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National News

Final Continuing Resolution Passes, Includes Restoration of Geothermal Royalties to Counties

The final continuing resolution, which funds the government through March 4, 2011, passed this week in the House and Senate. The 36-page resolution provides a nominal increase of \$1.16 billion over 2010 spending levels and includes a two-year freeze on federal civilian workers. The resolution indicated a compromise between Republicans and Democrats.

As signed by the President, the resolution includes a fix restoring the county share of geothermal royalties. Section 161 says: “Notwithstanding section 101, section 423 of Public Law 111–88 (123 Stat. 2961), concerning the distribution of geothermal energy receipts, shall have no force or effect and the provisions of section 3003(a) of Public Law 111–212 (124 Stat. 2338) shall apply for fiscal year 2011.”

Congressman Dean Heller (R-NV) has worked with the House appropriations committee to ensure restoration of county royalties, while in the Senate, Harry Reid (D-Nev.) and John Ensign (R-NV) worked together to remedy the situation.

Senators Rockefeller, Murkowski Hope to Block EPA Climate Rules Next Year

U.S. Senator Jay Rockefeller (D-WV) believes the new Congress will be “much more likely” to approve his legislation that would halt looming Environmental Protection Agency climate change rules [Sustainable Energy Coalition/SUN DAY Campaign and [The Hill](#)]. He wants to delay rules — which will begin phasing in next month — to curb emissions from power plants, refineries and other industrial plants, but never got a vote on his measure this year. In addition, Senator Lisa Murkowski (R-AK) is mulling new efforts to block EPA rules next year. She had earlier sponsored an unsuccessful “resolution of disapproval” that would have nullified EPA’s “endangerment finding” that greenhouse gases threaten humans, which is the legal underpinning for all EPA climate rules. Ascendant House Republicans are also vowing to block EPA climate rules and other pollution regulations they call “job-killing.”

Renewable Energy and Climate Change



EIA Releases Data on US Renewable Energy Production

The Energy Information Administration has released [new figures on renewable energy generation](#) in the first three quarters of 2010. Renewable sources including biomass, geothermal, solar, water, and wind accounted of 4.2% of US electricity production, a growth of 2.2% over 2009 numbers. Geothermal energy production grew by 4.9%, biomass by 5.5%, wind by 27.3%, and solar by 47.1%. Production of conventional hydropower dropped by 5.2%. Non-hydro renewables accounted for 3.9% of total electrical generation, up from 3.5% the year before. Net generation rose 5.4%, with coal-fired generation up 8.4%, the largest fuel-specific increase.

Nation's First Offshore Wind Farm Looks for Buyers

The [nation's first offshore wind farm, Cape Wind, has reached a deal](#) selling half its power to National Grid, Massachusetts' largest electric utility. The 468-MW project is expected to produce power for 200,000 homes and will cost at least \$2 billion to construct. Cape Wind does not yet have a buyer for the rest of its projected power, meaning it could end up building fewer than the expected 130 turbines, and thus have to increase the cost from 18.7 cents per kilowatt hour up to a maximum 19.3 cents per kilowatt hour. Sue Reid of the Conservation Law Foundation thinks buyers will end up buying in to the clean energy industry: "Really, are they going to choose to be on the wrong side of history here?" she said. But Robert Rio of the Associated Industries of Massachusetts said: "I can't envision a scenario where a utility would voluntarily purchase additional Cape Wind power knowing there's cheaper power available."

State News



California: Cap-and-Trade Program, Efficiency Payments for Utilities Approved

On December 16th, [California's Air Resources Board \(ARB\) voted 9 to 1 to approve regulations that will establish a cap-and-trade program](#) for greenhouse gas (GHG) emissions. The cap-and-trade program is scheduled to launch in 2012. Regulated entities will include in-state electricity generators, imported electricity, refineries, and large industrial emission sources in the first three-year period of compliance. They will be required to turn in an allowance or an offset credit for each ton of CO₂e emitted. Fuel distributors will be added to the list in 2015. Most regulated sources will receive a number of free allowances during transition. Next year, a revised version of the regulations will be released for a 15-day public comment period, with ARB planning to finalize regulations by late summer 2011.

California regulators have also approved tens of millions of dollars in customer payments to utilities owned by Pacific Gas and Electric Corp. (\$29.1 million), Southern California Edison (\$24.1 million), and San Diego Gas &

Electric Co. (\$5.1 million), as incentives for boosting energy efficiency and cutting customers' energy consumption from 2006 to 2008 (Sustainable Energy Coalition/SUN DAY Campaign and [WSJ](#)). The incentives "encourage the utilities to embrace energy efficiency as a core part of their business model by aligning the utility profit motive with the broad deployment of energy efficiency measures." Customer advocates, however, objected to the amount of the payments, saying the utilities did not achieve efficiency targets they had earlier agreed to meet. The group pointed to a CPUC staff report released earlier this year that found that the utilities did not meet efficiency performance benchmarks set by the CPUC.

California: Geothermal Expansion Considered

On Wednesday, December 22, the [Lake County Planning Commission will make a permitting decision](#) regarding the final environmental impact report and environmental assessment on a proposed geothermal field expansion project by Bottle Rock Power Steam. Bottle Rock is proposing modifications to its existing use permit and associated traffic control and road maintenance plan. The company wants to rezone 60 acres of the property to build two new geothermal well pads, an access road, and 1.3 miles of new pipeline. Up to 22 production and injection wells have been proposed.

