

Geothermal Energy Weekly

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National News

Ways and Means Subcommittees Hear Testimony on Renewable Energy Tax Incentives

At a House and Ways committee hearing this week, members of both the Select Revenue Measures and Oversight subcommittees heard testimony on tax breaks for renewable energy. Some of these incentives are slated to expire in as soon as three months, including the 1603 provision allowing developers to collect cash up front rather than a tax credit. Tax incentives for geothermal energy expire at the end of 2013. Reports of the hearing noted that witnesses were widely in favor of phasing out technology-specific tax credits in favor of technology neutral credits, but letting them phase out completely would be disastrous for national security and the economy in light of the need to decrease oil dependence.

Witnesses included Neil Auerbach of Hudson Clean Energy Partners, Will Coleman of Mohr Davidow Ventures, Tim Greeff of the Clean Economy Network, Kevin Book of ClearView Partners, Donald Marron, Director of the Urban Institute's Tax Policy Center, and Lawrence Lindsey, President/CEO of The Lindsey Group.

Auerbach [said he supported devoting a portion of royalties from oil and gas drilling](#) toward increased royalties to renewables. The "reverse auction" concept is included in a pending bill from Representative Devin Nunes (R-CA). Projects would bid for assistance in auction. Lindsey supported replacing specific subsidies with cash-flow taxes. These and other prepared statements as well as instructions to submit a statement for the record are available at: <http://waysandmeans.house.gov/Calendar/EventSingle.aspx?EventID=260256>.

In related news, the 12-person supercommittee assigned to reduce the national debt by \$1.5 trillion [heard testimony on tax reform](#) this week. “Fundamental tax reform, even if limited to just American businesses, can result in both revenue from economic growth for the federal government and more jobs for the American people,” said Rep. Jeb Hensarling, R-Texas, co-chairman of the committee.



“Spending cuts alone are not going to put Americans back to work or put our budget back in balance,” added Sen. Patty Murray, Washington, the Democratic co-chair. “We have to address both spending and revenue.”

Five Renewable Power Industries Sign Letter to President Obama Supporting Federal Renewable Energy Tax Incentives

This week, renewables associations representing the leading experts in several renewable energy industries sent a joint letter to President Obama and top members of Congress in support of the federal renewable energy tax incentives. The letter, below, describes how crafting long-term federal tax incentives for clean energy sources is crucial to the continued advancement of technologies and the assurance of economic stability.

The letter was signed by representatives from the Geothermal Energy Association, National Hydropower Association, Biomass Power Association, Wind Energy Association, and Solar Energy Industries Association.

Dear President Obama, Majority Leader Reid, Minority Leader McConnell, Speaker Boehner, Minority Leader Pelosi, Chairman Baucus, Ranking Member Hatch, Chairman Camp, and Ranking Member Levin:

As leaders of America’s renewable energy industries, we are writing to underscore the important role federal tax incentives play in developing and promoting new domestic energy resources to meet the nation’s growing demand for energy. Well-crafted, stable and efficient federal policy that provides long-term certainty plays a critical role in achieving the nation’s energy policy objectives while leveraging private sector resources to deploy new, clean domestic energy resources.

As with every other major U.S. energy resource, smart, reliable long-term policy helps bolster America’s renewable energy sector and yields significant economic and energy policy benefits. The organizations who have signed this letter represent over 507,000 renewable energy workers in all 50

states. Combined, we provide 425 billion kilowatt hours (kWh) of clean, domestic energy, enough to power 40 million homes.

In spite of the nation’s recent economic challenges, most of the recent growth in renewable energy jobs, investment, manufacturing capability and technological advancements has occurred in just the past few years. All of this is a direct result of renewable energy tax policies that were put in place by the previous bipartisan efforts of Congress. Now – when economic recovery is slow at best, job growth is still paramount, and technology leadership is uncertain – is distinctly not the time to increase the tax burden on America’s renewable energy industries.

