



KENNY C. GUINN  
Governor

STATE OF NEVADA  
COMMISSION ON MINERAL RESOURCES  
**DIVISION OF MINERALS**  
400 W. King Street, Suite 106  
Carson City, Nevada 89703  
(775) 684-7040 • Fax (775) 684-7052  
<http://minerals.state.nv.us/>

**Las Vegas Branch:**  
1771 E. Flamingo Rd.  
Suite #120-A  
Las Vegas, Nevada 89119  
(702) 486-4343  
Fax (702) 486-4345

ALAN R. COYNER  
Administrator

## NEVADA GEOTHERMAL UPDATE

July 2003

**NOTE - UPDATES AND NEW ITEMS ARE HIGHLIGHTED IN YELLOW**

### CURRENT POWER OPERATIONS

<u>Plant/Operator (year on-line)</u>	<u>Nameplate Capacity *</u>	<u>Location</u>
<b>Beowawe Power Plant (1985)</b> Beowawe Power LLC/Caithness Operating	16.6 MW	S13, T31N R47E
<b>Bradys Power Plant (1992)</b> Brady Power Partners/ORMAT	21.1 MW	S12, T22N R26E
<ul style="list-style-type: none"><li>Two BLM parcels in the Brady KGRA were offered for competitive geothermal lease sale, June 26, 2003; T21N R27E and T22N R28E. See the BLM website <a href="http://www.nv.blm.gov/minerals">http://www.nv.blm.gov/minerals</a>.</li><li>No bids were received on these parcels.</li></ul>		
<b>Desert Peak Power Plant (1985)</b> Brady Power Partners/ORMAT	12.5 MW	S21, T22N R27E
<ul style="list-style-type: none"><li>Power purchase contracts were recently awarded by Sierra Pacific for flash-steam and binary geothermal plant expansions, Desert Peak 2 for 25 MW and Desert Peak 3 for 13 MW. PUC approval 3/6/2003: <a href="http://www.puc.state.nv.us/news/2003/REPS%20303.pdf">http://www.puc.state.nv.us/news/2003/REPS%20303.pdf</a></li><li>ORMAT Nevada Inc.; Permit #517, API # 27-001-90295 for Thermal Gradient Well "ST 11c" issued January 29, 2003; NE/4 SW/4, Section 15, T22N R27E; Churchill Co., PTD 2000 ft.; Spud Feb 15, 2003, Caza Rig #505; Drilled to their projected TD, completed as an observation well, Feb 27, 2003.</li><li>ORMAT Nevada Inc.; Permit #518, API #27-001-90296 for Thermal Gradient Well "ST 12a" issued January 29, 2003; SE/4 NW/4, Section 21, T22N R27E; Churchill Co.; PTD 2000 ft.; Spud Mar 1, 2003, Caza Rig #505; Drilled to their projected TD, completed as an observation well, Mar 8, 2003.</li><li>ORMAT Nevada Inc. (ORNI 3, LLC); Permit #519PA for a geothermal project area issued March 7, 2003; Includes 8 production wells, 3 injection wells, and 2 observation wells; Project area includes sections 13-16 and 21-29, T22N R27E, Churchill County.</li><li>ORMAT Nevada Inc. (ORNI 3, LLC); Permit #521; API #27-001-90267 for Industrial Well "43-21" issued May 12, 2003, SE/4 NW/4, Section 21, T22N R27E; Desert Peak, Churchill County; PTD 5500'; Will be used to generate power for sale to Nevada Power; <b>Spud June 20, 2003; C and L Drilling Rig #6; Drilling.</b></li></ul>		
<b>Dixie Valley Power Plant (1988)</b> Caithness Dixie Valley/Caithness Operating	62.0 MW	S7, T24N R37E S33, T25N R37E
<ul style="list-style-type: none"><li>Thirty-six BLM parcels in the Dixie Valley KGRA were offered for competitive geothermal lease sale, June 26, 2003; T22-26N R35-39E. See the BLM website <a href="http://www.nv.blm.gov/minerals">http://www.nv.blm.gov/minerals</a>.</li><li>No bids were received on these parcels.</li></ul>		

**Empire Power Plant (1987)** **4.8 MW** **S21, T29N R23E**  
**Empire Energy LLC**

- ◆ Empire Energy LLC; Permit 507, API #27-031-90211 for Production Well “EEP-02” issued August 5, 2002; NW/4 NE/4 Section 16, T29N R23E, Washoe Co.; PTD 2500 ft.
- ◆ Empire Energy LLC; Permit 523, API #27-031-90217 for Observation Well #58-33 “PW-2” issued June 12, 2003; Section 4, T29N R23E, San Emidio Desert, Washoe Co.; This is a new permit issued to an old water well acquired from KINROSS Gold, drilled to a depth of 300’.
- ◆ Empire Energy LLC; Permit 524, API #27-031-90218 for Observation Well #51-4 “PW-3” issued June 12, 2003; Section 4, T29N R23E, San Emidio Desert, Washoe Co.; This is a new permit issued to an old water well acquired from KINROSS Gold, drilled to a depth of 300’.

