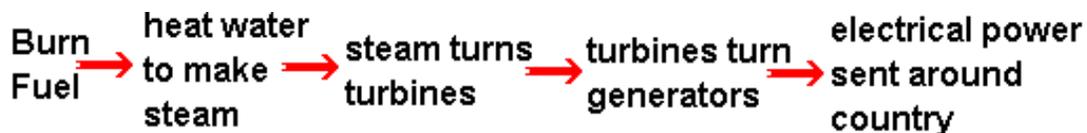


Fossil Fuels Fact Sheet

- Coal, Oil and Gas are called "fossil fuels" because they have been formed from the fossilized remains of prehistoric plants and animals.
- Fossil fuels are a nonrenewable energy source since they take millions of years to form.
- Fossil fuels ultimately get their energy from the sun. The plants that turned into fossils stored energy from the sun by photosynthesis.
- 85.6% of all energy consumed in the U.S. comes from fossil fuels.
- The average U.S. Household pays about 8 1/2 cents per KWH and uses 10,000 KWH per year.
- Types of Fossil Fuels
 - Coal
 - Coal is a hard, black colored rock-like substance formed when dead plants were subjected to extreme heat and pressure for millions of years. It is made up of carbon, hydrogen, oxygen, nitrogen and varying amounts of sulfur.
 - There are two ways to mine coal: Surface mining and underground mining
 - Coal often costs more to transport than other fuels.
 - Different types of coal have different amounts of carbon. The more carbon present, the more energy it contains.
 - Coal deposits can be found in 38 states. Montana, Illinois, and Wyoming are the top coal states.
 - Coal from the west has less sulfur content which means it produces fewer pollutants.
 - The federal government owns a majority of the nation's coal reserves.
 - Coal generates 50.2% of the electricity used in this country.
 - Coal industries are required to monitor the amount of pollutants they release into the air, and to reclaim land damaged by surface mining.
 - Clean coal technologies that do not hurt the environment are currently being researched by scientists and engineers.
 - Natural Gas
 - Natural gas was formed from the remains of tiny sea animals and plants that died millions of years ago. The gas then became trapped in layers of rock like water in a wet sponge.

- Raw natural gas is a mixture of different gases. Its main ingredient is methane.
- The strange smell of natural gas (like rotten eggs) comes from a chemical natural gas companies add called mercaptan. This is added so leaks are easily detected.
- Natural gas was first used in America in 1816 to light the streets of Baltimore.
- Natural gas accounts for 23.7% of the energy in the U.S.
- Natural gas is found more than 6,000 ft. under the earth's surface. Drilling can cost up to \$100/ft so sites must be chosen carefully. Only 48% of the sites we drill actually produce natural gas.
- Natural gas is produced in 32 states. The top 3 are Texas, Oklahoma, and New Mexico.
- Natural gas is transported by pipeline. More than one millions miles of pipelines link natural gas fields to major cities in the U.S.
- Industry is the biggest consumer of natural gas, using it as a heating source and often as an ingredient in the products they produce.
- 60% of homes use natural gas for heating.
- Natural gas can be used in any vehicle with a regular internal combustion engine, although the vehicle must have a special carburetor and fuel tank.
- If we continue to use natural gas at the current rate, we will only have 30-50 years worth.
- Natural gas is the most environmentally friendly fossil fuel.
- Oil (Petroleum)
 - Oil was formed from the remains of tiny sea animals and plants that died millions of years ago. The organic material was then broken down into hydrogen and carbon atoms and a sponge-like rock was formed, full of oil.
 - Only 44% of wells that are drilled for oil actually produce it.
 - The average oil well produces 11 barrels of oil per day.
 - State and federal governments regulate oil drilling and production.
 - Texas, Alaska, and California are the top three oil producing states.

- Oil cannot be used as it is when it is taken from the ground. Oil refineries clean and separate the oil into various fuels and by-products. The most important of these is gasoline.
- Gasoline and other petroleum products are transported through pipelines. There are about 230,000 miles of pipelines in the U.S.
- Petroleum supplies 37.2% of the energy used in the U.S.
- Americans use about 18 million barrels of oil every day.
- 67% of oil is used for transportation.
- The U.S. is becoming increasingly dependent on other countries for oil. Some of these countries include: Iran, Russia, Mexico and, Canada.
- The outer continental shelf (off the coasts of California and Alaska and in the Gulf of Mexico), contain rich deposits of petroleum and natural gas but offshore production is very costly.
- Petroleum production, distribution, and consumption can contribute to air and water pollution.
- Drilling for oil can disturb fragile ecosystems, especially when there is a spill. Leaking underground storage tanks pollute the groundwater and create toxic fumes. Even burning fuel in our cars emits pollutants.
- The Clean Air Act of 1970 helped us make advances in protecting our environment. Oil refineries had to reduce emissions and new technologies have been developed.
- This year the price of crude oil hit an all-time high of \$66 per barrel. Companies that transport materials and products have been forced to increase their price just to keep up.
- **How does it work?**



Information gathered from:

The NEED Project Secondary Energy Infobook

<http://www.energyquest.ca.gov/story/chapter08.html>

<http://www.eere.energy.gov>

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<http://www.tvakids.com/electricity/fossil.htm>

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☺ A silly old man is a fossil fool. ☺

