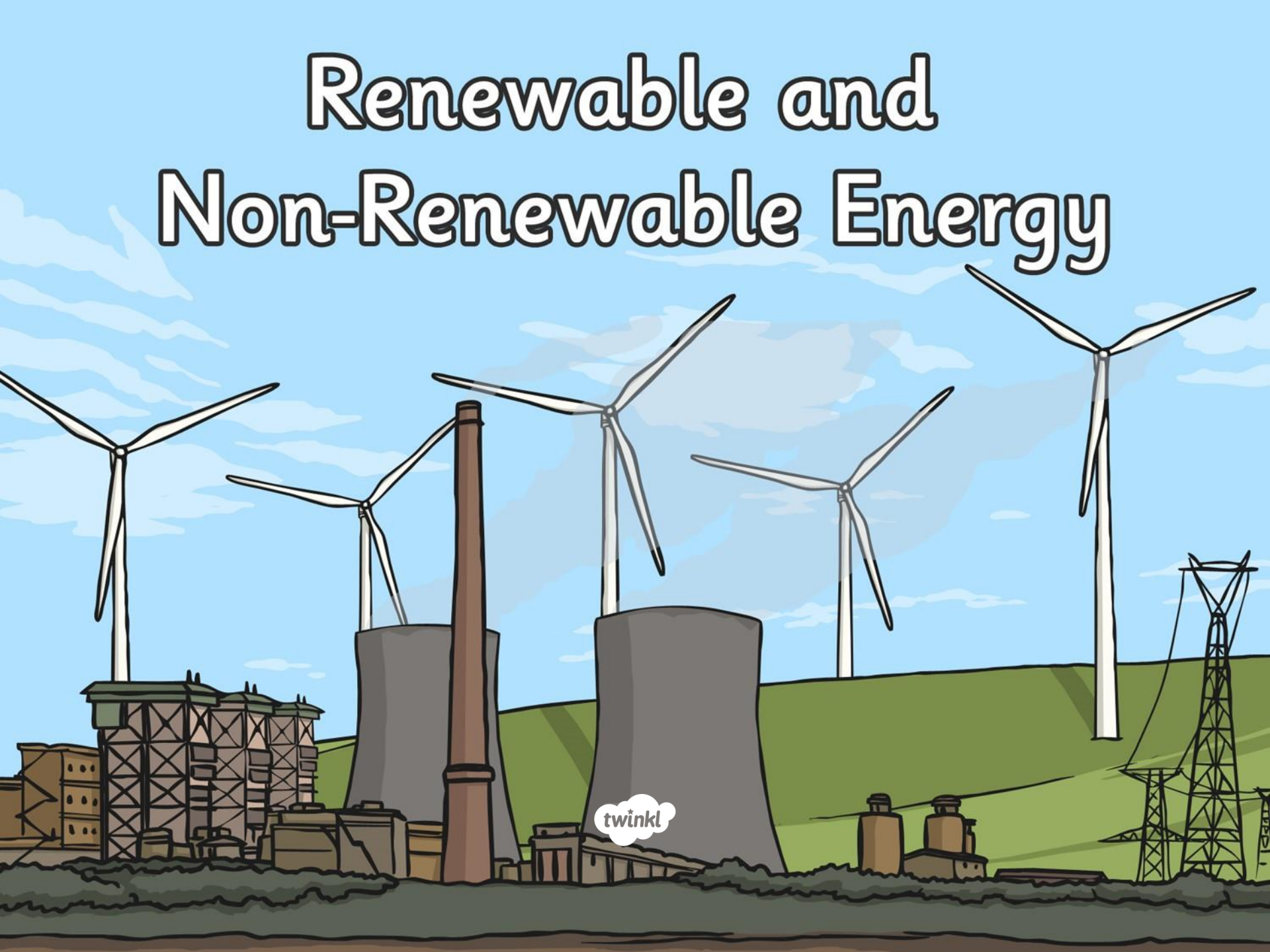
Renewable and Non-Renewable Energy



Renewable Energy

What is renewable energy?

Renewable energy comes from natural resources that are naturally replenished, such as sunlight, wind and waves.

