

## Major Energy Accomplishments (prior to the 19th century)

- 3000 BC** The Mesopotamians use rock oil in architectural adhesives, ship caulks, medicines, and roads.
- 2000 BC** The Chinese refine crude oil for use in lighting and heating.
- 300 B.C.** Hydropower is used by the Greeks to turn water wheels for grinding grains more than 2,000 years ago.
- 200 B.C.** The Chinese use natural gas to make salt from salt water (brine) in gas-fired evaporators.
- 500–900 AD** The first windmills were developed in Persia for pumping water and grinding grain.
- 600 BC** Thales, a Greek, finds that when amber is rubbed with silk, it becomes electrically charged and attracts objects. He has discovered static electricity.
- 600–700 AD** Arab and Persian chemists discover that petroleum's lighter elements can be mixed with quicklime to make Greek fire, a gas that is used as a weapon.
- About 1300** The first horizontal-axis windmills (like a pinwheel) appear in Western Europe.
- By 1600** Wood is the primary fuel for heating and cooking in homes and businesses. It will eventually be used for steam in industries, trains, and boats.
- 1600** William Gilbert (England) first coin the term "electricity" from elektron, the Greek word for amber. Gilbert writes about the electrification of many substances. He was also uses the terms electric force, magnetic pole, and electric attraction.
- 1626** French explorers discover Native Americans burning gases that are seeping into and around Lake Erie.
- 1660** Otto von Guericke (Germany) demonstrates a vacuum, and then invents a machine that produces static electricity.
- 1673–74** The first record of coal in the United States appears on a map prepared by Louis Joliet. The map notes charbon de terra (coal of the earth) along the Illinois River in northern Illinois.
- 1675** Stephen Gray (England) distinguishes between conductors and nonconductors of electrical charges.
- 1701** Coal is discovered near Richmond, Virginia.
- 1736** Several "cole mines" are located along the upper Potomac River, near what is now the border of Maryland and West Virginia.
- 1748** The first commercial U.S. coal production begins near Richmond, Virginia.
- Mid–1770s** French hydraulic and military engineer Bernard Forest de Belidor writes "Architecture Hydraulique," a four-volume work describing the engineering involved in using water pumps for work.
- 1750** A French military officer notes that Indians living near Fort Duquesne (now the site of Pittsburgh) set fire to an oil-slicked creek as part of a religious ceremony. As settlement by Europeans proceeds, oil is discovered in many places in northwestern Pennsylvania and western New York.
- 1752** Ben Franklin (United States) ties a key to a kite string during a thunderstorm, and proves that static electricity and lightning are the same thing.
- 1769** Nicolas-Joseph Cugnot (France) builds the first self-propelled vehicle, a military tractor that runs on steam. It can go 2.5 miles per hour.
- 1787** John Fitch (United States) successfully tests his invention, a 45-foot steamboat, in the Delaware River.
- 1745-1746** Pieter van Musschenbroek (the Netherlands) develops an electric capacitor that would be called the Leyden jar after the University of Leyden where he worked.
- 1745–46** Georg Von Kleist (Germany) develops the first electric capacitor, a device for storing electricity.
- 1800** Alessandro Volta (Italy) invents the first electric battery. The term volt is named in his honor.