**Soda Lake No. 1 (1987)** **26.1 MW** **S33, T20N**  
**R28E**

**Soda Lake No. 2 (1991)**  
**Constellation Operating Services**

- ◆ Nine BLM parcels in the Soda Lake KGRA were offered for competitive geothermal lease sale, June 26, 2003; T19-21N R27-29E. See the BLM website <http://www.nv.blm.gov/minerals>.
- ◆ No bids were received on these parcels.

**Steamboat I, IA (1986)** **10.8 MW** **S29, T18N R20E**  
**Steamboat II, III (1992)** **47.8 MW**

**S B Geo, Inc./Far West Capital**

- ◆ Advanced Thermal Systems (ATS) was recently awarded a power purchase contract from Sierra Pacific for a Kalina Cycle 44-MW binary plant, Steamboat IV. PUC approval 3/6/2003: <http://www.puc.state.nv.us/news/2003/REPS%20303.pdf>
- ◆ ORMAT Nevada Inc. announced on July 7, 2003 that they have executed a Letter of Intent to acquire the entire Steamboat Geothermal Complex in Steamboat Hills, Washoe County, Nevada. This transaction includes Steamboat 2 and 3 power plants and is expected to close by the end of July 2003 for \$32.5 million. ORMAT closed the acquisition of Steamboat 1 and 1A power plants in the same complex in June, 2003: [http://www.ormat.com/news\\_041.htm](http://www.ormat.com/news_041.htm)
- ◆ A recent [North Lake Tahoe Bonanza](#) news article by Rick Adair (July 11, 2003) states that “Although completion of the sale would provide ORMAT ownership of the existing plants, Reno-based Advanced Thermal Systems plans to construct two geothermal projects in the area...Construction of the 44 megawatt ATS Steamboat 4 project is expected to start this summer and be completed in two years”: <http://www.nevadaappeal.com/apps/pbcs.dll/article?AID=/20030711/NEWS/307110111/-1/ARCHIVES>

**Steamboat Geothermal Power** **14.41 MW** **S5, 6, T17N R20E**  
**Plant/Caithness Power Plant (1988)**

**Yankee-Caithness JVLP**

- ◆ Yankee Caithness Joint Venture, LLC: Permit #525, API 27-031-90219 for Industrial Production Well # 21B-5 issued July 14, 2003; NW/4 NW/4; Section 5, T17N R20E; Steamboat Springs, Washoe County, Nevada; PTD 5000’; Spud July 19, 2003, Nabors Rig #58, Drilling.

**Stillwater (1989)** **21.0 MW** **S1, T19N R30E**  
**Stillwater Holdings, LLC**

**Wabuska (1984)** **2.2 MW** **S15, 16, T15N R25E**  
**Homestretch Geothermal LLC**

\* Nameplate Capacity as reported to the Division of Minerals for 2002.

## DIRECT USE OPERATIONS

### **Empire Group LLC; Empire, Washoe County, Nevada**

<http://www.empirellc.com>

### **Gilroy Foods, A ConAgra Food Ingredients Company; Onion Dehydration Plant; Fernley, Nevada**

<http://www.gilroyfoods.com/aboutus.html>

Commenced seasonal onion dehydration processing operations on May 15, 2003. The plant will operate this season until the end of October.

## OTHER ACTIVE AREAS

### **Gerlach KGRA (T32N R23E), Washoe County**

- ◆ June 26, 2003 Nevada BLM Competitive Geothermal Lease Sale. Three parcels in the Gerlach KGRA were offered at the sale. Parcel #NV-GT-03-06-041, 1662.05 acres in sections 15,16,21,22; T32N R23E was purchased by Western Geothermal Partners, LLC for \$2.52 per acre. <http://www.nv.blm.gov/minerals>

### **Salt Wells KGRA (T16-17N R30-31E), Churchill County**

- ◆ June 26, 2003 Nevada BLM Competitive Geothermal Lease Sale. Five parcels in the Salt Wells KGRA were offered at the sale. All five parcels received bids and three parcels received multiple bids (#45, 46, 47). NGP Power Corp. purchased Parcels #42 (T16N R30-31E) and #43 (T16N R30E) for \$2.25 per acre. Nevada Geothermal Specialist, LLC purchased Parcel #45 (T17N R30E) for \$17.25 per acre, and Parcel #46 (T17N R30E) for \$5.15 per acre. Western Geothermal Partners, LLC took Parcel #47 (T17N R31E) for \$2.52 per acre. <http://www.nv.blm.gov/minerals>

