

Renewable Energy

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Geothermal energy

- The term 'geothermal' refers to the heat produced deep under the Earth's surface.
- Geothermal hot springs and geysers occur when the hot water comes to the surface. Hot water can also be trapped underground as 'geothermal reservoirs', which can be reached by drilling into the ground.
- The centre of the Earth is made of a core of iron, surrounded by a layer of hot, melted rock, known as magma. It is magma that erupts from volcanoes. The outer layer of the Earth is called the crust. In some places the crust is thin and the magma heats water flowing underground.
- Geothermal energy uses steam produced from the water heated by the Earth to produce electricity. The steam from geothermal sources can be used to drive turbines in geothermal power plants.
- The hot water can also be used directly to heat buildings.
- There are only a few places around the world where geothermal energy can effectively and easily be harnessed. Two of these are New Zealand and Iceland.
- In New Zealand, around 7% of the country's electricity supply comes from geothermal energy and this will increase in the future.
- Iceland has many volcanoes, hot springs and geysers. Geothermal power is used widely throughout the country - 25% of the country's electricity is generated from geothermal power.
- There are many benefits to geothermal energy. It is a relatively 'clean' energy source compared with the burning of fossil fuels and produces little pollution.
- Geothermal energy is also sustainable, as the hot water can be returned to its source and re-used. Unlike solar and wind energy, it does not rely on weather conditions; however deep drilling can be difficult and often expensive.



In some places, hot springs shoot hot water from below the Earth to the surface.

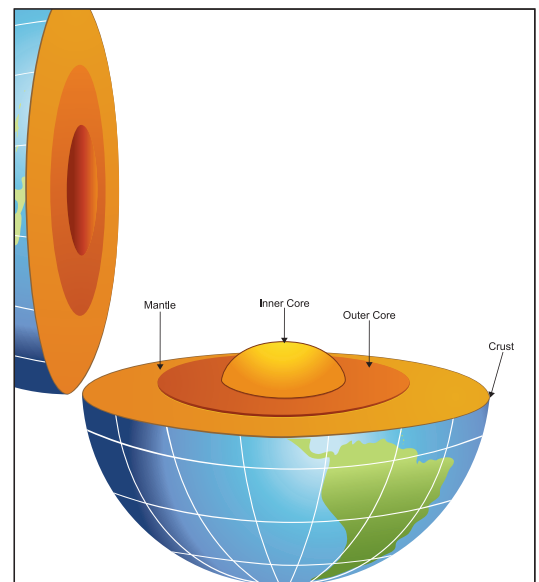


Diagram showing the layers of the Earth

Research Links

www.unfccc.org
www.nzgeothermal.org.nz
www.berr.gov.uk