

**Table 2. Renewable energy consumption by energy use sector and energy source, 2006 - 2010**

quadrillion Btu

<b>Sector and Source</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
Total	6.659	6.551	7.191	7.587	8.049
Biomass	3.277	3.503	3.852	3.899	4.295
Biofuels	0.771	0.991	1.372	1.567	1.855
Biodiesel <sup>1</sup>	0.033	0.046	0.040	0.040	0.028
Ethanol <sup>2</sup>	0.453	0.569	0.800	0.910	1.088
Losses and Coproducts	0.285	0.377	0.532	0.617	0.738
Biodiesel Feedstock <sup>3</sup>	*	0.001	0.001	0.001	0.001
Ethanol Feedstock <sup>4</sup>	0.285	0.376	0.531	0.616	0.738
Waste	0.397	0.413	0.436	0.452	0.454
Landfill Gas	0.157	0.173	0.187	0.204	0.213
MSW Biogenic <sup>5</sup>	0.171	0.165	0.169	0.168	0.164
Other Biomass <sup>6</sup>	0.069	0.075	0.079	0.079	0.076
Wood and Derived Fuels <sup>7</sup>	2.109	2.098	2.044	1.881	1.986
Geothermal	0.181	0.186	0.192	0.200	0.212
Hydroelectric Conventional	2.869	2.446	2.512	2.669	2.509
Solar Thermal/PV	0.068	0.076	0.089	0.098	0.109
Wind	0.264	0.341	0.546	0.721	0.924
Residential	0.472	0.522	0.556	0.552	0.554
Biomass	0.390	0.430	0.450	0.430	0.420
Wood and Derived Fuels <sup>8</sup>	0.390	0.430	0.450	0.430	0.420
Geothermal	0.018	0.022	0.026	0.033	0.037
Solar Thermal/PV <sup>9</sup>	0.063	0.070	0.080	0.089	0.097
Commercial	0.117	0.118	0.125	0.129	0.127
Biomass	0.102	0.102	0.109	0.112	0.108
Biofuels	0.001	0.002	0.002	0.003	0.003
Ethanol <sup>2</sup>	0.001	0.002	0.002	0.003	0.003
Waste	0.036	0.031	0.034	0.036	0.034
Landfill Gas	0.004	0.003	0.003	0.003	0.003
MSW Biogenic <sup>5</sup>	0.026	0.021	0.026	0.028	0.026
Other Biomass <sup>6</sup>	0.007	0.007	0.005	0.005	0.005
Wood and Derived Fuels <sup>7</sup>	0.065	0.069	0.073	0.072	0.070
Geothermal	0.014	0.014	0.015	0.017	0.019
Hydroelectric Conventional	0.001	0.001	0.001	0.001	0.001
Solar Thermal/PV	-	-	*	-	*
Wind	-	-	-	*	*
Industrial	1.930	1.964	2.053	2.005	2.249
Biomass	1.897	1.944	2.031	1.982	2.229
Biofuels	0.295	0.387	0.544	0.630	0.754
Ethanol <sup>2</sup>	0.010	0.010	0.012	0.013	0.016
Losses and Coproducts	0.285	0.377	0.532	0.617	0.738
Biodiesel Feedstock <sup>3</sup>	*	0.001	0.001	0.001	0.001
Ethanol Feedstock <sup>4</sup>	0.285	0.376	0.531	0.616	0.738
Waste	0.130	0.144	0.144	0.154	0.168
Landfill Gas	0.081	0.093	0.093	0.104	0.118
MSW Biogenic <sup>5</sup>	0.006	0.006	0.003	0.004	0.004
Other Biomass <sup>6</sup>	0.043	0.046	0.048	0.047	0.046
Wood and Derived Fuels <sup>7</sup>	1.472	1.413	1.344	1.198	1.307
Geothermal	0.004	0.005	0.005	0.004	0.004
Hydroelectric Conventional	0.029	0.016	0.017	0.018	0.016
Solar Thermal/PV	-	-	-	-	*
Wind	-	-	-	-	-
Transportation	0.475	0.603	0.827	0.934	1.098
Biomass	0.475	0.603	0.827	0.934	1.098
Biofuels	0.475	0.603	0.827	0.934	1.098
Biodiesel <sup>1</sup>	0.033	0.046	0.040	0.040	0.028
Ethanol <sup>2</sup>	0.442	0.557	0.786	0.894	1.070
Electric Power <sup>10</sup>	3.665	3.345	3.630	3.967	4.022
Biomass	0.412	0.423	0.435	0.441	0.440
Waste	0.231	0.237	0.258	0.261	0.252
Landfill Gas	0.073	0.077	0.092	0.097	0.092
MSW Biogenic <sup>5</sup>	0.139	0.138	0.141	0.137	0.135
Other Biomass <sup>6</sup>	0.019	0.022	0.026	0.027	0.025
Wood and Derived Fuels <sup>7</sup>	0.182	0.186	0.177	0.180	0.189
Geothermal	0.145	0.145	0.146	0.146	0.153
Hydroelectric Conventional	2.839	2.430	2.495	2.650	2.492
Solar Thermal/PV	0.005	0.006	0.009	0.009	0.013
Wind	0.264	0.341	0.546	0.721	0.924

**Table 2. Renewable energy consumption by energy use sector and energy source, 2006 - 2010 (cont)**

<sup>1</sup>Biodiesel primarily derived from soybean oil.

<sup>2</sup>Ethanol primarily derived from corn minus denaturant.

