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NEVADA GEOTHERMAL UPDATE

January 2006

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>
Beowawe Power Plant (1985) Beowawe Power LLC/Caithness Operating	16.6 MW	S13, T31N R47E
<ul style="list-style-type: none"> Beowawe Power LLC; Permit #565; API #27-015-90009 for Industrial Production Well "57-13" issued January 14, 2005; SW/4 SE/4 of Section 13, T31N R47E; Beowawe Springs, Lander County, Nevada; PTD 8500'; Set conductor July 26; Drilled out with Nabors rig # 37 August 29, 2005; Drilled to below 10,500'; Preparing to test well; TESTING. 		
Bradys Power Plant (1992) Brady Power Partners/ORMAT Nevada Inc.	26.1 MW	S12, T22N R26E
<ul style="list-style-type: none"> 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; Geothermal Project Area Permit. Brady Power Partners (ORMAT); Permit #562; API #27-001-90306 for Production Well #15-12 issued Nov 22, 2004; NW/4 SW/4, Section 12 T22N R26E; Commercial production well in the Desert Peak III Project Area; First production well to be drilled in this Project Area; PTD 5000'; Churchill County, Nevada; Permitted Location. 		
Desert Peak Power Plant (1985) Brady Power Partners/ORMAT Nevada Inc.	12.5 MW	S21, T22N R27E
<ul style="list-style-type: none"> Brady Power Partners (ORMAT); Well #23-1; DWR Permit #31002; API# 27-001-90024B; Section 23, T22E R27N, Desert Peak East, DOE Enhanced Geothermal Systems Technology Development (EGS); Well drilled in June 1979 to a total depth of 9641' by Phillips Petroleum Co.; Spud Oct 8, 2005 C&L Drilling rig #6; Twisted off drill stem during rework; rig moved off, well shut-in. Project under evaluation. April 27, 2005 – Nevada Public Utilities Commission issued a Compliance Order granting BRADY POWER PARTNERS AND ORNI 3, LLC permission to build an 11 MW geothermal binary power plant at Desert Peak Power Plant in Section 21, T22N R27E, Churchill County, Nevada contingent upon obtaining three permits in process. http://www.puc.state.nv.us/electric/dkt_05-3024/05-3024co.pdf March 24, 2005 - BRADY POWER PARTNERS and ORNI 3, LLC filed an application with the Public Utilities Commission of Nevada for a permit to construct a new geothermal power plant adjacent to the existing Desert Peak Power Plant, in Section 21, T22N R27E, Churchill County, Nevada. The facility will consist of two units, one 15 MW binary power plant and one 11 MW binary power plant. Nevada Power Company will purchase the energy from the plant. The PUC scheduled a hearing for April 13, 2005. - http://www.puc.state.nv.us/electric/dkt_05-3024/05-3024nh.pdf 		
Dixie Valley Power Plant (1988) Caithness Dixie Valley/Caithness Operating	62.0 MW	S7, T24N R37E
<ul style="list-style-type: none"> Caithness Dixie Valley/Caithness Operating 	S33, T25N R37E	

- ◆ AMP Resources (Stillwater) LLC: Permit #606, API #27-001-90316 for Industrial Production Well 67-19 issued July 19, 2005; located in the SW/4 SE/4 of Section 19 T20N R31E, Churchill County. The proposed depth of well is 2600'; Project Area Permit #579. Spud Sep 9, 2005, Equipment 2000 drilling rig #1; Completed drilling Sep 25, 2005.
- ◆ AMP Resources (Stillwater) LLC: Permit #595, API #27-001-90315 for Industrial Injection Well 54-7 issued June 17, 2005; located in the SW/4 NE/4 of Section 7 T19N R31E, Churchill County. The proposed depth of well is 1400'; Project Area Permit #579. Spud Oct 9, 2005, Equipment 2000 drilling rig #1; Drilled to TD, completed October 21, 2005.
- ◆ AMP Resources (Stillwater) LLC: Project Area Permit 579 issued May 9, 2005. Permit covers the drilling of 15 production wells with an estimated depth of 5500', 17 injection wells with an estimated depth of 5500', and 5 observation wells with an estimated depth of 3000'. The area encompasses portions of Sections 15-22 and 27-33 in T20N R31E, Churchill County.
- ◆ AMP Resources, LLC purchased the Stillwater Power Plant effective 12/31/2004.

