

Table 932. Renewable Energy Consumption Estimates by Source: 1990 to 2010

[In quadrillion Btu (6.04 represents 6,040,000,000,000). For definition of Btu, see source and text, this section. Renewable energy is obtained from sources that are essentially inexhaustible, unlike fossil fuels of which there is a finite supply]

Source and sector	1990	2000	2005	2007	2008	2009	2010 ¹
Consumption, total	6.04	6.11	6.24	6.55	7.19	7.59	8.05
Conventional hydroelectric power ²	3.05	2.81	2.70	2.45	2.51	2.67	2.51
Geothermal energy ³	0.17	0.16	0.18	0.19	0.19	0.20	0.21
Biomass ⁴	2.74	3.01	3.12	3.50	3.85	3.90	4.30
Solar energy ⁵	0.06	0.07	0.06	0.08	0.09	0.10	0.11
Wind energy ⁶	0.03	0.06	0.18	0.34	0.55	0.72	0.92
Residential ⁷	0.64	0.49	0.50	0.52	0.56	0.55	0.55
Biomass ⁴	0.58	0.42	0.43	0.43	0.45	0.43	0.42
Geothermal ³	0.01	0.01	0.02	0.02	0.03	0.03	0.04
Solar ⁵	0.06	0.06	0.06	0.07	0.08	0.09	0.10
Commercial ⁸	0.10	0.13	0.12	0.12	0.13	0.13	0.13
Biomass ⁴	0.09	0.12	0.11	0.10	0.11	0.11	0.11
Geothermal ³	0.03	0.01	0.01	0.01	0.02	0.02	0.02
Hydroelectric ²	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)
Industrial ⁹	1.72	1.93	1.87	1.96	2.05	2.01	2.25
Biomass ⁴	1.68	1.88	1.84	1.94	2.03	1.98	2.23
Geothermal ³	(Z)	(Z)	(Z)	0.01	0.01	(Z)	(Z)
Hydroelectric ²	0.03	0.04	0.03	0.02	0.02	0.02	0.02
Transportation	0.06	0.14	0.34	0.60	0.83	0.93	1.10
Fuel ethanol ¹⁰	0.06	0.14	0.33	0.56	0.79	0.89	1.07
Biodiesel ¹¹	(NA)	(NA)	0.01	0.05	0.04	0.04	0.03
Electric power ¹²	3.52	3.43	3.41	3.35	3.63	3.97	4.02
Biomass ⁴	0.32	0.45	0.41	0.42	0.44	0.44	0.44
Geothermal ³	0.16	0.14	0.15	0.15	0.15	0.15	0.15
Hydroelectric ²	3.01	2.77	2.67	2.43	2.49	2.65	2.49
Solar ⁵	(Z)	0.01	0.01	0.01	0.01	0.01	0.01
Wind ⁶	0.03	0.06	0.18	0.34	0.55	0.72	0.92

NA Not available. Z Less than 5 trillion Btu. ¹ Preliminary. ² Power produced from natural stream flow as regulated by available storage. ³ As used at electric power plants, hot water or steam extracted from geothermal reservoirs in the Earth's crust that is supplied to steam turbines at electric power plants that drive generators to produce electricity. ⁴ Wood and wood-derived fuels, municipal solid waste (from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass), fuel ethanol, and biodiesel. ⁵ The radiant energy of the sun, which can be converted into other forms of energy, such as heat or electricity. Solar thermal and photovoltaic electricity net generation and solar thermal direct use energy. ⁶ Energy present in wind motion that can be converted to mechanical energy for driving pumps, mills, and electric power generators. Wind pushes against sails, vanes, or blades radiating from a central rotating shaft. ⁷ Consists of living quarters for private households, but excludes institutional living quarters. ⁸ Consists of service-providing facilities and equipment of businesses, governments, and other private and public organizations. Includes institutional living quarters and sewage treatment facilities. Includes commercial combined-heat-and-power and commercial electricity-only plants. ⁹ Consists of all facilities and equipment used for producing, processing, or assembling goods. Includes industrial combined-heat-and-power and industrial electricity-only plants. ¹⁰ Ethanol primarily derived from corn. ¹¹ Any liquid biofuel suitable as a diesel fuel substitute, additive, or extender. ¹² Consists of electricity-only and combined-heat-and-power plants whose primary business is to sell electricity and/or heat to the public. Includes sources not shown separately.

Source: U.S. Energy Information Administration, "Monthly Energy Review," May 2011, <<http://www.eia.gov/totalenergy/data/monthly/>>.

Table 933. Fuel Ethanol and Biodiesel—Summary: 1990 to 2010

[110.9 represents 110,900,000,000,000. Data for 1990 are estimates. Beginning 1995, only feedstock data are estimates. Minus sign (-) indicates an excess of exports over imports, except where noted]

Fuel	1990	1995	2000	2005	2006	2007	2008	2009	2010 ¹
FUEL ETHANOL									
Feedstock ² (tril. Btu)	110.9	197.7	233.1	552.4	687.9	914.3	1,299.5	1,517.0	1,830.0
Production:									
1,000 bbl.	17,802	32,325	38,627	92,961	116,294	155,263	221,637	260,424	315,018
Tril. Btu.	63.4	115.2	137.6	331.2	414.4	553.2	789.7	928.0	1,122.0
Net imports ³ (1,000 bbl.)	(NA)	387	116	3,234	17,408	10,457	12,610	4,720	243
Stocks ⁴ (1,000 bbl.)	(NA)	2,186	3,400	5,563	8,760	10,535	14,226	16,594	17,940
Stock change ⁵ (1,000 bbl.)	(NA)	-207	-624	-439	3,197	1,775	3,691	2,368	⁶ 1,229
Consumption:									
1,000 bbl.	17,802	32,919	39,367	96,634	130,505	163,945	230,556	262,776	314,032
Tril. Btu.	63.4	117.3	140.3	344.3	465.0	584.1	821.5	936.0	1,118.0
BIODIESEL									
Feedstock ² (tril. Btu)	(NA)	(NA)	(NA)	11.7	32.4	63.4	87.7	65.0	40.0
Production:									
1,000 bbl.	(NA)	(NA)	(NA)	2,162	5,963	11,662	16,145	12,054	7,401
Tril. Btu.	(NA)	(NA)	(NA)	11.6	32.0	62.5	86.5	65.0	40.0
Net imports ³ (1,000 bbl.)	(NA)	(NA)	(NA)	1	242	-3,135	-8,626	-4,489	-1,958
Consumption:									
1,000 bbl.	(NA)	(NA)	(NA)	2,163	6,204	8,528	7,519	7,537	5,288
Tril. Btu.	(NA)	(NA)	(NA)	11.6	33.2	45.7	40.3	40.0	28.0

NA Not available. ¹ Preliminary. ² Total corn and other biomass inputs to the production of fuel ethanol. ³ Net imports equal imports minus exports. ⁴ Imports minus exports. Stocks are at end of year. ⁵ A negative number indicates a decrease in stocks. ⁶ Derived using the preliminary December 2009 stock value, not the final December 2009 value shown under "Stocks."

⁷ Total vegetable oil and other biomass inputs to the production of biodiesel.

Source: U.S. Energy Information Administration, "Monthly Energy Review," May 2011, <<http://www.eia.gov/totalenergy/data/monthly/>>.