



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

May 2004

**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>BRADY POWER PARTNERS (ORMAT); Geothermal Project Area Permit #540PA; Issued Apr 8, 2004, T22N R26E, Sections 13,14,23,24,11,12 and T22N R27E, Sections 7,18,19; Brady/Desert Peak Area, Churchill County, Nevada; The project area includes 3 production wells with an estimated depth of 6000'; Spent geothermal fluid will be re-injected into existing Brady injection wells; New Geothermal Project Area Permit.</li><li>ORMAT Nevada Inc. (ORNI 9, LLC); Permit #533; API #27-001-90300 for Observation Well "82-14" issued Nov 3, 2003, NE/4 NE/4, Section 14, T22N R26E; Brady Hot Springs KGRA, Churchill County; PTD 5000'; Will be used to monitor resources currently being used for electrical power generation. Any fluids will be re-injected. New Location.</li><li>ORMAT Nevada Inc. (ORNI 9, LLC); Permit #534; API #27-001-90301 for Observation Well "55-14" issued Nov 3, 2003, SW/4 NE/4, Section 14, T22N R26E; Brady Hot Springs KGRA, Churchill County; PTD 5000'; Will be used to monitor resources currently being used for electrical power generation. Any fluids will be re-injected. New Location.</li><li>ORMAT Nevada Inc. (ORNI 9, LLC); Permit #535; API #27-001-90302 for Observation Well "88-11" issued Nov 3, 2003, SE/4 SE/4, Section 11, T22N R26E; Brady Hot Springs KGRA, Churchill County; PTD 5000'; Will be used to monitor resources currently being used for electrical power generation. Any fluids will be re-injected. Spud 5/28/2004; C and L Drilling Rig #6; Set 20" casing at 420' on 6/1/2004; Drilling.</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>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 #538; API #27-001-90304 for Industrial Well "77-21" issued Apr 8, 2004, NE/4 SE/4, Section 21, T22N R27E; Desert Peak Project Area (#519PA), Churchill County; PTD 5500'; Spent geothermal fluid will be re-injected into Well #22-22; Spud Apr 10, 2004; C and L Drilling Rig #6; Set 13 3/8" @ 1149' on 4/26/2004; TD 3650'; Flow-testing 6/2/2004.</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; Spud June 20, 2003; C and L Drilling Rig #6; Reached TD 5218' Aug 3, 2003; Directionally re-drilled from 3941'-5300', Tested well, cemented from 2637'-2741', Milled window from 1740'-1794', Re-drilled #2 from 1756'-2691'; Tested well Mar 2004; Lost mud motor in hole; Released rig Apr 2004.</li><li>ORMAT Nevada Inc. (ORNI 3, LLC); Permit #529; API #27-001-90298 for Industrial Well "27-15" issued Aug 11, 2003, SW/4 SW/4, Section 15, T22N R27E; Desert Peak, Churchill County; Second production well location in the Desert Peak Project Area; Spud Aug 8, 2003; C and L Drilling Rig #6; Reached TD 5809'; Injection test performed; SHUT-IN Oct 2003.</li><li>ORMAT Nevada Inc. (ORNI 3, LLC); Permit #531; API #27-001-90299 for Industrial Well "37-21" issued Oct 6, 2003, SE/4 SW/4, Section 21, T22N R27E; Desert Peak, Churchill County; Third production well location in the</li></ul>		

Desert Peak Project Area; Spud Oct 14, 2003; C and L Drilling Rig #6; Set conductor at 100'; SUSPENDED WELL in Nov, 2003.

- ♦ ORMAT Nevada Inc. (ORNI 3, LLC); Permit #536; API #27-001-90303 for Industrial Well "74-21" issued Nov 3, 2003, SE/4 NE/4, Section 21, T22N R27E; Desert Peak, Churchill County; Production well location in the Desert Peak Project Area; Spud Nov 16, 2003; C and L Drilling Rig #6; New Location, Drilled to depth of 4250'; Successfully tested in Dec 2003-Jan 2004; SHUT-IN Feb 2004.

**Dixie Valley Power Plant (1988)**

**62.0 MW**

**S7, T24N R37E**

**Caithness Dixie Valley/Caithness Operating**

**S33, T25N R37E**

- ♦ Caithness Dixie Valley; SW Lamb #2; Permit #539, API 27-001-90305 issued Apr 8, 2004; NE/4 NE/4; Section 13, T24N R36E; Injection well permit for existing well drilled in August, 1979, Total Depth 8588'; Dixie Valley, Churchill County, Nevada; New Injection Permit Apr 2004.

**Empire Power Plant (1987)**

**4.8 MW**

**S21, T29N R23E**

**Empire Energy LLC**

**Soda Lake No. 1 (1987)**

**26.1 MW**

**S33, T20N R28E**

**Soda Lake No. 2 (1991)**

**Constellation Operating Services**

**Steamboat I, IA (1986)**

**10.8 MW**

**S29, T18N R20E**

**Steamboat II, III (1992)**

**47.8 MW**

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

- ♦ Reno Retail Company, LLC; Permit #541, API 27-031-90223 for Observation Well #24-28 issued April 30, 2004; SW/4 NW/4, Section 28, T18N R20E; Observation well in the Steamboat Hot Springs area, Washoe County, Nevada; PTD estimated at 700-800', maximum depth of 1000'; Will be used to further evaluate commercial potential of the geothermal resource. Spent geothermal fluid will be re-injected into the test well; New Location.