Wabuska (1984)

2.2 MW

S15, 16, T15N R25E

Homestretch Geothermal LLC

***Nameplate Capacity as reported to the Division of Minerals for 2004.**

GEOTHERMAL PRODUCTION FOR 2005

Company	Plant	Output Gross MWH	Output (Sales) MWH	Nameplate Capacity
Caithness	Beowawe	106,464	87,042	16.6
ORMAT	Brady Hot Spr.	165,493	115,838	26.1
Caithness	Dixie Valley	564,464	511,340	67
Empire	Empire	33,814	23,317	4.8
Constellation	Soda Lake 1	31,242	21,484	5.1
	Soda Lake 2	67,274	46,262	21
AMP Resources	Stillwater	99,345	60,321	21
ORMAT	SBI	41,783	28,172	8.4
	SBIA	17,371	16,047	2.4
	SBII	149,672	109,166	23.9
	SBIII	151,634	112,161	23.9
Homestretch	Wabuska I&II	8,661	5,782	2.2
ORMAT	Desert Peak	60,771	50,506	12.5
ORMAT	Steamboat Hills	72,166	64,336	14.5
ORMAT	Galena	20,786	17,017	30
TOTALS		1,590,940	1,268,791	274.4

DIRECT USE OPERATIONS

Empire Group LLC; Empire, Washoe County, Nevada

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

<http://www.conagrafoodingredients.com/products/gilroyfoods.jsp>

- ◆ Seasonal onion dehydration processing operations commenced mid-May 2005 and operated until the end of October 2005.

Steamboat Hot Springs; Washoe County, Nevada

- ◆ 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; Permitted Observation Well Location, Apr 2004.

OTHER ACTIVE AREAS

Gerlach KGRA, T32-33N R23-24E, Washoe County

- ◆ Gerlach Green Energy, LLC; Permit #633, API #27-031-90239 for Industrial Production Well 68-3 issued January 12, 2006; located in the SW/4 SE/4 of Section 3, T32N R23E, Washoe County. The proposed depth of well is 6000'; Planned use of the resource is for electrical power generation and potential direct use applications; New permitted location.
- ◆ Bureau of Land Management Winnemucca Field Office held public meetings in May 2005 and ended the public scoping period on June 22, 2005. All public comments were taken into consideration and baseline studies are continuing as of January 2006. At this time, the BLM anticipates completing a Draft EIS by the end of the year. Other opportunities for public comment will be made available during the process. The BLM will notify the public with News Releases, or by other means. Winnemucca Field Office (775) 623-1500.
- ◆ November 2, 2004, Granite Fox Power Plant Project – Nevada Public Utilities Commission Procedural Order. A portion of the proposed location for the power plant is on BLM land; therefore, the BLM must conduct an environmental analysis. Within 30 days following the analysis, Sempra must submit an Amended Application to the Commission. Following the environmental analysis and the filing of the Amended Application, the Commission has 120 days to grant or deny the UEPA permit application by Sempra. - http://www.puc.state.nv.us/ELECTRIC/dkt_04-5027/04-5027po.pdf

Pyramid Lake Paiute Reservation, T27-28N R19-20E, Washoe County

- ◆ Pyramid lake Paiute Tribe, Pyramid Lake Energy Project for the development of geothermal resources on the Pyramid Lake Paiute Reservation situated in Washoe, Lyon, and Storey counties. The project includes geophysical exploration surveys, gravity and magnetic, mapping, thermal gradient drill holes and slim holes. Seven 500' thermal gradient hole locations have been proposed in the area of T27-28N R19-20E, Washoe County. Drilling began in November 2005, Welsco Drilling Corp., and 3 gradient holes have been drilled as of December 31, 2005; New Location/Drilling.

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

- ◆ Nevada Geothermal Specialists LLC; Permit #570; API #27-001-90310 Industrial Production Well "PW-4" issued March 3, 2005; SW/4 NW/4 of Section 25, T17N R30E; Salt Wells KGRA, Churchill County, Nevada. Production well permit in Project Area 564PA; PTD 750'; Permitted location
- ◆ Nevada Geothermal Specialists LLC; Permit #573; API #27-001-90313 Industrial Injection Well "IW-5" issued March 3, 2005; NE/4 NW/4 of Section 25, T17N R30E; Salt Wells KGRA, Churchill County, Nevada. Injection well permit in Project Area 564PA; PTD 1500'; Permitted location.
- ◆ Salt Wells Geothermal Power Plant and Transmission Line Proposal, Finding of No Significant Impact and Decision Record authorizing Alternative A Plant Site with Southern Transmission Line issued by BLM with Stipulations, Feb 25, 2005. A complete plan of development must be provided to BLM in order for a right-of-way grant to be issued for the power line. Well drilling and road maintenance may begin immediately. Three identified prehistoric sites must be avoided, a historic marker must be constructed, and effects to the setting of the area must be mitigated, such as paint color, non-reflective wire, etc.