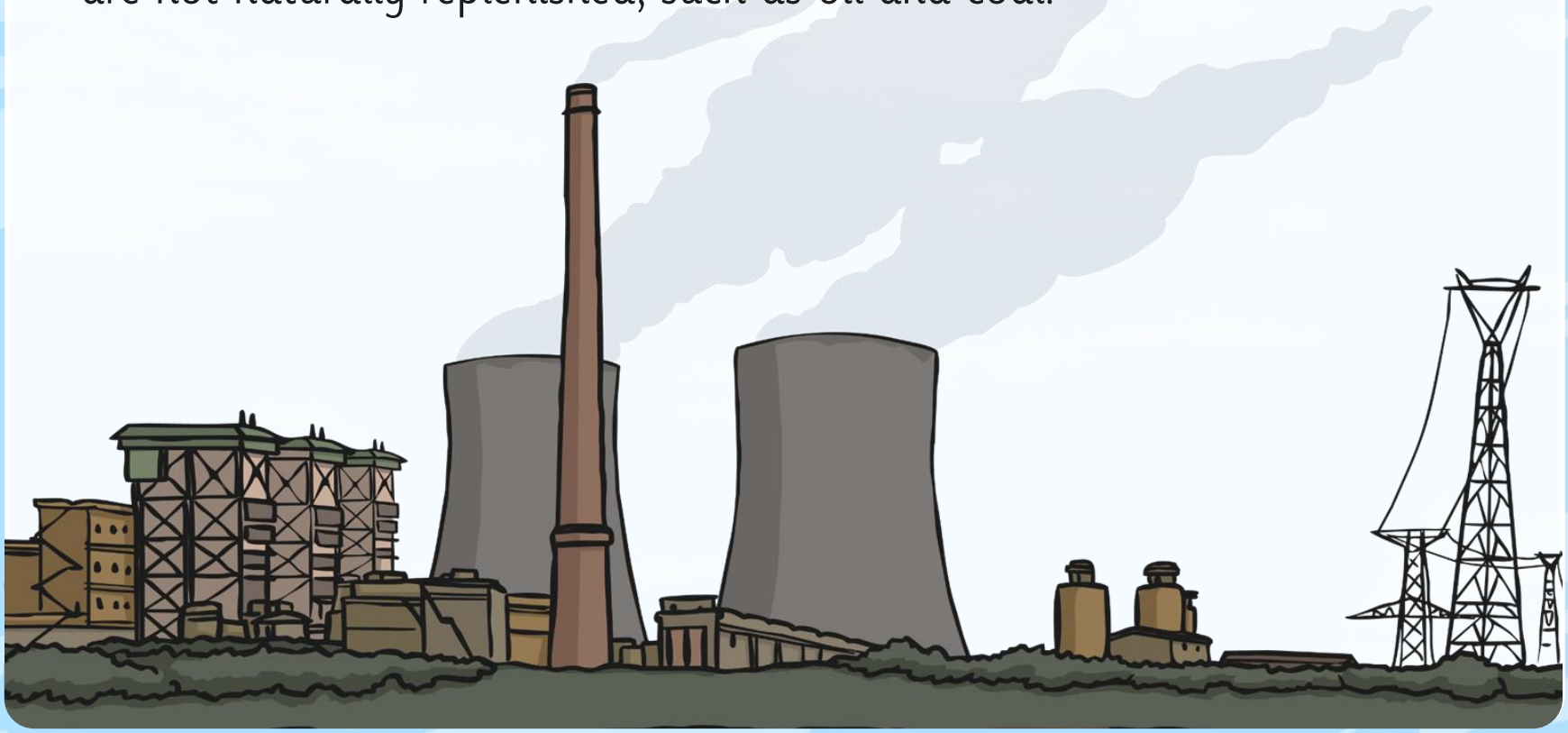


Non-Renewable Energy

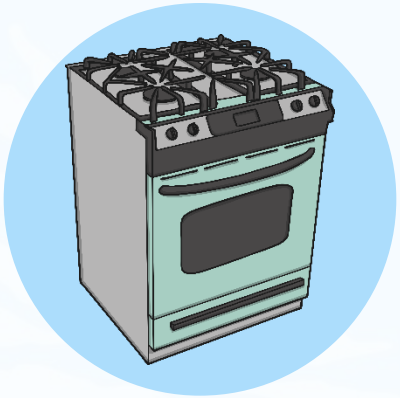


What is non-renewable energy?

