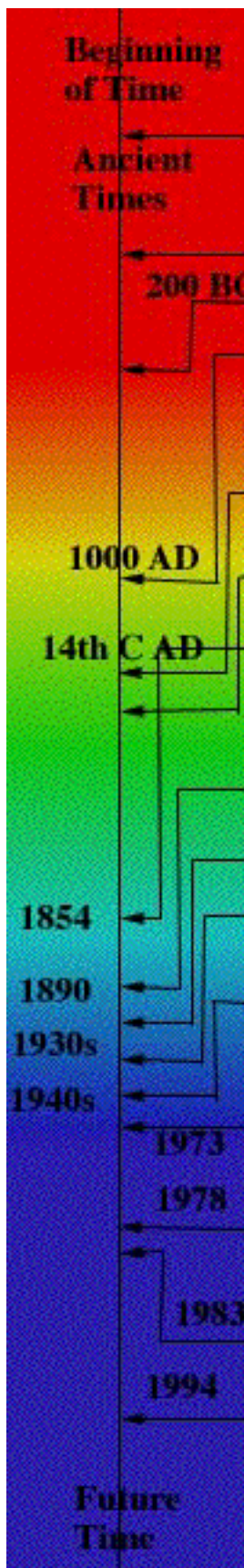


The History of Wind Power



~3200 B.C. the ancient Egyptians invented the sail. The way a boat moves is through the wind pushing the sail. Excluding modern times, a wind powered boat has been the primary form of water transportation in all of human history. Some examples of civilizations and countries that used wind powered sails follows.

Romans used passive wind power in their extensive fleets. Some ships were large enough to carry almost a thousand tons of cargo, or a great number of passengers depending on the length of the trip and the accommodations of the passengers.

The Chinese reportedly invented the windmill. West of China in Persia windmills were used around 200 BC.

By 1000 A.D. the Vikings had explored and conquered the North Atlantic because of the power of the wind.

Around the 14th century, the Dutch used passive wind power to pump water from flooded fields with a device called a windmill. Much of Holland is below sea-level and is often flooded. The windmill was the transition invention that led to modern wind power turbines and other devices.

French farmers used wind power to move water into pools where it was used for irrigation.

In 1854 a wind powered water pump was introduced in the United States. This type is very familiar because its blades rested on a wheel and it had a tail to keep the fan pointed into the wind.

In Denmark wind power was pioneered in 1890 starting (120) 5 - 25 kW wind powered systems.

In the 1930s a Frenchman named G. J. M. Darrieus invented a wind power design in the shape of an eggbeater.

By 1940 there were around 6 million windmills of the type introduced in the United States almost a century earlier in 1854.

In 1941 near Rutland, Vermont a giant 1.5 MW machine powered the Central Vermont Public Service electric grid.

Just as solar power technology accelerated during the oil embargo of 1973 - 1974, wind power made large strides.

Westinghouse Electric Company received Department of Energy (DOE) / NASA contracts for building large scale wind turbines. The greatest capacity wind turbine was built in Oahu, Hawaii, with a 3.2 MW power rating.

A 25% tax credit for investors of wind turbines was made through the Public Utilities Regulatory Policies Act (PURPA) of 1978. Between 1981 and 1984 6,870 turbines were installed in California.

At the end of 1983, there were around 4600 wind turbines operating out of California. These turbines together produced 300000 KW of electricity.

The change in prices of wind power electricity dropped from 14 cents per kWh in 1985 to 5 cents per kWh in 1994 making wind power a much greater competitor in the electricity market.-

