

# Geothermal Energy Weekly

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## **National News**

### **DOE Awards up to \$38 Million to Advance Technology and Reduce Cost of Geothermal Energy**

[Press Release, September 8](#) — U.S. Energy Secretary Steven Chu today announced \$38 million over three years for projects to accelerate the development of promising geothermal energy technologies and help diversify America's sources of clean, renewable energy. Thirty-two innovative projects in 14 states will develop and test new ways to locate geothermal resources and improve resource characterization, drilling, and reservoir engineering techniques, which will enable geothermal energy sources to help reduce the nation's reliance on fossil fuels. Funded through DOE's Office of Energy Efficiency and Renewable Energy, these advances will play an important role in achieving President Obama's goal of generating 80% of U.S. electricity from clean energy sources by 2035.



"The Department of Energy is investing in pioneering new technologies that will further develop the nation's geothermal resources, create skilled jobs for American workers, and help diversify our energy portfolio," said Secretary Chu. "The projects announced today will provide opportunities for clean energy innovations that will ensure the U.S. remains a global leader in geothermal energy development and expand the nation's use of this important renewable energy resource."

This significant investment in clean energy development is part of the Department's comprehensive effort to reduce the cost of geothermal energy, making it more competitive with conventional sources of baseload electricity. Projects will perform feasibility studies before advancing to prototyping and validation, which will be conducted through vigorous laboratory-based research and field testing. The selected projects will support the Department's goals of lowering the cost and financial risk associated with confirming and characterizing geothermal resources and will help to overcome key technical challenges to the reservoir creation and sustainability of enhanced geothermal systems.

Selected awardees are as follows:

Hattenburg Dilley & Linnell, LLC (Anchorage, Alaska): up to \$330,000

This project will evaluate the chemical, thermal and permeability characteristics of a geothermal reservoir using chemical signatures that are trapped inside minerals to increase exploration drilling success rates.

Lawrence-Berkeley National Laboratory (Berkeley, California): up to \$540,000

This project will predict changes in fluid flow through fractures and improve current methods of estimating geothermal reservoir temperatures to enable subsurface imaging and reduce exploration costs.

Lawrence Livermore National Security, LLC (Livermore, California): up to \$890,000

This project will reduce resource exploration costs by developing a processing technique for a variety of geophysical and geological parameters.

Paulsson, Inc. (Woodland Hills, California): up to \$3.0 million

This project will advance the collection of seismic data from stimulation zones to accurately characterize enhanced geothermal system reservoirs.

Potter Drilling, Inc. (Redwood City, California): up to \$1.5 million

This project will adapt hydrothermal spallation drilling technology to increase the effective diameter of wells and increase their production capacity.

Stanford University (Stanford, California): up to \$680,000

This project will develop geophysical approaches to detect and evaluate fractures to better characterize geothermal reservoirs and optimize their performance.



Colorado School of Mines (Golden, Colorado): up to \$1.1 million

This project will link reservoir temperature estimates with mineral analysis to aid discovery of unknown geothermal resources.

Colorado School of Mines (Golden, Colorado): up to \$630,000

This project will develop an advanced processing framework for survey data to reduce the cost of geothermal exploration.

University of Hawaii (Honolulu, Hawaii): up to \$980,000

This project will develop a new geophysical inversion and analysis procedure to map the subsurface structure of a geothermal prospect and lower exploration costs.

Idaho National Laboratory (Idaho Falls, Idaho): up to \$1.0 million

This project will seek to achieve increased accuracy in predicting reservoir temperatures in order to lower exploration costs.

FastCAP Systems Corporation (Boston, Massachusetts): up to \$2.2 million

This project will enable controlled pressure and directional drilling in high-temperature geothermal exploration wells to facilitate more economical identification of geothermal resources.

Applied Technology Associates (Albuquerque, New Mexico): up to \$1.5 million

This project will use an innovative sensor to facilitate simultaneous measurement of multiple wave

velocities and directions to improve reservoir observation and monitoring.

Los Alamos National Laboratory (Los Alamos, New Mexico): up to \$1.0 million

This project will allow for more accurate imaging of seismic data through the development of an advanced processing technique.

Los Alamos National Laboratory (Los Alamos, New Mexico): up to \$1.6 million

This project will reduce the cost of geothermal energy by developing an innovative method that combines high pressure impulses and thermal gradients to drill through hard rock.

Sandia National Laboratories (Albuquerque, New Mexico): up to \$400,000

This project will develop an environmentally-friendly material that will temporarily isolate sections of the wellbore to control zones of injection and production at high temperatures and pressures, lowering completion costs.

Sandia National Laboratories (Albuquerque, New Mexico): up to \$340,000

This project will assess the feasibility of using state-of-the-art sensors and components to accurately determine the direction and orientation of a geothermal well in real-time in order to lower drilling costs.

University of Nevada (Reno, Nevada): up to \$380,000

This project will use an advanced method to identify faults and characterize reservoirs resulting in lower exploration costs.



Brookhaven National Laboratory (Upton, New York):  
up to \$300,000

This project will develop a multi-functional cement to protect geothermal wellbores against common geothermal failure risks such as thermal cycling, thermal expansion, and corrosion.

Brookhaven National Laboratory (Upton, New York):  
up to \$300,000

This project will optimize a temporary sealer compound to address fluid loss encountered while drilling.

Clean Tech Innovations, LLC (Bartlesville,  
Oklahoma): up to \$500,000

This project will modify a gel that can tolerate the high temperatures and high pressures encountered in geothermal wells to provide isolation of lost circulation zones and reduce drilling costs.

Impact Technologies (Tulsa, Oklahoma): up to \$1.0  
million

This project will examine the feasibility of employing intense radiation technology to drill and seal off the walls of geothermal wells in order to reduce drilling costs.

National Energy Technology Laboratory (Albany,  
Oregon): up to \$770,000

This project will enable efficient reservoir creation by monitoring enhanced geothermal system reservoirs before and after stimulation using recently developed advanced geophysical techniques combined with geologic and geochemical analyses.

Atlas Copco Secoroc LLC (Ft. Loudon,  
Pennsylvania): up to \$3.4 million

This project will enable drilling at the high temperatures encountered in deep geothermal wells.

National Energy Technology Laboratory (Pittsburgh,  
Pennsylvania): up to \$1.0 million

This project will reduce the cost of reservoir development using an integrated experimental and modeling program to anticipate geochemical reactions in enhanced geothermal system processes.

