

Table 10.1 Renewable Energy Production and Consumption by Source
(Trillion Btu)

	Production ^a				Consumption								
	Biomass			Total Renewable Energy ^e	Hydroelectric Power ^f	Geothermal ^g	Solar ^h	Wind ⁱ	Biomass				Total Renewable Energy
	Wood ^b	Bio-fuels ^c	Total ^d						Wood ^j	Waste ^k	Bio-fuels ^l	Total	
1950 Total	1,562	NA	1,562	2,978	1,415	NA	NA	NA	1,562	NA	NA	1,562	2,978
1955 Total	1,424	NA	1,424	2,784	1,360	NA	NA	NA	1,424	NA	NA	1,424	2,784
1960 Total	1,320	NA	1,320	2,928	1,608	(s)	NA	NA	1,320	NA	NA	1,320	2,928
1965 Total	1,335	NA	1,335	3,396	2,059	2	NA	NA	1,335	NA	NA	1,335	3,396
1970 Total	1,429	NA	1,431	4,070	2,634	6	NA	NA	1,429	2	NA	1,431	4,070
1975 Total	1,497	NA	1,499	4,687	3,155	34	NA	NA	1,497	2	NA	1,499	4,687
1980 Total	2,474	NA	2,475	5,428	2,900	53	NA	NA	2,474	2	NA	2,475	5,428
1985 Total	2,687	93	3,016	6,084	2,970	97	(s)	(s)	2,687	236	93	3,016	6,084
1990 Total	2,216	111	2,735	6,040	3,046	171	59	29	2,216	408	111	2,735	6,040
1995 Total	2,370	198	3,099	6,557	3,205	152	68	33	2,370	531	200	3,101	6,559
2000 Total	2,262	233	3,006	6,102	2,811	164	63	57	2,262	511	236	3,008	6,104
2001 Total	2,006	254	2,624	5,162	2,242	164	62	70	2,006	364	253	2,622	5,160
2002 Total	1,995	308	2,705	5,731	2,689	171	60	105	1,995	402	303	2,701	5,726
2003 Total	2,002	401	2,805	5,942	2,793	173	58	113	2,002	401	403	2,806	5,944
2004 Total	2,121	486	2,996	6,063	2,688	178	58	142	2,121	389	498	3,008	6,075
2005 Total	2,137	561	3,101	6,221	2,703	181	58	178	2,137	403	574	3,114	6,234
2006 Total	2,099	716	3,212	6,586	2,869	181	61	264	2,099	397	766	3,262	6,637
2007 Total	2,089	970	3,472	6,510	2,446	186	66	341	2,089	413	983	3,485	6,523
2008 Total	2,059	1,374	3,868	7,192	2,511	192	74	546	2,059	435	1,357	3,851	7,175
2009 Total	1,935	1,570	3,957	7,625	2,669	200	78	721	1,935	452	1,553	3,940	7,608
2010 Total	2,217	1,868	4,553	8,314	2,539	208	91	923	2,217	468	1,821	4,506	8,267
2011 Total	2,213	2,029	4,704	9,300	3,103	212	112	1,168	2,213	462	1,934	4,609	9,204
2012 Total	2,151	1,929	4,547	8,886	2,629	212	159	1,340	2,151	467	1,890	4,508	8,847
2013 Total	2,338	1,981	4,816	9,418	2,562	214	225	1,601	2,338	496	2,014	4,848	9,451
2014 Total	2,401	2,103	5,020	9,766	2,467	214	337	1,728	2,401	516	2,077	4,994	9,740
2015 Total	2,312	2,161	4,992	9,729	2,321	212	427	1,777	2,312	518	2,153	4,983	9,720
2016 Total	2,302	2,275	5,081	10,428	2,472	210	570	2,096	2,230	503	2,287	5,020	10,368
2017 January	203	197	445	926	247	18	34	183	196	45	181	422	904
February	181	177	398	867	218	16	40	195	176	40	168	383	852
March	201	197	442	1,023	270	18	63	230	194	43	191	429	1,010
April	189	183	412	997	271	18	69	227	183	41	185	408	993
May	193	197	432	1,035	298	17	81	207	188	41	202	431	1,034
June	195	192	427	991	278	16	87	183	188	40	199	428	992
July	202	196	439	932	244	18	83	147	197	41	196	434	927
August	205	203	450	874	201	18	80	125	199	41	205	445	869
September	191	192	421	852	176	17	74	164	183	38	190	411	842
October	197	201	438	924	168	17	68	233	190	40	196	427	914
November	198	203	443	921	189	17	50	222	191	42	194	426	905
December	209	205	458	959	206	20	49	226	200	43	195	439	940
Total	2,364	2,344	5,204	11,301	2,767	210	777	2,343	2,285	495	2,304	5,084	11,181
2018 January	208	198	451	1,002	236	18	50	247	203	44	191	437	989
February	194	182	417	949	235	17	58	222	186	41	165	391	924
March	204	200	448	1,033	239	18	76	251	198	44	191	433	1,018
April	197	190	429	1,034	253	17	89	247	190	41	179	411	1,016
May	206	201	447	1,063	280	19	100	217	198	41	199	437	1,053
June	205	200	445	1,051	258	18	107	225	196	40	193	429	1,036
July	209	210	459	946	221	19	100	148	203	40	200	442	930
August	212	212	464	958	197	19	99	180	203	40	205	448	943
September	198	193	428	874	172	18	90	166	190	36	182	408	854
October	206	204	451	912	173	18	76	195	196	41	196	433	894
November	201	198	440	928	204	18	58	207	192	41	187	421	908
December	211	200	454	970	219	20	50	229	202	43	191	436	953
Total	2,451	2,389	5,332	11,722	2,688	218	951	2,533	2,357	492	2,279	5,128	11,518
2019 January	209	195	446	978	226	19	55	232	203	41	178	423	954
February	191	177	405	897	203	17	59	212	182	37	171	391	883
March	199	191	431	1,012	234	19	88	240	192	41	189	421	1,002
April	196	193	427	1,057	234	17	101	278	188	38	185	410	1,040
May	202	202	442	1,088	277	18	107	244	194	38	199	431	1,076
5-Month Total	996	959	2,150	5,031	1,174	90	410	1,206	958	195	922	2,075	4,956
2018 5-Month Total	1,009	972	2,192	5,082	1,244	89	372	1,185	975	211	925	2,110	5,000
2017 5-Month Total	967	952	2,129	4,848	1,303	87	287	1,042	937	210	927	2,073	4,793