### **Hot Sulphur Springs (Tuscarora), Elko County**

- ◆ Earth Power Resources was recently awarded a power purchase contract from Sierra Pacific for a 25 MW binary plant. PUC approval 3/6/2003: <http://www.puc.state.nv.us/news/2003/REPS%20303.pdf>

### **Rye Patch/Humboldt House KGRA, Pershing County (Rye Patch Power Plant, 12 MW, 90% complete)**

- ◆ Presco Energy/Department of Energy (DOE) National Renewable Energy Laboratory funded Thermal Gradient Wells; "Renewable Energy Advancement in Nevada"; contact Gina Tempel [gina@mines.unr.edu](mailto:gina@mines.unr.edu).
- ◆ Presco Energy began their drilling program in the Humboldt House KGRA (Known Geothermal Resource Area) southwest of Winnemucca, Nevada, in May 2003 with drilling contractor Layne Christensen Company. This program has been funded for the purpose of evaluating the lifetime and current potential of the Humboldt House geothermal system.
  - Presco Energy LLC.; Permit 511, API #27-027-90061 for Thermal Gradient Well "P 3-1" issued January 22, 2003; NE/4 NW/4 S3, T31N R33E; PTD 1000 ft.; Spud June 4, 2003.
  - Presco Energy LLC.; Permit 512, API #27-027-90062 for Thermal Gradient Well "P 5-1" issued January 22, 2003; SW/4 NE/4 S5, T31N R33E; PTD 1000 ft.
  - Presco Energy LLC.; Permit 513, API #27-027-90063 for Thermal Gradient Well "P 10-1" issued January 22, 2003; SW/4 NE/4 S10, T31N R33E; PTD 1500 ft.; Spud May 21, 2003.
  - Presco Energy LLC.; Permit 514, API #27-027-90064 for Thermal Gradient Well "P 32-1" issued January 22, 2003; SW/4 NE/4 S32, T32N R33E; PTD 1000 ft.
  - Presco Energy LLC.; Permit 515, API #27-027-90065 for Thermal Gradient Well "P 32-2" issued January 22, 2003; NE/4 SW/4 S32, T32N R33E; PTD 500 ft.; Spud May 21, 2003.

### **Fly Ranch Geothermal Prospect Area; West Black Rock Desert, Washoe County**

- ◆ SB Geo, Inc.; Permit #516, API #27-031-90214 for Thermal Gradient Well "72-02-TG" issued January 27, 2003; NE/4 NE/4 Section 2, T34N R23E, Washoe Co.; Re-Entry, PTD 1456 ft.; Cleaned out existing well (1-2FR) to 1456 ft.; Ran temperature logs; Completed Feb, 2003.
- ◆ SB GEO, INC.; Permit #520, API #27-031-90215 for Thermal Gradient Well "11-12-TG" issued April 17, 2003, NE/4 NE/4, Section 12, T34N R23E; Fly Ranch geothermal prospect area, West Black Rock Desert, Washoe County; PTD 2000'; For observation and logging temperature; Spud May 2, 2003,

Boart Longyear Drilling Co.

### **Blue Mountain Geothermal Prospect Area, Humboldt County**

- ◆ NORAMEX Corporation; Permit #500, API #27-013-90014 for Observation Well "Deep Blue #1" issued March 20, 2002; SE/4 SW/4, S14 T36N R34E, Humboldt Co.; PTD 2000 ft.; Drilled in May, 2002. <http://www.continentalridge.com/geothermal-energy.htm>

### **Joy Lake Geothermal Prospect Area, Washoe County**

- ◆ Evergreen Energy LLC; Permit #496, API #27-031-90208 for Observation Well "Joy Lake 45-22" issued January 29, 2002; SE/4 NW/4 Section 22, T17N R19E, Washoe Co.; PTD 3000 ft.
- ◆ Evergreen Energy LLC; Permit #497, API #27-031-90209 for Observation Well "Joy Lake 78-22" issued January 29, 2002; SE/4 NE/4, Section 22, T17N R19E, Washoe Co.; PTD 3000 ft.

## **OTHER NEWS**

### **Rep Jim Gibbons Introduces Bill to Amend Geothermal Steam Act**

- ◆ Representative Jim Gibbons introduced Bill H.R.2772 July 17, 2003 "To amend the Geothermal Steam Act of 1970 to promote the development and use of geothermal resources in the United States". Referred to the House Committee on Resources July 17, 2003. - <http://thomas.loc.gov>

### **Senator Harry Reid Introduces Legislation to Secure Funding for Nevada**

- ◆ U.S. Senator Harry Reid's legislation includes millions of dollars for safety, energy development, and water systems in Nevada. Senator Reid said, "With this money, Nevada will continue to lead the nation in developing renewable energy..." See a list of the projects on the website. - <http://mygov.governmentguide.com/mygov/bio/pr/?id=370&pr=07172003091346>

