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Food sales Q	
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Mercantile 136 99 112 1,598 1,125 1,174 84.9 87.7 Retail (other than mall) 45 35 22 671 563 380 67.5 62.9 Enclosed and strip malls 90 63 90 927 562 795 97.5 112.5 Office 109 78 124 1,905 1,358 2,069 57.3 57.1 Public assembly 66 48 51 893 570 915 74.4 84.7 Public order and safety Q Q 12 Q Q 162 Q Q Religious worship 21 Q 16 619 Q 530 33.4 Q Service 25 30 24 619 462 605 39.8 65.1 Warehouse and storage 56 31 60 2,080 1,049 2,958 27.1 29.2 Other Q	85.9
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1970 to 19798767931,3941,0731,59362.662.51980 to 19891101121111,9011,2901,98257.886.51990 to 1999102881061,9531,2872,03352.268.6	43.2
1980 to 19891101121111,9011,2901,98257.886.51990 to 1999102881061,9531,2872,03352.268.6	62.1
1990 to 1999 102 88 106 1,953 1,287 2,033 52.2 68.6	58.4
	55.8
2000 to 2009 179 131 144 2,326 1,597 1,901 77.0 81.8	51.9
	76.0
2010 to 2018 117 80 89 1,646 1,050 1,507 71.3 76.4	59.0
Climate zone ^a	
Cold or very cold N Q Q N Q Q N 86.1	61.3
Cool N 251 102 N 3,269 1,339 N 76.8	75.9
Mixed mild Q Q Q Q Q 2,346 79.0 84.6	60.4
Warm 262 Q 404 3,834 Q 6,958 68.3 46.7	58.1
Hot or very hot 366 111 Q 6,080 1,614 Q 60.2 68.6	45.3

	Sum of major consumption (trillion British		(Btul)	Total floors of buildings (million squ		S	nergy inter um of majo thousand B	or fuels Btu/square foot Mountain 74.3 70.5 67.9 74.1 74.4 111.3 80.4 65.7 78.5 102.1	ot)
	West		[[][]]	West			West South	iu, square roo	
	central	Mountain	Pacific		Mountain	Pacific		Mountain	Pacific
All buildings	760	570	713	11,580	7,680	11,952	65.6	74.3	59.7
Number of floors									
1	413	274	311	6,853	3,890	5,875	60.3	70.5	52.9
2	131	115	154	2,406	1,696	2,853	54.6	67.9	54.0
3	62	44	46	817	592	822	75.6	74.1	56.5
4 to 9	116	60	159	1,141	813	1,830	102.0	74.4	87.0
10 or more	37	Q	42	362	Q	573	101.9	111.3	74.2
Elevators and escalators									
(more than one may apply)									
Any elevators	272	231	306	3,388	2,877	4,007	80.3	80.4	76.3
1 elevator	79	70	74	1,253	1,069	1,315	63.0	65.7	56.6
2 to 5 elevators	115	79	130	1,477	1,006	1,521	78.0	78.5	85.3
6 or more elevators	78	Q	102	658	Q	1,172	118.1	102.1	86.7
Any escalators	33	Q	20	351	Q	286	95.1	Q	70.0
Number of workers (main shift)									
Fewer than 5	102	56	90	2,578	1,452	2,608	39.4	38.8	34.5
5 to 9	94	46	69	1,364	722	1,407	68.8	64.1	48.8
10 to 19	102	84	95	1,534	983	1,438	66.3	85.6	66.2
20 to 49	127	129	127	1,999	1,319	2,151	63.3	97.4	58.8
50 to 99	110	77	97	1,545	1,174	1,468	71.1	65.6	66.1
100 to 249	104	76	105	1,377	869	1,345	75.4	87.0	78.1
250 or more	122	102	131	1,182	1,161	1,534	103.4	88.2	85.1
Weekly operating hours									
Fewer than 40	45	17	60	1,200	506	1,546	37.8	34.1	38.5
40 to 48	120	77	107		1,487	2,704	44.2	52.1	39.5
49 to 60	134	128	110		2,221	2,472	52.3	57.7	44.5
61 to 84	150	92	139		955	1,957	76.6	96.0	70.9
85 to 167	84	97	98		914	1,228	100.9	106.3	80.1
Open continuously	225	159	200		1,597	2,045	98.1	99.3	97.7
Ownership and occupancy									
Nongovernment owned	578	439	553	8,828	5,883	9,428	65.5	74.6	58.6
Owner occupied	378	237	292		3,277	4,689	64.6	74.0	62.3
Leased to tenant or tenants	220	201	292		2,528	4,607	68.4	72.5	56.5
Unoccupied	Q	Q	200 Q		2,328 Q	4,007 Q	08.4 Q	79.5 Q	Q
Government owned	181	132	160		1,797	2,524	65.8	73.2	63.5
Federal	Q	Q	100 Q		1,797 Q	2,324	05.8 Q	, 73.2 Q	67.6
State	76	57	59		652	773	75.1	87.0	76.2
Local	90	71	84		1,065	1,494	57.8	66.7	56.3
Party responsible for operation									
of energy systems									
Building owner	612	459	561	9,553	6,350	8,940	64.1	72.3	62.7
Business owner or tenant	117	79	113	1,604	966	2,326	73.2	81.9	48.5
Property management	Q	Q	25	Q	Q	358	Q	Q	70.7

	Sum of major consumption (trillion British	fuels n thermal units	(Btul)	Total floors of buildings (million squ	-	S	nergy inter um of majo thousand B	-	ot)
	West South central	Mountain	Pacific	West South	Mountain	Pacific	West South	Mountain	Pacific
All buildings	760	570	713	11,580	7,680	11,952	65.6	74.3	59.7
Provider of direct input on energy-									
related equipment purchases Building owner	661	484	568	10,167	6,611	9,356	65.0	73.2	60.7
Business owner or tenant	64	55	86	811	634	1,285	78.5	86.5	66.9
	04 Q								
Property management		Q 22	Q	Q 472	Q 245	Q	Q	Q	Q
Other	27	23	44	473	345	1,125	58.0	66.4	38.8
Number of establishments									
1	499	344	435	8,015	4,893	7,842	62.3	70.4	55.5
2 to 5	147	139	143	2,133	1,596	2,224	68.7	87.2	64.4
6 to 10	37	40	64	454	463	686	82.4	86.1	93.1
11 to 20	31	25	40	394	336	530	77.7	75.4	75.5
More than 20	45	Q	31	507	Q	537	89.2	Q	56.9
Currently unoccupied	Q	Q	Q	Q	Q	Q	Q	Q	Q
Predominant exterior wall material									
	409	290	326	5,933	3,674	4,430	69.0	78.9	73.5
Brick, stone, or stucco									
Concrete (block or poured)	174	152	161	2,329	1,918	2,843	74.6	79.5	56.7
Concrete panels	44	31	82	812	467	1,855	53.6	66.9	44.2
Siding or shingles	Q 01	23	46	Q	312	1,044	Q	74.5	44.1
Metal panels	91	25	43	1,969	700	1,075	46.3	36.3	40.0
Window glass	18	26	25	194	311	351	92.9	85.2	70.9
Other	Q	21	30	Q	298	356	Q	72.1	85.1
Predominant roof material									
Metal surfacing	182	69	89	3,660	1,213	2,417	49.7	56.6	36.9
Synthetic or rubber	203	237	204	2,579	2,827	3,203	78.7	84.0	63.6
Built-up	179	134	179	2,350	1,571	2,582	76.3	85.0	69.3
Slate or tile shingles	29	Q	60	415	Q	858	68.9	Q	69.4
Wooden materials (including									
shingles)	Q	23	17	Q	423	390	Q	54.4	43.7
Asphalt, fiberglass, or									
other shingles	96	64	103	1,532	1,016	1,575	62.9	63.4	65.6
Concrete	20	Q	35	232	Q	399	86.5	Q	87.3
Other	42	Q	26	708	Q	528	58.7	Q	50.2
Roof tilt									
Flat	457	397	453	6,245	5,021	6,776	73.1	79.1	66.9
Shallow pitch	206	139	165	3,642	2,065	3,515	56.7	67.2	47.1
Steeper pitch	97	34	95	1,693	594	1,661	57.1	57.8	57.0
				,		,			
Cool roof characteristics (more than one may apply)	!								
White or reflective coating or paint	295	297	301	4,276	3,709	5,226	69.0	80.1	57.6
White or reflective tiles or shingles	36	Q	21	4,270	2,709 Q	332	86.4	Q	64.3
Aluminum coating	68	25	34	1,055	348	630	64.2	71.9	54.3
Ballasted roof system	39	Q	20	391	815	270	100.3	95.4	72.6
Other cool roof property	Q	Q Q	20 Q	291 Q	Q	270 Q	100.3 Q	95.4 Q	72.0 Q