Over time, renewable energy sources have become more cost competitive with traditional energy sources. With the continuation of modest tax relief to encourage the development of the nation’s renewable energy resources, there will be further technological advancement and greater efficiencies



achieved in the renewable sector. Costs will continue to decline and sustainability will be achieved.

A continued federal commitment to advance the nation's renewable energy resources will further reduce energy costs for consumers and increase diversification in our domestic energy portfolio. This is wholly consistent with the nation's economic and energy policy goals. In the highly regulated electric energy sector, renewable energy tax incentives represent our nation's de facto energy policy, ensuring the continued development of a diverse domestic energy mix. Without these incentives, the nation is in danger of becoming entirely reactive and overly reliant on a reduced number of energy sources, putting consumers and our economy at risk.

Targeted tax relief has proven to be an extremely effective means of promoting market diversity and technology maturation – and energy is no exception.

Energy tax incentives should be used to foster market competition based on national energy policy goals. As such, in the course of Congressional deliberation on legislation to grow the economy and reduce our budget deficit, we strongly encourage you to continue the tax relief that promoted such dramatic investment, created jobs and fostered project development.

Thank you in advance for your consideration. The renewable energy industries look forward to constructively working with you to redevelop vibrant American communities and help solve the nation's economic and fiscal challenges.

Sincerely,

Robert Cleaves Biomass Power Association

Denise Bode American Wind Energy Association

Linda Church Ciocci National Hydropower Association

Karl Gawell Geothermal Energy Association

Rhone Resch Solar Energy Industries Association

Congressman Adam Smith Hosts Roundtable Discussion on Development of Geothermal, Other Renewables on DOD Lands

Industry representatives from the geothermal, geothermal heat pump, wind, solar, biomass, fuel cell, and other clean technology industries participated in a roundtable discussion convened by Congressman Adam Smith (D-WA). Congressman Smith is the ranking member of the United States House Committee on Armed Services, which is responsible for funding and oversight of the Department of Defense (DOD). The roundtable held by Congressman Smith to facilitate discussion with industry on the issues and challenges that companies face in providing renewable energy to military installations. Topics addressed by Congressman Smith and industry representatives at the meeting included land use and site development, power purchase agreements, local utility relations, and the role of grid technologies in the development of renewable energy projects on DOD land. GEA President Paul Thomsen (pictured) as well as other GEA representatives were present at the roundtable to answer Congressman Smith's questions and highlight the potential of geothermal energy in relation to the DOD's renewable energy goals.





The Department of Defense has set a goal of producing or procuring 25% of its energy from renewable energy sources by 2025. The U.S. Navy's Geothermal Program Office (GPO), which develops and manages geothermal resources for the entire military, has identified 25 locations with geothermal potential on military controlled lands in the continental U.S.

DOE Highlights Clean Energy Jobs, Announces Major New Energy Efficiency Milestone

Press Release [[See full story](#)], September 21 — One day before Deputy Secretary of Energy Daniel Poneman highlights the clean energy jobs created with support from the Obama Administration, the Energy Department announced that the weatherization program under the Recovery Act has now made more than 500,000 low-income homes nationwide more energy-efficient. The weatherization program is helping families save hundreds of dollars a year on their energy bills, while employing more than 14,000 workers across the country and countless others throughout the supply chain.

The Department of Energy also today released a new video showing the positive impact that the administration's clean energy investments in advanced battery manufacturing have had on Michigan workers. Listen to Annette Herrera, an employee with A123 Systems, an advanced lithium-ion battery manufacturer, tell her story. The company also recently announced it has hired its 1000th clean energy employee in Michigan, many of whom were previously out of work.

"Our investments in clean energy innovation are creating hundreds of thousands of jobs around the country, developing entire industries and supply chains, and helping to make American companies more competitive," said Deputy Secretary Poneman. "We are in a race to capitalize on the huge economic and job growth potential of the clean energy economy. Other countries like China are already moving aggressively to develop and deploy these technologies, but with continued investments in innovation, this is a race we can win."