### **Senator Harry Reid Speaks at ACRE Conference - Encourages R&D Efforts in Nevada**

- ◆ The American Council for Renewable Energy (ACRE) held the Second Annual Conference "Renewable Energy in America – Building a National Strategy on State and Local Successes" July 8-9 in Washington DC. Senator Reid, an invited speaker, told leaders from the energy community, "I want the nation to see Nevada as a proving ground for renewable energy, not a dumping ground for nuclear waste". - <http://mygov.governmentguide.com/mygov/webreturn/?url=http://reid.senate.gov>

### **House Bill H.R.6, Energy Policy Act of 2003 Passed by the Senate, July 31, 2003**

- ◆ "To enhance energy conservation and research and development, to provide for security and diversity in the energy supply for the American people, and for other purposes" - [http://energy.senate.gov/legislation/108/bill\\_details.cfm?id=2040](http://energy.senate.gov/legislation/108/bill_details.cfm?id=2040), [http://energy.senate.gov/legislation/108/bill\\_details.cfm?id=2041](http://energy.senate.gov/legislation/108/bill_details.cfm?id=2041)

### **Geothermal Industry Applauds Senate Energy Bill**

"We applaud the United States Senate for reaching a compromise and passing vital national energy legislation," said Karl Gawell, Executive Director of the Geothermal Energy Association. "Senators Domenici (R-NM) and Bingaman (D-NM) showed outstanding leadership in steering this legislation, which contains provisions vital to the growth of the geothermal power industry, through the sometimes treacherous waters of the U.S. Senate."

"The US faces future shortages of affordable electricity, and the incentives in this bill will help clean, renewable power fill a significant part of that gap," GEA's Executive Director asserted.

Of particular importance to the geothermal industry are the tax provisions that expand the Production Tax Credit (PTC) to new geothermal power plants. This tax credit has been widely credited with fueling the dramatic expansion of the wind industry over the past decade. Under the Senate's legislation, the PTC would be expanded to apply to new geothermal plants as well.

"Today geothermal energy provides nearly 3,000 Megawatts of clean, reliable power to consumers in the Western States. The Production Tax Credit will provide investors the incentive they need to develop much more," Gawell said.

According to the US Geologic Survey, there are significant undeveloped geothermal resources in Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming. "The USGS identified over 20,000MW of clean geothermal power

potential in those states twenty years ago, but investors have not had the incentive necessary to overcome the expense and risk involved in developing those systems,” Gawell said. In addition to the identified systems, the USGS estimated in 1978 that there could be an additional 72,000 to 127,000 MW in undiscovered systems in the Western States.

“Tapping geothermal energy’s vast potential is essential to achieve healthier air and cleaner water in the West, and it will reduce the threat of global warming for the entire nation. This bill takes a big step in that direction,” Gawell added.

“We thank Senators Grassley (R-IA) and Baucus (D-MT) for supporting this provision as part of the Senate’s tax package. We wish to recognize Senator Harry Reid (D-NV) for his leadership on this issue along with Senators Allard (R-CO), Craig (R-ID), Crapo (R-ID), Feinstein (D-CA), and Lieberman (D-CT) who joined in pushing for the full inclusion of geothermal energy in the PTC during debate on the Senate floor,” Gawell stated.

The Geothermal industry also applauded the provisions of the bill that would create a national renewable portfolio standard (RPS). The bill’s provisions would require 10% of all electricity to come from renewable energy sources, like geothermal, by the year 2020. While several key geothermal states already have state-level RPS laws or requirements, the bill’s provisions would protect those important state efforts while opening a national market for renewable energy.

“Senators Bingaman (D-NM), Jeffords (I-VT) and Reid (D-NV) should be credited for their leadership and vision in securing a national RPS that will ensure a growing national market for clean, renewable power,” Gawell noted.

For more information on geothermal energy visit <http://www.geo-energy.org>.