	Sum of major consumption (trillion British		[Btu])	Total floors of buildings (million squ	-	S	nergy inter um of majo thousand B	-	ot)
	West South central	Mountain	Pacific	West South central	Mountain	Pacific	West South central	Mountain	Pacific
All buildings	760	570	713	11,580	7,680	11,952	65.6	74.3	59.7
Renovations since 2000 (more than one may apply)									
Any type of renovation	369	291	310	5,323	3,343	4,833	69.3	86.9	64.2
Addition or annex	89	64	68		783	751	78.5	81.6	90.5
Reduction in floorspace	Q	Q	Q		Q	Q	Q	Q	Q
Roof replacement	141	132	130		1,367	1,903	 61.0	96.3	68.3
Interior wall reconfiguration	191	154	121		1,701	1,961	79.7	90.7	61.7
Window replacement	57	91	66		970	953	62.7	93.6	68.8
HVAC equipment upgrade	218	174	189		2,113	2,681	69.3	82.4	70.5
Lighting upgrade	218	208	223		2,308	3,131	72.4	90.2	70.3
Electrical upgrade									
	118	100	106	·	1,132	1,347	76.3	88.1	78.6
Plumbing system upgrade	113	105	102		1,202	1,508	74.4	87.4	67.5
Insulation upgrade	53	Q	33		795	468	69.7	95.5	70.1
Fire, safety, or security upgrade	155	128	135		1,399	1,947	68.7	91.3	69.1
Structural upgrade	24	Q	45		Q	466	75.4	Q	96.9
Other	17	Q	Q		Q	Q	103.3	Q	Q
No renovations	314	215	341		3,461	5,942	61.1	62.0	57.5
Buildings constructed 2013 or later	77	65	61	1,115	876	1,177	68.7	74.4	52.1
Energy sources (more than one may apply)									
Electricity	760	570	713	11,349	7,411	11,781	66.9	77.0	60.5
Natural gas	577	487	575	7,488	5,948	8,138	77.0	81.8	70.7
Fuel oil	149	195	176	1,637	1,899	1,976	90.8	102.5	89.3
District heat	Q	53	87	Q	401	883	121.1	131.9	98.5
District chilled water	Q	33	68		267	696	107.2	121.8	98.2
Propane	43	Q	65		700	1,248	59.3	89.4	52.3
Solar	Q	24	89		396	1,028	Q	59.5	86.3
Wood, coal, and other	Q	Q	Q		Q	Q	Q	Q	Q
Space-heating energy sources (more than one may apply)	~~~~~				~ ~ ~		~	~	
Electricity	426	300	345	6,485	3,856	5,823	65.7	77.8	59.3
Natural gas	420	431	466		5,242	6,521	73.9	82.2	71.5
Fuel oil	430 Q	431 Q	400 Q		3,242 Q	0,521 Q	73.9 Q	02.2 Q	71.5 Q
District heat	Q	48	ر 86		373	874	126.9	127.7	98.8
	13								
Propane Other sources ^b	13 Q	Q Q	16 Q		Q Q	247 Q	48.5 Q	Q Q	64.7 Q
	Q	ų	ų	ų	ų	ų	ų	ų	ų
Primary space-heating energy source									
Electricity	281	125	189	4,726	2,200	3,855	59.5	57.0	49.1
Natural gas	373	382	377	5,010	4,523	5,404	74.5	84.5	69.8
Fuel oil	Q	Q	Q	Q	Q	Q	Q	Q	Q
District heat	Q	45	81	Q	362	797	129.0	124.8	101.1
Propane	Q	Q	Q		Q	Q	Q	Q	Q
Other sources ^b	Q	Q	Q		Q	Q	Q	Q	Q
	~		~	~			~		~

	Sum of major consumption (trillion Britick		c	Fotal floors of buildings	-	S	nergy inter um of majo	or fuels		
	(trillion British	n thermal units	5 [Btu]) (million squ	are teet)	(thousand Btu/square foot)				
	West			West			West			
	South			South			South			
	central	Mountain	Pacific	central	Mountain	Pacific	central	Mountain	Pacific	
All buildings	760	570	713	11,580	7,680	11,952	65.6	74.3	59.7	
Cooling energy sources										
(more than one may apply)										
Electricity	694	539	605	10,446	6,790	9,616	66.4	79.4	62.9	
Natural gas	N	Q	Q	N	Q	Q	N	Q	Q	
District chilled water	Q	33	68	721	267	696	107.2	121.8	98.2	
Water-heating energy sources										
(more than one may apply)										
Electricity	378	244	311	6,166	3,155	5,590	61.3	77.4	55.7	
Natural gas	446	401	471	5,461	4,486	6,237	81.7	89.3	75.4	
Fuel oil	Q	Q	Q	Q	Q	Q	Q	Q	Q	
District heat	Q	19	56	Q	169	531	115.6	112.1	105.8	
Propane	Q	Q	Q	Q	Q	Q	Q	Q	Q	
Cooking energy sources										
(more than one may apply)										
Electricity	306	254	249	3,637	2,708	2,814	84.1	93.6	88.5	
Natural gas	305	291	293	3,109	2,546	3,068	98.0	114.5	95.6	
Propane	Q	Q	37	Q	Q	453	Q	Q	81.7	
Energy end uses										
(more than one may apply)	720	550	662	10,400	7 200	10.200	<u> </u>	77 5		
Buildings with space heating	729	559	663	10,498	7,206	10,366	69.4	77.5	64.0	
Buildings with cooling	751	548	663	11,003	6,911	10,206	68.3	79.3	64.9	
Buildings with water heating	737	546	680	10,487	6,725	10,576	70.2	81.1	64.3	
Buildings with cooking	436	350	387	5,079	3,538	4,513	85.8	99.0	85.7	
Buildings with manufacturing	39	34	56	754	599	923	51.9	56.0	60.6	
Buildings with electricity	222	255	274	2 724	2 5 4 7	2 1 7 2	05.2	100.2	96.4	
generation Buildings with lighting	232	255 570	274 712	2,721 11,334	2,547	3,173	85.2 67.0	100.2 77.1	86.4	
	700	570	/12	11,334	7,390	11,716	67.0	//.1	60.7	
Percentage of floorspace heated										
Not heated	Q	12	50	1,082	474	1,586	28.5	24.9	31.5	
1% to 50%	72	41	81	1,650	611	2,436	43.5	67.2	33.2	
51% to 99%	197	132	192	2,576	1,909	2,739	76.5	69.3	70.2	
100%	460	385	390	6,273	4,687	5,191	73.3	82.2	75.2	
Percentage of floorspace cooled										
Not cooled	9	22	50	578	769	1,746	14.9	29.1	28.9	
1% to 50%	65	74	85	1,910	1,126	3,026	34.1	65.4	28.2	
51% to 99%	225	160	190	2,839	1,955	2,692	79.3	81.7	70.7	
100%	461	315	387	6,253	3,831	4,488	73.7	82.1	86.3	
Percentage lit when open										
0%	Q	Q	Q	Q	Q	Q	Q	Q	Q	
1% to 50%	74	39	47	1,954	789	1,563	37.7	49.8	30.0	
51% to 99%	335	254	341	4,547	3,095	4,876	73.6	81.9	70.0	
100%	349	276	322	4,731	3,477	5,151	73.8	79.4	62.5	
Building never open or electricity										
not used	2	Q	Q	333	Q	Q	Q	Q	Q	

