

**Table 1.4 Renewable Energy Consumption for Nonelectric Use by Energy Use Sector and Energy Source, 2003 - 2007**

(Quadrillion Btu)

Sector and Source	2003	2004	2005	2006	2007
Total	2.135	2.538	2.643	2.874	3.114
Biomass	2.049	2.449	2.549	2.770	2.998
Biofuels	0.414	0.513	0.595	0.795	1.024
Biodiesel <sup>1</sup>	0.002	0.004	0.012	0.032	0.062
Ethanol <sup>2</sup>	0.238	0.299	0.342	0.462	0.580
Losses and Coproducts	0.174	0.210	0.241	0.301	0.381
Biodiesel Feedstock <sup>3</sup>	*	*	*	*	0.001
Ethanol Feedstock <sup>4</sup>	0.174	0.210	0.241	0.301	0.380
Waste	0.153	0.159	0.173	0.174	0.185
Landfill Gas	0.075	0.075	0.080	0.081	0.093
MSW Biogenic <sup>5</sup>	0.016	0.023	0.023	0.024	0.019
Other Biomass <sup>6</sup>	0.061	0.061	0.070	0.069	0.073
Wood and Derived Fuels <sup>7</sup>	1.483	1.777	1.781	1.802	1.789
Geothermal	0.027	0.030	0.034	0.037	0.041
Solar/PV	0.058	0.059	0.061	0.067	0.075
Residential	0.471	0.483	0.507	0.475	0.527
Biomass	0.400	0.410	0.430	0.390	0.430
Wood and Derived Fuels <sup>8</sup>	0.400	0.410	0.430	0.390	0.430
Geothermal	0.013	0.014	0.016	0.018	0.022
Solar/PV	0.058	0.059	0.061	0.067	0.075
Commercial	0.092	0.098	0.098	0.095	0.097
Biomass	0.081	0.086	0.085	0.081	0.082
Biofuels	0.001	0.001	0.001	0.001	0.002
Ethanol <sup>2</sup>	0.001	0.001	0.001	0.001	0.002
Waste	0.010	0.015	0.014	0.016	0.012
Landfill Gas	-	*	*	0.001	0.001
MSW Biogenic <sup>5</sup>	0.009	0.012	0.012	0.013	0.008
Other Biomass <sup>6</sup>	0.001	0.003	0.002	0.002	0.003
Wood and Derived Fuels <sup>7</sup>	0.071	0.070	0.069	0.064	0.069
Geothermal	0.011	0.012	0.014	0.014	0.014
Industrial	1.312	1.629	1.658	1.788	1.824
Biomass	1.308	1.626	1.654	1.783	1.819
Biofuels	0.178	0.217	0.248	0.311	0.393
Ethanol <sup>2</sup>	0.005	0.006	0.007	0.010	0.012
Losses and Coproducts	0.174	0.210	0.241	0.301	0.381
Biodiesel Feedstock <sup>3</sup>	*	*	*	*	0.001
Ethanol Feedstock <sup>4</sup>	0.174	0.210	0.241	0.301	0.380
Waste	0.129	0.127	0.143	0.144	0.157
Landfill Gas	0.075	0.074	0.079	0.080	0.093
MSW Biogenic <sup>5</sup>	0.004	0.006	0.007	0.006	0.005
Other Biomass <sup>6</sup>	0.050	0.047	0.057	0.058	0.060
Wood and Derived Fuels <sup>7</sup>	1.001	1.282	1.262	1.328	1.269
Geothermal	0.003	0.004	0.004	0.004	0.005
Solar/PV	-	-	-	-	-
Transportation	0.235	0.296	0.346	0.483	0.629
Biomass	0.235	0.296	0.346	0.483	0.629
Biofuels	0.235	0.296	0.346	0.483	0.629
Biodiesel <sup>1</sup>	0.002	0.004	0.012	0.032	0.062
Ethanol <sup>2</sup>	0.233	0.292	0.334	0.451	0.566
Electric Power <sup>9</sup>	0.025	0.032	0.035	0.033	0.038
Biomass	0.025	0.032	0.035	0.033	0.038
Waste	0.014	0.017	0.015	0.014	0.016
Landfill Gas	*	*	0.001	*	*
MSW Biogenic <sup>5</sup>	0.003	0.005	0.005	0.005	0.006
Other Biomass <sup>6</sup>	0.011	0.012	0.010	0.009	0.010
Wood and Derived Fuels <sup>7</sup>	0.011	0.015	0.019	0.019	0.021
Geothermal	-	-	-	-	-
Solar/PV	-	-	-	-	-