The proposed development is for 2 net 10-MW binary cycle geothermal power plants to be constructed in 2 phases along with construction of a 230kV transmission line. The first plant would be constructed in 2005 and the second would depend on demand and resource viability. See the Environmental Assessment including proposal figures - http://www.nv.blm.gov/carson/Planning_Env_Coord/SaltWells/SaltWellsEA.htm.

- ◆ AMP Resources, LLC purchased the Salt Wells geothermal assets from Nevada Geothermal Specialists, LLC.
- ◆ Geothermal Project Area Permit Issued - Nevada Geothermal Specialists, LLC; Permit #564PA issued January 4, 2005; Area will include 6 production wells with PTD 1000', 4 injection wells with PTD 3000', 10 observation wells with PTD 1000'; Location T17N R30E, Sections 23,24,25,26,35,36. The production wells will be located in Sections 25,26,35 and the injection wells will be located in Sections 23 and 24, Churchill County. The purpose of the wells is for the support of electrical generation of an air-cooled binary cycle power plant. The geothermal resource will be used to generate electricity for commercial sale.

Naval Air Station, Fallon, Nevada, Churchill County, T18N R29E

- ◆ January 24, 2006 - ORMAT Technologies has entered into an agreement with the U. S. Navy to build a geothermal power plant near the Naval Air Station in Fallon. They announced a 50-year contract to develop geothermal energy on the NAS property. Following an exploratory drilling program, an estimated 30-megawatt power plant will be constructed near the southeast border of the base. Energy from the plant would be sold through a power purchase agreement with Sierra Pacific Power Company. The Navy will receive 5 percent of gross income from sales for the first 20 years, and 15 percent thereafter. See Lahontan Valley News article; Jan 24, 2006 – by Burke Wasson, bwasson@lahontanvalleynews.com - <http://www.lahontanvalleynews.com/article/20060124/News/101240027>

Hot Creek Ranch Geothermal Prospect Area, T7-8N R50E, Nye County

- ◆ Nevada Geothermal Specialists/AMP Resources; 5 thermal gradient hole locations were drilled and all sites reclaimed; November 2005.
- ◆ Nevada Geothermal Specialists/AMP Resources; Permit #616 issued September 7, 2005, API #27-023-90132 for Thermal Gradient Well UHCR-15, located in the NW/4 NE/4 Section 1, T7N R50E, Hot Creek Ranch, Nye County; The proposed TD is 500'.
- ◆ Nevada Geothermal Specialists/AMP Resources; Permits for seven temperature gradient wells issued on May 24, 2005. Permits 585 through 591 with API numbers 27-023-9125 through 27-023-9131; Located in Sections 22,29,32,33,34 T8N R50E and Sections 4,9 of T7N R50E; Proposed total depth for each well is 500 feet. Five of these wells were drilled in August 2005.

Grass Valley Geothermal Prospect Area, T24N R47E, Lander County

Hot Sulphur Springs (Tuscarora), T41N R52E, Elko County, Earth Power Resources

Rye Patch/Humboldt House KGRA, T31-32N R32-34E, Pershing County

- ◆ Rye Patch Power Plant, 12 MW, 90% complete

Black Warrior Peak, T23N R25E, Washoe County

- ◆ NORAMEX Corp.; Geothermal lease application filed 3/5/2005, Black Warrior Peak area, Washoe County, Nevada; Section 8, 640 acres; Pending.
- ◆ Vancouver, B.C. - Nevada Geothermal Power Inc. (NGP), NORAMEX, announced that it has acquired 7 square miles of private land and has applied for a one section federal geothermal lease south and east of Black Warrior Peak, Washoe County, Nevada. The leases are on private land and are subject to a 3.5% royalty on gross revenue from electricity sales; however, NGP can purchase the royalty for US\$1,000,000. Leases include surface and water rights. <http://www.nevadageothermal.com/s/BlackWarrior.asp>

Blue Mountain Geothermal Prospect Area, T36N R34E, Humboldt County

- ◆ NORAMEX CORP; Permit #617 issued Sep 22, 2005 for Industrial Production well #26A-14; API #27-013-90045; Located in NW/4 SW/4, Section 14, T36N R34E; Proposed total depth is 6000'; Production well location in the Blue Mountain geothermal project area 605PA; Humboldt County, Nevada; Permitted location.
- ◆ NORAMEX CORP; Permit #618 issued Sep 22, 2005 for Industrial Production well #38-14; API #27-013-90046; Located in SW/4 SW/4, Section 14, T36N R34E; Proposed total depth is 6000'; Production well location in the Blue Mountain geothermal project area 605PA; Humboldt County, Nevada; Permitted location.
- ◆ NORAMEX CORP; Permit #619 issued Sep 22, 2005 for Industrial Production well #63-14; API #27-013-90047; Located in SW/4 NE/4, Section 14, T36N R34E; Proposed total depth is 2000'; Production well location

