U.S. Geothermal Development

“Texas Lease Update”

June 2007
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Experience and Proven Capability

• 40 years experience:
  – developing modular power plants from 0.2MW to 130MW for geothermal, waste heat, biomass, solar, and re-powering rehabilitation of existing plants

• Vertically integrated alternative energy company
  – With 40 Years of success
  – Ormat Technologies Inc. NYSE (ORA) listed

• Geothermal and recovered energy power plants and projects
  – Approx 300 Mw installed in the United States
  – Approx 800 MW of installed capacity worldwide

• Flexible business model in the energy industry
  – Develop, design, build, own, operate
  – Turnkey supply
  – Equipment sales
  – Finance
Improving Project Viability by Matching the Geothermal Power Plant to the Resource

**Binary Geothermal Power Plants**
- 24 MW Zunil Geothermal Power Plant, Guatemala

**Combined Cycle Geothermal Power Plants**
- 30 MW Puna Geothermal Power Plant, Hawaii

GREEN ENERGY you can depend on
Power Plant Technology Considerations

- Designing the geothermal power plant requires matching the characteristics of the geothermal fluid with the optimum power cycle. The market driver is energy production and availability.

- Power generation factors are: (i) system simplicity; (ii) maintenance requirements; (iii) reservoir management, (iv) environmental considerations, and (v) power plant reliability.

- The optimum power cycle should allow injection of all of the geothermal fluid for long term reservoir sustainability.

- The optimum power cycle provides for the maximum output from available geothermal heat source with simplicity and high plant reliability. The project output is commercial grade electricity with financible field proven technology.
Emerging Technologies

Evaluating the Texas Resource
Ormat – 40 years of ORC technical innovation

Solar Powered ORC Water Pump – Mali 1966

High Reliability ORC Power Unit for Alyeska P/L 1976

5 MW Solar Pond Collects and Stores Energy - 1982

1 MW ORC Solar Thermal Project – Arizona 2006
Field Proven, Low Temperature, Ormat ORC Power Plant

- Collaborative R&D project with the Bureau of Reclamation and UTEP
- 70 kW Solar Pond
- ORC Power Unit at El Paso, Texas
- In operation from 1986 to 2002
- Temperatures of 154°F to 190°F
Texas lease acquisition

• On February 6, 2007 Ormat Secured the Geothermal leases in Texas.

• The lease(s) provide for exclusive right to make use of and convert the geothermal energy to electricity.

• Ormat is exploring all avenues of development from joint venture, to self build.
Texas lease acquisition

Texas General Land Office
Jerry Patterson, Commissioner

FOR IMMEDIATE RELEASE
Feb. 4, 1997

Press Release

Land Office awards Texas' first geothermal lease
Coastal shelf area is lease's new frontier for renewable energy today, awarding state's first lease for geothermal energy production.

Nevada-based geothermal industry leader, Ormat (NYSE: "ORA"), has the high bids Tuesday for six tracts of coastal land in seven counties totaling more than 11,000 acres. The lease allows Ormat to explore the potential of the land's geothermal resources and produce geothermal power from the earth.

"Texas is hot for geothermal energy," said Jerry Patterson, Commissioner of the Texas General Land Office. "As the Land Office, renewable energy means renewable revenue for the schoolchildren of Texas."

Geothermal energy provides a steady, reliable power source that doesn't create any carbon dioxide, and its "Fuel" — the earth's natural heat — is unlimited.

Ormat paid $5.641 million to lease the coastal shelf land for an average of about 15 cents per acre, or more than twice the minimum bid of $2 an acre. In addition to the lease fees, the Texas Permanent School Fund will earn 10 percent of any electricity produced from the geothermal leases.

Multiple bids received for the land ensured that the bidding process was very competitive, Patterson said. "We got more bids than we expected," he added. "I think that's a good sign geothermal might just be the economically viable form of renewable energy for Texas."

The tracts of land range from 1,174 acres to 2,480 acres and are along the coast in Jefferson, Galveston, Chambers, Calhoun, Jackson, Nueces and Kleberg counties.

Geothermal energy is heat energy from the earth's molten interior. Heat can be brought to the surface from movements in the Earth's crust or by deep circulation of groundwater, which forms reservoirs of hot water under pressure.

Texas isn't exactly known as a geothermal hot spot like Hawaii or California, which sit on the volatile Pacific Rim. But relatively new technologies, such as binary power plants, are proving to — more —
Corresponding DOE data

Figure 1. - Location of wells investigated for the DOE geopressed - geothermal research program in the Gulf Coast.
On Site Power for Austrian Eco-Tourist Resort

250 kW OEC Power Plant Provides Power & Heat from 210° F Geothermal Fluid from Hot Spring

Similar to the ORC power unit being supplied under the CRADA for installation at RMOTC Casper, Wyoming
Summary

• Ormat’s success is a result of matching geothermal resources with field proven, and time tested technologies.

• Ormat is re-evaluating the Texas geopressed potential.

• Ormat is committed to innovation, and successfully implementing innovative technologies such as:
  • RMOTC / Oil & Gas
  • EGS
  • Plug & Play for onsite power