

**Table C30. Natural gas consumption and conditional energy intensity by climate zone<sup>a</sup>, 2018**

	Total natural gas consumption (billion cubic feet)				Total floorspace of buildings using natural gas (million square feet)						Natural gas energy intensity (cubic feet/square foot)				
	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot
<b>All buildings</b>	200	791	630	461	133	4,971	20,476	18,756	17,686	5,833	40.2	38.6	33.6	26.1	22.9
<b>Building floorspace (square feet)</b>															
1,001 to 5,000	14	67	39	43	14	238	1,131	640	929	355	59.9	58.9	60.2	46.4	39.6
5,001 to 10,000	17	83	45	46	Q	440	1,744	1,119	1,511	Q	39.4	47.6	40.5	30.7	Q
10,001 to 25,000	41	117	63	72	15	1,088	2,910	1,760	3,151	615	37.5	40.3	35.8	22.9	24.3
25,001 to 50,000	36	150	91	65	10	802	4,017	2,432	2,536	680	44.7	37.3	37.4	25.6	15.4
50,001 to 100,000	35	121	98	93	24	734	3,373	3,140	3,466	1,275	47.8	35.8	31.2	26.9	19.2
100,001 to 200,000	28	104	100	58	19	801	2,792	3,374	2,756	794	34.4	37.1	29.7	21.2	24.3
200,001 to 500,000	23	102	102	60	20	661	2,856	3,035	2,270	851	35.4	35.7	33.7	26.4	23.9
Over 500,000	Q	48	92	23	21	Q	1,655	3,256	1,067	878	Q	29.2	28.2	21.6	23.8
<b>Principal building activity</b>															
Education	32	120	114	40	10	860	3,097	3,275	2,239	783	37.5	38.6	34.9	17.9	12.3
Food sales	Q	20	Q	Q	Q	Q	261	Q	Q	Q	Q	77.1	Q	Q	Q
Food service	Q	54	31	37	14	Q	268	230	291	125	Q	203.1	136.6	126.0	114.6
Health care	16	61	60	42	21	212	1,097	1,028	720	312	73.0	55.2	58.1	58.4	68.1
Inpatient	Q	48	48	35	21	Q	655	618	464	265	Q	73.3	76.9	76.3	78.2
Outpatient	Q	13	12	7	Q	Q	442	410	256	Q	Q	28.5	29.8	26.1	Q
Lodging	17	61	71	48	19	323	1,547	1,584	1,645	743	53.9	39.6	44.6	29.2	25.1
Mercantile	25	117	65	86	29	641	2,571	1,899	2,721	1,160	38.3	45.4	34.3	31.5	25.4
Retail (other than mall)	12	28	21	15	7	405	1,112	894	847	327	28.8	25.6	23.9	17.4	22.2
Enclosed and strip malls	Q	88	44	71	22	Q	1,459	1,005	1,874	833	Q	60.4	43.5	37.8	26.6
Office	28	94	67	45	7	1,036	3,678	3,459	2,453	657	27.2	25.5	19.5	18.3	9.9
Public assembly	16	82	62	35	14	338	1,664	1,277	1,301	653	46.9	49.1	48.4	26.8	21.1
Public order and safety	Q	12	15	14	Q	Q	327	438	379	Q	Q	35.4	34.2	37.5	Q
Religious worship	Q	31	23	22	6	Q	1,161	728	1,492	424	Q	26.9	31.6	14.9	13.0
Service	18	51	24	44	Q	328	1,437	614	867	Q	55.8	35.8	39.7	51.3	Q
Warehouse and storage	21	71	65	32	3	704	2,727	3,393	2,900	584	29.4	26.0	19.2	11.0	5.3
Other	Q	14	19	8	Q	Q	495	509	449	Q	Q	28.4	38.3	18.3	Q
Vacant	N	Q	Q	Q	Q	N	Q	Q	Q	Q	N	Q	Q	Q	Q
<b>Year constructed</b>															
Before 1920	Q	36	27	Q	Q	Q	1,097	759	Q	Q	Q	32.5	35.3	Q	Q
1920 to 1945	Q	47	44	17	Q	Q	1,542	1,356	590	Q	Q	30.4	32.4	28.7	Q
1946 to 1959	13	59	54	34	6	358	1,302	1,531	1,505	323	35.3	45.1	35.5	22.8	19.4
1960 to 1969	26	104	70	63	16	578	2,417	1,978	2,394	445	45.5	42.9	35.5	26.1	34.9
1970 to 1979	30	118	70	60	13	780	3,092	2,174	2,402	641	38.6	38.3	32.1	25.0	20.8
1980 to 1989	27	85	105	60	24	647	2,129	2,631	2,460	903	41.1	40.0	40.0	24.4	26.1
1990 to 1999	30	108	86	58	18	771	3,161	2,850	2,558	1,046	38.9	34.3	30.1	22.7	17.2
2000 to 2009	38	153	115	116	35	896	3,464	3,383	3,514	1,575	42.5	44.3	34.1	33.0	22.4
2010 to 2018	18	81	59	47	18	406	2,271	2,095	2,003	722	45.0	35.6	28.1	23.5	24.9

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	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot
<b>All buildings</b>	200	791	630	461	133	4,971	20,476	18,756	17,686	5,833	40.2	38.6	33.6	26.1	22.9
<b>Census region and division</b>															
Northeast	Q	180	219	N	N	Q	4,765	6,368	N	N	49.8	37.8	34.4	N	N
New England	Q	64	Q	N	N	Q	1,594	Q	N	N	Q	40.4	40.0	N	N
Middle Atlantic	Q	116	210	N	N	Q	3,171	6,145	N	N	Q	36.5	34.2	N	N
Midwest	147	478	161	N	N	3,888	12,268	4,254	N	N	37.9	39.0	37.8	N	N
East North Central	71	408	102	N	N	1,936	9,975	2,580	N	N	36.5	40.9	39.6	N	N
West North Central	77	70	59	N	N	1,952	2,294	1,674	N	N	39.3	30.7	35.0	N	N
South	N	N	156	336	100	N	N	5,234	12,082	4,579	N	N	29.9	27.8	21.9
South Atlantic	N	N	101	155	29	N	N	3,445	5,559	1,281	N	N	29.2	27.8	22.9
East South Central	N	N	Q	104	Q	N	N	Q	3,476	Q	N	N	27.5	29.9	Q
West South Central	N	N	Q	78	69	N	N	Q	3,047	3,247	N	N	33.1	25.6	21.4
West	43	133	Q	125	33	Q	3,443	2,901	5,603	1,254	48.4	38.7	32.4	22.3	26.2
Mountain	Q	104	Q	Q	24	Q	2,695	Q	Q	910	48.9	38.4	44.8	22.0	26.6
Pacific	Q	Q	Q	113	Q	Q	747	1,783	5,060	Q	Q	39.6	24.6	22.3	25.0
<b>Number of floors</b>															
1	86	360	215	249	65	1,768	7,912	5,791	9,035	2,838	48.8	45.4	37.1	27.5	23.0
2	63	176	151	102	19	1,896	5,063	4,816	4,174	1,253	33.0	34.7	31.3	24.3	15.5
3	28	97	84	44	8	778	2,891	2,254	1,838	408	36.1	33.4	37.2	23.9	19.3
4 to 9	17	121	121	53	27	380	3,271	3,946	1,942	899	43.7	37.0	30.7	27.5	30.4
10 or more	Q	38	60	13	13	Q	1,338	1,950	697	435	Q	28.7	30.7	19.1	30.5
<b>Number of workers (main shift)</b>															
Fewer than 5	27	106	73	68	11	688	3,216	2,174	3,137	613	39.2	33.0	33.5	21.8	17.6
5 to 9	24	80	61	41	9	698	2,101	1,715	1,970	393	34.3	38.1	35.4	20.9	22.8
10 to 19	41	120	60	65	14	875	2,930	1,540	2,121	515	46.7	41.1	39.1	30.8	27.1
20 to 49	37	171	100	89	25	970	3,800	3,019	3,672	1,147	37.8	45.1	33.1	24.3	21.5
50 to 99	31	111	91	88	15	768	2,739	2,937	2,686	909	40.0	40.4	31.2	32.8	16.8
100 to 249	24	124	118	62	25	556	3,090	3,724	2,347	1,150	43.7	40.1	31.8	26.4	21.9
250 or more	17	79	127	47	35	418	2,599	3,648	1,753	1,106	39.7	30.4	34.7	26.9	31.2
<b>Weekly operating hours</b>															
Fewer than 40	12	64	39	37	4	442	2,067	1,267	1,881	363	27.5	31.0	30.4	19.7	11.7
40 to 48	35	125	73	66	16	1,017	3,957	2,625	3,868	914	34.9	31.5	27.7	17.1	17.9
49 to 60	47	155	130	76	15	1,252	4,642	5,032	3,909	1,209	37.7	33.5	25.9	19.5	12.4
61 to 84	36	154	109	75	23	803	3,777	3,188	2,365	1,081	44.5	40.9	34.0	31.6	21.4
85 to 167	22	122	87	75	21	608	2,282	2,133	1,730	626	36.0	53.3	40.8	43.6	32.8
Open continuously	48	171	193	132	54	850	3,751	4,511	3,933	1,639	56.0	45.6	42.9	33.5	33.0
<b>Ownership and occupancy</b>															
Nongovernment owned	146	620	473	370	110	3,730	15,980	14,111	13,533	4,382	39.1	38.8	33.5	27.3	25.2
Owner occupied	94	374	287	229	66	2,489	10,313	7,916	8,252	2,616	37.9	36.2	36.2	27.7	25.1
Leased to tenant or tenants	52	244	185	141	45	1,241	5,586	6,101	5,258	1,748	41.6	43.7	30.2	26.8	25.5
Unoccupied	N	Q	Q	Q	Q	N	Q	Q	Q	Q	N	Q	Q	Q	Q
Government owned	54	172	157	91	23	1,242	4,496	4,645	4,153	1,451	43.6	38.2	33.9	22.0	15.9
Federal	Q	9	12	6	Q	Q	284	466	381	Q	Q	32.1	26.0	14.6	Q
State	11	46	52	38	7	287	1,169	1,490	1,521	472	38.3	39.6	34.8	25.3	15.6
Local	37	116	93	47	12	851	3,043	2,689	2,251	890	43.0	38.2	34.7	21.0	13.1