Temple University (Philadelphia, Pennsylvania): up  
to \$1.5 million

This project will employ new techniques to better interpret the shape, volume and evolution of a stimulated reservoir and optimize its performance.

Baker Hughes Oilfield Operations, Inc. (Houston,  
Texas): up to \$5.0 million

This project will develop downhole systems for continuous real-time data logging of high temperature wells to allow for more efficient drilling and reduced well costs.

Bell Geospace, Inc. (Houston, Texas): up to \$1.0  
million

This project will test two airborne geophysical survey technologies with the potential to lower geothermal exploration costs.

Geothermal Expandables, LLC (Houston, Texas): up  
to \$1.5 million

This project will improve upon existing casing designs by increasing the effective diameter of



production wells allowing for additional fluid flow and power production.

University of Texas (Austin, Texas): up to \$990,000

This project will develop seismic data processing technologies to locate fractures in a more cost effective manner and lower exploration costs.

University of Texas (Austin, Texas): up to \$700,000

This project will develop and test an innovative integrated exploration method to increase exploration drilling success rates.

University of Utah (Salt Lake City, Utah): up to \$990,000

This project will combine several geophysical techniques into an integrative method for identifying blind, high temperature geothermal resources, thereby lowering exploration costs.

University of Utah (Salt Lake City, Utah): up to \$1.0 million

This project will improve the prediction of permeability and temperature at depth and lower exploration costs.

### **Senate Committee Approves \$31.6B for 2012 Energy, Water**

The Senate Appropriations Committee yesterday approved \$31.625 billion in discretionary 2012 funding for the Department of Energy, Army Corps of Engineers and water programs of the Interior Department in a 29-1 vote, [according to E&E Daily](#). That total is \$57 million less than was enacted in 2011 and \$4.9 billion less than what President Obama requested.

The recommendation for geothermal technology is \$34,000,000, whereas the House report for HR 2354 recommends \$38,000,000 for geothermal technology. According to the Senate report, "The funds made available by this section shall be disbursed to the full spectrum of geothermal technologies as authorized by the Energy Independence and Security Act of 2007 (Public Law 110-140) and the Department of Energy shall continue its support of comprehensive programs that support academic and professional development initiatives. The Committee directs the Department to make not less than \$5,000,000 available to continue development and deployment of low-temperature geothermal systems."

The Senate appropriates \$250 million to ARPA-E, the Advanced Research Projects Agency-Energy, an increase of \$70 million over FY11 levels; approved \$1.796 billion in funding for the Office of Energy Efficiency and Renewable Energy (EERE), \$259 million to fossil energy program; and \$584 million to nuclear funding.

By contrast, the House budget would cut ARPA-E funding to \$100 million; provide \$1.3 billion to EERE; \$477 million for fossil energy; and \$734 million for nuclear energy.

The Army Corps would receive no money for "new start" water infrastructure projects (including locks, dams and levees), although it has a \$60 billion backlog of authorized projects.



An amendment to fund the repair of flood-damaged levees in the Midwest, where have 400,000 acres are under water, was postponed for consideration on the Senate floor. It also cuts funding for small nuclear reactors, providing no money for Yucca Mountain nuclear waste repository.

None of the 12 bills for 2012 fiscal year (starting Oct. 1) have yet cleared the two chambers.

## **New Transmission Proposal Fast-Tracks Approval Process**

A new Obama administration energy strategy could fast-track the approval process for major transmission lines that would serve renewable energy projects. The Department of Energy would delegate to the Federal Energy Regulatory Commission the authority to designate corridors of severe power line congestion.

FERC could designate a project to be considered as its own corridor thanks to a provision in the 2005 Energy Policy Act that allows FERC to issue construction permits "directly to a transmission developer whose project does not qualify under state rules because the developer does not serve end-use customers in the state" (see [Climatewire, Sept. 7](#)).

"Some stakeholders may feel that the delegation represents an attempt to expand federal agency authority and undercut state authority regarding the siting of transmission projects. However, the delegation will not expand federal authority, which was established and limited by EAct 2005, but rather will simply and consolidate in a single forum federal actions mandated by Congress," according to FERC staff comments, which are available online: see <http://www.congestion09.anl.gov/>.

Following is a letter approved by the Geothermal Energy Association's Government Relations Committee and sent to Energy Secretary Steven Chu in support of the pending proposal to delegate certain authority to FERC:

*Dear Secretary Chu,*

*I am writing on behalf of the Geothermal Energy Association about the proposal under discussion by the interagency workgroup including Federal Energy Regulatory Commission (FERC), Council on Environmental Quality (CEQ), Department of Energy (DOE), Department of the Interior (DOI), and Department of Agriculture that would delegate national interest electric transmission corridor designation from the DOE to the FERC, and*

*reestablish FERC "fallback authority" under EAct 2005, §1221.*

*We strongly support Administration efforts to eliminate duplication and more efficiently consider renewable energy transmission proposals. Transmission is a critical issue for geothermal as with all renewable power technologies, and we believe this proposal is a constructive approach that will help solve transmission problems.*



*We urge you to move forward with the proposal under discussion. Doing so will demonstrate positive initiative towards solving transmission issues, while also providing a more formal process for public input to address any remaining issues.*

*Thank you for considering our views.*

*Sincerely*

*Karl Gawell*

*Executive Director*

DOE has asked Edison Electric Institute members for comments on the plan, with a Sept. 9 deadline.

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## **Company News**

### **AltaRock Energy and Davenport Newberry: DOE Approves Newberry EGS Demonstration Seismic Mitigation Plan**

Press Release, September 8 — AltaRock Energy, in partnership with Davenport Newberry, is pleased to announce that, on August 10, 2011, the U.S. Department of Energy's Geothermal Technology Program announced their written approval of the Induced Seismicity Mitigation Plan (ISMP) prepared for the Newberry Enhanced Geothermal System Demonstration, currently being conducted in the Deschutes National Forest. The purpose of the ISMP is to demonstrate AltaRock's preparedness for addressing and mitigating potential seismic activity of concern to people at the demonstration site. Because EGS technology makes use of microseismicity to create and monitor reservoir growth, the Department of Energy requires the application of their Protocol for Addressing Induced Seismicity Associated with EGS.