- in the Blue Mountain geothermal project area; 605PA; Humboldt County, Nevada; Permitted location.
- ◆ NORAMEX CORP.; Permit #613, issued Aug 31, 2005, API #27-013-90042 for Thermal Gradient Well 7; location NW/4 NW/4, Section 14, T36N R34E; Humboldt County; Proposed total depth is 1640'; Permitted location.
- ◆ NORAMEX CORP.; Permit #614 issued Aug 31, 2005; API #27-013-90043 for Thermal Gradient Well 12, Located in SW/4 SE/4 Section 22, T36N R34E, Humboldt County; Proposed total depth is 1640'; Permitted location.
- ◆ NORAMEX CORP.; Permit #615 issued Aug 31, 2005; API #27-013-90044 for Thermal Gradient Well 15, Located in SW/4 SW/4 Section 14, T36N R34E, Humboldt County; Proposed total depth is 1640'; Permitted location.
- ◆ NORAMEX CORP.; Project Area Permit 605 issued July 25, 2005; Allows for a total of 8 production wells with estimated depths of 6,000' and 2000'. The project area encompasses Sections 1, 10-15, 22-26, T36N R34E.

Pumpnickel Valley Geothermal Prospect Area, T33N R40E, Humboldt County

- ◆ NORAMEX CORP.; Phase I of the drilling program for the Pumpnickel Geothermal Project has been completed with the drilling of 5 thermal gradient holes. The cuttings have been sent to the NBMG and water samples sent to Thermochem labs. A summary report is expected within weeks.
- ◆ NORAMEX CORP.; Permit #608 issued August 8, 2005 for Thermal Gradient Well PVTG-N, API #27-031-90041, Located in NW/4 SW/4 Section 4, T33N R40E, Humboldt County; Proposed total depth is 1640'; This location is on fee land.
- ◆ NORAMEX CORP.; Permit #604 issued July 5, 2005 for Thermal Gradient Well PVTG-A, API #27-013-90039, Located in NW/4 NW/4 Section 9, T33N R40E, PTD 1000'.
- ◆ NORAMEX CORP.; Permit #603 issued July 5, 2005 for Thermal Gradient Well PVTG-B, API #27-013-90038, Located in SW/4 NE/4 Section 5, T33N R40E, PTD 1000'.
- ◆ NORAMEX CORP.; Permit #602 issued July 5, 2005 for Thermal Gradient Well PVTG-K, API #27-013-90037, Located in SW/4 SW/4 Section 27, T33N R40E, PTD 1000'.
- ◆ NORAMEX CORP.; Permit #598 issued July 5, 2005 for Thermal Gradient Well PVTG-G, API #27-013-90033, Located in SE/4 NW/4 Section 33, T33N R40E, PTD 1000'.
- ◆ NORAMEX CORP.; Permit #596 issued July 5, 2005 for Thermal Gradient Well PVTG-I, API #27-013-90031, Located in NW/4 NE/4 Section 33, T33N R40E, PTD 1000'.

Hazen, Nevada, KGRA T20-21N R25-26E, Churchill and Lyon Counties

- ◆ Geothermal Rail Industrial Development LLC; has submitted an application to drill an industrial production well, 11-19, T20N R26E NW/4 NW/4 Section 19. Public comment period ends February 21, 2006.
- ◆ Geothermal Rail Industrial Development LLC; Permit #609 issued August 22, 2005, API #27-019-90017 for Thermal Gradient Well HTG 1; Location NE/4 NW/4, Section 19, T20N R26E, Lyon County; Proposed total depth is 800'; Spud Sep 6, 2005; Welsco Drilling Corp.; Completed drilling Oct 5, 2005.
- ◆ Geothermal Rail Industrial Development LLC; Permit #610 issued August 22, 2005, API #27-019-90018 for Thermal Gradient Well HTG 2; Location SE/4 NW/4 NW/4, Section 19, T20N R26E, Lyon County; Proposed total depth is 500'; Spud Sep 6, 2005; Welsco Drilling Corp.; Completed drilling Sep 9, 2005; TD 460'.
- ◆ Geothermal Rail Industrial Development LLC; Permit #611 issued August 22, 2005, API #27-019-90019 for Thermal Gradient Well HTG 3; Location NW/4 NW/4 NW/4, Section 17, T20N R26E, Lyon County; Proposed total depth is 500'; Spud Sep 28, 2005; Welsco Drilling Corp.; Completed drilling Sep 30, 2005.
- ◆ Geothermal Rail Industrial Development LLC; Permit #612 issued August 22, 2005, API #27-019-90020 for Thermal Gradient Well HTG 4; Location NW/4 SW/4, Section 17, T20N R26E, Lyon County; Proposed total depth is 500'; Spud Sep 9, 2005; Welsco Drilling Corp.; Completed drilling Sep 24, 2005.
- ◆ 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/>