^a For hydroelectric power, geothermal, solar, wind, and biomass waste, production equals consumption.

^b Wood and wood-derived fuels. Through 2015, wood production equals consumption. Beginning in 2016, wood production equals consumption plus densified biomass exports.

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

^d Includes biomass waste.

^e Hydroelectric power, geothermal, solar, wind, and biomass.

^f Conventional hydroelectricity net generation (converted to Btu by multiplying by the total fossil fuels heat rate factors in Table A6).

^g Geothermal electricity net generation (converted to Btu by multiplying by the total fossil fuels heat rate factors in Table A6), and geothermal heat pump and direct use energy.

^h Solar photovoltaic (PV) and solar thermal electricity net generation (converted to Btu by multiplying by the total fossil fuels heat rate factors in Table A6), and solar thermal direct use energy.

ⁱ Wind electricity net generation (converted to Btu by multiplying by the total fossil fuels heat rate factors in Table A6).

^j Wood and wood-derived fuels.

^k 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).

^l Fuel ethanol (minus denaturant), biodiesel, other renewable diesel fuel, and other renewable fuels consumption; plus losses and co-products from the production of fuel ethanol and biodiesel.

NA=Not available. (s)=Less than 0.5 trillion Btu.

Notes: • Production data are estimates. Consumption data are estimates, except for hydroelectric power in 1949–1978 and 1989 forward, and wind. • See Note, "Renewable Energy Production and Consumption," at end of section.

• Totals may not equal sum of components due to independent rounding.

• Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#renewable> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: • **Production:** Tables 10.2a–10.4 and U.S. Energy Information Administration, Form EIA-63C, "Densified Biomass Fuel Report."

• **Consumption:** Tables 10.2a–10.2c.