"The Department of Energy's approval of our Induced Seismicity Mitigation Plan highlights the great level of care and attention we have brought to this issue since the project's inception," said Will Osborn, Project Manager for AltaRock. "In our public outreach meetings we've received and responded to concerns about water usage and potential seismic activity; approval by the Department of Energy affirms that this project is well-planned and well-executed, and we're excited to keep the process moving along here in Oregon. We encourage the public to review the approved plan available on our Web site, and continue to provide comments and questions through our new toll-free information line." *Toll-free project information line 855-EGS-4-USA now available for comments and questions about demonstration activities.*

### **Atlas Copco: Order in for Turkey Geothermal Plant**

Press Release, September 5 -- Atlas Copco's Gas and Process division has won an order to deliver equipment to a turnkey geothermal power plant in Turkey's Aydin province. The order includes two turbo expander generator trains which will be able to deliver a total 45 MW of clean energy when the plant goes into operation in the fourth quarter of 2012.



The customer is Celikler Jeotermal Elektrik Uretim A.Sof Turkey, a company operating in sectors such as construction-contracting, mining, tourism and energy. Atlas Copco's consortium partners are process-design expert Exergy and air-cooled condenser specialist SPIG. Atlas Copco's share of the order value is MEUR 12 (approximately MSEK 110), booked in the third quarter.

"Atlas Copco expansion turbines and compressors are renowned in the renewable energy sector. They are operating successfully at geothermal plants in the United States since years," says Stephan Kuhn, President of Atlas Copco's business area Compressor Technique. "This order is another sign of our competitiveness in this market segment where we expect further growth in the future."

The plant, using Organic Rankine Cycle technology, will be built in the geothermal field at Pamukoren, a high-potential growth region for geothermal energy. Compared to natural-gas driven power generation producing the same amount of energy, this project will reduce CO<sub>2</sub> emissions by 238 000 tons a year at its peak production.

## **Nevada Geothermal Power: Independent Resource Review of Blue Mountain Project Completed**

Press Release, Vancouver B.C., September 7 — Nevada Geothermal Power Inc. (TSX.V: NGP, OTCBB: NGLPF) announced today that it has completed a comprehensive independent review of all resource information for the Blue Mountain project in order to gain a better understanding of the geothermal fluid flow system and ultimately to increase production from the Faulkner 1 geothermal power plant.

The study concludes that:

- Deep western injection wells 55-15, 57-15, 58-15 and 61-22 inject cooled geothermal fluid from the power plant into the hottest known part of the geothermal field. Geochemistry of reservoir fluids predict that still hotter thermal water is present in this portion of the geothermal system. Current injection of cooled water under pressure may be impeding hotter water from deeper in the fault structure from flowing up and eastward to the section 14 production wells.
- Shifting current injection from wells 55-15, 57-15, 58-15 and 61-22 to new well field areas along fault structures to the north and northeast would mitigate current well communication issues and allow for potential increased production from the power plant. Shifting injection may be achieved through stimulation of existing wells and by drilling new wells on identified structures.
- Geothermal reservoir host rocks are extensively altered and faulted. New injection targets are identified on structures trending north and northeast.
- New production targets are identified on the deep structures to the west.
- The study makes recommendations for increasing injectivity at existing shut-in wells to help stabilize the production temperatures and further drilling to potentially increase production from current levels.



The study was conducted under contract by Engeocon LLC. Stuart Johnson, principal of Engeocon, subsequently has joined NGP's permanent staff to help implement the Blue Mountain and other NGP resource development programs. Mr. Johnson is a recognized authority on geothermal resource development, having successfully reversed start up reservoir production declines by redistributing injection fluids at the Dixie Valley and Stillwater geothermal fields in Nevada. He directed field development work at Steamboat Hills, Nevada that enabled expansion of production capacity from approximately 35 MW when the property was acquired by Ormat to approximately 90 MW today.

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## **State News**

### **Nevada and California: Race in the Works for Exporting Excess Renewable Power**

Both Nevada and California have indicated plans to develop enough renewable power to meet portfolio standards as well as export additional power from these sources to nearby states. Some experts wonder what the competition will mean for current projects. "I don't see how anyone can ignore (Gov. Brown's) official policy saying, 'We want it all to come from California, and we want to export,'" [John Candelaria with Aspen Environmental Group told press.](#)

Transmission projects may proceed slowly, like the \$510 million, 500-kilovolt One Nevada line, which NV Energy and New York developer LS Power are building to link NV Energy's northern and southern grids. "If a developer is going to build transmission, we want them to proceed cautiously, so we don't cause more rate impacts not only on residents, but businesses," Eric Witkoski, the state consumer advocate who represents ratepayers in electricity rate cases, told press.

A 2010 Review-Journal comparison of renewables in Nevada found geothermal projects selling for 8.6 cents per kilowatt hour, compared to 13 cents per kilowatt hour from two solar projects.

### **Nevada: PUC Grants New Hearing on NV Energy's Geothermal, Solar Deals**

The state Public Utilities Commission has agreed to a re-hearing on NV Energy's application for three renewable energy projects — one power purchase agreement for geothermal and two for solar. The plants need approval in order to obtain financing. The commission originally said the utility failed to provide required information, and agreed to give NV Energy 90 days to submit the data. Jan. 31 is the final deadline on the decision.

NV Energy [told press](#) it is on track to meet its goal for percentage of renewable sources of energy this year, but that it will not be able to meet required targets by 2015 without additional renewable energy input to the grid. The utility plans to buy geothermal energy from Ormat Technologies and solar energy from Fotowatio Renewable Ventures and Mountain View Solar. The Ormat project is in Churchill County.



## Washington: Snohomish PUD Conducts Testing at Garland Geothermal Site

The Snohomish County Public Utility District plans to begin exploratory drilling for geothermal power. Imminent work includes testing water temperatures about a mile down in the Cascades and will cost about \$2.5 million. Commissioner Toni Olson [told press](#) the home-grown power would be worth the expense: "A huge portion of our costs are associated with the power supply," Olson said.

The work follows testing on five wells last year, of which one, the Garland site, located on private property, was identified for further drilling. If successful, the PUD would be the first utility in Washington to develop geothermal energy and could potentially power up to 35,000 homes in the county by 2020, with a plant potentially in place by 2016.

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## **International News**

### **Americas**

#### **Canada: CanGEA to Open the TSX as Part of It's 4th Annual Conference and Investment Forum**

[Press Release](#) - Calgary, August 31 — The Canadian Geothermal Energy Association is to open the Toronto Stock Exchange as part of CanGEA's 4th Annual Conference and Investment Forum, in Toronto/ Ontario, September 14-15, 2011.

With now less than two weeks to go until representatives from the Canadian and international geothermal energy industry are meeting in Toronto for CanGEA's 4th Annual Conference and Investment Forum, CanGEA is now releasing the final agenda for the conference.