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	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot
<b>All buildings</b>	200	791	630	461	133	4,971	20,476	18,756	17,686	5,833	40.2	38.6	33.6	26.1	22.9
<b>Party responsible for operation of energy systems</b>															
Building owner	171	644	507	364	101	4,265	17,429	15,020	14,164	4,543	40.1	37.0	33.8	25.7	22.3
Business owner or tenant	25	120	99	75	21	543	2,136	2,982	2,620	946	45.3	56.1	33.2	28.7	22.3
Property management	Q	10	10	12	Q	Q	399	333	445	Q	Q	25.8	29.0	26.6	Q
Other	Q	17	14	10	Q	Q	512	421	457	Q	Q	32.9	33.6	22.3	Q
<b>Provider of direct input on energy-related equipment purchases</b>															
Building owner	176	686	526	384	105	4,387	18,167	15,670	14,970	4,815	40.2	37.7	33.5	25.7	21.9
Business owner or tenant	16	67	63	50	20	335	1,194	1,726	1,590	697	46.9	55.9	36.8	31.5	28.4
Property management	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other	Q	32	35	21	5	Q	922	1,116	885	256	Q	35.0	31.2	23.5	20.8
<b>Number of establishments</b>															
1	135	527	417	308	81	3,349	13,879	11,978	11,883	3,449	40.4	38.0	34.8	25.9	23.4
2 to 5	41	132	128	81	22	999	3,386	3,542	3,299	1,011	40.8	39.0	36.2	24.6	21.9
6 to 10	Q	57	39	30	9	Q	1,346	1,392	988	493	Q	42.7	28.2	30.6	18.4
11 to 20	Q	47	19	29	9	Q	1,014	689	876	347	Q	46.7	28.1	33.6	25.7
More than 20	Q	25	23	12	12	Q	763	993	598	516	Q	32.9	22.9	19.7	24.0
Currently unoccupied	N	Q	Q	Q	Q	N	Q	Q	Q	Q	N	Q	Q	Q	Q
<b>Predominant exterior wall material</b>															
Brick, stone, or stucco	88	426	385	263	82	2,113	9,719	10,265	9,704	3,147	41.5	43.8	37.5	27.1	26.1
Concrete (block or poured)	59	178	121	83	21	1,322	4,659	3,789	3,504	945	44.3	38.3	31.9	23.8	22.1
Concrete panels	10	56	37	53	11	269	1,771	1,742	2,052	685	37.3	31.8	21.1	26.0	16.1
Siding or shingles	16	43	21	17	Q	449	1,296	475	433	Q	36.1	33.1	44.3	40.0	Q
Metal panels	21	60	44	31	7	603	2,033	1,591	1,400	510	34.9	29.6	27.4	22.5	14.5
Window glass	Q	16	10	6	5	Q	517	433	347	278	Q	30.6	23.1	18.3	17.6
Other	Q	12	13	6	Q	Q	481	462	246	Q	Q	25.4	27.5	23.9	Q
<b>Predominant roof material</b>															
Metal surfacing	36	89	86	77	15	951	2,587	2,779	3,343	796	37.6	34.5	31.0	23.2	18.6
Synthetic or rubber	81	353	259	139	50	1,952	8,703	7,562	5,183	2,056	41.5	40.5	34.3	26.8	24.3
Built-up	44	155	151	118	24	1,093	4,030	4,649	4,488	1,131	40.2	38.5	32.6	26.2	21.4
Slate or tile shingles	Q	35	23	26	9	Q	758	563	873	416	Q	46.2	41.2	29.7	22.7
Wooden materials (including shingles)	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Asphalt, fiberglass, or other shingles	32	124	75	71	16	731	3,468	2,022	2,629	686	43.1	35.9	37.0	27.2	23.5
Concrete	Q	Q	17	Q	4	Q	Q	490	Q	229	Q	Q	34.7	Q	18.7
Other	Q	16	16	13	7	Q	443	627	576	409	Q	36.5	25.4	23.4	18.1
<b>Roof tilt</b>															
Flat	127	490	421	281	95	2,841	11,910	12,558	10,019	3,883	44.7	41.2	33.5	28.1	24.6
Shallow pitch	43	211	127	117	29	1,318	5,890	4,123	5,053	1,446	32.6	35.9	30.8	23.1	20.1
Steeper pitch	30	90	83	63	9	813	2,675	2,075	2,614	503	37.2	33.6	39.9	24.3	17.5
<b>Cool roof characteristics (more than one may apply)</b>															
White or reflective coating or paint	45	243	254	192	64	1,058	5,913	7,255	7,291	2,879	42.4	41.1	35.1	26.3	22.2
White or reflective tiles or shingles	Q	20	14	15	5	Q	533	498	591	172	Q	37.4	27.5	26.0	28.1
Aluminum coating	Q	32	21	28	8	Q	750	815	1,082	312	Q	42.1	26.2	25.7	25.6
Ballasted roof system	28	70	68	21	Q	667	1,946	1,684	782	Q	41.4	36.2	40.5	27.3	Q
Other cool roof property	Q	12	8	Q	Q	Q	453	476	Q	Q	Q	26.0	16.0	Q	Q

