

# Iceland's Geothermal Value Proposition

## Geothermal Water – Steam – Electricity – Fresh Water – CO<sub>2</sub> – Minerals

A geothermal power plant provides multiple energy and chemical streams. Multi-year fixed-price contracts are available for competitively priced electricity. Abundance of geothermal fluid, fresh cold water and availability of pure CO<sub>2</sub> make geothermal areas attractive for a number of businesses; including controlled and pesticide free greenhouse production, algae production, aquaculture, cogeneration, etc.

### Business Environment

Iceland's government welcomes new investments. Competitive taxes, efficient incentives for investments (including a 15% corporate tax rate ceiling), a young and educated workforce and ready to build locations, make Iceland a great place for business.

### Experience in geothermal utilization

Icelandic expertise in sustainable uses of geothermal resources, has become valuable export service. With decades of experience, in designing and building power plants and production facilities, based on geothermal energy, Iceland boasts world-leading experts. The Geothermal Training Program of the United Nations University is in Iceland.

### Resources and infrastructure

Iceland has an area of 103,000 square kilometers (39,769 square miles) with 334,000 inhabitants. Most of the geothermal power plants have scalable industrial sites adjacent, often zoned. All necessary infrastructure, such as state of the art electric transmission, is nearby.

### Labour force

The country has a young and well educated workforce, ranked highly for *Technological readiness* and *Higher education and training* in the Global Competitiveness Report 2015-2106 published by the World Economic Forum. English is very widely spoken.

### Encouraging Multiple Usage

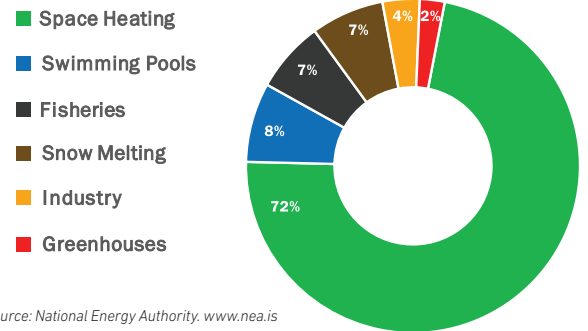
In addition to the incentives for new direct investment in Iceland, companies that connect directly to geothermal power plants, and use more than one energy/chemical stream, get financial benefits in the form of reduced transmission fees.

## 100% Renewable energy

All electricity on the Icelandic grid is produced using renewable hydro- and geothermal energy.

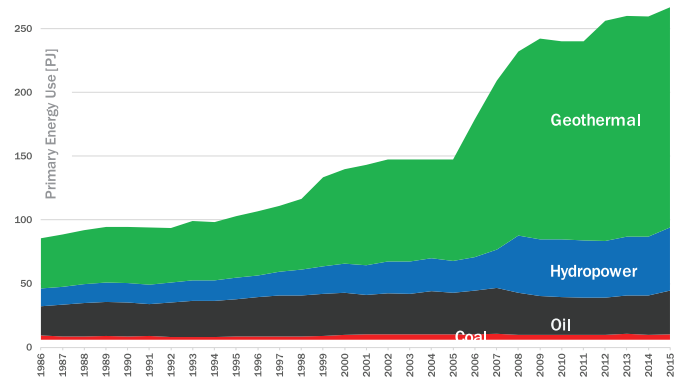
In 2015 the total electricity production was 18.8 TWh, 73% from hydro and 27% from geothermal resources.

### Geothermal Utilization 2015



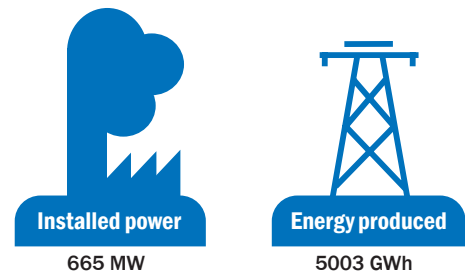
Source: National Energy Authority, www.nea.is

### Primary energy use in Iceland



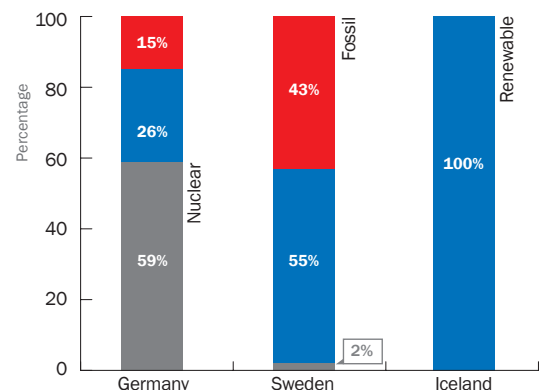
Source: National Energy Authority, www.nea.is

