

TRANSFORMERS

Transformers are a very important part of our electrical system.

They increase or decrease the voltage of electricity using a magnetic field.

When electricity travels from the power station into the transformer, wires are wrapped around a large metal rod inside the transformer. Electricity travelling around this rod creates a magnetic field. This is known as an electro-magnet.

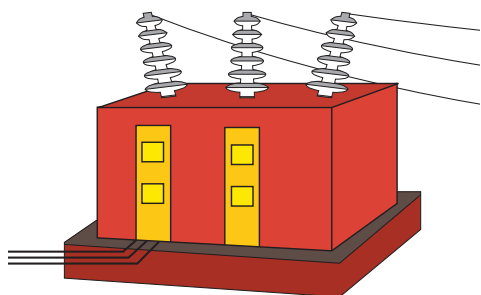
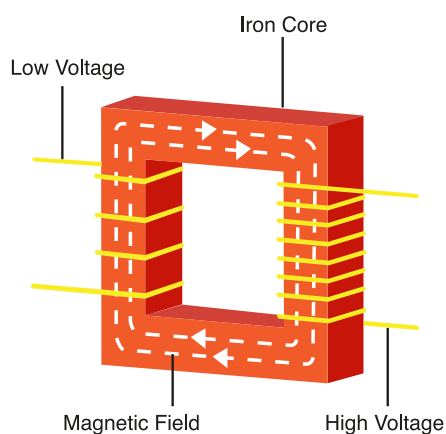
A second wire is wrapped around this same rod which then leads out of the transformer. The electrons in the wire are excited by the magnetic field, creating an electric current in the wire.

The increase or decrease in electricity is achieved by altering the number of coils around the metal rod.

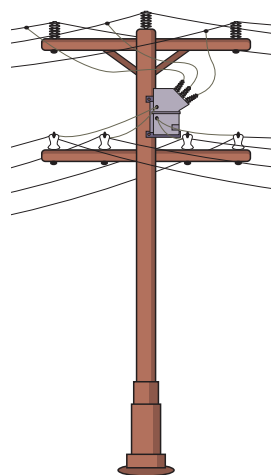
Transformers increase electricity up to 132,000 volts in areas around Kununurra and the Pilbara. Other areas in Western Australia are generally increased to 11,000 or 22,000 volts in order to reach the furthest home on the line.

As electricity travels closer to shops and homes, it needs to be brought down to 240 volts, a much safer level for appliances in your home. It will pass through a step-down transformer which can be found either in the substation, up a power pole or in a big green box on the street.

There is a very large amount of electricity travelling into these areas and can be very dangerous so make sure never to climb on them and always play away from them.



Step-up Transformer



Step-down Transformer