**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 Jul 14, 2003; NW/4 NW/4; Section 5, T17N R20E; Steamboat Springs, Washoe County, Nevada; PTD 5000'; Spud Jul 19, 2003, Nabors Rig #58, Rigged down Oct 10, 2003; Completed and tested; New directional completion 21B-5R drilled and currently being evaluated Oct 2003.
- ♦ Yankee Caithness Joint Venture, LLC; Permit #530, API 27-031-90220 for Industrial Injection Well # 64-32 issued Sep 17, 2003; SW/4 NE/4; Section 32, T18N R20E; Steamboat Springs, Washoe County, Nevada; PTD 1850'; Replacement well for the Coxi-1 well; Spud Sep 14, 2003; Lang Drilling Co.; Currently shut-in with plans to run additional cemented liner for completion as a new injection well; IDLE Oct 2003.

**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**

(No Website Currently Available)

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

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

Commenced seasonal onion dehydration processing operations in May 2004. The plant will operate this season until the end of October.

## OTHER ACTIVE AREAS

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

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

- ◆ Nevada Geothermal Specialists, LLC, Reno, Nevada (NGS) has submitted an application for a Permit to Construct Utility Facilities in the Salt Wells Known Geothermal Resource Area (KGRA), which is approximately 10 miles east of Fallon, Nevada. NGS proposes to construct the Salt Wells Geothermal Power Plant, a net 10 MW binary cycle power plant, available for commercial services by the end of 2005. Three to four production wells will be drilled to supply the plant with approximately 7,000 gpm of geothermal fluid, which will be re-injected into two injection wells. A six-mile transmission line is being proposed to deliver the power from the facility to the Sierra Pacific 230 kV line. Nevada SAI # E2004-172. Project: Salt Wells Geothermal Power Plant and Transmission Line. For more information from the Public Utilities Commission, Contact Michael Stafford, Clearinghouse Coordinator, (775) 684-0209 or email [mstafford@budget.state.nv.us](mailto:mstafford@budget.state.nv.us).
- ◆ Nevada Geothermal Specialists acquired 2 parcels containing approximately 3800 acres in T17N R30E, at the Nevada BLM KGRA Lease Sale on June 26, 2003. They paid \$17.25/acre for one parcel and \$5.15/acre for the other; see [Nevada Geothermal Update](#), June 2003. Anadarko Petroleum Corp. originally drilled several wells in the area during the early 1980s.

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

- ◆ Earth Power Resources announced recent address change: 2407 S. Troost Ave., Tulsa, OK 74114; Contact Ron Barr (918) 743-5593.
- ◆ Earth Power Resources, Inc.; State Permit #526PA issued Aug 5, 2003 for a geothermal project area to include 8 production wells (PTD 4000'), 6 injection wells (PTD 4000'), and 10 observation wells (PTD 4000'); The project area will encompass sections 4,5,8,9,16,& 17, T41N R52E; Hot Sulphur Springs, near Independence Valley and Tuscarora, Elko County, Nevada. The purpose of the project area is to supply a 25 MW power plant for a power purchase contract awarded by Sierra Pacific.
- ◆ Earth Power Resources, Inc.; State Permit #527 for Industrial Production Well #57-8 issued Aug 8, 2003; API #27-007-90027; SW/4 SW/4 SE/4, Section 8, T41N R52E; Hot Sulphur Springs, Elko County, Nevada; Projected total depth 4000'; 1<sup>st</sup> production well location in Project Area 526PA; Spud Nov 14, 2003; Lang Drilling Company, continuous core rig; Did not reach objective, temporarily abandoned Nov 24, 2003; Considering re-drilling with rotary rig. The well name and location have been changed, (originally #46-8); TEMPORARILY ABANDONED.
- ◆ Earth Power Resources, Inc.; State Permit #528 for Observation Well #67-8 issued Aug 8, 2003; API #27-007-90028; NE/4 SE/4, Section 8, T41N R52E; Hot Sulphur Springs, Elko County, Nevada; Projected total depth 4000'; 1<sup>st</sup> observation well location in Project Area 526PA; Spud Dec 5, 2003 Lang Drilling Company rotary rig; Set 7" at 1350', set 4.5" at 2490', shut down 12/18-28 for Holidays; Resumed operations on Dec 29 with Boart Longyear continuous core rig; Drilled to TD 3810'; Ran tests, evaluating; COGITATING.
- ◆ Earth Power Resources, Inc.; Permit for 2D shot hole seismic survey; Project Area 526Pa; Hot Sulphur Springs, near Tuscarora, Elko County, Nevada; Approximately 7 line miles of acquisition planned including sections 4,5,8,9,10,16 & 17, T41N R52E; Exploration survey permit.