Michigan: Outdated Funds Redirected to “Jobs Race to the Top”

If the states are the laboratories of democracy, Washington DC can take a lesson from what is happening to create jobs in Michigan, which built an entire advanced-battery “ecosystem” for the purpose of electrifying the automobile with breathtaking speed [Sustainable Energy Coalition/SUN DAY Campaign and [Politico](#)]. Here’s how a jobs program could work: Take funds now spent on redundant or outdated programs and redirect them to a Jobs Race to the Top competition among the country’s regions, states and communities. Focus the competition on job creation in clean energy. Devote the competition to rewarding the most effective (i.e., most lasting jobs created quickly) public-private partnerships. Without a financial carrot, the difficult regulatory changes at the local level would take years, if not decades.

International News

Europe: Projects Develop in UK and Serbia, Hothouse in Turkey, Iceland Touts China Partnership

UK’s Eden Geothermal Project Approved

Cornwall Council has [approved plans for the Eden Project geothermal power plant](#), which could be the first of its kind in the UK. Drilling is expected to start in the second half of 2011, production in the second half of 2013. Up to 4 MW of electrical capacity will be used by Eden, with surplus going to the national electricity grid. Julian German, cabinet member for climate change at Cornwall Council said: “It is essential that we use our vast array of renewable energy potential and electricity. Heat produced from deep under our land is one of the key resources that can provide Cornwall with national and international leadership.”



Exploration Permit Extended at Vranjska Banja, Serbia

Reservoir Capital Corp.'s [geothermal exploration permit at Vranjska Banja has been extended](#) until November 11, 2011. The 2010 work program final phase included a geophysical survey to determine the structure and depth of the geothermal resource, leading to identification of a viable target. The company also completed the first phase of resource testing on their existing wells, VG-2 and VG-3, determining that these wells are exploitable.

Turkish Company Developing Geothermal Hothouse

MB Holding's subsidiary Sultan Sera A.S is [beginning work on a geothermal-integrated hothouse project](#) in Antalya province. The company has previously produced geothermal electricity in Aydin. The 41,400-m² hothouse project will create jobs and has support from the Innovation Ministry of the Netherlands, including training for workers in the Netherlands. "We will cultivate Bandita-type tomatoes in the hothouse," said Muharrem Balat, chairman of MB Holding.

Iceland and China Partnering on Geothermal

[Iceland is China's primary geothermal partner, President Olafur R. Grimsson said](#) in an interview in Abu Dhabi. "Both Premier Wen Jiabao and Vice President Xi, who will be the next President of China, declared that on the basis of what China has done with Iceland in the field of geothermal, China now looks at Iceland as its primary partner in the geothermal transformation of China," Grimsson said. "This is doing in China what we did in Reykjavik," he said. "When I was a kid, Reykjavik was heated by coal and oil, but now it's entirely clean geothermal." Iceland also has geothermal partnerships in India, East Africa, Central America, the U.S. and Europe.

Pacific: Geological Concerns in New Zealand, Temporary Shutdown at Philippines Plant

Concern Raised Over Resources at Rotorua, New Zealand

With over 150 geysers counted in the Rotorua geothermal project area thirty years ago and only three today, [scientists and locals have shown concern over geothermal activities](#) and the protection of natural features. A review of Rotorua's geothermal plan will decide how much of the geothermal heat will be used and who can use it. "We now know in essence how much of the resource can be used, and it's now up to the community and stakeholders like iwi and power groups as to how we allocate that resource," said David Phizacklea of Environment Bay of Plenty. "There's no way you can go into full on scale commercial production in geothermal systems and protect geothermal features," said Bradley Scott of GNS Science. "It's one or the other."

Philippines' Northern Negros Plant Closed Temporarily

Energy Development Co. has announced its [49-MW Northern Negros geothermal energy plant shut down for about nine months](#). The company will perform technical examinations to increase the capacity. During the shutdown, the company will continue community relations and environmental management programs.

Africa: Yemen Ready to Drill

Yemen to Drill for Geothermal Energy

A USD 1.8 million contract between the Geological Survey Authority and Mineral Wealth means plans for drilling [the first geothermal exploratory well in Yemen](#). The project will explore geothermal resources in Allisi area in Dhamar governorate with the intent to generate electrical power. Ismail Al-Ganad, Chairman of Geological Survey Authority. Ismail Al-Ganad, Chairman of Geological Survey Authority said work in the area has been going on for two years. "During the past two years, the Authority conducting studies of geological, geochemical and detailed geophysical in the first area selected for drilling in the area of Allisi – Asbil in Dhamar governorate," he said. Work includes cooperation with a power research center in Italy and nature sciences institute in Germany.

Geothermal Heat Pumps and Direct Use



Ohio University and Michigan Ice Arena Utilizing Geothermal Systems

[Ohio State University will reduce the cost of heating and cooling](#) its South High Rises through a system of 458 geothermal wells to be drilled on its South Oval. The geothermal well field system will also extend to the new William Hall Complex building which will add 50 geothermal wells to the site.

The Plymouth Cultural Center in Michigan [dedicated its geothermal ice arena last week](#). The \$1 million technology upgrade should pay for itself within ten years. It is expected to save 50% of electric consumption during summer months and 80% natural gas consumption year round. "Basically, we drilled 45 holes in the ground outside and are circulating water through the ground to maintain a constant temperature through the year," Ryan Jahnke, Thermo Source Commercial and Industrial Division Manager, said. "In the process of creating ice, you strip the heat out and use that hot water for a variety of things including heating the building."



