

Table A4. Residential sector key indicators and consumption
(quadrillion Btu per year, unless otherwise noted)

Key indicators and consumption	Reference case							Annual growth 2013-2040 (percent)
	2012	2013	2020	2025	2030	2035	2040	
Key indicators								
Households (millions)								
Single-family	79.3	79.7	84.5	88.4	92.1	95.4	98.6	0.8%
Multifamily	28.2	28.4	30.4	32.1	33.9	35.7	37.5	1.0%
Mobile homes	6.4	6.3	5.5	5.3	5.1	4.9	4.8	-1.0%
Total	113.9	114.3	120.5	125.8	131.1	136.0	141.0	0.8%
Average house square footage	1,670	1,678	1,733	1,768	1,800	1,829	1,855	0.4%
Energy intensity								
(million Btu per household)								
Delivered energy consumption	90.2	99.0	88.2	83.5	80.6	77.6	75.0	-1.0%
Total energy consumption	174.3	184.6	169.1	161.0	156.2	151.9	148.3	-0.8%
(thousand Btu per square foot)								
Delivered energy consumption	54.0	59.0	50.9	47.3	44.8	42.5	40.4	-1.4%
Total energy consumption	104.3	110.0	97.6	91.1	86.8	83.1	79.9	-1.2%
Delivered energy consumption by fuel								
Purchased electricity								
Space heating	0.29	0.40	0.35	0.34	0.33	0.32	0.31	-1.0%
Space cooling	0.83	0.66	0.79	0.82	0.88	0.94	1.00	1.5%
Water heating	0.44	0.44	0.46	0.47	0.48	0.48	0.48	0.2%
Refrigeration	0.37	0.36	0.34	0.33	0.33	0.35	0.36	0.0%
Cooking	0.11	0.11	0.11	0.12	0.13	0.14	0.14	1.1%
Clothes dryers	0.20	0.20	0.21	0.22	0.23	0.24	0.25	0.7%
Freezers	0.08	0.08	0.07	0.07	0.07	0.06	0.06	-0.7%
Lighting	0.64	0.59	0.43	0.38	0.34	0.29	0.27	-2.9%
Clothes washers ¹	0.03	0.03	0.02	0.02	0.02	0.02	0.02	-2.0%
Dishwashers ¹	0.10	0.09	0.10	0.10	0.11	0.12	0.12	1.0%
Televisions and related equipment ²	0.33	0.33	0.32	0.32	0.34	0.36	0.37	0.5%
Computers and related equipment ³	0.12	0.12	0.10	0.08	0.07	0.06	0.05	-3.1%
Furnace fans and boiler circulation pumps	0.09	0.13	0.11	0.11	0.10	0.10	0.09	-1.3%
Other uses ⁴	1.06	1.19	1.44	1.53	1.65	1.77	1.89	1.7%
Delivered energy	4.69	4.75	4.86	4.92	5.08	5.23	5.42	0.5%
Natural gas								
Space heating	2.52	3.32	2.90	2.80	2.76	2.69	2.61	-0.9%
Space cooling	0.02	0.02	0.02	0.02	0.02	0.02	0.02	-0.2%
Water heating	1.20	1.20	1.21	1.22	1.24	1.23	1.19	0.0%
Cooking	0.21	0.21	0.21	0.21	0.22	0.22	0.22	0.3%
Clothes dryers	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.5%
Other uses ⁵	0.25	0.25	0.24	0.23	0.23	0.22	0.21	-0.6%
Delivered energy	4.25	5.05	4.63	4.54	4.52	4.43	4.31	-0.6%
Distillate fuel oil								
Space heating	0.43	0.44	0.36	0.32	0.28	0.25	0.22	-2.5%
Water heating	0.05	0.05	0.03	0.03	0.02	0.02	0.01	-4.7%
Other uses ⁶	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-0.5%
Delivered energy	0.49	0.50	0.40	0.35	0.31	0.27	0.24	-2.7%
Propane								
Space heating	0.26	0.30	0.20	0.18	0.17	0.15	0.14	-2.8%
Water heating	0.07	0.06	0.05	0.04	0.04	0.03	0.03	-3.0%
Cooking	0.03	0.03	0.03	0.03	0.02	0.02	0.02	-0.9%
Other uses ⁶	0.04	0.04	0.05	0.05	0.05	0.06	0.06	1.5%
Delivered energy	0.40	0.43	0.32	0.30	0.28	0.26	0.25	-2.0%
Marketed renewables (wood) ⁷	0.44	0.58	0.41	0.39	0.38	0.36	0.35	-1.8%
Kerosene	0.01	0.01	0.01	0.01	0.01	0.00	0.00	-3.0%

Table A4. Residential sector key indicators and consumption (continued)
(quadrillion Btu per year, unless otherwise noted)

