

**Table 5a. Historical Renewable Energy Consumption by Energy Use Sector and Energy Source, 1989-1999
(Quadrillion Btu)**

Sector and Energy Source	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Total	6.294	6.133	6.158	5.907	6.157	6.065	6.669	7.137	7.075	6.561	6.599
Biomass	3.062	2.662	2.702	2.847	2.804	2.939	3.068	3.127	3.006	2.835	2.885
Wood	2.637	2.191	2.190	2.290	2.228	2.315	2.420	2.467	2.350	2.175	2.224
Waste ^a	0.354	0.408	0.440	0.473	0.479	0.515	0.531	0.577	0.551	0.542	0.540
Alcohol Fuels ^b	0.071	0.063	0.073	0.083	0.097	0.109	0.117	0.084	0.106	0.117	0.122
Geothermal	0.317	0.336	0.346	0.349	0.364	0.338	0.294	0.316	0.325	0.328	0.331
Conventional Hydroelectric	2.837	3.046	3.016	2.617	2.892	2.683	3.205	3.590	3.640	3.297	3.268
Solar ^c	0.055	0.060	0.063	0.064	0.066	0.069	0.070	0.071	0.070	0.070	0.069
Wind	0.022	0.029	0.031	0.030	0.031	0.036	0.033	0.033	0.034	0.031	0.046
Residential	0.976	0.642	0.677	0.711	0.616	0.607	0.667	0.667	0.506	0.459	0.486
Biomass	0.918	0.581	0.613	0.645	0.548	0.537	0.596	0.595	0.433	0.387	0.414
Wood	0.918	0.581	0.613	0.645	0.548	0.537	0.596	0.595	0.433	0.387	0.414
Geothermal	0.005	0.006	0.006	0.006	0.007	0.006	0.007	0.007	0.008	0.008	0.009
Solar ^c	0.053	0.056	0.058	0.060	0.062	0.064	0.065	0.065	0.065	0.065	0.064
Commercial	0.061	0.071	0.072	0.081	0.084	0.086	0.092	0.110	0.113	0.111	0.114
Biomass	0.058	0.067	0.068	0.076	0.079	0.081	0.086	0.103	0.107	0.102	0.106
Wood	0.036	0.039	0.041	0.044	0.046	0.046	0.046	0.050	0.049	0.048	0.052
Waste ^a	0.022	0.028	0.026	0.032	0.033	0.035	0.040	0.053	0.058	0.054	0.054
Geothermal	0.003	0.003	0.003	0.003	0.003	0.004	0.005	0.005	0.006	0.007	0.007
Conventional Hydroelectric	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Industrial	1.814	1.667	1.626	1.672	1.697	1.844	1.905	1.971	1.976	1.841	1.843
Biomass	1.784	1.634	1.595	1.640	1.666	1.779	1.847	1.907	1.915	1.784	1.791
Wood	1.584	1.442	1.410	1.461	1.484	1.580	1.652	1.683	1.731	1.603	1.620
Waste ^a	0.200	0.192	0.185	0.179	0.181	0.199	0.195	0.224	0.184	0.180	0.171
Geothermal	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.003	0.003	0.004
Conventional Hydroelectric	0.028	0.031	0.030	0.031	0.030	0.062	0.055	0.061	0.058	0.055	0.049
Solar											
Wind											
Transportation	0.071	0.063	0.073	0.083	0.097	0.109	0.117	0.084	0.106	0.117	0.122
Alcohol Fuels ^b	0.071	0.063	0.073	0.083	0.097	0.109	0.117	0.084	0.106	0.117	0.122
Electric Power Sector ^d	3.372	3.689	3.710	3.360	3.662	3.420	3.889	4.305	4.375	4.032	4.034
Electric Utilities	2.983	3.151	3.114	2.712	2.953	2.714	3.173	3.553	3.620	3.279	3.123
Biomass	0.020	0.022	0.021	0.022	0.021	0.021	0.017	0.020	0.020	0.021	0.020
Wood	0.010	0.008	0.008	0.008	0.009	0.008	0.007	0.008	0.008	0.007	0.007
Waste ^a	0.010	0.013	0.014	0.013	0.011	0.013	0.010	0.012	0.013	0.013	0.013
Geothermal	0.197	0.181	0.170	0.169	0.158	0.145	0.099	0.110	0.115	0.109	0.036
Conventional Hydroelectric	2.765	2.948	2.923	2.521	2.774	2.549	3.056	3.423	3.485	3.149	3.067
Solar	*	*	*	*	*	*	*	*	*	*	*
Wind	*	*	*	*	*	*	*	*	*	*	*
Independent Power Producer	0.389	0.538	0.596	0.648	0.709	0.705	0.716	0.752	0.754	0.753	0.910
Biomass	0.211	0.295	0.333	0.381	0.394	0.413	0.405	0.418	0.426	0.424	0.433
Wood	0.089	0.120	0.118	0.132	0.141	0.144	0.119	0.130	0.129	0.129	0.131
Waste	0.122	0.175	0.215	0.249	0.253	0.269	0.286	0.288	0.296	0.294	0.302
Geothermal	0.111	0.145	0.165	0.168	0.193	0.180	0.181	0.191	0.194	0.202	0.276
Conventional Hydroelectric	0.043	0.066	0.062	0.065	0.087	0.072	0.093	0.104	0.096	0.092	0.151
Solar	0.003	0.004	0.005	0.004	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Wind	0.022	0.029	0.031	0.030	0.031	0.036	0.033	0.033	0.034	0.031	0.046

