

Generating Electric Energy

It's about turning!

If coiled wires turn near a magnet, electrons move! (oscillate – AC current)

If a magnet moves near coiled wire, electrons move! (oscillate – AC current)

What is a 'turbine'? A turbine is a series of 'blades' that turn on an axle.

What is a 'generator'? A generator is a machine in which moving (kinetic) energy is converted to electric energy. In the generator you will find the conducting wires. Electrons will oscillate in these wires.

What is 'the grid'? The generator connects to the grid, or a series of power lines that deliver electric energy to all our homes!

Oscillating electrons in a generator makes all the electrons along the line oscillate (AC).

Some people are 'off the grid'. This means their home is NOT connected to power lines.

How do we make the turbine move? Most generators use some method for turning the turbine. (water, wind, tides, steam etc...)

Light can be used to directly convert into electricity without a turbine. (solar power)

Terms to know:

Renewable = resource can be reused or regrown

vs. Non-renewable = resource is used up. We will run out.

Conventional Method = common / usual method

vs. Alternative Method = new and innovative methods.