Key indicators and consumption	Reference case							Annual growth 2013-2040 (percent)
	2012	2013	2020	2025	2030	2035	2040	
Delivered energy consumption by end use								
Space heating.....	3.95	5.05	4.23	4.04	3.92	3.78	3.63	-1.2%
Space cooling.....	0.86	0.68	0.81	0.84	0.90	0.96	1.02	1.5%
Water heating.....	1.76	1.76	1.75	1.76	1.78	1.75	1.71	-0.1%
Refrigeration.....	0.37	0.36	0.34	0.33	0.33	0.35	0.36	0.0%
Cooking.....	0.35	0.34	0.35	0.36	0.37	0.38	0.39	0.4%
Clothes dryers.....	0.25	0.25	0.26	0.27	0.28	0.29	0.30	0.7%
Freezers.....	0.08	0.08	0.07	0.07	0.07	0.06	0.06	-0.7%
Lighting.....	0.64	0.59	0.43	0.38	0.34	0.29	0.27	-2.9%
Clothes washers ¹	0.03	0.03	0.02	0.02	0.02	0.02	0.02	-2.0%
Dishwashers ¹	0.10	0.09	0.10	0.10	0.11	0.12	0.12	1.0%
Televisions and related equipment ²	0.33	0.33	0.32	0.32	0.34	0.36	0.37	0.5%
Computers and related equipment ³	0.12	0.12	0.10	0.08	0.07	0.06	0.05	-3.1%
Furnace fans and boiler circulation pumps.....	0.09	0.13	0.11	0.11	0.10	0.10	0.09	-1.3%
Other uses ⁸	1.36	1.49	1.73	1.82	1.94	2.05	2.17	1.4%
Delivered energy.....	10.28	11.32	10.63	10.51	10.57	10.56	10.57	-0.3%
Electricity related losses.....	9.57	9.79	9.75	9.74	9.91	10.10	10.33	0.2%
Total energy consumption by end use								
Space heating.....	4.53	5.88	4.93	4.71	4.56	4.39	4.21	-1.2%
Space cooling.....	2.56	2.05	2.38	2.47	2.62	2.79	2.93	1.3%
Water heating.....	2.66	2.68	2.69	2.70	2.72	2.68	2.62	-0.1%
Refrigeration.....	1.12	1.12	1.02	0.99	0.99	1.01	1.06	-0.2%
Cooking.....	0.56	0.56	0.58	0.60	0.62	0.64	0.66	0.6%
Clothes dryers.....	0.66	0.67	0.69	0.70	0.73	0.75	0.78	0.5%
Freezers.....	0.24	0.24	0.22	0.20	0.19	0.19	0.19	-0.9%
Lighting.....	1.94	1.80	1.29	1.13	1.00	0.85	0.77	-3.1%
Clothes washers ¹	0.09	0.09	0.07	0.05	0.05	0.05	0.05	-2.2%
Dishwashers ¹	0.29	0.29	0.29	0.30	0.32	0.34	0.36	0.8%
Televisions and related equipment ²	1.01	1.01	0.97	0.96	1.00	1.05	1.09	0.3%
Computers and related equipment ³	0.38	0.37	0.29	0.24	0.20	0.18	0.15	-3.3%
Furnace fans and boiler circulation pumps.....	0.28	0.40	0.34	0.33	0.31	0.28	0.27	-1.5%
Other uses ⁸	3.52	3.95	4.62	4.86	5.17	5.46	5.78	1.4%
Total.....	19.85	21.10	20.38	20.25	20.48	20.66	20.91	0.0%
Nonmarketed renewables⁹								
Geothermal heat pumps.....	0.01	0.01	0.02	0.02	0.03	0.03	0.03	4.1%
Solar hot water heating.....	0.01	0.01	0.01	0.01	0.01	0.01	0.01	1.8%
Solar photovoltaic.....	0.02	0.04	0.09	0.13	0.18	0.24	0.29	8.0%
Wind.....	0.00	0.00	0.01	0.01	0.01	0.01	0.01	6.9%
Total.....	0.04	0.06	0.13	0.17	0.23	0.28	0.35	7.0%
Heating degree days¹⁰.....	3,772	4,469	4,119	4,042	3,966	3,893	3,820	-0.6%
Cooling degree days¹⁰.....	1,494	1,307	1,467	1,517	1,568	1,618	1,670	0.9%

¹Does not include water heating portion of load.

²Includes televisions, set-top boxes, home theater systems, DVD players, and video game consoles.

³Includes desktop and laptop computers, monitors, and networking equipment.

⁴Includes small electric devices, heating elements, and motors not listed above. Electric vehicles are included in the transportation sector.

⁵Includes such appliances as outdoor grills, exterior lights, pool heaters, spa heaters, and backup electricity generators.

⁶Includes such appliances as pool heaters, spa heaters, and backup electricity generators.

⁷Includes wood used for primary and secondary heating in wood stoves or fireplaces as reported in the *Residential Energy Consumption Survey 2009*.

⁸Includes small electric devices, heating elements, outdoor grills, exterior lights, pool heaters, spa heaters, backup electricity generators, and motors not listed above. Electric vehicles are included in the transportation sector.

⁹Consumption determined by using the fossil fuel equivalent of 9,516 Btu per kilowatt-hour.

¹⁰See Table A5 for regional detail.

Btu = British thermal unit.

-- = Not applicable.

Note: Totals may not equal sum of components due to independent rounding. Data for 2012 and 2013 are model results and may differ from official EIA data reports.

Sources: 2012 and 2013 consumption based on: U.S. Energy Information Administration (EIA), *Monthly Energy Review*, DOE/EIA-0035(2014/11) (Washington, DC, November 2014). 2012 and 2013 degree days based on state-level data from the National Oceanic and Atmospheric Administration's Climatic Data Center and Climate Prediction Center. Projections: EIA, AEO2015 National Energy Modeling System run REF2015.D021915A.