	Sum of major consumption (trillion British			Total floors of buildings (million squ	-	S	nergy inter um of majo :housand B	-	ot)
	West South central	Mountain	Pacific	West South central	Mountain	Pacific	West South central	Mountain	Pacific
All buildings	760	570	713	11,580	7,680	11,952	65.6	74.3	59.7
Percentage lit during off hours									
0%	78	43	98	1,797	964	2,612	43.6	44.5	37.7
1% to 50%	565	453	483	8,436	5,824	7,930	66.9	77.7	61.0
51% to 100%	92	63	105	888	486	975	103.2	129.3	108.0
Building always open with									
no off hours	Q	Q	26	Q	Q	263	Q	Q	99.1
Electricity not used	N	Ν	N	Q	Q	Q	N	N	N
Heating equipment									
(more than one may apply)									
Packaged heating units	438	386	362	6,609	4,812	5,705	66.3	80.2	63.5
Furnaces	135	104	111	1,927	1,367	1,736	70.3	75.9	63.8
Individual space heaters	149	146	156	1,984	1,792	2,445	74.9	81.3	63.9
Boilers	174	239	232	2,172	2,528	2,857	80.0	94.4	81.3
Heat pumps	80	116	145	1,200	1,291	1,974	66.8	90.2	73.6
District heat	Q	48	86	, Q	373		126.9	127.7	98.8
Duct reheat	86	31	52	1,049	367	628	82.0	85.3	82.1
Other	Q	Q	Q	_, Q	Q	Q	Q	Q	Q
Cooling equipment									
(more than one may apply)									
Packaged air-conditioning units	483	374	442	7,224	4,733	6,849	66.9	79.0	64.5
Residential-type central air				· · · · · · · · · · · · · · · · · · ·	,				
conditioners	136	76	97	2,175	1,027	1,536	62.4	74.5	63.3
Individual air conditioners	88	68	106	1,251	654	1,492	70.6	103.4	71.0
Central chillers	150	110	205	1,703	1,114	1,993	88.0	99.0	102.8
Heat pumps	33	99	118	508	1,072	1,428	64.2	91.9	82.3
District chilled water	Q	33	68	721	267	696	107.2	121.8	98.2
Swamp coolers	Q	49	54	Q	578	734	Q	85.0	73.3
Other	Q	Q	Q	Q	Q	Q	Q	Q	Q
HVAC features									
(more than one may apply)									
Economizer cycle	264	281	350	3,008	3,232	4,479	87.7	86.8	78.1
Variable air volume (VAV) system	255	232	272	3,239	2,621	3,313	78.8	88.6	82.0
Dedicated outside air system (DOAS)	90	Q	80	965	2,021 Q	945	93.3	112.8	84.3
Demand controlled ventilation (DCV)	81	66	89	1,016	730	1,136	79.9	90.4	78.6
Regular HVAC maintenance Building automation system (BAS)	674	531	623	9,460	6,622	9,328	71.2	80.2	66.8
controls heating or cooling	377	312	383	4,744	3,552	4,826	79.6	87.8	79.3
Internet-connected or smart	577	J12	505		5,552	т,020	,	07.0	,
thermostat	63	45	41	1,153	509	677	54.4	89.0	60.0
Programmable thermostat	132	120	159	2,286	1,723	3,143	57.9	69.7	50.6
Main equipment replaced since									
2000 (more than one may apply) Heating	232	140	217	3,828	2,086	3,615	60.6	67.3	60.0
Cooling	154	142	134	2,353	1,604	2,282	65.3	88.3	58.9
cooming	1.04	142	1.04	2,333	1,004	2,202	05.5	00.3	50.3

	Sum of major consumption (trillion British		; [Btu])	Total floors of buildings (million squ		s	nergy inter um of majo thousand B	-	ot)
	West South central	Mountain	Pacific	West South central	Mountain	Pacific	West South central	Mountain	Pacific
All buildings	760	570	713	11,580	7,680	11,952	65.6	74.3	59.7
Water-heating equipment									
Centralized system	463	395	419	6,596	4,942	6,375	70.2	80.0	65.8
Distributed system	125	71	108	2,159	885	2,208	57.7	80.4	48.9
Combination of centralized and									
distributed systems	149	79	153	1,732	899	1,993	86.1	88.0	76.9
Generation technologies (more than one may apply)									
Reciprocating engine generators	217	227	179	2,458	2,116	2,042	88.2	107.3	87.5
Solar panels	Q	24	84	2,430 Q	396	988	Q	59.5	85.0
Other generation technology	Q	Q	37		2390 Q	370	Q Q	Q	100.5
Lighting equipment types (more than one may apply)	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	¥	57				<u>ч</u>	ч 	100.5
Incandescent	170	142	214	2,080	1,364	2,376	81.9	104.4	90.2
Standard fluorescent	550	446	567	8,448	5,645		65.1	79.0	62.2
						9,112			
Compact fluorescent	286	226	360	3,653	2,541	4,335	78.4	88.9	83.0
High-intensity discharge (HID)	68	105	79	830	988	974	82.0	106.3	81.4
Halogen	165	140	171	2,087	1,366	1,832	78.9	102.5	93.4
LED	502	432	534	6,506	5,168	7,763	77.2	83.6	68.7
Other	Q	N	Q	Q	N	Q	Q	N	Q
Refrigeration equipment (more than one may apply)									
Any refrigeration	691	499	608	9,599	6,068	8,854	72.0	82.3	68.7
Walk-in units	321	290	319	3,063	2,505	2,974	105.0	115.7	107.1
Cases or cabinets	331	247	303	3,236	2,262	3,069	102.4	109.2	98.8
Large cold storage areas	44	Q	43	362	Q	459	121.1	Q	94.6
Commercial ice makers	404	332	328	4,501	3,254	3,575	89.7	102.0	91.7
Residential-type or compact units	566	388	498	8,220	5,023	7,470	68.9	77.3	66.6
Vending machines	419	301	316	5,166	3,410	4,084	81.2	88.2	77.4
No refrigeration	69	71	105	1,982	1,612	3,098	34.7	44.2	33.8
Office equipment (more than one may apply)									
Desktop computers	702	515	649	10,093	6,477	10,014	69.5	79.6	64.8
With multiple monitors	436	352	452		4,276	6,439	78.1	82.3	70.2
Laptop computers	577	424	529	8,299	5,327	8,133	69.5	79.6	65.0
Dedicated servers	459	346	466		4,161	6,524	74.9	83.2	71.5
Tablets charged in building	459	365	400		4,293	5,530	77.2	85.0	72.3
Large floor-standing office devices ^c	447	336	433	6,291	4,427	6,208	71.1	75.9	69.8
Smaller desktop office devices ^c	669	472	577	9,505	5,843	8,907	70.3	80.8	64.7
Interactive whiteboards	108	118	91	1,567	1,467	1,371	69.2	80.5	66.1
Televisions or video displays	593	440	502	8,231	5,216	7,266	72.0	84.3	69.1
Point-of-sale devices or cash				,		,		_	
registers	365	332	324	3,888	3,415	3,407	93.9	97.2	95.2

