

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

Key indicators and consumption	Reference case							Annual growth 2011-2040 (percent)
	2010	2011	2020	2025	2030	2035	2040	
Key indicators								
Households (millions)								
Single-family	82.85	83.56	91.25	95.37	99.34	103.03	106.77	0.8%
Multifamily	25.78	26.07	29.82	32.05	34.54	37.05	39.53	1.4%
Mobile homes	6.60	6.54	6.45	6.60	6.75	6.88	7.02	0.2%
Total	115.23	116.17	127.52	134.02	140.63	146.96	153.32	1.0%
Average house square footage	1,653	1,659	1,704	1,724	1,740	1,754	1,767	0.2%
Energy intensity								
(million Btu per household)								
Delivered energy consumption	99.2	97.2	86.0	82.5	79.7	77.3	75.5	-0.9%
Total energy consumption	189.0	185.0	161.7	157.4	154.0	151.4	150.6	-0.7%
(thousand Btu per square foot)								
Delivered energy consumption	60.0	58.6	50.4	47.8	45.8	44.1	42.7	-1.1%
Total energy consumption	114.3	111.5	94.9	91.3	88.5	86.3	85.2	-0.9%
Delivered energy consumption by fuel								
Electricity								
Space heating	0.30	0.27	0.29	0.30	0.31	0.32	0.32	0.6%
Space cooling	0.92	0.93	0.95	1.04	1.14	1.23	1.32	1.2%
Water heating	0.45	0.45	0.50	0.52	0.53	0.54	0.55	0.7%
Refrigeration	0.38	0.38	0.38	0.39	0.41	0.43	0.45	0.6%
Cooking	0.11	0.11	0.12	0.13	0.14	0.15	0.16	1.3%
Clothes dryers	0.20	0.20	0.22	0.23	0.24	0.25	0.26	1.0%
Freezers	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.1%
Lighting	0.65	0.63	0.45	0.40	0.38	0.37	0.38	-1.8%
Clothes washers ¹	0.03	0.03	0.03	0.02	0.02	0.02	0.03	-0.8%
Dishwashers ¹	0.10	0.10	0.10	0.10	0.11	0.12	0.13	0.8%
Televisions and related equipment ²	0.32	0.32	0.35	0.37	0.40	0.43	0.45	1.2%
Computers and related equipment ³	0.16	0.16	0.13	0.12	0.12	0.12	0.13	-0.8%
Furnace fans and boiler circulation pumps	0.13	0.13	0.14	0.14	0.14	0.14	0.14	0.2%
Other uses ⁴	1.11	1.07	1.08	1.21	1.33	1.46	1.62	1.4%
Delivered energy	4.93	4.86	4.84	5.08	5.36	5.67	6.03	0.7%
Natural gas								
Space heating	3.32	3.25	3.02	2.92	2.85	2.77	2.67	-0.7%
Space cooling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.1%
Water heating	1.30	1.30	1.33	1.33	1.31	1.27	1.26	-0.1%
Cooking	0.22	0.22	0.22	0.22	0.23	0.23	0.24	0.3%
Clothes dryers	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.7%
Delivered energy	4.89	4.83	4.62	4.54	4.46	4.34	4.23	-0.5%
Distillate fuel oil								
Space heating	0.49	0.50	0.45	0.40	0.36	0.32	0.29	-1.9%
Water heating	0.10	0.09	0.06	0.05	0.04	0.04	0.03	-3.3%
Delivered energy	0.58	0.59	0.51	0.45	0.40	0.36	0.32	-2.1%
Propane								
Space heating	0.28	0.27	0.25	0.24	0.23	0.22	0.21	-0.8%
Water heating	0.07	0.07	0.05	0.05	0.05	0.04	0.04	-1.8%
Cooking	0.03	0.03	0.03	0.03	0.03	0.03	0.02	-0.7%
Other uses ⁵	0.15	0.16	0.19	0.21	0.22	0.23	0.25	1.5%
Delivered energy	0.53	0.53	0.52	0.52	0.52	0.52	0.52	-0.0%
Marketed renewables (wood) ⁶	0.44	0.45	0.44	0.44	0.45	0.45	0.45	0.1%
Other fuels ⁷	0.04	0.02	0.02	0.02	0.02	0.02	0.02	-1.5%

