

**Table A4. Residential 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	
<b>Key indicators</b>								
<b>Households (millions)</b>								
Single-family .....	78.99	79.28	85.71	89.73	93.56	96.99	100.37	0.8%
Multifamily .....	28.13	28.24	30.55	32.18	33.98	35.82	37.61	1.0%
Mobile homes .....	6.58	6.41	5.70	5.46	5.29	5.14	5.03	-0.9%
<b>Total .....</b>	<b>113.70</b>	<b>113.93</b>	<b>121.96</b>	<b>127.38</b>	<b>132.83</b>	<b>137.95</b>	<b>143.01</b>	<b>0.8%</b>
<b>Average house square footage .....</b>	<b>1,662</b>	<b>1,670</b>	<b>1,736</b>	<b>1,771</b>	<b>1,802</b>	<b>1,831</b>	<b>1,858</b>	<b>0.4%</b>
<b>Energy intensity</b>								
<b>(million Btu per household)</b>								
Delivered energy consumption .....	99.0	91.5	88.1	84.6	81.5	78.7	76.5	-0.6%
Total energy consumption .....	188.2	176.4	167.1	161.6	156.8	152.8	150.2	-0.6%
<b>(thousand Btu per square foot)</b>								
Delivered energy consumption .....	59.6	54.8	50.7	47.8	45.2	43.0	41.2	-1.0%
Total energy consumption .....	113.2	105.6	96.3	91.2	87.0	83.5	80.9	-1.0%
<b>Delivered energy consumption by fuel</b>								
<b>Purchased electricity</b>								
Space heating .....	0.37	0.29	0.35	0.35	0.34	0.33	0.32	0.4%
Space cooling .....	0.83	0.85	0.89	0.98	1.07	1.16	1.25	1.4%
Water heating .....	0.44	0.45	0.47	0.49	0.50	0.50	0.51	0.5%
Refrigeration .....	0.38	0.38	0.38	0.38	0.38	0.40	0.41	0.3%
Cooking .....	0.11	0.11	0.12	0.12	0.13	0.14	0.15	1.1%
Clothes dryers .....	0.20	0.20	0.21	0.22	0.23	0.24	0.25	0.8%
Freezers .....	0.08	0.08	0.08	0.08	0.08	0.08	0.08	-0.1%
Lighting .....	0.64	0.64	0.44	0.39	0.35	0.30	0.28	-2.9%
Clothes washers <sup>1</sup> .....	0.03	0.03	0.03	0.02	0.02	0.02	0.02	-1.2%
Dishwashers <sup>1</sup> .....	0.10	0.10	0.10	0.10	0.10	0.11	0.12	0.6%
Televisions and related equipment <sup>2</sup> .....	0.33	0.33	0.33	0.33	0.35	0.37	0.39	0.5%
Computers and related equipment <sup>3</sup> .....	0.13	0.12	0.10	0.08	0.07	0.06	0.05	-3.0%
Furnace fans and boiler circulation pumps .....	0.12	0.09	0.12	0.12	0.12	0.12	0.12	0.8%
Other uses <sup>4</sup> .....	1.11	1.02	1.24	1.34	1.46	1.58	1.70	1.9%
<b>Delivered energy .....</b>	<b>4.85</b>	<b>4.69</b>	<b>4.84</b>	<b>5.00</b>	<b>5.21</b>	<b>5.41</b>	<b>5.65</b>	<b>0.7%</b>
<b>Natural gas</b>								
Space heating .....	3.09	2.51	2.82	2.76	2.69	2.62	2.54	0.0%
Space cooling .....	0.02	0.02	0.02	0.02	0.02	0.02	0.02	-0.6%
Water heating .....	1.20	1.22	1.21	1.22	1.22	1.19	1.16	-0.2%
Cooking .....	0.21	0.21	0.21	0.21	0.21	0.22	0.22	0.2%
Clothes dryers .....	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.7%
Other uses <sup>5</sup> .....	0.25	0.25	0.24	0.23	0.22	0.22	0.21	-0.6%
<b>Delivered energy .....</b>	<b>4.82</b>	<b>4.26</b>	<b>4.56</b>	<b>4.50</b>	<b>4.43</b>	<b>4.32</b>	<b>4.21</b>	<b>0.0%</b>
<b>Distillate fuel oil</b>								
Space heating .....	0.46	0.44	0.42	0.38	0.34	0.31	0.29	-1.5%
Water heating .....	0.06	0.06	0.03	0.03	0.02	0.02	0.02	-4.4%
Other uses <sup>6</sup> .....	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-0.6%
<b>Delivered energy .....</b>	<b>0.53</b>	<b>0.51</b>	<b>0.46</b>	<b>0.41</b>	<b>0.37</b>	<b>0.34</b>	<b>0.31</b>	<b>-1.7%</b>
<b>Propane</b>								
Space heating .....	0.37	0.37	0.30	0.28	0.26	0.25	0.24	-1.6%
Water heating .....	0.07	0.07	0.05	0.04	0.04	0.03	0.03	-3.3%
Cooking .....	0.03	0.03	0.03	0.03	0.02	0.02	0.02	-0.9%
Other uses <sup>6</sup> .....	0.04	0.04	0.05	0.05	0.05	0.06	0.06	1.5%
<b>Delivered energy .....</b>	<b>0.51</b>	<b>0.51</b>	<b>0.42</b>	<b>0.40</b>	<b>0.38</b>	<b>0.36</b>	<b>0.35</b>	<b>-1.3%</b>
Marketed renewables (wood) <sup>7</sup> .....	0.54	0.45	0.46	0.45	0.44	0.43	0.42	-0.3%
Kerosene .....	0.02	0.01	0.00	0.00	0.00	0.00	0.00	-2.5%