### Electricity from geothermal 2015



Source: National Energy Authority, www.nea.is

### 100% Renewable Energy on the National Grid



Source: International Energy Authority, National Energy Authority of Iceland, 2015

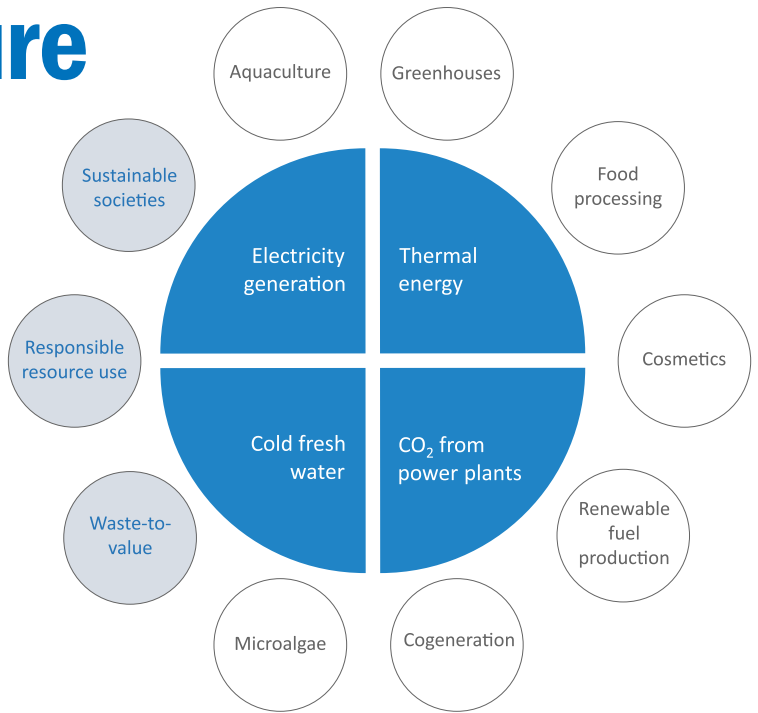
# The power of nature

## Multiple Value Streams

The combination of multiple value streams from geothermal powerplants provide the opportunity to create unique sustainable inputs to diverse processes.

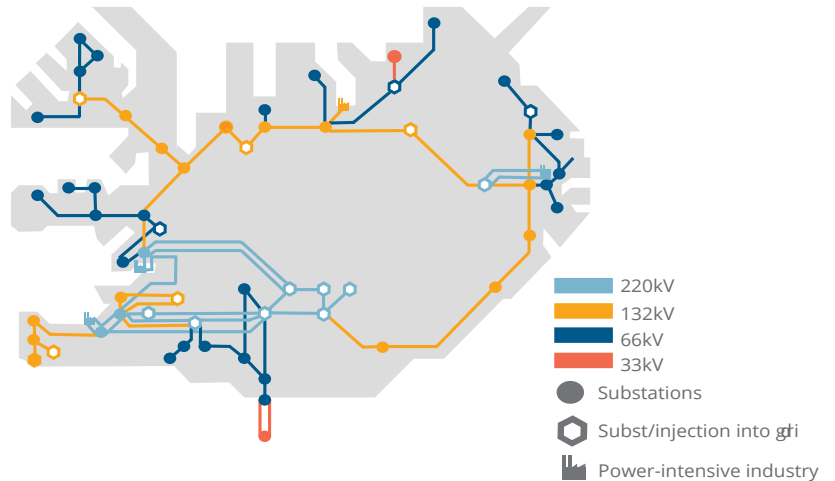
- Microalgae cultivation utilizing electricity, thermal energy and CO2
- Waste-to-value food processing based on geothermal heat
- Liquid fuel production using electricity and CO2
- Algae based cosmetic production

These are all examples of high value products being produced in Iceland based on the full utilization of geothermal resources.



## The electricity grid

Iceland's Energy Infrastructure ranks among the top five in the world according to IMD's World Competitiveness Yearbook 2016. Iceland's electricity transmission grid is circular and with redundant routes to ensure high uptimes.



## Geothermal in Iceland

Electricity  
Space Heating  
Spas  
Swimming Pools

Fish farming  
Greenhouses  
Snow Melting  
Fish Drying

Cosmetics  
The Blue Lagoon  
Micro Algae Production  
Industrial steam



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