

Table A5. Commercial sector key indicators and consumption
(quadrillion Btu per year, unless otherwise noted)

Key indicators and consumption	Reference case							Annual growth 2012-2040 (percent)
	2011	2012	2020	2025	2030	2035	2040	
Key indicators								
Total floorspace (billion square feet)								
Surviving	80.2	80.8	87.1	91.9	96.2	100.8	106.5	1.0%
New additions	1.5	1.6	2.1	2.0	2.0	2.3	2.4	1.6%
Total	81.7	82.4	89.1	93.9	98.2	103.1	108.9	1.0%
Energy consumption intensity (thousand Btu per square foot)								
Delivered energy consumption	105.2	100.7	98.5	96.7	95.6	94.6	93.9	-0.3%
Electricity related losses	115.7	113.2	104.8	103.1	101.3	99.4	98.0	-0.5%
Total energy consumption	220.9	213.8	203.3	199.9	196.9	194.0	191.8	-0.4%
Delivered energy consumption by fuel								
Purchased electricity								
Space heating ¹	0.17	0.15	0.16	0.16	0.15	0.15	0.14	-0.1%
Space cooling ¹	0.55	0.55	0.51	0.53	0.53	0.55	0.57	0.1%
Water heating ¹	0.09	0.09	0.09	0.09	0.09	0.08	0.08	-0.4%
Ventilation	0.51	0.52	0.55	0.57	0.59	0.60	0.62	0.6%
Cooking	0.02	0.02	0.02	0.02	0.02	0.02	0.02	-0.3%
Lighting	0.96	0.94	0.88	0.88	0.87	0.85	0.84	-0.4%
Refrigeration	0.39	0.38	0.37	0.37	0.38	0.39	0.41	0.2%
Office equipment (PC)	0.13	0.12	0.07	0.05	0.04	0.03	0.02	-5.6%
Office equipment (non-PC)	0.22	0.22	0.24	0.27	0.31	0.35	0.38	2.0%
Other uses ²	1.50	1.53	1.80	2.00	2.20	2.41	2.63	2.0%
Delivered energy	4.53	4.52	4.69	4.94	5.18	5.42	5.72	0.8%
Natural gas								
Space heating ¹	1.72	1.54	1.71	1.68	1.64	1.59	1.54	0.0%
Space cooling ¹	0.04	0.04	0.04	0.04	0.04	0.04	0.04	-0.7%
Water heating ¹	0.47	0.48	0.50	0.51	0.52	0.52	0.53	0.3%
Cooking	0.19	0.20	0.21	0.22	0.23	0.23	0.24	0.7%
Other uses ³	0.81	0.70	0.78	0.84	0.94	1.09	1.30	2.2%
Delivered energy	3.22	2.96	3.23	3.29	3.35	3.48	3.65	0.7%
Distillate fuel oil								
Space heating ¹	0.15	0.13	0.14	0.13	0.12	0.11	0.11	-0.8%
Water heating ¹	0.03	0.03	0.04	0.05	0.05	0.06	0.06	2.5%
Other uses ⁴	0.23	0.24	0.21	0.21	0.21	0.20	0.20	-0.7%
Delivered energy	0.42	0.40	0.40	0.39	0.38	0.37	0.37	-0.3%
Marketed renewables (biomass)	0.11	0.13	0.13	0.13	0.13	0.13	0.13	0.0%
Other fuels ⁵	0.31	0.28	0.33	0.33	0.34	0.35	0.36	0.9%
Delivered energy consumption by end use								
Space heating ¹	2.04	1.82	2.01	1.97	1.91	1.85	1.79	-0.1%
Space cooling ¹	0.59	0.60	0.55	0.56	0.57	0.58	0.60	0.0%
Water heating ¹	0.59	0.60	0.63	0.65	0.66	0.66	0.67	0.4%
Ventilation	0.51	0.52	0.55	0.57	0.59	0.60	0.62	0.6%
Cooking	0.21	0.22	0.23	0.24	0.25	0.26	0.26	0.6%
Lighting	0.96	0.94	0.88	0.88	0.87	0.85	0.84	-0.4%
Refrigeration	0.39	0.38	0.37	0.37	0.38	0.39	0.41	0.2%
Office equipment (PC)	0.13	0.12	0.07	0.05	0.04	0.03	0.02	-5.6%
Office equipment (non-PC)	0.22	0.22	0.24	0.27	0.31	0.35	0.38	2.0%
Other uses ⁶	2.96	2.88	3.26	3.52	3.81	4.18	4.62	1.7%
Delivered energy	8.60	8.29	8.78	9.08	9.38	9.75	10.22	0.7%

Table A5. Commercial sector key indicators and consumption (continued)
(quadrillion Btu per year, unless otherwise noted)