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



Notices

Closing This Week

Renewable Energy World Now Seeking Awards Nominations (December 31)

Nominations can now be submitted in categories ranging from "Project of the Year" to "Innovation" to "Leadership." Nominations will remain open until December 31, after which the 16 editors of the Renewable Energy World Media Network will select the winners in each category. In addition the 5 finalists in each category will be released in January so our readers -- 25,000 votes last year -- can vote for the 2011 Reader's Choice Award. Submit Your Nominations Today!

Project of the Year (Solar, Wind, Hydro, Geothermal and Bioenergy)

Innovation Awards

Leadership Awards

Please visit

<http://www.renewableenergyworld.com/partner/rew/expo/north-america/awards/2010-11-22/>.

Current Notices

DOE Seeks Peer Review Comments on Geothermal Life-Cycle Analysis

Life-Cycle Analysis Results of Geothermal Systems in Comparison to Other Power Systems

Draft for Peer Review

The Geothermal Technologies Program is soliciting peer review comments on the draft report Life-Cycle Analysis Results of Geothermal Systems in Comparison to Other Power Systems from Argonne National Laboratory. ANL concludes that "despite the large amount of steel and concrete required per MW power capacity, enhanced geothermal systems are one of the lower GHG emitters of the renewable systems studied per unit of lifetime kWh output. EGS GHG emissions can be reduced even further as well depth decreases."

See <http://www1.eere.energy.gov/geothermal/plans/comments.cfm?doc=lifecycle>

DOE Seeks Peer Review Comments on Geothermal Water Use

Water Use in the Development and Operation of Geothermal Power Plants

Draft for Peer Review

The Geothermal Technologies Program is soliciting peer review comments on the draft report Water Use in the Development and Operation of Geothermal Power Plants from Argonne National Laboratory. ANL concludes that

"Overall, geothermal technologies appear to consume less water on average over the lifetime energy output than other power generation technologies."

See <http://www1.eere.energy.gov/geothermal/plans/comments.cfm?doc=wateruse>

Employment



Employment Opportunities

For more on employment opportunities listed here visit http://geo-energy.org/empl_opport.aspx.

General Manager, Geothermal Exploration, Origin Energy

- Lead our Indonesia geothermal exploration business
- Jakarta based with domestic and international travel

As a result of Origin's continued commitment to renewable energy and sustainability this newly created position has been established to manage the exploration program in our Indonesian geothermal business.

Based in Jakarta you will report directly to the JV President Director (Country Manager). Starting on our flagship operation located in Northern Sumatra, you will be responsible for all exploration strategy, plans and results. In addition, you will lead other future Indonesia geothermal exploration projects.

Drawing on your background in Geoscience and Exploration Management, you will manage all Geoscience and reservoir engineers within the project and will be responsible for all resource and exploration related technical decisions.

Origin Energy is a top 20 ASX listed company in Australia and has experienced significant growth year on year since forming in 2000 which continues. Operating as a fully integrated energy provider and employing approximately 4500 employees across Australia, New Zealand and the Pacific with major projects including oil and gas exploration and production, power generation and energy retailing. Origin currently holds 51.4% of Contact Energy, which has 304 MW operating geothermal and a number of projects under development.

If you are interested in this opportunity or other geothermal opportunities please contact: Jennifer Blake on +617 3867 0022 or email jennifer.blake@originenergy.com.au.

Landman, Nevada Geothermal Power

The Company offers excellent health benefits, competitive remuneration, and opportunities for career advancement in an exciting field of endeavor. No phone calls please. Only qualified candidates will be contacted for an interview. Email resumes to: careers@nevadageothermal.com, Fax resumes to: 604-688-5926

Staff Geologist/GIS Technician, Nevada Geothermal Power

The Company offers excellent health benefits, competitive remuneration, and opportunities for career advancement in an exciting field of endeavor. No phone calls please. Only qualified candidates will be contacted for an interview. Email resumes to: careers@nevadageothermal.com, Fax resumes to: 604-688-5926

NREL Seeking Applicants for Geothermal Analysis Group

We're looking for applicants with geothermal or related technical backgrounds that have strong analytical skills and good writing/communication skills. If you have any graduate students, post-docs, former undergrads with some experience, or other contacts that are looking for employment and would be good fits for any of these positions, please forward them the information. They can also apply for the positions online at http://www.nrel.gov/employment/job_openings.html. You may also contact:

Senior Level Assistant Site Manager, Operations and Maintenance

Contact: Richard@mrspokane.com or call 509-340-2852 Ext. 18

Senior Principal Geothermal Geologist – Brisbane, Australia

Shane Stevens / Talent Search Team Manager, Origin

Email: Shane.stevens@originenergy.com.au Phone: +61 00 11 73858 0237

Vice President Geology, Western US

Please send resumes to Bstevens@stmassociates.com

Geothermal Openings, NREL, Boulder, CO

Go to http://www.nrel.gov/employment/job_openings.html and search "geothermal"

Drilling Manager, NV

Contact: Andrew Matkovic / Vice President Clean Tech & Energy
(216) 539-7668 or andrewmatkovic@carmongroup.com

Geophysicist, Calpine, The Geysers, CA

To apply online, see

https://www.hrapply.com/calpine/AppJobView.jsp?link=3645&page=AppJobList.jsp&skimSessionName=com.hrlogix.view.cont.app.JobListTable&skimName=requisition.requisition_id&skimNdx=4&op=reset.

