property management	49	45	Q	32	N	Q	Q	Q	Q
Other	260	223	52	171	Q	37	Q	Q	16
<b>Number of establishments</b>									
1	4,719	3,876	2,794	1,082	N	842	65	237	540
2 to 5	811	748	394	354	N	63	Q	11	48
6 to 10	135	127	42	84	N	Q	Q	Q	Q
11 to 20	63	60	13	48	N	Q	Q	Q	Q
More than 20	19	18	6	12	N	1	Q	Q	Q
Currently unoccupied	170	152	N	N	152	Q	Q	Q	Q
<b>Campus or complex activity</b>									
Not part of a campus or complex	3,622	3,190	2,027	1,046	117	433	46	81	306
Primary or secondary school	247	40	34	Q	Q	207	Q	69	138
College or university	103	60	44	Q	N	43	N	42	Q
Office complex	141	135	79	55	Q	5	Q	Q	Q
Retail complex	250	249	129	103	Q	Q	N	N	Q
Storage complex	418	403	278	124	Q	Q	Q	Q	Q
Religious campus or complex	253	253	241	Q	Q	N	N	N	N
Health care complex	60	55	40	15	Q	5	Q	Q	Q
Lodging or resort complex	102	96	68	26	Q	Q	Q	Q	Q
Transportation complex	36	Q	Q	Q	N	14	N	Q	13
Government complex	124	Q	Q	Q	N	124	18	Q	91
Other	563	478	299	166	Q	85	Q	34	48
<b>Predominant exterior wall material</b>									
Brick, stone, or stucco	2,490	2,005	1,258	690	57	485	40	132	314
Concrete (block or poured)	935	811	506	257	48	124	3	32	89
Concrete panels	137	119	60	59	Q	18	Q	Q	12
Siding or shingles	948	810	597	195	Q	138	Q	Q	86
Metal panels	1,250	1,095	723	342	Q	154	Q	44	97
Window glass	19	15	5	9	Q	5	Q	Q	Q
Other	139	128	100	28	Q	11	Q	Q	Q

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<b>All buildings</b>	5,918	4,982	3,249	1,581	152	937	70	256	610
<b>Predominant roof material</b>									
Metal surfacing	2,198	1,847	1,254	520	73	350	Q	76	254
Synthetic or rubber	940	791	482	288	Q	149	12	42	96
Built-up	708	544	290	232	Q	164	Q	60	87
Slate or tile shingles	376	310	203	101	Q	65	Q	Q	42
Wooden materials (including shingles)	166	149	84	64	Q	Q	Q	Q	Q
Asphalt, fiberglass, or other shingles	1,311	1,158	827	304	Q	153	8	35	110
Concrete	83	64	31	32	N	19	Q	Q	Q
Other	136	118	77	40	Q	18	Q	Q	4
<b>Roof tilt</b>									
Flat	1,914	1,568	839	669	60	346	38	118	190
Shallow pitch	2,313	1,993	1,311	612	70	320	22	59	239
Steeper pitch	1,691	1,420	1,099	300	Q	271	Q	79	182
<b>Cool roof characteristics (more than one may apply)</b>									
White or reflective coating or paint	1,285	1,082	627	421	Q	203	13	64	126
White or reflective tiles or shingles	140	123	81	42	Q	17	Q	Q	Q
Aluminum coating	528	471	295	160	Q	57	Q	25	31
Ballasted roof system	114	75	45	30	Q	38	Q	3	32
Other cool roof property	35	26	17	9	N	9	Q	Q	Q
<b>Renovations since 2000 (more than one may apply)</b>									
Any type of renovation	2,032	1,726	1,161	532	32	306	25	89	191
Addition or annex	327	255	192	61	Q	73	Q	20	47
Reduction in floorspace	35	29	10	19	N	5	Q	Q	Q
Roof replacement	847	735	522	202	Q	112	5	37	70
Interior wall reconfiguration	709	606	372	230	Q	103	Q	28	72
Window replacement	484	428	316	109	Q	56	3	12	41
HVAC equipment upgrade	1,006	850	552	277	Q	156	Q	41	102
Lighting upgrade	1,012	855	575	263	Q	157	9	51	97
Electrical upgrade	565	486	337	135	Q	79	4	27	47
Plumbing system upgrade	584	486	332	132	Q	99	4	21	74
Insulation upgrade	307	265	202	60	Q	42	Q	11	30
Fire, safety, or security upgrade	570	467	336	127	Q	104	3	20	81
Structural upgrade	147	126	100	22	Q	21	Q	Q	13
Other	43	37	31	5	N	Q	Q	Q	Q
No renovations	3,530	2,954	1,898	937	119	576	44	150	383
Buildings constructed 2013 or later	357	302	190	111	Q	55	Q	17	36

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<b>Energy sources (more than one may apply)</b>									
Electricity	5,613	4,693	3,104	1,511	78	920	70	246	603
Natural gas	2,974	2,502	1,637	844	Q	471	20	139	312
Fuel oil	583	442	337	105	Q	140	6	37	98
District heat	86	53	48	Q	Q	34	Q	26	5
District chilled water	55	25	23	2	Q	30	0	26	4
Propane	676	596	434	140	Q	79	Q	17	42
Solar	99	62	44	18	Q	37	Q	10	26
Wood, coal, and other	180	172	143	29	N	Q	Q	Q	Q
<b>Space-heating energy sources (more than one may apply)</b>									
Electricity	2,563	2,165	1,372	780	Q	398	40	103	255
Natural gas	2,587	2,166	1,430	715	Q	421	17	123	281
Fuel oil	266	229	175	55	Q	36	Q	Q	33
District heat	83	51	46	Q	Q	32	Q	24	5
Propane	431	381	265	94	Q	50	Q	Q	27
Other sources <sup>b</sup>	127	125	109	Q	N	Q	Q	Q	Q
<b>Primary space-heating energy source</b>									
Electricity	1,856	1,551	980	562	Q	305	35	62	209
Natural gas	2,344	1,959	1,314	624	Q	385	16	114	256
Fuel oil	222	190	137	53	Q	32	Q	Q	29
District heat	78	49	44	Q	Q	29	Q	22	5
Propane	338	294	216	56	Q	44	Q	Q	Q
Other sources <sup>b</sup>	63	61	57	Q	N	Q	N	N	Q
<b>Cooling energy sources (more than one may apply)</b>									
Electricity	4,584	3,840	2,527	1,280	33	744	57	185	502
Natural gas	4	4	Q	Q	N	Q	N	Q	Q
District chilled water	55	25	23	2	Q	30	0	26	4
<b>Water-heating energy sources (more than one may apply)</b>									
Electricity	2,785	2,377	1,500	850	Q	408	36	94	279
Natural gas	1,885	1,562	1,024	531	Q	322	17	101	204
Fuel oil	72	56	42	Q	Q	16	Q	Q	14
District heat	38	23	22	2	N	15	Q	12	1
Propane	145	128	97	31	Q	17	Q	Q	Q
<b>Cooking energy sources (more than one may apply)</b>									
Electricity	1,216	1,012	708	301	Q	203	6	47	151
Natural gas	727	604	406	198	Q	123	4	44	75
Propane	159	135	108	26	N	24	Q	Q	11

