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National News

Senate Energy Committee Passes New Geothermal Legislation

Senate Energy Committee moved the ball forward for geothermal energy by passing two important geothermal measures, S. 1142 and S. 1149, on December 15. "These two measures will support exploration drilling, expand geothermal research into heating uses, and expedite leasing and development," remarked GEA Executive Director Karl Gawell.

S. 1142, the Geothermal Exploration and Technology Act of 2011, is sponsored by Senators Tester, Reid, Murkowski and Begich. It has three major provisions: 1) it proposes a new federal loan program to promote exploratory geothermal drilling, along with the mapping and development of the nation's substantial untapped geothermal potential; 2) it expands geothermal research into direct use and heat pump technologies; and 3) it facilitates the use of geothermal co-production by federal oil and gas leases.

S.1149, the Geothermal Production Expansion Act of 2011, is sponsored by Senators Wyden, Begich, Merkley, Crapo and Risch. It would modify the federal all-competitive leasing statute for geothermal to allow limited negotiated lease sales in circumstances where new discoveries have been made.

During the mark-up Senators Bingaman, Murkowski, Sanders and Mansion all spoke in support of geothermal energy, particularly related to S. 1142. Senator Coats expressed opposition to S. 1142 because it had no budget score and contained no proposed offsets for potential future spending. Senator Shaheen replied that "while we needed to be cognizant of the budget deficit" that her "list of priorities also included job creation."

While S. 1149 passed on a voice vote, with no opposition noted, Senator Coats asked for a roll call on S. 1142, which passed 13-8-1 with Senators voting as follows: Voting Yes on S. 1142: Senators Bingaman, Wyden, Johnson, Landrieu, Cantwell, Sanders, Stabenow, Udall, Shaheen, Franken, Manchin, Coons, and Murkowski. Voting No on S. 1142: Senators Barrasso, Risch, Lee, Paul, Coats, Portman, Hoeven, and Corker. Voting to Abstain on S. 1142: Senator Heller

Now both measures move to the Senate floor for full consideration. "These measures will help the geothermal industry continue to grow and support new jobs, the adoption of new technology, and expanded US exports," Gawell said. "The geothermal industry applauds the Senate Energy Committee for its work." For more details on either measure, go to: <http://thomas.loc.gov/home/thomas.php>



Treasury Department Issues FAQs on Section 1603 Grant Program

The Department of Treasury has released a set of Frequently Asked Questions on the Section 1603 cash-grant program. Wilson Sonsini Goodrich & Rosati followed up with an alert stating that the FAQs further clarify the requirements of the program, specifically the requirement that qualifying projects must begin construction by the end of 2011. WSGR notes:

“If an owner of property transfers the property to a "related person" (generally an entity with 20 percent common ownership) and the transferee uses the property in a qualifying energy project, then for the purposes of determining whether the transferee qualifies for the 5 percent safe harbor, the transferee is treated as if it paid or incurred—at the same time as the transferor—the costs that the transferor paid or incurred to acquire the property. The same rule applies to transfers to unrelated persons only in the case of certain sale/leaseback transactions.

“If a purchaser such as a tax equity investor acquires an interest in an entity after December 31, 2011, but before the property is placed in service, and the entity previously had met the 5 percent safe harbor, eligibility for the cash grant is not affected so long as (i) the purchaser is an otherwise eligible cash-grant applicant, and (ii) the entity being sold had commenced development of a project as evidenced by activity such as acquiring land, obtaining permits and licenses, entering into a power purchase agreement, entering into an interconnection agreement, or contracting with an engineering, procurement, and construction contractor.”

Please visit <http://www.treasury.gov/initiatives/recovery/Pages/1603.aspx> to access the Treasury Department's FAQs.

Geothermal Energy Association Commends Senate Energy Committee on Passage of New Geothermal Legislation

Press Release, Washington, D.C., December 15---The Geothermal Energy Association (GEA) today applauded the Senate Energy Committee for moving the ball forward for geothermal energy by passing two important geothermal measures, S. 1142 and S. 1149.

"These two measures will support exploration drilling, expand geothermal research into heating uses, and expedite leasing and development," remarked GEA Executive Director Karl Gawell.

S.1142, the Geothermal Exploration and Technology Act of 2011, is sponsored by Senators Tester, Reid, Murkowski and Begich. It has three major provisions: 1) it proposes a new federal loan program to promote exploratory geothermal drilling, along with the mapping and development of the nation's substantial untapped geothermal potential; 2) it expands geothermal research into direct use and heat pump technologies; and 3) it facilitates the use of geothermal co-production by federal oil and gas leases.



