

# GEOPOWERING THE WEST

## Geothermal Energy

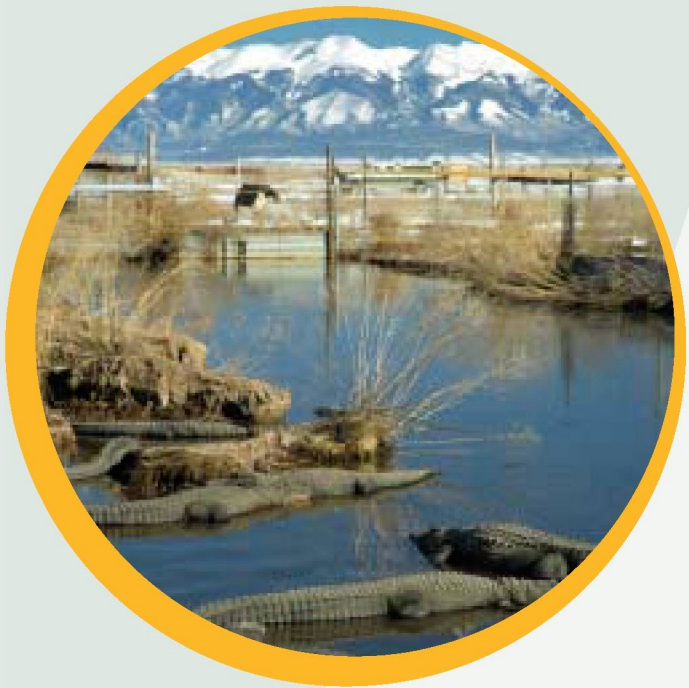
The Bountiful, Clean  
Energy Source for the West



GeoPowering the West will contribute to the overall increased use of domestic renewable energy resources, as recommended in the National Energy Policy, by:

- Doubling the number of states with geothermal electric power facilities from four to eight by 2010, and
- Supplying the heat or power needs of 5 million Western homes and businesses by 2015.

Geothermal Energy Program  
Office of Energy Efficiency & Renewable Energy  
U.S. Department of Energy



*Aquaculture, or fish farming, is one of the many uses of geothermal waters. These alligators consume waste products from nearby geothermally heated fish farms, and also provide meat and leather products.*

## GeoPowering the West Activities

**G**eothermal energy represents a major economic opportunity for the American West, an area characterized by a steadily increasing population that requires reliable sources of heat and power. GeoPowering the West is pursuing this opportunity by:

- Bringing together national, state and local stakeholders for state-sponsored geothermal development workshops;
- Working with public power companies and rural electric cooperatives to promote use of geothermal power;
- Promoting increased federal use of geothermal energy;
- Helping American Indians identify and develop geothermal resources on tribal lands; and
- Sponsoring non-technical educational workshops.

# What Is GeoPowering the West?

The U.S. Department of Energy's (DOE's) GeoPowering the West (GPW) program works with the U.S. geothermal industry, power companies, industrial and residential consumers, and federal, state, and local officials to provide technical and institutional support and limited, cost-shared funding to state-level activities.

By demonstrating the benefits of geothermal energy, GPW increases state and regional awareness of opportunities to enhance local economies and strengthen our nation's energy security while minimizing environmental impact.

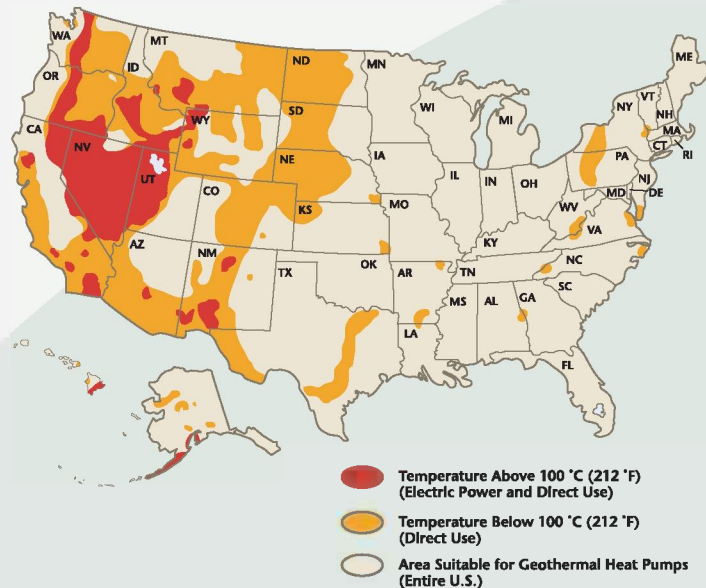
By identifying barriers to development and working with others to eliminate them, GPW helps a state or region create a regulatory and economic environment that is more favorable for geothermal and other renewable energy development.

*These two geothermal power plants in Steamboat Springs, Nevada, have a combined 48-MW capacity.*



**Direct use** applications directly pipe hot water from geothermal resources to provide heat for industrial processes, crop drying, greenhouses, aquaculture, recreation, sidewalk snow-melting, and buildings. Geothermal district heating systems supply heat to multiple buildings through a network of pipes carrying the hot geothermal water.

# U.S. Geothermal Energy Potential



**Electricity** is produced using expanding steam or very hot water from the underground reservoir to spin a conventional turbine-generator. Geothermal power plants operate at high capacity factors (70-100%), with availability factors typically greater than 95%. Geothermal plants are among the cleanest sources of electric power available.



*Each year, thousands of tons of onion and garlic are economically dehydrated with geothermal waters at this plant in Empire, Nevada.*

## Heat and Power for the 21<sup>st</sup> Century

# Resources and Contacts

## General Geothermal Energy Information

U.S. Department of Energy  
Office of Wind and Geothermal Technologies  
[www.eren.doe.gov/geothermal](http://www.eren.doe.gov/geothermal)  
[www.eren.doe.gov/geopoweringthewest](http://www.eren.doe.gov/geopoweringthewest)

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