

ENERGY RESOURCES

HYDRO & GEOTHERMAL

HYDROELECTRIC POWER



Hydropower, or hydroelectric power, is one of the oldest and largest sources of renewable energy. It uses the flow of moving water to generate electricity. Hydropower is used to generate 68% of Iceland's electricity.

Advantages of Hydropower



- ▶ Renewable
- ▶ Clean
- ▶ Reliable
- ▶ Flexible
- ▶ Economical

Disadvantages of Hydropower

- ▶ Expensive
- ▶ Environmentally damaging
- ▶ Displaces people
- ▶ Water quality
- ▶ Emissions
- ▶ Failure risk
- ▶ Limited locations
- ▶ Drought

GEOTHERMAL ENERGY



Geothermal energy systems harness the internal heat of the earth for either power generation or heating and cooling. Geothermal energy is used to produce 31% of Iceland's electricity.

Advantages of Geothermal Power



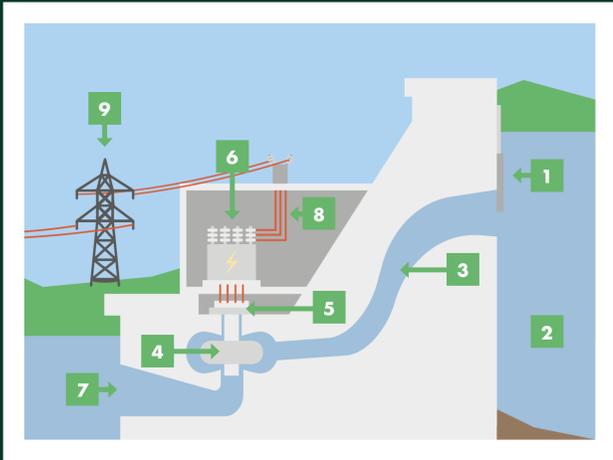
- ▶ Environmentally friendly
- ▶ Renewable
- ▶ Reliable
- ▶ Small land footprint
- ▶ Expanding quickly

Disadvantages of Geothermal Power

- ▶ Location restricted
- ▶ Gas emissions
- ▶ Earthquakes and subsidence
- ▶ High costs
- ▶ Resource depletion