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<b>All buildings</b>	5,918	4,982	3,249	1,581	152	937	70	256	610
<b>Energy end uses (more than one may apply)</b>									
Buildings with space heating	4,901	4,103	2,747	1,304	52	798	69	206	524
Buildings with cooling	4,631	3,861	2,548	1,280	33	769	57	206	506
Buildings with water heating	4,595	3,850	2,564	1,252	Q	744	60	205	480
Buildings with cooking	1,738	1,457	1,043	411	Q	281	14	76	191
Buildings with manufacturing	322	300	189	110	N	22	Q	1	19
Buildings with electricity generation	706	510	381	129	Q	196	7	51	137
Buildings with lighting	5,503	4,588	3,052	1,464	72	916	70	246	600
<b>Percentage of floorspace heated</b>									
Not heated	1,017	879	502	277	100	138	Q	Q	86
1 to 50%	693	639	407	226	Q	54	Q	Q	43
51 to 99%	905	760	512	226	Q	145	Q	59	71
100%	3,303	2,704	1,827	851	Q	599	46	143	410
<b>Percentage of floorspace cooled</b>									
Not cooled	1,288	1,120	701	301	118	167	Q	Q	104
1 to 50%	1,111	998	626	362	Q	112	4	26	82
51 to 99%	998	804	535	268	Q	194	10	71	112
100%	2,522	2,059	1,387	651	Q	463	42	109	312
<b>Percentage lit when open</b>									
0%	Q	Q	Q	Q	N	N	N	N	N
1 to 50%	1,280	1,107	840	268	N	172	Q	35	132
51 to 99%	1,784	1,498	928	570	N	286	31	86	169
100%	2,272	1,842	1,232	609	N	431	34	125	271
Building never open or electricity not used	513	465	221	93	152	48	Q	Q	38
<b>Percentage lit during off hours</b>									
0%	2,062	1,720	1,199	514	Q	343	Q	92	227
1 to 50%	3,246	2,708	1,744	912	53	538	44	142	352
51 to 100%	240	203	116	68	Q	37	2	Q	23
Building always open with no off hours	64	62	46	16	N	3	Q	Q	Q
Electricity not used	305	288	145	Q	74	Q	N	Q	Q

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<b>All buildings</b>	5,918	4,982	3,249	1,581	152	937	70	256	610
<b>Heating equipment (more than one may apply)</b>									
Packaged heating units	2,187	1,848	1,128	710	Q	339	26	86	226
Furnaces	1,621	1,411	926	455	Q	209	Q	46	141
Individual space heaters	1,246	1,114	779	331	Q	132	5	46	80
Boilers	703	523	366	156	Q	180	19	45	117
Heat pumps	673	539	374	163	Q	134	Q	34	90
District heat	83	51	46	Q	Q	32	Q	24	5
Duct reheat	134	104	49	49	Q	31	Q	15	11
Other	17	17	Q	4	N	Q	Q	Q	Q
<b>Cooling equipment (more than one may apply)</b>									
Packaged air-conditioning units	2,565	2,186	1,361	801	Q	379	34	93	251
Residential-type central air conditioners	1,309	1,083	717	362	Q	226	Q	53	159
Individual air conditioners	735	622	446	177	Q	113	3	37	73
Central chillers	202	121	89	33	Q	80	7	29	44
Heat pumps	492	409	290	115	Q	84	Q	19	57
District chilled water	55	25	23	2	Q	30	0	26	4
Swamp coolers	85	78	54	23	Q	6	Q	Q	Q
Other	Q	Q	Q	Q	N	Q	Q	Q	N
<b>HVAC features (more than one may apply)</b>									
Economizer cycle	747	521	318	202	Q	226	7	62	157
Variable air volume (VAV) system	698	531	345	180	Q	166	8	61	98
Dedicated outside air system (DOAS)	249	168	116	47	Q	81	1	35	45
Demand controlled ventilation (DCV)	349	254	161	92	Q	95	Q	17	70
Regular HVAC maintenance	3,554	2,856	1,889	932	Q	699	45	189	465
Building automation system (BAS) controls heating or cooling	933	650	443	205	Q	284	13	96	175
Internet-connected or smart thermostat	325	269	203	66	N	56	Q	20	31
Programmable thermostat	1,545	1,320	828	483	Q	226	Q	42	165
<b>Main equipment replaced since 2000 (more than one may apply)</b>									
Heating	1,937	1,683	1,142	503	Q	254	21	50	183
Cooling	1,269	1,082	762	306	Q	187	Q	44	130
<b>Water-heating equipment</b>									
Centralized system	3,538	2,951	2,022	899	Q	587	52	156	379
Distributed system	782	670	404	262	Q	112	Q	34	72
Combination of centralized and distributed systems	274	229	138	91	Q	45	1	15	29