Emigrant Geothermal Project, T1S R36E, Esmeralda County

- ◆ Fish Lake Valley, – Esmeralda Energy Company/Geo-Energy Partners-1983 Ltd. (GEO-83) Signed a DOE cost sharing award for the Emigrant Slimhole Drilling Project (GRED III Award). The DOE will fund 80% of a 4000' core hole at a location on GEO-83's leases at the project in Esmeralda County. The DOE total cost share is estimated at \$592,000 of the total budget of \$740,000. Esmeralda is seeking a power purchase agreement for the project. GeothermEx's PRP/PIER report estimated Emigrant to be capable of between 49-118 MW. For more information, contact Jack McNamara (818) 865-8515, jackmack@suesec.com.

Spencer Hot Springs Area;, T17N R45E, Lander County

- ◆ The Greater Austin Chamber of Commerce has requested that Lander County proceed with Nevada Division of State Lands Question 1 Program Grants to purchase 200 acres of open space recreation at Spencer Hot Springs. There was discussion regarding this at the March 28, 2005 Commission meeting. The Chamber of Commerce has requested \$5,000 from the County for a feasibility study of the project. The matter will be addressed at the April 11 Commission Meeting. - <http://www.landercounty.com/official/05MAR28.REG.pdf>

Ruby Valley/Ruby Lake, Sulfur Hot Springs, T31N R59E, Elko County

- ◆ Elko BLM notes public interest in a non-competitive lease sale for parcel(s) in the area. Analysis is on hold pending completion of an EA on the district-wide geothermal leasing program.

OTHER NEWS

DEPARTMENT OF ENERGY, GEOPOWERING THE WEST <http://www.eere.energy.gov/geothermal/gpw/>

- ◆ Two solicitations by the GPW Nevada Working Group for funding have been granted. The amount of the grants has not yet been announced.
 - Geothermal Industrial Park, Elko, NV. The project involves expansion and diversification of a highly successful district heating system by constructing a geothermally-heated industrial park to be located on the western edge of town. **Project partners are** Chilton Engineering, developer, markay@frontiernet.net and the Oregon Institute of Technology, Geo-Heat Center, technical consultant, <http://geoheat.oit.edu/>. The funds will be used to provide engineering assistance as construction develops for an estimated 100,000 sq. ft of floor space.
 - Mt Grant Hospital, Hawthorne, NV. Engineering assistance in the form of a feasibility study is being requested by the hospital staff so that decisions can be made as to the lowest life-cycle cost of a replacement of a fuel oil / propane heating plant with a geothermal system. Project partners are the Mt. Grant Hospital, administrators, 775-945-2461 and the Oregon Institute of Technology, Geo-Heat Center, technical consultant, <http://geoheat.oit.edu/>.