### **Governor Signs Bills Regarding Renewable Energy**

- ◆ AB296; <http://www.leg.state.nv.us/72nd/Reports/history.cfm?ID=643>  
*Provides multiplier for electricity generated by certain renewable energy systems for purpose of calculating compliance with portfolio standard for renewable energy. (BDR 58-1163)*  
Introduced On: Mar 13, 2003 By: Weber Geddes Anderson Sherer Leslie Buckley Horne Mabey Pierce. Most Recent History Action: May 21, 2003 - Approved by the Governor. Chapter 143.
- ◆ AB398; <http://www.leg.state.nv.us/72nd/Reports/history.cfm?ID=814>  
*Establishes alternative procedure pursuant to which certain performance contracts for cost-savings energy measures in buildings occupied by governmental entities are bid. (BDR 27-1115)*  
Introduced On: Mar 17, 2003 By: Geddes Hettrick Hardy Beers Knecht Anderson Andonov Arberry Jr. Buckley Carpenter Chowning Christensen Collins Conklin Gibbons Giunchigliani Goicoechea Goldwater Grady Griffin Gustavson Horne Koivisto Leslie Mabey Manendo Marvel Mortenson Parks Perkins Pierce Sherer Weber Townsend Amodei. Most Recent History Action: Jun 11, 2003 Approved by the Governor. Chapter 480.
- ◆ AB429; <http://www.leg.state.nv.us/72nd/Reports/history.cfm?ID=900>  
*Makes various changes relating to net metering and renewable energy. (BDR 58-779)*  
“...revising the definition of renewable energy to include waterpower for the purposes of the portfolio standard for renewable energy for certain providers of electric service and for net metering and optional pricing..” Introduced On: Mar 17, 2003 By: Hettrick Hardy Geddes Knecht Beers Brown Goicoechea Grady Griffin Gustavson Mabey Marvel Sherer. Most Recent History Action: Jun 09, 2003 - Approved by the Governor. Chapter 332.
- ◆ AB431; <http://www.leg.state.nv.us/72nd/Reports/history.cfm?ID=904>  
*Establishes program to provide incentives for installation of certain solar energy systems. (BDR 53 723).* Introduced On: Mar 17, 2003 By: Giunchigliani. Most Recent History Action: Jun 09, 2003 Approved by the Governor. Chapter 331.

### **Nevada BLM Geothermal KGRA (Known Geothermal Resource Area) Lease Sale; June 26, 2003**

- ◆ The Nevada BLM held a Competitive Geothermal Lease Sale on June 26, 2003. A total of 55 parcels were offered, and six parcels received eleven bids from three companies. Western Geothermal Partners, LLC, NGP Power Corp., and Nevada Geothermal Specialist, LLC were the bidders at the sale, and each successfully purchased 2 parcels. One parcel at Gerlach and five at Salt Wells were bought. The high bid was received from Nevada Geothermal Specialist, LLC for parcel #45 in Salt Wells for \$17.25 per acre. Parcels at Brady, Dixie Valley and Soda Lake received no bids. For questions, call (775) 861-6538 or (775) 861-6537, or for further details, see the BLM website <http://www.nv.blm.gov/minerals>.

**June 26, 2003 Competitive Geothermal Lease Sale  
Results  
11 Bids on 6 Parcels**

Winner	Parcel Number NV-GT-03-06-	Bidder Name	Total Bid Amount	Amount Per Acre	Amount Submitted	Total Parcel Acreage	Serial Number
*	41	Western Geothermal Partners, LLC	\$4,188.37	\$2.52	\$837.67	1662.05	N-77268
*	42	NGP Power Corp.	\$3,030.75	\$2.25	\$606.15	1346.92	N-77269
*	43	NGP Power Corp.	\$3,060.00	\$2.25	\$612.00	1360.00	N-77270
	45	Western Geothermal Partners, LLC	\$14,238.00	\$5.65	\$2,847.60	2520.00	
	45	NGP Power Corp.	\$5,670.00	\$2.25	\$1,134.00	2520.00	
*	45	Nevada Geothermal Specialist, LLC	\$44,226.00	\$17.25	\$8,845.20	2520.00	N-77271
	46	Western Geothermal Partners, LLC	\$3,210.48	\$2.52	\$642.10	1274.00	
	46	NGP Power Corp.	\$2,866.50	\$2.25	\$573.30	1274.00	
*	46	Nevada Geothermal Specialist, LLC	\$6,561.10	\$5.15	\$1,312.22	1274.00	N-77272
*	47	Western Geothermal Partners, LLC	\$4,702.32	\$2.52	\$940.46	1865.64	N-77273
	47	NGP Power Corp.	\$4,198.50	\$2.25	\$839.70	1865.64	
<b>TOTALS OF SUCCESSFUL BONUS BIDS</b>			<b>\$65,768.54</b>				

**New RFP Issued by Sierra Pacific Resources**

- June 30, 2003: Sierra Pacific Resources' two Nevada subsidiaries issued a new Request for Proposals for energy generated by renewable energy fuel sources. Responses are due to the utilities by August 18, 2003. For more information or to submit a response, see the website at: <http://www.sierrapacificresources.com/company/renewables/>  
News release: <http://www.sierrapacificresources.com/news/releases/spr/1056956400.html>

**Request For Information, Western Area Power Administration**

- June 16, 2003: The Colorado River Storage Project Management Center of Western Area Power Administration is soliciting information regarding potential sources of non-hydro renewable energy for Federal installations in New Mexico. Responses should be received by September 12, 2003. Contact: Sam Loftin (801) 524-6381, Western Area Power Administration, CRSP Management Center, ATTN: L6440, P. O. Box 11606, Salt Lake City, UT 84147-0606.

