



The energy journey

How is electricity generated at Fawley Power Station?

The first stage of your energy journey starts here!



OIL is brought into the Power Station via boat or road.

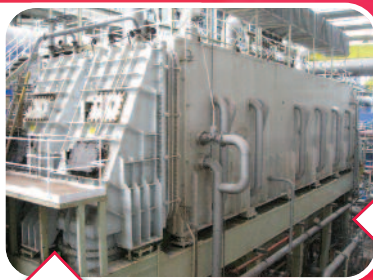


This picture shows the front of the boiler at Fawley

The **BOILER** heats up **PURE WATER** until it changes to **STEAM**. Inside the boiler **PURE WATER** runs through hundreds of tubes of pipe which hang inside. At the Power Station **OIL** is ignited in the boiler to heat the **PURE WATER**.

What happens to all the steam?

After **STEAM** passes through the **TURBINE** it is cooled in the **CONDENSERS** and changed back into water. The water is then pumped back into the **BOILER** to be reheated again into **STEAM**.



The **STEAM** travels along pipes to the **TURBINE**. It hits the **TURBINE** blades and makes them spin.

At Fawley **COOLING WATER** is taken from the **SOLENT**. Once this cooling water has been used to cool the **STEAM** it is returned to the **SOLENT**.



We need to turn the **GENERATOR** at high speed to produce electricity so we connect it to a **TURBINE**. These are large machines which have sets of blades fixed to a shaft.



The spinning **TURBINE** drives the **GENERATOR** which produces **ELECTRICITY**.

This picture shows one of the generators and turbines at Fawley



The electricity generated travels along cables to a **TRANSFORMER** which changes the electricity from a **LOW VOLTAGE** to **HIGH VOLTAGE**. This is the best way to send electricity over long distances.



For further information about the npower Brighter Futures education programme, please visit npower.com/education and www.npower.com/climatecops



Brighter futures