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<b>All buildings</b>	200	791	630	461	133	4,971	20,476	18,756	17,686	5,833	40.2	38.6	33.6	26.1	22.9
<b>Renovations since 2000 (more than one may apply)</b>															
Any type of renovation	92	423	363	208	74	2,350	10,759	9,858	7,780	3,000	39.3	39.3	36.8	26.8	24.6
Addition or annex	40	124	99	61	27	921	2,784	2,488	1,466	950	43.7	44.7	39.8	41.3	28.1
Reduction in floorspace	Q	16	19	8	Q	Q	470	455	313	Q	Q	33.1	41.1	26.4	Q
Roof replacement	41	204	193	87	27	956	5,094	4,839	3,259	1,237	43.0	40.0	40.0	26.7	21.5
Interior wall reconfiguration	50	183	186	78	31	1,296	5,106	5,361	3,008	1,214	38.7	35.9	34.8	26.0	25.8
Window replacement	27	114	120	33	10	555	3,039	3,095	1,350	509	47.9	37.5	38.9	24.7	20.6
HVAC equipment upgrade	54	262	250	116	44	1,444	6,699	6,470	4,770	1,883	37.4	39.1	38.7	24.4	23.4
Lighting upgrade	58	298	253	118	44	1,477	7,753	6,953	4,726	1,903	39.2	38.4	36.4	25.0	23.0
Electrical upgrade	27	180	160	57	31	605	4,522	4,180	2,109	1,002	43.8	39.7	38.4	27.2	30.7
Plumbing system upgrade	25	160	158	62	22	600	4,094	3,933	2,317	913	42.3	39.0	40.1	26.7	24.4
Insulation upgrade	18	82	90	29	11	319	2,262	2,147	976	452	56.3	36.3	42.1	30.1	23.2
Fire, safety, or security upgrade	47	200	204	77	33	1,049	5,053	5,044	3,071	1,411	45.1	39.6	40.4	25.2	23.7
Structural upgrade	Q	46	62	23	Q	Q	1,316	1,236	659	Q	Q	34.7	49.9	35.5	Q
Other	Q	Q	12	8	Q	Q	Q	281	336	Q	Q	Q	42.3	23.1	Q
No renovations	93	308	228	224	45	2,336	7,971	7,506	8,466	2,368	39.9	38.6	30.3	26.4	19.2
Buildings constructed 2013 or later	14	61	40	29	14	285	1,746	1,392	1,439	464	50.2	34.9	28.6	20.3	30.3
<b>Energy sources (more than one may apply)</b>															
Electricity	200	791	630	461	133	4,971	20,476	18,756	17,686	5,833	40.2	38.6	33.6	26.1	22.9
Natural gas	200	791	630	461	133	4,971	20,476	18,756	17,686	5,833	40.2	38.6	33.6	26.1	22.9
Fuel oil	43	150	205	86	38	842	3,976	5,949	2,720	1,471	50.6	37.7	34.4	31.7	25.8
District heat	Q	24	30	22	10	Q	1,201	1,637	999	298	Q	20.2	18.2	21.8	32.1
District chilled water	Q	13	24	16	9	Q	611	878	833	558	Q	21.0	27.0	19.5	15.6
Propane	15	40	62	21	11	398	1,130	1,626	947	467	37.3	35.6	37.9	22.5	24.4
Solar	Q	19	39	19	11	Q	614	1,457	677	417	Q	31.8	26.7	27.8	27.5
Wood, coal, and other	Q	24	Q	Q	Q	Q	534	Q	Q	Q	Q	45.2	Q	Q	Q
<b>Space-heating energy sources</b>															
Natural gas	193	748	573	399	97	4,639	18,890	15,512	14,864	4,139	41.6	39.6	36.9	26.8	23.3
Natural gas main	188	703	535	332	76	4,422	16,654	14,053	11,979	2,952	42.4	42.2	38.1	27.7	25.6
Natural gas secondary	Q	45	38	67	21	Q	2,236	1,459	2,885	1,186	Q	20.3	25.8	23.4	17.7
Other excluding natural gas	7	43	57	58	28	332	1,582	3,118	2,592	1,443	20.9	27.4	18.1	22.5	19.2
Buildings without heating	N	Q	Q	Q	9	N	Q	Q	Q	251	N	Q	Q	Q	35.8
<b>Primary space-heating energy source</b>															
Electricity	10	69	66	108	41	398	2,693	2,858	4,559	2,342	26.0	25.6	23.2	23.7	17.4
Natural gas	188	703	535	332	76	4,422	16,654	14,053	11,979	2,952	42.4	42.2	38.1	27.7	25.6
Fuel oil	Q	Q	Q	Q	Q	Q	Q	227	Q	Q	Q	Q	14.9	Q	Q
District heat	Q	18	24	16	8	Q	1,062	1,492	814	281	Q	17.4	16.4	19.6	28.0
Propane	N	N	N	Q	N	N	N	N	Q	N	N	N	N	Q	N
Other sources <sup>b</sup>	Q	Q	N	N	N	Q	Q	N	N	N	Q	Q	N	N	N
<b>Cooling energy sources</b>															
Natural gas	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Other excluding natural gas	185	742	608	452	133	4,584	18,956	18,164	17,286	5,811	40.4	39.1	33.5	26.1	22.9
Buildings without cooling	15	41	10	9	Q	356	1,377	400	368	Q	40.9	29.5	25.4	24.4	Q
<b>Water-heating energy sources</b>															
Natural gas	151	614	487	340	115	3,338	14,125	12,641	12,131	4,417	45.4	43.5	38.6	28.0	26.0
Other excluding natural gas	48	165	137	110	17	1,614	5,939	5,848	4,851	1,300	29.8	27.8	23.4	22.6	13.4
Buildings without water heating	Q	12	Q	12	Q	Q	412	Q	703	Q	Q	29.0	Q	16.6	Q

**Table C30. Natural gas consumption and conditional energy intensity by climate zone<sup>a</sup>, 2018**

	Total natural gas consumption (billion cubic feet)				Total floorspace of buildings using natural gas (million square feet)						Natural gas energy intensity (cubic feet/square foot)				
	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot
<b>All buildings</b>	200	791	630	461	133	4,971	20,476	18,756	17,686	5,833	40.2	38.6	33.6	26.1	22.9
<b>Cooking energy sources</b>															
Natural gas	95	424	335	232	103	1,928	8,124	7,959	6,573	3,121	49.4	52.2	42.1	35.4	32.9
Other excluding natural gas	24	91	75	41	10	620	3,074	2,184	1,732	852	38.4	29.5	34.4	23.5	11.9
Buildings without cooking	81	277	220	188	21	2,424	9,277	8,614	9,380	1,860	33.4	29.8	25.6	20.1	11.1
<b>Energy end uses (more than one may apply)</b>															
Buildings with space heating	200	791	630	457	124	4,971	20,472	18,630	17,456	5,581	40.2	38.7	33.8	26.2	22.3
Buildings with cooling	185	751	620	452	133	4,615	19,099	18,357	17,317	5,813	40.2	39.3	33.8	26.1	22.9
Buildings with water heating	200	779	625	449	132	4,952	20,064	18,490	16,983	5,717	40.3	38.8	33.8	26.5	23.2
Buildings with cooking	119	515	410	273	113	2,548	11,198	10,143	8,305	3,973	46.8	46.0	40.4	32.9	28.4
Buildings with manufacturing	25	77	37	20	8	631	1,879	1,159	955	637	40.0	41.1	31.5	20.7	13.3
Buildings with electricity generation	61	304	288	148	61	1,278	7,081	8,191	5,205	2,223	48.0	42.9	35.1	28.5	27.5
Buildings with lighting	200	790	629	458	133	4,964	20,420	18,727	17,562	5,833	40.2	38.7	33.6	26.1	22.9
<b>Percentage of floorspace heated</b>															
Not heated	N	Q	Q	Q	9	N	Q	Q	Q	251	N	Q	Q	Q	35.8
1% to 50%	Q	32	20	35	17	Q	1,202	1,299	2,526	909	Q	26.9	15.3	13.7	18.7
51% to 99%	33	177	138	131	38	842	4,361	4,295	5,328	1,638	38.6	40.7	32.2	24.7	23.0
100%	161	582	471	291	70	3,797	14,909	13,036	9,602	3,035	42.5	39.0	36.2	30.3	23.0
<b>Percentage of floorspace cooled</b>															
Not cooled	15	41	10	9	Q	356	1,377	400	368	Q	40.9	29.5	25.4	24.4	Q
1% to 50%	47	143	103	43	7	1,280	4,301	4,025	3,204	548	36.4	33.3	25.7	13.6	12.7
51% to 99%	49	250	212	154	43	1,136	6,390	6,273	5,420	1,982	43.3	39.1	33.7	28.5	21.9
100%	90	358	305	255	83	2,199	8,408	8,059	8,693	3,283	40.8	42.6	37.9	29.3	25.2
<b>Heating equipment (more than one may apply)</b>															
Packaged heating units	110	454	355	303	83	2,500	10,945	10,142	11,454	3,772	43.9	41.4	35.0	26.4	22.0
Furnaces	53	222	104	96	27	1,439	5,698	2,659	3,117	931	36.5	38.9	39.3	30.7	29.5
Individual space heaters	52	195	170	120	26	1,517	5,119	4,630	4,072	992	34.5	38.1	36.8	29.6	26.4
Boilers	103	379	325	149	57	2,131	8,763	8,143	4,716	1,925	48.2	43.3	39.9	31.6	29.7
Heat pumps	20	100	132	89	20	515	2,846	3,347	3,506	818	38.8	35.2	39.4	25.4	23.9
District heat	Q	20	28	22	8	Q	1,085	1,620	991	281	Q	18.4	17.6	22.0	28.0
Duct reheat	Q	60	50	30	20	Q	1,364	1,643	1,099	908	Q	43.7	30.6	27.7	21.8
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Cooling equipment (more than one may apply)</b>															
Packaged air-conditioning units	125	534	423	337	92	2,974	12,355	12,313	12,684	4,003	41.9	43.2	34.3	26.6	23.1
Residential-type central air conditioners	54	205	139	80	25	1,417	5,229	3,686	2,941	803	38.4	39.2	37.7	27.2	31.3
Individual air conditioners	34	143	121	69	21	752	3,080	3,296	2,596	659	45.4	46.3	36.6	26.4	31.9
Central chillers	47	152	188	108	42	1,133	4,018	5,084	3,325	1,331	41.6	37.7	36.9	32.5	31.5
Heat pumps	13	73	100	52	12	306	2,177	2,839	2,081	505	43.0	33.7	35.2	25.0	24.2
District chilled water	Q	13	24	16	9	Q	611	878	833	558	Q	21.0	27.0	19.5	15.6
Swamp coolers	Q	18	26	9	Q	Q	415	523	450	Q	Q	44.5	49.9	20.9	Q
Other	Q	Q	Q	Q	N	Q	Q	Q	Q	N	Q	Q	Q	Q	N



