

**Table 898. Renewable Energy, Consumption by Sector and Source: 2004 to 2030**

[In quadrillions of Btu per year. For definition of Btu, see source and text, this section. Data represent actual heat rates used to determine fuel consumption for all renewable fuels except hydropower, solar, and wind. Consumption at hydroelectric, solar, and wind facilities determined by using the fossil fuel equivalent of 10,280 Btu per kilowatt-hour]

Sector and source	2004	2005	2010	2015	2020	2025	2030
<b>MARKETED RENEWABLE ENERGY <sup>1</sup></b>							
<b>Total marketed renewable energy . . . . .</b>	<b>6.27</b>	<b>6.19</b>	<b>8.45</b>	<b>8.82</b>	<b>9.15</b>	<b>9.56</b>	<b>9.86</b>
Residential (wood) . . . . .	0.40	0.41	0.43	0.41	0.40	0.40	0.39
Commercial (biomass) . . . . .	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Industrial <sup>2</sup> . . . . .	1.91	1.69	2.28	2.45	2.59	2.76	2.93
Conventional hydroelectric . . . . .	0.05	0.03	0.03	0.03	0.03	0.03	0.03
Municipal waste <sup>3</sup> . . . . .	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Biomass . . . . .	1.64	1.40	1.55	1.67	1.77	1.88	2.01
Biofuels heat and coproducts . . . . .	0.21	0.24	0.69	0.74	0.78	0.83	0.88
Transportation . . . . .	0.30	0.34	0.95	1.01	1.10	1.19	1.27
Ethanol used in E85 <sup>4</sup> . . . . .	—	—	—	—	—	0.01	0.02
Ethanol used in gasoline blending . . . . .	0.29	0.33	0.91	0.98	1.05	1.14	1.20
Biodiesel used in distillate blending . . . . .	—	—	0.04	0.03	0.04	0.05	0.05
Electric power <sup>5</sup> . . . . .	3.55	3.64	4.67	4.83	4.93	5.09	5.15
Conventional hydroelectric . . . . .	2.66	2.68	2.99	3.04	3.05	3.06	3.06
Geothermal . . . . .	0.31	0.32	0.36	0.37	0.44	0.48	0.53
Municipal waste <sup>3</sup> . . . . .	0.27	0.28	0.29	0.33	0.33	0.33	0.34
Biomass . . . . .	0.16	0.21	0.51	0.55	0.56	0.68	0.67
Dedicated plants . . . . .	0.14	0.09	0.11	0.11	0.12	0.17	0.26
Cofiring . . . . .	0.02	0.11	0.40	0.44	0.44	0.50	0.41
Solar thermal . . . . .	0.01	0.01	0.01	0.02	0.02	0.02	0.02
Solar photovoltaic . . . . .	—	—	—	—	—	—	—
Wind . . . . .	0.14	0.15	0.50	0.52	0.53	0.53	0.53
<b>Ethanol, total . . . . .</b>	<b>0.29</b>	<b>0.33</b>	<b>0.91</b>	<b>0.98</b>	<b>1.06</b>	<b>1.15</b>	<b>1.22</b>
Sources:							
Corn . . . . .	0.28	0.33	0.87	0.93	0.99	1.07	1.13
Cellulose . . . . .	—	—	0.01	0.02	0.02	0.02	0.02
Imports . . . . .	0.01	0.01	0.02	0.03	0.05	0.06	0.07
<b>NONMARKETED RENEWABLE ENERGY <sup>6</sup></b>							
<b>Selected consumption:</b>							
Residential . . . . .	0.03	0.03	0.04	0.05	0.06	0.07	0.08
Solar hot water heating . . . . .	0.03	0.03	0.03	0.04	0.05	0.06	0.06
Geothermal heat pumps . . . . .	—	—	0.01	0.01	0.01	0.01	0.02
Solar photovoltaic . . . . .	—	—	—	—	—	—	—
Commercial . . . . .	0.02	0.03	0.03	0.03	0.03	0.03	0.04
Solar thermal . . . . .	0.02	0.02	0.03	0.03	0.03	0.03	0.03
Solar photovoltaic . . . . .	—	—	—	—	—	0.01	0.01

— Represents or rounds to zero. <sup>1</sup> Includes nonelectric renewable energy groups for which the energy source is bought and sold in the marketplace, although all transactions may not necessarily be marketed, and marketed renewable energy inputs for electricity entering the marketplace on the electric power grid. Excludes electricity imports. <sup>2</sup> Includes all electricity production by industrial and other combined heat and power for the grid and for own use. <sup>3</sup> Includes municipal solid waste, landfill gas, and municipal sewage sludge. All municipal solid waste is included, although a portion of the municipal solid waste stream contains petroleum-derived plastics and other nonrenewable sources. For municipal waste used to produce electric power, incremental growth is assumed to be for landfill gas facilities. <sup>4</sup> Excludes motor gasoline component of E85. <sup>5</sup> Includes consumption of energy by electricity-only and combined heat and power plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes small power producers and exempt wholesale generators. <sup>6</sup> Includes selected renewable energy consumption data for which the energy is not bought or sold, either directly or indirectly as an input to marketed energy.