

# Environment and sustainability



# Wind Turbines





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Wind power is the most significant generator of renewable energy in the UK. The onshore and offshore wind farms produced 14.8% of all electricity consumed by UK homes and businesses in 2017. The turbines we use today are advanced technology based on the traditional windmill concept.

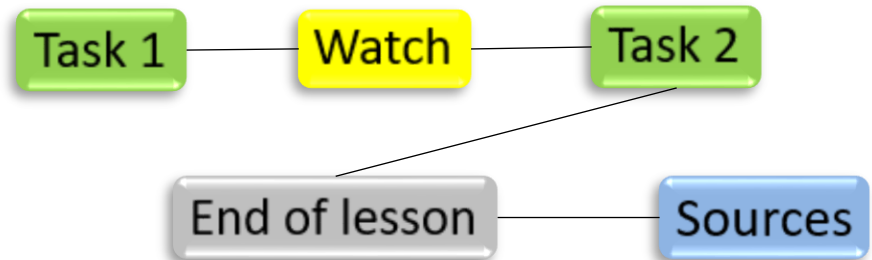
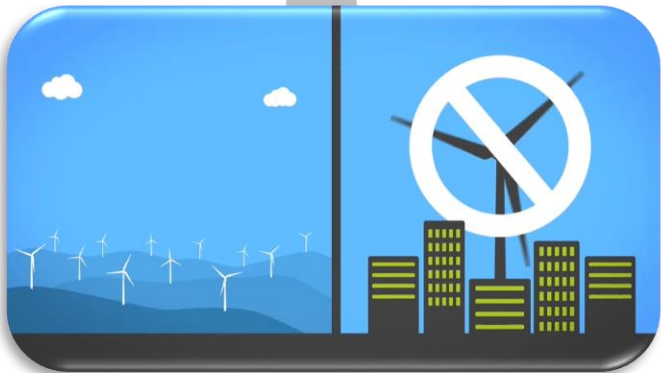
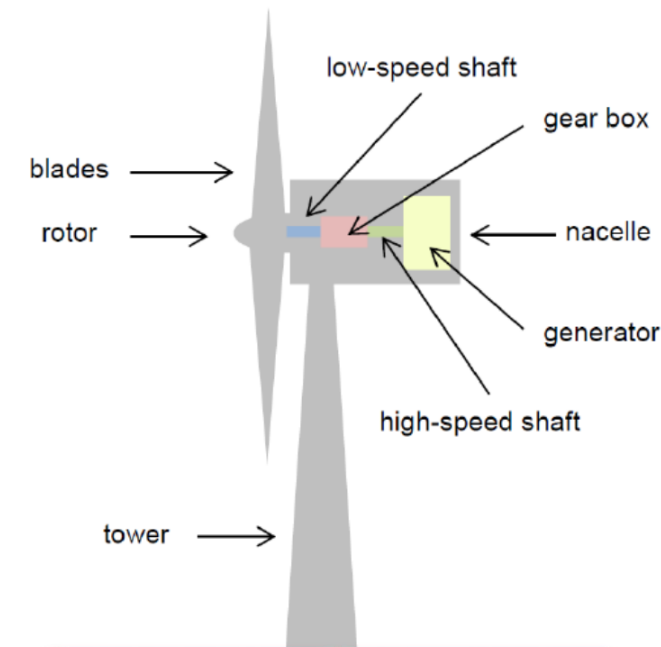
The UK has an enviable geographic position for the turbines that harness the winds' energy because of the high proportion of wind that's blown around and over the country in Europe. Although the initial investment is high, this renewable energy source produces no carbon emissions and is one of the safest and cleanest methods of generating electricity.



# Overview

## Wind turbines

Wind turbines use large blades to catch the wind. When the wind blows, the blades are forced round, driving a turbine which generates electricity. The stronger the wind, the more electricity produced.



## How much electricity?

Most onshore wind turbines have a capacity of 2-3 megawatts (MW), which can produce over 6 million kilowatt hours (kwh) of electricity every year. That's enough to meet the electricity demand of around 1,500 average households.

Up to a certain level, the faster the wind blows, the more electricity is generated. In fact, when the wind speed doubles, up to eight times more electricity is generated. But if the wind is too strong, turbines will shut themselves down to prevent being damaged.

Answer the following questions on e-waste in full sentences.

- 1 What does RPM mean?
- 2 Why is the UK a good place for wind energy?
- 3 What is happening to the price of wind energy?

**WWW:** What do you currently do to help the environment?

**EBI:** What more could you do to help the environment?

# Wind Turbines

## Sources

LEXOLOGY®



**Business Electricity Prices**

Cheap Business Electricity Prices



good energy

**vivint.Solar®**

**Vox**

WINDEXchange



**BuildingGreen**