Renewable Energy Mechanical/Systems Engineer, Idaho International Laboratory, ID

Please contact: Vanessa Van Dyk at Idaho National Laboratory: Vanessa.VanDyk@inl.gov, 208-526-6325
OR apply on line at: www.inl.gov/careers

Project Manager

Contact: Andrew Matkovic, Vice President, The Carmon Group Inc.

andrewmatkovic@carmongroup.com or (216) 539-7668

(updated 8/20/10)

Development Manager

Contact: Andrew Matkovic, Vice President, The Carmon Group Inc.

andrewmatkovic@carmongroup.com or (216) 539-7668

(updated 8/20/10)

Project Manager Geothermal Exploration, Europe

Contact: drobot@penderfinancial.com

Requests for Proposals**Closing This Week****Water & Wastewater TA (December 31)**

The U.S. Department of Agriculture requests proposals for the Technical Assistance and Training Grant Program. This RFP will fund projects that assist communities with water or wastewater systems through free technical assistance and/or training provided by the grant recipients. \$17 million expected to be available, up to 6 awards anticipated. Responses due 12/31/10. For more info, contact Anita O'Brien at anita.obrien@wdc.usda.gov or go to: <http://www.usda.gov/rus/water/tatg.htm>. Refer to Sol# RDUP-TAT-FY11. (Grants.gov 10/1/10)

New This Week**Open Tender for Geothermal in Aceh, Indonesia (January 31)**

Tender Committee of The Seulawah Agam Geothermal Working Area of Aceh Government will conduct tender for Seulawah Agam Geothermal Working Area, Aceh Besar Regency that has been decreed by the Minister of Energy and Mineral Resources. Minister EMR Decree No. 1789.K/33/MEM/2007, 45,000 ha, estimated 160 MWe potential, 55 MWe Phase 1 Development Plan. Interested parties can submit written enquiries on tender process through January 31, 2011, with a pre-bid meeting on February 9, 2011. Authorized personnel must include one copy of business license when registering. Amount of bidding guarantee and account number for the tender committee will be informed during pre-PQ enquiry period. Information can be communicated to the tender committee via email: tendcom.sag@gmail.com. Office of the Aceh Mining and Energy Agency is: Jlm. T. Nyak Arief No. 195 Banda Aceh, Tel. +62-651-7551773, 7554737, Fax +62-651-7553080

Proposal Announcements

Refurbished 27-MW Marine Turbine, Ram Power

This turbine, originally designed by Westinghouse for aircraft carrier service, has been completely refurbished for geothermal service. It has been re-rated to 27,350 kW at design inlet conditions of 469,875 lb/h 60 psig, 307F inlet conditions; 3.0" HgA exhaust. At a steam flow of 431,215 lb/h, it is expected that the turbine will produce 25,100 kW.

New engineering performed for this machine includes: New steam path engineering and all new manufacturing/performance drawings are available, including interstage and inner gland steam sealing manufacturing drawings, turbine clearance diagrams, rotor lifting diagrams, and new flow path performance curves at the anticipated steam flow rates.

Hardware includes: New 5 stage rotor, new diaphragms, generator and governor end gland steam packing sets, interstage packing sets, T1 and T2 axial aligning journal bearings, one high capacity active thrust bearing and one high capacity inactive thrust bearing, with directed lubrication and temperature sensors. The machine is set up for mounting five Bently Nevada XL-8mm proximity probes.

Also included in the sale package are: turbine casing testing, final turbine assembly check, preparation and compilation of all material certifications, test reports and QA documents.

The complete package (rotor, diaphragms, seals, and casings) can be prepared for ocean transport with appropriate preservation for short-term storage.

Turbine current delivery date is 3-4 months after a purchase agreement is established, ex-works Houston, TX, USA. Please contact info@ram-power.com for further information.

Assessment of Greenhouse Gases and Climate Impacts (January 7)

The U.S. Environmental Protection Agency requests proposals for Integrated Assessment of Greenhouse Gases and Climate Impacts. This RFP will support comprehensive, integrated modeling and assessment of multiple greenhouse gases (GHGs) and air pollutants, and the enhancement of understanding of climate change impacts and their economic implications to assist decision makers and the public to effectively respond to the challenges and opportunities posed by climate change. \$2 million expected to be available, up to 3 awards anticipated. Responses due 1/7/11. For more info, contact Lesley Jantarasami at integratedassessmentrfp@epa.gov or go to: http://www.epa.gov/air/grants_funding.html. Refer to Sol# EPA-OAR-CCD-10-13. (Grants.gov 11/9/10)

Switzer Environmental Fellowships (January 15)

The Robert and Patricia Switzer Foundation request proposals for the Switzer Environmental Fellowship Program. This program provides fellowships to graduate students in New England and California whose studies are

directed toward improving environmental quality and who demonstrate the potential for leadership in their field. Awards have been made to students pursuing environmental policy, economics, land and water conservation, public health, journalism, architecture, environmental justice, business, and law as well as the more traditional sciences of biology, chemistry, and engineering. 20 fellowships of \$15K each anticipated, as well as networking and leadership support. Responses due 1/15/11. For more info, go to: <http://www.switzernetwork.org/grant-programs/fellowship-program>. (Foundation Center RFP Bulletin 10/1/10)

WaterSMART - California (January 31)