**Table C30. Natural gas consumption and conditional energy intensity by climate zone<sup>a</sup>, 2018**

	Total natural gas consumption (billion cubic feet)				Total floorspace of buildings using natural gas (million square feet)						Natural gas energy intensity (cubic feet/square foot)				
	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot
<b>All buildings</b>	200	791	630	461	133	4,971	20,476	18,756	17,686	5,833	40.2	38.6	33.6	26.1	22.9
<b>HVAC features (more than one may apply)</b>															
Economizer cycle	94	362	319	170	44	2,376	8,712	9,391	5,751	1,647	39.5	41.5	34.0	29.5	26.6
Variable air volume (VAV) system	72	251	268	119	48	1,667	6,761	8,068	4,244	2,290	43.2	37.1	33.2	28.0	21.0
Dedicated outside air system (DOAS)	23	71	116	54	13	585	1,634	2,802	1,580	684	38.7	43.3	41.4	34.1	19.7
Demand controlled ventilation (DCV)	27	77	110	53	16	533	2,242	2,906	2,093	736	51.6	34.2	37.8	25.1	21.3
Regular HVAC maintenance	171	685	578	407	122	4,272	16,898	17,119	15,377	5,225	40.1	40.5	33.8	26.5	23.4
Building automation system (BAS) controls heating or cooling	91	369	361	187	74	2,122	9,196	10,648	6,867	3,256	42.8	40.2	33.9	27.2	22.8
Internet-connected or smart thermostat	Q	38	31	30	11	Q	1,071	1,070	1,559	447	Q	35.4	28.7	19.3	24.5
Programmable thermostat	52	193	120	120	18	1,288	4,984	3,466	4,298	1,013	40.3	38.7	34.5	27.9	18.0
<b>Main equipment replaced since 2000 (more than one may apply)</b>															
Heating	82	322	226	152	43	2,032	8,449	6,288	6,188	1,935	40.4	38.2	35.9	24.6	22.1
Cooling	58	223	203	82	33	1,419	5,523	5,504	3,190	1,197	40.6	40.3	36.8	25.8	27.9
<b>Water-heating equipment</b>															
Centralized system	150	551	425	294	81	3,737	14,300	12,088	10,954	3,309	40.2	38.5	35.1	26.9	24.4
Distributed system	24	112	89	71	27	569	2,704	3,006	2,666	1,213	42.3	41.3	29.6	26.6	22.7
Combination of centralized and distributed systems	25	117	111	84	24	646	3,059	3,396	3,362	1,196	38.8	38.2	32.7	25.1	20.3
<b>Generation technologies (more than one may apply)</b>															
Reciprocating engine generators	57	259	258	123	52	1,120	6,058	7,083	4,296	1,906	51.2	42.8	36.4	28.6	27.5
Solar panels	Q	19	38	18	11	Q	610	1,440	665	417	Q	31.8	26.4	27.4	27.5
Other generation technology	Q	32	17	10	Q	Q	669	448	356	Q	Q	48.4	38.6	28.0	Q
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>															
Snack bar, concession stand, or coffee shop	38	125	111	56	31	809	2,797	2,510	1,928	1,139	47.2	44.7	44.2	29.1	27.3
Fast food or small restaurant	20	133	113	56	32	471	2,720	2,520	1,833	1,182	42.9	49.0	44.7	30.5	27.0
Cafeteria or large restaurant	32	143	181	73	34	839	3,810	4,326	2,294	1,230	38.4	37.6	41.9	31.9	28.0
Commercial kitchen or food preparation area	50	229	190	112	60	908	4,953	4,474	3,489	2,189	55.3	46.3	42.4	32.1	27.4
Small kitchen area	53	194	173	91	42	1,282	5,384	4,537	3,470	1,832	41.6	36.1	38.2	26.2	22.7

**Table C30. Natural gas consumption and conditional energy intensity by climate zone<sup>a</sup>, 2018**

	Total natural gas consumption (billion cubic feet)				Total floorspace of buildings using natural gas (million square feet)						Natural gas energy intensity (cubic feet/square foot)				
	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot
<b>All buildings</b>	200	791	630	461	133	4,971	20,476	18,756	17,686	5,833	40.2	38.6	33.6	26.1	22.9
<b>Annual consumption (hundred cubic feet)</b>															
1,000 or less	Q	12	9	19	4	Q	1,082	1,033	2,611	1,064	Q	11.4	8.4	7.4	3.8
1,001 to 5,000	28	108	64	70	19	1,152	3,949	2,631	3,905	1,041	24.4	27.2	24.2	17.9	18.5
5,001 to 10,000	29	119	61	68	17	750	3,446	2,242	2,938	778	38.7	34.7	27.0	23.2	21.5
10,001 to 25,000	35	162	120	115	25	941	4,241	3,903	3,749	1,101	37.7	38.3	30.6	30.7	22.6
25,001 to 50,000	43	140	105	52	15	886	3,099	3,161	1,772	580	48.5	45.1	33.1	29.3	25.0
50,001 to 100,000	32	94	99	54	18	584	1,944	2,352	1,384	571	54.3	48.4	42.1	39.2	32.1
Over 100,000	29	156	174	82	35	441	2,715	3,435	1,326	696	66.6	57.5	50.8	62.1	50.9

Data source: U.S. Energy Information Administration, Forms EIA-871A and C 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.

Estimates in the *energy end uses* category represent total consumption in buildings that have the end use but not the consumption specifically for that end use.

HVAC = Heating, ventilation, and air conditioning.

<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.

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 C30. Natural gas consumption and conditional energy intensity by climate zone<sup>a</sup>, 2018**

	RSEs for total natural gas consumption				RSEs for total floorspace of buildings using natural gas					RSEs for natural gas energy intensity						
	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot	
<b>All buildings</b>	21.8	9.0	12.0	11.5	13.5	23.3	8.9	10.8	11.1	13.3	4.7	3.3	4.3	3.6	5.7	
<b>Building floorspace (square feet)</b>																
1,001 to 5,000	31.4	17.8	17.1	20.8	31.9	31.2	19.4	18.1	14.4	28.3	15.6	8.5	12.5	15.8	17.8	
5,001 to 10,000	44.7	17.7	21.2	24.3	34.4	31.2	19.5	22.2	19.5	29.6	23.8	14.5	13.2	12.7	38.5	
10,001 to 25,000	26.9	15.0	21.0	17.5	43.4	24.0	12.9	19.7	15.3	31.1	15.2	6.3	8.3	7.9	24.2	
25,001 to 50,000	27.8	13.8	16.4	15.6	22.7	36.6	13.3	14.7	14.6	21.8	19.8	6.1	6.7	7.0	17.3	
50,001 to 100,000	24.3	13.5	15.4	21.6	20.0	22.9	15.4	15.4	15.6	20.7	9.3	9.0	5.9	15.2	10.3	
100,001 to 200,000	28.9	13.4	13.8	20.9	19.1	28.1	11.2	13.0	18.5	17.5	9.4	6.4	7.4	10.5	15.8	
200,001 to 500,000	27.0	14.1	14.1	12.9	27.6	26.8	15.2	11.1	11.9	15.0	11.1	5.6	9.2	8.4	19.1	
Over 500,000	53.8	15.1	30.6	21.0	18.4	53.2	16.3	17.8	21.3	15.2	37.3	19.1	20.2	14.5	15.7	
<b>Principal building activity</b>																
Education	32.0	13.2	15.7	16.4	25.8	29.7	15.5	15.3	16.8	18.7	4.0	6.9	5.9	8.5	20.2	
Food sales	45.3	27.4	33.5	59.4	56.0	44.4	26.9	41.2	46.3	46.8	3.9	15.6	20.0	51.2	46.3	
Food service	36.8	21.0	25.8	23.3	32.5	37.7	20.5	28.4	21.3	28.0	11.6	13.7	16.2	12.9	12.6	
Health care	20.8	18.0	19.1	15.1	20.6	20.7	13.8	17.7	14.4	17.4	12.9	10.8	8.6	8.7	11.5	
Inpatient	24.4	20.4	20.3	15.5	21.1	24.1	18.3	21.2	14.4	19.4	10.9	12.6	7.4	7.9	10.7	
Outpatient	44.3	21.8	22.2	20.1	35.0	37.8	18.3	22.1	19.3	27.6	17.4	12.5	20.9	13.7	27.3	
Lodging	21.4	15.6	35.8	17.5	20.9	26.2	15.3	24.6	17.8	21.8	17.8	8.7	17.3	7.4	10.6	
Mercantile	34.8	16.9	20.5	17.2	18.8	27.9	13.9	16.9	15.8	17.1	20.0	7.7	10.5	6.1	11.0	
Retail (other than mall)	44.7	21.1	22.7	28.8	28.6	34.0	21.2	21.6	26.1	25.8	26.9	9.3	10.0	9.3	12.5	
Enclosed and strip malls	44.8	19.9	26.8	17.8	25.6	34.3	15.8	22.9	16.3	23.7	21.8	7.9	12.3	5.6	14.1	
Office	22.8	15.9	16.5	12.3	21.8	23.4	13.7	14.9	11.0	15.3	9.0	8.6	9.7	6.6	18.9	
Public assembly	32.2	14.7	21.2	18.9	28.0	31.9	15.0	18.3	14.7	22.0	14.1	9.5	9.2	10.6	21.1	
Public order and safety	65.9	29.7	44.8	40.8	63.0	59.4	26.0	37.2	34.2	60.3	24.5	21.7	22.4	13.1	11.8	
Religious worship	40.7	27.3	19.9	28.3	31.1	44.3	24.8	16.6	22.8	23.0	14.2	8.8	9.8	11.4	26.0	
Service	42.6	17.6	26.1	32.5	55.2	41.9	16.7	25.7	24.7	49.1	20.8	12.1	8.2	33.0	24.3	
Warehouse and storage	25.3	20.7	20.9	23.7	40.4	31.0	16.6	16.2	20.4	31.0	15.2	8.9	8.2	11.0	30.6	
Other	49.4	31.6	37.6	42.0	109.3	50.2	35.9	30.0	39.5	63.3	3.8	16.0	23.5	15.1	89.6	
Vacant	0.0	44.9	32.0	43.1	100.4	0.0	45.5	27.2	32.3	75.0	0.0	13.4	17.7	25.9	72.1	
<b>Year constructed</b>																
Before 1920	45.8	22.7	24.8	21.4	70.7	40.0	19.8	23.3	30.5	88.3	32.3	12.1	12.6	22.2	105.2	
1920 to 1945	51.2	17.4	18.7	20.8	27.4	52.1	19.7	20.3	23.7	38.4	14.0	18.9	14.6	9.0	34.0	
1946 to 1959	44.7	18.6	20.3	22.4	44.8	44.2	22.3	20.0	18.0	36.9	6.8	14.2	6.0	10.5	27.5	
1960 to 1969	24.7	15.1	13.5	14.8	36.5	26.7	15.5	12.4	13.5	27.6	13.2	6.9	8.1	8.9	27.3	
1970 to 1979	22.4	14.3	16.2	15.1	28.0	25.4	13.7	14.2	15.2	22.5	20.1	7.0	8.7	7.6	15.9	
1980 to 1989	29.7	14.9	28.6	15.8	22.9	23.9	15.0	18.8	12.7	19.0	11.0	9.1	13.4	11.8	13.0	
1990 to 1999	28.7	15.8	17.9	17.0	27.1	25.9	15.8	17.5	16.8	23.2	5.8	7.6	9.5	7.9	15.7	
2000 to 2009	31.0	13.3	17.1	19.0	21.1	30.8	12.0	14.5	16.6	20.3	4.9	6.7	8.0	11.8	11.8	
2010 to 2018	25.8	16.1	19.0	19.6	24.7	33.1	16.4	19.9	19.6	21.6	17.1	7.0	15.2	12.1	17.5	



