

Trends in Renewable Energy Consumption and Electricity 2010

Release Date: December 11, 2012

Next Release Date: August 2013

Table 3. Renewable energy consumption for electricity generation by energy-use sector and energy source, 2006 - 2010

(quadrillion Btu)

Sector and Source	2006	2007	2008	2009	2010
Total	3.873	3.536	^R 3.817	4.137	4.253
Biomass	0.591	0.598	0.606	0.592	0.630
Waste	0.241	0.245	0.267	0.272	0.281
Landfill Gas	0.076	0.080	0.094	0.100	0.106
MSW Biogenic ¹	0.147	0.146	0.148	0.147	0.145
Other Biomass ²	0.018	0.019	0.024	0.025	0.030
Wood and Derived Fuels ³	0.350	0.353	0.339	0.320	0.350
Geothermal	0.145	0.145	0.146	0.146	0.148
Hydroelectric Conventional	2.869	2.446	^R 2.511	2.669	2.539
Solar Thermal/PV	0.005	0.006	0.009	0.009	0.012
Wind	0.264	0.341	0.546	0.721	0.923
Commercial	0.022	0.020	0.021	0.024	0.025
Biomass	0.021	0.020	0.021	0.023	0.024
Waste	0.021	0.019	0.020	0.023	0.024
Landfill Gas	0.003	0.002	0.003	0.003	0.003
MSW Biogenic ¹	0.013	0.013	0.014	0.016	0.017
Other Biomass ²	0.004	0.004	0.004	0.004	0.004
Wood and Derived Fuels ³	*	*	*	*	*
Geothermal	-	-	-	-	-
Hydroelectric Conventional	0.001	0.001	0.001	0.001	0.001
Solar Thermal/PV	-	-	*	*	*
Wind	-	-	-	*	*
Industrial	0.219	0.208	0.200	0.182	0.197
Biomass	0.190	0.193	0.184	0.164	0.180
Waste	0.003	0.004	0.005	0.004	0.008
Landfill Gas	*	*	*	*	*
MSW Biogenic ¹	*	0.001	-	-	-
Other Biomass ²	0.003	0.003	0.004	0.004	0.008
Wood and Derived Fuels ³	0.187	0.188	0.179	0.160	0.172
Geothermal	-	-	-	-	-
Hydroelectric Conventional	0.029	0.016	0.017	0.018	0.016
Solar Thermal/PV	-	-	-	-	*
Wind	-	-	-	-	-
Electric Power ⁴	3.632	3.307	3.596	3.931	4.031
Biomass	0.379	0.386	0.401	0.405	0.426
Waste	0.216	0.221	0.242	0.244	0.249
Landfill Gas	0.072	0.077	0.091	0.097	0.103
MSW Biogenic ¹	0.134	0.132	0.135	0.131	0.128

Other Biomass ²	0.010	0.012	0.016	0.017	0.018
Wood and Derived Fuels ³	0.163	0.165	0.159	0.160	0.177
Geothermal	0.145	0.145	0.146	0.146	0.148
Hydroelectric Conventional	2.839	2.430	^b 2.494	2.650	2.521
Solar Thermal/PV	0.005	0.006	0.009	0.009	0.012
Wind	0.264	0.341	0.546	0.721	0.923

¹Includes paper and paper board, wood, food, leather, textiles and yard trimmings.

²Agriculture byproducts/crops, sludge waste, and other biomass solids, liquids and gases.

³Black liquor, and wood/wood waste solids and liquids.

⁴The electric power sector comprises electricity-only and combined-heat-power (CHP) plants within North American Industry 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. EIA uses a method of allocating fuel consumption between electric power generation and useful thermal output (UTO) for combined heat and power (CHP) plants. The 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.

Energy consumption for the noncombustible renewable energy sources (hydroelectric conventional, solar thermal, PV and wind) used in electricity generation is determined by multiplying generation times the fossil fuel equivalent heat rate. Energy consumption for geothermal energy used in electricity generation is determined by multiplying generation times the geothermal heat rate. See U.S. Energy Information Administration (EIA), Annual Energy Review (AER) 2010, DOE/EIA-0384 (2010) (Washington, DC, October 2011), Table A6.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report," and predecessor forms: Form EIA-906, "Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant Report."