The U.S. Department of the Interior, Bureau of Reclamation - Mid-Pacific Region, requests proposals for WaterSMART: California Bay-Delta Agricultural Water Conservation and Efficiency Projects. Through this RFP, the Bureau seeks projects that save water, improve water management, create new supplies for agricultural irrigation, improve energy efficiency, and benefit endangered species. Projects should also increase the capability or success rate of on-farm water conservation or water use efficiency projects that can be undertaken by farmers and ranchers through irrigation system improvements and irrigation efficiency enhancements. Projects must be located within the CALFED solution area. \$5 million expected to be available, up to 7 awards anticipated. Responses due 1/31/11. For more info, contact Mary Sims at msims@usbr.gov or go to: <http://www.grants.gov/search/search.do?mode=VIEW&oppld=58759>. Refer to Sol# R11AF20006. (Grants.gov 11/15/10)

USTDA-Sponsored Indonesia Geothermal Power Training Program Is Offering Business Development Opportunities for U.S. Companies (January)

January 10 – February 11, 2011

www.indonesiageothermal.govtools.us

The United States Trade and Development Agency (USTDA) is sponsoring an in-country Indonesia Geothermal Power Development Training Program from January 10 to February 11, 2011, followed by a Reverse Trade Mission of Indonesian delegates to the U.S. in March 2011. The Indonesian government is seeking to expand its current geothermal power generation capacity of 1,100 MW to 9,500 MW by 2025 and has vested all responsibilities for geothermal resource development with the provincial authorities and local tendering committees. The USTDA-sponsored program is aiming to train these decision-makers in geothermal resource development and transparent tendering processes, while promoting U.S. geothermal business interests in Indonesia.

The Training Program will be delivered by U.S. technical experts at six different locations in Indonesia, identified with the greatest potential for business development. USTDA is offering a unique opportunity for U.S. companies to visit these training sessions and present on their company's products / services and successful projects – to an exclusive audience of decision-makers.

Also, an Opening Event with welcome reception and dinner is scheduled in Jakarta on Friday, January 14, 2011, where U.S. companies will have an opportunity to meet and network with the central and local Indonesian authorities from across various provinces, registered for the Training Program.

This is a chance to build a relationship and highlight your company to the local authorities! For more information on participation and/or sponsorships, please contact Andrew Graves at agraves@bcs-hq.com or 410.997.7778 ext. 234.

Note: Participation at and/or sponsorship of all USTDA events is limited to U.S. Firms, U.S. individuals or U.S. companies, each as defined under (www.ustda.gov).

Industry/University Cooperative Research Centers (February 2)

The National Science Foundation requests proposals for Fundamental Research Program for Industry/University Cooperative Research Centers. This program provides support to centers to conduct fundamental research to better position themselves as leaders in emerging areas that could benefit the industries that they serve. Areas of interest include, but are not limited to: Energy and the Environment; and Advanced Manufacturing. \$1.6 million expected to be available, up to 10 awards anticipated. Responses due 2/2/11. For more info, contact Rathindra DasGupta at rdasgupt@nsf.gov or go to: <http://www.nsf.gov/pubs/2010/nsf10601/nsf10601.htm>. Refer to Sol# 10-601. (Grants.gov 8/17/10)

Sensors and Sensing Systems (February 15)

The National Science Foundation requests proposals for Sensors and Sensing Systems. This program supports research on methods to acquire and use sensor data on civil, mechanical, and manufacturing systems. The program supports fundamental research on advanced actuators, sensors, wireless sensor networks, new materials and concepts for sensing applications, power generation and energy supply for sensors and sensing systems. Also of interest is research on the strategic incorporation of sensors into both natural and engineered systems to achieve effective data acquisition and on processing and transmission of sensor data. Responses due 2/15/11. For more info, contact Shih Liu at sliu@nsf.gov or go to: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13349. Refer to Sol# PD-10-1639. (Grants.gov 10/22/10)

Control Systems, NSF (February 15)

The National Science Foundation requests proposals for Control Systems. This program supports innovative research on control theory and control technology driven by real life applications. Program emphasis is on paradigm-shifting ideas for control strategies that may be inspired by nature, unconventional applications, and the combined role of feedback and uncertainty in systems that incorporate large numbers of sensors and actuators.

Responses due 2/15/11. For more info, contact Eduardo Misawa at emisawa@nsf.gov or go to: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13575. Refer to Sol# PD-10-1632. (Grants.10/18/10)

Manufacturing Enterprise Systems (February 15)

The National Science Foundation requests proposals for Manufacturing Enterprise Systems. This program supports research on design, planning, and control of operations in manufacturing enterprises. Research projects addressing energy efficiency, renewable energy and the power grid have been awarded in 2010. Responses due 2/15/11. For more info, contact Russell Barton at rbarton@nsf.gov or go to: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13342. Refer to Sol# PD-10-1786. (Grants.gov 10/25/10)

Materials and Surface Engineering (February 15)

The National Science Foundation requests proposals for Materials and Surface Engineering. This program supports fundamental research leading to a better understanding of the effect of microstructure, surfaces, and coatings on the properties and performance of engineering materials; and the ultimate control of these properties through material design. Responses due 2/15/11. For more info, contact Clark Cooper at ccooper@nsf.gov or go to: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13356. Refer to Sol# PD-10-1633. (Grants.gov 10/18/10)

Structural Materials and Mechanics (February 15)