S.1149, the Geothermal Production Expansion Act of 2011, is sponsored by Senators Wyden, Begich, Merkley, Crapo and Risch. It would modify the federal all-competitive leasing statute for geothermal to allow limited negotiated lease sales in circumstances where new discoveries have been made.

"These measures will help the geothermal industry continue to grow and support new jobs, the adoption of new technology, and expanded US exports," Gawell said. "The geothermal industry applauds the Senate Energy Committee for its work today."

For more information or to arrange an interview GEA Executive Director Karl Gawell, please contact Leni Schimpf at 646-695-7045 or Leni@rosengrouppr.com.

State News

Geothermal Energy in California to Benefit Phoenix Customers; New Geothermal Player in Nevada

Salt River Project, serving nearly 950,000 customers in the greater Phoenix area, has signed a second agreement to purchase [49 MW of geothermal energy](#) from the Hudson Ranch Power II project in California. The project is owned by EnergySource, and SRP will arrange transmission of the energy to Arizona.

And in Nevada, 483,000 acres of land along Interstate 80 from Reno to the Utah line has been purchased by Miramar Beach, Fla. company Fountain Investments, which assigned their rights to the purchase to Conduit LLC. Don Pattalock, president of Conduit subsidiaries New Nevada Land and New Nevada Resources, [told press the new owners](#) are optimistic about mineral and geothermal opportunities.

International News

Africa

East African Countries Continue Geothermal Drive; Drilling to Begin in Rwanda

With United Nations' South Africa climate talks wrapped to mixed reception, efforts to develop geothermal energy in the plentiful African regions are still growing. United Nations Environment Program representative Dr. Meseret Zemedkun [told press](#) the availability rate of geothermal compared to hydropower was at 90-95 percent versus 50-55 percent. "[African] countries are very keen to develop their resources," she said.



Funding for geothermal projects in East Africa [got a new boost](#) with 50 million euros (\$65 million) promised by KfW Group, Germany's state-owned lender. KfW's development bank signed with the African Union to supply exploratory drilling.

In Rwanda, plans are set for drilling operations for [three wells at Karisimbi](#) to begin before the end of the month and will be completed in two months, State Minister for Energy and Water, Eng. Emma Francoise Isumbingab announced. Geothermal surveys conducted in the Karisimbi area since 1983 have indicated enormous potential and could contribute to the country's goal to reach 300 MW of geothermal energy to the national grid by 2017.

Americas

Canada: Plans Underway for 5-MW Geothermal Plant in Saskatchewan

Deep Earth Energy Production Corp. is planning to develop a 5-MW production plant to power 5,000 homes in the first phase of a project at Williston Basin. The plan includes six wells, with depths to reach 3,000 m. "The first project is expected to cost around \$5 million. The total project to completion will be around \$25 to \$30 million," DEEP [president and CEO Kirsten Marcia told press](#). The exploration could additionally support up to 50 MW after the first phase is completed.

Peru: Water-Sampling Program Indicates Geothermal Viability

Mustang Geothermal [has announced results](#) of a water-sampling program at its geothermal concessions in the southeast of the country, with work done by Thermochem, Inc. The company reports indications are good for a viable geothermal reservoir and additional exploration work. Results of testing indicated a relatively evolved and localized geothermal system suitable for targeted geothermal exploration, with pH values from 6.76-7.04 and reservoir temperature ranges from 100.4°C to 130.0°C.

Pacific

Australia: Torrens Energy Announces Updates at Parachilna Resource

[Torrens Energy announced](#) a new estimate of 88,000 PJ for its Parachilna project, revised from its previous estimate of 780,000 PJ, to conform to new industry reporting guidelines. The estimate indicates a potential of 2900 MWh of electricity per year for 30 years. The company also announced cost estimates around \$100 million, including the cost of a new transmission line. The company remains committed to its geothermal space and is also looking into alternative resource projects to "enhance shareholder value in the short term," it said.



Indonesia: Japanese Companies to Develop Geothermal Plant Near Jakarta

Marubeni Corp. and Toshiba Corp. of Japan have won an order for a [55-MW geothermal plant near Jakarta](#). The plant is scheduled to begin operations in 2014.

New Zealand: Government to Offer Shares in Mighty River Power

The government is offering minority shares in state-owned Mighty River Power, and will make an initial public offering next year, likely in the third quarter of 2012. As part of the announcement, Finance Minister Bill English and State Owned Enterprises [Minister Tony Ryall told press](#): "Our advice is that Mighty River Power is ready to go to the market. We will provide more detailed information on this IPO - including how widespread New Zealand ownership will be achieved - when detailed decisions have been made in early 2012." Genesis, Meridian and Solid Energy are also state-owned assets that are planned to be put up for minority shares, with Mighty River Power to be the first.

