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National News

Geothermal Industry Applauds Recovery Act Clean Energy Investment Toward Economic Recovery

The geothermal community cheered on May 27 when President Obama announced details of the American Reinvestment and Recovery Act at Nellis Air Force Base, Nev., after touring the country’s largest solar energy farm. The President announced over \$467 million in funding for geothermal and solar energy projects, including \$350 million in new investment for geothermal technology.

The Recovery Act will help move the clean energy industry toward strengthening U.S. energy and economic independence and the creation of jobs, areas of focus for the Obama Administration.

“We have a choice. We can remain the world’s leading importer of oil, or we can become the world’s leading exporter of clean energy,” President Obama said in his statement. “We can hand over the jobs of the future to our competitors, or we can confront what they have already recognized as the great opportunity of our time: the nation that leads the world in creating new sources of clean energy will be the nation that leads the 21st century global economy. That’s the nation I want America to be.”

The funding provides new investment in geothermal energy technology in four essential areas:

- Geothermal Demonstration Projects (\$140 Million) - Funding will support demonstrations of cutting-edge technologies to advance geothermal energy in new geographic areas, as well as geothermal energy

production from oil and natural gas fields, geopressured fields, and low to moderate temperature geothermal resources.

- Enhanced Geothermal Systems Technology Research and Development (\$80 Million) - Funding will support research of EGS technology to allow geothermal power generation across the country. Conventional geothermal energy systems must be located near easily-accessible geothermal water resources, limiting its nationwide use. EGS makes use of available heat resources through engineered reservoirs, which can then be tapped to produce electricity. While the long-term goal of EGS is to generate cost competitive clean electricity, enabling research and development is needed to demonstrate the technology's readiness in the near-term.
- Innovative Exploration Techniques (\$100 Million) - Funding will support projects that include exploration, siting, drilling, and characterization of a series of exploration wells utilizing innovative exploration techniques. Exploration of geothermal energy resources can carry a high upfront risk. By investing in and validating innovative exploration technologies and methods, DOE can help reduce the level of upfront risk for the private sector, allowing for increased investment and discovery of new geothermal resources.
- National Geothermal Data System, Resource Assessment, and Classification System (\$30 Million) - The long-term success of geothermal energy technologies depends upon a detailed characterization of geothermal energy resources nationwide. In 2008, the United States Geological Survey (USGS) conducted an assessment of high temperature resource potential in the Western United States. To fully leverage new low-temperature, geopressured, co-production, and EGS technologies, DOE will support a nationwide assessment of geothermal resources, working through the USGS and other partners. Second, DOE will support the development of a nationwide data system to make resource data available to academia, researchers, and the private sector. Finally, DOE will support the development of a geothermal resource classification system for use in determining site potential.

"These are all critical areas for geothermal technology development," according to Karl Gawell, GEA's Executive Director. "Geothermal energy is a widespread and complex resource base, and this announcement recognizes the need to move forward with technology development across several different applications and resources."

"There are more geothermal power projects under development today than have been built in the history of the United States," Gawell said. "This stimulus funding will help make sure those projects are successfully completed and will help develop the technology needed to bring tens of thousands of additional megawatts on line."

According to a report done by GEA in March, there were 126 new geothermal projects under development with the potential to put 5,500 MW of new geothermal power on line. GEA estimates that bringing these projects on line could help economic recovery by spurring as many as 100,000 new jobs.

Links to all funding opportunities authorized through the Recovery Act are posted at <http://www.energy.gov/recovery/funding.htm>. Two amendments were also posted, one for Enhanced Geothermal Systems Component Research and Development/Analysis at <https://e-center.doe.gov/iips/faopor.nsf/UNID/762FF27668B2EE82852575C30070422D?OpenDocument>, the other, Enhanced Geothermal Systems Demonstration at <https://e-center.doe.gov/iips/faopor.nsf/UNID/DFEA0DAF24386352852575C30077E428?OpenDocument>.

See also <http://www.realestaterama.com/2009/05/27/president-obama-announces-over-467-million-in-recovery-act-funding-for-geothermal-and-solar-energy-projects-ID05426.html> and <http://www.renewableenergyworld.com/rea/partner/geothermal-energy-association-4102/news/article/2009/05/geothermal-industry-applauds-president-obamas-announcement-says-stimulus-funds-will-help-spur-economic-recovery?cmpid=rss>.

