



# GREEN GUIDE: RENEWABLE ENERGY

*This guide talks through some of the most commonly used types of renewable energy.*



## What is renewable energy?

Also known as 'clean energy' or 'green energy'. Renewable energy does not require fossil fuels to generate a source of energy power. Instead it transforms natural processes or resources into energy. This can then be used to generate electricity, fuel and other forms of power. Renewable energy is completely sustainable.

Non-renewable, or 'dirty energy' refers to the use of fossil fuels like oil, gas, and coal to generate energy sources. Non-renewable sources of energy not only take a long time to replenish, but they emit harmful gases into the atmosphere when used.



1

**Hydropower Energy** - Relies on fast-moving water e.g rapids in a river or waterfalls. The forces of the water is converted in energy by generator's with spinning turbine blades.

2

**Wind Energy** - Comes from air and wind. Wind turbines are commonly used to harness this energy.

3

**Biomass Energy** - Biomass is created when organic material that comes from plants and animals, crops, wood, and trees is burned. The chemical energy is released as heat which can generate electricity with a steam turbine.

4

**Solar Energy** - Comes from the sun. Solar panels are commonly used to harness this energy.

5

**Geothermal Energy** - It comes from heat generated by the Earth's core, during the original formation of the planet, as well as the radioactive decay of materials. This energy is generated into heat and steam which is then transferred into power.