Geothermal Heat Pumps and Direct Use

Geothermal Heating Potential Seen in Scotland

Glasgow City Council is funding a project to test the potential for [geothermal heating applications in parts of Glasgow](#), which has a target to reach 11% renewables in its energy mix by 2020. This is the first project of its kind in Scotland, and is being carried out by British Geological Survey experts.



<http://www.geo-energy.org/updates.aspx>

Notices

Current Notices

International Market Workshop for GEA Members to Precede January San Francisco Event

GEA recently began working on an exports/international market initiative. As part of this initiative, we will be hosting a West Coast International Markets Workshop on January 17, 2012 from 1pm to 4pm to dialogue with GEA member companies regarding exports and international markets. This meeting will be held at the Marriott Marquis in San Francisco, CA in coordination with GEA's Finance and Development Forum occurring the following day.

We are also inviting select government officials to participate and help companies explore how the National Export Initiative applies to geothermal companies. This meeting is for GEA member companies either currently



exporting or interested in entering foreign markets. For more information about this meeting, contact Alison Holm at Alison@geo-energy.org.

GRC Call for 2012 Annual Meeting Papers (April 27)

Present your paper at the Geothermal Resources Council's 2012 Annual Meeting, September 30 through October 3, 2012 in Reno, Nevada. Authors may submit an oral technical presentation and/or poster before April 27.

Please direct all content related questions to: Frank Monastero at monasterofc@gmail.com; Lisa Shevenell at lisaas@unr.edu. Please direct all format and general submission questions to: Anh Lay at alay@geothermal.org or (530) 758-2360 ext. 100

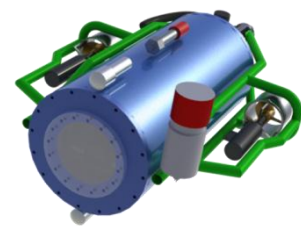
2012 Paper Topics

- Business Development / Finance
- Basin & Range / Cascades / Rocky Mountains
- Direct Use / Heat Pump
- Enhanced Geothermal Systems
- Exploration / Resource Assessment / Management
- Geology, Geophysics and Geochemistry
- Geothermal Energy Associated with Oil and Gas Operations
- Geothermal Project Case Studies
- International
- Power Operations / Maintenance / Production Technologies
- Regulatory / Environmental Compliance / Policy Issues
- Utility and Transmission Issues
- Other _____

Instructions to submit: http://geothermal.informz.net/geothermal/archives/archive_1972541.html

Project Abysse Seeks Support to Build Remote-Controlled, Mine-Shaft Submarine for Geothermal Implementation

From Project Abysse: We are 20 engineering students from the University of Sherbrooke that are conceiving and building a remote-controlled submarine capable of navigating in a submerged mine shaft and measuring the temperature of the surrounding water. The objective of our project is to promote the use of geothermal energy. Having the thermal gradient of a mine shaft can potentially lead to geothermal implementations.



3D rendering of the submarine

We are currently looking for sponsors to help and encourage us in our endeavors, both on the financial side, as well as technical support. Any technical information or monetary or material donation would be greatly appreciated.



If you wish to help us in any way, you can contact Mathieu Couture at: Mathieu.G.Couture@USherbrooke.ca, or Stephane Labadie at: Stephane.Labadie@USherbrooke.ca. For more information regarding the project, visit our Web site: www.projetabyss.com.

Is Your Company Interested in Providing a Geothermal Internship?

If your company working in the geothermal industry has provided internship opportunities in the past, or is interested in doing this in the future, GEA can help. Contact Alison Holm: Alison@geo-energy.org. To see some of the work that GEA has done connecting and providing resource for students who are interested in geothermal careers, visit GEA's networking database, the Geothermal Web: <http://geothermalweb.org/Students.aspx>.

For Sale: Binary Cycle Geothermal Power Plant

U.S. Geothermal Inc. is seeking indications of interest to purchase the 4.8 MW (gross) binary cycle power plant located near Empire, Nevada. The plant was built in 1986 and consists of four 1.2 MW Ormat Energy Converters ("OEC"), a wet cooling tower, electrical equipment and controls, and associated spare parts, including a spare turbine. After substantial refurbishment during 2009 and 2010, the plant is fully operational, and achieved 98.8% operating availability in 2011. Sale of individual OEC units will be considered. Please contact: Mr. Doug Glaspey at 208-424-1027 or Mr. Chris Harriman at 208-645-2600.

