



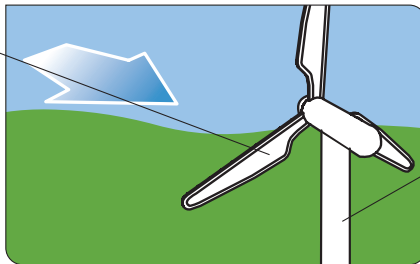
Energy source: wind

What is wind energy?

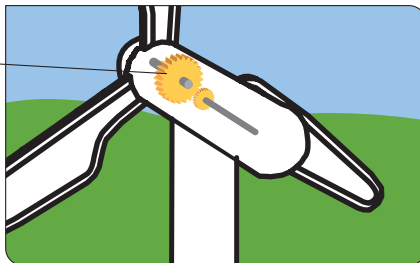
Wind has been used for a long time to make sailing boats move and windmills work. Now, giant wind turbines use the force of the wind to turn electricity generators. Where lots of these turbines are built in one place, it is known as a wind farm. Wind energy is the fastest-growing form of renewable energy in the UK.

How a wind turbine works

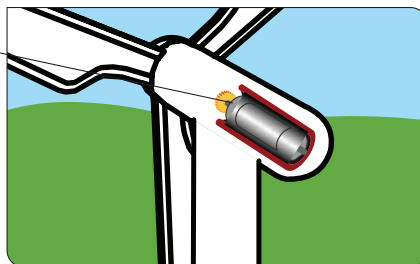
1. The wind blows against turbine blades, making them turn.



2. The blades are connected to a shaft and gears, which spin quickly.



3. The gears turn a machine called a generator, which makes electricity.



4. The electricity flows along wires in the tower, down to a thick cable buried in the ground.

5. The turbine has equipment to make sure that it always faces the wind, and a brake to shut it down in strong gales.

Facts

- There are 20 wind farms over 25MW capacity in the UK.
- Most of these are located in Scotland and the west coast of England and Wales.
- Wind energy supplies 0.5% of the UK's electricity.
- A 25MW wind farm can supply enough electricity for 16,000 homes.

Using wind energy to generate electricity

Advantages

- Wind is a renewable source so it will not run out.
- It does not produce any carbon dioxide which can lead to problems like making countries hotter and drier.
- Wind farms are safe and easy to build.

Disadvantages

- We cannot control when the wind blows. Wind turbines shut down in very strong or very weak winds.
- They can only be built in certain areas. These areas need to be windy places, usually hilly areas or coasts.
- Not everyone likes the appearance of wind farms.