

# Energy Facts



## Idaho — GEOTHERMAL ENERGY

The ISEA Geothermal Task Force issued a report that highlights the benefits and challenges geothermal energy provides to meet Idaho's energy needs:

- Idaho uses renewable geothermal energy for both direct heating and for production of electricity.
- The city of Boise has the oldest geothermal district heating system in America, which it continues to expand the system to meet winter heating demands, and the only geothermal heated state capitol building in the country.
- Geothermal energy is used in Idaho for heating of greenhouses, fish farms, and recreational facilities.
- Geothermal power plants are long-term, secure power sources that have minimal fuel supply costs when in production.
- Geothermal power plants provide base load renewable power 24 hours per day 7 days a week.
- Idaho has abundant near-term geothermal resource potential (see map below) with estimates of more than 800 MW of geothermal-powered generation potentially available .



Drilling a geothermal well.



Raft River, Idaho — Water Cooled Binary Cycle Geothermal Power Plant.

### IDAHO STRATEGIC ENERGY ALLIANCE

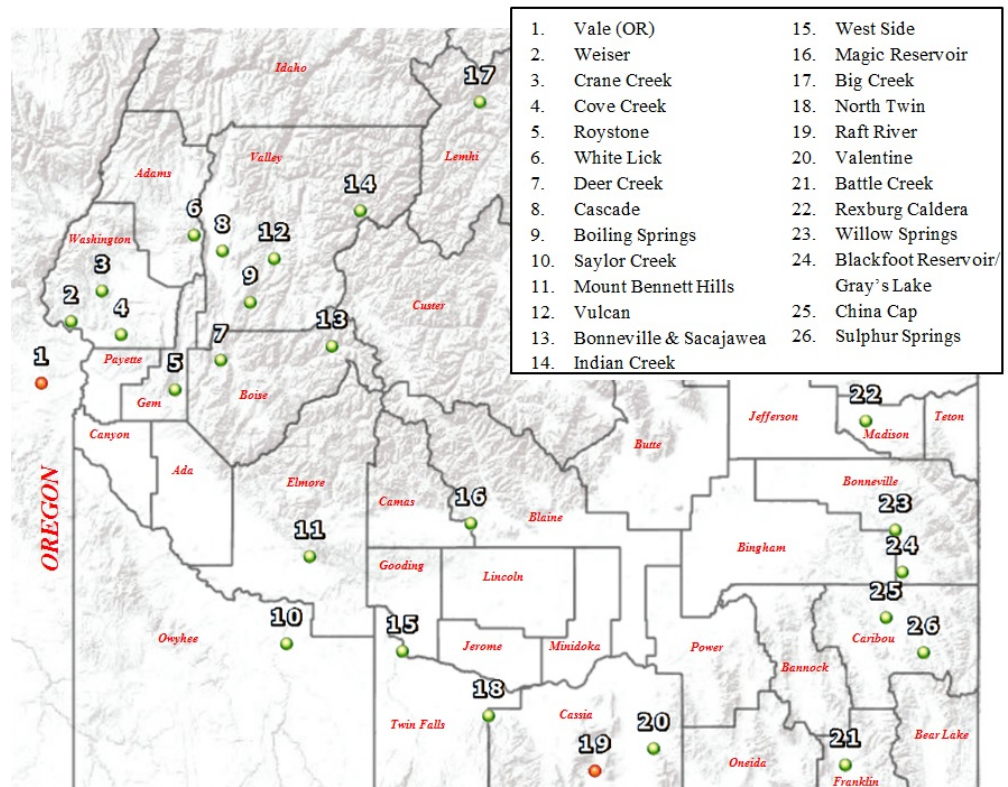
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Geothermal Potential of Idaho (Source: Idaho Department of Water Resources)

## DID YOU KNOW...

- Geothermal energy is thermal energy that originates in the Earth's core from the initial formation of the planet and from radioactive decay of minerals.
- Geothermal energy is most accessible in places where hot or molten rock (magma) is present at relatively shallow distances from the Earth's surface.

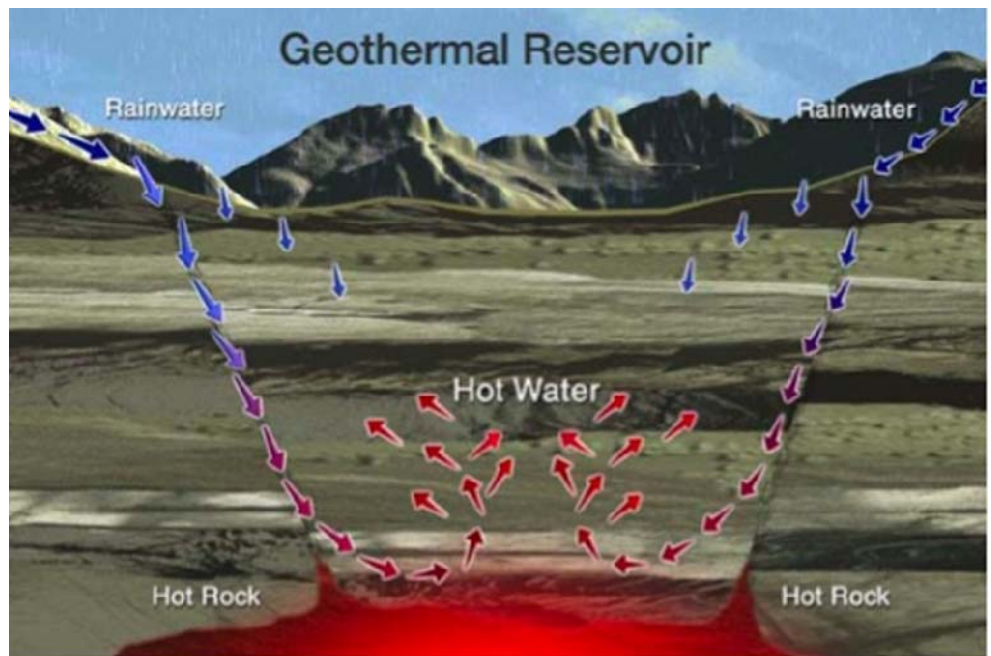


**Neal Hot Springs**— geothermal power plant near Vale, Oregon.



**Advanced Binary Cycle Plants** — are efficient and automated.

- Two operating geothermal power plants (one at Raft River, Idaho and one near Vale, Oregon) provide Idaho Power with 35 net megawatts of clean energy.
- A useful geothermal resource requires hot rock, a permeable formation, and water to move the heat to production wells.
- Like oil and gas discovery, geothermal reservoirs require high risk drilling to define the energy capacity of each reservoir able to meet the requirements of power production and district heating.
- Like other energy supply options with low (or zero) fuel cost, the cost of power from the plants decreases with time as the upfront capital costs become repaid.
- Geothermal power plants have low environmental impact with little or no greenhouse gas emissions or effects on wildlife and viewscape; they use very little land compared to conventional energy resources.
- Competitive BLM leasing rules provide state and local governments with proceeds from public auctions held for geothermal rights leasing.
- Geothermal power plants provide an increase in the tax base and long-term jobs for communities that host them.



*Geothermal Reservoir Formation*

**Find the ISEA Task Force Reports:**  
[www.energy.idaho.gov/energyalliance/taskforce.htm](http://www.energy.idaho.gov/energyalliance/taskforce.htm)