Non-renewable energy comes from natural resources that are not naturally replenished, such as oil and coal.



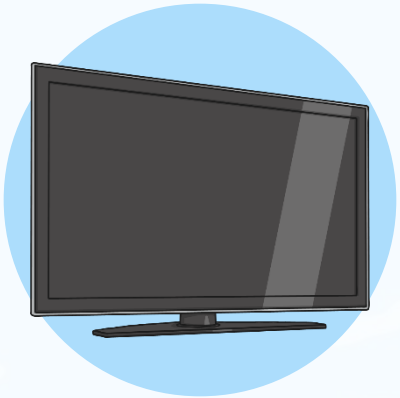
What Do We Use Energy For?



Gas is used to heat our homes, water and to cook our food.

We need energy to power our cars. We use diesel, petrol or electricity for fuel.





We use electricity to power lots of things, such as lights, televisions and computers.

Why Don't We Use Renewable Energy All the Time?

- Renewable energy, such as wind or sunshine, can't be stored to be used whenever we need it.
- If the wind doesn't blow, or if it isn't very sunny, then there may not be enough power for everyone.
- Non-renewable resources, such as oil or coal, can be stored and used when they are needed.
- Non-renewable energy is usually cheaper than renewable energy, which means not everyone can afford to use renewable energy.

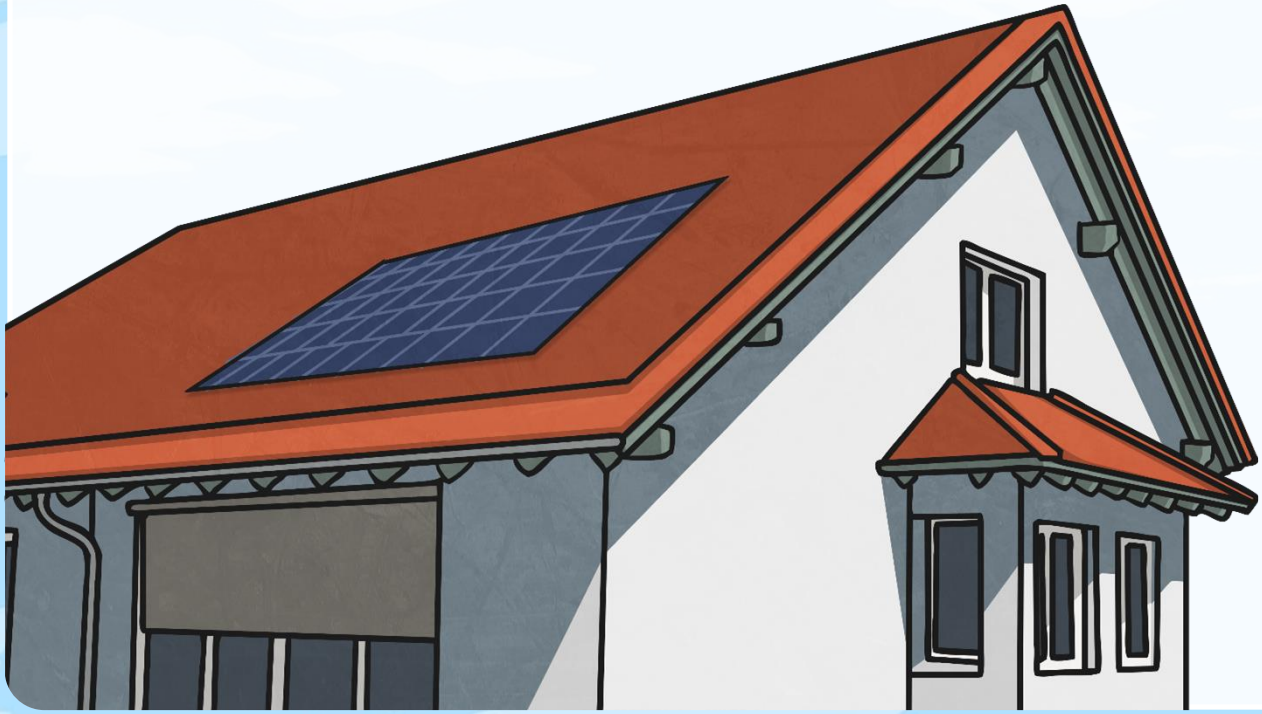


Solar Energy

Solar energy comes from the sun.