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<b>Generation technologies (more than one may apply)</b>									
Reciprocating engine generators	580	420	319	101	Q	160	6	41	113
Solar panels	94	62	44	18	Q	32	Q	Q	22
Other generation technology	43	35	25	11	N	7	Q	2	Q
<b>Lighting equipment types (more than one may apply)</b>									
Incandescent	1,100	971	678	280	Q	129	5	40	83
Standard fluorescent	4,012	3,301	2,166	1,076	60	710	53	188	469
Compact fluorescent	1,130	972	599	361	Q	158	16	43	99
High-intensity discharge (HID)	238	183	134	49	Q	55	7	16	33
Halogen	552	490	291	196	Q	62	Q	20	35
LED	2,593	2,248	1,526	717	Q	345	24	113	208
Other	Q	Q	Q	Q	N	N	N	N	N
<b>Refrigeration equipment (more than one may apply)</b>									
Any refrigeration	3,850	3,265	2,240	1,012	Q	585	44	149	393
Walk-in units	706	586	355	230	Q	119	3	42	74
Cases or cabinets	837	735	480	251	Q	102	6	21	76
Large cold storage areas	69	64	40	22	Q	5	Q	1	Q
Commercial ice makers	872	709	492	216	Q	163	5	40	118
Residential-type or compact units	3,321	2,814	1,953	853	Q	507	39	127	341
Vending machines	800	619	384	234	Q	181	18	50	112
No refrigeration	2,068	1,717	1,008	568	140	351	Q	107	218
<b>Office equipment (more than one may apply)</b>									
Desktop computers	3,804	3,107	2,016	1,088	Q	696	55	186	455
With multiple monitors	1,504	1,249	791	458	N	255	20	72	163
Laptop computers	2,786	2,326	1,517	809	N	461	37	112	311
Dedicated servers	1,400	1,118	667	452	N	282	18	60	204
Tablets charged in building	1,556	1,280	773	506	N	277	19	81	177
Large floor-standing office devices <sup>c</sup>	1,456	1,137	759	378	N	319	22	86	211
Smaller desktop office devices <sup>c</sup>	3,560	2,991	1,948	1,037	Q	569	50	145	374
Interactive whiteboards	262	122	96	26	N	140	1	40	99
Televisions or video displays	2,451	2,078	1,404	673	N	373	24	101	249
Point-of-sale devices or cash registers	1,420	1,258	729	529	N	161	21	35	105



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<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>									
Snack bar, concession stand, or coffee shop	144	104	63	40	N	41	Q	14	24
Fast food or small restaurant	160	148	87	61	N	13	Q	Q	5
Cafeteria or large restaurant	129	57	45	12	N	72	2	21	49
Commercial kitchen or food preparation area	284	229	175	55	Q	55	Q	19	35
Small kitchen area	1,018	860	640	217	Q	157	Q	31	117
<b>Separate computer areas (more than one may apply)</b>									
Server closet	1,237	969	576	392	N	269	14	57	198
Data center	116	74	58	16	N	42	2	13	27
Computer-based training room	228	120	78	42	N	108	8	38	62
Student or public computer center	236	117	63	54	N	119	1	30	88
<b>Window and interior lighting features (more than one may apply)</b>									
Multipaned windows	3,527	2,977	1,990	905	83	550	48	148	354
Tinted window glass	1,679	1,411	834	528	49	268	20	69	179
Reflective window glass	497	423	240	179	Q	74	Q	12	57
External overhangs or awnings	1,513	1,278	804	448	Q	235	9	60	166
Skylights or atriums	509	431	287	134	Q	78	Q	17	54
Light scheduling	910	749	437	289	Q	161	Q	54	98
Occupancy sensors	1,025	740	465	274	Q	285	13	80	192
Multilevel lighting or dimming	332	275	199	76	Q	57	2	19	37
Daylight harvesting	138	117	73	43	Q	21	2	Q	10
Plug-load control	58	44	33	10	Q	14	Q	Q	6
Demand responsive lighting	98	79	58	Q	Q	19	Q	Q	Q
Building automation system (BAS) for lighting	317	210	104	106	Q	107	2	26	80

**Table B17. Occupancy of nongovernment-owned and government-owned buildings, number of buildings, 2018**

**Number of buildings (thousand)**

	Nongovernment-owned buildings					Government-owned buildings			
	All buildings	All buildings	Owner occupied	Leased to tenant or tenants	Unoccupied	All buildings	Federal	State	Local
<b>All buildings</b>	5,918	4,982	3,249	1,581	152	937	70	256	610
<b>Electric vehicle (EV) charging</b>									
Charging stations associated with the building	132	111	73	37	Q	21	Q	Q	17

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.

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

<sup>b</sup>*Other sources* includes wood, coal, solar, and all other energy sources.

<sup>c</sup>*Office 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

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**Relative standard errors (RSEs) for Table B17. Occupancy of nongovernment-owned and government-owned buildings, number of buildings, 2018**

**RSEs for number of buildings**

	Nongovernment-owned buildings				Government-owned buildings				
	All buildings	All buildings	Owner occupied	Leased to tenant or tenants	Unoccupied	All buildings	Federal	State	Local
<b>All buildings</b>	3.9	3.8	4.3	5.5	20.3	9.5	26.0	12.9	10.1
<b>Building floorspace (square feet)</b>									
1,001 to 5,000	4.9	5.0	6.1	6.8	25.6	13.5	37.4	21.9	14.4
5,001 to 10,000	5.9	6.1	8.3	11.3	40.4	18.6	52.6	27.7	20.9
10,001 to 25,000	5.6	5.5	5.7	10.7	74.4	14.7	43.3	28.5	15.2
25,001 to 50,000	5.6	6.4	8.2	9.8	64.5	9.8	34.1	24.5	11.6
50,001 to 100,000	5.3	6.6	7.8	9.5	64.1	8.6	31.1	15.8	10.4
100,001 to 200,000	5.6	6.6	8.3	9.5	47.5	9.0	32.3	17.2	11.1
200,001 to 500,000	5.0	6.4	7.9	9.0	52.5	9.0	23.6	20.3	9.3
Over 500,000	7.8	8.7	10.3	15.0	50.2	16.2	30.1	33.0	19.6
<b>Principal building activity</b>									
Education	7.8	12.9	15.5	28.8	0.0	9.8	66.4	16.8	10.9
Food sales	14.3	14.3	16.7	26.4	0.0	0.0	0.0	0.0	0.0
Food service	7.7	7.9	9.2	11.7	0.0	30.2	7.7	53.5	35.3
Health care	9.8	10.4	16.0	12.6	0.0	38.9	82.7	86.9	51.4
Inpatient	19.4	16.7	18.2	35.0	0.0	51.7	42.0	41.3	68.9
Outpatient	10.3	10.8	17.4	12.8	0.0	46.9	93.8	103.7	63.1
Lodging	9.4	9.1	10.8	22.9	0.0	56.2	109.0	59.8	59.6
Mercantile	7.3	7.4	13.8	8.3	0.0	59.0	51.5	68.7	25.3
Retail (other than mall)	10.1	10.1	15.6	13.2	0.0	59.0	51.5	68.7	25.3
Enclosed and strip malls	7.6	7.6	29.2	9.1	0.0	0.0	0.0	0.0	0.0
Office	7.2	6.8	8.4	9.7	0.0	21.1	42.4	37.7	20.8
Public assembly	9.1	8.8	9.9	24.3	0.0	18.4	73.9	45.0	17.8
Public order and safety	20.2	37.6	37.1	61.9	0.0	23.3	36.8	50.5	26.3
Religious worship	9.5	9.5	9.8	31.6	0.0	0.0	0.0	0.0	0.0
Service	7.4	6.8	8.7	13.4	0.0	21.6	40.1	36.2	27.6
Warehouse and storage	7.4	7.4	8.6	14.1	0.0	33.7	40.9	66.8	40.2
Other	17.1	20.7	24.2	31.8	0.0	26.9	67.8	39.4	41.9
Vacant	17.2	18.5	39.8	29.1	20.3	52.1	71.9	109.1	51.1
<b>Year constructed</b>									
Before 1920	12.8	13.5	15.1	22.6	55.6	30.8	74.3	77.0	25.8
1920 to 1945	10.7	11.3	13.6	14.9	96.2	29.2	47.5	52.3	25.5
1946 to 1959	8.1	9.1	10.1	18.0	46.5	14.9	51.8	38.5	21.3
1960 to 1969	6.4	7.2	10.2	11.8	40.2	17.0	44.0	30.4	20.6
1970 to 1979	7.4	7.5	9.5	11.0	34.5	17.5	76.1	30.0	21.6
1980 to 1989	7.0	7.2	9.8	9.8	40.9	15.7	98.0	26.0	19.6
1990 to 1999	7.5	8.5	9.9	12.7	62.3	12.7	35.0	23.7	15.4
2000 to 2009	8.0	7.8	8.5	12.4	77.4	19.2	43.9	27.1	23.0
2010 to 2018	11.0	11.9	16.5	15.8	87.6	17.7	54.4	42.6	22.7