	Sum of major consumption (trillion Britisł	fuels n thermal units	Total floors of buildings (million squ	-	Energy intensity for sum of major fuels (thousand Btu/square foot)				
	West South central	Mountain	Pacific	West South central	Mountain	Pacific	West South central	Mountain	Pacific
All buildings	760	570	713	11,580	7,680	11,952	65.6	74.3	59.7
Food preparation or serving areas in non-food service buildings (more than one may apply)									
Snack bar, concession stand, or coffee									
shop	95	120	116	5 1,011	1,106	1,337	93.5	108.2	86.8
Fast food or small restaurant	104	113	121	. 980	983	1,373	106.6	114.8	88.5
Cafeteria or large restaurant	126	115	101	. 1,450	1,202	1,081	87.1	95.8	93.7
Commercial kitchen or									
food preparation area	192	164	148	2,013	1,633	1,611	95.3	100.2	92.1
Small kitchen area	154	147	131	2,367	1,856	1,985	65.2	79.4	66.2
Separate computer areas (more than one may apply)									
Server closet	410	335	397	5,939	4,104	5,794	69.0	81.6	68.5
Data center	96	Q	143	1,077	982	1,387	89.5	96.5	103.0
Computer-based training room	159	160	123	2,006	1,782	1,575	79.3	90.0	78.3
Student or public computer center	123	109	99		1,125	1,293	67.5	96.7	76.3
Window and interior lighting features (more than one may									
apply)									
Multipaned windows	562	506	512	7,749	6,229	7,748	72.5	81.3	66.1
Tinted window glass	420	319	415		3,844	6,325	71.6	83.1	65.7
Reflective window glass	175	180	210		2,071	3,021	83.6	86.9	69.5
External overhangs or awnings	280	264	297		2,772	4,270	72.4	95.4	69.5
Skylights or atriums	152	157	168		1,869	3,141	69.6	84.0	53.4
Light scheduling	339	305	343		3,220	4,410	84.7	94.7	77.8
Occupancy sensors	318	288	407		3,607	5,876	78.1	79.7	69.3
Multilevel lighting or dimming	117	170	128		1,714	1,604	89.0	99.1	80.0
Daylight harvesting	65	85	81		778	1,239	89.5	108.8	65.2
Plug-load control	Q	Q	30		Q	312	Q		97.7
Demand responsive lighting	Q	Q	24		Q	333	Q		72.6
Building automation system (BAS) for	ų	<u> </u>	29	г <u> </u>	ų		<u> </u>	ų	72.0
lighting	162	165	185	2,002	1,678	2,527	80.7	98.6	73.3
Electric vehicle (EV) charging									
Charging stations associated with the									
building	44	99	125	568	1,131	1,944	77.7	87.6	64.5
	·				±,±0±	-,J			07.5

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

^a*Climate 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.

^c*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: December 2022

	RSEs for sum of consumption	of major fuels		SEs for tot f buildings	al floorspace		SEs for ene um of majo	ergy intensity or fuels	for
	West South central	Mountain	Pacific	West South central	Mountain	Pacific	West South central	Mountain	Pacific
All buildings	10.5	15.6	6.1	11.5	13.1	8.1	6.2	7.7	5.8
Building floorspace (square feet)									
1,001 to 5,000	19.4	16.2	11.9	14.2	19.0	8.9	14.6	10.8	9.5
5,001 to 10,000	20.0	22.5	16.1	19.2	21.0	10.2	11.1	16.5	15.3
10,001 to 25,000	20.2	15.5	14.6	22.4	15.1	17.8	20.9	6.4	13.4
25,001 to 50,000	20.8	20.5	11.5	17.9	20.9	14.5	9.8	5.2	13.6
50,001 to 100,000	16.5	18.7	15.2	14.7	14.2	14.6	11.1	9.7	9.0
100,001 to 200,000	14.9	20.1	20.1	10.3	17.6	18.9	8.3	13.5	15.4
200,001 to 500,000	13.1	26.3	18.1	13.3	23.2	12.4	5.6	7.3	11.8
Over 500,000	16.0	67.7	22.1	15.7	59.2	26.0	11.4	18.1	19.7
	10.0	07.7	22.1	15.7	J J .2	20.0	11.4	10.1	19.7
Principal building activity									
Education	31.1	15.4	13.0	20.3	15.2	15.8	16.1	5.1	7.3
Food sales	45.9	17.2	52.1	48.6	18.2	46.1	25.9	15.6	19.0
Food service	22.4	21.3	38.6	25.1	21.9	26.2	14.5	6.2	21.7
Health care	18.5	25.8	14.9	16.9	20.0	20.2	6.4	11.1	10.9
Inpatient	20.5	32.9	17.6	20.0	31.8	25.4	4.4	5.5	14.1
Outpatient	35.6	24.2	22.6	29.1	19.7	24.0	10.3	9.3	14.6
Lodging	22.8	54.5	15.2	21.7	43.0	14.7	7.3	17.7	9.6
Mercantile	16.9	15.9	14.4	15.1	15.6	10.7	5.0	6.7	7.6
Retail (other than mall)	18.1	29.4	24.8	21.6	21.9	24.2	8.0	14.6	11.2
Enclosed and strip malls	24.1	24.6	19.2	21.1	22.6	15.9	4.9	8.5	7.5
Office	16.5	21.0	13.6	18.0	21.0	10.0	5.5	4.4	6.0
Public assembly	19.9	27.3	13.1	19.1	26.5	13.7	8.0	22.5	6.5
Public order and safety	56.6	35.1	44.0	48.3	37.0	38.5	14.5	12.9	14.5
Religious worship	14.4	33.3	34.9	16.6	28.2	28.6	13.0	27.6	13.8
Service	32.6	23.8	30.5	33.8	20.2	27.0	24.6	10.9	16.8
Warehouse and storage	20.0	35.6	20.1	24.9	25.5	17.9	17.7	14.5	14.9
Other	54.9	82.7	35.2	44.9	42.3	34.5	17.3	82.0	20.8
Vacant	44.3	75.5	41.1	44.1	68.6	46.9	44.2	131.8	65.5
Year constructed									
Before 1920	74.3	63.5	34.9	73.3	63.9	36.9	8.0	62.9	21.1
1920 to 1945	24.4	27.1	24.5	27.0	33.6	23.4	22.1	26.0	13.3
1946 to 1959	25.9	30.6	14.7	26.6	23.7	15.2	13.4	19.9	14.6
1960 to 1969	22.2	22.9	16.9	16.9	22.9	17.9	16.5	8.3	13.1
1970 to 1979	22.8	24.7	20.2	21.9	20.2	25.4	6.7	8.2	27.3
1980 to 1989	14.5	45.0	13.6	16.2	33.3	10.0	9.6	18.5	8.4
1990 to 1999	13.2	16.2	13.8	18.9	14.9	17.1	13.5	7.9	8.8
2000 to 2009	18.1	14.0	19.3	19.6	14.3	16.7	7.4	14.6	11.4
2010 to 2018	24.6	27.1	15.6	21.6	28.9	20.0	11.2	10.9	11.9
Climate zone ^a									
Cold or very cold	0.0	57.8	56.7	0.0	59.5	57.7	0.0	5.2	18.6
Cool	0.0	17.9	40.0	0.0	15.6	41.1	0.0	9.8	5.7
Mixed mild	89.4	80.5	50.5	87.9	72.2	47.6	7.2	28.6	14.4
Warm	40.5	69.0	10.3	40.6	69.1	9.2	2.3	0.7	7.2
									3.5
Hot or very hot	18.8	15.4	86.9	21.8	16.6	86.9	10.2	7.6	3.5