See footnotes at end of table.

Table 5b. Historical Renewable Energy Consumption by Energy Use Sector and Energy Source, 2000-2004 (Continued)
(Quadrillion Btu)

Sector and Energy Source	2000	2001	2002	2003	2004 ^P
Total	6.158	5.328	5.835	6.082	6.117
Biomass	2.907	2.640	2.648	2.740	2.845
Wood	2.257	1.980	1.899	1.929	1.989
Waste ^a	0.511	0.514	0.576	0.571	0.560
Alcohol Fuels ^b	0.139	0.147	0.174	0.239	0.296
Geothermal	0.317	0.311	0.328	0.339	0.340
Conventional Hydroelectric	2.811	2.242	2.689	2.825	2.725
Solar ^c	0.066	0.065	0.064	0.064	0.063
Wind	0.057	0.070	0.105	0.115	0.143
Residential	0.503	0.439	0.382	0.434	0.408
Biomass	0.433	0.370	0.313	0.359	0.332
Wood	0.433	0.370	0.313	0.359	0.332
Geothermal	0.009	0.009	0.010	0.017	0.018
Solar	0.061	0.060	0.059	0.058	0.057
Commercial	0.109	0.089	0.090	0.102	0.106
Biomass	0.100	0.080	0.081	0.087	0.089
Wood	0.053	0.040	0.039	0.040	0.041
Waste ^a	0.047	0.039	0.042	0.047	0.048
Geothermal	0.008	0.008	0.009	0.014	0.015
Conventional Hydroelectric	0.001	0.001	0.000	0.001	0.001
Industrial	1.828	1.630	1.608	1.581	1.676
Biomass	1.781	1.593	1.565	1.533	1.620
Wood	1.636	1.443	1.396	1.363	1.448
Waste ^a	0.145	0.150	0.168	0.170	0.172
Geothermal	0.004	0.005	0.005	0.005	0.005
Conventional Hydroelectric	0.042	0.033	0.039	0.043	0.051
Solar					
Wind					
Transportation	0.139	0.147	0.174	0.239	0.296
Alcohol Fuels ^b	0.139	0.147	0.174	0.239	0.296
Electric Power Sector ^d	3.579	3.023	3.581	3.725	3.632
Electric Utilities	2.607	2.067	2.545	2.622	2.505
Biomass	0.021	0.019	0.049	0.036	0.029
Wood	0.007	0.006	0.011	0.017	0.012
Waste ^a	0.014	0.013	0.038	0.020	0.016
Geothermal	0.003	0.003	0.029	0.026	0.026
Conventional Hydroelectric	2.582	2.044	2.465	2.556	2.447
Solar	*	*	*	*	*
Wind	*	0.001	0.002	0.004	0.003
Independent Power Producer	0.972	0.956	1.036	1.103	1.127
Biomass	0.432	0.432	0.467	0.485	0.479
Wood	0.127	0.121	0.140	0.151	0.155
Waste	0.305	0.311	0.327	0.335	0.324
Geothermal	0.293	0.286	0.275	0.277	0.275
Conventional Hydroelectric	0.185	0.165	0.185	0.224	0.227
Solar	0.005	0.006	0.006	0.005	0.006
Wind	0.057	0.068	0.103	0.111	0.140