On the first day of the conference, representatives from the Association and industry participants will be opening the Toronto Stock Exchange.

"While the geothermal power players listed on the Toronto Stock Exchange have seen a difficult start into the year, recent project updates on the progress of development to bring clean geothermal power to the market are promising signs of a positive outlook for the industry", so Alexander Richter, Director at CanGEA.

On the first day of the conference development, marketing & media, drilling and direct use of geothermal energy are key topics. Canadian and international developers will speak about geothermal development in Canada, the U.S., South America and Asia. For the first time at a geothermal energy event, marketing aspects of promoting geothermal energy and geothermal energy activities will be discussed to evaluate what the industry can do better to promote geothermal energy and its potential. Two other sessions will then look at geothermal drilling and the direct use potential for geothermal are



A recent report by the Geological Survey of Canada and a team of leading scientists in the field of geothermal energy highlights the “enormous geothermal energy resources that could supply Canada with a renewable and clean source of power”. So we are proud to have the Geological Survey of Canada represented speaking about the report and the potential for geothermal in Canada on day two. Other topics are then geothermal research activities and education in Canada, geothermal policy and power systems options for geothermal projects.

The second half of day two will then be our annual Investment Forum with presentations on the Canadian Geothermal Reporting Code, geothermal exploration risk insurance and geothermal financing. For the conference, we have been able to attract high-level speakers from Canada, the United States, Iceland, Switzerland, Indonesia and Argentina to present their companies and activities.

### **Chile: Greater State Role Needed in Geothermal Development**

Authorities could take on greater initial financial roles in the development of geothermal energy in Chile, and could establish long-term power purchase agreements and feed-in tariffs to encourage investment, IDB energy expert Alberto Levy [told an energy conference organized by IDB in Santiago](#).

"Around 70% of the investment currently goes toward exploration, drilling the holes and defining the characteristics of the resource. That is a lot of uncertainty for investors, who want to be sure they can recuperate the investment they have made. The state could therefore initially develop the project, and then sell it on later," Levy said.

### **Guatemala: Centram Geothermal Granted Two Concessions**

Centram Geothermal Inc. has been granted two geothermal exploration concessions in Guatemala: Atitlan, with a reservoir at a temperature of 186°C, and Joaquina, with a reservoir temperature of 180°C or higher. "Our research on the geothermal prospects of Central America has resulted in the acquisition of two very encouraging projects," John Paterson, [Centram's President and CEO told press](#). "We now intend to aggressively explore and evaluate the development potential of these prospects."

## **Europe**

### **Germany: Romanian Dafora Wins Geothermal Drilling Contract**

Dafora, a Romanian drilling company listed on the Bucharest Stock Exchange, has won EUR 15 million contract to [drill for geothermal](#) for GeothermSolarpark Nordhastedt GmbH. The two-year contract is the company's first in Germany and has the potential for extension.



### **Greece: Bidding Open to Explore Geothermal Sites**

Greece has opened bidding for the exploration of geothermal energy in four areas: Kavala, the Spercheios basin, Sousaki and Ikaria Island. Energy Minister George Papaconstantinou [this week named](#) Germany's abandonment of nuclear power, as well as political turmoil in the Middle East, as looming reasons to develop renewable energy in southern Europe.

Research and investigation on the projects is expected to cost about 100 million Euros (\$141 million) initially, and construction is estimated at 50 million Euros per unit.

### **Norway: GEG Secures Funding for Geothermal Turbine Modules**

Green Energy Group (GEG) has [secured a private-equity investment](#) from WHEB Partners of London for its project to design more efficient geothermal technology. The premise of the company's project is the design of 5-MW geothermal turbine modules that are able to be deployed at individual well heads. This eliminates the need for building a critical mass of steam from multiple wells, which conventionally then feed into larger turbine equipment. The new design could speed up access to geothermal resources as well as lower the cost. GEG is completing its first full-scale pilot plant in Kenya.

## **Pacific**

### **Australia: Grant will Assist Paralana 3 Geothermal Well; Treasury Looks to Geothermal**

The Australian Centre for Renewable Energy (ACRE) has [allocated a \\$7 million grant](#) for the Paralana joint venture project. Led by Petratherm, the partners are Beach Energy and TRUenergy. About \$4.2 million of the grant has been spent for drilling and fracture stimulation of the Paralana 2 well, while the remaining \$2.8 million will go toward the Paralana 3 well.

And an article on [businessday.com.au](#), "[Treasury model puts the heat on geothermal](#)," discusses the role the Treasury department is laying out for geothermal energy as carbon pricing may lead to big domestic emissions cuts that favor renewable energy-powered electricity. Treasury's consultants, SKM MMA and ROAM Consulting, estimate the percentage of geothermal in the overall electricity mix by 2050 will be 23% and 13%, respectively.

### **Indonesia: Ministry to Speed Up Geothermal Project Permits; Arrow to Build Geothermal Plant in Lampung**

President Susilo Bambang Yudhoyono has directed the Forestry Ministry to speed up permitting for geothermal projects in forest areas, of which there are already several proposals. "When the [permit] requirements are completed, we guarantee that it will take no longer than three months for the geothermal permit to be issued," Forestry Minister Zulkifi Hasan [told press](#).



Meanwhile, Arrow Resources Development has [selected a site in Lampung, Indonesia](#) for its first geothermal power plant project, with plans to sell the power to Perusahaan Listrik Negara (PLN). The plant is expected to produce between 25 and 50 MW of electricity.

### **Philippines: Contracts Set for Maibarara Geothermal Project**

The 20-MW Maibarara geothermal power project led by PetroEnergy Resources is expected to move forward with the help of two separate project agreements, one with local firm EEI Corporation, the other with Japanese firm Fuji Electric. EEI Corporation has contracted for the engineering, procurement and construction. [Project representatives told press](#) that for the turnkey contract, “EEI has tapped Fuji Electric for the design, manufacture, delivery and testing of the power plant.”

The Maibarara geothermal facility in Laguna has secured an environmental compliance certificate and other permits. The geothermal facility is targeted for operations to begin around 2013, and will provide up to 20 MW of power to the National Grid Corp., where it is needed in the Luzon grid.

### **Africa**

#### **Kenya: ARGeo Meets in Nairobi; WB Develops Geothermal Risk Fund; KenGen Looks at Issuing Bonds; Bids in for 8 GDC Projects**

A meeting [hosted by UNEP](#) of high level officials from African Rift Geothermal Development Facility (ARGeo) member countries will meet for two days in Nairobi to discuss challenges and opportunities for development of geothermal resource in the East African Rift region, strategies, various geothermal programs, country support, and best practices. They plan to develop a strategic framework for ARGeo projects in line with other geothermal support programs in the region.