	RSEs for sum of consumption	of major fuels		SEs for tot f buildings	al floorspace			s for energy intensity for of major fuels West South central Mountain 6.2 7.7 8.2 7.1 5.6 6.3 9.9 13.1 12.3 5.6 15.0 19.6			
	West South			West South			South				
	central	Mountain	Pacific	central	Mountain	Pacific	central	Mountain	Pacific		
All buildings	10.5	15.6	6.1	11.5	13.1	8.1	6.2	7.7	5.8		
Number of floors											
1	12.9	12.9	8.1	15.3	13.4	10.0	8.2	7.1	5.8		
2	16.2	13.0	15.8	15.0	11.5	12.4	5.6	6.3	12.3		
3	30.9	29.8	23.8	26.2	36.2	20.8	9.9	13.1	16.0		
4 to 9	31.4	16.3	16.5	23.2	18.2	17.4	12.3	5.6	12.3		
10 or more	37.1	60.1	24.9	27.1	51.9	22.2	15.0	19.6	8.8		
Elevators and escalators (more than one may apply)											
Any elevators	23.2	26.5	11.8	18.0	21.6	13.3	7.7	11.3	7.9		
1 elevator	46.8	21.0	15.8	31.5	21.6	19.4	22.2	9.6	14.0		
2 to 5 elevators	21.1	16.9	13.2	17.5	16.6	11.8	7.9	16.2	6.2		
6 or more elevators	16.7	62.4	20.8	14.3	50.2	20.4	8.7	22.1	13.4		
Any escalators	23.9	77.4	20.4	21.0	66.6	25.7	20.8	24.8	11.3		
Number of workers (main shift)											
Fewer than 5	18.4	23.7	9.1	18.7	20.2	17.7	11.3	9.8	15.4		
5 to 9	20.6	17.5	17.5	17.4	19.1	18.5	7.4	12.6	9.1		
10 to 19	19.3	22.0	11.8	20.9	16.2	15.5	12.7	17.1	12.5		
20 to 49	14.0	16.9	15.3	15.0	11.2	11.6	11.0	13.2	10.9		
50 to 99	32.3	20.3	19.3	26.0	20.7	13.4	12.0	8.1	11.5		
100 to 249	13.4	28.3	14.6	12.7	28.7	17.3	3.8	10.8	11.0		
250 or more	13.3	49.3	15.7	13.1	33.2	15.2	6.3	23.6	11.1		
Weekly operating hours											
Fewer than 40	23.0	22.4	16.7	17.2	17.0	19.7	17.8	26.5	17.1		
40 to 48	11.7	18.0	10.7	16.9	20.9	10.5	12.0	5.5	10.5		
49 to 60	14.4	15.8	10.2	16.8	13.0	11.6	6.5	8.8	7.8		
61 to 84	28.1	25.0	11.8	23.1	22.5	11.4	14.9	10.8	6.0		
85 to 167	19.4	14.8	21.4	15.6	18.7	24.0	13.0	9.4	19.2		
Open continuously	10.9	33.6	8.5	11.0	26.8	11.2	5.9	13.3	7.5		
Ownership and occupancy											
Nongovernment owned	10.0	16.9	6.2	10.0	13.8	9.8	6.8	8.8	6.9		
Owner occupied	13.8	24.4	7.4	11.3	15.3	11.1	8.8	13.4	8.2		
Leased to tenant or tenants	14.9	12.8	9.9	11.2	17.5	10.5	9.3	9.4	9.4		
Unoccupied	61.0	78.2	54.1	62.4	78.9	56.0	76.0	144.6	102.5		
Government owned	17.8	21.4	15.2	20.8	18.6	13.5	6.4	8.0	8.6		
Federal	47.0	35.6	54.1	45.3	44.8	41.5	26.0	17.7	32.1		
State	31.1	31.9	31.1	31.8	23.6	26.2	14.2	17.1	13.4		
Local	19.4	22.2	11.7	21.9	24.7	15.4	5.8	5.9	8.2		
Party responsible for operation											
of energy systems											
Building owner	11.8	17.1	8.0	13.2	13.4	7.9	7.2	8.9	5.4		
Business owner or tenant	13.6	13.6	16.1	13.9	19.2	17.6	9.1	10.1	13.7		
Property management	32.4	36.8	34.4	33.1	40.3	30.1	16.7	34.0	20.0		
Other	64.2	21.5	26.7	45.6	15.9	31.8	35.2	16.9	26.8		