Site Needed for DOE Demonstration, Chena Power

Chena Power is in need of a site location for their DOE Demonstration incorporating a [Pratt & Whitney](#) 280 kW power module and 3 evaporative coolers, placed on 2 low boy trailers, with satellite monitoring. The system requires 20 gallons per minute of water for cooling. Here's an opportunity for testing the production of a reservoir over the next few years and produce electricity for onsite use. Contact Bernie Karl recycle@polarnet.com.

Employment

New This Week

Internship: Hot Dry Rocks, Australia

(See also: <http://geothermalweb.org/>)---Hot Dry Rocks, an Australian Geothermal Consultancy is looking for an intern starting in March 2012. This non-paid intern will work 6 to 10 hours per week at our Melbourne Office and Lab. Tasks will involve assisting the lab manager in the preparation of rock samples for analysis, data management of rock core samples and production of geothermal maps.

HDR (Hot Dry Rocks Pty Ltd) is Australia's foremost and largest geothermal-specific exploration and development consultancy. HDR specialises in locating and characterising geothermal resources suitable to exploit for power generation. We have worked on scores of projects across Australia and in other parts of the world; in Hot



Sedimentary Aquifers (HSAs), Engineered Geothermal Systems (EGS) and conventional geothermal systems.

HDR's strength lies in combining expertise in crustal heat flow measurement and modelling, EGS research and development, and petroleum and mineral exploration.

HDR also supports an internal research and development program, delivering state-of-the-art tools and software for the geothermal sector. For example, HDR developed an electronic divided bar meter for rock thermal conductivity measurement—the first portable instrument of its type in the world—and operates the only commercial laboratory for rock thermal property measurement in Australia.

Through its in-house expertise and strategic partnerships, HDR offers a full range of services and advice from initial ground selection, exploration and resource characterisation; through drilling, reservoir stimulation and appraisal; to economic modelling and full-scale development. HDR is focused on the subsurface aspects of geothermal energy development.

Interested candidates should submit a letter of interest, resume and two letters of reference to Lawrence Molloy at lawrence.molloy@hotdryrocks.com

Employment Opportunities

Reservoir Engineer, CALPINE, The Geysers, Middletown, CA

Position Summary: Create and maintain reservoir-steamfield-powerplant simulation models. Monitor reservoir performance. Apply expertise to reservoir management, operational problems, and forecasting at The Geysers, the world's largest geothermal field. Calpine is North America's leading geothermal power producer. At The Geysers, about 100 miles northeast of San Francisco, Calpine harnesses naturally heated steam from the earth to create electrical power. This renewable "green" power is available to consumers throughout California. This position reports to the Manager of Geothermal Production Analysis. Please apply online at <http://www.calpine.com/careers/>

Essential Duties and Responsibilities:

1. Build and maintain calibrated numerical simulation models of the reservoir-pipeline-power plant system. Use the model to forecast steam flows under different operational scenarios.
2. Develop conceptual models of the reservoir. Prepare estimates of field reserves and forecasts of future production and generation. Prepares related reports as needed.
3. Provide support on forecasts of future capital improvements, generation and revenues.
4. Contribute insight to the broader team's thinking about the nature of The Geysers resource and the appropriate strategy for managing this unique asset within Calpine's stated "Next 50 Years" initiative.



Qualifications and Experience:

1. Education: Bachelor of Science degree (BS) and graduate degrees (MS or PhD) in GeoScience or Engineering, with background in oil/gas/geothermal reservoir engineering.
2. Geothermal Reservoir Simulation: Expertise in large-scale numerical simulation of heat and mass flows in geothermal reservoirs, including understanding of numerical modeling techniques and underlying physical principles. Ability to integrate the reservoir simulation with a steam gathering system model and turbine performance curves in order to produce valid generation forecasts.
3. Reserves and Economics: Ability to translate current reserves and production forecasts into economic projections that meet financial reporting standards.
4. Other Reservoir Engineering Skills: Deep understanding of water-steam thermodynamics. Experience with decline curve analysis, wellbore flow modeling, flow test techniques, pressure build-up testing, interference testing, and other standard reservoir engineering methods applied to geothermal reservoirs.
5. Safety Consciousness: Commitment to following safe work practices that minimize risks to people, property, and the environment.

