Table E4. Electricity consumption intensities (Btu) by end use, 2012

	Electricity energy intensity[1] (thousand Btu/square foot in buildings using electricity for the end use)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	50.0	1.7	8.3	8.1	0.5	8.7	3.7	9.1	2.1	5.2	9.1
Building floorspace (square feet)											
1,001 to 5,000	59.4	2.9	8.2	6.5	0.7	8.3	20.4	24.0	3.4	5.9	8.5
5,001 to 10,000	45.5	1.8	6.1	6.1	0.6	7.1	9.9	14.2	2.3	4.7	7.8
10,001 to 25,000	40.0	1.9	5.5	6.0	0.5	6.9	5.0	8.4	2.2	4.1	7.6
25,001 to 50,000	43.5	1.8	7.0	7.4	0.5	8.4	1.9	6.8	1.9	4.3	8.4
50,001 to 100,000	48.1	1.7	8.1	8.1	0.5	8.1	1.8	8.4	2.0	4.5	8.6
100,001 to 200,000	52.3	1.4	8.5	9.5	0.4	9.7	1.6	8.1	1.7	6.0	9.1
200,001 to 500,000	57.7	1.4	11.7	10.0	0.5	10.3	1.7	6.8	1.8	5.9	11.0
Over 500,000	62.9	1.2	13.3	11.8	0.4	11.4	2.3	3.2	2.7	6.9	12.9
Principal building activity											
Education	37.4	1.6	8.4	5.6	0.7	6.3	0.7	3.6	1.8	6.4	5.4
Food sales	166.1	2.0	5.3	9.4	0.1	12.4	14.8	117.6	1.6	2.0	9.4
Food service	153.2	4.7	18.0	17.2	3.8	10.2	54.3	62.4	4.1	2.7	11.5
Health care	87.9	1.8	17.5	19.9	0.8	14.7	4.2	4.6	4.0	8.2	16.8
Inpatient	105.8	1.6	26.2	19.3	2.3	16.7	4.6	6.0	5.1	9.0	21.1
Outpatient	64.0	2.0	6.4	20.7	0.2	11.9	2.5	2.6	2.5	7.2	11.0
Lodging	52.2	2.1	7.3	8.4	2.3	6.8	4.6	5.7	7.5	1.2	12.8
Mercantile	62.3	1.6	8.2	10.8	0.8	12.4	1.4	18.5	1.6	2.1	8.3
Retail (other than mall)	51.8	1.8	7.6	8.6	0.1	13.3	1.5	11.8	1.3	2.0	8.2
Enclosed and strip malls	72.0	1.5	8.8	12.7	1.3	11.5	1.3	23.6	1.8	2.1	8.5
Office	54.2	1.9	7.6	13.4	0.2	9.2	0.7	2.0	2.3	10.5	8.3
Public assembly	49.4	3.3	17.7	4.4	0.1	6.4	1.8	5.0	1.4	3.0	13.1
Public order and safety	50.7	1.5	11.2	3.7	2.2	10.8	2.2	2.1	2.2	5.4	13.8
Religious worship	17.8	1.1	3.6	2.9	0.1	2.1	0.7	0.9	0.9	0.8	6.2
Service	28.2	1.5	4.3	3.4	0.2	8.4	0.8	1.3	1.0	2.0	8.6
Warehouse and storage	22.6	0.7	3.4	1.2	0.1	7.0	0.1	5.4	0.6	1.5	6.2
Other	96.7	2.5	14.3	8.5	0.1	19.3	Q	8.5	1.3	22.1	25.8
Vacant	15.5	0.8	2.2	3.1	(*)	4.4	Q	1.3	0.5	1.3	6.9
Year constructed											
Before 1920	28.7	1.3	3.5	5.3	0.2	5.5	2.7	5.0	1.3	3.2	6.6
1920 to 1945	37.4	1.2	6.2	6.2	0.3	6.6	2.2	6.8	1.7	4.4	7.1
1946 to 1959	40.2	1.7	6.4	6.9	0.6	7.1	3.0	6.5	1.7	3.9	8.1
1960 to 1969	49.2	2.1	7.6	7.4	0.6	9.0	3.9	7.9	2.3	5.9	9.5
1970 to 1979	55.2	1.9	8.4	9.6	0.7	9.5	5.2	10.0	2.5	5.9	9.6
1980 to 1989	53.9	1.7	10.1	9.0	0.5	9.0	3.3	9.0	2.2	5.5	9.2
1990 to 1999	55.4	1.9	9.4	8.5	0.6	9.4	4.3	11.1	2.2	5.3	9.7
2000 to 2003	52.8	1.5	8.9	8.7	0.5	9.4	3.9	8.8	2.0	5.7	9.5
2004 to 2007	51.0	1.5	8.4	7.6	0.4	8.9	2.8	11.7	2.5	4.1	9.3
2008 to 2012	53.7	1.5	8.6	8.8	0.4	9.0	4.4	10.9	2.2	4.9	9.6