The Sun can be used to give us heat energy.

Solar panels are used to convert sunlight into electricity.

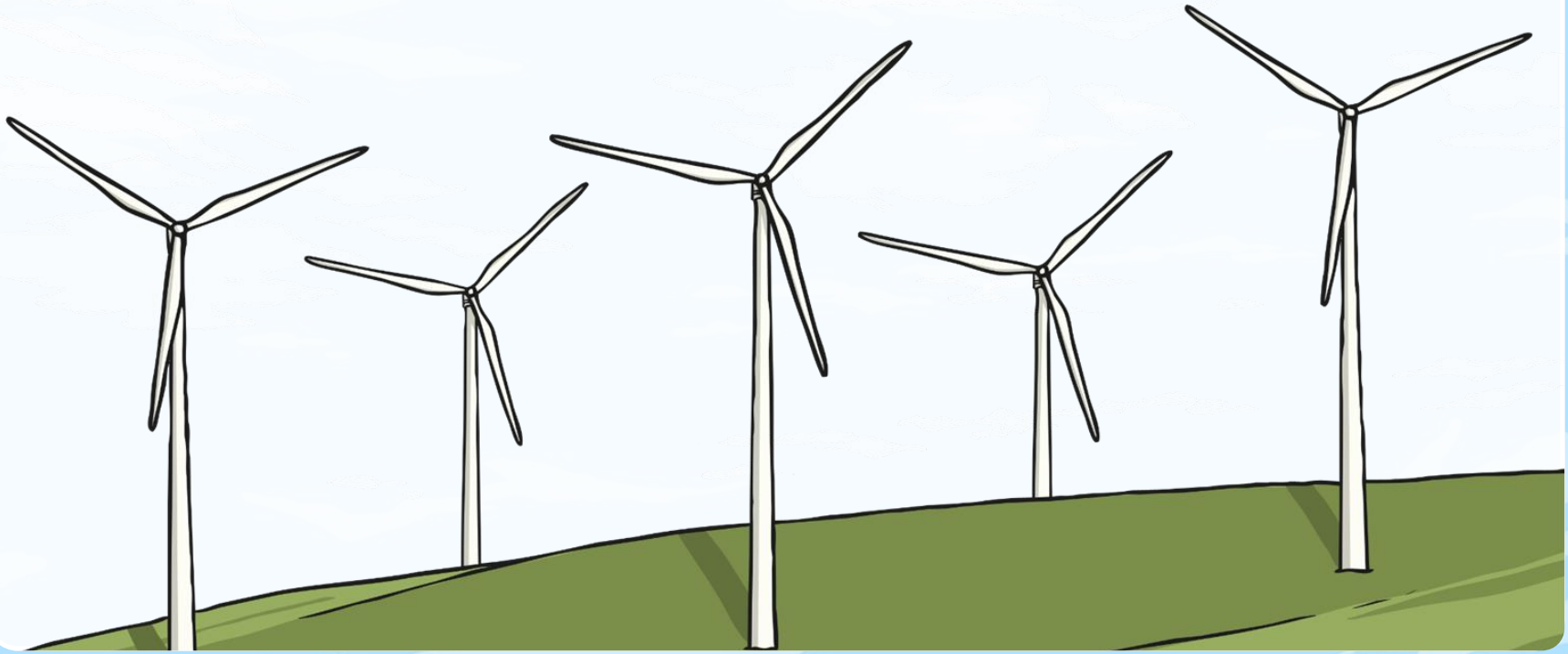


Wind Energy

Wind turbines are used to convert wind energy to electricity.