	RSEs for sum of consumption	of major fuels		SEs for tot f buildings	al floorspace		SEs for ene um of majo	ergy intensity or fuels	for
	West South central	Mountain	Pacific	West South central	Mountain	Pacific	West South central	Mountain	Pacific
All buildings	10.5	15.6	6.1	11.5	13.1	8.1	6.2	7.7	5.8
Provider of direct input on energy-									
related equipment purchases									
Building owner	11.2	16.1	8.0	12.4	12.8	8.2	7.2	8.4	5.8
Business owner or tenant	15.7	15.6	19.4	18.4	21.0	26.7	14.9	10.3	16.1
Property management	36.4	64.3	26.8	38.5	53.6	42.9	16.1	59.1	22.7
Other	36.7	38.8	14.6	25.1	46.2	10.8	27.9	18.9	14.7
Number of establishments									
1	15.6	11.7	9.0	15.3	12.1	10.0	8.8	7.3	6.7
2 to 5	13.9	38.1	16.1	11.9	31.4	11.6	6.1	12.8	10.4
6 to 10	24.2	21.3	21.8	21.7	18.6	24.7	12.3	8.9	10.2
11 to 20	31.3	27.1	13.3	30.8	23.7	12.0	8.1	14.3	8.0
More than 20	25.9	25.3	21.0	20.4	33.9	16.5	12.6	13.0	14.5
Currently unoccupied	61.0	75.5	54.1	60.8	68.6	54.7	74.0	131.8	100.7
Predominant exterior wall material									
Brick, stone, or stucco	14.2	21.8	9.9	14.5	15.1	9.3	6.9	11.8	8.9
Concrete (block or poured)	11.0	15.2	9.9	13.0	13.2	12.7	9.7	11.8	9.7
Concrete panels	19.2	30.0	20.6	19.8	27.2	18.2	9.6	13.9	14.9
Siding or shingles	37.1	24.2	25.1	38.7	22.5	30.7	5.9	9.6	28.0
Metal panels	16.0	27.1	14.8	13.5	31.0	16.1	10.2	12.6	14.5
Window glass	25.8	41.8	26.9	26.9	40.6	25.1	15.0	6.3	12.2
Other	50.0	28.7	27.7	43.7	28.7	22.8	30.5	15.0	22.2
Predominant roof material									
Metal surfacing	20.1	18.4	11.9	20.4	18.1	14.9	8.6	11.5	13.7
Synthetic or rubber	12.5	15.5	7.7	12.1	17.1	10.1	3.2	5.9	6.4
Built-up	21.4	41.6	11.4	15.8	28.8	10.1	13.6	20.5	8.3
Slate or tile shingles	22.9	39.4	24.7	13.0	35.8	22.6	17.5	9.2	6.2
Wooden materials (including			27.7	12.0		22.0	17.5	5.2	0.2
shingles)	36.7	26.4	32.8	46.7	32.1	33.5	45.1	27.5	25.0
Asphalt, fiberglass, or									
other shingles	16.5	28.2	20.3	18.0	17.3	20.8	9.2	14.8	18.9
Concrete	40.9	65.5	30.1	35.7	36.8	17.1	22.0	57.8	21.2
Other	20.7	31.7	19.6	19.7	32.0	28.9	12.8	16.1	29.3
Roof tilt									
Flat	10.5	19.5	7.4	10.9	16.7	9.6	5.9	9.4	6.4
Shallow pitch	13.3	12.4	9.9	14.5	14.4	12.4	8.1	9.7	12.6
Steeper pitch	19.7	18.9	23.6	23.2	12.7	20.7	9.4	20.7	8.6
Cool roof characteristics (more than one	e								
may apply)		• • •							
White or reflective coating or paint	15.9	24.8	7.4	12.0	19.3	10.1	10.0	9.7	5.9
White or reflective tiles or shingles	43.7	30.1	19.6	37.8	36.2	13.2	13.4	16.5	22.2
Aluminum coating	31.5	35.3	18.6	22.9	48.2	40.4	20.9	40.6	41.7
Ballasted roof system	25.8	54.8	29.7	21.0	35.9	25.1	27.2	30.2	23.9
Other cool roof property	67.1	58.0	34.9	61.1	60.8	30.0	34.9	6.7	19.0

	RSEs for sum of consumption	of major fuels		SEs for tot f buildings	al floorspace		SEs for ene um of majo	ergy intensity or fuels	for
	West South central	Mountain	Pacific	West South central	Mountain	Pacific	West South central	Mountain	Pacific
All buildings	10.5	15.6	6.1	11.5	13.1	8.1	6.2	7.7	5.8
Renovations since 2000									
(more than one may apply)									
Any type of renovation	10.9	19.9	8.6	9.7	18.0	8.4	7.3	9.6	7.1
Addition or annex	12.5	19.5	15.3	9.0	21.9	17.3	7.2	9.3	15.6
Reduction in floorspace	49.5	56.1	56.1	41.5	68.3	36.8	27.9	16.8	28.2
Roof replacement	13.6	34.5	13.1	13.4	26.7	13.1	5.6	15.8	11.7
Interior wall reconfiguration	16.5	34.6	17.3	12.6	26.4	10.8	8.6	12.6	10.1
Window replacement	20.4	43.0	22.0	18.9	30.7	22.3	6.4	20.1	7.4
HVAC equipment upgrade	10.7	29.4	13.1	12.2	23.6	11.1	10.7	13.1	9.9
Lighting upgrade	11.6	25.0	11.6	10.0	20.9	10.6	7.7	12.6	8.0
Electrical upgrade	16.6	43.8	14.0	18.1	32.1	8.0	11.4	20.3	11.6
Plumbing system upgrade	14.9	40.5	12.0	12.9	29.2	11.1	9.6	17.3	9.2
Insulation upgrade	14.7	53.3	18.5	18.0	41.2	24.2	10.9	23.7	13.9
Fire, safety, or security upgrade	14.6	36.4	17.2	13.4	27.1	13.7	9.1	15.0	10.0
Structural upgrade	21.2	79.5	20.9	19.5	66.4	18.9	10.4	32.0	16.1
Other	13.7	41.4	45.5	15.7	48.6	38.4	5.2	42.0	32.3
No renovations	16.3	12.7	7.7	19.0	11.4	9.6	9.7	7.2	5.9
Buildings constructed 2013 or later	21.2	27.7	11.7	20.8	29.1	16.6	10.1	8.4	13.1
· · · · · · · · · · · · · · · · · · ·									
Energy sources (more than one may apply)									
Electricity	10.5	15.6	6.1	11.7	13.4	7.7	6.0	7.3	5.3
Natural gas	9.2	13.0	7.7	8.6	16.2	8.9	3.7	7.0	4.3
Fuel oil	12.1	33.1	16.2	13.4	31.4	15.7	8.0	8.9	10.7
District heat	57.4	37.2	24.1	53.4	33.8	18.4	7.3	18.8	10.7
District chilled water	58.3	44.9	27.6	47.5	31.0	20.5	18.8	29.6	10.7
Propane	28.1	63.7	27.0	25.5	40.8	20.3	16.5	35.4	15.0
Solar	45.3	33.6	24.3	47.8	40.8 31.9	18.7	38.4	7.6	10.9
Wood, coal, and other	43.3 54.3	38.3	48.5	53.0	46.6	48.7	24.9	13.3	42.4
Space-heating energy sources	54.5	30.5	40.5	55.0	40.0	40.7	24.9	13.5	42.4
(more than one may apply)									
Electricity	10.1	16.8	5.7	11.3	13.0	9.6	5.4	9.6	8.5
Natural gas	9.8	19.3	8.8	9.4	16.7	9.2	3.7	6.7	4.4
Fuel oil	69.5	49.2	63.3	79.6	53.3	65.0	40.1	12.9	16.7
District heat	58.2	36.3	24.2	56.6	31.6	18.6	3.5	21.8	11.1
Propane	40.9	101.2	39.2	45.6	71.4	38.3	21.3	77.8	23.0
Other sources ^b	52.1	68.0	68.1	52.1	66.0	51.0	0.0	8.4	66.3
Primary space-heating									
energy source									
Electricity	17.0	11.1	11.4	17.1	14.0	14.1	6.1	7.0	9.4
Natural gas	10.9	20.9	10.0	10.3	18.9	9.8	3.7	7.1	4.9
Fuel oil	76.8	105.8	110.5	81.1	96.9	110.6	21.6	61.0	14.1
	70.0								
District heat	61.6	35.8	26.8	60.9	31.9	21.5	3.1	23.2	10.3
District heat Propane						21.5 45.6	3.1 19.9	23.2 56.7	10.3 43.4