#### 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".  
The following update was submitted by Gina Tempel.  
Gina Tempel, Ph.D., Associate Professor  
Department of Geological Sciences, MS 172, University of Nevada, Reno  
(775)784-4706, (775)784-1833 FAX, email: [gtempel@unr.edu](mailto:gtempel@unr.edu)

#### Humboldt House Geothermal Area

Five geothermal temperature gradient wells were drilled near the Florida Canyon mine in Humboldt County to test the resource potential of the Humboldt House geothermal area (HHGA). The Rye Patch or Humboldt House area is located 50 km northeast of Lovelock, Nevada. Drilling and coring operations were conducted between May and July 2003, with 3 wells reaching a total depth of 1000 feet, 1 well to 500 feet, and 1 well to 1500 feet. A total of 1851 feet of core were recovered from three of the wells. Currently, geochemical and petrographic studies are being conducted on the core by scientists affiliated with the Great Basin Center for Geothermal Energy at the University of Nevada Reno. Results of these geochemical and petrographic studies will be used to determine the source of the geothermal fluids at HHGA and the relative timing of the fluid movement with respect to the geologic

history of the area. Well logs, a summary of drilling activity, a map, and initial thermal profiles can be found at <http://www.nbmjg.unr.edu/geothermal/site.php?sid=Rye%20Patch> on the Nevada Bureau of Mines and Geology website.

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

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

- ◆ NORAMEX CORP. Permit #500, API #27-013-90014 for Observation Well “Deep Blue #1 issued March 20, 2002; SE/4 SW/4, Section 14, T36N R34E, Humboldt County; PTD 2000’; Drilled in May, 2002; Plan to test the #1 well in near future.
- ◆ NORAMEX CORP. Permit #532, API #27-013-90015 for Observation Well “Deep Blue #2” issued Nov 3, 2003; SW/4 NE/4, Section 14, T36N R34E, Humboldt County; PTD 3400’; Blue Mountain area; Will be used to further evaluate the commercial potential of the geothermal resource. Spud March 25, 2004, Lang Drilling Company; Set surface casing; Moved in Boart Longyear continuous coring rig Apr 1, 2004; Completed to depth of 3700’ Apr 28, 2004; Max temp measured during drilling was 330°F @ 1920’; Flow-tested Apr 29 @ 80 gpm; TESTING.- [http://www.nevadageothermal.com/News/Press\\_Releases/2004/may.06.04.pdf](http://www.nevadageothermal.com/News/Press_Releases/2004/may.06.04.pdf)

**Fallon Naval Air Base; T18N R29E; Churchill County**

- ◆ Geophysical survey application received at BLM on November 4, 2003; Dawson Geophysical Company, Section 13, T18N R29E, Case number NVN 77785. See GRC Bulletin Sep/Oct 2002 for paper by Francis C. Monastero, Geothermal Program Office, U. S. Naval Air Weapons Station, China Lake, referencing “Future Prospects on Military Lands” and planned exploration and development of the Fallon and Hawthorne, Nevada military sites. <http://www.geothermal.org/articles/coso.pdf>

**Hazen, Nevada; T21-22N R26E; Churchill and Lyon Counties**

- ◆ Geothermal Rail Industrial Development project (GRID-USA) announced. Plans for alternative energy industrial park east of Reno, Nevada. Contact 1025 Ridgeview Dr., Ste. 100, Reno, NV 89509, (775) 826-3333 or (866) GRIDUSA. See website - <http://www.gridusa.biz/>

**Bureau of Land Management Reno, Nevada office is planning a KGRA lease sale in September, 2004.**

**Recent BLM Geothermal Leases Filed**

- ◆ For more information on BLM leases in Nevada, see the website: <http://www.blm.gov/lr2000>

<b>Non-Competitive Geothermal BLM Lease Applications (09/03-04/04), Pending:</b>			
Western Geothermal Ptnrs 9/2/2003	NVN 77550; 1036.57 acres	T38N R62E (6,28,32,34)	Wells, NV, Elko Co.
Western Geothermal Ptnrs 9/2/2003	NVN 77551; 160.0 acres	T38N R62E (32)	Wells, NV, Elko Co.
Western Geothermal Ptnrs 9/2/2003	NVN 77552; 160.0 acres	T38N R62E (28)	Wells, NV, Elko Co.
Western Geothermal Ptnrs 9/9/2003	NVN 77600; 1280.0 acres	T11N R25E (27)	East of Smith Vly, Lyon Co.
Western Geothermal Ptnrs 9/9/2003	NVN 77602; 1311.2 acres	T10N R25E (2,3)	East of Smith Vly, Lyon Co.
Geo-Energy Partners 9/16/2003	NVN 77627; 2560.0 acres	T01S R36E (14,15,21,22)	Fish Lake Vly, Esmeralda Co.
Geo-Energy Partners 9/16/2003	NVN 77628; 2556.24 acres	T01S R36E (3,10,11,13)	Fish Lake Vly, Esmeralda Co.
NORAMEX CORP. 10/1/2003	NVN 77668; 1959.00 acres	T36N R34E (10,12,22)	West of Blue Mtn, Humboldt Co.
NORAMEX CORP. 10/1/2003	NVN 77669; 1338.94 acres	T36N R34E (24,26)	West of Blue Mtn, Humboldt Co.
Stillwater Holdings LLC 10/8/2003	NVN 77690; 400.00 acres	T19N R30E (28,29)	Stillwater, Churchill Co.
Western Geothermal Ptnrs 10/14/2003	NVN 77711; 1280.00 acres	T17N R31E (33,34)	Salt Wells, Churchill Co.
Western Geothermal Ptnrs 10/14/2003	NVN 77712; 1296.58 acres	T16N R31E (3,4)	SE of Salt Wells, Churchill Co.

