

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

	Production <sup>a</sup>				Consumption								
	Biomass			Total Renewable Energy <sup>e</sup>	Hydroelectric Power <sup>f</sup>	Geothermal <sup>g</sup>	Solar <sup>h</sup>	Wind <sup>i</sup>	Biomass				Total Renewable Energy
	Wood <sup>b</sup>	Bio-fuels <sup>c</sup>	Total <sup>d</sup>						Wood <sup>j</sup>	Waste <sup>k</sup>	Bio-fuels <sup>l</sup>	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	9,767	2,467	214	338	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	9,721
2016 Total	2,297	2,275	5,075	10,423	2,472	210	570	2,096	2,224	503	2,287	5,015	10,363
2017 Total	2,259	2,344	5,099	11,196	2,767	210	777	2,343	2,181	495	2,304	4,979	11,077
2018 January	202	200	445	972	228	18	49	233	197	43	187	426	954
February	184	184	408	918	227	16	55	211	176	40	166	382	892
March	199	202	443	1,011	235	18	74	241	193	43	192	428	996
April	188	191	420	1,018	256	16	86	241	181	41	181	402	1,001
May	197	202	440	1,049	277	18	96	218	189	41	201	430	1,040
June	195	200	435	1,030	251	17	102	225	186	39	194	419	1,015
July	203	210	452	945	229	18	97	150	196	39	199	435	928
August	203	212	455	949	200	18	95	181	194	40	206	440	934
September	190	194	421	865	174	17	85	169	182	37	182	400	845
October	196	204	441	902	178	17	72	193	187	41	196	423	884
November	193	198	432	905	199	17	56	200	185	41	189	414	887
December	205	200	447	943	208	19	48	221	196	42	191	429	925
Total	2,355	2,397	5,238	11,508	2,663	209	916	2,482	2,261	487	2,283	5,031	11,301
2019 January	R 202	195	R 437	R 944	R 221	18	R 52	R 216	R 196	R 39	177	R 413	R 920
February	R 184	177	R 396	R 873	R 204	R 16	R 56	R 201	R 175	R 36	172	R 383	R 860
March	R 196	191	R 425	R 990	R 234	18	R 84	R 229	R 189	38	186	R 413	R 978
April	R 185	193	R 414	R 1,030	R 248	16	R 95	R 257	R 177	R 36	185	R 397	R 1,013
May	R 193	202	R 431	R 1,064	R 285	R 17	R 102	R 229	R 185	R 36	199	R 420	R 1,053
June	R 191	197	R 424	R 1,000	R 250	R 17	R 110	R 199	R 182	R 36	194	R 412	R 988
July	R 200	203	R 439	R 988	R 221	18	R 113	R 196	R 192	R 37	197	R 425	R 973
August	R 203	199	R 439	R 945	R 201	18	R 109	R 178	R 193	R 37	194	R 423	R 929
September	R 191	182	R 408	R 903	R 165	R 17	R 95	R 218	R 181	R 35	179	R 395	R 890
October	R 193	192	R 422	R 930	R 163	R 16	R 85	R 245	R 184	37	191	R 412	R 921
November	R 193	192	R 421	R 901	R 180	R 14	R 63	R 223	R 183	37	187	R 407	R 887
December	R 201	203	R 443	R 939	R 191	R 16	R 53	R 236	R 191	R 39	194	R 424	R 920
Total	R 2,330	2,328	R 5,100	R 11,509	R 2,563	R 201	R 1,018	R 2,626	R 2,227	R 442	2,255	R 4,924	R 11,332
2020 January	R 193	203	R 436	R 995	R 226	17	66	R 251	R 186	39	187	R 412	R 971
February	R 184	187	R 407	R 996	R 235	16	R 78	R 259	R 176	36	174	R 386	R 974
March	R 192	184	R 414	995	R 209	19	R 93	R 260	R 182	38	162	R 383	R 963
April	R 183	113	R 332	R 918	R 196	18	R 112	R 261	R 175	R 36	112	R 323	R 910
May	191	137	R 364	R 1,037	R 272	18	R 131	R 251	183	36	146	R 365	R 1,038
June	R 181	164	R 378	R 1,051	R 259	17	R 130	R 266	R 171	33	167	R 371	R 1,044
July	R 185	181	401	R 1,006	R 247	R 18	R 139	R 201	R 178	R 35	179	R 392	R 998
August	189	179	403	966	216	18	128	201	180	35	175	390	952
8-Month Total	1,498	1,348	3,134	7,963	1,860	142	878	1,950	1,430	288	1,302	3,021	7,850
2019 8-Month Total	1,553	1,558	3,406	7,834	1,864	138	722	1,704	1,487	295	1,504	3,286	7,715
2018 8-Month Total	1,570	1,600	3,497	7,893	1,904	139	655	1,699	1,512	327	1,525	3,364	7,760

<sup>a</sup> For hydroelectric power, geothermal, solar, wind, and biomass waste, production equals consumption.

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

<sup>c</sup> Total biomass inputs to the production of fuel ethanol and biodiesel.

<sup>d</sup> Includes biomass waste.

<sup>e</sup> Hydroelectric power, geothermal, solar, wind, and biomass.

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

<sup>g</sup> 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.

<sup>h</sup> 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.

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

<sup>j</sup> Wood and wood-derived fuels.

<sup>k</sup> 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).

<sup>l</sup> 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.

R=Revised. 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.