Meanwhile, the World Bank has developed a US\$13 million risk mitigation fund for geothermal development in Kenya that would underwrite dry well drilling and is now in talks on how the funds would be used. “The way things have been done in the past is that you wait for an investor to come and put in money before you have even been shown the existence of the resource. But with the fund it is very easy for partners to come on board because there is evidence the resource is there,” GDC Managing Director Dr Silas Simiyu [told press](#).

As companies look at funding options, Kenya Electricity Generation Co. (KenGen) may issue asset-backed security bonds to raise funds for its geothermal explorations as early as next year, via trade on the Nairobi Stock Exchange.

“We can use steam as an asset to raise funds for drilling,” Managing Director Eddy Njoroge [told press](#). “The idea is in the development stage, but we could be ready in six months, a year.”



And in a bid for eight different 100-MW geothermal power plants at the Bogoria-Silali block, state-owned Geothermal Development Co. plans to select a different company for each of the eight facilities. “We want them to compete against each other to get the plants up,” Silas Simiyu, the company’s chief executive officer [told press](#).

GDC received bids from 19 companies, including Mitsubishi Corp., Alstom SA in France, General Electric Co., and Toshiba Corp. Construction is expected to start as early as January and be completed in 2017.

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## **Geothermal Heat Pumps and Direct Use**

### **Geothermal Energy Project Completed at Peppermill in Reno**

The Peppermill Resort Spa Casino in Reno, Nevada, which has hosted the GEA Geothermal Energy Expo in the past, is now heated by 100% geothermal energy throughout the 2.1-million square foot facility.

Press Release [\[See full story\]](#), September 3 — Being part of the unique high desert canvas of Reno-Tahoe has inspired the Peppermill Resort Spa Casino to adopt sweeping green initiatives to dramatically reduce the Resort's carbon footprint. For several years the Resort has been mindful to minimize the impact of operations on the environment while maintaining a premiere level of service and experience for guests. The Resort has used geothermal energy to heat the domestic hot water for the Tuscany Tower, including the 43,000 square foot Spa Toscana and Fitness Center as well as the two outdoor swimming pools and spas, since the 2007 expansion project. With the culmination of a \$9.7 million investment, the entire Resort is now on-line to heat both space and domestic water with geothermal energy.

As the demand to conserve increased, the Peppermill continued to investigate new and innovative ways to save precious resources. Peppermill President, Bill Paganetti, engaged world-renowned geothermal expert, Dr. Jim Combs of Geo Hills Associates LLC of Reno, to consult on the existing historical data and information from earlier projects. Because the Peppermill already had a re-injection well on the property, Dr. Combs recommended a new geothermal well be drilled on the property.



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



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## **Notices**

### **New This Week**

#### **BLM Reno Office Announces New Hours, Closes P.O. Box**

BLM announces changes at the Information Access Center (IAC) at its Reno, Nevada State Office. New hours of operation are 8 a.m. to 4 p.m. Additionally, BLM's P.O. Box in Reno is closed: As of Oct. 1, all mail to the Nevada State Office should be addressed to the physical address at 1340 Financial Blvd., Reno, NV 89502.

#### **“Does Geothermal Power All Reno Homes?”**

The [Reno-Gazette Journal decided to take a look](#) at whether there is enough geothermal power produced at the Steamboat complex in Reno, Nevada, to power the city of Reno itself. They found that it is currently impossible to track energy electrons from production point to consumer usage, but that yes, in theory, Steamboat operator Ormat Technologies produces enough geothermal energy at the complex to supply the demand of Reno's residential customers.

In 2010, Steamboat produced 728,535 MWh, while Reno's estimated residential consumption was 689,280 MWh that same year. The combined Northern Nevada communities consumed about 2,154,000 MWh, and it is unknown exactly where Steamboat's energy ended up.

### **Current Notices**

#### **GEA National Geothermal Summit Photos Available**

Did you attend last month's GEA National Geothermal Summit in Reno, Nevada? Look for your photo on our Flickr page: <http://www.flickr.com/photos/geo-energy/>.





### **Call for Geothermal Abstracts, American Association of Petroleum Geologists (September 22)**

The Energy and Minerals Division of the American Association of Petroleum Geologists will hold a Geothermal Session at the 2012 annual meeting to be held in Long Beach, California on April 22-25. The Geothermal Session will be hosted under Theme 7: Alternative Energy and will be chaired by W.C. "Rusty" Riese of Rice University and Stephen Testa of the California State Mining & Geology Board. The Geothermal Session Chair will be Richard Erdlac.

Abstracts are requested related to the exploration, development and production, and economics of geothermal energy especially as associated to production from SEDIMENTARY ROCK. These abstracts could discuss geothermal in sedimentary basins or in any region where sedimentary rock has provided the trapping mechanism for geothermal resources. Of special importance would be papers that indicate how in-place oil/gas well assets can be converted to producing hot water for geothermal energy.

Submissions at <http://www.aapg.org/longbeach2012/guidelines.cfm>. The closing date for Abstract submission is September 22, 2011.

### **BLM Seeking Comments on Draft EIS for West Chocolate Mountains (September 29)**

BLM's California Desert District Office, working with Ecology and Environment, Inc. has prepared an environmental impact statement (EIS) addressing solar and wind energy ROWs and geothermal leasing in the West Chocolate Mountains Renewable Energy Project Area in Imperial County. The BLM must receive written comments on the Draft CDCA Plan Amendment and Draft EIS within 90 days following the date the Environmental Protection Agency publishes its Notice of Availability for the Draft EIS in the Federal Register. (Notice posted July 1, 2011).

Comments related to the West Chocolate Mountains Renewable Energy Evaluation Area may be submitted by any of the following methods:

- E-mail: [wcm\\_comments@blm.gov](mailto:wcm_comments@blm.gov).
- Fax: (951) 697-5299.
- Mail: Bureau of Land Management, California Desert District Office, 22835 Calle San Juan de Los Lagos, Moreno Valley, California 92533-9046, Attn: Peter Godfrey.

For more information visit: [prepared an environmental impact statement \(EIS\)](#)

Click here to read the draft EIS: <http://www.blm.gov/ca/st/en/fo/elcentro/nepa/wcm.html>



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## **Employment**

### **Employment Opportunities**

#### **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**

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.

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



We will begin reviewing applications on April 15, 2011 and will continue until a suitable candidate is identified.

