

Significant Events in the History of Energy By Fuel

Wood (Biomass)

Pre-1885	Wood was the primary source for cooking, warmth, light, trains and steamboats. Cutting wood was time consuming, hard work.
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Electricity

1700's	After eons of superstitious imaginations about electricity, Ben Franklin figured out that static electricity and lightening were the same. His correct understanding of the nature of electricity paved the way for the future.
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1830-1839	Michael Faraday built an induction dynamo based on principles of electromagnetism, induction, generation and transmission.
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1860's	Mathematical theory of electromagnetic fields was published. Maxwell created a new era of physics when he unified magnetism, electricity and light. One of the most significant events, possibly the very most significant event, of the 19th century was Maxwell's discovery of the four laws of electrodynamics ("Maxwell's Equations"). This led to electric power, radios, and television.
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Coal

1763-1774	Pumping water from coal mines was a most difficult and expensive problem. The steam engine developed by James Watt during these years provided the solution. Watt's steam engine remained basically unchanged for the next century and its uses expanded to change the whole nature of industry and transportation.
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1885-1950	Coal was the most important fuel. One half ton of coal produced as much energy as 2 tons of wood and at half the cost. But it was hard to stay clean in houses heated with coal.
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Late 1860's	The steel industry gave coal a big boost.
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1982	Coal accounted for more than half of the supply of electricity but little was used in homes. In terms of national electricity generation, hydropower, natural gas, and nuclear energy contributed between 10 and 15 percent each.
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Oil

By 1870	Oil had become the country's second biggest export after the industry was started by Edwin Drake .
1890	Mass production of automobiles began, creating demand for gasoline. Prior to this, kerosene used for lighting had been the main oil product.
1951-present	Oil has given us most of our energy. Automobiles increased the demand for oil.
1960	The Organization of Petroleum Exporting Countries (OPEC) was formed by Iran, Iraq, Kuwait, Saudi Arabia, and Venezuela. The group has since grown to include 11 member countries.
1970	U.S. production of petroleum (crude oil and natural gas plant liquids) reached its highest level at 11.7 million barrels per day. Production in the Lower-48 States has been generally declining since 1970. Some of this decline has been offset by increased Alaskan production after 1978.
1993 forward	For the first time the U.S. imported more oil and refined products from other countries than it produced. More and more imports have been needed because of growing petroleum demand and declining U.S. production
Nuclear	
1906	Special theory of relativity written. Albert Einstein created a new era of physics when he unified mass, energy, magnetism, electricity, and light. One of the most significant events, if not the very most significant event, of the 20th century was Einstein's writing the formula of $E=mc^2$: energy = mass times the square of the speed of light. This led to nuclear medicine - and a much longer life span, astrophysics, and commercial nuclear electric power
1942	Scientists produced nuclear energy in a sustained nuclear reaction.
1957	The first commercial nuclear power plant began operating.
1995	Nuclear power contributed about 20 percent of the nation's electricity.

Significant Events in the History of Energy Uses

Transportation

1781	The stagecoach was the worldwide standard for passenger travel.
1800	Transportation as we know today was almost non-existent. Railroads covered far less territory. Trains were much smaller. Horse-drawn carts moved food and all other items on land, and barges moved them on rivers.
1881	The steam-powered railway train had become the worldwide standard for passenger travel.
1908	Henry Ford produced the Model T car (Note that the Model T had been designed to use ethanol, gasoline, or any combination of the two fuels).
1920	The Ford Motor Company manufactured the Model T in large numbers.
1949-2000	In transportation, use of energy is overwhelmingly petroleum. Energy for this use more than tripled from 1949 to 2000, with motor gasoline accounting for about two-thirds of it. Distillate fuel oil and jet fuel are other important petroleum products used in transportation.
1950-present	The National Highway Defense System opened interstate highways for fast trucks.

Energy Uses Have Changed

1800	The residential sector consumed most of America's energy.
1850-1980	The average energy that each person used increased steadily.
1979-1982	Energy consumption decreased ten percent. The industrial sector cut its consumption by 20 percent. The residential and commercial sectors energy consumption stayed about the same.
1950	Distillate fuel oil heated about 22 percent of U.S. households. Over a third of all U.S. housing units were warmed by coal. Natural gas was used to warm about 25 percent of U.S. households. Electricity was used to warm only 0.6 percent of U.S. households.
1978	Microwave ovens were located in 8 percent of U.S. households.
1990	16 percent of households owned one or more personal computers.



1997

- Only about 11 percent of all U.S. housing units were warmed by distillate fuel oil.
- Only 0.2 percent of all U.S. housing units were warmed by coal.
- More than 50 percent of all U.S. households used natural gas for warmth.
- Electricity was used as the main heating fuel in 29 percent of U.S. households.
- 35 percent of U.S. households had personal computers.
- 83 percent of U.S. households had microwaves.
- 99 percent of U.S. households had a color television.
- 47 percent of U.S. households had central air conditioning.
- 85 percent of U.S. households had one refrigerator
- 15 percent of U.S. households had two or more refrigerators.