Table E4. Electricity consumption intensities (Btu) by end use, 2012

	Electricity energy intensity[1] (thousand Btu/square foot in buildings using electricity for the end use)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	50.0	1.7	8.3	8.1	0.5	8.7	3.7	9.1	2.1	5.2	9.1
Census region and division											
Northeast	49.2	2.4	5.7	9.0	0.4	8.9	3.2	8.9	1.9	5.6	9.4
New England	41.1	2.8	4.0	6.7	0.4	7.3	3.2	9.5	1.7	4.2	8.8
Middle Atlantic	52.2	2.3	6.3	9.8	0.4	9.5	3.1	8.6	1.9	6.1	9.6
Midwest	45.8	2.9	5.7	7.8	0.5	8.5	3.7	7.7	1.9	4.6	9.0
East North Central	47.4	2.9	5.7	8.2	0.5	8.9	3.5	8.0	1.9	4.7	9.4
West North Central	42.5	3.0	5.6	7.0	0.5	7.9	4.0	7.0	1.9	4.5	8.1
South	54.8	1.2	12.3	8.1	0.6	9.1	3.8	9.7	2.3	5.0	9.3
South Atlantic	55.6	1.2	12.0	8.1	0.6	8.8	3.3	10.1	2.5	5.4	9.2
East South Central	49.9	1.7	9.0	7.8	0.5	8.5	4.4	9.2	2.5	4.1	8.5
West South Central	55.7	1.1	14.4	8.2	0.6	9.7	4.6	9.2	1.9	4.8	9.8
West	46.1	1.3	5.7	7.8	0.5	7.8	4.0	9.7	2.3	5.6	8.4
Mountain	47.5	1.7	7.1	8.3	0.5	8.1	3.5	8.3	2.9	5.0	8.5
Pacific	45.5	1.2	5.3	7.6	0.5	7.7	4.3	10.3	2.2	5.8	8.4
Climate region[2]											
Very cold/Cold	45.7	2.9	4.8	8.1	0.5	8.4	3.3	8.6	2.0	4.8	9.0
Mixed-humid	51.7	1.8	8.7	8.2	0.5	9.0	3.9	9.0	2.4	5.4	9.1
Mixed-dry/Hot-dry	44.3	0.5	7.3	6.8	0.4	7.4	4.7	9.4	2.1	5.6	8.0
Hot-humid	62.7	0.5	18.3	8.9	0.6	9.8	4.0	10.6	2.2	4.7	10.0
Marine	49.8	1.6	3.2	9.7	0.5	8.7	3.0	8.9	2.1	7.6	10.7
Number of floors											
One	48.9	1.8	7.7	6.7	0.6	8.7	5.7	14.0	1.8	3.8	8.0
Two	44.4	1.7	6.7	7.1	0.4	7.8	2.2	7.4	1.9	5.3	8.0
Three	46.1	1.8	7.4	8.1	0.4	7.9	3.1	5.3	2.3	5.5	9.2
Four to nine	58.7	1.7	11.8	11.7	0.5	9.6	2.8	4.0	2.9	7.2	12.2
Ten or more	62.3	1.3	12.2	12.6	0.3	10.2	2.0	3.1	3.5	7.7	12.4
Elevators and escalators (more than one may apply)											
Any elevators	57.6	1.7	10.8	11.0	0.4	9.6	2.2	4.6	2.6	7.5	11.2
Number of elevators											
One	45.0	1.7	7.2	8.6	0.4	7.9	1.6	5.0	2.2	5.3	8.5
Two to five	59.7	1.8	10.8	11.0	0.5	9.7	2.4	4.4	2.6	9.6	11.6
Six or more	71.5	1.4	15.7	14.1	0.4	11.6	2.5	4.2	3.4	7.3	14.3
Any escalators	62.0	1.6	12.5	11.8	0.4	11.6	2.2	4.8	3.3	4.6	12.9
Number of workers (main shift)											
Fewer than 5	29.3	1.9	4.8	3.4	0.4	5.5	4.7	9.0	2.0	2.4	7.2
5 to 9	42.5	1.8	6.3	5.7	0.5	6.8	9.3	10.6	1.9	2.9	7.9
10 to 19	46.9	2.0	6.2	6.4	0.6	7.4	10.0	12.1	2.3	3.4	7.9
20 to 49	51.7	1.7	7.4	7.8	0.6	8.7	4.5	11.1	2.1	5.1	8.5
50 to 99	54.2	1.6	9.1	8.8	0.6	9.5	1.7	9.3	2.0	5.5	8.9
100 to 249	57.8	1.5	9.9	10.0	0.5	10.7	1.5	8.2	1.9	6.3	10.4
250 or more	71.1	1.6	14.1	14.6	0.5	12.1	2.2	4.4	2.8	9.2	13.0