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

Key indicators and consumption	Reference case							Annual growth 2012-2040 (percent)
	2011	2012	2020	2025	2030	2035	2040	
<b>Delivered energy consumption by end use</b>								
Space heating.....	4.84	4.07	4.36	4.22	4.09	3.95	3.81	-0.2%
Space cooling.....	0.85	0.88	0.91	1.00	1.09	1.18	1.27	1.3%
Water heating.....	1.77	1.79	1.77	1.78	1.78	1.74	1.71	-0.2%
Refrigeration.....	0.38	0.38	0.38	0.38	0.38	0.40	0.41	0.3%
Cooking.....	0.34	0.34	0.35	0.36	0.37	0.38	0.39	0.4%
Clothes dryers.....	0.25	0.25	0.27	0.28	0.29	0.30	0.31	0.8%
Freezers.....	0.08	0.08	0.08	0.08	0.08	0.08	0.08	-0.1%
Lighting.....	0.64	0.64	0.44	0.39	0.35	0.30	0.28	-2.9%
Clothes washers <sup>1</sup> .....	0.03	0.03	0.03	0.02	0.02	0.02	0.02	-1.2%
Dishwashers <sup>1</sup> .....	0.10	0.10	0.10	0.10	0.10	0.11	0.12	0.6%
Televisions and related equipment <sup>2</sup> .....	0.33	0.33	0.33	0.33	0.35	0.37	0.39	0.5%
Computers and related equipment <sup>3</sup> .....	0.13	0.12	0.10	0.08	0.07	0.06	0.05	-3.0%
Furnace fans and boiler circulation pumps.....	0.12	0.09	0.12	0.12	0.12	0.12	0.12	0.8%
Other uses <sup>8</sup> .....	1.40	1.31	1.53	1.63	1.74	1.86	1.98	1.5%
<b>Delivered energy.....</b>	<b>11.26</b>	<b>10.42</b>	<b>10.74</b>	<b>10.77</b>	<b>10.83</b>	<b>10.86</b>	<b>10.94</b>	<b>0.2%</b>
<b>Electricity related losses.....</b>	<b>10.13</b>	<b>9.68</b>	<b>9.64</b>	<b>9.81</b>	<b>10.00</b>	<b>10.22</b>	<b>10.55</b>	<b>0.3%</b>
<b>Total energy consumption by end use</b>								
Space heating.....	5.63	4.66	5.05	4.90	4.74	4.57	4.41	-0.2%
Space cooling.....	2.58	2.64	2.68	2.91	3.14	3.37	3.61	1.1%
Water heating.....	2.68	2.71	2.71	2.74	2.74	2.69	2.65	-0.1%
Refrigeration.....	1.17	1.16	1.12	1.12	1.12	1.15	1.19	0.1%
Cooking.....	0.56	0.56	0.59	0.60	0.62	0.64	0.66	0.6%
Clothes dryers.....	0.66	0.66	0.69	0.71	0.73	0.76	0.78	0.6%
Freezers.....	0.25	0.25	0.24	0.23	0.23	0.22	0.23	-0.3%
Lighting.....	1.97	1.95	1.31	1.16	1.02	0.86	0.79	-3.2%
Clothes washers <sup>1</sup> .....	0.10	0.10	0.08	0.07	0.06	0.06	0.06	-1.4%