Chief Reservoir Engineer, CalEnergy, Calipatria (Imperial Valley), CA

Applicants should apply via our careers Web site (full job description available there):

<http://www.calenergy.com/common/careers/taleo.asp?c=cal>

Primary Job Duties and Responsibilities

- Maintain an accurate and current reservoir engineering database for the areas of responsibility. This includes maintaining a current set of well production histories, observation of well data, geochemical trends and relevant geological data for the assigned fields.
- Prepare authorization for expenditures (AFE's) and economics for well work and equipment.
- Conduct and supervise well-field related activities that include but are not limited to the following: well acidization, well surveys (static, pressure-temperature-spinner (PTS), caliper), coiled tubing cleanouts, capillary tubing installations and tracer enthalpy testing.
- Develop new and innovative technical solutions to resource and/or drilling related issues as required.
- Diagnose well problems and engineer solutions. This includes using simulation tools to model downhole flow conditions to diagnose well problems and be proactive in preventing possible problems.
- Monitor well-field performance of MidAmerican Energy Company geothermal fields to determine potential problems that could arise and simulate current trends to the future to determine needed changes in operating procedure.
- Coordinate with all professional resource sources to provide a comprehensive interpretation of the company's geothermal and mineral reservoirs. Interpretation should be fully documented for financing.
- Responsible for data collection and analysis of Region 1 shallow heat anomaly to meet regulatory obligations and provide an appropriate management program.



- Responsible for coordinating the development of appropriate software tools to manage the reservoir and production data gathered from the field.
- Provide monthly reporting to California department of oil, gas and geothermal resources on production and injection as well as quarterly reporting to environmental agencies.
- Collect/analyze Pressure-Temperature-Spinner (PTS) and capillary tubing data.
- Must have working knowledge of reservoir simulation to oversee, direct and troubleshoot outside simulations of reservoir for financing and development.
- Develop well flow performance curves.
- Provide engineering analysis and economic models for exploration, development, workover and acquisition projects.
- Provide engineering technical support to CalEnergy Operating Corporation and global MidAmerican Energy Company operations as required.

Qualifications

- Bachelor's degree or higher in engineering, preferably petroleum.
- At least fifteen years of related experience and/or additional resource engineering-related training. Geothermal resource engineering experience is required and some petroleum engineering experience in oil and gas is also desired.
- Effective oral and written communication skills. Ability to read, write, analyze, and interpret technical procedures or regulations. Ability to effectively present information and respond to questions from managers and employees.
- Effective analytical, problem-solving and decision-making skills. Ability to work with mathematical concepts such as probability and statistics and complex equations including algebra, trigonometry, geometry, calculus, as well as differential equations. Must have basic computer programming ability and be very fluent in spreadsheet analysis. Must have a solid understanding and be proficient in economic analysis. Must be able to work with math in an abstract way. Must be able to modify and/or derive mathematical equations from physical processes and relationships.
- The employee should be able to solve tough problems and deal with a variety of variables in situations where only limited standardization exists. Employee needs to synergize several inconsistent partial data sets to arrive at abstract answers. Employee should be able to interpret a variety of instructions furnished in written, oral, diagram or schedule form. Ability to visualize and comprehend the dynamic conditions and possibilities that occur during power plant and well-field development and the changes to the process that will occur over time and with proposed changes.
- A valid California driver's license is required.
- Project management skills; ability to prioritize and handle multiple issues and projects concurrently.



Research Geologist/Geophysicist, United States Geological Survey

The USGS in Menlo Park, California, has an opening for a Research Geologist/Geophysicist to conduct research in support of geothermal energy assessments, with a focus on the structural, geomechanical, thermal, and hydrologic properties of fault-hosted hydrothermal systems. Detailed information on the position can be found at <http://tinyurl.com/USGSGeothermalJob>. Individuals must apply online at <http://www.usajobs.gov/> to receive consideration. For more information about the USGS, visit: <http://www.usgs.gov/ohr/great.html>.

Tenure-line Position, Energy Resources Engineering, Stanford University, CA

The Department of Energy Resources Engineering at Stanford University [invites applications for a tenure-line faculty appointment](#). The position is at the assistant professor level. It is desired that the selected candidate be able to start by January 2012. (Application reviews began April 15, 2011)

The Department of Energy Resources Engineering focuses on a wide range of activities related to the recovery of the Earth's energy resources (e.g., hydrocarbons, geothermal, and renewables). The Department also has active research programs on carbon sequestration and clean energy conversions. ERE offers degrees in both energy resources engineering (B.S., M.S., Ph.D.) and petroleum engineering (M.S., Ph.D.). The ideal candidate should have research and teaching interests beyond traditional petroleum engineering disciplines.