### **Reservoir Engineering Manager – Geothermal, Chevron, Jakarta, Indonesia**

Chevron Asia Pacific Exploration and Production is accepting online applications for the position of Reservoir Engineering Manager located in Jakarta, Indonesia. To learn more about this exciting position and to apply visit [www.chevron.apply2jobs.com](http://www.chevron.apply2jobs.com) and search by requisition 081116435. All applicants must apply via the Chevron online application process.

### **Consultant, Geothermal Market in Turkey, EBRD**

The European Bank for Reconstruction and Development is considering a wide range of renewable energy proposals in Turkey, some of which are in the geothermal sector, and as such requires a consultant to provide an assessment of the Geothermal Market in Turkey. See <http://www.ebrd.com/pages/homepage.shtml> and <http://www.balkans.com/open-news.php?uniquenumber=91332>

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## **Requests for Proposals**

### **New This Week**

#### **Advancement of Clean Energy - India**

The U.S. Agency for International Development in India announces its intent to request proposals for a new energy and climate change program titled Partnership to Advance Clean Energy Deployment (PACE-D). The contract will assist in deploying clean energy technologies, systems and solutions and will accelerate India's transition to a high performing, low emissions and energy secure economy by primarily working on three key components improved end use energy efficiency, increased supply of renewable energy and adoption and accelerated deployment of cleaner fossil technologies and management systems. The RFP will be posted on or about 9/6/11. For more info, contact Sumit Dutta at [indiarco@usaid.gov](mailto:indiarco@usaid.gov) or go to:

[https://www.fbo.gov/?s=opportunity&mode=form&id=0cfaa54bb271f1398f93d5b31e6e7f45&tab=core&\\_cvview=0](https://www.fbo.gov/?s=opportunity&mode=form&id=0cfaa54bb271f1398f93d5b31e6e7f45&tab=core&_cvview=0).

Refer to Sol# 386-11-000002. (FBO 8/14/11)

#### **Emerging Technology Demonstrations – California (October 6)**

The California Energy Commission requests proposals for the Emerging Technology Demonstration Grant Program. Through this RFP, CEC seeks to support emerging technologies that are past the “proof-of-concept” stage and are ready to be demonstrated in an industrial setting. Project should target industrial, agricultural, or water energy efficiency areas for cumulative electricity, natural gas, or electricity demand reduction in CA. \$14 million expected to be available, individual awards NTE \$2 million. Abstracts due 10/6/11, final proposals due



12/22/11. For more info, contact Crystal Presley-Willis at [Cpresley@energy.state.ca.us](mailto:Cpresley@energy.state.ca.us) or go to: <http://www.energy.ca.gov/contracts/index.html>. Refer to PON# 11-501.

### **Electric Energy Innovations - California (October 12)**

The California Energy Commission requests proposals for the Energy Innovations Small Grant Program - Electricity Program. EISG funds the early development of innovative energy RD&D projects. Projects must target one of the following: Industrial/Agriculture/Water End-Use Efficiency; Building End-Use Efficiency; Environmentally Preferred Advanced Generation; Renewable Generation; Energy-Related Environmental Research; and Energy Systems Integration. Proposed projects must be clearly relevant to CA's electric market. Individual hardware awards NTE \$95K, individual modeling awards NTE \$50K. Responses due 10/12/11. For more info, contact [eisg@projects.sdsu.edu](mailto:eisg@projects.sdsu.edu) or go to: <http://www.energy.ca.gov/contracts/smallgrant/index.html>. Refer to Sol# 11-02.

### **Sustainability Research Networks, NSF (December 1)**

The National Science Foundation requests proposals for the Sustainability Research Networks Competition. Through this competition, NSF, in partnership with other agencies, international efforts, and the private sector, aims to support members of the academic research community for projects which produce discoveries and knowledge that will inform decisions leading to environmental, energy, social and cultural sustainability. \$36 million expected to be available, up to 4 awards anticipated. Preliminary proposals due 12/1/11, final proposals due 4/1/12. For more info, including contacts, go to: [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=nsf11574](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf11574). Refer to NSF 11-574. (Grants.gov 8/25/11)

### **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](mailto:rdasgupt@nsf.gov) or go to: [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=nsf11570](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf11570). Refer to NSF 11-570. (Grants.gov 8/10/11)

## **Proposal Announcements**

### **Procurement Notice, Geothermal Clean Energy Investment Project, World Bank, Indonesia**

*From USTDA:* We would like to take this opportunity to pass on the procurement notice for the World Bank's Geothermal Clean Energy Investment Project, a \$574.7 million investment in new geothermal resource development, and encourage all of those interested to pursue contract and procurement opportunities.



This project will be implemented by PT Pertamina Geothermal Energy (PGE) and will necessitate numerous contracts, including contracts for confirmation of geothermal resources and steam field development, as well as construction of the Steamfield Above-Ground System (SAGS) and power plants of approximately 110 MW and approximately 40 MW at the Ulubelu and Lahendong (Tompaso) geothermal fields, respectively.

Other contract opportunities may include:

- a) FEED Consultant for the design of the steam gathering station and power plant
- b) Supervision Consultant for Infrastructure to supervise the infrastructure works related to the development of certain fields;
- c) Supervision Consultant for EPC to supervise the process of power generation installation.

Consulting services will be procured in accordance with the World Bank's Guidelines: Selection and Employment of Consultants by World Bank Borrowers. Interested bidders should immediately contact PGE, [procurement@pgeindonesia.com](mailto:procurement@pgeindonesia.com), and register to receive the Specific Procurement Notices as they are issued. A pre-qualification notice is expected to be released in the month of September.

More information for potential bidders can be found at the project homepage:

<http://web.worldbank.org/external/projects/main?pagePK=64283627&piPK=73230&theSitePK=40941&menuPK=228424&Projectid=P113078>

U.S. companies interested in learning more about World Bank procurement guidelines should contact Mr. David Fulton, Advisor & Director of Business Liaison from the U.S. Department of Commerce at the Office of the U.S. Executive Director, [dfulton@worldbank.org](mailto:dfulton@worldbank.org).