109th Congress - Geothermal Related Bills Introduced – <http://thomas.loc.gov>

- ◆ H.R.6.ENR - Energy Policy Act of 2005 – Enrolled as agreed to or passed by both House and Senate; Signed by President Aug 8, 2005; Became Public Law Aug 8, 2005. Purpose of bill to ensure jobs for our future with secure, affordable, and reliable energy. Public Print Version H.R.6.P.P.
- ◆ H.R. 174 Geothermal Energy Initiative Act of 2005; To encourage greater use of geothermal energy resources; Sponsor Millender-McDonald, introduced in House 1/4/2005; Referred to Subcommittee on Forests and Forest Health 2/3/2005; Referred to House Subcommittee on Department Operations, Oversight, Nutrition, and Forestry 2/17/2005.
- ◆ H.R. 622 Renewable Energy Production Incentive Reform Act; To reauthorize and revise the Renewable Energy Production Incentive program, and for other purposes; Sponsor Bono, introduced in House 2/8/2005; Referred to Subcommittee on Energy and Air Quality 2/25/2005; Related Bill S. 326.
- ◆ S. 326 Renewable Energy Production Incentive Reform Act; A bill to reauthorize the Renewable Energy Production Incentive program, and for other purposes; Sponsor Smith, introduced in Senate 2/9/2005; Referred to Committee on Energy and Natural Resources 2/9/2005; Related Bill H.R. 622.
- ◆ S. 427 Renewable Energy Investment Act of 2005; A bill to amend the Public Utility Regulatory Policies Act of 1978 to provide for a Federal renewable portfolio standard; Sponsor Jeffords, introduced in Senate 2/17/2005; Referred to Committee on Energy and Natural Resources 2/17/2005.
- ◆ H.R. 610 Energy Research, Development, Demonstration, and Commercial Application Act of 2005; To provide for Federal energy research, development, demonstration, and commercial application activities, and for other purposes; Sponsor Biggert, introduced in House 2/8/2005; Referred to Subcommittee on Energy and Mineral Resources 2/9/2005; Placed on Union Calendar July 29, 2005; Calendar Number 123.
- ◆ H.R. 612 Energy Basic and Applied Sciences Act of 2005; To provide for Federal energy research, development, demonstration, and commercial application activities, and for other purposes; Sponsor Biggert, introduced in House 2/8/2005; Referred to Subcommittee on Energy 2/17/2005; Sec 407, Geothermal. Develop improved technologies for reducing the costs of geothermal energy installations; Sec 411 appropriates \$30M for Sec 407.
- ◆ H.R. 737 Renewable Energy and Energy Efficiency Act of 2005; To establish an energy program for the United States that unlocks the potential of renewable energy and energy efficiency, and for other purposes; Sponsor Woolsey, introduced in House 2/9/2005; Referred to Subcommittee on Energy 2/17/2005.
- ◆ H.R. 983 To amend title VI of the Public Utility Regulatory Policies Act of 1978 to establish a Federal renewable energy portfolio standard for certain retail electric utilities, and for other purposes; Sponsor Udall, introduced in

House 2/17/2005; Referred to House Committee on Energy and Commerce 2/17/2005; Referred to House Subcommittee on Energy and Air Quality 3/22/2005.

- ◆ H.R. 1127 Renewable Energy Production Incentive Reform and Reauthorization Act; To reauthorize the renewable energy production incentive and to provide that a qualified renewable energy facility shall not be assigned a priority for eligibility or allocation of appropriated funds on the basis of the energy source used at such facility; Sponsor Terry, introduced in House 3/3/2005; Referred to House Committee on Energy and Commerce 3/3/2005; Referred to House Subcommittee on Energy and Air Quality 3/22/2005.

New BLM Cost Recovery Fees Take Effect November 7

- ◆ November 1, 2005 – The BLM will begin charging cost recovery fees for several mineral extraction activities on public lands, effective November 7, 2005 – Copies of the final rule are available at local BLM offices, or may be accessed through <http://www.gpoaccess.gov> published in The Federal Register Vol. 70, No. 194, page 58854 - http://frwebgate.access.gpo.gov/cgi-bin/getpage.cgi?position=all&page=58854&dbname=2005_register. The BLM issued this final rule to amend its mineral resources regulations to increase certain fees and to impose new fees to cover costs of processing documents relating to its minerals programs. The new fees include costs of environmental studies, lease applications, name changes, corporate mergers, lease consolidations and reinstatements, and other processing related costs. These fees will extend to oil and gas, mining law administration, geothermal, coal, sand and gravel permits, and other minerals extraction activities. The final rule provides for case-by-case fees, as well as fixed fees. The new fees are listed in Table 1 of the final rule. For geothermal leases, Noncompetitive Lease Application fees will increase from \$75 to \$335 and Competitive Lease Application fees will increase from \$0 to \$130.
- ◆ August 30, 2005 – The recently enacted Energy Policy affects the BLM cost recovery proposal. The Policy has limited the BLM's authority to recover some of its costs, and requires deferral of fees for processing permits, which are related to drilling for fluid minerals, until a pilot program to improve the process has been completed. Any new fees related to APDs and GPDs, which were included in the BLM proposal, will not be included in the final rule, expected to be issued this year. However, geophysical exploration permits are not affected by the new legislation and the BLM will include the new fees for those permits in their rule, which they plan to issue after processing public comments. - http://www.blm.gov/nhp/news/releases/pages/2005/pr050830_energy.htm
- ◆ The BLM issued a proposed rule July 19, 2005 for regulation changes that would enable the agency to recover costs of processing documents related to mineral operations on public lands. The proposal would authorize the BLM to increase or set new fees for environmental-impact studies, monitoring activities, and other processing-related actions. The proposal includes solid minerals as well as fluid minerals; it covers oil & gas Applications for Permits to Drill (APDs) and geothermal permits to drill (GPDs) and geophysical exploration surveys. The fees would be phased in over 5 years, with the first year fees set at \$1600 for APDs and GPDs and \$500 for geophysical exploration permits. Each year the fees would increase by \$500 until the full fee of \$4000 for APDs, \$3500 for PDs and \$2500 for geophysical exploration permits is met. Currently, there are no fees for these three types of permits. The BLM published its proposal in the Federal Register, opening up a 30-day public comment period that will close on August 18, 2005.