Proposed EPA Greenhouse Gas Registry Forthcoming

By Dan Jennejohn, GEA Research Associate

The Environmental Protection Agency's (EPA) proposed greenhouse gas (GHG) registry is at the forefront of a number of proposals and incentives from the federal agency that could potentially impact the geothermal industry. As part of its new budget, the EPA recently earmarked \$17m for the development of the GHG registry. The proposed registry will require major emitters of GHGs (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and other fluorinated gases) to report emissions to the EPA. The compliance threshold for emitters is 25,000 tons of annual GHG emissions. Emitters are to begin collecting emissions data on January 1, 2010 and results are due March 31, 2011, with reports to be given annually thereafter. The proposed registry currently possesses no mechanism to track GHG offsets nor does it require third party verification. The public comment period on the proposed registry is open until June 9, 2009.

In addition to the proposed GHG registry the EPA already has in place a number of programs that provide incentives to renewable energy (geothermal included) development. Programs that may affect the geothermal industry include:

- The Combined Heat and Power Partnership helps promote the greater adoption of CHP by tracking financial incentives and regulations promoting CHP production.
- The Clean Energy-Environment State Partnership program provides tools to state policy makers that promote the development of clean energy to improve air quality standards, greater energy efficiency, renewable energy, and economic growth.
- The Green Power Partnership promotes the lowering of transaction costs associated with buying "green" power from renewables.
- The Re-Powering America's Land Program is beginning to integrate geothermal heat flow data with maps of contaminated land and former mining sites in order to identify optimal locations for future geothermal project development.

For additional information regarding EPA proposals and incentives please visit <http://www.epa.gov/climatechange/policy/neartermghgreduction.html> and <http://www.epa.gov/renewableenergyland/>) or email danj@geo-energy.org.

Senate Energy Committee Announces Upcoming Actions

From Senate Committee on Energy & Natural Resources:

On Tuesday, June 2, the full committee will consider the nominations of Catherine Zoi to be Assistant Secretary of Energy for Energy Efficiency and Renewable Energy; William Brinkman to be Director of the Office of Science, Department of Energy; and Anne Castle to be an Assistant Secretary of the Interior for Water and Science. (Dirksen 366 at 2:15 p.m.)

On Thursday, June 4, the full committee will continue its mark-up of pending energy legislation. An agenda will be announced next week. There will be no webcast. (Dirksen 366 at 9:30 a.m.)

Company News

Raser Technologies: Governor Schwarzenegger Demonstrates Electric Hummer H3

Press Release—May 28, Governor Arnold Schwarzenegger to Showcase Raser's Electric Hummer H3 in a Demonstration Drive at the California State Capitol

Raser Technologies, Inc. (NYSE: RZ), a leading energy technology company, will join with California Governor Arnold Schwarzenegger today to demonstrate Raser's Electric Hummer H3, designed to achieve 100 mpg for a typical daily drive of 60 miles. The H3 uses an extended range electric vehicle (E-REV) powertrain developed by Raser Technologies. The Hummer H3 is a mid-sized SUV, similar in size to a Jeep Commander.

Governor Arnold Schwarzenegger will view the new plug-in electric Hummer H3 at the California State Capitol Thursday in a demonstration drive with Raser Chairman Kraig Higginson.

'I believe low-carbon fuel vehicles are the future and I want to see them succeed right here in California,' said Governor Schwarzenegger. 'That's why I'm bringing cars like this one to the Capitol where we can show the world there is a market for smart and innovative technologies that will also create jobs in the auto industry.'

According to a 2008 report by the U.S. Department of Transportation, trucks and SUVs account for nearly half the vehicles on the road and a majority of the emissions and fuel consumption.

'California has been known for its leadership in emissions and fuel economy standards which have been a driving force in establishing the new national CAFE standard,' said Kraig Higginson, Chairman of Raser Technologies. 'We believe Raser's E-REV powertrain will enable trucks and SUVs to meet or exceed this new standard while dramatically reducing emissions in larger vehicles,' added Higginson.

The most significant advantage of the E-REV is its ability to displace petroleum in favor of electric fuel, by driving the first 40 miles all on electricity. That's significant because the majority of Americans drive fewer than 40 miles a day. 'One of the best ways to improve gas fuel economy is not to burn gas,' stated David West, vice president of marketing for Raser Technologies and co-founder of the Plug-In Hybrid Development Consortium. 'Most people will drive the Electric Hummer H3 primarily on electricity for about 60 cents per equivalent gallon of gasoline and will fill up with gas only a few times a year, rather than once a week,' added West.