Relative standard errors (RSEs) for Table B17. Occupancy of nongovernment-owned and government-owned buildings, number of buildings, 2018

RSEs for number of buildings

	Nongovernment-owned buildings					Government-owned buildings			
	All buildings	All buildings	Owner occupied	Leased to tenant or tenants	Unoccupied	All buildings	Federal	State	Local
<b>All buildings</b>	3.9	3.8	4.3	5.5	20.3	9.5	26.0	12.9	10.1
<b>Census region</b>									
Northeast	9.9	9.8	11.7	10.9	41.5	18.2	40.2	37.1	25.9
Midwest	10.9	10.0	11.1	11.9	35.9	23.7	61.5	37.8	23.4
South	7.7	6.9	8.0	7.6	34.2	19.8	45.2	22.2	20.8
West	8.1	10.0	9.8	13.2	44.3	11.1	45.7	16.5	13.9
<b>Climate zone<sup>a</sup></b>									
Cold or very cold	18.8	18.5	21.3	19.0	71.7	28.8	66.7	61.1	32.8
Cool	11.8	11.3	12.9	13.0	33.9	21.1	35.7	26.0	22.3
Mixed mild	15.1	15.7	17.2	16.4	41.7	17.0	51.6	28.2	18.3
Warm	11.4	11.8	12.2	10.9	41.8	20.7	47.6	22.8	20.9
Hot or very hot	18.8	18.0	21.2	18.4	52.9	26.8	97.4	35.4	26.9
<b>Number of floors</b>									
1	4.3	4.3	5.0	6.5	24.1	9.4	32.4	13.5	11.6
2	5.8	6.2	5.9	11.0	53.9	12.9	37.7	23.6	15.2
3	10.5	8.8	9.1	18.4	47.5	27.4	55.4	47.6	24.4
4 to 9	9.4	10.8	12.8	15.6	47.1	18.6	37.1	32.9	17.8
10 or more	9.8	12.0	14.8	13.1	49.4	23.0	53.6	41.1	29.4
<b>Elevators and escalators (more than one may apply)</b>									
Any elevators	6.5	7.1	8.0	13.1	47.8	10.9	31.6	19.3	11.3
1 elevator	7.7	8.4	9.5	18.8	63.4	14.0	40.8	25.4	14.7
2 to 5 elevators	6.7	8.0	9.6	13.0	73.8	10.8	32.9	17.0	15.9
6 or more elevators	7.8	8.4	9.3	14.6	73.6	14.4	29.5	25.8	18.8
Any escalators	28.9	35.5	27.7	60.0	2.7	28.9	44.9	46.6	22.2
<b>Number of workers (main shift)</b>									
Fewer than 5	5.5	5.5	6.7	8.8	20.3	12.8	45.4	19.8	14.1
5 to 9	6.1	6.1	7.1	9.2	0.0	16.1	60.0	28.6	18.3
10 to 19	6.5	6.8	8.1	11.7	0.0	17.0	57.9	29.7	21.8
20 to 49	6.3	7.3	8.3	9.3	0.0	11.7	42.0	25.5	12.2
50 to 99	6.7	8.6	11.7	11.3	0.0	10.1	39.7	18.4	11.5
100 to 249	7.1	8.4	8.6	12.9	0.0	11.5	34.5	22.0	11.9
250 or more	7.2	7.6	8.9	11.2	0.0	18.6	23.5	37.7	22.7
<b>Weekly operating hours</b>									
Fewer than 40	6.1	6.6	7.6	13.2	20.3	15.8	83.0	25.5	18.6
40 to 48	6.2	6.1	7.8	9.8	0.0	13.7	42.7	22.1	14.1
49 to 60	5.2	5.4	6.9	10.1	0.0	14.0	48.7	29.9	13.8
61 to 84	7.6	7.6	9.1	9.7	0.0	19.3	65.8	29.3	19.9
85 to 167	8.6	8.7	9.8	13.5	0.0	20.3	37.8	25.1	41.4
Open continuously	8.1	8.1	9.7	16.2	0.0	18.5	69.0	33.3	21.2

**Relative standard errors (RSEs) for Table B17. Occupancy of nongovernment-owned and government-owned buildings, number of buildings, 2018**