Table E4. Electricity consumption intensities (Btu) by end use, 2012

	Electricity energy intensity[1] (thousand Btu/square foot in buildings using electricity for the end use)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	50.0	1.7	8.3	8.1	0.5	8.7	3.7	9.1	2.1	5.2	9.1
Weekly operating hours											
Fewer than 40	18.2	1.6	4.1	1.4	0.4	3.1	1.3	3.4	1.4	3.0	5.1
40 to 48	33.5	1.4	6.2	4.8	0.3	6.3	1.0	3.0	1.8	5.5	6.3
49 to 60	39.8	1.8	6.7	6.9	0.3	7.3	1.2	3.7	1.7	6.2	7.4
61 to 84	53.8	1.7	8.6	9.5	0.7	9.0	2.7	11.9	1.6	4.3	8.3
85 to 167	72.9	2.2	10.0	10.2	0.5	11.4	11.2	25.0	1.5	3.1	10.6
Open continuously	73.4	1.7	12.5	12.6	0.8	12.4	5.0	10.6	4.1	6.1	14.9
Ownership and occupancy											
Nongovernment owned	51.4	1.7	8.0	8.4	0.5	8.9	4.8	10.8	2.2	4.9	9.2
Owner occupied	51.2	1.9	8.6	7.6	0.4	8.8	5.3	10.0	2.5	4.3	9.9
Leased to tenant(s)	52.6	1.7	7.5	9.3	0.6	9.0	5.0	12.5	2.0	5.1	8.4
Owner occupied and leased	51.2	1.3	7.5	8.9	0.4	9.0	2.8	8.6	1.8	6.2	9.0
Unoccupied	8.6	Q	1.7	0.1	Q	1.9	Q	Q	Q	Q	6.2
Government owned	45.2	1.7	9.6	7.3	0.6	8.0	1.5	3.9	1.9	6.0	8.8
Federal	49.2	1.4	9.1	10.9	0.2	9.7	1.3	1.9	1.2	4.8	11.2
State	49.8	2.0	8.6	10.2	0.4	9.3	2.1	4.6	2.4	6.4	10.0
Local	42.6	1.7	10.1	5.5	0.7	7.2	1.4	3.8	1.8	6.0	7.9
Party responsible for operation and maintenance of energy systems											
Building owner	49.0	1.8	8.5	8.1	0.5	8.6	3.4	7.7	2.2	5.4	9.2
Business owner or tenant	55.7	1.5	7.1	8.2	0.6	9.2	5.3	17.6	1.7	3.6	7.9
Property management	50.5	1.3	9.1	9.9	0.3	7.5	4.4	7.2	2.8	6.0	8.5
Other	55.3	1.8	10.2	6.5	Q	8.2	5.9	12.9	2.3	3.0	9.7
Provider of direct input on energy-related equipment purchases											
Building owner	48.8	1.7	8.4	8.0	0.5	8.6	3.4	7.9	2.2	5.3	9.2
Business owner or tenant	59.4	1.7	7.8	8.7	0.7	9.6	6.5	17.9	1.8	4.1	8.5
Property management	46.0	1.8	6.7	9.5	0.4	7.6	4.3	6.8	2.2	4.0	8.0
Other	55.9	1.3	9.1	8.2	0.4	8.2	4.3	17.4	1.9	3.0	8.1
Number of establishments											
One	48.7	1.9	8.3	7.4	0.5	8.5	4.7	8.6	2.4	5.0	9.2
2 to 5	47.8	1.5	7.3	8.1	0.4	8.2	2.8	9.4	1.7	4.1	8.8
6 to 10	55.7	1.4	7.9	10.5	0.7	8.5	1.5	12.3	1.9	6.5	8.0
11 to 20	63.6	1.7	10.0	12.5	0.7	10.4	1.4	13.1	2.0	5.3	9.1
More than 20	68.6	1.3	12.6	12.4	0.7	12.6	1.3	7.4	1.9	10.2	10.1
Currently unoccupied	7.5	Q	1.6	0.1	Q	1.6	Q	Q	Q	Q	5.5
Predominant exterior wall material											
Brick, stone, or stucco	51.4	1.8	8.6	8.6	0.6	8.4	3.9	8.2	2.4	5.5	9.2
Concrete (block or poured)	53.9	1.5	9.1	8.2	0.6	9.2	3.3	12.9	2.0	4.2	9.0
Concrete panels	48.7	1.2	7.1	8.3	0.3	9.2	2.7	6.5	2.2	6.2	9.8
Siding or shingles	43.8	2.5	5.8	6.6	0.5	7.1	6.6	10.2	2.1	4.1	8.3
Metal panels	33.5	1.8	6.9	4.5	0.3	8.5	2.0	5.3	1.1	3.3	7.7
Window glass	79.8	2.5	14.0	16.5	0.2	12.8	2.0	5.7	2.5	15.9	13.2
Other	54.7	2.3	9.1	7.7	0.5	7.6	Q	15.9	1.6	5.0	10.3
No one major type	44.7	1.3	5.3	8.2	0.2	8.0	Q	7.2	1.7	4.0	9.4