Western Geothermal Ptnrs 10/16/2003	NVN 77722; 1920.00 acres	T18N R30E (22,26,27)	North of Salt Wells, Churchill Co.
Kingzett, James M. 10/21/2003	NVN 77739; 2560.00 acres	T19N R26E (6) T20N R25E (34,36) T20N R26E (31)	Hazen, Churchill & Lyon Cos.
Kingzett, James M. 10/21/2003	NVN 77740; 2560.00 acres	T21N R26E (2,8,12,16)	N of Hazen, Churchill & Lyon Cos.
Kingzett, James M. 10/21/2003	NVN 77741; 2560.00 acres	T21N R26E (4) T22N R26E (34,35,36)	N of Hazen, Churchill & Lyon Cos.
McGee, Charles M. 11/12/2003	NVN 77801; 640.00 acres	T12N R43E (34)	Big Smoky Valley, Nye County
Signorotti, Stephen G 12/9/2003	NVN 77942; 240.00 acres	T31N R55E (36)	East of Dixie Flats; Elko Co.
Signorotti, Stephen G 12/9/2003	NVN 77943; 1240.00 acres	T30N R55E (12,13,14)	East of Dixie Flats; Elko, Co.
Western Geothermal Ptnrs 1/8/2004	NVN 77983; 200.00 acres	T08N R29E (25)	Mineral County, near Hawthorne
Western Geothermal Ptnrs 1/8/2004	NVN 77984; 945.09 acres	T07N R30E (5,6)	Mineral County, near Hawthorne
Western Geothermal Ptnrs 1/8/2004	NVN 77985; 1822.76 acres	T08N R30E (29,30,31,32)	Mineral County, near Hawthorne
Bright-Holland Company 2/19/2004	NVN 78098; 800.00 acres	T34N R23E (13,24)	Fly Ranch, Washoe County
Bright-Holland Company 2/19/2004	NVN 78099; 2192.61 acres	T34N R23E (1-3,10-12)	Fly Ranch, Washoe County
Bright-Holland Company 2/19/2004	NVN 78100; 2083.23 acres	T34N R23E (14,15,22,23)	Fly Ranch, Washoe County
Noramex Corp. 2/25/2004	NVN 78124; 1880.00 acres	T33N R40E (10) T34N R40E (28,34)	Tipton Ranch, Humboldt County
Western Geothermal Ptnrs 3/4/2004	NVN 78144; 1280.00 acres	T02S R39E (21,22)	Silverpeak, Esmeralda County
Katz, Lewis 4/1/2004	NVN 78364; 2340.00 acres	T29N R48E (24,36) T29N R49E (30,32)	Crescent Valley, Eureka County

<b>Recent Geothermal BLM Lease s Issued:</b>			
ORMAT Nevada Inc. 8/26/2003	NVN 76209; 2560.0 acres	T24N R47E (10,15,16, 20)	Grass Valley, Lander Co.
ORMAT Nevada Inc. 8/26/2003	NVN 76210; 2563.0 acres	T24N R47E (2,3,4,9)	Grass Valley, Lander Co.
ORMAT Nevada Inc. 8/26/2003	NVN 76211; 2560.0 acres	T24N R47E (21,22,28,29)	Grass Valley, Lander Co.
PSG Resources LLC 8/27/2003	NVN 77110; 640.0 acres	T02S R39E (15)	Silverpeak, Esmeralda Co.
PSG Resources LLC 8/27/2003	NVN 77111; 640.0 acres	T02S R39E (10)	Silverpeak, Esmeralda Co.
Nevada Geothermal Spec	NVN 77271; 2520 acres	T17N R30E (23-26)	Salt Wells
Nevada Geothermal Spec	NVN 77272; 1274 acres	T17N R30E (35,36)	Salt Wells
Western Geothermal Ptnrs 12/1/2003	NVN 77268; 1662.05 acres	T32N R23E (15,16,21,22)	Gerlach
Western Geothermal Ptnrs 12/1/2003	NVN 77273; 1865.64 acres	T17N R31E (19,30,31)	Salt Wells;
Katz, Lewis 5/24/2004	NVN 74266; 640.00 acres	T28N R49E (10)	Crescent Valley, Eureka Co.
Cortez Joint Venture 5/24/2004	NVN 74501; 640.56 acres	T28N R49E (4)	Crescent Valley, Eureka Co.

