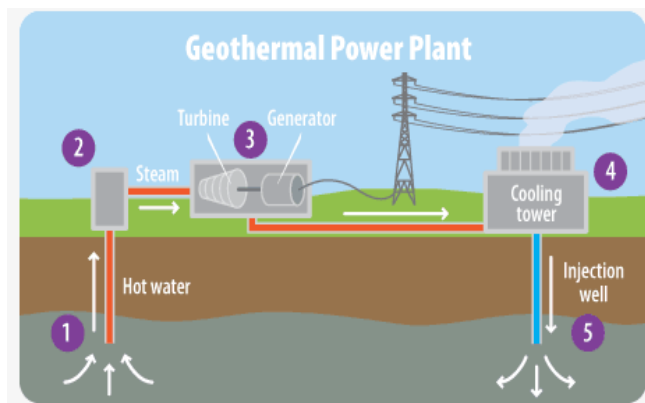




Geothermal energy

Geothermal energy is **heat within the earth**. The word geothermal comes from the Greek words geo (earth) and therme (heat). Geothermal energy is a renewable energy source because heat is continuously produced inside the earth.

This energy is harnessed to generate electricity when water is injected deep underground and returns as steam (or hot water, which is later converted to steam) to drive a turbine on an electric power generator.



Using this underground energy **allows us to reduce our use of fossil fuels and can help us to achieve energy self-sufficiency**. Geothermal energy is also in line with sustainable development and is essentially free once the plant has been installed.

Geothermal energy can **heat, cool, and generate electricity**: Geothermal energy can be used in different ways depending on the resource and technology chosen—heating and cooling buildings through geothermal heat pumps, generating electricity through geothermal power plants, and heating structures through direct-use

The **Vindhyanchal geothermal power point located in the Singrauli district of Madhya Pradesh** is the largest producer of geothermal energy in India; it had the capacity of 4760MW of current production.



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