Table E4. Electricity consumption intensities (Btu) by end use, 2012

	Electricity energy intensity[1] (thousand Btu/square foot in buildings using electricity for the end use)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	50.0	1.7	8.3	8.1	0.5	8.7	3.7	9.1	2.1	5.2	9.1
Predominant roof material											
Metal surfacing	38.4	1.8	7.4	4.8	0.3	8.0	3.7	8.5	1.6	3.5	7.5
Synthetic or rubber	56.2	2.0	8.5	9.7	0.5	9.6	3.5	9.7	2.2	5.8	10.1
Built-up	54.0	1.5	9.5	9.5	0.6	9.4	3.5	8.7	2.0	5.8	9.2
Slate or tile shingles	47.3	1.5	8.0	7.4	0.9	7.0	4.4	8.8	3.0	5.1	9.6
Wooden materials (including shingles)	42.8	0.9	6.2	5.6	0.6	6.3	11.4	13.7	2.4	3.4	7.3
Asphalt, fiberglass, or other shingles	45.7	1.9	7.0	6.9	0.6	7.4	4.4	8.9	2.5	4.2	8.5
Concrete	64.5	1.1	13.4	11.2	Q	10.3	2.2	8.3	2.4	11.0	11.1
Other	53.8	0.7	9.0	7.8	Q	7.7	Q	14.7	1.6	3.3	10.1
No one major type	27.4	1.2	4.1	3.8	Q	5.4	Q	Q	1.0	2.7	6.7
Roof characteristics											
Roof tilt											
Flat	56.0	1.7	9.5	9.7	0.5	9.8	3.8	8.8	2.2	5.9	9.9
Shallow pitch	44.2	1.7	6.8	6.3	0.5	7.8	3.9	11.2	1.9	4.3	7.9
Steeper pitch	37.8	1.9	6.3	5.5	0.5	5.8	3.3	6.7	2.5	3.7	7.9
Cool roof	57.2	1.5	9.5	9.5	0.6	9.7	3.1	10.3	2.1	6.0	9.8
Renovations in buildings constructed before 2008 (more than one may apply)											
Any type of renovation	52.8	1.8	8.6	8.9	0.5	8.9	3.5	8.4	2.2	5.7	9.6
Addition or annex	53.8	1.8	10.2	8.7	0.6	9.1	2.5	6.9	2.5	4.6	10.5
Reduction in floorspace	70.0	1.3	13.5	13.2	0.4	13.0	3.2	11.0	2.2	5.6	12.1
Roof replacement	54.1	1.8	8.9	9.5	0.6	9.2	3.3	7.5	2.1	5.9	10.0
Exterior wall replacement	56.8	2.1	9.7	9.1	0.7	8.7	3.0	8.9	2.0	6.8	9.9
Interior wall reconfiguration	57.2	1.8	9.4	10.4	0.5	9.5	2.9	7.3	2.3	7.5	10.1
Window replacement	49.0	1.7	8.2	8.3	0.5	8.0	3.5	5.7	2.5	6.3	9.1
HVAC equipment upgrade	55.4	1.8	9.3	9.5	0.5	9.2	3.0	8.0	2.2	6.1	10.0
Lighting upgrade	55.0	1.7	9.0	9.3	0.5	9.0	3.6	8.7	2.2	5.9	9.7
Electrical upgrade	56.1	1.8	9.5	9.4	0.6	9.0	3.6	8.2	2.3	6.5	10.4
Plumbing system upgrade	54.9	1.7	8.8	9.5	0.6	8.5	4.0	7.6	2.6	6.5	10.1
Insulation upgrade	56.8	1.9	9.5	8.8	0.6	8.4	3.6	9.8	2.6	7.1	10.1
Fire, safety, or security upgrade	56.1	1.8	9.9	9.7	0.5	8.8	3.5	7.4	2.3	6.8	10.0
Structural upgrade	60.0	1.6	11.6	9.0	0.4	8.9	3.0	8.2	2.9	7.7	11.7
Other	52.2	1.3	10.7	10.5	0.3	9.2	Q	4.5	2.1	7.7	9.1
No renovations	46.2	1.7	7.9	7.1	0.5	8.4	3.8	9.7	2.1	4.5	8.4
Buildings constructed 2008 or later	53.7	1.5	8.6	8.8	0.4	9.0	4.4	10.9	2.2	4.9	9.6
Energy sources (more than one may apply)											
Electricity	50.0	1.7	8.3	8.1	0.5	8.7	3.7	9.1	2.1	5.2	9.1
Natural gas	52.5	1.6	8.3	8.5	0.6	8.8	3.7	9.8	2.2	5.0	9.3
Fuel oil	64.5	1.9	12.3	11.3	0.5	11.1	2.5	6.1	2.6	8.0	12.8
District heat	59.1	1.6	7.3	14.1	0.6	11.5	2.8	4.0	3.3	6.9	14.1
District chilled water	63.3	1.8	7.7	14.7	0.9	12.8	3.6	4.2	3.5	8.8	15.4
Propane	49.0	2.7	7.1	6.3	0.4	8.3	4.2	11.1	2.4	3.1	9.7
Other	44.7	1.4	7.5	8.2	0.3	7.9	2.0	7.1	1.4	4.2	8.1