Governor Guinn Names Wagner Energy Advisor

- ◆ August 24, 2005 – Governor Kenny Guinn announced the appointment of Rebecca Wagner as his energy advisor and the director of Nevada's Office of Energy. She replaced Richard Burdette from the Office of Energy, where she has served as interim advisor since April 27, 2005. Prior to her position in the Office of Energy, Wagner was Public Information Officer at the PUC from December 2003. http://gov.state.nv.us/pr/2005/PR_2005-08-24WAGNER.htm

Sierra Pacific to Develop Coal Fired Power Facility/ 250 mile Transmission Line – Ely, White Pine County

- ◆ January 9, 2006 – The company announced that it would move forward with plans to develop a coal-fired power facility in White Pine County, which includes two 750 megawatt units utilizing state-of-the-art coal fuel technologies and a 250 mile transmission line connecting the northern and southern parts of the state. The transmission line will include several hundred megawatts of capacity for power generated by renewable resources. The first unit is expected to be operational by 2011. – David Sims, Director of Project Development, dsims@sierrapacific.com, (702) 367-5860 - http://www.sierrapacificresources.com/projects/pdfs/ely_energy_infosheet_v9final.pdf

Amp Resources to be acquired by Raser Technologies, Inc. - <http://www.rasertech.com/news/scripts/full-news.php?1137675600>

- ◆ January 19, 2006, Provo, UT based Raser Technologies, a technology licensing company, announced that it has reached an agreement to acquire Amp Resources, a privately held company that markets renewable power generation products. Raser will acquire Amp's portfolio of heat transfer and renewable power generation technologies along with the multiple, long-term geothermal energy sales contracts Amp holds with various utilities. These projects are anticipated to be in service by the end of 2007. Raser will assume approximately \$50 million of Amps' debt and liabilities and Amp stockholders will receive up to 10 million shares of Raser common stock and \$38 million in cash. More information about the integration of the two companies can be found at <http://www.rasertech.com/raserandamp.html>. The acquisition is subject to closing conditions and regulatory approval.

Partnership Developing Renewable Energy Center at Redfield Campus -
<http://www.unr.edu/geothermal/UNRREC.htm>

- ◆ On November 11, 2005, Ormat Technologies, Inc. (NYSE ORA) received the Nevada Governor's Distinguished Business of the Year award for 2005. Governor Kenny Guinn and Lieutenant Governor Lorraine Hunt presented the Award to Daniel Schochet, Vice President of Ormat, at the Governor's Industry Appreciation Dinner at the Reno Hilton on November 8, 2005. The Economic Development Authority of Western Nevada (EDAWN) co-hosted the award ceremony with the Northern Nevada Development Authority, in cooperation with the Nevada Commission on Economic Development. The Award is given to companies that exemplify good corporate citizenship.
- ◆ ORMAT received the Geothermal Industry Excellence Award and UNR received the Geothermal Community Excellence Award at the recent GRC Annual Meeting/GEA Trade Show held at the Hilton in Reno for their contributions in the partnership developing the only college campus in the world to be powered completely by geothermal energy. ORMAT will provide up to one megawatt of electricity and hot water for heating and research to the university. Some of the goals for the UNR-REC are to provide geothermal based electricity to power the facility, conduct research on hydrogen production, and provide classrooms and laboratories for research and education in geothermal and renewable energy. The campus is located in south Reno near the Steamboat Springs geothermal area. To open Fall 2005.

Public Utilities Commission of Nevada - <http://www.puc.state.nv.us/>

- ◆ February 9, 2006 – A Prehearing Conference will be held at 10:00 AM, Hearing Room A, Public Utilities Commission of Nevada, 1150 East William Street, Carson City, NV 89701, or via videoconference to: Hearing Room A, Public Utilities Commission of Nevada, 101 Convention Center Drive, Ste. 250, Las Vegas, NV 89109.
- ◆ December 15, 2005 – Sierra Pacific Power Company and Nevada Power Company ("Companies") filed the Revised Plan ("Revised RPS Compliance Plan") with the Commission.
- ◆ October 3, 2005 – The PUC ordered the "Companies" to develop a revised plan for the future to address compliance with the RPS outlining a program with achievable goals, and addressing barriers, solutions and tools provided by the Commission.
- ◆ August 8, 2005 – The PUC granted Sierra Pacific Power and Nevada Power Co an exemption from fines for Noncompliance with the Renewable Energy Portfolio Standard during Compliance Year 2004. The Utility is required to provide a detailed compliance plan to the Commission by December 15, 2005.
http://puc.state.nv.us/electric/dkt_05-4003/05-4003io.pdf
- ◆ April 1, 2005 - Sierra Pacific Power Co. and Nevada Power Co. filed the Annual Report with the PUC of Nevada in regard to their efforts to comply with the renewable energy portfolio standard. The report is available for public review at the PUC offices in Carson City and Las Vegas. The PUC must issue an order stating whether or not the companies complied with the law, within 30 days. Regulatory Operations Staff will conduct an investigation and present their report to the PUC no later than April 27, 2005. The companies have asked regulators to exempt them from fines for failure to comply, which prompted the introduction of bill SB188 to the 2005 Legislature.