The National Science Foundation requests proposals for Structural Materials and Mechanics. This program supports fundamental research on the behavior of civil infrastructure materials and the mechanics of structural components in the built environment. Of particular interest is research on structural components consisting of natural and synthetic materials, their response to mechanical, hydrothermal, and time-dependent loads, and their impact on life-cycle performance and sustainable development of the civil infrastructure. Responses due 2/15/11. For more info, contact Clark Cooper at ccooper@nsf.gov or go to: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13357. Refer to Sol# PD-10-1635. (Grants.gov 10/18/10)

Mechanics of Materials (February 15)

The National Science Foundation requests proposals for Mechanics of Materials. This program supports fundamental research on solid mechanics including theoretical, analytical, and computational approaches, model-based simulation, and the development of constitutive models. Responses due 2/15/11. For more info, contact Glaucio Paulino at gpaulino@nsf.gov or go to: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13355. Refer to Sol# PD-10-1630. (Grants.gov 10/18/10)

Materials Processing and Manufacturing (February 15)

The National Science Foundation requests proposals for Materials Processing and Manufacturing. This program supports fundamental research on the interrelationship of materials processing, structure, performance and

process control. Responses due 2/15/11. For more info, contact Mary Toney at mtoney@nsf.gov or go to: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13344. Refer to Sol# PD-10-1467. (Grants.gov 10/18/10)

Manufacturing and Construction Machines and Equipment (February 15)

The National Science Foundation requests proposals for Manufacturing and Construction Machines and Equipment. This program supports fundamental research leading to improved machines and applications for both manufacturing and construction. Key goals are to advance the transition of these industries from skill-based to knowledge-based activities and to develop them as activities with minimal environmental and societal impact.

Responses due 2/15/11. For more info, contact George Hazelrigg at ghazelri@nsf.gov or go to: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13346. Refer to Sol# PD-10-1468. (Grants.gov 10/18/10)

Development of 400-MW Geothermal Power Plants, Kenya (February 21)

1. Introduction — GDC, a 100% state-owned corporation, tasked with accelerating the development of geothermal energy in Kenya, is undertaking steam field development at Menengai Prospect. Detailed surface studies comprising of geology, geophysics, surface heat measurement, baseline environmental and social economic assessment estimates the field potential to be about 1250 MW. The long term plan is to develop 1000 MW within this prospect. However, the current project aims to realize about 400 MW by year 2014, 600 MW by 2016 and 1000 MW by 2018.

2. Project Development Plan — The estimated 400 MW Menengai Phase I Geothermal Project including four power plant construction is projected to be completed by 2014. GDC will map the first four development blocks, drill exploration, appraisal and production wells and offer the steam to competitively selected investors who will construct the power plants and generate power with the fuel mined from these blocks. A total of 120 wells will be drilled for this Phase.

3. GDC — Under this project, GDC will undertake Resource Development and Management covering the Development Of Civil Infrastructure, Exploration and Appraisal Drilling, Feasibility Studies, Production Drilling, Reservoir Management and the Brine Reinjection System.

The main access road and drilling water reticulation system have been constructed. Two GDC rigs are already on project site and are scheduled to commence drilling by mid-December, 2010. Plans are underway to deploy four additional rigs to the project at a later stage.

4. Investors — The Investors role will include financing, design, construction, operation and maintenance of the power plants. In addition, GDC will require the selected investors to partner in financing the steam development.

For more information, please contact Martin Kabaki via email at martin1980june@yahoo.com

International Young Eco-Hero Awards (February 28)

Action For Nature invites applications for the International Young Eco-Hero Awards, to recognize the individual accomplishments of young people, ages 8 to 16, for their outstanding accomplishments in environmental advocacy, environmental health, research, or protection of the natural world. Winners will receive public recognition, cash prizes, and certificates for their outstanding efforts to help protect and preserve the environment. Responses due 2/28/11. For more info, go to: <http://www.actionfornature.org/>. (Foundation Center RFP Bulletin 10/1/10)

Climate Change and Health, HHS (May 24)

The U.S. Department of Health & Human Services requests proposals for Climate Change and Health: Assessing and Modeling Population Vulnerability to Climate Change. This RFP encourages research of risk factors of populations that lead to or are associated with increased vulnerability to exposures, diseases, and other adverse health outcomes related to climate change. For more info, including funding and program contacts, go to: <http://grants.nih.gov/grants/guide/pa-files/PAR-10-235.html>. Refer to Sol# PAR-10-235. (Grants.gov 7/21/10)

U.S. DOE Office of Science (September 30)

The U.S. Department of Energy, Office of Science, announces its continuing interest in receiving New and Renewal-Supplemental Applications for the Office of Science Grants and Cooperative Agreements. Areas of interest include, but area not limited to: Basic Energy Sciences, Biological and Environmental Research, and Advanced Scientific Computing. Subtopics include, but are not limited to: Materials Science, Solar Photochemistry, and Climate and Environmental Sciences. \$800 million expected to be available. Proposals accepted through 9/30/11. For more info on new grants, go to:

<https://www.fedconnect.net/FedConnect/?doc=DE-FOA-0000411&agency=DOE>. Refer to Sol# DE-FOA-0000411. For more info on Renewal-Supplemental grants, go to:

<https://www.fedconnect.net/FedConnect/?doc=DE-FOA-0000412&agency=DOE>. Refer to Sol# DE-FOA-0000412. (Grants.gov 9/30/10)

U.S. Navy Energy Conservation Projects (October 31, 2012)

The Naval Surface Warfare Center has issued a Broad Agency Announcement for White Papers that address Energy Conservation Applications for the U.S. Navy. This BAA solicits innovative concepts for Navy shipboard energy conservation and carbon footprint reduction with the potential for rapid transition to Fleet operation. The target segment of the Fleet is the ships operated by Military Sealift Command. Responses accepted to 10/31/12. The selection of one or more sources for full proposals and potential contract award will be based on responses to the BAA and the peer review process. For more info, contact Jamie Mattern at james.g.mattern1@navy.mil or go to:

https://www.fbo.gov/?s=opportunity&mode=form&id=f4ea9da536f0413f20b80d9f02707b7e&tab=core&_cvview=0.