The wind blows the blades around and this movement is converted into electricity.

A group of wind turbines is called a wind farm.

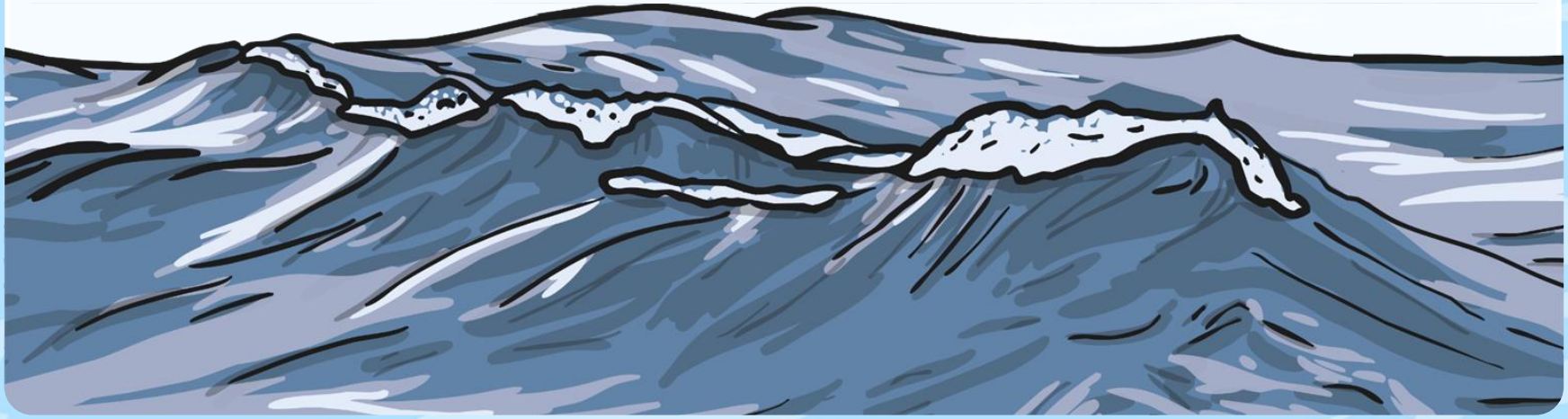


Hydropower Energy

Hydropower is energy that comes from moving water.

Water that flows down fast-flowing rivers is used to spin turbines that generate electricity.

The movement of big waves at sea can also be used to generate energy.



Geothermal Energy



Geothermal energy is thermal energy generated and stored in the Earth.

It is always very warm underground, even if it is very cold on the surface.

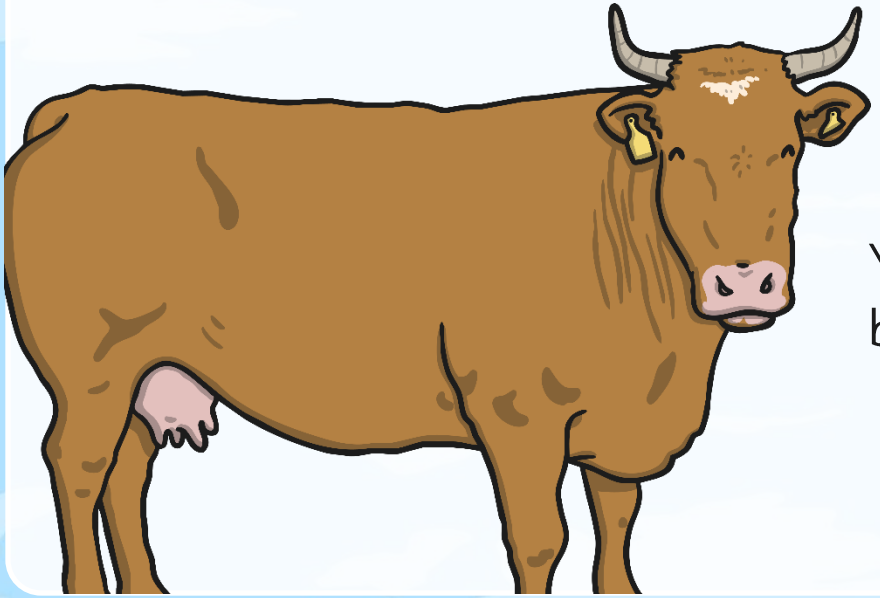
We can collect heat from underground and use it to heat our houses.