Allocate Fossil Fuel Revenues for Renewables, Says Murkowski

Despite assurance from Senate Majority Leader Harry Reid (D-Nev.) that energy legislation would be a top priority this fall, there has been no real debate on the issue, causing additional anticipation and uncertainty, according to Sen. Lisa Murkowski (R-Alaska). "For about three years running, we've had a near-constant prospect of an energy debate on the Senate floor. Not once during that time has the Senate actually debated energy policy," [she said this week](#) at the [RETECH renewable energy conference](#) in Washington, DC.

Murkowski recommends putting revenue from the development of conventional resources toward clean energy development. "That will finally provide the makings of a legitimate long-term energy policy," she said. "Our best energy policy will not rely on new mandates or higher taxes -- it will instead help fossil fuels work themselves out of a job." Murkowski has proposed such a fund as part of other legislation without success.



The senator's remarks came during the annual RETECH conference, which is hosted by the American Council on Renewable Energy. See details on the conference's geothermal panel under Renewable Energy and Climate Change news in this issue.

Company News

Alterra Power: Permit Received for Expansion of Reykjanes Plant

Press Release [[See full story](#)], Vancouver, September 15 -- Alterra Power Corp. (TSX: AXY) ("Alterra") is pleased to announce that an operating permit has been received for its planned 80 MW expansion of the Reykjanes geothermal power plant in Iceland. The permit formally allows Alterra to install and place into service a new, currently-owned 50 MW turbine, as well as a 30 MW low pressure turbine that will be powered from existing steam production.

Separately, Alterra is continuing its effort to finalize power purchase arrangements with aluminum smelter Norðurál Helguvík sf. (a subsidiary of Century Aluminum Co., "Norðurál") and other industrial power purchasers. Results from a pending arbitration related to a prior power purchase agreement with Norðurál are expected this fall.

Júlíus Jónsson, CEO of Alterra's Icelandic subsidiary, HS Orka hf ("HS Orka"), said, "I am pleased that we have now been granted regulatory approval to move forward with this major expansion in a uniquely rich resource area. Full attention is now focused on finalizing our power purchase and financing arrangements, which we intend to achieve in the next few months."

GeoTek: Emerging Geothermal Technology Company Strengthens Management

From GeoTek Press Release [[See full story](#)] — Midland Texas, September 22 — GeoTek Energy, LLC, a geothermal technology company focused on implementation of the Gravity Head Energy System, announced today the addition of Louis Capuano and Hezy Ram to its management team.

Lou Capuano Jr. will serve as a member of the GeoTek Board of Managers. Lou is the Founder and Chairman of ThermaSource, Inc., a worldwide leader in geothermal drilling and consulting. In 2007, he became CEO of ThermaSource, LLC, a holding company for ThermaSource, Inc., ThermaSource Cementing, Inc., EGS, Inc., ChemTech Services, LLC, and Tecton Geologic, LLC. Capuano earned a bachelor of science in petroleum engineering from the University of Southwestern Louisiana. He has more than 32 years of geothermal experience.



Hezy Ram has been appointed Executive Advisor - Board of Managers. Ram spent 25 years developing and acquiring geothermal projects in North and Central America. For most of his career he was an executive vice president with Ormat Technologies, the largest pure geothermal energy company. After leaving Ormat in 2007, Hezy founded Ram Power, which became a publicly traded company in Canada by virtue of consolidating Ram Power with three other publicly traded geothermal companies.

Ormat Technologies: \$310M Commitment Received for Olkaria III

Press Release [[See full story](#)], Reno Nevada, September 22 -- Ormat Technologies, Inc. (NYSE: ORA) announced today that its wholly-owned subsidiary, Ormat International, Inc., signed a commitment letter issued by the Overseas Private Investment Corporation ("OPIC") to provide project financing of up to \$310 million, to refinance and expand Ormat's 48 MW Olkaria III geothermal complex located in Naivasha, Kenya.

