

# **GEOHERMAL ENERGY: ADVANTAGES AND DISADVANTAGES**

Geothermal energy is the energy obtained from the earth (geo) from the hot rocks present inside the earth. It is produced due to the fission of radioactive materials in the earth's core and some places inside the earth become very hot. These are called hot spots. They cause water deep inside the earth to form steam. As more steam is formed, it gets compressed at high pressure and comes out in the form of hot springs which produces geothermal power.

To harness this geothermal energy, two holes are dug deep into the earth and cold water is pumped through the first one and steam comes out through the second long pipe which helps in generating electricity. The holes dug for harnessing geothermal energy result in lesser emission of greenhouse gases than due to burning of fossil fuels. Thus if used at a larger scale and more efficiently, it gives a hope to reduce global warming.

Geo-thermal energy is one of the rare forms of energy which is not directly or indirectly from solar energy. In areas where hot springs are found, hot springs

baths are very common and enjoyable form of recreation. However, they need to be in a controlled environment since they cannot be accessed without proper supervision. We have earlier seen how it is harnessed, the process involved is a long and expensive one and not feasible in some areas.

Construction of geothermal energy plants can affect the seismic stability to a large extent. Even though there are lesser emissions, digging deep holes causes seismic disturbances which have led to earthquakes.

Now let's discuss advantages and disadvantages of Geothermal Energy.

### **Advantages of Geothermal Energy**

- 1) It is a renewable source of energy.
- 2) By far, it is non-polluting and environment friendly.
- 3) There is no wastage or generation of by-products.
- 4) Geothermal energy can be used directly. In ancient times, people used this source of energy for heating homes, cooking, etc.
- 5) Maintenance cost of geothermal power plants is very less.
- 6) Geothermal power plants don't occupy too much space and thus help in protecting natural environment.
- 7) Unlike solar energy, it is not dependent on the weather conditions.

## **Disadvantages of Geothermal Energy**

- 1) Only few sites have the potential of Geothermal Energy.
- 2) Most of the sites, where geothermal energy is produced, are far from markets or cities, where it needs to be consumed.
- 3) Total generation potential of this source is too small.
- 4) There is always a danger of eruption of volcano.
- 5) Installation cost of steam power plant is very high.
- 6) There is no guarantee that the amount of energy which is produced will justify the capital expenditure and operations costs.
- 7) It may release some harmful, poisonous gases that can escape through the holes drilled during construction.

Source: <http://www.ianswer4u.com/2012/02/geothermal-energy-advantages-and.html#axzz3Qs5RV0Sb>