

Fossil Fuel Facts

What are fossil fuels?

Fossil fuels are called “fossil” because, just like rock fossils, they are made from dead plants and animals. Those plants and animals lived a very long time ago, even before dinosaurs. After they died, they were buried under layers of rock. The heat and pressure of being so far under the earth changed them until they became coal, oil and gas. We burn these three types of fuels to make light and heat, or to create other energy, such as electricity.

Oil

Oil is a sticky, black liquid made from tiny, one-celled sea plants and animals called plankton. To get to it, you drill a narrow hole deep into the earth and pump it back to the surface using suction. Oil gets turned into petrol / diesel to make your car go, tar for paving roads and chemicals that make plastics.

Coal

Coal is black, rocklike stuff that was created from dead plants in swamps. There is more of it than any other fossil fuel. Coal can be found near the surface of the earth or further underground. To reach it, coal needs to be mined. 40% of the electricity in the world is made from burning coal; its heat turns water into steam, which turns turbines -- big wheels -- that make the electricity.

Natural Gas

Anywhere you find oil, you will find natural gas. Just like with oil, you drill to reach it and pump it into pipe lines. Then it has to be cleaned, which means everything but the methane gas is removed. Methane doesn't have any smell, so a chemical is added to make it stink so you can tell when you're around it. It's highly flammable and is used for cooking, heating and making electricity. It's cleaner than oil or coal and burns hotter as well, so it produces more electricity.

Interesting Fossil Fuel Facts:

- Fossil Fuels take millions of years for fossil fuels to develop.
- The fossil fuels we use today began forming during the Carboniferous Period which was before dinosaurs ruled the Earth.
- Oil, also called petroleum, is pumped from underground and can be turned into products such as gasoline and electricity.
- If your house uses natural gas for cooking and heating, this is a form of a fossil fuel that lies underground usually above oil.
- Coal is another fossil fuel used to generate electricity and is found closer to the Earth's surface.

- Although fossil fuels are mainly used to make electricity, they are also used to power machines such as cars and planes.
- Fossil fuels are non-renewable which means they cannot be made by humans.
- Fossil fuels in their natural form must first be burned to be used as electricity.
- When fossil fuels are burned, they release unhealthy toxins into the air we breathe.
- Around 90% of our energy comes from fossil fuels.
- The energy stored in fossil fuels comes from the sun.
- The main component of natural gas is methane which is highly flammable.
- Natural gas has no smell so a chemical called mercaptan is added so that it can easily be detected.
- Natural gas is pumped to houses by way of underground pipelines that connect directly to the natural gas source.
- Although renewable sources of energy are better than non-renewable sources of energy, we continue to use non-renewable sources because they are easier to obtain.

Advantages of using fossil fuels

- Very large amounts of electricity can be generated in one place using coal, fairly cheaply.
- Transporting oil and gas to the power stations is easy
- Gas-fired power stations are very efficient.
- A fossil-fuelled power station can be built almost anywhere, as long as you can get large quantities of fuel to it. Didcot power station, in Oxfordshire, has a dedicated rail link to supply the coal.

Disadvantages of using fossil fuels

- Fossil fuels are non-renewable energy resources. **Their supply is limited, and will eventually run out.** Fossil fuels do not renew themselves, while fuels such as wood can be renewed endlessly.
- Fossil fuels **release carbon dioxide when they burn**, which adds to the greenhouse effect and increases global warming. Of the three fossil fuels, for a given amount of energy released, coal produces the most carbon dioxide and natural gas produces the least.
- Coal and oil **release sulphur dioxide gas when they burn**, which causes breathing problems for living creatures and contributes to acid rain.
- Mining coal can be difficult and dangerous. It can also destroy large areas of landscape.
- Coal-fired power stations need huge amounts of fuel, which means train-loads of coal almost constantly. To cope with changing demands for power, the station needs reserves. This means covering a large area of countryside next to the power station with piles of coal.