<b>Competitive Sale Geothermal BLM Lease Applications (06/2003), DROPPED:</b>			
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

## OTHER NEWS

### Coal, Oil, Natural Gas, Nuclear and Renewables Link Arms To Support Energy Bill

- ◆ “An unusually broad alliance of energy producers and consumers, assembled by the Western Business Roundtable, is urging Congress to boost energy production across the board in order to meet expected sharp increases in energy demand over the next 20 years. In a joint letter signed by 80+ companies and associations representing coal, oil, natural gas, nuclear, renewable and energy consumers, the group cited Energy Information Administration analyses showing that demand for all forms of energy will increase dramatically over the next two decades.” - [http://www.westernroundtable.com/news/article\\_wbrt.asp?id=18](http://www.westernroundtable.com/news/article_wbrt.asp?id=18)

### News on the Energy Bill

- ◆ **Link to the new Senate Energy Bill:**  
[http://www.energy.senate.gov/legislation/energybill2004/full\\_text.pdf](http://www.energy.senate.gov/legislation/energybill2004/full_text.pdf)
- ◆ **Energy Policy Overview – American Geological Institute – Government Affairs Program; 5-13-2004**  
On May 11, 2004, the Senate approved the Corporate Tax Bill S. 1637, which included a \$14 billion energy tax incentive package.  
“While many of the tax incentives and cuts benefit conventional energy suppliers, the 1.8-cent-per-kilowatt-hour renewable energy credit may help the United States become a larger force in the renewable technology market. However, some advocates of renewable energy claim that a tax incentive may not be enough to spur the industry’s development, and that a renewable portfolio standard (RPS) should be implemented in the United States as it has been in some European countries. The 15 states that have independently adopted RPS policies account for 75 percent of renewable industry growth over the last decade, illustrating the potential effect of RPS. President Bush continues to advocate a voluntary approach to renewable development.” -  
<http://www.agiweb.org/gap/legis108/energy.html>
- ◆ **New Mexico Bill Requires Utilities to Develop More Renewable Energy, March 15, 2004**  
A Bill signed March 15, 2004 requires that electric utilities in the state use renewable energy sources for at least 5% of their sales by 2006, increasing 1% per year until 2011. U.S. Senator Domenici, R-NM, continues to push for an energy bill, saying his bill would reinstate renewable energy tax credits, which expired in January. -  
<http://www.westernroundtable.com/news/article.asp?id=708>

### United States and United Kingdom Announce Clean Energy Partnerships – May 20, 2004

- ◆ **Initiatives Will Help Achieve Sustainable Energy Future**  
LONDON, U.K. – Today the U.K. announced it will join the “Efficient Energy for Sustainable Development Partnership” (EESD) of the U.S. Clean Energy Initiative, while on April 28 the U.S. joined the U.K. “Renewable Energy and Energy Efficiency Partnership” (REEEP). Both partnerships promote sustainable, affordable energy in the developed and developing world. -  
[http://www.energy.gov/engine/content.do?PUBLIC\\_ID=15928&BT\\_CODE=PR\\_PRESSRELEASES&TT\\_CODE=PRESSRELEASE](http://www.energy.gov/engine/content.do?PUBLIC_ID=15928&BT_CODE=PR_PRESSRELEASES&TT_CODE=PRESSRELEASE)

### Washington, DC – April 2, 2004 – Geothermal Energy Act of 2004 (H.R. 4094)

#### Congresswoman Millender-McDonald Introduces Comprehensive Geothermal Bill

- ◆ Legislation would spur job growth; reduce dependency on pollution producing power plants. Congresswoman Juanita Millender-McDonald introduced new alternative energy legislation this week that would improve air quality and spur job growth by encouraging greater investment in geothermal energy to reduce our nation’s dependency on fossil fuel-based electrical power plants. The Geothermal Energy Act of 2004 (H.R. 4094) would reduce our nation’s reliance on oil, gas, and coal-fired electrical power plants by authorizing a new assessment of our nation’s geothermal resources and expanding geothermal energy investment by offering tax incentives to develop these resources. - [http://www.house.gov/apps/list/press/ca37\\_millender-mcdonald/pr04022004geo.html](http://www.house.gov/apps/list/press/ca37_millender-mcdonald/pr04022004geo.html)  
The Geothermal Energy Initiative Act of 2004 does the following:
  - Authorizes the update of the 26 year-old national assessment of geothermal resources.
  - Provides financial incentives to encourage the development of known geothermal resources by expanding the production tax credit to include geothermal resources.
  - Directs federal land management agencies to responsibly consider geothermal resources in their land use planning process. The Initiative also provides direction to assist in streamlining the permit approval process.
  - Provides provisions to defray costs associated with preparation of documents and analysis for compliance with federal environmental protection regulations.