	RSEs for sum of consumption		RSEs for total floorspace of buildings			RSEs for energy intensity for sum of major fuels			
	West South		5	West South		5.10	West South		D (*
	central	Mountain	Pacific	central	Mountain	Pacific	central	Mountain	Pacific
All buildings	10.5	15.6	6.1	11.5	13.1	8.1	6.2	7.7	5.8
Cooling energy sources (more than one may apply)									
Electricity	9.0	15.2	5.2	10.5	13.3	6.6	4.6	7.0	5.1
Natural gas	0.0	3.9	62.0	0.0	3.9	55.0	0.0	0.0	55.4
District chilled water	58.3	44.9	27.6	47.5	31.0	20.5	18.8		11.7
Water-heating energy sources									
(more than one may apply)									
Electricity	13.4	12.5	6.8	14.4	13.0	6.7	7.0	7.6	8.1
Natural gas	10.9	18.7	7.7	9.7	16.4	9.2	3.9	6.8	5.6
Fuel oil	70.6	49.5	71.3	93.7	49.8	61.1	156.6	12.9	56.7
District heat	59.2	36.9	29.5	55.4	32.8	23.4	7.4		11.7
Propane	41.8	58.9	72.7	47.7	65.7	42.2	38.3		51.8
Cooking energy sources (more than one may apply)									
Electricity	10.9	25.0	11.0	9.8	18.8	11.4	5.8	8.7	4.7
Natural gas	5.5	21.0	9.6	4.9	17.7	12.0	3.4	6.6	5.3
Propane	43.1	53.2	27.9	34.7	60.1	21.4	26.8		18.6
Energy end uses (more than one may apply)									
Buildings with space heating	10.6	15.9	6.7	10.1	13.7	8.1	4.7	7.2	5.3
Buildings with cooling	10.5	15.7	5.4	10.8	13.5	6.4	5.3	7.0	5.1
Buildings with water heating	10.3	16.2	6.2	10.0	14.3	7.2	4.8	6.8	4.9
Buildings with cooking	7.4	20.1	9.2	6.8	15.3	10.8	3.4		4.6
Buildings with manufacturing	23.7	15.3	28.7	22.3	24.7	19.6	20.8		16.7
Buildings with electricity									
generation	11.1	26.7	11.7	10.2	24.4	11.8	5.5	7.8	7.7
Buildings with lighting	10.5	15.6	6.1	11.7	13.4	7.6	6.1	7.2	5.2
Percentage of floorspace heated									
Not heated	50.5	19.9	18.3	48.5	30.5	20.0	12.4	27.8	25.2
1% to 50%	16.7	33.2	18.1	20.6	33.7	15.3	14.3	27.9	8.8
51% to 99%	13.8	13.2	10.0	15.4	15.3	9.5	7.5	11.3	5.4
100%	15.2	20.2	10.0	14.8	16.2	9.1	4.6	6.4	7.8
Percentage of floorspace cooled									
Not cooled	42.3	41.2	30.8	38.5	31.9	23.0	23.5	16.8	27.2
1% to 50%	22.9	25.4	11.2	24.8	26.4	13.0	17.3	8.4	8.1
51% to 99%	10.3	21.9	14.4	10.9	17.5	11.9	6.5	13.2	8.4
100%	14.1	21.7	6.1	13.8	18.3	6.1	3.8	8.7	5.2
Percentage lit when open									
0%	105.9	70.2	102.1	110.2	70.2	77.9	222.7	0.0	98.9
1% to 50%	17.9	22.1	20.4	20.5	24.6	19.0	13.1	13.0	16.9
51% to 99%	9.0	21.0	8.2	9.9	16.4	9.8	6.3	9.5	8.7
100%	17.0	14.2	7.8	15.4	14.8	7.9	6.0	7.2	7.5
Building never open or electricity		20.2	40.0	25.0	40.4	<u> </u>	50.0	27.0	50.0
not used	42.0	29.3	49.9	35.9	40.4	38.5	58.8	37.9	50.0

	RSEs for sum of consumption	RSEs for total floorspace of buildings			RSEs for energy intensity for sum of major fuels				
	West South central	Mountain	Pacific	West South central	Mountain	Pacific	West South central	Mountain	Pacific
	central		T define	central	Mountain	T define		mountain	
All buildings	10.5	15.6	6.1	11.5	13.1	8.1	6.2	7.7	5.8
Percentage lit during off hours									
0%	28.9	38.4	18.9	25.5	26.7	18.8	12.4	19.9	11.0
1% to 50%	11.0	18.0	6.5	11.1	13.4	7.3	7.2	7.7	6.5
51% to 100%	16.9	17.9	15.5	17.7	14.8	17.6	13.3	20.9	10.2
Building always open with									
no off hours	43.0	34.1	42.3	39.6	36.6	38.9	19.0	18.6	16.5
Electricity not used	0.0	0.0	0.0	49.9	45.0	53.1	0.0	0.0	0.0
Heating equipment (more than one may apply)									
Packaged heating units	10.9	16.4	8.0	9.9	14.3	9.7	5.9	8.3	6.5
Furnaces	16.7	23.5	12.2	17.1	16.6	14.0	5.1	8.2	11.0
Individual space heaters	15.0	31.6	13.9	15.7	23.8	10.5	5.8	16.0	12.4
Boilers	9.8	26.1	12.5	12.3	22.1	13.7	7.6	8.2	6.3
Heat pumps	14.3	36.1	17.9	16.4	24.7	12.7	6.6	15.1	8.8
District heat	58.2	36.3	24.2	56.6	31.6	18.6	3.5	21.8	11.1
Duct reheat	14.7	33.2	19.2	12.1	34.2	17.8	10.3	11.7	11.2
Other	99.2	28.7	102.7	99.2	31.4	95.5	0.0	5.8	49.6
Cooling equipment									
(more than one may apply)	10.0	42.2	6.0	10.1	12.0	7.0	<u> </u>	7.4	
Packaged air-conditioning units	10.8	12.2	6.0	10.1	13.8	7.0	6.4	7.4	5.0
Residential-type central air conditioners	15.6	27.0	20.9	19.0	22.1	16.7	9.0	5.4	16.9
Individual air conditioners	15.0	33.6	19.7	13.6	20.2	16.6	7.9	20.5	13.1
Central chillers	13.4	19.8	11.2	11.4	18.5	10.0	6.7	13.4	7.2
Heat pumps	23.4	42.0	16.2	21.3	30.7	14.3	9.9	16.1	7.2
District chilled water	58.3	44.9	27.6	47.5	31.0	20.5	18.8	29.6	11.7
Swamp coolers	75.9	23.0	27.0	64.5	16.3	20.9	26.4	11.2	15.0
Other	79.0	75.0	67.9	97.9	70.1	47.1	233.4	3.0	41.1
HVAC features	75.0	, 5.0	07.5	57.5	,0.1	77.1	233.4	5.0	
(more than one may apply)									
Economizer cycle	18.5	22.9	12.1	15.9	19.8	12.8	7.3	8.3	7.0
Variable air volume (VAV) system	23.8	27.1	12.4	23.5	21.5	10.3	10.4	9.8	7.5
Dedicated outside air system (DOAS)	19.7	57.4	17.9	15.9	51.3	12.5	10.3	13.3	12.1
Demand controlled ventilation (DCV)	20.0	23.3	19.1	17.8	20.0	17.9	8.4	20.1	15.7
Regular HVAC maintenance	10.9	16.1	7.4	11.6	13.7	8.9	5.7	6.8	5.3
Building automation system (BAS)									
controls heating or cooling	19.3	23.1	9.7	18.4	18.3	9.9	5.6	9.4	5.6
Internet-connected or smart									
thermostat	29.7	35.9	31.0	34.9	27.6	20.1	11.9	14.0	13.9
Programmable thermostat	23.5	11.7	7.9	23.2	14.6	7.9	9.7	5.7	10.2
Main equipment replaced since 2000 (more than one may apply)									
Heating	10.0	15.1	10.2	11.6	14.9	9.1	7.8	6.0	10.9
Cooling	10.2	32.1	14.0	9.3	24.1	13.1	8.9	11.8	8.2
	10.2	~+		5.5		-9.1	0.0		