Relative standard errors (RSEs) for Table C30. Natural gas consumption and conditional energy intensity by climate zone<sup>a</sup>, 2018

	RSEs for total natural gas consumption				RSEs for total floorspace of buildings using natural gas						RSEs for natural gas energy intensity				
	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot
<b>All buildings</b>	21.8	9.0	12.0	11.5	13.5	23.3	8.9	10.8	11.1	13.3	4.7	3.3	4.3	3.6	5.7
<b>Census region and division</b>															
Northeast	50.2	16.3	10.8	0.0	0.0	50.8	17.1	12.2	0.0	0.0	2.8	6.8	6.7	0.0	0.0
New England	93.5	19.5	70.6	0.0	0.0	96.1	18.6	70.5	0.0	0.0	17.4	5.9	1.1	0.0	0.0
Middle Atlantic	58.4	23.1	10.8	0.0	0.0	59.4	24.1	12.4	0.0	0.0	2.6	9.7	7.0	0.0	0.0
Midwest	25.9	12.6	26.1	0.0	0.0	27.2	12.6	24.2	0.0	0.0	5.3	4.3	4.3	0.0	0.0
East North Central	47.5	14.4	39.0	0.0	0.0	46.2	14.2	37.5	0.0	0.0	6.3	4.2	5.9	0.0	0.0
West North Central	22.8	18.2	23.3	0.0	0.0	26.1	26.1	21.4	0.0	0.0	9.3	12.1	5.1	0.0	0.0
South	0.0	0.0	24.3	14.7	14.0	0.0	0.0	22.4	15.4	14.0	0.0	0.0	6.0	4.4	6.8
South Atlantic	0.0	0.0	14.0	13.1	21.1	0.0	0.0	14.8	13.3	30.9	0.0	0.0	7.0	2.4	17.3
East South Central	0.0	0.0	56.7	29.6	71.2	0.0	0.0	60.5	33.2	70.7	0.0	0.0	11.7	14.6	2.9
West South Central	0.0	0.0	86.8	41.5	18.0	0.0	0.0	83.7	40.5	15.6	0.0	0.0	14.4	4.9	7.8
West	48.2	18.0	52.2	16.6	31.7	52.3	17.0	39.7	12.0	31.9	9.2	5.8	23.4	7.9	8.6
Mountain	58.4	17.6	83.1	69.2	21.7	64.0	16.5	73.1	68.7	17.1	14.5	7.2	34.6	1.9	11.2
Pacific	71.1	50.9	59.5	16.9	102.0	73.2	49.6	45.5	11.0	105.0	8.0	8.9	25.9	8.8	46.3
<b>Number of floors</b>															
1	22.5	11.3	15.7	14.8	18.5	23.5	11.7	15.5	13.8	17.1	8.2	5.4	5.6	6.5	6.5
2	26.2	14.7	13.9	14.4	17.0	26.8	12.1	12.8	13.2	14.7	7.9	6.4	6.8	7.7	9.9
3	33.1	13.7	16.8	15.2	42.7	34.2	12.8	18.2	14.3	33.0	11.5	9.5	8.2	10.6	36.6
4 to 9	25.4	14.1	14.6	15.1	15.9	25.6	13.0	14.0	18.7	16.7	11.0	5.5	9.7	12.3	13.8
10 or more	44.4	16.6	42.0	28.0	47.4	32.9	25.0	24.5	21.3	24.6	26.6	25.8	28.6	11.9	30.1
<b>Number of workers (main shift)</b>															
Fewer than 5	33.3	14.2	19.6	20.3	29.7	37.0	15.7	16.9	18.7	29.3	14.5	8.7	9.3	10.6	27.7
5 to 9	32.2	17.5	19.2	23.5	35.6	34.7	17.5	18.2	18.6	27.4	7.7	9.5	10.6	10.7	24.3
10 to 19	28.3	17.6	16.0	17.1	33.0	29.7	17.5	22.2	15.1	36.9	12.5	6.1	13.6	7.0	28.8
20 to 49	33.8	13.4	18.6	15.5	22.1	26.1	14.6	17.3	15.1	18.2	13.1	7.5	7.2	8.8	18.4
50 to 99	24.0	14.7	15.0	19.2	20.5	24.5	14.6	14.2	14.5	21.2	4.1	5.5	10.3	14.6	17.4
100 to 249	28.2	15.1	12.4	16.9	20.7	29.6	13.4	12.6	13.9	18.5	10.9	7.3	6.1	6.6	9.7
250 or more	30.9	12.3	23.3	14.3	23.8	24.0	13.9	15.2	13.7	15.0	17.0	13.8	15.0	9.5	14.6
<b>Weekly operating hours</b>															
Fewer than 40	41.4	18.2	20.0	21.7	34.8	38.0	16.5	19.4	21.8	30.4	16.2	7.3	6.8	8.5	29.2
40 to 48	27.2	14.2	17.1	17.9	21.9	23.8	13.0	15.4	15.8	17.9	10.0	8.0	8.7	7.4	17.2
49 to 60	32.8	16.5	13.9	14.0	19.6	30.9	14.1	12.9	12.7	14.6	7.1	7.3	5.6	5.7	17.4
61 to 84	27.3	13.3	15.1	17.8	21.5	25.4	11.7	13.2	13.2	17.3	15.1	4.8	8.5	10.2	16.4
85 to 167	30.4	15.4	14.9	20.1	32.3	31.2	13.0	14.5	13.0	26.1	20.5	9.0	12.3	16.2	18.9
Open continuously	18.3	11.6	18.7	12.4	18.6	21.2	11.0	14.7	14.5	18.4	9.7	5.9	7.9	6.4	12.2
<b>Ownership and occupancy</b>															
Nongovernment owned	22.1	9.4	12.3	11.8	14.6	23.7	9.3	10.5	12.0	14.3	6.6	3.8	5.3	4.6	7.5
Owner occupied	24.3	10.2	15.6	11.9	15.6	27.3	9.4	12.5	13.1	14.5	8.8	4.6	7.8	6.8	11.8
Leased to tenant or tenants	23.0	12.7	12.9	14.9	22.5	22.4	11.5	11.5	12.7	18.6	6.4	6.0	5.4	6.8	10.7
Unoccupied	0.0	70.9	47.4	70.7	50.2	0.0	75.4	43.0	61.7	50.2	0.0	17.5	30.1	16.5	0.0
Government owned	24.6	10.3	15.4	20.0	17.2	25.3	11.7	14.7	17.8	15.5	7.8	4.9	5.3	6.7	13.3
Federal	68.0	25.0	40.3	41.8	48.3	52.4	25.4	38.8	35.0	39.9	27.5	12.0	33.6	23.3	31.0
State	36.8	16.6	26.7	28.3	33.6	29.5	16.6	23.5	26.6	28.9	22.9	7.3	11.1	10.5	19.3
Local	29.2	12.4	17.8	22.1	20.3	28.6	14.2	17.9	18.7	17.0	6.5	6.3	5.8	9.4	17.7

Relative standard errors (RSEs) for Table C30. Natural gas consumption and conditional energy intensity by climate zone<sup>a</sup>, 2018