Refer to BAA# N00167-11-BAA-01. (FBO 11/3/10)

Coordination of the Colorado Geothermal Working Group

The Governor's Energy Office (GEO) seeks quotes from independent contractors providing professional consulting services to assist the GEO in the coordination of the Colorado geothermal working group. Activities include: event and meeting logistic support (drafting and sending invitations, finding meeting space, contract catering services when appropriate, etc.), develop and distribute background and support material, and others.

Alaska Fairbanks North Star Borough Offers \$1M Matched-Funds Grant

Alaska's Fairbanks North Star Borough is putting out a \$1 million grant through the Department of Energy for geothermal energy exploration for the proposal venture that can provide matching funds. Former Mayor Jim Whitaker initiated the request based on positive results of deep well testing 50 years ago. Luke Hopkins, Mayor of Fairbanks North Star Borough said researchers at the University of Alaska Fairbanks have shown interest. The goal is to find out whether the university's existing power plant could be replaced with a geothermal power plant.

See <http://www.azocleantech.com/details.asp?newsID=12786>

Fairbanks North Star Borough <http://www.co.fairbanks.ak.us/>

PDF: <http://co.fairbanks.ak.us/Meetings/Ordinances/2010/2010-20-1o.pdf>

Partner Sought for Hot Oil and Gas Wells, Mississippi

Rich McAdoo (rlmcadoo@continentalenergy.com) is seeking local operators or parties with access to properties with hot oil or gas wells (shut-in or production) located in Mississippi. If you are looking for a financial and technical partner to develop coproduction of geothermal fluids with oil and gas in Mississippi, send him an email.

Events

GEA Events



Calendar of 2011 GEA and GEA-Sponsored Events

Look for more information on these upcoming events at <http://geo-energy.org/events.aspx>.

For sponsorship and speaking opportunities, or if you have other questions, contact Kathy Kent at Kathy@geo-energy.org.

- February 9: GEA Geothermal Energy Finance Forum, New York, NY
- March 7-10: Renewable Energy World North America Conference and Expo, Tampa, FL
- March 8: REW-NA Conference Workshop, Geothermal Energy 201 and Geothermal in the Southeastern U.S., Tampa, FL
- April 7: California Geothermal Energy Collaborative Geothermal Education and Outreach Workshop, Davis, CA

- May 4-5: GEA Geothermal New Technologies and Applications Showcase and Forum and Member's Meeting, Washington, DC
- May 26-27: California Geothermal Energy Collaborative Summit, Mammoth Lakes, CA
- July 20: GEA Geothermal Energy Finance Forum, San Francisco, CA
- October 23-26: GEA Geothermal Energy Expo® and GRC Annual Meeting 2011, San Diego, CA

Geothermal Energy Finance Forum 2011, NYC, NY (February 9)

Back by popular demand, and featuring the Honorable President Ólafur Ragnar Grímsson, President of Iceland: Geothermal Energy Finance Forum 2011 will be held at the Ritz-Carlton, Battery Park in New York City on February 9. Registration is now available at http://geo-energy.org/events/finance_forum_2011.aspx

The Geothermal Energy Association (GEA) and Gold Level Sponsor, Islandsbanki, will be holding a one-day Geothermal Energy Finance Forum on Wednesday, February 9, 2011 at the Ritz-Carlton, Battery Park in New York City. This program will bring the finance and investment community of New York City together and provide a tutorial on geothermal energy investment with top experts and major players in geothermal development and finance. The day's agenda includes presentations and panel discussion on; geothermal technology, geothermal project development, financing and investment, risk mitigation, employment, government finance and incentives, legal and regulatory issues, and case studies from developers and financiers with recent success stories. In addition to bringing together the geothermal community with the finance and investment communities, this event will highlight the global growth in geothermal production and use.

Confirmed speakers to date include:

The Honorable President Olafur Grimsson, President of Iceland

Dita Bronicki, CEO, Ormat Technologies

Arni Magnusson, Executive Director- International Industries, Islandsbanki

Nick Goodman, CEO, Raser Technologies

Brian Fairbank, President and CEO, Nevada Geothermal Power Inc.

Toni Volpe, President and CEO, Enel North America, a Division of Enel Green Power

Alison Thompson, VP Corporate Relations, Magma Energy Corporation

John McIlveen, Research Director, Jacob Securities, Inc.