In addition to plug-in electric vehicle technology, Raser is a leader in modular, low temperature geothermal power generation. Raser provides clean renewable geothermal power to California and intends to ramp up development of its large geothermal holdings to meet growing demand for base load renewable energy.

More information on the Electric Hummer H3 can be found at www.rasertech.com/hummer.

See <http://www.rasertech.com/news>.

U.S. Geothermal: Oregon Project to Receive DOE Loan

Press Release—May 26, U.S. Geothermal's Neal Hot Springs Oregon Project Selected for Department of Energy Loan Program

Boise, Idaho - U.S. Geothermal Inc., a renewable energy company focused on the production and sale of electricity from geothermal energy, announced today that it has been selected by the U.S. Department of Energy ("DOE") to enter into due diligence review on an \$85 million project loan for its Neal Hot Springs project in eastern Oregon. The DOE loan is expected to provide 80% of the \$106 million estimated total

capital cost. Construction of a binary cycle power plant utilizing significantly improved technology is expected to begin in mid 2010. The new plant, designed to deliver 22 megawatts ("MW") of power net to the grid, is scheduled to begin commercial operations in late 2011. The DOE loan is anticipated to be a combined construction and long term loan and provide the project with a low cost annual interest rate.

On February 26, 2009 U.S. Geothermal submitted an application for the Neal Hot Springs project to the DOE's Energy Efficiency, Renewable Energy and Advanced Transmission and Distribution Solicitation loan guarantee program under Title XVII of the Energy Policy Act of 2005. The company was notified that its project application is complete, the power plant technology choice qualifies as new or improved under the program, and the project has been selected to proceed in the project loan process.

The renewable energy is expected to be sold under a long term power purchase agreement that is currently under advanced negotiations.

"Another critical milestone in the development of our project at Neal Hot Springs has been achieved and provides us with access to a source of low cost capital", said Daniel Kunz, CEO and President of U.S. Geothermal. "As we enter into due diligence with the DOE on this important \$85 million loan we can now work to complete the balance of the project requirements necessary to construct an advanced and highly efficient geothermal power plant."

U.S. Geothermal also announced today that it made a regular annual grant of compensation options pursuant to its Stock Option Plan to directors, employees and consultants to acquire 1,795,000 shares in capital of the company. The options are exercisable at a price of US\$0.92 per share for a term of 5 years expiring May 26, 2014. The options will vest pursuant to the schedule included in the company's Stock Option Plan.

See <http://usgeothermal.com/NewsReleases.aspx>.

Western GeoPower: Sigurjonsson Appointed Director of Company

Press Release—May 28, [Change in Directors of Western GeoPower](#)

Vancouver, Canada -- Western GeoPower Corp. (WGP), a renewable energy company, today announced that Gudmundur F. Sigurjonsson has been appointed a director of the company.

An Iceland-based professional engineer, Sigurjonsson has an extensive background in project engineering and management. His general and international experience in project execution and project control includes work in Iceland, Denmark, New Zealand and the Philippines. His core competences include cost engineering, feasibility assessments and business modeling.

Sigurjonsson is the principal of FnF Limited, a management consulting business. Through FnF, Sigurjonsson is an advisor to Geysir Green Energy, a global leader in the development of, and investment in, geothermal power. Through FnF, Sigurjonsson is also the chief executive of Envent Holding Philippines, a joint venture between Geysir Green Energy and Reykjavik Energy Invest. Envent was established to develop renewable energy projects in the Philippines.

Sigurjonsson graduated from the University of Iceland with a Bachelor of Science degree in chemistry and earned his masters of engineering from the Technical University of Denmark.

He replaces Ásgeir Margeirsson of Geysir Green Energy, who resigned as a director of Western GeoPower.

Kenneth MacLeod, the company's president and CEO, said: "We are grateful for Margeirsson's contributions in the past, and look forward to working with Sigurjonsson whose experience and background will be an asset as the corporation moves forward. This appointment will strengthen the company's

relationship with our largest shareholder Geysir Green Energy and with the geothermal industry in Iceland.”

See <http://www.geopower.ca/newsp1.htm>.