The lava from volcanoes shows us how hot it is underground.

Biomass Energy

Biomass means ‘natural material’. Energy can be obtained by burning natural waste materials such as scrap pieces of wood, dead trees and unused parts of crops.





You can even burn the gas produced by cow manure to make energy.

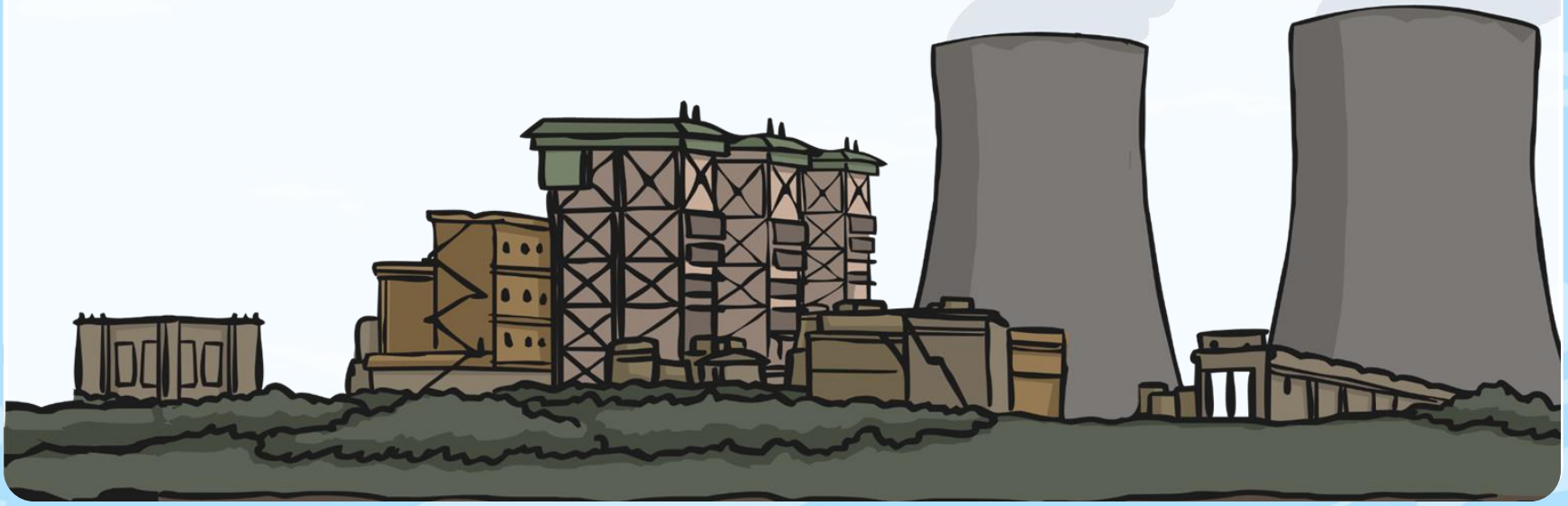
Coal Energy



Coal is mined from under the ground and burned in large power stations to produce electricity.

The coal that we use cannot be replaced so one day there will be no coal left.

Burning coal is bad for the environment because lots of carbon dioxide gets released into the atmosphere.



Oil Energy



Oil is found deep underground and pumped up to the surface for us to use.

Oil is burned at some power stations to make electricity and is also used to make fuel which we use in our cars.

If we keep using oil there will eventually be none left.



Nuclear Energy



Nuclear power stations use uranium as fuel to make electricity. Uranium is a natural resource taken from the ground so it is not renewable.

Nuclear power doesn't produce much waste so it is a very clean way of generating energy.



Gas Energy



Natural gas is found deep underground and is pumped into our homes. We use it to cook and burn it in a boiler to heat our water.

The gas that we pump from underground will one day run out and there won't be any left to use.