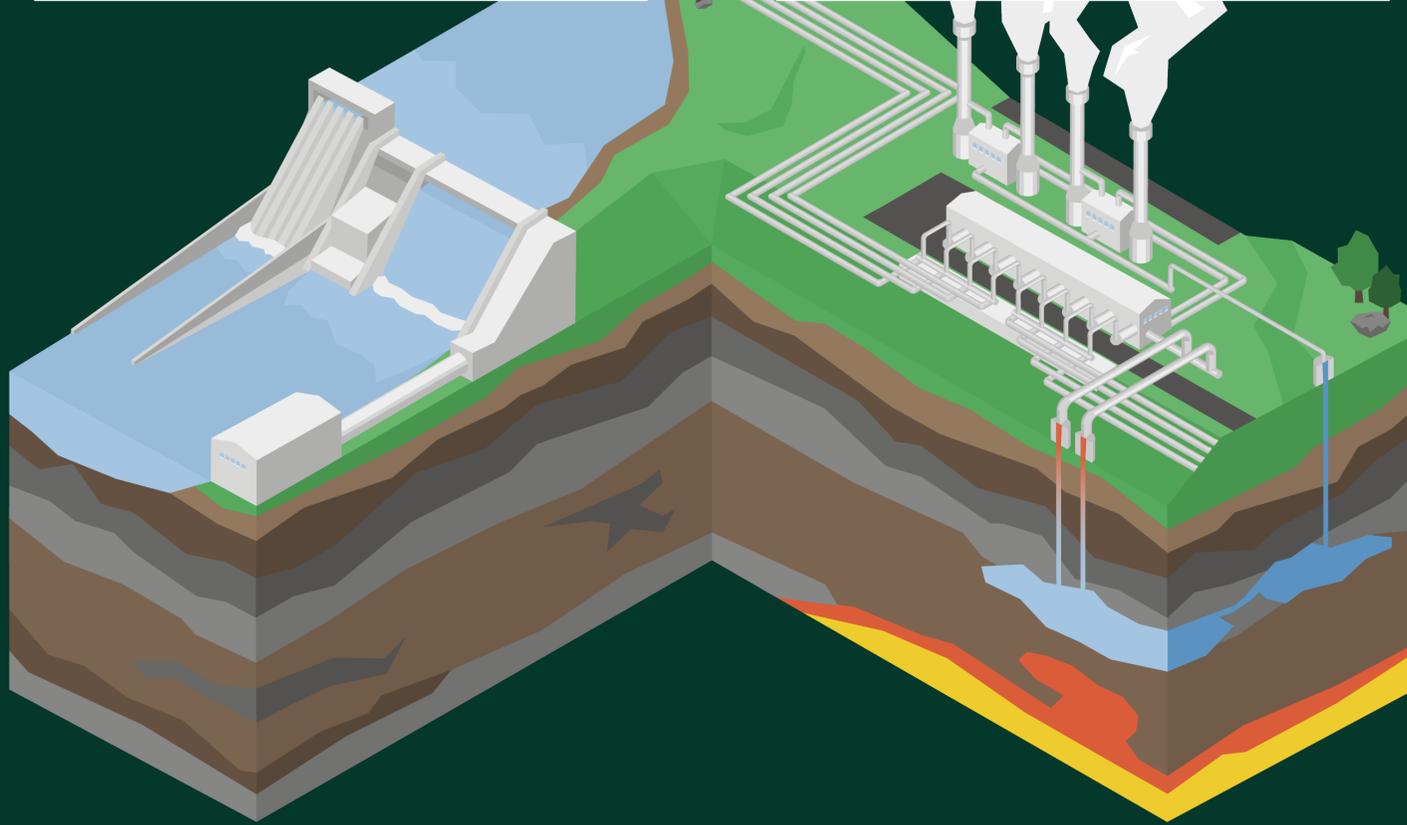
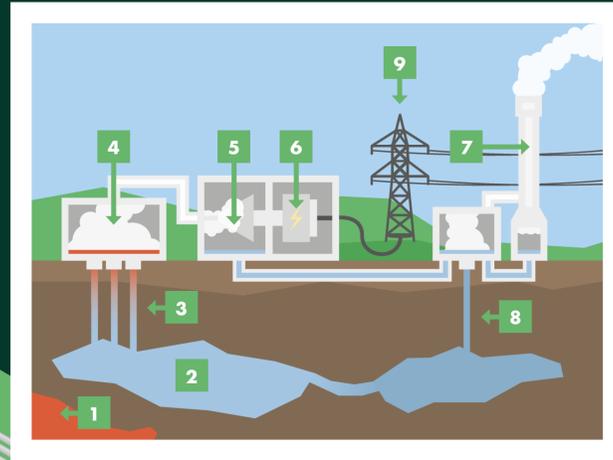
HYDROELECTRIC DAM

- 1 SLUICE GATES
- 2 STORAGE RESERVOIR
- 3 PENSTOCK
- 4 TURBINE
- 5 GENERATOR
- 6 TRANSFORMER
- 7 DOWNSTREAM OUTLET
- 8 POWER TRANSMISSION CABLES
- 9 POWERLINES

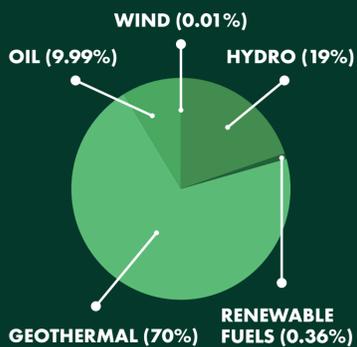


GEOTHERMAL POWER PLANT

- 1 MAGMA
- 2 GEOTHERMAL FLUID
- 3 PRODUCTION WELL
- 4 FLASH TANK
- 5 TURBINE
- 6 GENERATOR
- 7 COOLING TOWER
- 8 INJECTION WELL
- 9 POWERLINES



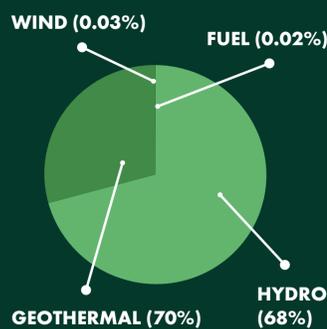
90% of Iceland's energy resources are fuelled by renewables.



There are 8 geothermal power stations in Iceland.



99.9% of Iceland's electricity is produced by renewable energy sources.



In Iceland there are 37 large hydro plants, along with about 200 smaller ones.