Rick Rodgers, Managing Director, Montgomery Street Financial

Recep C. Kendircioglu, Senior Managing Director, John Hancock Financial Services

Halley Dickey, Director of Geothermal Business Development, Turbine Air Systems

Mike Ronzello, Sales and Business Development Manager, Pratt & Whitney Power Systems

John McKinsey, Partner, Stoel Rives LLP

John Pierce, Partner, Wilson Sonsini Goodrich & Rosati

Karl Gawell, Executive Director, GEA

Jonathan Weisgall, Vice President of Legislative and Regulatory Affairs, MidAmerican Energy Holdings Company
Subir Sanyal, President and Manager of Reservoir Engineering, GeothermEx, a Schlumberger Company
Vicky McDowell, Deputy Administrator, US Treasury
Saurabh Anand, Vice President, Denham Capital
Keith Martin, Partner, Chadbourne & Parke, LLP
Chris Demos, Senior Investment Officer, Overseas Private Investment Corporation
Eddie Sadan, VP of Business Development, Ram Power Corporation
Brian Harenza, Hannon Armstrong
Jonathan Zurkoff, VP of Finance, US Geothermal
Louis Capuano Jr, CEO, ThermaSource
Mark Taylor, Lead Analyst, CCS & Geothermal, Bloomberg New Energy Finance

Agenda:

7:30 am Registration
8:30 am –12:30 pm Morning Session
12:30 – 1:15 pm Luncheon
1:15 – 5:00 pm Afternoon Session
5:00 – 6:00 pm Networking Reception

The Ritz-Carlton, Battery Park is located at Two West Street, New York City. For more information, including the full agenda, visit: http://geo-energy.org/events/finance_forum_2011.aspx.

With any questions, please feel free to email Kathy Kent at kathy@geo-energy.org.

For media credentials, please contact Garret Drexler at 646-695-7042 or garret@rosengrouppr.com.

CGEC Events Announced for Spring 2011

April 7, 2011: California Geothermal Energy Collaborative, Education and Outreach Workshop for the public, Davis, CA

May 26-27, 2011: California Geothermal Energy Collaborative Summit, Mammoth Lakes, CA

See <http://cgec.ucdavis.edu/>

Renewable Energy World North America 2011, Tampa, FL (March 8–10)

Details coming on three sessions for the Geothermal Track, chaired by the Geothermal Energy Association. For full conference details and to register, visit <http://www.renewableenergyworld-events.com/index.html>.

Geothermal Preconference Workshop details: <http://geo-energy.org/events/REWConference.aspx>

REWNA Conference Workshop: Geothermal Energy 201 and Geothermal in the Southeastern U.S., Tampa, FL (March 8)

As part of the preconference workshops at Renewable Energy World North America 2011, GEA along with the Geothermal Resource Group, POWER Engineers, Texas A&M University, and Gulf Coast Green Energy will hold a half-day workshop providing a basic overview of the geothermal industry and emerging technologies. The workshop will open with a 101 background including the elements of geothermal energy, market trends, and a status of the geothermal industry in the U.S. provided by the GEA. Our section on drilling is adapted from the Geothermal Resource Group's 3-day geothermal drilling course, which has been delivered to geothermal operating companies around the world and focuses on how geothermal drilling differs from oil and gas drilling. POWER Engineers will cover above-ground components of flash and binary cycles, including the steam gathering, two phase flow, separation systems, turbines, cooling systems, extraction, and electrical development. Texas A&M's GPRI Department of Petroleum Engineering will discuss the oil and gas well brine management, including potential for re-use and related reservoir issues. The course will conclude with instruction from Gulf Coast Green Energy on low-temperature technologies, including a case study of a geothermal coproduction project taking place in the southeastern U.S.

Instructors:

- Karl Gawell, Executive Director, Geothermal Energy Association
- Bill Rickard, President, Geothermal Resource Group
- Kevin Wallace Senior Project Manager and Renewables Market Manager, POWER Engineers
- David Burnett, Director, Global Petroleum Research Institute, Texas A&M University
- Loy Snearly, President/CEO, Gulf Coast Green Energy

Contact: Leslie Blodgett, leslie@geo-energy.org.

See <http://geo-energy.org/events/REWConference.aspx>

Why Should You Attend GEA Events?

As the national trade association for the geothermal industry, the Geothermal Energy Association (GEA) strives to create and deliver educational events involving the full range of the geothermal industry, reflecting the dynamic growth of the geothermal market, and communicating the benefits of geothermal energy to all. GEA events offer important opportunities to learn and network within the geothermal community, and to inform and educate companies and organizations outside today's industry that are interested in learning more about geothermal energy. The revenue generated from GEA events is used to advance the goal of the GEA, "to expand the production and use of geothermal energy in the United States and around the world." The revenue supports GEA's workshops and events, communications activities, outreach efforts, policy related activities and analysis, internet publications, and other initiatives designed to help achieve this goal. ONLY GEA puts your dollars to work

in all of these ways to advance the future of the geothermal energy industry. And, GEA does not sell your email or postal address to junk mailers or spammers.

To keep track of new events and changes to this calendar go to: www.geo-energy.org.

Other Events

Geothermal Heat Pump Training (Various Dates)

Accredited Geothermal Installer Certification

Offered in partnership with the International Ground Source Heat Pump Association (IGSHPA). Those who pass the open book exam become IGSHPA Accredited Geothermal Installers. Course also includes a hands-on pipe fusion training and certificate.

For dates see: https://www.heatspring.com/?id=geothermal_training

BLM Announces Geothermal Lease Sale (March 22, 2011)

Next Lease Sale date: March 22, 2011

Geothermal Energy Utilization Associated with Oil and Gas Development, SMU Geothermal Laboratory, Dallas, TX (June 13–15, 2011)

<http://smu.edu/geothermal/>

GEOTHERMAL ENERGY WEEKLY

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

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