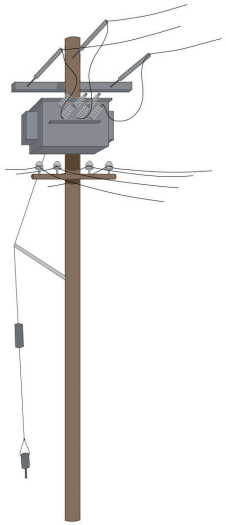
Electricity

Electricity is a form of ***energy*** that we can make (generate) and move around (transmit and distribute) to use in our homes and schools to ***power*** appliances. It is very ***useful***, but it is powerful so it can be ***dangerous.***

Electricity is measured by its pressure or force – voltage, and its rate of flow (speed) – current. It needs both to be at a certain level to hurt. When electricity is travelling long distances it is at a high voltage. When it is in your house it is a low voltage, however all electricity in overhead wires and underground cables and in your house has that potential to hurt.

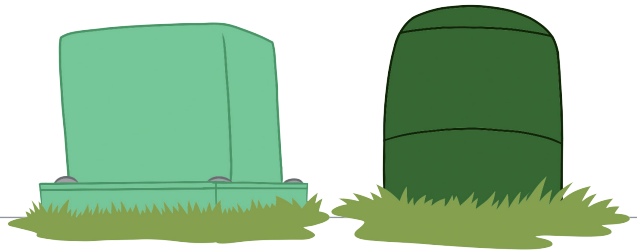


Power pole and power lines

Electricity travels on a path, known as a circuit, along wires made of good conductors such as aluminium. The power poles hold the wires up out of the way for safety. If you ever see a power line on the ground stay 8 metres away and call 000 or Western Power on **13 13 51**.

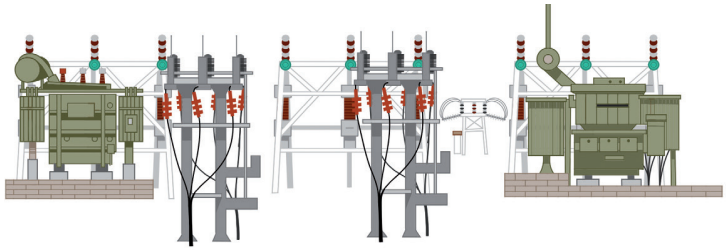
Green dome or mini pillar

Sometimes electricity goes underground instead of overhead. Green mini pillars are connection points for underground power that allow technicians to work on them. The pillars are strong to protect the wires and they are coloured green to blend in with their surroundings. Pillars are safe, but can become dangerous if damaged. If you see a damaged pillar report it to Western Power on **13 13 51**.



Substation

Electricity that has travelled a long way at a high voltage (transmission), needs to be converted to a lower voltage at a substation, so that it can continue safely to where it's needed (distribution). Only trained people can enter substation sites.



Electrical cabinet

An electrical cabinet houses a transformer for underground power and protects it. Transformers in your neighbourhood change high voltage, to a lower voltage. This, then allows electricity to move safely to your home or school to power your appliances. Voltage is the push of the electricity, similar to the force of water coming out of a tap.