Table E4. Electricity consumption intensities (Btu) by end use, 2012

	Electricity energy intensity[1] (thousand Btu/square foot in buildings using electricity for the end use)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	50.0	1.7	8.3	8.1	0.5	8.7	3.7	9.1	2.1	5.2	9.1
Space-heating energy sources											
Electricity	53.9	1.7	8.8	8.3	0.6	8.9	3.5	9.8	2.2	5.2	9.0
Electricity main	57.2	2.0	10.2	8.2	0.6	9.1	4.0	10.3	2.5	6.0	9.3
Electricity secondary	50.0	1.4	7.2	8.4	0.5	8.6	3.0	9.4	1.9	4.4	8.6
Other excluding electricity	46.6	N	6.9	8.1	0.4	8.5	4.1	7.8	2.1	5.2	9.4
Buildings without heating	32.0	N	15.1	4.6	0.3	7.3	4.2	10.6	1.5	3.1	7.7
Primary space-heating energy source											
Electricity	57.2	2.0	10.2	8.2	0.6	9.1	4.0	10.3	2.5	6.0	9.3
Natural gas	48.5	1.2	7.3	7.9	0.5	8.4	3.6	9.3	1.9	4.8	8.7
Fuel oil	31.8	2.6	4.7	4.7	0.3	6.8	1.5	4.2	1.7	3.7	7.6
District heat	59.5	1.6	7.3	14.2	0.6	11.7	2.9	4.1	3.2	7.0	14.3
Propane	31.3	3.4	3.0	3.2	0.2	4.7	9.6	10.3	1.3	1.6	5.8
Other	27.2	Q	1.7	3.6	0.2	6.5	Q	4.2	1.7	2.4	6.9
Cooling energy sources											
Electricity	52.0	1.7	8.3	8.1	0.5	8.7	3.7	9.3	2.1	5.1	9.0
Other excluding electricity	59.1	1.6	N	14.1	0.7	12.6	5.1	4.5	3.9	9.0	14.7
Buildings without cooling	16.8	1.3	N	1.0	0.3	5.2	3.2	8.4	1.0	1.8	6.5
Water-heating energy sources											
Electricity	51.8	1.8	8.4	8.0	0.5	8.9	2.9	9.9	1.8	5.4	8.5
Other excluding electricity	52.7	1.8	8.5	8.9	N	8.8	4.7	8.6	2.7	5.0	10.0
Buildings without water heating	19.4	0.7	5.3	2.7	N	5.7	Q	2.5	1.2	3.1	7.0
Cooking energy sources											
Electricity	61.5	1.9	10.2	9.2	0.7	8.7	3.7	12.4	2.2	4.9	9.1
Other excluding electricity	62.9	1.6	10.7	10.0	0.9	9.0	N	16.1	2.9	3.8	10.1
Buildings without cooking	40.0	1.6	6.4	6.9	0.3	8.5	N	4.0	1.9	5.7	8.8
Energy end uses (more than one may apply)											
Buildings with space heating	51.0	1.7	8.1	8.2	0.5	8.7	3.7	9.1	2.2	5.2	9.1
Buildings with cooling	52.3	1.7	8.3	8.4	0.5	8.9	3.7	9.1	2.2	5.3	9.2
Buildings with water heating	52.2	1.8	8.4	8.4	0.5	8.8	3.7	9.3	2.2	5.2	9.2
Buildings with cooking	62.0	1.8	10.4	9.5	0.7	8.8	3.7	13.7	2.5	4.6	9.4
Buildings with manufacturing	44.9	1.3	7.1	5.7	0.3	9.7	3.8	7.1	1.0	3.2	11.2
Buildings with electricity generation	65.2	1.7	11.5	11.2	0.6	10.7	2.6	8.5	2.5	7.6	11.9
Percent of floorspace heated											
Not heated	32.0	N	15.1	4.6	0.3	7.3	4.2	10.6	1.5	3.1	7.7
1 to 50	33.0	0.5	4.2	3.7	0.2	6.3	3.5	7.8	1.2	4.3	7.3
51 to 99	54.5	1.3	9.0	8.8	0.6	9.0	3.2	11.7	2.0	4.2	9.0
100	53.4	2.1	8.6	8.9	0.6	9.1	3.8	8.5	2.4	5.7	9.5
Percent of floorspace cooled											
Not cooled	16.8	1.3	N	1.0	0.3	5.2	3.2	8.4	1.0	1.8	6.5
1 to 50	27.6	1.1	2.2	3.5	0.2	6.5	2.0	5.1	1.0	2.2	7.0
51 to 99	57.2	1.7	8.7	9.4	0.6	9.1	3.2	10.9	2.2	6.2	9.5
100	61.7	2.1	11.3	10.2	0.6	9.9	4.5	9.9	2.8	6.2	10.2

Table E4. Electricity consumption intensities (Btu) by end use, 2012

	Electricity energy intensity[1] (thousand Btu/square foot in buildings using electricity for the end use)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	50.0	1.7	8.3	8.1	0.5	8.7	3.7	9.1	2.1	5.2	9.1
Percent lit when open											
Zero	10.7	Q	Q	Q	Q	Q	Q	Q	Q	Q	8.0
1 to 50	30.7	1.3	5.0	5.3	0.4	4.0	2.6	5.0	2.0	2.5	8.5
51 to 99	51.5	1.7	8.2	8.6	0.6	8.2	3.4	9.6	2.1	5.2	8.9
100	57.2	1.9	9.6	8.8	0.5	10.8	4.2	9.9	2.2	6.0	9.6
Building never open/electricity not used	7.8	1.3	2.1	0.1	Q	Q	Q	Q	Q	Q	4.7
Percent lit during off hours											
Zero	32.0	1.7	5.6	5.0	0.3	5.4	2.3	5.3	1.5	4.6	6.7
1 to 50	52.7	1.7	8.8	8.6	0.6	9.1	3.5	9.2	2.1	5.1	9.1
51 to 100	81.2	1.8	12.0	12.9	0.7	14.2	7.0	16.1	3.5	7.1	14.5
Building always open with no "off hours"	87.0	1.4	13.8	13.7	0.5	15.1	5.6	20.0	4.8	5.8	15.5
Electricity not used	N	N	N	N	N	N	N	N	N	N	N
Heating equipment (more than one may apply)											
Heat pumps	51.7	1.3	9.6	7.3	0.6	8.2	2.2	8.1	2.9	5.3	8.8
Furnaces	41.9	2.2	5.6	6.1	0.4	6.7	4.4	8.9	2.1	3.9	7.3
Individual space heaters	44.6	1.8	6.5	7.2	0.5	8.1	2.7	7.1	2.1	4.3	8.6
District heat	59.1	1.6	7.3	14.0	0.6	11.6	2.8	4.0	3.3	6.9	14.1
Boilers	53.2	1.3	9.8	9.4	0.5	8.8	2.1	5.8	2.4	6.2	10.2
Packaged heating units	53.5	1.8	8.4	8.5	0.5	8.8	4.4	11.2	1.9	4.7	8.8
Other	83.3	3.1	6.0	11.3	0.7	9.8	4.0	39.8	1.2	2.1	8.4
Cooling equipment (more than one may apply)											
Residential-type central air conditioners	43.1	1.7	6.3	5.1	0.5	7.3	3.2	11.1	2.0	3.4	7.5
Heat pumps	51.4	1.3	9.0	7.4	0.6	8.3	2.0	8.5	2.7	5.4	8.6
Individual air conditioners	44.0	1.7	7.1	6.5	0.6	7.2	2.7	6.2	2.8	4.0	8.6
District chilled water	63.3	1.8	7.7	14.7	0.9	12.8	3.6	4.2	3.5	8.8	15.4
Central chillers	65.7	1.5	12.8	12.3	0.4	10.6	2.2	4.9	2.5	8.7	12.4
Packaged air conditioning units	54.9	1.7	8.7	9.2	0.5	9.0	4.3	11.0	1.9	4.6	8.9
Swamp coolers	51.1	1.9	6.9	7.4	0.6	8.4	7.5	13.3	1.7	3.0	7.9
Other	97.8	Q	11.9	15.2	Q	15.4	Q	4.5	1.3	Q	14.2
Main equipment replaced since 1990 (more than one may apply)											
Heating	48.0	1.8	7.5	7.3	0.6	7.8	3.7	9.1	2.2	5.2	8.2
Cooling	49.5	1.8	8.0	7.7	0.6	7.9	3.5	8.5	2.3	5.4	8.5
Water-heating equipment											
Centralized system	52.3	2.0	8.4	8.3	0.6	8.8	4.8	9.0	2.4	5.1	9.6
Distributed system	42.5	1.5	6.8	6.6	0.3	8.3	2.8	7.1	1.5	4.5	7.8
Combination of centralized and distributed system	58.7	1.5	9.7	9.8	0.6	9.4	2.2	11.3	2.0	6.0	9.1