**RSEs for number of buildings**

	Nongovernment-owned buildings					Government-owned buildings			
	All buildings	All buildings	Owner occupied	Leased to tenant or tenants	Unoccupied	All buildings	Federal	State	Local
<b>All buildings</b>	3.9	3.8	4.3	5.5	20.3	9.5	26.0	12.9	10.1
<b>Party responsible for operation of energy systems</b>									
Building owner	4.4	4.2	4.3	7.3	21.0	9.6	26.7	12.7	10.4
Business owner or tenant	6.5	6.7	20.9	7.8	57.6	26.1	70.7	66.2	30.3
Property management	20.7	21.8	40.9	21.9	0.0	61.2	50.2	95.9	72.5
Other	18.8	22.7	25.0	27.5	0.0	30.7	84.8	53.5	39.2
<b>Provider of direct input on energy-related equipment purchases</b>									
Building owner	4.4	4.2	4.4	6.5	21.3	9.8	27.1	13.7	10.4
Business owner or tenant	8.9	9.2	25.4	9.6	51.6	35.6	68.3	59.4	39.4
Property management	25.5	27.7	58.0	31.1	0.0	60.2	50.2	100.4	67.5
Other	10.5	12.1	23.9	15.4	50.2	28.8	77.9	47.5	38.1
<b>Number of establishments</b>									
1	4.6	4.4	4.9	6.6	0.0	10.1	26.5	13.6	10.9
2 to 5	6.0	6.2	7.6	8.5	0.0	21.1	78.6	38.2	25.4
6 to 10	11.5	11.5	20.3	13.7	0.0	50.1	25.0	54.4	55.5
11 to 20	18.0	18.6	36.2	21.7	0.0	64.6	83.0	63.0	79.5
More than 20	18.6	19.4	21.5	25.1	0.0	42.7	67.7	42.3	62.5
Currently unoccupied	18.7	20.3	0.0	0.0	20.3	52.5	101.1	110.1	51.3
<b>Campus or complex activity</b>									
Not part of a campus or complex	4.3	4.3	5.4	5.4	21.2	13.2	33.2	23.7	13.8
Primary or secondary school	12.1	26.2	28.0	98.7	70.4	13.4	61.8	22.9	15.2
College or university	21.8	33.6	32.2	85.4	0.0	26.8	0.0	27.4	51.8
Office complex	12.7	13.0	20.1	16.2	72.2	45.2	55.2	69.8	52.0
Retail complex	13.2	13.3	20.6	14.4	64.5	67.7	0.0	0.0	67.7
Storage complex	14.4	14.4	15.6	21.9	64.7	84.2	69.5	44.1	76.8
Religious campus or complex	11.5	11.5	11.6	41.2	51.6	0.0	0.0	0.0	0.0
Health care complex	18.0	19.2	22.3	38.7	55.4	49.3	90.4	84.7	62.4
Lodging or resort complex	15.1	15.4	18.1	34.9	68.3	62.8	50.2	66.4	70.2
Transportation complex	34.3	51.4	77.1	69.2	0.0	40.1	0.0	60.7	42.1
Government complex	18.1	90.1	50.7	93.2	0.0	18.1	48.7	55.6	21.8
Other	9.2	9.8	12.1	19.2	51.4	23.2	66.1	36.3	28.9
<b>Predominant exterior wall material</b>									
Brick, stone, or stucco	5.3	4.8	5.7	6.9	29.3	11.9	34.0	19.8	11.5
Concrete (block or poured)	5.3	5.6	7.1	9.3	31.3	15.0	33.6	26.2	19.3
Concrete panels	12.1	14.1	18.0	21.8	94.8	29.3	48.3	59.1	32.2
Siding or shingles	7.3	7.7	8.1	13.3	53.8	15.7	51.9	36.9	18.8
Metal panels	7.6	7.7	8.5	13.2	47.9	21.2	73.1	35.6	22.9
Window glass	21.3	26.5	26.3	38.1	91.4	30.6	89.4	40.7	51.4
Other	14.7	15.0	17.4	27.7	61.7	38.5	110.4	57.7	42.0

**Relative standard errors (RSEs) for Table B17. Occupancy of nongovernment-owned and government-owned buildings, number of buildings, 2018**

**RSEs for number of buildings**

	Nongovernment-owned buildings					Government-owned buildings			
	All buildings	All buildings	Owner occupied	Leased to tenant or tenants	Unoccupied	All buildings	Federal	State	Local
<b>All buildings</b>	3.9	3.8	4.3	5.5	20.3	9.5	26.0	12.9	10.1
<b>Predominant roof material</b>									
Metal surfacing	6.2	6.2	7.2	9.9	35.3	16.3	51.4	23.1	17.6
Synthetic or rubber	6.0	6.6	8.0	9.1	45.8	12.4	46.4	23.9	14.4
Built-up	7.7	8.4	10.5	10.8	37.3	16.6	61.1	24.9	19.3
Slate or tile shingles	10.1	10.5	12.4	17.8	69.9	31.2	68.1	84.0	26.2
Wooden materials (including shingles)	12.9	13.7	19.5	21.4	94.5	52.2	111.1	70.2	86.9
Asphalt, fiberglass, or other shingles	6.2	7.0	7.6	11.6	38.6	15.3	43.8	34.1	17.8
Concrete	20.6	22.7	35.5	26.3	0.0	45.5	103.7	64.3	59.6
Other	15.6	15.3	16.6	24.8	68.0	37.2	59.0	71.3	32.7
<b>Roof tilt</b>									
Flat	4.9	5.1	5.9	8.1	25.2	11.3	34.8	15.7	13.3
Shallow pitch	5.0	5.1	5.8	8.7	30.5	14.7	47.6	24.0	14.1
Steeper pitch	7.5	7.8	7.7	13.6	58.4	14.8	36.6	23.6	16.1
<b>Cool roof characteristics (more than one may apply)</b>									
White or reflective coating or paint	5.8	6.1	7.3	8.6	37.7	14.8	45.1	24.7	14.4
White or reflective tiles or shingles	15.4	16.6	15.0	32.3	61.6	37.7	58.5	59.8	53.2
Aluminum coating	8.8	9.3	10.6	15.5	41.0	28.6	93.2	37.3	39.2
Ballasted roof system	14.8	18.4	24.6	28.0	49.4	25.9	74.1	33.9	29.8
Other cool roof property	29.3	35.0	49.4	40.5	0.0	43.4	71.2	86.6	50.4
<b>Renovations since 2000 (more than one may apply)</b>									
Any type of renovation	5.0	5.4	6.0	7.9	33.3	10.0	47.6	16.4	11.9
Addition or annex	9.4	11.1	12.5	21.5	102.7	15.7	64.6	30.6	18.7
Reduction in floorspace	22.2	25.2	37.6	33.2	0.0	42.4	78.4	78.1	52.0
Roof replacement	6.8	7.4	8.6	11.5	44.4	14.1	48.9	26.9	16.4
Interior wall reconfiguration	6.0	6.6	7.6	11.3	46.3	14.4	60.8	30.0	17.5
Window replacement	9.5	10.2	11.9	17.0	107.1	18.2	44.8	34.5	19.4
HVAC equipment upgrade	7.0	7.1	9.3	10.3	49.0	14.8	79.4	26.4	15.5
Lighting upgrade	5.9	6.6	8.2	9.7	54.7	13.2	42.9	19.8	15.9
Electrical upgrade	7.1	6.9	9.3	12.4	30.7	20.1	35.2	30.9	23.0
Plumbing system upgrade	7.8	8.7	11.1	14.2	42.8	14.3	38.2	24.6	17.9
Insulation upgrade	9.2	9.8	13.4	17.4	48.8	20.6	75.4	33.4	25.2
Fire, safety, or security upgrade	6.2	6.3	8.8	13.2	59.0	14.0	42.8	23.2	16.6
Structural upgrade	13.9	15.2	17.0	34.8	48.9	29.2	50.7	50.1	42.3
Other	29.5	33.2	36.8	36.9	0.0	58.2	93.8	61.4	75.7
No renovations	4.3	4.2	5.1	6.1	24.3	11.3	29.5	17.6	11.3
Buildings constructed 2013 or later	11.9	12.7	15.6	19.8	98.7	27.0	104.3	48.8	35.8