**Mining Energy Solutions, Elko, Nevada August 26-28, 2003**

- "A Western States Conference on Energy Efficiency and Clean Energy Investments"; The conference will be hosted by the Department of Energy, Nevada Office of Industries of the future, Nevada State Office of Energy, and the Nevada Mining Association. Seminars and exhibits will focus on innovative mining technologies, energy efficiency, renewable energy, and energy solutions. For registration information: <http://www.oit.doe.gov/miningsolutions>

**Nevada Petroleum Society Field Trip, August 22-24, 2003**

- "Oil, Gas and Geothermal Occurrences In Northwestern Nevada". Areas included in the trip are Brady-Desert Peak Geothermal Power Plant, Humboldt House-Rye Patch, Buena Vista Valley Oil Field-Kyle Hot Springs, Leach Hot Springs, Pleasant Valley Earthquake and Surface Rupture, Dixie Valley Geothermal Power Plant, Favrett Canyon, Type section of the Triassic Favrett Formation, and an active placer mine. Reservations are limited and should be made by July 25. Reservation form: <http://www.nbmj.unr.edu/nps/FieldTrip2003.pdf>  
Additional Details: Call John Snow (775-684-7045) or Mike Evans (775-827-1613)  
Or visit the NPS website: <http://www.nbmj.unr.edu/nps/>

**POWER-GEN Renewable Energy Conference and Exhibition, March 1-3, 2004**

- PennWell Corporation and the American Council for Renewable Energy (ACRE) have formed a partnership for the creation of POWER-GEN Renewable Energy. The conference will be held at the Flamingo Hotel in Las Vegas, Nevada on March 1-3, 2004. The purpose of the conference is to bring together all sectors of the energy industry to discuss issues and plan for the future. Abstract deadline for papers is August 1, 2003. See the website for more information: <http://pgre04.events.pennnet.com>

**Recent BLM Geothermal Leases Filed**

- For more information on BLM leases in Nevada, see the website: <http://www.blm.gov/lr2000>. This information has been provided courtesy of the "Nevada Oil Reporter".

<b>Non-Competitive Geothermal BLM Lease Applications, Pending:</b>			
Katz, L.	1 lease; 480 acres	T41N R52E	Tuscarora, Elko Co.
Henkle & Assoc.	1 lease; 1420 acres	T23N R43E	Reese River, Lander Co.
Ormat Nevada Inc.	7 leases; 16,372 acres	T12-13N R33-34E	Gabbs Valley, Mineral/Nye Cos.
Townsend, G.	1 lease; 1240 acres	T35N R43E	Humboldt Co.
PSG Resources	2 leases; 1280 acres	T25N R39E	Dixie Valley, Pershing Co.
PSG Resources	1 lease; 640 acres	T2S R39E	Esmeralda Co.
PSG Resources	1 lease; 640 acres	T1S R39E	Esmeralda Co.
Stillwater Holdings	NVN 77158; 2271.30 acres	T18-19N R30E (5,6)	
ORMAT Nevada Inc.	NVN 77208; 640 acres	T23N R26E (34)	
ORMAT Nevada Inc	NVN 77217; 640 acres	T24N R32E (6)	Churchill Co.
ORMAT Nevada Inc	NVN 77218; 1920 acres	T24N R31E (10,12,14)	Churchill Co.
Western Geothermal Ptnrs	NVN 77247; 1260 acres	T24N R43E (33,34)	
Western Geothermal Ptnrs	NVN 77248; 1280 acres	T24N R33E (28,34)	Carson Sink
Western Geothermal Ptnrs	NVN 77249; 651 acres	T26N R35E (35)	Buena Vista Vly
Western Geothermal Ptnrs	NVN 77250; 640 acres	T23N R33E (4)	Carson Sink
ORMAT Nevada Inc	NVN 77296; 1920 acres	T24N R26E (20,30,32)	Churchill Co.
ORMAT Nevada Inc	NVN 77297; 1920 acres	T23N R25E (12) T23N R26E (6) T24N R25E (36)	Churchill Co.
Western Geothermal Ptnrs	NVN 77435; 1260 acres	T18N R31E (30,31)	Salt Wells
Western Geothermal Ptnrs	NVN 77436; 2560 acres	T18N R30E (25,34-36)	Salt Wells

<b>Competitive Sale Geothermal BLM Lease Applications, Pending:</b>			
Western Geothermal Ptnrs	NVN 77268; 1662.05 acres	T32N R23E (15,16,21,22)	Gerlach
NGP Power Corp	NVN 77269; 1346.92 acres	T16N R30E (1) T16N R31E (6)	Salt Wells
NGP Power Corp	NVN 77270; 1360 acres	T16N R30E (2,3)	Salt Wells
Nevada Geothermal Spec	NVN 77271; 2520 acres	T17N R30E (23-26)	Salt Wells
Nevada Geothermal Spec	NVN 77272; 1274 acres	T17N R31E (35,36)	Salt Wells
Western Geothermal Ptnrs	NVN 77273; 1865.64 acres	T17N R31E (19,30,31)	Salt Wells