We seek scholars with a Ph.D. in a relevant field with novel and innovative research interests in energy resources, such as in one or more of the following areas:

1. Energy systems modeling and optimization, for example integration of energy recovery and carbon sequestration
2. Engineering of enhanced geothermal systems
3. Recovery of unconventional energy resources, such as coalbed gas, shale gas or gas hydrates
4. Renewable energy resources

Please apply online at <https://academicjobsonline.org/ajo/jobs/685/> in electronic format (PDF only) with the following application material:

- cover letter
- curriculum vitae
- a statement outlining research and teaching interests
- the names of three references including e-mail addresses
- copies of up to five selected papers published in refereed journals over the past three years



Requests for Proposals

Proposal Announcements

***For Students! Regional Energy Department Business Plan Competitions (March 2)**

From EERE Network News--If you're a university student interested in low-carbon technologies and entrepreneurship, then this is the premier opportunity for you to pitch your idea. The Regional Clean Energy Business Plan Competition is accepting business plan submissions until March 2, 2012.

Across the country, six regional competitions will serve as platforms for students to come up with innovative business plans to transform great clean energy ideas into great businesses. Based in California, Colorado, Illinois, Maryland, Massachusetts, and Texas, the regional competitions span the entire nation and all U.S. territories. Each region is unique in its own right, but they all share the common goal of bringing clean technologies to the market through creative business solutions.

Some of the submission deadlines have already passed while others range to March 2, 2012. Be sure to individually check regional competitions and the corresponding deadline [here](#).

The six regional winners will each receive \$100,000 in prize money and a chance to compete for a National Grand Prize at a competition held at DOE headquarters in Washington, D.C., in the summer of 2012. See the [Energy Blog post](#).

Financial JV Partner Needed, Geothermal Power Generation Project in Indonesia

The promoters were awarded the bid to build a 65 MW Geothermal Working Area (GWA) and the mining permit (IUP) of Geothermal in West Nusa Tenggara Province, Indonesia, in July 2010. The IUP is valid up to 35 years, with 3 years for exploration, 2 years for feasibility study & construction, and 30 years for commercialization. Each stage could be extended by government approval.

Promoters can sell electricity to the PLN (National Electricity Grid of Indonesia) at USD 9.65 cents per kWh. The promoters have entered a long-term Power Purchase Agreement (PPA) for 25 Years. Promoters must conduct exploration within the next 6 months.

The recommended activities of exploration stage consist of magneto telluric, gradient temperature drilling and exploration drilling. The outcome of the exploration stage is to confirm the status of probable reserve from the hypothetical resource at 65 MW. The estimated capital expenditure for the exploration stage is US \$15 million, which is required to determine the location for drilling the exploitation wells.



After confirming the location of the exploitation wells, 5–10 production wells will be drilled to produce 50 MW steam. The steam shall be converted into electricity power by constructing the steam gathering facilities, piping, infrastructures and power plant within 2 years. A mix of equity and debt finance of the total amount of the capital expenditure will be about USD \$150 million.

Projected forecasts can be disclosed during the initial conversation with potential JVC financial and EMC partners. Yearly Projected Net Profit is estimated to be \$12 Million USD with an IRR of 16.2%. Please contact Dr. Tom Lannin at tlannin@gmail.com to discuss details and terms. The opportunity is open for 90 days. (*Posted ~Nov. 17, 2011*)

People, Prosperity and the Planet, EPA (December 22)

The U.S. Environmental Protection Agency requests proposals for the National Student Design Competition for Sustainability Focusing on People, Prosperity and the Planet (P3). The P3 Awards program was developed to foster progress toward sustainability by achieving the mutual goals of economic prosperity, protection of the planet, and improved quality of life for its people. Areas of interest include: Energy; Built Environment; Materials and Chemicals; Water; Agriculture; Green Infrastructure; and Clean Cookstoves. \$1.05 million expected to be available, up to 45 awards anticipated. Responses due 12/22/11. For more info, contact Cynthia Nolt-Helms at nolt-helms.cynthia@epa.gov or go to: http://www.epa.gov/ncer/rfa/2012/2012_p3.html. Refer to EPA-G2012-P3. (Grant.gov 10/2/11)

Industry/University Cooperative Research Centers, NSF (February 1)

The National Science Foundation requests proposals for Fundamental Research Program for Industry/University Cooperative Research Centers. Areas of interest include, but are not limited to: Energy and Environment; Advanced Manufacturing; Biotechnology; Advanced Materials; and Fabrication and Process Technology. \$1.6 million expected to be available, up to 10 awards anticipated. Responses due 2/1/12. For more info, contact Rathindra DasGupta at rdasgupt@nsf.gov or go to: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf11570. Refer to NSF 11-570. (Grants.gov 8/10/11)

Sustainable Energy Pathways, NSF (February 1)