	RSEs for total natural gas consumption				RSEs for total floorspace of buildings using natural gas					RSEs for natural gas energy intensity						
	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot	
<b>All buildings</b>	21.8	9.0	12.0	11.5	13.5	23.3	8.9	10.8	11.1	13.3	4.7	3.3	4.3	3.6	5.7	
<b>Party responsible for operation of energy systems</b>																
Building owner	22.9	9.2	13.0	11.9	14.1	24.7	9.4	11.0	11.8	13.7	5.9	3.4	5.0	4.4	7.7	
Business owner or tenant	27.8	19.5	18.9	16.3	29.5	22.5	18.8	16.5	15.5	26.0	14.1	7.6	8.0	8.8	18.8	
Property management	50.2	28.6	28.6	37.8	42.8	54.1	32.3	26.4	25.3	33.9	17.8	24.7	13.8	21.8	40.6	
Other	47.9	27.1	33.4	34.2	34.9	35.7	20.3	33.9	30.2	34.7	40.0	19.9	18.1	16.5	24.1	
<b>Provider of direct input on energy-related equipment purchases</b>																
Building owner	22.6	9.3	13.3	12.2	13.1	24.7	9.2	11.7	11.9	13.6	5.7	3.4	4.7	4.2	6.9	
Business owner or tenant	37.0	18.9	20.5	18.5	33.5	27.0	17.5	18.4	17.3	30.9	19.1	8.2	11.6	13.6	16.5	
Property management	64.8	47.8	30.4	53.5	61.5	72.9	42.2	30.9	32.7	45.9	7.6	20.5	15.2	26.0	57.8	
Other	25.6	22.4	20.3	23.1	37.3	26.1	22.5	16.2	15.1	29.6	15.7	17.5	11.2	13.5	25.7	
<b>Number of establishments</b>																
1	21.3	9.9	11.7	12.9	17.6	23.5	9.9	11.9	12.2	15.3	5.7	4.8	4.3	5.1	7.6	
2 to 5	30.0	12.9	24.7	16.5	23.3	29.0	10.7	17.9	15.9	22.8	7.7	7.7	11.8	7.5	16.5	
6 to 10	30.8	21.8	16.6	24.4	36.2	24.1	19.9	16.6	23.8	24.2	19.8	10.1	11.0	12.0	27.9	
11 to 20	40.7	24.9	30.0	19.5	40.8	47.9	20.4	19.0	16.0	35.5	33.7	9.1	19.4	7.0	21.0	
More than 20	51.6	40.0	17.4	27.7	26.7	46.4	22.3	19.1	20.9	19.7	32.2	26.6	22.8	20.1	15.8	
Currently unoccupied	0.0	67.9	36.9	57.3	50.2	0.0	69.6	30.3	45.9	50.2	0.0	11.2	22.3	26.2	0.0	
<b>Predominant exterior wall material</b>																
Brick, stone, or stucco	20.4	11.2	13.1	12.8	15.4	21.5	11.3	12.0	12.6	16.5	6.1	4.4	5.5	4.2	9.5	
Concrete (block or poured)	26.2	11.4	16.1	16.5	25.7	25.2	11.4	14.3	15.0	17.8	10.4	8.0	9.0	7.0	21.5	
Concrete panels	26.9	24.8	23.2	26.5	27.8	25.4	23.1	19.8	14.2	31.2	24.5	7.3	18.0	24.0	23.7	
Siding or shingles	32.9	19.2	30.3	23.1	59.5	36.2	24.0	29.9	19.8	55.1	23.5	14.7	18.2	10.2	12.6	
Metal panels	47.0	15.5	26.4	25.3	42.2	43.1	14.4	22.0	24.4	27.1	7.4	6.4	15.2	14.8	36.2	
Window glass	43.1	31.4	28.1	35.4	41.6	33.7	22.9	27.5	29.7	34.3	25.3	21.8	10.1	22.0	18.4	
Other	51.3	35.8	32.2	30.3	65.4	49.9	35.8	27.0	24.1	43.7	26.8	10.7	26.3	19.7	32.2	
<b>Predominant roof material</b>																
Metal surfacing	34.2	14.0	24.1	17.9	24.0	37.6	14.6	20.9	16.4	18.6	15.9	6.4	9.5	9.4	16.7	
Synthetic or rubber	19.1	9.7	12.1	15.3	17.6	18.1	8.9	10.7	13.4	16.1	5.2	4.8	5.9	9.2	9.8	
Built-up	28.8	15.8	19.8	12.1	34.0	28.2	14.7	13.1	11.6	20.6	7.0	7.5	12.2	7.3	23.4	
Slate or tile shingles	67.9	31.9	21.1	28.1	31.0	59.5	27.7	16.8	21.3	28.0	34.1	11.7	12.3	12.5	22.9	
Wooden materials (including shingles)	48.5	39.5	45.0	28.2	35.9	39.9	46.6	50.3	39.8	40.3	24.9	22.5	13.7	30.3	41.9	
Asphalt, fiberglass, or other shingles	30.8	13.9	16.6	16.9	25.3	30.8	14.5	17.3	16.2	23.7	10.6	6.5	9.7	7.7	13.9	
Concrete	58.1	44.2	20.0	52.9	38.1	68.8	38.4	18.1	47.8	30.7	52.5	33.0	14.2	12.5	23.3	
Other	80.2	25.3	22.8	24.2	30.5	54.2	16.3	19.5	23.5	29.3	58.8	26.1	17.5	16.1	16.3	
<b>Roof tilt</b>																
Flat	19.1	9.6	12.4	11.2	14.6	19.5	9.2	10.1	10.1	13.6	5.2	4.9	5.7	5.8	6.6	
Shallow pitch	32.6	11.4	16.9	15.7	20.9	34.0	11.7	16.6	16.0	17.6	17.3	4.5	7.4	6.1	12.5	
Steeper pitch	33.6	12.7	19.8	16.6	40.3	35.0	13.0	20.4	15.6	29.2	6.3	5.3	9.0	6.7	30.5	
<b>Cool roof characteristics (more than one may apply)</b>																
White or reflective coating or paint	28.1	12.0	17.9	12.2	13.8	25.1	11.0	13.8	10.8	14.4	6.2	4.9	7.8	7.3	5.6	
White or reflective tiles or shingles	66.4	27.0	27.1	18.5	38.4	46.8	23.8	23.1	19.1	34.4	30.3	16.9	15.2	14.2	17.7	
Aluminum coating	46.9	21.4	32.6	25.4	37.7	52.6	23.1	22.1	24.0	30.1	16.8	14.7	18.6	17.7	26.4	
Ballasted roof system	31.9	17.4	34.9	20.6	62.9	31.2	16.4	19.9	20.5	24.1	4.5	7.3	20.8	12.7	53.9	
Other cool roof property	46.1	36.9	46.2	40.4	52.6	52.0	31.1	45.3	36.4	48.8	17.6	14.9	25.7	17.0	36.7	

Relative standard errors (RSEs) for Table C30. Natural gas consumption and conditional energy intensity by climate zone<sup>a</sup>, 2018