Under the agreed term sheet attached to the commitment letter, the loan will be comprised of a refinancing tranche of up to \$85 million to prepay the existing loan and fund transaction costs, a construction loan tranche of up to \$165 million to finance the construction of an additional 36 MW expansion currently underway, and a \$60 million stand-by facility to finance an additional optional 16 MW capacity expansion, that, if exercised by Ormat, could bring the total capacity of the complex to approximately 100 MW.

The maturity dates of the construction tranche and the refinancing tranche are expected to be June 2030 and December 2030, respectively. The maturity and certain other terms of the stand-by facility will be finalized following Ormat's decision to exercise the option to construct the additional 16 MW expansion.

Financial closing is targeted to occur during December 2011, subject to (among others) successful negotiation of the loan documentation, completion of due diligence by OPIC and fulfillment of certain conditions precedent to be agreed upon in the loan documents.

Dita Bronicki, CEO of Ormat Technologies said, "This financing marks one of the largest project finance loans obtained by Ormat, and demonstrates OPIC's confidence in our technology and operational skills, evidenced by our successful track record of over a decade with the Olkaria III Geothermal complex. We thank OPIC for their confidence in Ormat and their support of U.S. investments in nurturing development in Africa".



Renewable Energy and Climate Change

Geothermal Panel Delivers at RETECH Renewables Conference

An estimated 3,000 government, utility, technology and finance professionals from 50+ countries met this week at RETECH 2011: The Renewable Energy Technology Conference & Exhibition in Washington, DC.



The conference featured a panel on the status and outlook of geothermal power generation as part of its Renewable Energy Power Generation Technology track. Topics included top issues, such as tax incentives for geothermal energy, costs and financing, and the need solve time gaps in the permitting process. Additionally the panel discussed the need for wider education on geothermal energy and on how it differs from other renewables, as well as the potential for jobs in the sector.

The panel was chaired by Paul Thomsen, Director, Policy & Business Development, Ormat Technologies, Inc. and co-chaired by Karl Gawell, Executive Director, Geothermal Energy Association. Panelists came from leading companies in the geothermal sector: Jonathan Weisgall, Vice President of Legislative and Regulatory Affairs, Mid-American Energy; Greg Wetstone, Vice President, Terra-Gen Power; Hezy Ram, CEO, Ram Energy Inc.; and Francesco Venturini, CEO, Enel Green Power North America.

On comparing geothermal to other renewables, Gawell said that because geothermal is baseload, meaning it is available 24/7, the power output will be several times greater than the MW capacity. "A lot of people don't take that into consideration and just look at megawatt capacity," he pointed out.

Weisgall, also representing CalEnergy, said the company has 10 plants with a total 340 MW capacity adjacent to the Salton Sea in southern California. "There are 240 employees at those plants," he said. "This is in Imperial County, where the unemployment rate is nearing 31%."

Venturini described Enel Green Power's innovative use of technologies at its existing Stillwater, Nevada geothermal plant. Solar PV modules will be added to generate an additional 24 MW, enhancing thermal efficiency at peak times on the hottest days (see also [Project of the Week at greentechmedia.com](http://www.retech2011.com/)).

For more on the RETECH conference, visit <http://www.retech2011.com/>.



GEA Exec. Director Comments on Solyndra Bankruptcy on *National Journal*

This week, Amy Harder on the National Journal's Energy & Environment Blog asked: "[What do Solyndra's failures mean for renewable energy writ large?](#)," in light of the federally backed solar company's recent bankruptcy, dismissal of 1,100 workers, and FBI investigation. "*Should Solyndra's woes warrant a deeper look at the Energy Department's ability to finance renewable energy? How does global competition--namely from China -affect the ability of renewable energy companies like Solyndra to succeed? Should the government stop funding renewable energy altogether?*"

In response on the blog, Karl Gawell, Executive Director of GEA, pointed out that the answers could largely depend on how policy makers respond to the Solyndra bankruptcy. To view his response, visit:

<http://energy.nationaljournal.com/2011/09/solyndra-bad-bet-or-tip-of-the.php#2072546>.

