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NON-RENEWABLE ENERGY SOURCES

Type of fuel	Where it is from	Advantages	Disadvantages
Coal (fossil fuel)	Formed from fossilised plants and consisting of carbon with various organic and some inorganic compounds. Mined from seams of coal, found sandwiched between layers of rock in the earth. Burnt to provide heat or electricity.	Ready-made fuel. It is relatively cheap to mine and to convert into energy. Coal supplies will last longer than oil or gas.	When burned coal gives off atmospheric pollutants, including greenhouse gases.
Oil (fossil fuel)	A carbon-based liquid formed from fossilised animals. Lakes of oil are sandwiched between seams of rock in the earth. Pipes are sunk down to the reservoirs to pump the oil out. Widely used in industry and transport.	Oil is a ready-made fuel. Relatively cheap to extract and to convert into energy.	When burned, it gives off atmospheric pollutants, including greenhouse gases. Only a limited supply.
Natural gas (fossil fuel)	Methane and some other gases trapped between seams of rock under the earth's surface. Pipes are sunk into the ground to release the gas.	Gas is a ready-made fuel. It is a relatively cheap form of energy. It's a slightly cleaner fuel than coal and oil.	When burned, it gives off atmospheric pollutants, including greenhouse gases. Only limited supply of gas.

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	Often used in houses for heating and cooking.		
Nuclear	Radioactive minerals such as uranium are mined. Electricity is generated from the energy that is released when the atoms of these minerals are split (by nuclear fission) in nuclear reactors.	A small amount of radioactive material produces a lot of energy. Raw materials are relatively cheap and can last quite a long time. It doesn't give off atmospheric pollutants.	Nuclear reactors are expensive to run. Nuclear waste is highly toxic, and needs to be safely stored for hundreds or thousands of years (storage is extremely expensive). Leakage of nuclear materials can have a devastating impact on people and the environment. The worst nuclear reactor accident was at Chernobyl , Ukraine in 1986.
Biomass	Biomass energy is generated from decaying plant or animal waste. It can also be an organic material which is burned to provide energy, eg heat, or electricity. An example of biomass energy is oilseed rape (yellow flowers you see in the UK in summer), which produces oil. After treatment with chemicals it can be used as a fuel in diesel engines.	It is a cheap and readily available source of energy. If the crops are replaced, biomass can be a long-term, sustainable energy source.	When burned, it gives off atmospheric pollutants, including greenhouse gases. If crops are not replanted , biomass is a non-renewable resource.
Wood	Obtained from felling trees, burned to generate heat and light.	A cheap and readily available source of energy. If the trees are replaced, wood	When burned it gives off atmospheric pollutants, including greenhouse gases.

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		burning can be a long-term, sustainable energy source.	If trees are not replanted wood is a non-renewable resource.

How long will fossil fuels last?

Estimates from international organisations suggest that if the world's demand for energy from fossil fuels continues at the present rate that oil and gas reserves may run out within some of our lifetimes. Coal is expected to last longer.

Estimated length of time left for fossil fuels

Fossil fuel	Time left
Oil	50 years
Natural gas	70 years
Coal	250 years

- **Wood** can be used for fuel and is renewable if trees are replanted.
- **Biomass**, which is material from living things, can be renewable if plants are replanted.