	RSEs for total natural gas consumption				RSEs for total floorspace of buildings using natural gas						RSEs for natural gas energy intensity				
	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot
<b>All buildings</b>	21.8	9.0	12.0	11.5	13.5	23.3	8.9	10.8	11.1	13.3	4.7	3.3	4.3	3.6	5.7
<b>Renovations since 2000 (more than one may apply)</b>															
Any type of renovation	23.9	9.3	12.9	14.1	16.1	24.7	9.3	11.3	14.2	15.6	4.6	4.4	5.0	6.8	9.1
Addition or annex	30.0	13.6	16.1	24.6	19.8	30.6	11.7	15.9	17.8	17.1	6.8	8.2	8.1	22.9	15.5
Reduction in floorspace	70.7	32.2	31.3	31.5	46.4	70.7	29.8	24.0	32.0	68.1	0.0	22.1	20.2	18.6	52.4
Roof replacement	23.9	11.0	16.7	14.8	20.2	25.1	10.0	13.0	16.2	26.1	8.1	5.8	8.0	6.7	16.8
Interior wall reconfiguration	27.2	12.9	19.4	16.5	21.8	26.6	11.8	13.7	13.2	14.5	5.7	6.7	9.8	7.8	15.1
Window replacement	33.2	12.5	21.3	24.0	32.0	31.2	11.9	14.4	19.7	32.5	9.3	10.4	11.8	9.3	22.0
HVAC equipment upgrade	24.7	10.4	14.9	14.0	20.2	23.5	11.3	12.1	14.7	19.0	7.2	6.0	7.0	5.2	14.1
Lighting upgrade	24.8	10.7	15.3	14.6	18.6	27.4	10.1	11.6	13.2	15.9	6.8	4.7	7.0	4.6	11.5
Electrical upgrade	34.2	12.9	17.3	18.2	20.2	31.2	12.9	12.5	20.9	16.8	9.5	8.0	10.0	9.3	16.7
Plumbing system upgrade	28.2	12.2	18.7	18.1	30.2	28.0	13.2	14.1	16.4	19.8	12.1	10.3	9.3	8.3	19.7
Insulation upgrade	30.7	16.7	27.0	21.2	29.5	32.8	16.6	18.9	22.6	29.0	23.8	13.6	16.0	15.3	23.5
Fire, safety, or security upgrade	29.5	11.6	15.9	16.0	23.7	28.5	11.4	13.0	15.4	18.4	6.2	7.8	7.8	7.3	14.6
Structural upgrade	45.4	17.9	37.5	20.5	48.8	40.0	19.6	26.1	25.3	42.9	10.6	22.9	18.7	18.9	28.0
Other	104.9	42.0	33.8	34.7	27.7	95.2	43.1	29.1	28.7	28.9	65.3	6.2	16.0	28.4	18.1
No renovations	22.8	11.5	12.5	11.5	16.6	23.0	10.8	12.1	10.3	17.9	6.3	4.3	6.3	4.7	9.6
Buildings constructed 2013 or later	26.0	18.0	22.8	21.0	28.3	34.4	17.5	22.0	21.6	24.6	22.3	8.5	17.2	12.2	12.4
<b>Energy sources (more than one may apply)</b>															
Electricity	21.8	9.0	12.0	11.5	13.5	23.3	8.9	10.8	11.1	13.3	4.7	3.3	4.3	3.6	5.7
Natural gas	21.8	9.0	12.0	11.5	13.5	23.3	8.9	10.8	11.1	13.3	4.7	3.3	4.3	3.6	5.7
Fuel oil	18.2	13.5	17.9	12.8	16.7	19.3	13.2	13.7	12.0	18.3	11.1	8.5	9.3	7.1	10.3
District heat	41.5	21.5	21.5	29.7	39.7	42.7	25.8	19.3	31.0	31.4	31.9	30.5	18.0	19.4	19.7
District chilled water	52.9	27.9	40.8	32.4	29.0	63.2	22.8	30.0	31.9	19.4	18.9	20.0	21.4	20.1	22.0
Propane	37.5	23.1	38.0	24.0	32.7	45.8	19.0	25.0	23.3	21.9	18.0	11.7	24.0	16.1	20.4
Solar	48.3	26.5	29.7	21.7	35.2	47.3	22.2	23.4	11.3	32.8	6.3	13.6	15.2	17.5	14.5
Wood, coal, and other	40.1	35.3	50.0	45.7	49.3	55.9	31.3	47.0	37.4	48.5	57.4	23.5	55.1	30.8	21.7
<b>Space-heating energy sources</b>															
Natural gas	21.6	8.9	12.3	11.9	14.2	23.4	9.0	11.1	11.2	13.1	5.2	3.1	4.3	4.2	7.0
Natural gas main	21.8	9.1	12.6	12.2	15.1	23.6	9.0	11.3	12.2	14.3	5.4	2.7	4.5	4.9	8.1
Natural gas secondary	36.1	18.9	18.1	15.1	23.4	30.2	17.5	18.0	11.5	18.4	25.9	15.3	9.0	8.0	17.3
Other excluding natural gas	33.9	18.4	17.0	15.9	19.7	35.9	12.8	14.6	15.2	20.1	18.4	15.7	14.6	12.5	10.4
Buildings without heating	0.0	70.5	78.7	52.8	34.7	0.0	70.5	85.9	32.2	33.0	0.0	0.0	73.9	38.3	33.5
<b>Primary space-heating energy source</b>															
Electricity	31.2	17.4	14.8	15.0	17.9	23.8	16.4	14.2	13.0	16.9	18.4	10.9	12.2	7.2	10.5
Natural gas	21.8	9.1	12.6	12.2	15.1	23.6	9.0	11.3	12.2	14.3	5.4	2.7	4.5	4.9	8.1
Fuel oil	55.0	88.5	50.3	105.8	99.7	55.0	83.7	34.0	102.8	99.7	0.0	18.6	45.6	1052.1	0.0
District heat	58.5	21.0	23.0	29.1	32.9	49.9	27.6	21.5	33.6	28.3	47.3	35.1	18.1	22.6	22.1
Propane	0.0	0.0	0.0	48.1	0.0	0.0	0.0	0.0	48.1	0.0	0.0	0.0	0.0	0.0	0.0
Other sources <sup>b</sup>	50.0	47.6	0.0	0.0	0.0	50.0	51.1	0.0	0.0	0.0	0.0	15.2	0.0	0.0	0.0
<b>Cooling energy sources</b>															
Natural gas	69.6	44.4	36.8	53.1	50.3	69.6	52.1	30.4	53.2	50.3	0.0	14.2	21.2	12.8	0.0
Other excluding natural gas	21.1	8.8	12.2	11.6	13.5	22.8	8.9	10.8	11.2	13.3	5.1	3.4	4.2	3.7	5.8
Buildings without cooling	43.2	20.5	34.2	30.4	81.8	47.3	19.3	40.9	23.7	57.6	14.2	7.5	24.9	20.7	54.7
<b>Water-heating energy sources</b>															
Natural gas	22.1	9.4	13.1	11.3	14.3	23.0	9.2	12.1	10.7	14.4	4.9	3.1	5.1	2.9	5.4
Other excluding natural gas	26.7	12.3	13.5	17.9	23.1	26.8	11.7	11.6	15.1	16.9	11.5	7.3	6.4	11.2	16.7
Buildings without water heating	62.2	33.6	29.5	32.5	51.2	67.1	33.4	23.8	25.8	32.0	21.5	15.1	15.1	15.0	48.6

Relative standard errors (RSEs) for Table C30. Natural gas consumption and conditional energy intensity by climate zone<sup>a</sup>, 2018

	RSEs for total natural gas consumption				RSEs for total floorspace of buildings using natural gas						RSEs for natural gas energy intensity				
	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot
<b>All buildings</b>	21.8	9.0	12.0	11.5	13.5	23.3	8.9	10.8	11.1	13.3	4.7	3.3	4.3	3.6	5.7
<b>Cooking energy sources</b>															
Natural gas	20.7	9.3	13.2	12.3	14.5	21.6	8.7	10.7	11.7	11.7	5.5	3.9	5.8	3.7	6.5
Other excluding natural gas	32.2	14.4	18.6	20.0	23.3	29.8	13.6	18.5	16.7	19.6	5.4	10.4	8.5	9.5	14.1
Buildings without cooking	22.8	11.6	13.5	13.3	18.6	25.8	11.2	12.4	11.6	20.4	8.4	3.1	5.3	7.3	14.9
<b>Energy end uses (more than one may apply)</b>															
Buildings with space heating	21.8	9.0	12.0	11.5	13.5	23.3	8.9	10.9	11.2	13.0	4.7	3.3	4.4	3.6	5.9
Buildings with cooling	21.1	8.8	12.1	11.6	13.5	23.0	8.9	10.7	11.2	13.3	5.1	3.4	4.2	3.7	5.8
Buildings with water heating	21.8	9.0	12.1	11.4	13.6	23.2	8.9	10.9	11.0	13.5	4.6	3.3	4.3	3.7	5.6
Buildings with cooking	22.0	9.3	12.8	12.3	14.5	22.7	9.2	10.8	11.8	12.0	3.8	4.8	5.2	3.2	6.5
Buildings with manufacturing	39.6	14.2	21.8	25.5	27.3	35.1	14.8	21.5	19.8	26.1	21.2	8.3	14.3	16.9	23.7
Buildings with electricity generation	21.1	10.9	14.5	11.6	13.1	24.2	10.5	11.8	11.2	15.6	7.2	5.9	7.2	4.9	9.6
Buildings with lighting	21.9	9.0	12.0	11.4	13.5	23.3	9.0	10.8	10.9	13.3	4.7	3.3	4.3	3.6	5.7
<b>Percentage of floorspace heated</b>															
Not heated	0.0	70.5	78.7	52.8	34.7	0.0	70.5	85.9	32.2	33.0	0.0	0.0	73.9	38.3	33.5
1% to 50%	35.8	20.3	23.0	20.3	27.5	47.6	17.7	20.6	14.8	26.2	21.1	10.9	13.8	12.0	21.9
51% to 99%	32.5	13.3	12.0	13.3	18.0	36.7	10.8	11.9	12.8	19.1	10.4	7.3	5.1	6.1	10.2
100%	22.3	9.6	14.1	11.7	17.1	23.1	9.6	12.0	11.2	14.2	4.0	3.8	5.4	5.3	8.2
<b>Percentage of floorspace cooled</b>															
Not cooled	43.2	20.5	34.2	30.4	81.8	47.3	19.3	40.9	23.7	57.6	14.2	7.5	24.9	20.7	54.7
1% to 50%	24.9	12.7	17.3	17.8	30.4	27.9	12.0	14.5	15.6	32.3	10.9	6.6	8.3	8.4	30.0
51% to 99%	26.9	12.8	10.0	16.0	17.1	28.5	11.6	10.3	14.5	16.3	8.7	6.6	4.5	8.8	7.6
100%	19.9	9.6	16.9	10.5	16.8	22.5	9.1	14.0	10.7	15.2	9.1	5.1	6.9	3.6	8.7
<b>Heating equipment (more than one may apply)</b>															
Packaged heating units	20.4	9.7	13.8	13.1	15.7	20.6	8.8	12.0	12.7	14.5	8.7	4.7	6.5	5.6	7.0
Furnaces	31.3	10.7	17.4	14.8	24.8	30.7	11.7	17.2	14.0	23.7	8.9	5.5	7.1	6.3	10.3
Individual space heaters	23.8	12.6	18.2	17.3	17.5	26.9	10.8	12.6	14.0	17.0	10.0	5.5	9.5	12.1	11.5
Boilers	19.4	9.8	13.4	12.9	17.7	21.7	9.6	11.7	10.6	14.0	5.4	4.3	6.0	7.0	9.0
Heat pumps	31.5	14.9	20.2	15.4	26.8	26.7	14.6	14.6	11.1	20.3	11.6	12.4	10.8	8.0	12.9
District heat	41.5	21.1	21.1	29.8	32.9	42.7	27.3	19.4	31.4	28.3	31.9	34.0	17.5	19.7	22.1
Duct reheat	65.7	16.7	19.0	23.2	20.5	36.9	14.4	14.8	21.2	19.0	39.4	10.1	11.3	9.6	18.1
Other	59.2	35.2	48.3	45.5	70.9	62.3	37.8	45.4	42.5	70.7	32.0	17.1	6.1	15.0	5.1
<b>Cooling equipment (more than one may apply)</b>															
Packaged air-conditioning units	20.4	8.9	9.5	12.5	15.1	20.2	8.3	9.1	12.0	15.8	6.6	3.5	3.6	5.1	6.8
Residential-type central air conditioners	25.1	10.5	14.6	17.7	30.1	30.0	12.0	14.8	15.4	19.6	12.0	5.2	4.1	7.3	19.0
Individual air conditioners	29.2	13.3	12.9	17.8	26.8	30.5	11.4	12.9	16.2	29.8	4.8	6.8	6.2	7.0	9.0
Central chillers	22.9	13.1	12.2	11.9	18.9	24.7	14.0	11.9	11.9	15.0	7.9	9.2	6.8	6.6	10.5
Heat pumps	33.2	17.3	26.8	18.8	37.2	32.0	17.2	17.9	13.2	32.3	14.5	9.5	15.3	8.8	19.6
District chilled water	52.9	27.9	40.8	32.4	29.0	63.2	22.8	30.0	31.9	19.4	18.9	20.0	21.4	20.1	22.0
Swamp coolers	38.6	20.7	40.8	34.8	78.1	54.9	20.1	34.8	30.1	52.2	57.8	10.7	19.8	15.4	58.3
Other	99.9	67.7	50.8	100.2	0.0	99.9	70.1	50.8	74.4	0.0	0.0	1.4	0.0	98.1	0.0