### **RE&EE Awards, State Energy Program, DOE**

The U.S. Department of Energy requests proposals for the State Energy Program. This program provides formula grants to State and Territorial energy offices to design and carry out renewable energy and energy efficiency priorities. \$39 million expected to be available, up to 56 awards anticipated. Due dates based on state/territorial program years. For more info, contact Sheldon Funk at [sheldon.funk@netl.doe.gov](mailto:sheldon.funk@netl.doe.gov) or go to: <https://www.fedconnect.net/fedconnect/?doc=DE-FOA-0000507&agency=DOE>. Refer to Sol# DE-FOA-0000507. (Grants.gov 6/23/11)

### **Alaska Native Fund (October 15)**

The Alaska Conservation Foundation requests proposals for the Alaska Native Fund. The Fund seeks to advance Alaska Native priorities for protecting land and sustaining ways of life. The 2011 priority issues include: Climate Change, Food Security, Sustainable Economies, Energy, and Holistic Wellness. \$100K expected to be available, individual awards NTE \$20K. Letters of Inquiry are required, and are due 7/25/11, final proposals due



10/15/11. For more info, go to: <http://alaskaconservation.org/grant-opportunities/alaska-native-fund/>. (Tribal Climate Change Newsletter 6/2011)

### **Environmental Engineering, Energy for Sustainability, and Environmental Sustainability, NSF (February 17, 2012)**

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](mailto:pbishop@nsf.gov) or go to: [http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=501029](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 [grorrer@nsf.gov](mailto:grorrer@nsf.gov) or go to: [http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=501026](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](mailto:bhamilto@nsf.gov) or go to: [http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=501027](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=501027). Refer to Sol# PD-12-7643. (Grants.gov 6/8/11)

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## **Events**

### **Happening This Week**

#### **Geothermal Power Plant Tour at The Geysers, Calpine Corp. (September 10)**

Saturday, September 10, Cloverdale Street Celebration, 9 a.m. – 1 p.m., Calpine Sponsoring a Booth at The Street Celebration and Free Guided Tours to The Geysers. Visit [www.geysers.com](http://www.geysers.com).



## **GEA and GEA-Sponsored Events**

### **Geothermal Energy Expo® and GRC Annual Meeting 2011, San Diego, CA (October 23–26)**

The GEA Geothermal Energy Expo is the world's largest gathering of vendors providing support for geothermal resource exploration, characterization, development, production and management. It provides a unique opportunity for exhibitors to showcase their projects, equipment, services and state of the art technology to the geothermal community.

“The 2011 Expo is certain to be the largest-ever gathering of the geothermal community,” said GEA Marketing and Events Director Kathy Kent. “Each year the growing geothermal industry comes together for this event and it has become the most vital gathering for companies and leaders developing geothermal resources around the world.” The 2010 Expo in Sacramento featured more than 2,500 attendees from 42 different states and 13 different countries. The sold-out Expo Hall featured 162 exhibitors coming from 34 different states and 10 different countries. Please contact Kathy Kent, [Kathy@geo-energy.org](mailto:Kathy@geo-energy.org) for information, registration, sponsorship opportunities, etc.

### **Sponsorship Opportunities Available 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. Sponsorship details are posted online: <http://www.geo-energy.org/images/GEA2011SponsorshipOpps9.pdf>.

### **Sedimentary Basins Geothermal Workshop, National Science Foundation, Salt Lake City, UT (November 7–9)**

Cosponsored by GEA: the "Tracking an Energy Elephant: Science and Engineering Challenges for Unlocking the Geothermal Potential of Sedimentary Basins" NSF-sponsored workshop will be held November 7–9 in Salt Lake City, Utah. Visit [www.SedHeat.org](http://www.SedHeat.org) or contact Devri: [DevriRoubidoux@boisestate.edu](mailto:DevriRoubidoux@boisestate.edu).

The goal of this workshop is to focus on an under-studied portion of the renewable energy portfolio - the geothermal energy of sedimentary basins. The workshop will provide a road map for how NSF's community, through fundamental research, facilities development, data sharing and cyberinfrastructure, and education, can help make the vast geothermal potential of sedimentary basins a significant part of the nation's renewable energy portfolio.



The ability to translate that potential into productive use lies in the application of basic science and engineering to overcome challenges that currently restrain the utilization of these complex systems for electrical base load. Effective use also lies in reducing the economic risk of geothermal exploration and development which inhibits attracting financial investors to this energy sector. In addition, it is also important to provide federal and state decision makers and agencies with the information they require to make sound decisions about geothermal energy. Thus, the long-term vision is integrate NSF-sponsored research, education and cyberinfrastructure to build a partnership among researchers, industry, and state and federal agencies to insure that geothermal energy can meet its potential as a major and sustainable contributor to our nation's energy grid. This workshop is a step toward that goal.

### **Renewable Energy World North America Conference and Expo, Long Beach, CA (February 14–16, 2012)**

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 looks forward to highlighting geothermal energy at the event. If you have attended this in the past and would like to discuss next year's event or offer suggestions for the planning committee please contact Leslie Blodgett at GEA, [leslie@geo-energy.org](mailto:leslie@geo-energy.org).

### **Other Events**

#### **Geothermal Power Plant Tours at The Geysers, Calpine Corp. (Sept–Nov)**

Calpine is offering free tours of a geothermal power plant at The Geysers. Reservations are required and can be made by going to [www.geysers.com](http://www.geysers.com). Three tours remain this year:

- Saturday, September 10, Cloverdale Street Celebration, 9 a.m. – 1 p.m., Calpine Sponsoring a Booth at The Street Celebration and Free Guided Tours to The Geysers
- Saturday, October 1, Calpine Visitors Center, Middletown CA, Calpine's Community Tour Event, 9 a.m. – 1 p.m., Calpine Offering Free Bus Tours to The Geysers and Geothermal Presentations at Calpine's Visitors Center
- Friday, November 4, Calpine Visitors Center, Middletown CA, Calpine's Geothermal Education Day, 9 a.m. – 1 p.m., Calpine Hosting Free Geothermal Presentations and Guided Tours of The Geysers at Calpine's Visitors Center





### **Geothermal Operations and Plant Optimization Conference, San Jose, California (September 15–16)**

The conference will feature keynote presentations from Alterra US and Iceland, Ram Power, Pacific Gas and Electric and the Geothermal Program Office - US Navy; Exclusive power plant maintenance and reservoir management workshop; The latest solutions from PowerChemTech, GE Global Research and Baker Hughes; and Technology updates from Potter Drilling, Veizades & Associates and Global Power Solutions. To register - visit [www.geothermalinsider.com/operations](http://www.geothermalinsider.com/operations) or phone US toll free: 1 800 814 3459 ext 7565

### **13th Oregon Geothermal Working Group meeting, Klamath Falls, OR (September 15)**

The 13th Oregon Geothermal Working Group meeting is planned for September 15, 2011, 8:30 AM - 2:30 PM, at the Oregon Institute of Technology (OIT): Mt. Mazama Room, College Union, Klamath Falls, OR 97601.