Key indicators and consumption	Reference case							Annual growth 2012-2040 (percent)
	2011	2012	2020	2025	2030	2035	2040	
Electricity related losses	9.46	9.32	9.34	9.69	9.94	10.24	10.66	0.5%
Total energy consumption by end use								
Space heating ¹	2.40	2.13	2.33	2.28	2.20	2.13	2.06	-0.1%
Space cooling ¹	1.73	1.74	1.57	1.59	1.60	1.62	1.66	-0.2%
Water heating ¹	0.78	0.80	0.81	0.82	0.83	0.82	0.82	0.1%
Ventilation	1.58	1.58	1.64	1.69	1.71	1.73	1.77	0.4%
Cooking	0.26	0.27	0.28	0.28	0.29	0.30	0.30	0.4%
Lighting	2.95	2.87	2.63	2.60	2.54	2.45	2.41	-0.6%
Refrigeration	1.20	1.17	1.10	1.10	1.11	1.13	1.16	0.0%
Office equipment (PC)	0.39	0.35	0.20	0.15	0.11	0.08	0.07	-5.8%
Office equipment (non-PC)	0.69	0.67	0.72	0.80	0.90	1.00	1.10	1.8%
Other uses ⁶	6.08	6.04	6.85	7.45	8.04	8.73	9.54	1.6%
Total	18.05	17.61	18.12	18.77	19.32	19.99	20.88	0.6%
Nonmarketed renewable fuels⁷								
Solar thermal	0.08	0.08	0.09	0.09	0.09	0.10	0.11	1.0%
Solar photovoltaic	0.03	0.05	0.10	0.12	0.15	0.19	0.24	5.9%
Wind	0.00	0.00	0.00	0.00	0.00	0.01	0.01	8.3%
Total	0.11	0.13	0.18	0.21	0.24	0.29	0.35	3.7%
Heating degree days								
New England	6,082	5,541	6,045	5,975	5,905	5,835	5,763	0.1%
Middle Atlantic	5,405	4,886	5,307	5,229	5,152	5,076	5,000	0.1%
East North Central	6,163	5,350	5,933	5,867	5,801	5,735	5,669	0.2%
West North Central	6,635	5,537	6,226	6,170	6,112	6,053	5,992	0.3%
South Atlantic.....	2,568	2,297	2,588	2,551	2,516	2,481	2,448	0.2%
East South Central.....	3,358	2,896	3,258	3,218	3,177	3,135	3,093	0.2%
West South Central.....	2,145	1,683	1,924	1,870	1,815	1,761	1,707	0.1%
Mountain.....	5,223	4,445	4,660	4,586	4,508	4,428	4,347	-0.1%
Pacific.....	3,532	3,150	3,244	3,267	3,290	3,314	3,339	0.2%
United States	4,258	3,712	4,015	3,945	3,877	3,810	3,745	0.0%
Cooling degree days								
New England	568	592	565	583	601	620	638	0.3%
Middle Atlantic	885	863	848	875	903	929	956	0.4%
East North Central	855	982	825	835	846	856	867	-0.4%
West North Central	1,064	1,231	1,024	1,032	1,041	1,051	1,061	-0.5%
South Atlantic.....	2,267	2,184	2,208	2,244	2,280	2,316	2,350	0.3%
East South Central.....	1,740	1,780	1,795	1,829	1,863	1,897	1,931	0.3%
West South Central.....	3,067	2,903	2,880	2,948	3,017	3,086	3,155	0.3%
Mountain.....	1,506	1,664	1,661	1,719	1,779	1,841	1,905	0.5%
Pacific.....	767	917	860	861	861	861	861	-0.2%
United States	1,481	1,514	1,488	1,530	1,572	1,614	1,656	0.3%

¹Includes fuel consumption for district services.

²Includes (but is not limited to) miscellaneous uses such as transformers, medical imaging and other medical equipment, elevators, escalators, off-road electric vehicles, laboratory fume hoods, laundry equipment, coffee brewers, and water services.

³Includes miscellaneous uses, such as pumps, emergency generators, combined heat and power in commercial buildings, and manufacturing performed in commercial buildings.

⁴Includes miscellaneous uses, such as cooking, emergency generators, and combined heat and power in commercial buildings.

⁵Includes residual fuel oil, propane, coal, motor gasoline, and kerosene.

⁶Includes (but is not limited to) miscellaneous uses such as transformers, medical imaging and other medical equipment, elevators, escalators, off-road electric vehicles, laboratory fume hoods, laundry equipment, coffee brewers, water services, pumps, emergency generators, combined heat and power in commercial buildings, manufacturing performed in commercial buildings, and cooking (distillate), plus residual fuel oil, propane, coal, motor gasoline, kerosene, and marketed renewable fuels (biomass).

⁷Consumption determined by using the fossil fuel equivalent of 9,716 Btu per kilowatthour.

Btu = British thermal unit.

PC = Personal computer.

Note: Totals may not equal sum of components due to independent rounding. Data for 2011 and 2012 are model results and may differ from official EIA data reports.

Sources: 2011 and 2012 consumption based on: U.S. Energy Information Administration (EIA), *Monthly Energy Review*, DOE/EIA-0035(2013/09) (Washington, DC, September 2013). 2011 and 2012 degree days based on state-level data from the National Oceanic and Atmospheric Administration's Climatic Data Center and Climate Prediction Center. Projections: EIA, AEO2014 National Energy Modeling System run REF2014.D102413A.