See footnotes at end of table.

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Table 5a and 5b. Historical Renewable Energy Consumption by Energy Use Sector and Energy Source, 2000-2004 (Continued)

Notes and Sources

^a Municipal solid waste, landfill gases, agriculture byproducts/crops, sludge waste, tires, and other biomass solids, liquids and gases.

^b Ethanol primarily derived from corn.

^c Includes small amounts of distributed solar thermal and photovoltaic energy used in the commercial, industrial and electric power sectors.

^d The electric power sector comprises electricity-only and combined-heat-power (CHP) plants within North American Classification System (NAICS) 22 category whose primary business is to sell electricity, or electricity and heat, to the public.

*=Less than 500 billion Btu.

P=Preliminary.

Note: Data revisions are discussed in the Highlights section. Blank cell indicates the sector has no data to report for that energy source. Totals may not equal sum of components due to independent rounding.

Sources: Analysis conducted by Energy Information Administration, Office of Coal, Nuclear, Electric, and Alternate Fuels and specific sources described as follows. Residential: Energy Information Administration, Form EIA-457A/G, "Residential Energy Consumption Survey;" Oregon Institute of Technology, Geo-Heat Center and Energy Information Administration, Form EIA-63A, "Annual Solar Thermal Collector Manufacturers Survey" and Form EIA-63B, "Annual Photovoltaic Module/Cell Manufacturers Survey." Commercial: Energy Information Administration, Form EIA-867, "Annual Nonutility Power Producer Report," Form EIA-860B, "Annual Electric Generator Report - Nonutility," Form EIA-906, "Power Plant Report, Form EIA-920, "Combined Heat and Power Plant Report," and Oregon Institute of Technology, Geo-Heat Center. Industrial: Energy Information Administration, Form EIA-846 (A,B,C) "Manufacturing Energy Consumption Survey," Form EIA-867, "Annual Nonutility Power Producer Report," Form EIA-860B, "Annual Electric Generator Report - Nonutility," and Form EIA-906, "Power Plant Report," Form EIA-920, "Combined Heat and Power Plant Report," Oregon Institute of Technology, Geo-Heat Center and Government Advisory Associates, Resource Recovery Yearbook and Methane Recovery Yearbook. Transportation: Bureau of Alcohol, Tobacco and Firearms, fuel ethanol production and import data, U.S. Bureau of Census, Schedule B, Commodity Number 2207.20.0000, "Ethyl Alcohol, Denatured of Any Strength," Energy Information Administration, Form-EIA-819M, "Monthly Oxygenate Telephone Report," and Form EIA-814, "Monthly Imports Report." Electric Power: Energy Information Administration, Form EIA-759, "Monthly Power Plant Report," Form EIA-867, "Annual Nonutility Power Producer Report," Form EIA-860B, "Annual Electric Generator Report - Nonutility," Form EIA-906, "Monthly Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant Report."