Table E4. Electricity consumption intensities (Btu) by end use, 2012

	Electricity energy intensity[1] (thousand Btu/square foot in buildings using electricity for the end use)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	50.0	1.7	8.3	8.1	0.5	8.7	3.7	9.1	2.1	5.2	9.1
Lighting equipment types (more than one may apply)											
Incandescent	54.3	1.7	9.5	8.9	0.6	8.9	3.1	9.6	2.3	5.0	9.4
Standard fluorescent	51.0	1.7	8.4	8.3	0.5	8.7	3.6	9.1	2.1	5.2	9.2
Compact fluorescent	56.4	1.8	9.7	9.5	0.6	9.2	3.6	9.0	2.4	5.8	9.7
High-intensity discharge (HID)	55.7	1.5	10.2	9.3	0.5	9.8	2.2	8.7	2.1	4.9	10.1
Halogen	58.2	1.7	9.8	9.7	0.6	9.5	3.1	10.3	2.3	5.0	10.0
LED	64.1	1.7	11.0	11.2	0.6	10.0	2.9	11.9	2.4	5.3	10.9
Other	72.9	Q	12.9	12.1	Q	9.8	3.6	13.9	3.0	5.4	11.8
Refrigeration equipment (more than one may apply)											
Any refrigeration	53.3	1.7	8.6	8.5	0.5	8.8	3.7	9.1	2.2	5.1	9.2
Walk-in units	72.9	1.8	11.6	10.9	0.8	10.0	4.8	19.3	2.6	4.7	10.3
Cases or cabinets	69.2	1.8	10.4	10.7	0.8	9.8	4.3	18.2	2.4	4.5	10.0
Large cold storage areas	80.1	1.1	9.6	8.8	0.6	10.0	4.1	34.7	1.7	3.1	9.8
Commercial ice makers	68.1	1.8	11.5	10.9	0.7	10.0	4.4	14.0	2.8	5.3	10.6
Residential-type or compact units	49.8	1.7	8.3	8.3	0.5	8.6	2.8	6.6	2.1	5.4	9.1
Vending machines	57.6	1.7	9.7	9.8	0.6	10.0	2.4	8.6	2.3	5.6	10.2
No refrigeration	28.3	1.6	5.8	4.9	0.3	7.6	Q	N	1.7	5.2	7.9
Office equipment (more than one may apply)											
Desktop computers	52.1	1.7	8.4	8.4	0.5	8.9	3.6	8.9	2.1	5.2	9.2
With flat screen monitors	52.2	1.7	8.5	8.5	0.5	8.9	3.6	8.9	2.1	5.2	9.2
With multiple monitors	57.7	1.6	9.8	10.4	0.5	9.6	2.4	7.3	2.2	7.5	10.0
Laptop computers	52.0	1.7	8.9	8.8	0.5	9.0	2.3	7.3	2.1	5.7	9.4
Dedicated servers	55.5	1.7	9.1	9.3	0.5	9.3	2.7	8.5	2.2	6.4	9.5
Laser printers	53.8	1.7	8.7	9.0	0.5	9.1	2.9	8.6	2.3	5.8	9.4
Inkjet printers	49.3	1.8	8.3	7.6	0.5	8.4	4.2	8.5	1.8	4.5	8.8
FAX machines	52.7	1.7	8.5	8.7	0.5	9.2	3.1	8.9	2.1	5.2	9.2
Photocopiers	52.3	1.7	8.8	8.9	0.5	9.1	2.1	7.0	2.2	5.8	9.5
Number of desktop computers											
None	28.6	2.2	6.3	3.7	0.6	5.5	7.2	12.3	2.6	Q	7.5
1 to 4	44.7	1.8	5.8	5.4	0.5	6.8	11.9	14.3	1.9	1.4	8.2
5 to 9	48.4	1.7	6.5	6.6	0.5	8.2	5.2	13.0	2.1	2.8	8.5
10 to 19	46.9	1.8	6.4	7.5	0.5	8.4	2.9	9.5	1.8	4.4	8.3
20 to 49	54.7	1.7	8.9	9.0	0.6	10.0	2.2	10.1	2.2	4.2	9.6
50 to 99	49.2	1.9	8.7	8.8	0.5	9.3	1.6	5.9	1.9	5.0	8.7
100 to 249	56.0	1.5	8.8	10.1	0.6	10.4	1.4	5.1	2.5	8.4	10.3
250 or more	65.5	1.4	14.3	12.6	0.3	10.1	1.7	3.1	2.4	11.5	10.9