QUEST Article Explores Induced Seismicity

An article on QUEST explores geothermal energy in California, where "more renewable energy comes from geothermal energy than solar and wind combined." The article concentrates particularly on Enhanced Geothermal Systems, technology currently funded by the Department of Energy at seven demonstration projects across the U.S. Through these projects and other research, scientists are working to lower any risks associated with induced seismicity. For example: "Calpine is working with Ernie Majer of the Lawrence Berkeley National Laboratory to monitor the risk of induced seismicity with additional, around-the-clock seismic monitoring next to their EGS production and injection wells located in the northwestern region of the Geysers," according to Ernie Majer, a staff scientist with the Lawrence Berkeley National Laboratory. See:

<http://science.kqed.org/quest/video/induced-seismicity-man-made-earthquakes/>

State News

California: IID to Sell Water to Geothermal Project

The Imperial Irrigation District has [agreed to sell water](#) to Obsidian Energy for the Black Rock 1, 2, and 3 geothermal power project. The circumstances of the sale fall under the Interim Water Supply Policy, which sets aside 25,000 acre-feet of water per year for new non-agricultural projects. Obsidian will pay \$164,929 per year on a 30.5-year contract for 609 acre-feet of water each year.



International News

Europe

Iceland: Joint Geothermal Projects with Russia a Priority, Says President

This week Iceland's President Olafur Grimsson spoke at the second international forum The Arctic: Territory of Dialogue. A champion of geothermal energy, Grimsson told the conference that coordinating on geothermal energy projects with Russia is a top priority for his country. Russian Prime Minister Vladimir Putin also met with Grimsson, saying Moscow has specific ideas on joint energy projects, [according to reports](#). Additional potential Russian-Icelandic joint development projects include commercial navigation, transport terminals, and corridors like the Northern Sea Route.

Spain: Government Awards Subsidies for Canary Islands Geothermal Exploration

The "GeotherCan" project in Spain to develop 3D models for characterizing geothermal resources has been awarded around \$1.07 M in federal government subsidies. Led by Petratherm España, the project is located in the Canary Islands and is expected to yield a better understanding of the subsurface system on the islands of Tenerife and Gran Canaria.

"This funding support from the Spanish government not only supports the GeotherCan project, but it will also provide substantial additional information to Petratherm – at a fraction of the normal research costs – which will assist our other projects in the region," [said Terry Kallis](#), Petratherm's managing director.

Americas

Canada: CanGEA Holds Annual Conference

The Canadian Geothermal Energy Association held its Annual Conference and Investment Forum on September 14–15 in Toronto. The conference began with the opening of the Toronto Stock Exchange and featured geothermal opportunities across Canada.

[From thinkgeoenergy.com](#): *Presentations of the conference covered the value chain of geothermal development, looking at Canadian potential and resources, as well as international development. In a first, a marketing panel looked into the current position of geothermal energy in the media and what possibilities the sector has to market itself. Geothermal drilling and experiences with projects, as well as direct use in Canada were the last topics of Day one that closed with a networking reception. Presentations will be made available for purchase at www.cangea.ca*



Asia/Pacific

China: Tapping Iceland for Geothermal Knowledge

China, which is becoming increasingly active in the geothermal sector, has [sent the most students out of any country](#) to Iceland to study at the Geothermal Training Program, a program of The United Nations University that has been in place for over 30 years. "Iceland has a huge advantage due to its experience and knowledge in regard to the utilization of hydropower and geothermal power," said Cui Yu, geothermal projects manager at Beijing's Geology Minerals Development Bureau. Cui is one of the students currently studying in Iceland. "China can learn from Iceland's experience and Icelanders can teach us many things."

China has 26 MW of installed geothermal capacity, according to reports. Companies involved in geothermal prospects in China include China Petrochemical Corp. and Xianyang-based Shaanxi Green Energy Geothermal Development Co.

Indonesia: Panax to Drill on Flores Island, Marubeni Wins Geothermal Tender

Panax Geothermal, based in Australia, is making ready its [plans to drill at its Sokoria Project](#) on Flores Island. Preparations include conducting detailed road and port surveys and marking final drill sites. The project is planned to have a 30-MW capacity. Geothermal power generated at the site will be sold to PT PLN (Perusahaan Listrik Negara).