<sup>1</sup>Biodiesel primarily derived from soy bean oil.

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

<sup>3</sup>Difference between the energy in biodiesel feedstocks (principally soy bean oil) and the energy in biodiesel consumed in the transportation sector.

<sup>4</sup>Difference between energy in ethanol feedstocks (primarily corn) and its coproducts (wet and dry distiller grains), and the energy in ethanol consumed in the transportation sector.

<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/woodwaste solids and liquids.

**Table 1.4 Renewable Energy Consumption for Nonelectric Use by Energy Use Sector and Energy Source, 2003 - 2007 (Quadrillion Btu) (Continued)**

Sector and Source	2003	2004	2005	2006	2007
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<sup>8</sup>Wood and wood pellet fuels.

<sup>9</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. Starting with 2004 EIA adopted a new method of allocating fuel consumption between electric power generation and useful thermal out put (UTO) for combined heat and power (CHP) plants. The new method proportionately distributes a CHP plant's losses between the two output products (electric power and UTO) assuming the same efficiency for production of electricity as UTO. Data revisions are discussed in the Highlights section.

Revisions to biomass removed MSW non-biogenic and tires from renewable waste energy.

**Sources:** Analysis conducted by Energy Information Administration, Office of Coal, Nuclear, Electric, and Alternate Fuels and specific sources described as follows. Residential: Energy Information Administration, Form EIA-457A/G, "Residential Energy Consumption Survey;" Oregon Institute of Technology, Geo-Heat Center; and Energy Information Administration, Form EIA-63-A, "Annual Solar Thermal Collector Manufacturers Survey" and Form EIA-63B, "Annual Photovoltaic Module/Cell Manufacturers Survey." Commercial: Energy Information Administration, Form EIA-920, "Combined Heat and Power Plant Report" and Form EIA-923, "Power Plant Operations Report;" and Oregon Institute of Technology, Geo-Heat Center. Industrial: Energy Information Administration, Form EIA-846 (A, B, C) "Manufacturing Energy Consumption Survey," Form EIA-920, "Combined Heat and Power Plant Report," and Form EIA-923, "Power Plant Operations Report;" Oregon Institute of Technology, Geo-Heat Center; Government Advisory Associates, Resource Recovery Yearbook and Methane Recovery Yearbook; U.S. Environmental Protection Agency, Landfill Methane Outreach Program estimates; and losses and coproducts from the production of biodiesel and ethanol calculated as the difference between energy in feedstocks and production. Biofuels for Transportation: Biodiesel: 2001-2005: U.S. Department of Agriculture, Commodity Credit Corporation, Bioenergy Program estimates of production assigned to consumption and 2006 and forward: U.S. Department of Commerce, Bureau of Census, Current Industrial Reports, Fats and Oils - Production, Consumption and Stocks, and Ethanol: 2001-2004: EIA, Petroleum Supply Annual, Tables 2 and 16. Calculated as ten percent of oxygenated finished motor gasoline field production (Table 2) plus fuel ethanol refinery input (Table 16). 2005-2007: EIA Petroleum Supply Annual (Various Issues), 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). 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: Energy Information Administration, Form EIA-920, "Combined Heat and Power Plant Report," and Form EIA-923, "Power Plant Operations Report."