

Table 10.1 Renewable Energy Production and Consumption by Primary Energy Source, Selected Years, 1949-2008
(Trillion Btu)

Year	Production ¹			Consumption								
	Biomass		Total Renewable Energy ⁴	Hydroelectric Power ⁵	Geothermal ⁶	Solar/PV ⁷	Wind ⁸	Biomass				Total Renewable Energy
	Biofuels ²	Total ³						Wood ⁹	Waste ¹⁰	Biofuels ¹¹	Total	
1949	NA	1,549	2,974	1,425	NA	NA	NA	1,549	NA	NA	1,549	2,974
1950	NA	1,562	2,978	1,415	NA	NA	NA	1,562	NA	NA	1,562	2,978
1955	NA	1,424	2,784	1,360	NA	NA	NA	1,424	NA	NA	1,424	2,784
1960	NA	1,320	2,929	1,608	1	NA	NA	1,320	NA	NA	1,320	2,929
1965	NA	1,335	3,398	2,059	4	NA	NA	1,335	NA	NA	1,335	3,398
1970	NA	1,431	4,076	2,634	11	NA	NA	1,429	2	NA	1,431	4,076
1971	NA	1,432	4,268	2,824	12	NA	NA	1,430	2	NA	1,432	4,268
1972	NA	1,503	4,398	2,864	31	NA	NA	1,501	2	NA	1,503	4,398
1973	NA	1,529	4,433	2,861	43	NA	NA	1,527	2	NA	1,529	4,433
1974	NA	1,540	4,769	3,177	53	NA	NA	1,538	2	NA	1,540	4,769
1975	NA	1,499	4,723	3,155	70	NA	NA	1,497	2	NA	1,499	4,723
1976	NA	1,713	4,768	2,976	78	NA	NA	1,711	2	NA	1,713	4,768
1977	NA	1,838	4,249	2,333	77	NA	NA	1,837	2	NA	1,838	4,249
1978	NA	2,038	5,039	2,937	64	NA	NA	2,036	1	NA	2,038	5,039
1979	NA	2,152	5,166	2,931	84	NA	NA	2,150	2	NA	2,152	5,166
1980	NA	2,476	5,485	2,900	110	NA	NA	2,474	2	NA	2,476	5,485
1981	13	R2,597	R5,478	2,758	123	NA	NA	2,496	88	13	R2,597	R5,478
1982	35	2,664	6,034	3,266	105	NA	NA	2,510	119	35	2,664	6,034
1983	R64	R2,906	R6,562	3,527	129	NA	(s)	2,684	157	R64	R2,906	R6,562
1984	R79	R2,973	R6,524	3,386	165	(s)	(s)	2,686	208	R79	R2,973	R6,524
1985	R95	R3,018	R6,187	2,970	198	(s)	(s)	2,687	236	R95	R3,018	R6,187
1986	R109	R2,934	R6,225	3,071	219	(s)	(s)	2,562	263	R109	R2,934	R6,225
1987	R125	R2,877	R5,741	2,635	229	(s)	(s)	2,463	289	R125	R2,877	R5,741
1988	R127	R3,019	R5,570	2,334	217	(s)	(s)	2,577	315	R127	R3,019	R5,570
1989	R128	R3,162	R6,394	2,837	317	55	22	2,680	354	R128	R3,162	R6,394
1990	R113	R2,737	R6,208	3,046	336	60	29	2,216	408	R113	R2,737	R6,208
1991	R131	R2,784	R6,240	3,016	346	63	31	2,214	440	R131	R2,784	R6,240
1992	R148	R2,935	R5,995	2,617	349	64	30	2,313	473	R148	R2,935	R5,995
1993	R173	R2,912	R6,265	2,892	364	66	31	2,260	479	R173	R2,912	R6,264
1994	R192	R3,031	R6,157	2,683	338	69	36	2,324	515	R192	R3,031	R6,157
1995	R202	R3,103	R6,705	3,205	294	70	33	2,370	531	R204	R3,105	R6,707
1996	R144	R3,158	R7,168	3,590	316	71	33	2,437	577	R146	R3,160	R7,169
1997	190	R3,112	R7,181	3,640	325	70	34	2,371	551	187	R3,109	7,178
1998	R207	2,933	6,659	3,297	328	70	31	2,184	542	205	R2,932	R6,658
1999	215	2,969	6,683	3,268	331	69	46	2,214	540	213	R2,968	6,681
2000	238	3,010	6,262	2,811	317	66	57	2,262	511	241	3,013	6,264
2001	260	2,629	5,318	2,242	311	65	70	2,006	364	258	2,627	5,316
2002	R314	2,712	5,899	2,689	328	64	105	1,995	402	309	R2,707	R5,894
2003	R411	2,815	R6,148	2,825	331	64	115	2,002	401	R413	2,817	6,150
2004	R500	3,011	6,248	2,690	341	65	142	2,121	389	513	3,023	R6,260
2005	R581	R3,120	R6,410	2,703	343	66	178	R2,136	403	R594	R3,133	R6,423
2006	R743	R3,309	R6,857	2,869	343	72	264	R2,152	R414	795	R3,361	R6,908
2007	R1,011	R3,583	6,800	R2,446	R349	R81	R341	R2,142	R430	R1,025	R3,597	R6,814
2008 ^P	1,429	3,900	7,316	2,452	358	91	514	2,041	431	1,413	3,884	7,300

¹ Production equals consumption for all renewable energy sources except biofuels.

² Total biomass inputs to the production of fuel ethanol and biodiesel.

³ Wood and wood-derived fuels, biomass waste, fuel ethanol, and biodiesel.

⁴ Hydroelectric power, geothermal, solar/PV, wind, and biomass.

⁵ Conventional hydroelectricity net generation (converted to Btu using the fossil-fueled plants heat rate).

⁶ Geothermal electricity net generation (converted to Btu using the geothermal energy plants heat rate), and geothermal heat pump and direct use energy.

⁷ Solar thermal and photovoltaic electricity net generation (converted to Btu using the fossil-fueled plants heat rate), and solar thermal direct use energy.

⁸ Wind electricity net generation (converted to Btu using the fossil-fueled plants heat rate).

⁹ Wood and wood-derived fuels.

¹⁰ Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and

other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

¹¹ Fuel ethanol and biodiesel consumption, plus losses and co-products from the production of fuel ethanol and biodiesel.

R=Revised. P=Preliminary. NA=Not available. (s)=Less than 0.5 trillion Btu.

Notes: • See Note, "Renewable Energy Production and Consumption," at end of section. • See Table E1 for estimated renewable energy consumption for 1635-1945. • Totals may not equal sum of components due to independent rounding.

Web Pages: • For all data beginning in 1949, see <http://www.eia.doe.gov/emeu/aer/renew.html>.

• For related information, see <http://www.eia.doe.gov/fuelrenewable.html>.

Sources: **Biofuels:** Tables 10.3 and 10.4. **All Other Data:** Tables 10.2a-c.