### **Nevada PUC Adopts New Renewable Energy Regulations to Encourage Development – April 28, 2004**

- ◆ Carson City, NV – The Public Utilities Commission adopted new regulations that require the economic impact and environmental benefits of renewable resources be considered by the state’s electric utilities when making long-term energy plans. The utilities will be offered financial incentives for developing new renewable resources. “The regulations adopted today are designed to improve the resource planning process and encourage the development of new generation, both renewable and traditional,” said Don Soderberg, PUC Chairman. Under the new regulations, the Commission has the option to designate a project as “critical”. In return, the utility may be awarded a financial incentive for meeting the objective - <http://www.puc.state.nv.us/news/2004/regs.pdf>

### **SMUD to Issue a Request for Information in June 2004**

- ◆ The Sacramento Municipal Utility District (SMUD ) requests suppliers of renewable electric capacity and energy to place their names on SMUD's solicitation email list. This email list will be used initially to issue a Request for Information and Qualifications (RFI/Q) in June 2004. The RFI/Q will help SMUD purchase renewable electric capacity and energy and identify renewable projects to meet its Renewable Portfolio Standard (RPS) goals and Greenenergy(r) program requirements. SMUD's RPS program includes a policy of targeting 10% of the District's electric energy needs from renewable resources by 2006 and 20% by 2011. Companies should register at <http://www.bids.smud.org>. For more info, contact Cesar Beltran, SMUD, at [cbeltran@smud.org](mailto:cbeltran@smud.org).  
From: Roger R. Hill, Technical Director, GeoPowering the West, Sandia National Laboratories.

### **California Geothermal Summit – Sacramento, CA - May 20, 2004**

- ◆ The Summit is designed to help set the stage for geothermal development under the California Renewable Portfolio Standard (RPS) and to establish the California Geothermal Collaborative. Presentations will include information regarding geothermal policies, issues and opportunities for resource development, Federal and State initiatives, and resource potential. To register, RSVP to: [GeothermalSummit@energy.state.ca.us](mailto:GeothermalSummit@energy.state.ca.us). For additional information, contact the California Energy Commission, 1516 9<sup>th</sup> Street, Sacramento, CA 95814-5504 (916) 654-5129.

### **Western Governor’s Association – North American Energy Summit – April 14-16, 2004**

- ◆ The 3-day North American Energy Summit was held in Albuquerque, NM. The summit featured the release of a new report that finds energy efficiency, renewable energy, and distributed generation are critical to meeting future energy demands along the U.S.-Mexico border. Govs. Richardson and Schwarzenegger released a letter calling for development of at least 30,000MW of clean energy in the West by 2015 and to increase the efficiency of energy use by 20% by 2020. See article referencing the Summit at the DOE’s Geothermal Technologies Program website - [http://www.eere.energy.gov/geothermal/cfml/news\\_detail.cfm/news\\_id=6811](http://www.eere.energy.gov/geothermal/cfml/news_detail.cfm/news_id=6811).
- ◆ **Plenary Session Recordings are now available -** <http://www.westgov.org/wga/initiatives/energy/summit/index.htm>.
- ◆ See more information about the meeting at the WGA website - <http://www.westgov.org/index.htm>. One of the reports released at the meeting was regarding the design of a regional tracking system to verify and track renewable energy generation.
- ◆ The following is from the WGA website, “WGA and the California Energy Commission are leading a region-wide effort to create an independent regional tracking system to verify and track renewable energy generation in the region. The *Western Renewable Energy Generation Information System (WREGIS)*, which will be operational in 2005, will help utilities comply with renewable energy portfolio standards and will serve to verify retail product claims of “green” power suppliers.” - <http://www.westgov.org/wieb/wregis/>

### **Western Governor’s Association – Annual Meeting – June 20-22, 2004**

- ◆ The annual meeting will be held in Santa Fe, New Mexico at the Eldorado Hotel. - <http://www.westgov.org/wga/meetings/am2004.htm>

### **Geothermal Industry and BLM Coordination Meeting; January 27, 2004; Reno, Nevada**

- ◆ Reno, Nevada BLM considers the meeting “a successful start to furthering industry and BLM coordination of the geothermal program in Nevada”. An agenda is being developed for the follow up meeting, which will be held in May.
- ◆ Approximately 40 people attended the meeting and heard discussions from representatives of Industry and Government concerning issues related to geothermal development in Nevada.
- ◆ The group formed two committees to explore policy issues and technical matters and will meet again in May. - <http://www.rgj.com/news/stories/html/2004/01/28/62691.php>
- ◆ Update – May, 2004: The BLM, Nevada Division of Minerals, Tribal Representatives, and the Nevada Energy

Office have been working together to follow up on the issue identified in January regarding the Native American consultation process and its impact on permitting time frames. The agencies are working to provide a means for all representatives to be able to attend the next workshop in order to discuss this issue. The BLM will schedule the workshop once that goal is met, anticipating a date in the late summer.