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

Key indicators and consumption	Reference case							Annual growth 2011-2040 (percent)
	2010	2011	2020	2025	2030	2035	2040	
Delivered energy consumption by end use								
Space heating.....	4.86	4.76	4.47	4.32	4.22	4.09	3.96	-0.6%
Space cooling.....	0.92	0.93	0.95	1.04	1.14	1.23	1.32	1.2%
Water heating.....	1.91	1.91	1.94	1.95	1.93	1.89	1.89	-0.0%
Refrigeration.....	0.38	0.38	0.38	0.39	0.41	0.43	0.45	0.6%
Cooking.....	0.36	0.36	0.37	0.38	0.40	0.41	0.42	0.6%
Clothes dryers.....	0.25	0.25	0.28	0.29	0.30	0.32	0.33	0.9%
Freezers.....	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.1%
Lighting.....	0.65	0.63	0.45	0.40	0.38	0.37	0.38	-1.8%
Clothes washers ¹	0.03	0.03	0.03	0.02	0.02	0.02	0.03	-0.8%
Dishwashers ¹	0.10	0.10	0.10	0.10	0.11	0.12	0.13	0.8%
Televisions and related equipment ²	0.32	0.32	0.35	0.37	0.40	0.43	0.45	1.2%
Computers and related equipment ³	0.16	0.16	0.13	0.12	0.12	0.12	0.13	-0.8%
Furnace fans and boiler circulation pumps.....	0.13	0.13	0.14	0.14	0.14	0.14	0.14	0.2%
Other uses ⁸	1.26	1.23	1.28	1.41	1.55	1.69	1.87	1.5%
Delivered energy.....	11.41	11.28	10.95	11.04	11.20	11.35	11.57	0.1%
Electricity related losses.....	10.35	10.20	9.66	10.04	10.45	10.90	11.50	0.4%
Total energy consumption by end use								
Space heating.....	5.49	5.33	5.05	4.93	4.83	4.71	4.57	-0.5%
Space cooling.....	2.84	2.88	2.86	3.10	3.35	3.60	3.84	1.0%
Water heating.....	2.85	2.85	2.95	2.99	2.97	2.92	2.94	0.1%
Refrigeration.....	1.16	1.16	1.14	1.16	1.21	1.25	1.31	0.4%
Cooking.....	0.58	0.59	0.62	0.65	0.67	0.70	0.72	0.7%
Clothes dryers.....	0.66	0.66	0.71	0.74	0.77	0.80	0.83	0.8%
Freezers.....	0.25	0.26	0.25	0.25	0.25	0.24	0.25	-0.1%
Lighting.....	2.02	1.97	1.35	1.19	1.11	1.09	1.10	-2.0%
Clothes washers ¹	0.10	0.10	0.08	0.07	0.07	0.07	0.07	-1.0%
Dishwashers ¹	0.32	0.32	0.31	0.31	0.33	0.35	0.37	0.5%
Televisions and related equipment ²	0.98	0.98	1.05	1.12	1.18	1.25	1.32	1.0%
Computers and related equipment ³	0.49	0.49	0.39	0.37	0.36	0.36	0.36	-1.0%
Furnace fans and boiler circulation pumps.....	0.42	0.42	0.42	0.42	0.42	0.42	0.41	-0.0%
Other uses ⁸	3.60	3.48	3.44	3.80	4.14	4.49	4.97	1.2%
Total.....	21.76	21.48	20.62	21.08	21.65	22.25	23.08	0.2%
Nonmarketed renewables⁹								
Geothermal heat pumps.....	0.01	0.01	0.02	0.02	0.02	0.03	0.03	4.3%
Solar hot water heating.....	0.01	0.01	0.02	0.02	0.02	0.02	0.02	1.6%
Solar photovoltaic.....	0.01	0.02	0.14	0.15	0.17	0.18	0.21	8.1%
Wind.....	0.00	0.00	0.01	0.01	0.01	0.01	0.01	7.0%
Total.....	0.03	0.04	0.20	0.21	0.22	0.24	0.27	6.4%
Heating degree days¹⁰.....	4,388	4,240	4,054	3,978	3,903	3,829	3,756	-0.4%
Cooling degree days¹⁰.....	1,498	1,528	1,499	1,545	1,591	1,638	1,685	0.3%

¹Does not include water heating portion of load.

²Includes televisions, set-top boxes, and video game consoles.

³Includes desktop and laptop computers, monitors, printers, speakers, networking equipment, and uninterruptible power supplies.

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 and mosquito traps.

⁶Includes wood used for primary and secondary heating in wood stoves or fireplaces as reported in the *Residential Energy Consumption Survey 2005*.

⁷Includes kerosene and coal.

⁸Includes all other uses listed above.

⁹Consumption determined by using the fossil fuel equivalent of 9,756 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 2010 and 2011 are model results and may differ slightly from official EIA data reports.

Sources: 2010 and 2011 consumption based on: U.S. Energy Information Administration (EIA), *Annual Energy Review 2011*, DOE/EIA-0384(2011) (Washington, DC, September 2012). 2010 and 2011 degree days based on state-level data from the National Oceanic and Atmospheric Administration's Climatic Data Center and Climate Prediction Center. Projections: EIA, AEO2013 National Energy Modeling System run REF2013.D102312A.