Table E4. Electricity consumption intensities (Btu) by end use, 2012

	Electricity energy intensity[1] (thousand Btu/square foot in buildings using electricity for the end use)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	50.0	1.7	8.3	8.1	0.5	8.7	3.7	9.1	2.1	5.2	9.1
Number of laptop computers											
None	43.9	1.9	6.2	5.9	0.5	7.6	10.6	15.9	2.2	2.8	8.1
1 to 4	44.0	1.9	6.8	6.0	0.5	7.8	4.4	9.8	1.9	2.8	8.3
5 to 9	51.6	1.4	8.2	8.9	0.6	9.7	2.4	9.5	1.9	3.9	9.1
10 to 19	53.4	1.9	9.5	9.4	0.6	9.0	2.0	8.1	2.0	4.6	9.3
20 to 49	54.5	1.5	8.3	9.9	0.6	9.4	1.8	6.1	2.6	7.6	9.9
50 to 99	55.7	1.6	11.1	10.1	0.4	9.8	1.6	4.3	2.0	7.1	10.5
100 to 249	59.0	1.4	11.2	11.1	0.4	9.6	1.4	3.4	2.3	11.7	10.2
250 or more	67.1	1.7	14.3	13.1	0.4	10.3	1.5	3.3	2.7	10.8	11.3
Number of dedicated servers											
None	40.5	1.9	6.8	5.9	0.6	7.5	6.4	10.3	2.1	2.5	8.3
1 to 4	49.7	1.7	7.4	7.8	0.5	8.7	3.4	9.8	2.0	4.0	8.7
5 to 9	55.0	1.6	8.9	9.5	0.7	9.4	1.8	9.2	2.0	5.6	9.0
10 to 19	65.3	1.6	12.3	13.0	0.4	11.0	1.9	6.3	2.8	8.9	11.3
20 to 49	63.7	1.7	13.8	11.9	0.3	10.5	1.8	3.6	2.4	9.6	10.8
50 or more	88.0	1.6	17.1	14.5	0.4	11.9	2.0	4.1	2.7	23.3	14.0
Number of photocopiers											
None	44.6	1.9	7.0	6.1	0.6	7.6	10.6	15.3	1.9	3.1	8.1
One	42.9	1.7	6.3	6.0	0.5	7.4	3.3	9.3	1.8	2.9	8.3
2 to 4	49.1	1.8	7.9	8.2	0.5	8.8	1.6	7.3	2.2	5.2	8.5
5 to 9	55.5	1.5	9.1	9.5	0.6	10.3	1.4	6.8	1.9	7.5	9.3
10 or more	67.3	1.5	13.9	13.4	0.4	11.0	2.0	3.9	3.0	9.5	12.5
Number of TVs or video displays											
None	34.5	1.6	5.1	4.9	0.3	6.9	6.6	9.3	0.8	4.2	7.5
One	41.2	1.5	5.2	6.0	0.3	7.5	5.7	9.6	1.3	3.4	7.7
2 to 4	48.9	1.7	7.8	7.6	0.5	8.9	4.6	9.2	1.6	4.2	8.9
5 to 9	62.9	2.5	10.1	9.9	0.6	9.6	5.4	11.8	2.0	7.3	9.6
10 to 19	61.3	1.7	10.7	11.1	0.7	10.3	2.8	9.8	2.0	6.7	9.7
20 to 49	59.1	1.6	10.3	10.6	0.8	10.0	1.3	9.5	2.6	5.8	8.9
50 to 99	60.3	2.0	9.8	9.9	0.9	9.9	1.7	6.7	4.3	8.7	10.4
100 or more	67.3	1.4	14.3	11.5	0.6	9.6	3.3	5.5	6.1	4.9	13.8
Food preparation or serving areas in non-food service buildings (more than one may apply)											
Snack bar or concession stand	65.9	1.7	12.8	10.0	0.6	9.4	2.1	13.3	2.6	5.2	10.4
Fast food or small restaurant	78.2	1.3	12.6	12.4	0.8	11.6	2.3	20.6	3.0	4.4	11.3
Cafeteria or large restaurant	58.5	1.6	12.4	10.2	0.6	9.1	1.8	6.9	2.7	5.7	9.9
Commercial kitchen/ food preparation area	61.7	1.7	11.5	9.7	0.7	8.8	2.3	12.4	2.9	4.0	10.2
Small kitchen area	49.3	1.6	9.5	7.5	0.5	7.3	1.8	7.7	2.4	4.0	9.1
Separate computer areas (more than one may apply)											
Data center or server farm	73.3	1.9	16.2	12.7	0.3	11.2	1.9	4.3	2.8	13.6	12.4
Computer-based training room	57.7	1.5	11.3	10.0	0.5	9.8	1.6	7.1	2.2	6.9	9.5
Student or public computer center	48.3	1.7	9.8	7.9	0.7	7.7	1.6	5.7	2.5	5.5	8.3