#### **GRED-III, Application Due (please check site for the latest due date.)**

- ◆ DOE's Office of EERE is seeking financial assistance applications for the third Geothermal Resource Exploration and Definition (GRED III) Program. Through this Funding Opportunity Announcement (FOA), DOE intends to provide financial support for the exploration and definition of new geothermal resources, which will ultimately lead to more electrical generation and direct-use applications from geothermal resources. DOE has requested approximately \$2 million in FY 2004 for this program. The actual level of funding, if any, depends on the appropriations for this program. DOE anticipate(s) making 3-10 awards under this announcement depending on the size of the awards.

Title: Geothermal Resource Exploration and Definitions, GRED-III

Number: DE-PS36-04-GO94016

[http://www.eere.energy.gov/geothermal/current\\_solicitations.html](http://www.eere.energy.gov/geothermal/current_solicitations.html)

<https://e-center.doe.gov/iips/faopor.nsf/UNID/FE9EF9C9026D358585256E5F007D292D?OpenDocument>

#### **USDA NEWS RELEASE**

##### **VENEMAN ANNOUNCES \$22.8 MILLION IN GRANTS FOR RENEWABLE ENERGY INITIATIVES**

- ◆ \$22.8 Million Targeted for Farmers, Ranchers and Small Business to Acquire Energy Systems or Improve Energy Efficiencies

WASHINGTON, May 4, 2004—Agriculture Secretary Ann M. Veneman today announced the availability of approximately \$23 million in grants that will support President Bush's energy plan to develop renewable energy systems and promote energy efficiency improvements. "President Bush wants to bring greater energy independence to our country through expanded use of renewable energy," said Veneman. These grants will help America's farmers, ranchers and rural businesses meet this need." -

<http://www.usda.gov/Newsroom/0182.04.html>

[http://www.eere.energy.gov/geothermal/cfml/news\\_detail.cfm/news\\_id=6854](http://www.eere.energy.gov/geothermal/cfml/news_detail.cfm/news_id=6854)

#### **Preserving the Geothermal Technical Literature - Geothermal Technologies Program of the U.S.**

##### **Department of Energy.**

- ◆ Princeton Energy Resources International is supporting the efforts to archive, in electronic form, important reports that resulted from U.S. government-sponsored research on geothermal energy since 1974. "The geothermal Technologies Program asked Princeton Energy Resources International (PERI) to survey where the technical literature has ended up, how to find it, and what broad steps might be useful to ensure that important information remains accessible. PERI has already contacted several geothermal program managers at U.S. national laboratories and several information collection agencies. This research has yielded two reports. They can be accessed by going to the PERI website at <http://www.perihq.com> and clicking on the Geothermal E-Archive Project link at the bottom of the page. You can support the effort by completing the survey that is also available via the PERI website". Please contact Dan Entingh (301) 468-8418 or [dentingh@perihq.com](mailto:dentingh@perihq.com).

#### **Phoenix-Based Salt River Project Adds Geothermal Purchase to Its Renewable –Energy Portfolio**

- ◆ February 19, 2004. SRP announced a five-year agreement to purchase 25 megawatts of power and renewable-energy credits from TransAlta Energy Marketing, US. The credits are generated by geothermal power plants operated by CalEnergy in the Imperial Valley, California. For more information regarding SRP's EarthWise Energy Program – <http://www.srpnet.com/earthwise>

#### **Sierra Pacific Resources Evaluating Bids for New RFP**

- ◆ February 2004; 2003 RFP Status

Colin Duncan of Sierra Pacific reports that they received a wide spectrum of proposed projects to the 2003 Renewable Resources Request For Proposal (RFP). The 2003 RFP received proposals for Geothermal, Wind, Solar, Hydroelectric and BioMass projects. Existing geothermal projects from earlier RFP's include ORMAT, who is on schedule with their 30Mw Desert Peak contract and Earth Power in Elko County, who is continuing forward with their 20Mw geothermal contract. Two renewable projects, which were awarded contracts during earlier RFP's, have been terminated. The ATS 40 Mw Geothermal project in Steamboat, Washoe County, was terminated and an 80 Mw Wind project by Ceilo was also cancelled. In addition to the 120 Mw lost by ATS and Ceilo, Colin Duncan estimates that by the year 2007, they will need an additional 30 Mw bringing the total to

150 Mw needed by the year 2007 from non-solar renewable resources.

- ◆ Sierra Pacific Resources' two Nevada subsidiaries issued a new Request for Proposals for energy generated by renewable energy fuel sources. Responses were due to the utilities and bidding was closed on August 18, 2003; For more information see the website at:  
<http://www.sierrapacificresources.com/company/RFPs/renewablerfp.html>  
News release: <http://www.sierrapacificresources.com/news/releases/spr/1056956400.html>  
"On October 24, 2003, Sierra Pacific Power and Nevada Power (Companies) issued letters to the respondents of the 2003 Renewable Energy RFP indicating if they were on the "Short List", the "Secondary List" or the "Not Successful List".... <http://www.sierrapacificresources.com/company/RFPs/>

#### **Geothermal Resources Council's 2004 Annual Meeting, August 29-September 1, 2004**

- ◆ Hyatt Grand Champions Resort, Palm Springs, CA. <http://www.geothermal.org/meet.html>  
**GEA Trade Show/GRC Annual Meeting**  
The 2004 GEA Trade Show and GRC Annual Meeting will be held at the Hyatt Grand Champions Resort in Palm Springs, California from August 29, 2004 to September 1, 2004. For information about the GEA Trade Show contact Daniela Stratulat at 202-454-5263 or visit <http://www.geo-energy.org>. For information about the GRC Annual Meeting call (530) 758-2360 or visit <http://www.geothermal.org>.

