

# A clean energy gold rush

## Geothermal energy: A sure bet for Nevada

Few early prospectors who traversed the Nevada desert got rich, but had those early seekers looked deeper, they would've found real riches beneath the Great Basin's rippling mountains in the form of geothermal energy. Today, a new generation of prospectors has rediscovered Nevada and is pioneering clean energy by punching holes in the ground and bringing clean, reliable, base-load geothermal power, as well as economic opportunity, to cities and rural communities in Nevada.

**“This is a new type of gold for Nevada and it’s going to be far more valuable today than silver or gold. The geothermal industries are the new prospectors.”**

—Paul Thomsen, Director of Policy & Business Development, Ormat Technologies, Inc.

John Bernardy is one of the pioneers. After the Navy, he left stints on Montana fire crews and at Nevada gold mines to work as a chemical engineer at Reno-based Ormat Technologies, Inc., where he said he found steady employment and an opportunity to do good.

“Around here, there isn’t a lot for chemical engineers. I wanted to get into power production and Ormat was offering a renewable energy source that runs 24-7, so I saw it as an opportunity,” Bernardy said.

### Green collar job opportunities

Ormat is in the forefront of this subterranean land rush. As the largest geothermal developer in the United States, the company mines a prolific resource along Interstate 80 near Fallon, 60 miles east of Reno, where hot magma flows near the Earth’s crust.

Ormat builds about five new power stations per year in various locations. It is

poised to develop four new power plants in Nevada creating more than 400 new jobs replacing fossil fuel with labor. Ormat has grown from 10 U.S. employees in 1995 to 500 today, including 130 in Nevada.

Some 3,000 megawatts of geothermal power could be produced in Nevada, said Paul Thomsen, Director of Policy & Business Development for Ormat. To put that number



in some perspective, 3,000 megawatts will require a \$17 billion investment with nearly 50 percent allocated to the exploration and drilling phases.

“We’ve only scratched the surface. The potential for this resource is endless,” he said.

Bernardy said he is fortunate to find work in geothermal. Jobs for people with technical skills are few in northern Nevada—one of his friends from college works as a gas attendant at Costco and the other returned to school. He said the chance to help protect the planet while earning a living wage makes geothermal jobs appealing.



Drilling exploration crew performing initial well logging tests at the Desert Peak site, Nev.  
PHOTO: DOE/NREL, Pat Laney

“Being in renewable energy is a night and day (improvement) from working in a gold mine. And there are benefits for everyone because we’re working for the planet. That’s job satisfaction,” Bernardy said.

And geothermal energy is more than potential; it’s available now. For example, Ormat has seven power plants operating in the hills around Reno. Nevada is the nation’s second leading geothermal producer and has 45 new projects

underway, which will add jobs, according to the Great Basin Center for Geothermal Energy at the University of Nevada, Reno.

## Clean, base-load power energizes Nevada’s economy

Geothermal power stations use heat from the Earth to drive turbines. Electricity goes to cities and the water stays behind. Geothermal power produces so-called base load power and can operate at 95 percent capacity all day, year-round. It produces almost no air pollutants or gases that contribute to global warming.

In northern Nevada, Churchill County Commissioner Norm Frey welcomes geothermal power. Five power stations near Fallon produce more electricity than the town’s 8,000 people use, so much of it is exported for use outside of town.

Geothermal energy companies pay Churchill County \$601,443 in net county tax proceeds and \$1.6 million in property taxes annually, according to officials. The revenue helps pay for schools, Frey said. The companies also provide good-paying jobs and help fill local hotels and restaurants with customers.

“We want these (geothermal) resources in our community. It’s green energy and we want to see it developed,” Frey said.

Unlike Western boom towns that came and went when precious ore ran out, today’s geothermal energy prospectors have an almost inexhaustible supply. The Western Governors’ Association estimates about 5,630 megawatts of geothermal energy are viable for commercial development in the West by 2015.

“This is a new type of gold for Nevada and it’s going to be far more valuable today than silver or gold. The geothermal industries are the new prospectors,” Ormat’s Thomsen said.



## Nevada clean energy facts

- As of April 2010, there were 20 geothermal power plants in Nevada with a total operating capacity of more than 445 MW and an additional 3,300 MW in development.<sup>7</sup>
- In 2009, Nevada had the highest number of solar watts and solar retail sales per capita in the nation.<sup>13</sup>
- In 2007, Nevada had 28 percent clean energy job growth over ten years.<sup>1</sup>
- EnergyStar certified houses built by Pulte Homes in the Las Vegas area are saving homeowners \$300 or more on their annual energy bills.<sup>14</sup>

**Left:** The Desert Peak Geothermal plant located 4 miles southeast of Brady’s Hot Springs near Fernley, Nev.  
PHOTO: Ormat Technologies, Inc.