**Relative standard errors (RSEs) for Table B17. Occupancy of nongovernment-owned and government-owned buildings, number of buildings, 2018**

**RSEs for number of buildings**

	Nongovernment-owned buildings					Government-owned buildings			
	All buildings	All buildings	Owner occupied	Leased to tenant or tenants	Unoccupied	All buildings	Federal	State	Local
<b>All buildings</b>	3.9	3.8	4.3	5.5	20.3	9.5	26.0	12.9	10.1
<b>Energy sources (more than one may apply)</b>									
Electricity	3.9	3.7	4.2	5.4	25.1	9.6	26.0	13.0	10.2
Natural gas	4.8	4.8	5.4	6.7	33.0	10.7	25.6	16.5	11.5
Fuel oil	9.7	10.6	11.5	14.1	58.6	15.3	38.7	27.7	18.0
District heat	14.7	19.3	20.2	52.2	51.6	22.3	73.1	27.2	33.2
District chilled water	20.1	35.7	37.5	39.1	101.1	23.0	37.3	26.7	31.4
Propane	10.0	9.3	10.2	15.1	61.5	24.7	58.4	35.8	29.5
Solar	15.5	18.2	22.0	32.2	2.7	26.1	69.9	49.4	29.0
Wood, coal, and other	17.3	17.7	20.1	34.4	0.0	56.0	88.1	69.7	59.4
<b>Space-heating energy sources (more than one may apply)</b>									
Electricity	4.7	4.4	5.8	5.5	54.7	13.0	34.7	15.8	15.0
Natural gas	5.2	5.1	5.8	6.8	33.1	10.7	26.4	18.1	11.5
Fuel oil	13.9	14.1	15.3	20.3	55.4	31.3	70.0	55.5	34.2
District heat	15.4	19.7	20.6	52.2	51.6	23.2	73.4	28.6	33.2
Propane	13.5	12.8	13.1	20.7	61.5	31.1	75.1	56.4	42.3
Other sources <sup>b</sup>	21.3	21.5	23.6	51.4	0.0	108.7	25.2	49.4	110.2
<b>Primary space-heating energy source</b>									
Electricity	6.4	5.9	7.6	6.7	80.0	16.1	39.8	23.3	17.6
Natural gas	5.5	5.6	6.2	7.4	33.2	10.3	27.0	19.1	11.0
Fuel oil	16.1	16.2	18.3	20.9	55.4	35.2	79.7	65.5	38.5
District heat	15.8	20.4	21.3	54.7	51.6	23.7	73.8	29.1	33.8
Propane	17.5	16.0	16.3	28.6	61.7	35.1	75.1	70.1	46.5
Other sources <sup>b</sup>	22.4	22.9	24.3	78.7	0.0	47.7	0.0	0.0	47.7
<b>Cooling energy sources (more than one may apply)</b>									
Electricity	3.9	3.5	4.3	4.8	32.3	10.1	27.9	14.5	10.7
Natural gas	37.3	44.1	36.3	100.9	0.0	54.6	0.0	90.3	63.4
District chilled water	20.1	35.7	37.5	39.1	101.1	23.0	37.3	26.7	31.4
<b>Water-heating energy sources (more than one may apply)</b>									
Electricity	4.0	3.9	5.1	5.5	38.4	10.9	39.2	16.0	12.8
Natural gas	5.5	5.4	5.9	7.5	66.4	11.5	27.0	21.5	11.6
Fuel oil	24.0	21.1	22.3	52.1	55.4	42.2	104.0	63.2	47.6
District heat	17.4	25.0	25.9	41.3	0.0	27.4	82.4	30.3	37.8
Propane	15.8	16.7	17.6	37.2	55.4	27.3	54.5	44.1	49.3

**Relative standard errors (RSEs) for Table B17. Occupancy of nongovernment-owned and government-owned buildings, number of buildings, 2018**

**RSEs for number of buildings**

	Nongovernment-owned buildings					Government-owned buildings			
	All buildings	All buildings	Owner occupied	Leased to tenant or tenants	Unoccupied	All buildings	Federal	State	Local
<b>All buildings</b>	3.9	3.8	4.3	5.5	20.3	9.5	26.0	12.9	10.1
<b>Cooking energy sources (more than one may apply)</b>									
Electricity	5.7	6.1	6.8	9.5	49.2	11.3	27.4	22.3	13.0
Natural gas	5.4	6.4	7.9	9.7	55.4	11.6	45.8	24.8	13.2
Propane	14.8	13.7	16.8	26.6	0.0	38.3	96.1	41.5	44.8
<b>Energy end uses (more than one may apply)</b>									
Buildings with space heating	4.1	3.8	4.5	5.2	31.9	10.2	26.1	13.8	11.0
Buildings with cooling	3.9	3.5	4.3	4.8	31.7	9.9	27.7	13.9	10.6
Buildings with water heating	3.9	3.7	4.2	5.3	33.7	9.3	26.6	14.2	10.0
Buildings with cooking	5.0	5.2	5.6	8.0	108.4	10.1	49.4	16.3	11.6
Buildings with manufacturing	11.3	11.2	11.2	16.9	0.0	43.1	87.4	40.1	48.5
Buildings with electricity generation	7.4	8.3	9.4	11.4	58.6	12.3	30.9	22.1	14.2
Buildings with lighting	3.9	3.6	4.2	5.1	26.8	9.6	26.0	13.0	10.2
<b>Percentage of floorspace heated</b>									
Not heated	8.2	8.5	9.6	15.2	26.3	16.0	67.0	26.9	21.3
1 to 50%	8.5	8.3	9.8	13.6	82.5	24.9	52.7	48.2	31.4
51 to 99%	6.7	6.6	7.4	10.0	62.4	16.7	54.0	29.6	16.6
100%	4.1	4.0	5.0	5.6	35.1	9.6	32.1	11.2	11.2
<b>Percentage of floorspace cooled</b>									
Not cooled	7.1	7.7	7.5	15.0	23.4	15.5	60.8	29.7	19.8
1 to 50%	5.9	6.0	7.6	10.6	63.3	16.9	34.4	29.8	20.2
51 to 99%	6.6	6.4	7.6	9.3	94.4	15.5	37.7	26.9	13.8
100%	4.3	4.1	5.1	5.0	39.7	10.6	34.9	14.5	12.2
<b>Percentage lit when open</b>									
0%	35.1	35.1	40.8	47.9	0.0	0.0	0.0	0.0	0.0
1 to 50%	6.7	6.4	6.7	12.4	0.0	17.9	68.7	32.6	21.4
51 to 99%	4.8	4.6	5.8	6.1	0.0	14.0	37.2	23.3	14.9
100%	4.7	4.9	6.2	7.4	0.0	9.8	36.2	13.6	11.3
Building never open or electricity not used	11.6	12.6	16.7	25.1	20.3	31.9	101.1	82.9	34.3
<b>Percentage lit during off hours</b>									
0%	6.5	6.6	6.8	10.3	60.3	15.0	44.7	22.0	16.8
1 to 50%	3.8	3.6	4.6	5.4	33.2	9.9	28.6	15.0	10.9
51 to 100%	10.6	11.5	16.3	16.6	33.7	37.0	44.6	64.4	48.2
Building always open with no off hours	15.2	15.3	19.3	23.7	0.0	43.3	49.2	55.0	54.7
Electricity not used	16.0	16.6	20.3	28.4	31.2	54.6	0.0	84.7	54.3



