

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

Geothermal 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.

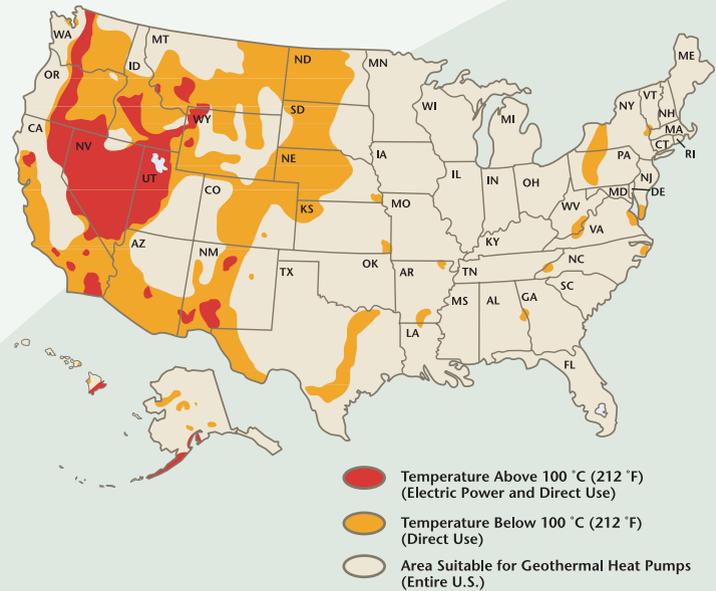
By identifying barriers to development and working with others to eliminate them, GPW helps a state or region create a regulatory and economic environment that is more favorable for geothermal and other renewable energy development.

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 21st Century

Resources and Contacts

General Geothermal Energy Information

U.S. Department of Energy
Office of Wind and Geothermal Technologies
www.eren.doe.gov/geothermal
www.eren.doe.gov/geopoweringthewest

GeoPowering the West

Susan L. Norwood
GPW National Coordinator
U.S. Department of Energy
202.586.4779
susan.norwood@ee.doe.gov

Roger Hill
GPW Technical Director
Sandia National Laboratories
505.844.6111
rrhill@sandia.gov

Curtis Framel
DOE Seattle Region
206.553.7841
curtis.framel@ee.doe.gov

Steve Palomo
DOE Denver Region
303.275.4838
steve.palomo@ee.doe.gov

Sara Boddy
GPW Communications
National Renewable Energy Laboratory
303.275.4256
sara_boddy@nrel.gov

Barbara Farhar
GPW Policy Analyst
National Renewable Energy Laboratory
303.384.7376
barbara_farhar@nrel.gov

Gerry Nix
GPW (NREL) Program Manager
National Renewable Energy Laboratory
303.384.7566
gerald_nix@nrel.gov

Bob Neilson
GPW (INEEL) Program Manager
Idaho National Engineering & Environmental Laboratory
208.526.8274
rmn@inel.gov

Joel Renner
Geothermal Program Manager
Idaho National Engineering & Environmental Laboratory
208.526.9824
rennerjl@inel.gov

Ed Hoover
GPW (Sandia) Program Manager
Sandia National Laboratories
505.844.7315
erhoove@sandia.gov

GeoPowering the West Partners

Liz Battocletti
Bob Lawrence & Associates
703.836.0304
ecbatto@aol.com

John Lund
Geo-Heat Center
541.885.1750
lundj@oit.edu
geoheat@oit.edu

Jane Long
Great Basin Center for Geothermal Energy
775.784.6987
jcslong@unr.edu | www.mines.unr.edu/geothermal/

James Taranik
Great Basin Center for Geothermal Energy
775.784.4258
jtaranik@mines.unr.edu | www.mines.unr.edu/geothermal/

Troy Gagliano
National Conference of
State Legislatures
303.830.2200
troy.gagliano@ncsl.org | www.ncsl.org

Mike Hughes
Resolve, Inc.
303.861.1500
mhughes@resolv.org

Paul Dunlevy
U.S. Bureau of Land Management
202.452.7707
paul_dunlevy@blm.gov

U.S. Trade and Education Associations

Ted Clutter
Geothermal Resources Council
530.758.2360
tclutter@geothermal.org | www.geothermal.org

Karl Gawell
Geothermal Energy Association
202.454.5264
karl@geo-energy.org | www.geo-energy.org

Marilyn Nemzer
Geothermal Education Office
800.866.4436
mnemzer@aol.com | geothermal.marin.org



U.S. Department of Energy
Office of Wind and Geothermal Technologies
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Washington, D.C. 20585

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