Table E4. Electricity consumption intensities (Btu) by end use, 2012

	Electricity energy intensity[1] (thousand Btu/square foot in buildings using electricity for the end use)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	50.0	1.7	8.3	8.1	0.5	8.7	3.7	9.1	2.1	5.2	9.1
HVAC conservation features (more than one may apply)											
Economizer cycle	59.8	1.8	9.6	11.1	0.5	10.2	2.7	8.3	2.2	6.5	10.7
Regular HVAC maintenance	54.6	1.7	8.9	9.0	0.5	9.3	3.6	9.2	2.2	5.6	9.6
Building automation system (BAS)[3]	61.7	1.7	10.9	10.9	0.5	10.3	2.4	8.9	2.2	6.9	10.8
Window and interior lighting features (more than one may apply)											
Multipaned windows	53.1	1.9	8.4	8.7	0.6	8.9	3.8	9.5	2.3	5.4	9.3
Tinted window glass	55.2	1.6	9.5	9.2	0.6	9.4	3.2	9.1	2.2	5.6	9.6
Reflective window glass	64.7	1.8	11.3	11.1	0.5	10.3	2.5	10.5	2.6	7.6	10.5
External overhangs or awnings	58.5	1.7	9.3	9.3	0.7	9.3	4.6	13.0	2.3	5.1	9.3
Skylights or atriums	51.2	1.4	9.1	9.4	0.5	9.0	2.2	7.0	2.1	4.9	9.7
Light scheduling	61.0	1.7	10.0	10.6	0.6	9.4	2.9	11.6	2.3	6.2	10.0
Occupancy sensors	57.9	1.6	9.8	10.2	0.5	9.2	2.4	9.3	2.2	6.4	10.4
Multi-level lighting or dimming	63.9	1.9	10.7	11.1	0.6	9.1	3.1	13.1	2.7	5.0	10.6
Daylight harvesting	60.7	1.6	10.4	11.3	0.6	9.9	2.6	10.8	2.0	4.8	10.7
Demand responsive lighting	57.4	1.4	8.8	9.6	0.8	9.4	1.8	14.8	2.1	3.5	8.7
Building automation system (BAS) for lighting[3]	67.6	1.6	11.1	12.0	0.7	10.8	2.3	14.1	1.7	5.9	10.4
Equipment usage reduced when building not in full use (more than one may apply)											
Heating	48.2	1.8	8.0	8.0	0.5	8.1	2.9	8.5	1.9	4.9	8.4
Cooling	49.2	1.7	8.3	8.1	0.5	8.2	3.0	8.4	1.9	4.9	8.4
Lighting	49.4	1.7	8.2	8.1	0.5	8.5	3.5	8.6	2.1	5.0	8.9
Annual consumption (kilowatthours)											
10,000 or less	4.5	0.7	1.1	0.4	0.1	1.2	0.4	0.4	0.4	0.7	1.9
10,001 to 50,000	16.2	1.1	2.4	2.0	0.2	3.4	1.1	1.6	1.1	2.1	4.3
50,001 to 100,000	28.0	1.7	4.0	3.7	0.3	5.4	3.1	4.2	1.6	3.3	6.4
100,001 to 500,000	45.3	1.8	6.0	6.3	0.5	7.4	6.7	11.5	2.2	3.9	7.7
500,001 to 1,000,000	55.9	1.9	8.6	8.8	0.8	8.7	6.3	9.5	2.8	5.6	9.3
1,000,001 to 5,000,000	62.3	1.7	9.7	10.8	0.5	10.8	2.7	12.2	2.1	5.2	10.4
Over 5,000,000	88.5	2.0	18.7	15.5	0.7	15.2	2.5	8.3	2.9	10.7	16.7

Table E4. Electricity consumption intensities (Btu) by end use, 2012

	Electricity energy intensity[1] (thousand Btu/square foot in buildings using electricity for the end use)										
	Total	Space heating	Cooling	Ventilation	Water heating	Lighting	Cooking	Refrigeration	Office equipment	Computing	Other
All buildings	50.0	1.7	8.3	8.1	0.5	8.7	3.7	9.1	2.1	5.2	9.1

[1]The electricity intensity calculation (electricity consumption for the end use divided by the floorspace in buildings that use electricity for the particular end use) differs from the calculation used in the 2003 CBECS tables, in which the intensities were not conditional on the presence of the end use; the 2003 CBECS denominator was total floorspace in all buildings that used electricity. In this table, the intensities for each end use do not sum to the total electricity intensity, whereas they did in the 2003 CBECS table.

[2]These climate regions were created by the Building America program, sponsored by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE).

[3]In earlier CBECS publications, BAS was referred to as *Energy Management and Control System (EMCS).*

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 20 buildings were sampled.

N = No cases in reporting sample.

(*) = Value rounds to zero in the units displayed.

Notes: ● Because of rounding, data may not sum to totals. ● See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from http://www.eia.gov/consumption/commercial/data/2012/ ● Site electricity is the amount of electricity delivered to commercial builidngs. Primary electricity, which is not included in the *Total of major fuels* category, is site electricity plus the conversion losses in the generation, transmission, and distribution processes. ● Statistics for the *Energy end uses* category represent total consumption in buildings that have the end use, not consumption specifically for that particular end use. ● HVAC = Heating, ventilation, and air conditioning.

Source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Forms EIA-871A and E of the 2012 Commercial Buildings Energy Consumption Survey.