<b>Geothermal BLM Leases Issued:</b>			
NGP Power Corp.	7 leases; 16,552 acres	T17N R30E	Salt Wells, Churchill Co.
NGP Power Corp.	2 leases; 4837 acres	T18N R30E	Salt Wells, Churchill Co.
NGP Power Corp.	2 leases; 3244 acres	T16N R30E	Salt Wells, Churchill Co.
Barrick Goldstrike	1 lease; 725.127 acres	T36N R49E	Eureka Co.
Sierra Nevada Geo	1 lease; 651 acres	T26N R35E	New York Cyn, Pershing Co.

### Geothermal Energy Report Released

- ◆ The DOE Energy Efficiency and Renewable Energy and Department of Interior Bureau of Land Management (BLM) have released a geothermal energy report entitled “*Opportunities for Near-Term Geothermal Development on Public Lands in the Western United States.*”

<http://www.nrel.gov/docs/fy03osti/33105.pdf>

The report identifies 35 sites in the Western U. S. as having the greatest potential for short-term development of geothermal power. Ten of these sites are in Nevada: Fish Lake, Beowawe, Salt Wells, Soda Lake, Steamboat, Stillwater, Dixie Valley, Brady, Rye Patch, and San Emidio.

### Great Basin Center for Geothermal Energy

- ◆ Great Basin Center Contact Information:
  - Dr. Jane C. S. Long, Professor of Hydrologic Sciences; Director, Great Basin Center for Geothermal Energy; Director, Department of Geological Sciences, University of Nevada, Reno, MS 172, Reno, NV 89557-0138.
  - Dr. Lisa Shevenell, Associate Director, Great Basin Center for Geothermal Energy, Nevada Bureau of Mines and Geology, University of Nevada, Reno, MS 178, Reno, NV 89557-0057
  - Contact information for the Great Basin Center for Geothermal Energy  
Email: [geothermal@mines.unr.edu](mailto:geothermal@mines.unr.edu)  
Phone: (775) 784-7018  
Department of Geological Sciences, University of Nevada, Reno, MS 172, Reno, NV 89557-0138.
- ◆ June 13, 2003, New Funding for Geothermal Research Projects  
The Great Basin Center for Geothermal Energy, headquartered in the Mackay School of Mines at the University of Nevada, Reno, has received its second year of funding from the U.S. Department of Energy

to conduct peer-reviewed research and to produce a web-based, stakeholder geothermal information system for Nevada geothermal data. Initial funding to the Center was obtained in March 2002 with assistance of Senator Harry Reid, and year 2 funding was received in May 2003. The Center recently awarded \$676,474 in new research funding in the second year of its peer-reviewed research program. These research projects were externally reviewed and competitively selected from proposals submitted to the Center in May 2003, and nine new research projects were initiated during this second funding cycle. Funded projects include a wide range of earth-science-related topics designed to explore for new geothermal systems and assess known systems and currently producing geothermal systems. The objectives of both the research and outreach components of the Center are to increase the amount of energy produced with geothermal resources in the Great Basin by evaluating existing, new and developing scientific methods to improve exploration and assessment of these resources. The funded proposals can be viewed at:

<http://www.unr.edu/geothermal/funding/projects.html>

List of funded projects:

- Arehart, G. - Dating of young igneous rocks associated with geothermal systems in the Great Basin.
- Blewitt, G. - Targeting of potential geothermal resources in the Great Basin from regional to Basin scale relationships between geodetic strain and geological structures.
- Calvin, W. - Remote sensing for exploration and mapping of geothermal Resources.
- Coolbaugh, M. - Regional assessment of exploration potential for geothermal systems in the Great Basin using a geographic information system (GIS) – Part II.
- Faulds, J. - Geologic and geophysical analysis of the Desert Peak-Brady geothermal fields: Structural controls on geothermal reservoirs in the Humboldt Structural Zone.
- Lechler, P. - Exploration for concealed structures at Desert Peak using mercury soil gas detectors.
- Louie, J. - Continuation project: Assembling crustal geophysical data for geothermal exploration in the western Great Basin.
- Oppliger, G. - Investigating the relation between geothermal reservoir compaction, geometry and production rates from a ten-year InSAR ground displacement history at the Bradys and Desert Peak fields: Assessing the potential of retrospective InSAR monitoring to assist reservoir management and expansion over fields without previously documented subsidence.
- Shevenell, L. - Geochemical sampling of thermal and nonthermal waters in Nevada: Continued evaluation of geothermal resources for electrical power generation and direct-use applications.

