Appendix E

Table E1. Estimated Energy Consumption in the United States, Selected Years, 1635-1945

(Quadrillion Btu)

Year	Fossil Fuels				Renewable Energy			Electricity Net Imports	Total
	Coal	Natural Gas	Petroleum	Total	Conventional Hydroelectric Power	Wood [1]	Total		
1635	NA	—	—	—	—	(s)	(s)	—	(s)
1645	NA	—	—	—	—	0.001	0.001	—	0.001
1655	NA	—	—	—	—	0.002	0.002	—	0.002
1665	NA	—	—	—	—	0.005	0.005	—	0.005
1675	NA	—	—	—	—	0.007	0.007	—	0.007
1685	NA	—	—	—	—	0.009	0.009	—	0.009
1695	NA	—	—	—	—	0.014	0.014	—	0.014
1705	NA	—	—	—	—	0.022	0.022	—	0.022
1715	NA	—	—	—	—	0.037	0.037	—	0.037
1725	NA	—	—	—	—	0.056	0.056	—	0.056
1735	NA	—	—	—	—	0.080	0.080	—	0.080
1745	NA	—	—	—	—	0.112	0.112	—	0.112
1755	NA	—	—	—	—	0.155	0.155	—	0.155
1765	NA	—	—	—	—	0.200	0.200	—	0.200
1775	NA	—	—	—	—	0.249	0.249	—	0.249
1785	NA	—	—	—	—	0.310	0.310	—	0.310
1795	NA	—	—	—	—	0.402	0.402	—	0.402
1805	NA	—	—	—	—	0.537	0.537	—	0.537
1815	NA	—	—	—	—	0.714	0.714	—	0.714
1825	NA	—	—	—	—	0.960	0.960	—	0.960
1835	NA	—	—	—	—	1.305	1.305	—	1.305
1845	NA	—	—	—	—	1.757	1.757	—	1.757
1850	0.219	—	—	0.219	—	2.138	2.138	—	2.357
1855	0.421	—	—	0.421	—	2.389	2.389	—	2.810
1860	0.518	—	0.003	0.521	—	2.641	2.641	—	3.162
1865	0.632	—	0.010	0.642	—	2.767	2.767	—	3.409
1870	1.048	—	0.011	1.059	—	2.893	2.893	—	3.952
1875	1.440	—	0.011	1.451	—	2.872	2.872	—	4.323
1880	2.054	—	0.096	2.150	—	2.851	2.851	—	5.001
1885	2.840	0.082	0.040	2.962	—	2.683	2.683	—	5.645
1890	4.062	0.257	0.156	4.475	0.022	2.515	2.537	—	7.012
1895	4.950	0.147	0.168	5.265	0.090	2.306	2.396	—	7.661
1900	6.841	0.252	0.229	7.322	0.250	2.015	2.265	—	9.587
1905	10.001	0.372	0.610	10.983	0.386	1.843	2.229	—	13.212
1910	12.714	0.540	1.007	14.261	0.539	1.765	2.304	—	16.565
1915	13.294	0.673	1.418	15.385	0.659	1.688	2.347	0.002	17.734
1920	15.504	0.813	2.676	18.993	0.738	1.610	2.348	0.003	21.344
1925	14.706	1.191	4.280	20.177	0.668	1.533	2.201	0.004	22.382
1930	13.639	1.932	5.897	21.468	0.752	1.455	2.207	0.005	23.680
1935	10.634	1.919	5.675	18.228	0.806	1.397	2.203	0.005	20.436
1940	12.535	2.665	7.760	22.960	0.880	1.358	2.238	0.007	25.205
1945	15.972	3.871	10.110	29.953	1.442	[1]1.261	2.703	0.009	32.665

[1] There is a discontinuity in the "Wood" time series between 1945 and 1949. Through 1945, data are for fuelwood only; beginning in 1949, data also include wood-derived fuel and wood byproducts burned as fuel.

NA=Not available. — = Not applicable. (s)=Less than 0.0005 quadrillion Btu.

Notes: • For years not shown, there are no data are available. • See Tables 1.3 and 10.1 for continuation of these data series from 1949 forward. • See Note, "Geographic Coverage of Statistics for 1635-1945," at end of section.

Sources: **Coal, Natural Gas, and Petroleum:** *Energy in the American Economy, 1850-1975,* Table VII. **Conventional Hydroelectric Power:** *Energy in the American Economy, 1850-1975,* Table II. **Wood:** • 1635-1845: U.S. Department of Agriculture Circular No. 641, *Fuel Wood Used in the United States 1630-1930,* February 1942. This source estimates fuelwood consumption in cords per decade, which were converted to Btu using the conversion factor of 20 million Btu per cord. The annual average value for each decade was assigned to the fifth year of the decade on the assumption that annual use was likely to increase during any given decade and the average annual value was more likely to reflect mid-decade yearly consumption than use at either the beginning or end of the decade. Values thus begin in 1635 and are plotted at 10-year intervals. • 1850-1945: *Energy in the American Economy, 1850-1975,* Table VII. **Electricity Net Imports:** *Energy in the American Economy, 1850-1975,* Tables I and VI. Calculated as the difference between hydroelectric consumption and hydroelectric production times 3,412 Btu per kilowatthour.

Appendix E

Note: Geographic Coverage of statistics for 1635-1945. Table E1 presents estimates of U.S. energy consumption by energy source for a period that begins a century and a half before the original 13 colonies formed a political union and continues through the decades during which the United States was still expanding territorially. The question thus arises, what exactly is meant by "U.S. consumption" of an energy source for those years when the United States did not formally exist or consisted of less territory than is now encompassed by the 50 States and the District of Columbia?

The documents used to assemble the estimates, and (as far as possible) the sources of those documents, were reviewed carefully for clues to geographic coverage. For most energy sources, the extent of coverage expanded more rapidly than the Nation, defined as all the official States and the District of Columbia. Estimates or measurements of consumption of each energy source generally appear to follow settlement patterns. That is, they were made for areas of the continent that were settled enough to have economically significant consumption even though those areas were not to become States for years. The wood data series, for example, begins in 1635 and includes 12 of the original colonies (excepting Georgia), as well as Maine, Vermont, and the area that would become the District of Columbia. By the time the series reaches 1810, the rest of the continental States are all included, though the last of the 48 States to achieve statehood did not do so until 1912. Likewise, the coal data series begins in 1850 but includes consumption in areas, such as Utah and Washington (State), which were significant coal-producing regions but had not yet attained statehood. (Note: No data were available on State-level historical coal consumption. The coal data shown in Table E1 through 1945 describe *apparent* consumption, i.e., production plus imports minus exports. The geographic coverage for coal was therefore based on a tally of coal-*producing* States listed in various historical issues of *Minerals Yearbook*. It is likely that coal was consumed in States where it was not mined in significant quantities.)

By energy source, the extent of coverage can be summarized as follows: • **Coal**—35 coal-producing States by 1885. • **Natural Gas**—All 48 contiguous States, the District of Columbia, and Alaska by 1885. • **Petroleum**—All 48 contiguous States, the District of Columbia, and Alaska by 1885. • **Conventional Hydroelectric Power**—Coverage for 1890 and 1895 is uncertain, but probably the 48 contiguous States and the District of Columbia. Coverage for 1900 through 1945 is the 48 contiguous States, and the District of Columbia. • **Wood**—All 48 contiguous States and the District of Columbia by 1810.