The National Science Foundation requests proposals for Sustainable Energy Pathways. This RFP will support interdisciplinary efforts by teams of researchers to address the challenges of developing efficient pathways towards a sustainable energy future. \$34 million expected to be available. Responses due 2/1/12. For more info, including agency contacts, go to: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf11590. Refer to Sol# 11-590. (Grants.gov 9/22/11)



Environmental Engineering, Energy for Sustainability, and Environmental Sustainability, NSF (February 17)

The National Science Foundation requests proposals for the following programs, with responses due 2/17/12. :

- **Environmental Engineering.** The goal of this program is to encourage transformative research which applies scientific principles to minimize solid, liquid, and gaseous discharges into land, inland and coastal waters, and air that result from human activity, and to evaluate adverse impacts of these discharges on human health and environmental quality. \$9.4 million expected to be available, up to 44 awards anticipated. For more info, contact Paul Bishop at pbishop@nsf.gov or go to: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=501029. Refer to Sol# PD-12-1440. (Grants.gov 6/8/11)
- **Energy for Sustainability.** This program supports fundamental research and education in energy production, conversion, and storage and is focused on energy sources that are environmentally friendly and renewable. Sources of sustainable energy include: Sunlight, Wind/Wave, Biomass, and Geothermal. \$9.2 million expected to be available, up to 42 awards anticipated. For more info, contact Gregory Rorrer at gorrer@nsf.gov or go to: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=501026. Refer to Sol# PD-12-7644. (Grants.gov 6/8/11)
- **Environmental Sustainability.** This program supports engineering research with the goal of promoting sustainable engineered systems that support human well-being and that are also compatible with sustaining natural systems. \$5.4 million expected to be available, up to 45 awards anticipated. For more info, contact Bruce Hamilton at bhamilto@nsf.gov or go to: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=501027. Refer to Sol# PD-12-7643. (Grants.gov 6/8/11)

Events

GEA and GEA-Sponsored Events

GEA Geothermal Energy Finance Forum, San Francisco, CA (January 18)

GEA will be hosting its next Geothermal Energy Finance Forum at San Francisco's Marriott Marquis on January 18, 2012. This event will highlight the leading companies in the geothermal market, as well as examine the risks and benefits to investing in geothermal energy.

The program will feature discussions with geothermal leaders including Karen Douglas, Commissioner, California Energy Commission; Dan Nastou, Power and Infrastructure, John Hancock Financial Services; John Marciano, Chadbourne & Parke LLP; Rick Rodgers, Managing Director and CEO, Montgomery Street Financial; Mark Taylor, Lead Analyst, CCS & Geothermal, Bloomberg New Energy Finance; Shinji Yamamoto, Chief Investment Officer, IFC; CJ Arrigo, Advisor, Glacier; David Watson, Hudson Ranch I, EnergySource; Jonathan Weisgall, Vice President of Legislative and Regulatory Affairs, MidAmerican Energy Holdings Company; Kent Burton, National Environmental Strategies; Jonathan Zurkoff, VP of Finance, U.S. Geothermal; Louis Capuano Jr, Chairman of the



Board, ThermaSource; Subir Sanyal, President and Manager of Reservoir Engineering, GeothermEx; Anders Kruss, Alterra Power Corp.; Craig Mataczynski, CEO, Gradient Resources; Lenny Hochschild, Managing Director, Evolution Markets, Inc.; and more.

Event partners for the event are American Council on Renewable Energy (ACORE) as well as sponsors GeothermEx and Pratt & Whitney Power Systems.

If you are interested in being a participant in or sponsor of this event, please contact Kathy Kent at kathy@geo-energy.org. To register for the event, please visit: http://geo-energy.org/events/finance_forum_2012.aspx. Discounted registration is available through December 23rd. Significant discounts for GEA Members and Students are available. For more information or to receive media credentials, please contact Shawna Seldon, 212 255 7541 or Shawna@rosengrouppr.com.

Geothermal Track, Renewable Energy World North America Conference and Expo, Long Beach, CA (February 14–16)

The 2012 Renewable Energy World North America Conference and Expo event will take place February 14-16 in Long Beach, California — please save the date! GEA is on the planning committee and will be exhibiting on the Expo floor. Additional participation and sponsorship opportunities are available. Contact: Leslie Blodgett at GEA, leslie@geo-energy.org.