Dishwashers <sup>1</sup> .....	0.31	0.31	0.29	0.29	0.30	0.32	0.34	0.4%
Televisions and related equipment <sup>2</sup> .....	1.03	1.02	0.98	0.99	1.02	1.07	1.11	0.3%
Computers and related equipment <sup>3</sup> .....	0.39	0.38	0.29	0.25	0.21	0.18	0.15	-3.3%
Furnace fans and boiler circulation pumps.....	0.36	0.29	0.34	0.34	0.34	0.34	0.34	0.6%
Other uses <sup>8</sup> .....	3.71	3.42	4.01	4.27	4.55	4.84	5.16	1.5%
<b>Total.....</b>	<b>21.39</b>	<b>20.10</b>	<b>20.38</b>	<b>20.58</b>	<b>20.83</b>	<b>21.09</b>	<b>21.48</b>	<b>0.2%</b>
<b>Nonmarketed renewables<sup>9</sup></b>								
Geothermal heat pumps.....	0.01	0.01	0.02	0.02	0.02	0.02	0.03	3.2%
Solar hot water heating.....	0.00	0.01	0.01	0.01	0.01	0.01	0.01	2.4%
Solar photovoltaic.....	0.02	0.02	0.10	0.12	0.14	0.18	0.22	8.3%
Wind.....	0.00	0.00	0.01	0.01	0.01	0.01	0.01	9.1%
<b>Total.....</b>	<b>0.03</b>	<b>0.04</b>	<b>0.14</b>	<b>0.16</b>	<b>0.19</b>	<b>0.23</b>	<b>0.27</b>	<b>6.9%</b>
<b>Heating degree days<sup>10</sup>.....</b>	<b>4,258</b>	<b>3,712</b>	<b>4,015</b>	<b>3,945</b>	<b>3,877</b>	<b>3,810</b>	<b>3,745</b>	<b>0.0%</b>
<b>Cooling degree days<sup>10</sup>.....</b>	<b>1,481</b>	<b>1,514</b>	<b>1,488</b>	<b>1,530</b>	<b>1,572</b>	<b>1,614</b>	<b>1,656</b>	<b>0.3%</b>

<sup>1</sup>Does not include water heating portion of load.

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

<sup>3</sup>Includes desktop and laptop computers, monitors, and networking equipment.

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

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

<sup>6</sup>Includes such appliances as pool heaters, spa heaters, and backup electricity generators.

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

<sup>8</sup>Includes 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.

<sup>9</sup>Consumption determined by using the fossil fuel equivalent of 9,716 Btu per kilowatt-hour.

<sup>10</sup>See 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 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.