**Relative standard errors (RSEs) for Table B17. Occupancy of nongovernment-owned and government-owned buildings, number of buildings, 2018**

**RSEs for number of buildings**

	Nongovernment-owned buildings					Government-owned buildings			
	All buildings	All buildings	Owner occupied	Leased to tenant or tenants	Unoccupied	All buildings	Federal	State	Local
<b>All buildings</b>	3.9	3.8	4.3	5.5	20.3	9.5	26.0	12.9	10.1
<b>Heating equipment (more than one may apply)</b>									
Packaged heating units	4.0	4.4	6.2	6.3	51.2	8.9	34.4	14.8	11.0
Furnaces	7.2	6.3	7.4	8.6	47.6	20.7	60.3	45.1	18.2
Individual space heaters	5.9	6.1	7.4	10.7	56.8	18.0	37.6	32.8	22.0
Boilers	6.2	7.3	8.5	12.6	73.1	10.8	26.1	20.1	12.7
Heat pumps	7.7	7.9	10.3	13.1	61.1	15.4	59.3	27.4	21.6
District heat	15.4	19.7	20.6	52.2	51.6	23.2	73.4	28.6	33.2
Duct reheat	12.6	13.5	19.5	19.3	109.1	28.0	88.4	45.2	26.0
Other	46.4	46.5	59.8	28.1	0.0	44.4	72.6	64.9	70.6
<b>Cooling equipment (more than one may apply)</b>									
Packaged air-conditioning units	4.3	4.4	5.6	6.7	33.0	9.2	29.4	14.1	11.4
Residential-type central air conditioners	7.6	6.8	7.5	9.2	86.1	18.9	75.9	37.8	17.8
Individual air conditioners	6.6	6.5	8.1	10.3	2.7	17.2	39.2	29.7	25.4
Central chillers	9.0	13.5	17.5	17.3	82.9	11.6	37.0	23.0	11.1
Heat pumps	11.0	11.3	12.3	18.6	81.5	19.2	70.1	37.9	22.3
District chilled water	20.1	35.7	37.5	39.1	101.1	23.0	37.3	26.7	31.4
Swamp coolers	12.8	12.7	17.4	28.3	107.9	40.9	49.2	60.5	35.3
Other	53.2	61.4	55.3	108.7	0.0	106.9	61.9	109.8	0.0
<b>HVAC features (more than one may apply)</b>									
Economizer cycle	5.6	5.9	7.7	9.2	61.5	11.3	38.7	17.0	13.8
Variable air volume (VAV) system	8.4	9.0	11.5	10.8	64.2	11.7	33.6	21.4	12.8
Dedicated outside air system (DOAS)	11.0	14.1	16.2	21.6	92.6	17.4	46.7	28.6	25.0
Demand controlled ventilation (DCV)	8.8	10.0	11.0	18.5	95.7	19.3	64.9	22.0	25.2
Regular HVAC maintenance	4.2	4.0	4.7	5.6	42.6	9.0	24.4	13.7	9.8
Building automation system (BAS) controls heating or cooling	6.4	7.8	10.3	10.3	72.6	9.1	35.2	13.9	13.0
Internet-connected or smart thermostat	12.2	12.4	14.6	18.9	0.0	22.9	52.1	48.1	27.5
Programmable thermostat	4.7	4.9	6.8	6.8	65.5	14.3	51.3	30.3	15.7
<b>Main equipment replaced since 2000 (more than one may apply)</b>									
Heating	4.9	5.2	6.2	6.6	40.1	10.7	47.5	24.6	13.5
Cooling	4.8	4.7	5.8	8.7	53.6	11.7	75.7	22.6	15.2
<b>Water-heating equipment</b>									
Centralized system	4.4	4.3	4.6	6.9	35.7	10.3	29.8	15.8	10.9
Distributed system	8.9	8.8	11.8	10.9	108.2	19.9	53.5	31.0	24.7
Combination of centralized and distributed systems	8.8	8.7	10.2	12.5	58.4	20.2	31.3	40.6	23.8

**Relative standard errors (RSEs) for Table B17. Occupancy of nongovernment-owned and government-owned buildings, number of buildings, 2018**