Details and the agenda are available at: <http://www.oregon.gov/ENERGY/RENEW/Geothermal/OGWG-Meetings.shtml>. Preregistration is encouraged — please register by September 5. Email [linda.ross@state.or.us](mailto:linda.ross@state.or.us) with the following: name, organization, address, e-mail address and phone number.

### **RETECH 2011, Renewable Energy Technology Conference & Exhibition, Washington DC (September 20–22)**

This year, RETECH will be held at the Walter E. Washington Convention Center in Washington DC. For information and to register, visit <http://www.retech2011.com>.

### **XIX Annual Congress of the Mexican Geothermal Association (September 22–23)**

The XIX Annual Congress of the Mexican Geothermal Association (AGM) will be held in Los Humeros, Pue., Mexico, on 22-23 September 2011. Visit <http://www.geotermia.org.mx>.

### **CanGEA's 4th Annual Conference and Investment Forum, Toronto, ON (September 14-15)**

The event will showcase Canadian development, activities of Canadian and international companies, and plug in a comprehensive finance and investment element as part of its Investment Forum. The event also features two workshops on geothermal energy and the Canadian Geothermal Code for Public Reporting on September 13, 2011. Details about the event and workshops can be found at: [www.cangeaevents.ca/toronto](http://www.cangeaevents.ca/toronto)

### **U.S.-Mexico Renewable Energy and Energy Efficiency Policy Roundtable, U.S. DOC, Mexico City, Mexico (September 26–27)**

The Government of Mexico has set an ambitious goal of 15% renewable energy production by 2020; this is coupled with a significant interest in energy efficiency improvements. To accomplish these goals, significant investment over the next decade is needed – providing export opportunities for U.S. companies.



Participants in the U.S.-Mexico Renewable Energy and Energy Efficiency Policy Roundtable will:

- Accompany a senior-level Department of Commerce official to meetings with the Government of Mexico on renewable energy and energy efficiency policy;
- Receive an invitation to an Ambassador's reception to network with Mexican officials and companies;
- Participate in a closed-door U.S.-Mexico Roundtable on Renewable Energy and Energy Efficiency Policy;
- Be invited to showcase products or services at the Green Expo's technical seminar; and
- Receive in-depth market information from the International Trade Administration on opportunities in the Mexican RE&EE market.

Cost is \$500; Participants are responsible for making their own travel arrangements. **Deadline for registration is August 15.** To register for the policy roundtable email: [ryan.mulholland@trade.gov](mailto:ryan.mulholland@trade.gov) or [aliza.totayo@trade.gov](mailto:aliza.totayo@trade.gov).

### **First UK Geothermal Symposium, London, UK (September 27)**

Where: The Institute of Directors, 116 Pall Mall, London SW1, on Tuesday 27 September 2011, 3.00pm–7.45pm

Contact: 08456 435 208 / [assistant@egs-energy.com](mailto:assistant@egs-energy.com) (spaces are limited)

Details: [www.egs-energy.com](http://www.egs-energy.com)

The first UK Geothermal Symposium, "Engineered Geothermal System Energy – in the UK and a Global Perspective" is taking place in London/ UK, September 27, 2011. Geothermal energy could provide at least 10% of UK electricity demand. Government support is needed through ROCs and RHI and a commitment to geothermal licensing. Agenda will be followed by Networking, Drinks and Canapés.

### **Soultz Geothermal Conference, Soultz-sous-Forets, France (October 5-6)**

The first Soultz Geothermal Conference is scheduled for October 5-6, 2011. The conference will give an overview of the geothermal activity in the Upper Rhine Valley and will focus on various technical and scientific challenges. The status of those geothermal projects will be presented in terms of design, concept, exploration, drilling, exploitation, monitoring, field testing, laboratory experiments and various modeling. Scope of the conference and all the details are presented at: [www.geothermie-soultz.fr](http://www.geothermie-soultz.fr)

### **Public Meeting on Geysers EGS Project, US DOE and Calpine Corp., Middletown, CA (November 4)**

The Department of Energy and Calpine Corp. plan to hold public meetings on the EGS demonstration projects underway at the Geysers. The venture will present progress reports at 2 p.m. Friday, Nov. 4. The meeting will be held at The Calpine Geothermal Visitors Center, 15500 Central Park Road, Middletown. Phone 707-987-4270.

For more information on the program, visit [www.geothermal.energy.gov](http://www.geothermal.energy.gov).



### **CanGEA's Annual Geothermal Power Forum, Calgary, AB (November 4)**

CanGEA takes part in the upcoming Global Clean Energy Congress in Calgary November 1-3, 2011 (<http://globalcleanenergycongress.com>) through a geothermal panel, and will hold its Annual Power Forum in the city on November 4, 2011. Details at: [www.cangeaevents.ca/calgary](http://www.cangeaevents.ca/calgary)

### **Turkey Renewable Energy and Energy Efficiency Trade Mission, U.S. DOC, Ankara-Istanbul-Izmir (December 5–9)**

Turkey's renewable energy investments will exceed US \$20 billion during the next 5 years. The country ranks Number 2 geothermal energy development potential in Europe and 5th in the world. A new Renewable Energy Law passed on December 12, 2010 increasing guaranteed prices for renewable energy resources, and additional incentives are in place.

Participants in this Trade Mission will gain:

- A senior U.S. Department of Commerce executive will lead the mission and facilitate valuable introductions to key Turkish energy industry decision-makers;
- A U.S. Export-Import Bank representative will travel with the delegation in all three cities and advise the participants on trade finance solutions;
- 10-15 pre-scheduled meetings with potential partners, distributors, end users, or local industry contacts;
- Meetings with key government decision makers and private sector firms;
- Pre-travel webinars on subjects ranging from industry briefings to business practices in Turkey;
- Meetings with CS Turkey's energy specialists in Ankara, Istanbul and Izmir, Turkey;
- Transportation to all mission-organized meetings inside Turkey (all air transportation within Turkey is the responsibility of the mission participant);
- The Trade Mission visit will provide visibility for participating American firms at networking receptions at the U.S. Ambassador's residence and U.S. Embassy press releases

Who should participate?: U.S. renewable energy equipment and systems manufacturers, RE project developers, engineering firms, energy efficiency systems and equipment suppliers, project finance companies, and any other RE & EE companies. Cost for small and medium size firms: \$3.285; large companies: \$4.055. To apply, go to: <http://export.gov/california/kern/trademissions/>.

Contact:

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