<sup>3</sup>Losses and co-products from the production of biodiesel. Does not include natural gas, electricity, and other non-biomass energy used in the production of biodiesel.

<sup>4</sup>Losses and co-products from the production of fuel ethanol. Does not include natural gas, electricity, and other non-biomass energy used in the production of fuel ethanol.

<sup>5</sup>Includes paper and paper board, wood, food, leather, textiles and yard trimmings.

<sup>6</sup>Agriculture byproducts/crops, sludge waste, and other biomass solids, liquids and gases.

<sup>7</sup>Black liquor, and wood/wood waste solids and liquids.

<sup>8</sup>Wood and wood pellet fuels.

<sup>9</sup>Includes small amounts of distributed solar thermal and photovoltaic energy used in the commercial, industrial and electric power sectors.

<sup>10</sup>The electric power sector comprises electricity-only and combined-heat-power (CHP) plants within North American Classification System (NAICS) 22 category whose primary business is to sell electricity, or electricity and heat, to the public.

MSW = Municipal Solid Waste.

PV = Photovoltaic.

\* = Less than 500 billion Btu.

- = No data reported.

**Notes:** Totals may not equal sum of components due to independent rounding.

Data revisions are discussed in the Highlights section.

Energy consumption for the noncombustible renewable energy sources (geothermal, hydroelectric conventional, solar thermal, PV and wind) used in electricity generation is determined by multiplying generation times the fossil fuel equivalent heat rate. See U.S. Energy Information Administration (EIA), Monthly Energy Review (MER) 2011, DOE/EIA-0035 (2011) (Washington, DC, March 2011), Table A6.

Data for 2010 is preliminary.

**Sources:** Analysis conducted by U.S. Energy Information Administration (EIA), Office of Electricity, Coal, Nuclear and Renewables Analysis and specific sources described as follows. Residential: U.S. Energy Information Administration, Form EIA-457A/G, "Residential Energy Consumption Survey;" National Renewable Energy Laboratory; and U.S. Energy Information Administration, Form EIA-63-A, "Annual Solar Thermal Collector Manufacturers Survey" and Form EIA-63B, "Annual Photovoltaic Module/Cell Manufacturers Survey." Commercial: U.S. Energy Information Administration, Form EIA-906, "Power Plant Report," Form EIA-920, "Combined Heat and Power Plant Report," and Form EIA-923, "Power Plant Operations Report;" and National Renewable Energy Laboratory. Industrial: U.S. Energy Information Administration, Form EIA-846 (A, B, C) "Manufacturing Energy Consumption Survey," Form EIA-906, "Power Plant Report," Form EIA-920, "Combined Heat and Power Plant Report," and Form EIA-923, "Power Plant Operations Report;" and National Renewable Energy Laboratory;

U.S. Environmental Protection Agency, Landfill Methane Outreach Program estimates; and losses and coproducts from the production of biodiesel calculated as the difference between energy in feedstocks and production and from the production of ethanol calculated as the difference between energy feedstocks and production less denaturants. Biofuels for Transportation: Biodiesel: Consumption: 2006-2008: Calculated as biodiesel production plus net imports, 2009: January and February: EIA, Petroleum Supply Monthly, Table 1, data for refinery and blender net inputs of renewable fuels except ethanol. March 2009 and forward: Calculated as biodiesel production plus biodiesel net imports minus biodiesel stock change; Production: 2006: U.S. Department of Commerce, Bureau of Census, Current Industrial Reports, Fats and Oils - Production, Consumption and Stocks, data for soybean oil in methyl esters (biodiesel), 2007 and 2010: U.S. Department of Commerce, Bureau of Census, Current Industrial Reports, Fats and Oils - Production, Consumption and Stocks, data for fats and oils in methyl esters, 2008: U.S. Energy Information Administration, Form EIA-22S, "Supplement to the Monthly Biodiesel Production Survey," and 2009: U.S. Energy Information Administration, "Form EIA-22M, Monthly Biodiesel Production Survey;" Trade: USDA imports data for Harmonized Tariff Schedule code 3824.90.40.20, Fatty Esters Animal/ Vegetable Mixture, (for data through June 2010), and 3824.90.40.30, "Biodiesel/Mixes" (for data beginning July 2010); and exports data for Schedule B code 3824.90.40.00 (Fatty Substances Animal/ Vegetable Mixture; Stock Change: 2009: EIA Petroleum Supply Annual (PSA) various reports. Table 1 data for renewable fuels except ethanol and 2010: EIA, Petroleum Supply Monthly, Table 1 data for renewable fuels except ethanol; Balancing Item: Calculated as biodiesel consumption and biodiesel stock change minus biodiesel production and biodiesel net imports; and Ethanol: 2006-2008: EIA Petroleum Supply Annual various reports, Tables 1 and 15.

Calculated as motor gasoline blending components adjustments (Table 1), plus finished motor gasoline adjustments (Table 1), plus fuel ethanol refinery and blender net inputs (Table 15). 2009: EIA Petroleum Supply Annual 2009, Table 1. Calculated as fuel ethanol refinery and blender net inputs minus fuel ethanol adjustments. 2010: EIA, Petroleum Supply Monthly, various reports, Table 1. Calculated as fuel ethanol refinery and blender net inputs minus fuel ethanol adjustments. Small amounts of ethanol consumption are distributed to the commercial and industrial sectors according to those sector's shares of U.S. motor gasoline supplied. Electric Power: U.S. Energy Information Administration, Form EIA-906, "Power Plant Report," Form EIA-920, "Combined Heat and Power Plant Report," and Form EIA-923, "Power Plant Operations Report."