Also in Indonesia, the Japanese [Marubeni has won a tender](#) for work on the Patuha geothermal plant in West Java, owned by state company Geo Dipa Energy. PLN will buy the electricity at 6.8 cents per kilowatt hour. Patuha is expected to begin producing power in 2013.

Japan: 740 MW of Geothermal Potential in Northeast

The Japan Geothermal Developers' Council estimates 740 MW of new geothermal power could be developed in the northeast Tohoku region. [Reports have shown](#) 23,400 MW of energy available in the nation.

Philippines: PetroEnergy Signs Sales Agreement for Maibarara Project

PetroEnergy Resources Corp. (PERC) has [signed a 20-year agreement](#) with Trans-Asia Oil and Energy Development Corp. for the sale of electricity from the Maibarara geothermal project. "MGI will sell the entire output of the plant starting in 3rd quarter of 2013, when the power facility is targeted to begin commercial operations," PetroEnergy Resources told press. The plant is planned for a 20-MW capacity.



Geothermal Heat Pumps and Direct Use

GHP Industry Surveys to Aid Development of National Certification Standard

Oak Ridge National Laboratory is conducting a series of surveys to gather information on federal experience with geothermal heat pump systems. Information from the surveys will help as ORNL works with GEO and IGSHPA to develop the first national certification standard for system installers. To take the surveys, visit:

http://www.ghpnscs.org/index.php?option=com_content&view=article&id=48&Itemid=20



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

Notices

New This Week

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.



Closing this Week

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.
- 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 \(EIS\)](#)

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. (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

New This Week

SCE Launches 2011 Renewable Auction Mechanism Solicitation (November 15)

From SCE — SCE is pleased to announce that it has launched its 2011 Renewable Auction Mechanism [RAM] Request for Offers [RAM RFO] from owners of eligible renewable resource [ERR] Generating Facilities. Information regarding the RAM RFO can be found on the RAM RFO website at <https://sceram.accionpower.com>.

The RAM RFO is open to projects utilizing ERRs with contract capacities not less than 1 MW and not greater than 20MW. Additional Offer qualification criteria can be found in the RAM RFO Participant Instructions [RFO Instructions], available in the Documents section of the RAM RFO website.

To participate in the RAM RFO, Offerors must register on the RAM RFO website as an Offeror and complete prequalification in the Offer Management tab of the RFO website. Only those participants who have completed and met the prequalification criteria may submit an Offer using the Offer Form. Offerors will be notified once the Offer Form has been posted on the RFO website.

Offer Submittal Deadline: Tuesday, November 15. For an Offer to be considered in SCEs 2011 RAM RFO, Offerors must submit complete Offer[s] via the RAM RFO website no later than 12:00 pm[noon] Pacific Prevailing Time on Tuesday, November 15, 2011.

RFO Web Conference: SCE will host a RAMRFO Conference via Webex to discuss the RAM RFO process on Tuesday, October 25, 2011. Conference details will be made available on the RAM RFO website.



All inquiries regarding the RAM RFO must be posted in the Q and A section of the RAM RFO website. SCE representatives will post responses to participants questions on the RAM website.

Proposal Announcements

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 for more information.

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 or go to:

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 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 or go to: <http://www.energy.ca.gov/contracts/smallgrant/index.html>. Refer to Sol# 11-02.

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)

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, 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=28424&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.

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 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)

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. 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 or go to: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf11570. Refer to NSF 11-570. (Grants.gov 8/10/11)

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 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 grorrer@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

Happening This Week

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 or 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 (spaces are limited)

Details: 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.

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 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 or contact Devri: 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.



Other Events

Geothermal Power Plant Tours at The Geysers, Calpine Corp. (Oct–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.

- 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



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

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.

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



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/>.

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GEOHERMAL ENERGY WEEKLY

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

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