#### **Bureau of Land Management, Nevada Public Land Records Website**

- ◆ The site provides access to the BLM Nevada's official Public Land Records. Master Title Plats, Use Plats, and Historical Indices are available through the Internet or from any one of the BLM Nevada's Information Access Centers. The centers are located in Battle Mountain, Caliente, Carson City, Elko, Ely, Las Vegas, Reno, Tonopah, and Winnemucca and are open Mon-Fri 7:30 am - 4:30 pm. The Land Record Internet site is available 24 hours per day, 365 days a year. Plans for this site are for expansion to include Cadastral Survey Records, Mineral Surveys, and Protraction Diagrams. <http://www.nv.blm.gov/landrecords/>

#### **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.
- ◆ Dr. Geoff Blewitt, March 31, 2004:  
Geoff Blewitt at the Great Basin Center for Geothermal Energy reports the first assessment of data quality from a 30-station continuous GPS station network, installed to determine millimeter-level strain changes in the Earth's crust that might be used to target new geothermal resources. This network has been under construction for the first half of the fiscal year and came on line in late January 2004. Initial results from the first 60 days of operation show that station positions estimated every 24 hours repeat to within 1 to 2 mm in longitude and latitude. The goal is to resolve station motions to less than one millimeter per year, and then use 2-3 years of data to create a strain tensor map to identify areas undergoing active trans-tensional tectonics. These initial results show that the network is meeting (exceeding) the required level of data precision. - Dr Geoff Blewitt, Research Professor, University of Nevada, Reno, (775) 784-6691 extension 171 - <http://www.nbrmg.unr.edu/staff/geoff.htm>
- ◆ Dr. Lisa Shevenell was honored on May 4, 2004 during RaderEnergy's 2004 'Key Women in Energy™-Americas' Honors Ceremony at the Houston Museum of Natural Science. A reception was held to recognize 100 women from energy-related fields for their contributions. The women were selected by a panel of judges and represented 19 different countries.

## LINKS: USEFUL DATABASES AND GEOTHERMAL INFORMATION

- ♦ **American Council on Renewable Energy (ACORE)** – <http://www.americanrenewables.org/>
- ♦ **American Geological Institute Government Affairs Program** - <http://www.agiweb.org/gap>
- ♦ **Black Rock-High Rock NCA (National Conservation Area) planning website** – <http://www.blackrockhighrock.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/deployment\\_gpw.html](http://www.eere.energy.gov/geothermal/deployment_gpw.html)
- ♦ **GeoPowering the West, GeoPowering the West Calendar** – [http://www.eere.energy.gov/geothermal/gpw\\_calendar.html](http://www.eere.energy.gov/geothermal/gpw_calendar.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/>.  
PURPOSE. To promote public understanding about geothermal resources and its importance in providing clean sustainable energy while protecting our environment. SCOPE. The Geothermal Education Office (GEO) produces and distributes educational materials about geothermal energy to schools, energy/environmental educators, libraries, industry, and the public.
- ♦ **Geothermal Energy Association** - <http://www.geo-energy.org/>  
Developing Plants in the U.S., New page being created; use the form to post your project - <http://www.geo-energy.org/Developing.htm>
- ♦ **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/>
- ♦ **James & James Science Publishers; Provider of information for energy and environment professionals worldwide; On-line database of renewable energy suppliers** – <http://www.jxj.com/>
- ♦ **National Geothermal Collaborative** – <http://www.geocollaborative.org/>
- ♦ **National Renewable Energy Laboratory (NREL)** - <http://www.nrel.gov/geothermal>. Geothermal Program; Access reports and publications on geothermal energy by Gerald Nix, Charles Kutscher, Barbara Farhar, Keith Gawlik, Brandon Owens, Walter Short.
- ♦ **Nevada Bureau of Mines and Geology, MI-2002, “The Nevada Mineral Industry 2002”** - <http://www.nbmgs.unr.edu/hits.php?p=dox/mi/02.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>
- ♦ **Office of Scientific and Technical Information; Subject portals on renewable energy and energy efficient technologies** <http://www.osti.gov/subjectportals/>
- ♦ **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/RFPs/renewablerfp.html>

- ♦ **Southern Methodist University Geothermal Laboratory** - <http://www.smu.edu/geothermal/>
- ♦ **Stanford Geothermal Program** - <http://ekofisk.stanford.edu/geotherm.html>
- ♦ **U.S. Department of Agriculture, Rural Development** - <http://www.rurdev.usda.gov>
- ♦ **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)