#### **Public Utilities Commission Approves Renewable Energy Contracts**

- ◆ March 6, 2003: The Public Utilities Commission approved six contracts between Nevada Power/Sierra Pacific and renewable energy power plants under development. These plants will provide enough electricity in 2005 and 2006 for Nevada Power to comply with the non-solar portion of Nevada's Renewable Energy Portfolio Standard.  
<http://www.puc.state.nv.us/news/2003/REPS%20303.pdf>  
<http://www.leg.state.nv.us/NRS/NRS-704.html#NRS704Sec7801> SB 372 (2001).

#### **LINKS: USEFUL DATABASES AND GEOTHERMAL INFORMATION**

- ◆ **American Council for Renewable Energy (ACRE)** – <http://www.americanrenewables.org/>
- ◆ **Bureau of Land Management – Nevada Geothermal Program** - <http://www.nv.blm.gov/minerals/geothermal/index.htm>
- ◆ **Council of State Governments – TrendsAlert; Renewable Energy and State Economics** – <http://www.csg.org>. Summarizes issues and policy options for state officials, regarding economic potential of renewable energy.
- ◆ **Geo-Heat Center, Oregon Institute of Technology, Klamath Falls, Oregon** - <http://geoheat.oit.edu/>
- ◆ **GeoPowering the West** - <http://www.eere.energy.gov/geothermal/>
- ◆ **GeoPowering the West, Geothermal Related Events Calendar** – <http://www.eere.energy.gov/geothermal/geocalendar.html>

- ◆ **Geothermal Biz.com** - <http://www.geothermal-biz.com/>  
*Geothermal biz.com* was created to help the geothermal entrepreneur—companies, small businesses, Native American tribes, homeowners, and individuals—develop geothermal direct use and small power generation projects.
- ◆ **Geothermal Education Office** - <http://www.geothermal.marin.org/>
- ◆ **Geothermal Energy Association** - <http://www.geo-energy.org/>
- ◆ **Geothermal Resources Council** - <http://www.geothermal.org>
- ◆ **Great Basin Center for Geothermal Energy at the University of Nevada, Reno** - <http://www.unr.edu/geothermal/>
- ◆ **Idaho National Engineering and Environmental Laboratory (INEEL)** - <http://geothermal.inel.gov/>
- ◆ **Nevada Bureau of Mines and Geology, MI-2001, “The Nevada Mineral Industry 2001”** - <http://www.nbmgs.unr.edu/hits.php?p=dox/mi/01.pdf>
- ◆ **Nevada Bureau of Mines and Geology, Geothermal Energy** - <http://www.nbmgs.unr.edu/geothermal/index.html>
- ◆ **Nevada Commission on Mineral Resources, Division of Minerals** - <http://minerals.state.nv.us/programs/ogg.htm>
- ◆ **Nevada State Office of Energy, Renewable Energy & Energy Conservation Task Force, including report by Mary Riddel “Potential Economic Impact of Nevada’s Renewable Energy Resources”** - <http://energy.state.nv.us/taskforce/default.htm>
- ◆ **Nevada Public Utilities Commission** - <http://www.puc.state.nv.us/>
- ◆ **Office of the Governor, Nevada State Energy Office** - <http://energy.state.nv.us/taskforce/default.htm>
- ◆ **Renewable Energy Policy Project & CREST (Center for Renewable Energy & Sustainable Technology)** - <http://www.repp.org/>
- ◆ **Sandia National Laboratories Geothermal Research Dept.** - <http://www.sandia.gov/geothermal>
- ◆ **Sierra Pacific Resources, Renewables RFP** - <http://www.sierrapacificresources.com/company/renewables/>
- ◆ **Southern Methodist University Geothermal Laboratory** - <http://www.smu.edu/geothermal/>
- ◆ **Stanford Geothermal Program** - <http://ekofisk.stanford.edu/geotherm.html>
- ◆ **U.S. Geological Survey, USGS Open-file Report 99-425 online version 1.0, “Geothermal Industry Temperature Profiles from the Great Basin”** - <http://geopubs.wr.usgs.gov/open-file/of99-425/webmaps/home.html>

Information compiled by the Nevada Division of Minerals with assistance from:

EHNI ENTERPRISES, INC.  
P.O. Box 4228  
Carson City, NV 89702-4228

Under USDOE Cooperative Agreement: SEP/CA/03/006 supporting GeoPowering the West.

For further information regarding GeoPowering Nevada or Nevada’s Geothermal Program contact John Snow, Geothermal Program Manager, Nevada Division of Minerals at 775-684-7045, Fax: 775-684-7052, or e-mail [jsnow@govmail.state.nv.us](mailto:jsnow@govmail.state.nv.us)