The Geothermal Track sessions will highlight:

- Geothermal Policy and Economics
- Geothermal Plant Systems and Technology
- Geothermal Energy and Waste Heat Recovery
- a pre-conference introductory workshop on geothermal energy in California and beyond

Speakers from the geothermal community will include: Louis Capuano, Jr., ThermaSource; Halley Dickey, TAS Energy; Karl Gawell, Geothermal Energy Association; Joe Lillard, Atlas Copco Mafi-Trench; John McCaull, Geothermal Energy Association; John McIlveen, Jacob Securities Inc.; John McKinsey, Stoel Rives; Josh Nordquist, Ormat Technologies; Maria Richards, Southern Methodist University; Mike Ronzello, Pratt and Whitney Power Systems; Bruno Vanslambrouck, HOWEST, University College of West Flanders; Kelsey Walker, TAS Energy; A. Scott Weber, University of Buffalo; Harvey Wen, Bechtel Power Corp.; and Gary Zyhowski, Honeywell.

Sponsorship Opportunities for GEA Events

Your company has the opportunity for high visibility at GEA's events. In addition to providing the financial support needed for GEA to undertake successful events, GEA events feature media availabilities with sponsors which



garner extensive coverage in mainstream press outlets. Events are updated at: <http://geo-energy.org/events.aspx>.

Events currently listed for 2012 are:

- January 18, 2012 GEA Geothermal Energy Finance Forum - San Francisco, CA
- February 14-16, 2012 Renewable Energy World Conference and Expo - Long Beach, CA (GEA is a supporting organization for this event)
- May 23, 2012 GEA International Geothermal Energy Showcase - Washington, DC
- August 7-8, 2012 GEA National Geothermal Summit 2012 - Sacramento, CA
- Sept. 30-Oct. 2, 2012 GEA Geothermal Energy Expo® and GRC Annual Meeting - Reno, NV

Other Events

Geothermal Lease Sale, BLM, Nevada (January 24)

The BLM is holding a competitive oral sale of Federal lands in the State of Nevada for geothermal leasing on January 24, 2012 at the Nevada State Office, 1340 Financial Boulevard, Reno, Nevada. There are 34 parcels totaling 99,469 acres, with two of the parcels are in the Elko area; two in the Battle Mountain area; nine in the Carson City region; and 21 in the Winnemucca area.

Leases issue for a primary term of 10 years. Annual rental is \$2 per acre for the first year (paid to BLM), \$3 per acre for the second through tenth year, and \$5 per acre per year thereafter. Once the site is producing for commercial generation, royalty rates are 1.75% for the first 10 years of production and 3.5% thereafter. Lands that do not receive a bid are available for a two-year period beginning the first business day after the sale.

To pre-register by mail or fax, mail the bidder registration form to the above address or fax to (775) 861-6710. On the day of the sale, bidders can register from 8:00 a.m. until 8:45 a.m, and the sale starts at 9. Bring a photo ID to the sale.

Contact: Justin Abernathy, (775) 861-6504. View the parcel list and other available documents, and check back for changes at:

http://www.blm.gov/nv/st/en/prog/minerals/leasable_minerals/geothermal0/ggeothermal_leasing.html. The bid form for successful bidders (Form 3000-2, dated August 2007) can be found at:

<https://www.blm.gov/FormsCentral/show-home.do>



Two Geothermal Leases Up for Bid, BLM, Colorado (February 9)

At its quarterly oil and gas lease auction, the BLM in Colorado will offer two parcels allotted for geothermal energy development. The sale is on February 9 at the BLM State Office, 2850 Youngfield Street, Lakewood, Colorado 80215; Telephone 303-239-3600.

Leases issue for a primary term of 10 years. Annual rental is \$2 per acre for the first year (paid to BLM), \$3 per acre for the second through tenth year, and \$5 per acre per year thereafter. Once the site is producing for commercial generation, royalty rates are 1.75% for the first 10 years of production and 3.5% thereafter. Lands that do not receive a bid are available for a two-year period beginning the first business day after the sale.

The first geothermal parcel includes 4,587.77 acres of BLM land. The second geothermal parcel includes about 3,765.49 acres of U.S. Forest Service land. The BLM's resource management plan for Gunnison includes stipulations for geothermal leasing that protect geologic hazards, the Gunnison sage-grouse, and senior water rights.

Contacts: Ms. Sharon A. Sales, sharon_sales@co.blm.gov, (303) 239-3987; Mrs. Rebecca Skinner, rebecca_skinner@co.blm.gov, (303) 239-3780; or Mr. Kristian Lee, kristian_lee@co.blm.gov, (303) 239-3786.

Additional lease sale information can be obtained online at:

www.blm.gov/co/st/en/BLM_Programs/oilandgas/leasing.html, or by contacting the address above. The bid form for successful bidders (Form 3000-2, dated August 2007) can be found at:

<https://www.blm.gov/FormsCentral/show-home.do>

GEOTHERMAL ENERGY WEEKLY

A newsletter for the geothermal industry written by Leslie Blodgett and Karl Gawell

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