



U. S. Geothermal| [HTM](#) |Profile|Summary

Geothermal energy is classified as a renewable source of electricity. It is considered to be a clean, environmentally friendly, sustainable method of electrical power generation. The use of geothermal energy is an established method of electrical power generation with 2,000 megawatts (MW) of installed capacity in the Western United States.

The benefits of geothermal energy are far reaching. A geothermal power plant does not burn fuel; energy production is clean, and renewable. It is a base load source; therefore, geothermal plants are designed to run 24 hours a day, every day with no emissions.

The US market demand for electricity is rising, creating a growing dependency on non-renewable non-sustainable resources. Consumption of fossil fuels has produced significant environmental problems including air pollution, smog and global warming. As a result of the environmental impact, rises in the world oil price and thinning reserves the world has looked to other sources of energy that will help alleviate these issues. Geothermal energy is rapidly growing into a \$1.5 billion per year industry. There are approximately 12,000 MW of direct use and over 10,715 MW of generating capacity globally.

There are two main systems currently utilized for electric power generation. The first, and rarest, are vapor-dominated systems that yield nearly pure high-temperature steam ($>235^{\circ}\text{C}$ or 455°F). The Geysers in California is an example of this type system where steam is typically found at depths of 3,250 to 13,000 feet. The second type system is dominated by hot water and operates in the temperature range from 100°C to 300°C (212°F - 700°F).

Using modern scientific and engineering techniques, geothermal systems may be sustained commercially for decades. The Geysers (California) and Wairakei (New Zealand) have produced electric power continuously for 40 years. The pioneering Larderello field in Italy has been productive since 1904. In fact, not a single geothermal field has been exhausted to date, although reservoir pressures and temperatures have declined slowly in response to production.

The heat source for geothermal energy comes primarily from large, magmatic systems deep in the earth's crust. These are still partially molten or crystallized, but are hot igneous intrusions that yield their heat gradually over hundreds of thousands of years. As the earth cools over time, there is a constant movement of thermal energy that travels outward through highly permeable fracture zones to the surface.

Don't miss the NEXT premium Alert! Sign-up, Get
Alerts, **MakeMon**
ey **!®**

we received or expecting compensation from the featured company. Our firm, principals and staff may own/buy/sell/trade stock/securities of this company. Always Read the full Disclosure/Disclaimer. Thanks.