**RSEs for number of buildings**

	Nongovernment-owned buildings					Government-owned buildings			
	All buildings	All buildings	Owner occupied	Leased to tenant or tenants	Unoccupied	All buildings	Federal	State	Local
<b>All buildings</b>	3.9	3.8	4.3	5.5	20.3	9.5	26.0	12.9	10.1
<b>Generation technologies (more than one may apply)</b>									
Reciprocating engine generators	8.8	9.7	11.0	12.8	58.6	14.1	33.8	25.4	16.2
Solar panels	15.4	18.2	22.0	32.2	2.7	27.1	71.7	51.7	29.2
Other generation technology	21.4	23.7	29.3	34.2	0.0	47.1	57.3	38.0	78.5
<b>Lighting equipment types (more than one may apply)</b>									
Incandescent	7.8	7.9	8.7	11.3	60.9	18.8	47.4	30.1	19.2
Standard fluorescent	4.2	3.8	4.6	5.3	30.6	10.3	30.1	16.7	10.5
Compact fluorescent	5.2	5.9	7.5	8.3	53.9	14.2	39.1	27.0	14.8
High-intensity discharge (HID)	9.8	12.6	15.6	20.5	58.3	18.0	43.2	35.5	22.8
Halogen	8.0	8.7	12.3	12.6	60.0	18.7	55.2	28.1	31.5
LED	3.6	3.7	4.8	5.9	68.1	10.1	27.4	13.1	11.1
Other	57.3	57.3	111.1	56.3	0.0	0.0	0.0	0.0	0.0
<b>Refrigeration equipment (more than one may apply)</b>									
Any refrigeration	4.1	4.0	4.6	5.7	47.5	9.8	24.5	16.0	10.1
Walk-in units	5.4	6.0	7.5	8.3	66.4	9.1	43.4	19.8	10.5
Cases or cabinets	5.8	6.5	7.4	9.6	106.2	10.8	30.2	15.4	14.1
Large cold storage areas	17.2	18.4	24.9	24.2	70.6	35.8	54.6	34.1	60.1
Commercial ice makers	5.5	6.2	7.6	8.2	66.4	11.3	35.8	20.1	13.2
Residential-type or compact units	4.3	4.2	4.9	5.8	50.0	11.2	27.2	18.7	11.3
Vending machines	6.1	6.2	7.6	10.1	70.6	9.9	22.5	15.4	13.0
No refrigeration	5.3	5.4	6.7	9.5	21.1	13.8	50.2	20.2	15.8
<b>Office equipment (more than one may apply)</b>									
Desktop computers	4.0	3.8	4.7	4.6	49.2	9.6	28.6	12.9	10.5
With multiple monitors	5.0	5.1	6.0	6.9	0.0	14.8	31.8	25.1	13.8
Laptop computers	4.0	4.1	5.1	5.2	0.0	11.4	27.6	15.7	12.5
Dedicated servers	4.9	4.6	5.8	7.7	0.0	11.2	29.2	18.8	14.3
Tablets charged in building	4.4	4.7	6.0	6.9	0.0	11.8	37.0	15.2	14.2
Large floor-standing office devices <sup>c</sup>	4.4	5.0	5.7	7.6	0.0	9.5	26.6	14.6	11.9
Smaller desktop office devices <sup>c</sup>	4.1	3.9	4.6	5.1	49.2	9.7	28.6	14.8	10.7
Interactive whiteboards	8.7	14.5	17.2	18.4	0.0	10.6	36.9	22.3	12.5
Televisions or video displays	3.8	3.8	5.1	5.1	0.0	8.9	40.9	13.4	11.1
Point-of-sale devices or cash registers	5.2	5.5	7.6	7.4	0.0	10.1	31.7	22.7	11.8

**Relative standard errors (RSEs) for Table B17. Occupancy of nongovernment-owned and government-owned buildings, number of buildings, 2018**

**RSEs for number of buildings**

	Nongovernment-owned buildings					Government-owned buildings			
	All buildings	All buildings	Owner occupied	Leased to tenant or tenants	Unoccupied	All buildings	Federal	State	Local
<b>All buildings</b>	3.9	3.8	4.3	5.5	20.3	9.5	26.0	12.9	10.1
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>									
Snack bar, concession stand, or coffee shop	11.0	13.3	15.7	19.8	0.0	17.0	65.7	39.1	27.0
Fast food or small restaurant	9.4	9.6	12.9	13.9	0.0	36.7	70.6	66.3	37.0
Cafeteria or large restaurant	7.7	14.7	17.7	24.5	0.0	10.1	30.0	19.1	13.1
Commercial kitchen or food preparation area	8.5	9.6	10.8	13.9	55.4	17.3	52.3	41.1	15.6
Small kitchen area	6.5	7.0	7.5	11.0	49.2	14.9	62.6	29.1	16.6
<b>Separate computer areas (more than one may apply)</b>									
Server closet	5.3	5.4	6.2	8.1	0.0	10.2	35.7	15.6	11.6
Data center	13.1	16.6	20.6	14.7	0.0	23.8	30.7	37.8	32.0
Computer-based training room	8.4	10.8	14.6	15.3	0.0	12.4	49.8	23.1	16.2
Student or public computer center	8.0	13.9	12.1	22.6	0.0	9.8	46.5	22.2	12.0
<b>Window and interior lighting features (more than one may apply)</b>									
Multipaned windows	4.2	4.1	5.1	5.3	28.7	8.9	30.1	15.0	10.0
Tinted window glass	4.2	4.6	6.0	7.7	37.2	10.7	30.8	19.5	12.4
Reflective window glass	7.0	7.5	10.4	11.0	53.1	20.0	79.2	22.2	24.2
External overhangs or awnings	5.0	5.5	6.5	7.6	40.1	11.8	44.8	20.9	14.1
Skylights or atriums	7.1	8.2	8.2	16.1	54.5	13.3	54.8	31.4	15.3
Light scheduling	5.2	5.6	6.9	9.5	61.4	12.5	51.7	21.5	16.9
Occupancy sensors	6.5	7.2	10.8	9.0	49.0	9.2	29.1	18.9	12.0
Multilevel lighting or dimming	10.0	10.9	13.9	13.5	91.1	20.8	41.9	33.3	27.7
Daylight harvesting	12.0	12.8	19.3	19.9	78.1	37.6	47.5	79.8	26.4
Plug-load control	18.4	20.6	25.7	40.5	94.5	40.2	32.7	63.8	45.3
Demand responsive lighting	30.7	36.1	36.0	50.5	42.6	46.8	64.7	72.9	53.8
Building automation system (BAS) for lighting	9.3	10.8	15.8	14.5	91.1	15.4	48.9	29.9	19.5

**Relative standard errors (RSEs) for Table B17. Occupancy of nongovernment-owned and government-owned buildings, number of buildings, 2018**

**RSEs for number of buildings**

	Nongovernment-owned buildings					Government-owned buildings			
	All buildings	All buildings	Owner occupied	Leased to tenant or tenants	Unoccupied	All buildings	Federal	State	Local
<b>All buildings</b>	3.9	3.8	4.3	5.5	20.3	9.5	26.0	12.9	10.1
<b>Electric vehicle (EV) charging</b>									
Charging stations associated with the building	11.5	12.8	17.7	19.6	69.9	26.7	67.0	51.9	32.0

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>.

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

<sup>b</sup>*Other sources* includes wood, coal, solar, and all other energy sources.

<sup>c</sup>*Office devices* refers to any combination of printers, copiers, scanners, or FAX machines.