	RSEs for sum of consumption		RSEs for total floorspace of buildings			RSEs for energy intensity for sum of major fuels			
	West South central	Mountain	Pacific	West South central	Mountain	Pacific	West South central	Mountain	Pacific
All buildings	10.5	15.6	6.1	11.5	13.1	8.1	6.2	7.7	5.8
Water-heating equipment									
Centralized system	12.7	19.3	6.9	10.5	15.9	6.5	5.3	7.9	4.7
Distributed system	25.2	15.2	16.0	28.5	17.2	13.1	9.5	10.2	12.7
Combination of centralized and									
distributed systems	15.5	16.0	17.0	13.3	16.8	14.3	7.3	7.3	11.1
Generation technologies									
(more than one may apply)									
Reciprocating engine generators	11.5	28.8	17.1	10.5	27.8	15.8	4.9	8.5	11.8
Solar panels	45.3	33.6	21.2	47.8	31.9	18.1	38.4	7.6	9.6
Other generation technology	30.4	55.3	30.3	47.5	50.7	34.1	53.3	14.7	17.7
Lighting equipment types (more than one may apply)									
Incandescent	11.2	36.2	8.8	10.6	25.6	10.2	6.9	16.0	10.5
Standard fluorescent	8.0	17.3	6.2	10.3	14.4	8.8	6.2	8.1	6.5
Compact fluorescent	16.7	24.7	8.4	13.1	19.2	6.9	6.1	9.9	6.5
High-intensity discharge (HID)	16.7	44.5	15.7	16.6	35.2	15.4	8.3	20.0	12.2
Halogen	11.2	33.7	13.6	9.6	25.1	8.9	7.1	16.4	6.9
LED	10.2	17.1	7.2	10.3	14.1	6.6	4.2	7.6	5.5
Other	70.9	0.0	51.3	70.9	0.0	51.3	0.0	0.0	0.0
Refrigeration equipment (more than one may apply)									
Any refrigeration	10.6	16.9	7.2	11.2	13.8	8.1	5.8	6.2	4.9
Walk-in units	7.7	21.1	9.3	7.2	17.1	9.6	4.8	7.0	4.7
Cases or cabinets	10.0	25.6	8.5	10.0	22.3	10.9	4.6	7.8	5.3
Large cold storage areas	29.7	58.9	26.6	28.8	52.0	19.7	11.1	18.5	12.7
Commercial ice makers	8.5	17.9	8.5	8.1	15.5	11.5	4.1	8.0	6.6
Residential-type or compact units	10.7	18.3	7.1	12.7	15.0	8.1	5.9	7.4	5.7
Vending machines	12.7	21.9	10.3	10.4	20.7	9.8	6.4	5.7	8.5
No refrigeration	14.2	23.4	18.3	15.6	21.8	13.5	11.8	16.1	18.2
Office equipment									
(more than one may apply)			~ -						
Desktop computers	10.3	15.4	6.5	10.9	14.2	7.3	5.8	7.2	4.8
With multiple monitors	11.5	21.9	10.5	9.1	20.0	10.8	4.4	8.0	5.2
Laptop computers	12.3	17.5	6.8	10.6	15.0	7.4	5.4	8.6	6.5
Dedicated servers	9.8	19.3	8.3	10.4	16.2	10.1	4.5	8.0	7.4
Tablets charged in building	12.2	18.6	8.4	9.9	14.8	9.8	5.0	8.6	5.7
Large floor-standing office devices ^c	11.7	20.5	9.4	9.9	17.3	9.6	5.7	8.8	6.0
Smaller desktop office devices ^c	10.0	16.6	6.4	9.9	14.7	7.5	5.1	6.5	5.4
Interactive whiteboards	19.4	41.2	14.6	16.6	26.4	13.1	6.3	18.9	10.0
Televisions or video displays	9.0	16.2	7.4	10.0	14.0	9.3	5.6	7.5	6.1
Point-of-sale devices or cash registers	9.9	21.9	8.8	8.9	18.8	10.8	3.6	8.4	3.8

	RSEs for sum of consumption	RSEs for total floorspace of buildings			RSEs for energy intensity fo sum of major fuels			for	
	West South central	Mountain	Pacific	West South central	Mountain	Pacific	West South central	Mountain	Pacific
All buildings	10.5	15.6	6.1	11.5	13.1	8.1	6.2	7.7	5.8
Food preparation or serving areas in non-food service buildings (more than one may apply)									
Snack bar, concession stand, or coffee									
shop	12.9	38.9	15.1	10.5	30.0	15.1	7.4	13.9	6.5
Fast food or small restaurant	13.2	37.1	18.1	13.1	30.9	16.1	4.1	8.8	8.6
Cafeteria or large restaurant	11.0	44.5	18.5	9.5	31.2	20.8	6.4	17.7	5.8
Commercial kitchen or									
food preparation area	10.9	28.1	12.2	11.9	20.9	13.9	5.6	12.7	4.6
Small kitchen area	11.1	34.2	12.9	9.3	21.2	14.4	9.0	17.1	7.9
Separate computer areas									
(more than one may apply)									
Server closet	13.6	19.8	10.1	11.9	17.6	10.5	5.3	6.2	6.6
Data center	12.1	55.2	20.3	9.9	44.1	21.4	8.5	18.3	12.4
Computer-based training room	17.8	35.7	14.9	15.5	26.4	17.2	5.1	12.5	8.5
Student or public computer center	16.1	42.6	16.5	11.5	29.9	18.0	8.8	18.3	12.5
Window and interior lighting									
features (more than one may									
apply)									
Multipaned windows	13.0	16.7	8.7	11.9	14.1	9.3	5.3	7.2	5.8
Tinted window glass	10.8	20.5	6.0	11.3	16.9	8.8	5.8	8.3	7.0
Reflective window glass	25.7	30.5	10.8	20.7	23.0	12.8	10.6	13.2	7.7
External overhangs or awnings	12.6	23.8	9.2	12.1	19.8	11.1	4.4	7.7	7.2
Skylights or atriums	10.2	30.6	11.3	6.5	23.9	11.5	9.2	10.9	8.8
Light scheduling	12.6	21.8	9.3	10.4	17.9	9.9	5.0	7.9	7.9
Occupancy sensors	16.7	26.1	9.1	14.7	21.5	9.0	5.0	9.4	5.3
Multilevel lighting or dimming	11.2	34.8	11.5	9.0	27.8	10.1	8.9	12.1	6.2
Daylight harvesting	20.2	21.1	16.9	18.6	13.3	14.3	12.4	17.6	7.9
Plug-load control	28.8	51.1	36.2	29.7	37.3	25.8	12.5	41.2	17.8
Demand responsive lighting	36.5	30.4	29.6	42.1	21.4	34.2	14.8	24.4	24.0
Building automation system (BAS) for									
lighting	10.3	33.5	14.5	12.6	26.4	13.7	8.4	9.3	9.1
Electric vehicle (EV) charging	×								
Charging stations associated with the									
building	18.4	41.3	12.9	19.0	29.3	10.5	6.5	18.5	5.8

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

^c*Office devices* refers to any combination of printers, copiers, scanners, or FAX machines.