Relative standard errors (RSEs) for Table C30. Natural gas consumption and conditional energy intensity by climate zone<sup>a</sup>, 2018

	RSEs for total natural gas consumption			RSEs for total floorspace of buildings using natural gas			RSEs for natural gas energy intensity								
	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot	Cool	Mixed mild	Warm	Hot or very hot	
<b>All buildings</b>	21.8	9.0	12.0	11.5	13.5	23.3	8.9	10.8	11.1	13.3	4.7	3.3	4.3	3.6	5.7
<b>HVAC features (more than one may apply)</b>															
Economizer cycle	19.6	9.6	14.1	13.3	15.0	21.4	9.4	12.2	11.1	14.3	5.5	4.5	6.5	8.2	10.4
Variable air volume (VAV) system	19.9	9.2	15.7	12.6	16.9	22.0	10.3	12.1	11.6	13.1	5.7	6.4	8.8	6.2	13.2
Dedicated outside air system (DOAS)	32.1	19.6	23.0	19.4	24.7	36.7	17.4	17.4	19.1	21.5	10.8	9.3	11.7	11.4	19.7
Demand controlled ventilation (DCV)	25.7	15.0	12.8	15.3	23.3	27.2	15.8	13.0	15.5	23.7	14.7	7.3	7.7	9.7	15.1
Regular HVAC maintenance	21.3	9.2	12.3	12.0	13.5	22.2	9.1	10.9	11.5	12.7	4.2	3.9	4.6	4.2	5.9
Building automation system (BAS) controls heating or cooling	17.9	9.4	14.1	9.9	15.0	19.3	8.3	11.9	9.2	12.2	5.5	3.9	6.4	4.7	9.4
Internet-connected or smart thermostat	50.0	28.6	16.8	22.0	30.2	47.1	26.2	17.3	23.6	23.3	10.7	28.5	10.2	15.3	16.9
Programmable thermostat	31.6	13.2	16.1	19.8	18.5	31.2	12.2	14.2	18.5	26.4	11.0	5.9	6.9	11.4	20.1
<b>Main equipment replaced since 2000 (more than one may apply)</b>															
Heating	23.6	11.1	11.7	15.1	23.9	24.6	10.7	11.1	13.3	20.9	7.3	5.5	5.3	7.7	12.8
Cooling	27.9	11.5	17.7	15.5	24.3	28.7	11.9	14.5	12.4	18.7	4.9	5.7	7.6	7.6	11.8
<b>Water-heating equipment</b>															
Centralized system	21.6	10.0	13.0	11.6	16.6	23.5	9.7	12.1	11.7	15.7	5.9	3.7	5.3	5.0	8.9
Distributed system	30.6	19.4	13.9	16.2	26.9	27.5	15.8	12.2	14.8	23.4	9.9	10.8	9.4	9.4	15.0
Combination of centralized and distributed systems	28.3	13.1	18.4	15.5	22.8	27.0	9.8	14.1	16.4	18.2	11.6	7.2	9.6	8.2	15.7
<b>Generation technologies (more than one may apply)</b>															
Reciprocating engine generators	20.1	12.3	15.3	12.6	13.6	22.3	10.6	12.5	12.7	17.0	7.3	7.0	7.9	5.7	10.7
Solar panels	49.2	26.6	28.8	22.7	35.2	48.1	22.4	23.2	11.6	32.8	6.4	13.7	14.8	18.2	14.5
Other generation technology	57.9	32.8	42.3	25.1	41.6	60.6	27.9	28.9	25.9	42.9	6.4	18.8	25.0	15.1	20.2
<b>Food preparation or serving areas in non-food service buildings (more than one may apply)</b>															
Snack bar, concession stand, or coffee shop	24.1	12.7	25.2	16.7	15.3	23.8	14.5	19.3	15.6	11.4	8.2	9.9	13.8	6.4	11.5
Fast food or small restaurant	23.6	13.9	22.7	18.9	17.0	25.6	11.0	15.4	14.8	12.5	13.8	7.4	12.6	9.0	11.2
Cafeteria or large restaurant	29.1	11.0	18.5	13.3	23.6	30.7	10.4	13.5	11.5	16.7	8.0	9.1	9.9	8.4	15.0
Commercial kitchen or food preparation area	22.5	9.8	16.0	12.9	14.2	22.4	12.1	12.1	11.7	14.2	4.6	7.3	7.3	4.0	8.6
Small kitchen area	28.3	12.3	17.7	16.2	21.5	27.5	11.3	13.1	15.7	14.7	5.9	7.5	8.9	6.8	16.5

Relative standard errors (RSEs) for Table C30. Natural gas consumption and conditional energy intensity by climate zone<sup>a</sup>, 2018

	RSEs for total natural gas consumption			RSEs for total floorspace of buildings using natural gas			RSEs for natural gas energy intensity								
	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot	Cold or very cold	Cool	Mixed mild	Warm	Hot or very hot
<b>All buildings</b>	21.8	9.0	12.0	11.5	13.5	23.3	8.9	10.8	11.1	13.3	4.7	3.3	4.3	3.6	5.7
<b>Annual consumption (hundred cubic feet)</b>															
1,000 or less	34.8	28.5	25.5	13.9	28.0	46.2	24.7	21.5	15.5	28.0	34.6	11.3	14.1	7.1	16.0
1,001 to 5,000	27.9	15.9	19.1	15.3	19.3	25.0	15.3	17.3	13.5	16.2	8.1	10.1	8.8	4.9	17.2
5,001 to 10,000	37.3	16.8	18.6	18.4	42.0	34.6	13.6	15.8	16.5	28.0	14.1	6.7	8.1	6.7	24.3
10,001 to 25,000	26.9	11.6	16.1	15.4	25.2	28.2	11.5	14.9	13.2	14.6	11.8	4.6	7.5	6.1	18.6
25,001 to 50,000	25.3	14.3	14.4	23.8	25.4	27.7	12.9	12.7	19.5	20.3	11.5	7.1	9.1	8.8	12.4
50,001 to 100,000	22.2	13.3	13.5	20.5	23.9	23.2	11.6	13.0	17.1	24.6	12.3	7.9	7.0	7.2	14.5
Over 100,000	24.0	12.5	18.1	18.3	22.9	23.6	12.5	16.3	17.8	21.8	9.3	6.2	9.3	17.5	10.5

Data source: U.S. Energy Information Administration, Forms EIA-871A and C 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.