

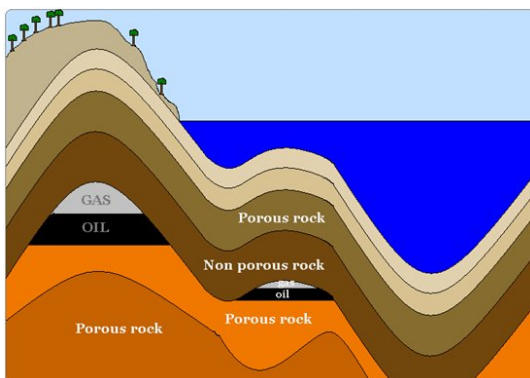


In the category of traditional energizers we have coals, oil and gas, so called fossil fuels. These energizers have been used for many hundred years but since the industrial revolution of the 19th century they have been utilized more and more.

How is fossil fuel formed? Coals have been formed by plant remains, especially in moors and swamp areas. Coal formed mainly in two periods in Earth's past. The coal period is believed to have started 360 million years ago and have had a span of about 80 million years. During the first half of the period the weather was warm and humid but got colder in between. Enormous woods in the swamplands were characteristic. During warmer periods big forests grew. When glaciers melted and the high tides of the ocean grew the forest drowned in oxygen poor environment. It is known that during the coal period the changes in the flow of water led to thick layers of organic material gathered. The bacteria then turned the plant remains into fuel by e.g. disposing of oxygen and hydrogen from the plant remains.

Most of the earth's coal supply was formed during the coal period but it is known that during the Cretaceous period conditions were favourable on earth so a considerable amount of coals were formed during that time.

Coals are categorised into four types by their content of carbon; turf, lignite, bituminous coal and anthracite coal. The anthracite coals are about 95% carbon and give a lot of energy but give out rather small amount of pollution. When the carbon content in the coals becomes less the coals become worse as energy and pollutes more.



Oil is the organic remains of microscopic aquatic organisms that fell to the sea floor when they died and who were gathered in the layer of the sea floor. Anaerobic bacteria transformed oxygen, nitrogen and other material out of the vestige so the most part of the leftover contained carbon. The layers with the carbon have been moving with the earth's crust. At a certain depth and a certain pressure and temperature occurred in a complex chemical process where the carbon turned to oil and gas. To make it possible for oil to develop the temperature must be 50 – 60°C and for gas about 100°C. Both oil and gas have been moving in the earth crust in porous layers and accumulate in so-called traps. By far the most of the oil was developed during the Chalk Period, which began about 144 million years ago and ended about 66 million years.

It takes a very long time for fossil fuel to develop. With an enormous use since the industrial revolution have the reserves decreased very much and it took those reserves many thousand years or even millions of years to develop. Scientists agree that fossil fuel is running out in the world and it will be more difficult and more expensive to get the fossil fuels that still exist.



Energy demand has grown very much not least because of increasing demand in Asia.

The worst thing about the use of fossil fuels is probably the effect of taking the place of burning fuel. Burning the fossil fuel releases a lot of carbon dioxide which passes into the atmosphere. When data is accessed it can be seen that the increase in carbon dioxide in the atmosphere has increased enormously. This increase in carbon dioxide is believed to cause what we call global warming, which can leads to a higher temperature on earth with unpredictable consequences.

Because of this need to seek all possible ways to reduce the use of traditional energy sources and seek instead ways in which today's energy needs are met by more environmentally friendly energizer.

[A presentation about fossil fuels held in Lithuania](#)

Written by Jón Páll, Óskar and Pálmi Geir.