Great Basin Center for Geothermal Energy – <http://www.unr.edu/geothermal/>

- ◆ Contact Information:
 - DIRECTOR - Dr. Lisa Shevenell, Hydro geologist. Email: geothermal@mines.unr.edu - Phone (775) 784-1779 Fax (775) 327-5801. Nevada Bureau of Mines and Geology, University of Nevada, Reno, MS 178, Reno, NV 89557-0057
 - ASSOCIATE DIRECTOR – Dr. Allen Gates, Professor and Interim Chair, Mechanical Engineering. Email: gates@unr.edu - Phone (775) 784-6906 Fax (775) 784-1701. Department of Mechanical Engineering, University of Nevada, Reno, MS 256, Reno, NV 89557
 - PROGRAM OFFICER – Peggy Brown, Central Point of Contact for the Great Basin Center for Geothermal Energy. Email: geothermal@mines.unr.edu - Phone (775) 784-7018 Fax (775) 327-5801. Great Basin

Center for Geothermal Energy, 259 Paul Laxalt Mineral Research Building, University of Nevada, Reno, MS 172, Reno, NV 89557-0138

- ◆ In September 2005, the Great Basin Center for Geothermal Energy (GBCGE) at the University of Nevada, Reno (UNR) issued a request for proposals from UNR students to participate in research being conducted by currently funded GBCGE principal investigators. A panel of three UNR professors evaluated the proposals, and the proposal submitted by master's student Garrett S. Vice was selected for funding. Vice will work under the direction of Dr. James Faulds studying the structural controls on geothermal fields in northwestern Nevada, with a focus on sites near Pyramid Lake. Funding for the student stipend and tuition was awarded to the GBCGE by the University of Nevada, Reno through their Applied Research Initiative program. Information about the GBCGE can be found at: <http://www.unr.edu/geothermal/>
- ◆ Prof. Geoffrey Blewitt at The Great Basin Center for Geothermal Energy at University of Nevada, Reno reports that there are now 60 stations installed in the MAGNET GPS network in northern Nevada. The latest stations to be installed were in the Honey Lake area. This network has now been operational for over one year, and is scheduled to deliver high-resolution crustal strain data by summer of 2006. For more information, visit the Nevada Geodetic Laboratory on-line at <http://geodesy.unr.edu>.

LINKS: USEFUL DATABASES AND GEOTHERMAL INFORMATION

- ◆ American Council on Renewable Energy (ACORE) – <http://www.acore.org/>
- ◆ American Geological Institute Government Affairs Program - <http://www.agiweb.org/gap>
- ◆ Black Rock-High Rock NCA (National Conservation Area) planning website – <http://www.nv.blm.gov/Winnemucca/>
- ◆ 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/gpw/>
- ◆ 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/>
- ◆ Geothermal Resources Council - <http://www.geothermal.org>
- ◆ GeothermEx, Inc – <http://www.geothermex.com>
Designed to provide information of use to geothermal developers, including downloads of the PIER Geothermal Database of resources in western Nevada and California.
- ◆ 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.earthscan.co.uk>
- ◆ 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-2003, “The Nevada Mineral Industry 2003” - <ftp://comstock.nbmq.unr.edu/pub/dox/mi/03.pdf>
- ◆ Nevada Bureau of Mines and Geology, Geothermal Energy - <http://www.nbmq.unr.edu/geothermal/gthome.htm>
- ◆ 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/>
<http://www.puc.state.nv.us/ELECTRIC/propgen.pdf>
- ◆ 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.
<https://cfwebprod.sandia.gov/cfdocs/GPI/index.cfm>
- ◆ Sierra Pacific Resources, Renewables RFP - <http://www.sierrapacificresources.com/company/RFPs/renewablerfp.cfm>
- ◆ 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 - Geopubs
Online Geologic Publications of the Western United States - <http://geopubs.wr.usgs.gov/>

This will be the final copy of the Geothermal Update until funding can be secured for continued publication. NDOM is pursuing funding and hope to have the Update back on line in the near future.

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