Renewable and Climate Change News

DOE Announces \$2.4 Billion in Funding for Carbon Capture and Storage Projects

From EESI Climate Change News:

On May 15, U.S. Secretary of Energy Steven Chu announced that \$2.4 billion in stimulus funding will be used to advance the commercial deployment of carbon capture and storage (CCS) technology. “To prevent the worst effects of climate change, we must accelerate our efforts to capture and store carbon in a safe and cost-effective way. This funding will both create jobs now and help position the United States to lead the world in CCS technologies, which will be in increasing demand in the years ahead,” Chu said. Among the initiatives to receive funding are the Department of Energy’s Clean Coal Power Initiative (\$800 million), which co-finances new coal technologies that can help utilities cut sulfur, nitrogen and mercury pollutants from power plants, industrial CCS and CO₂ reuse projects (\$1.52 billion), geologic sequestration site characterization (\$50 million), and CCS training and research (\$20 million).

For additional information see <http://www.energy.gov/news2009/7405.htm> and <http://www.ibtimes.com/articles/20090515/carbon-capture-and-storage-tech-gets4-billion-froms-doe.htm>.

Thirty Governors Form Energy and Climate Coalition Group

From EESI Climate Change News:

On May 21, governors from 30 states signed on to the Governors’ Energy and Climate Coalition Group in an effort to find common ground on a national strategy for climate change action. “These states have been leaders on the green front – promoting renewable and clean energy, creating jobs and taking concrete steps to address climate change,” said Vermont Governor Jim Douglas. “The Governors’ Climate Coalition is in an important position to assist the federal government as it builds out a national energy policy that creates jobs and protects consumers and the environment. The bipartisan group of governors supports a federal cap on greenhouse gases, using energy more efficiently and more clean domestic energy. “States are where the green economy is being built,” the Coalition’s Statement of Principles said. “Therefore we pledge to work with Congress and the Administration to develop a strong state-federal partnership to create and preserve our jobs and industry, keep the United States competitive abroad, and at the same time address climate threats.”

For additional information see <http://www.sfgate.com/cgi-bin/article.cgi?f=/n/a/2009/05/21/state/n153501D88.DTL&type=politics> and <http://www.law.georgetown.edu/gcc/News/documents/GovernorsEnergyandClimateCoalition.pdf>.

State News

California: The Geysers Wastewater Projects Keeps Russian River Clean

The Geysers geothermal fields has received praise for diverting Santa Rosa’s wastewater from the Russian River, according to pressdemocrat.com. According to the article, 65% of the highly treated water was used by the steam fields to generate electricity. Dennis Gilles, Calpine's senior vice president, said the wastewater now generates 96 MW or about 10% of the 1,000-MW area. "It's been a win-win," Gilles told press, noting that the wastewater works to reenergize the steam fields.

See <http://www.pressdemocrat.com/article/20090526/NEWS/905261005?Title=The-Geysers-getting-credit-for-a-cleaner-Russian-River>.

California: Coso Geothermal to Begin Pumping at Hay Ranch

On May 6, the Inyo County Board Supervisors approved the Hay Ranch project run by Coso Operating Company, according to inyoregister.com. Everyone at the plant are eager to break ground on the needed eight miles of pipeline, senior vice-president Joe Greco of Terra-Gen Power, one of Coso's parent companies, told press. Coso now awaits the permit from the Bureau of Land Management to begin construction.

The company has had to wait through four years of analysis, environmental review, and multiple visits to court rooms and public hearings, according to the article. Opposition for the project has come from environmental groups worried that the pumping will cause damage to the lake and surrounding area. Coso's Conditional Use Permit contains measures to prevent serious damage to the environment. The monitoring wells will be fitted with triggers as an early warning system in case water levels drop below acceptable levels per the permit.

Greco told press he expects the permit to be in hand by June, and construction will take about four months. Local contractors and workers will be hired and utilized as much as possible, he said.

See <http://www.inyoregister.com/content/view/120921/1/>.

Nevada: Lawmakers and Governor Pass Green Energy Package

Lawmakers and the governor's office have passed a three-bill package of green energy legislation, according to nevadaappeal.com. The package includes SB152, which uses stimulus funding to create training programs for work in the renewable energy field. It also includes SB395, which revises the process for issuing permits to build utility generating facilities as well as setting energy standards, and requires the public works board to adopt standards water and energy use.

AB522, which was amended and passed last week, establishes the fund for renewable energy and creates abatements for renewable energy projects. Sen. Randolph Townsend, R-Reno, said the amendment "gives the county the option to review the project and analyze in fact the potential abatement impact on local government and school districts."

Paul Thomsen, Director, Policy and Business Development, Ormat Technologies provided his comments on the new legislation. "The geothermal industry in Nevada and the Geothermal Energy Association worked hard recently to include geothermal, after it was omitted, in the suite of tax incentives recently passed (AB 522) in Nevada," he said. "The industry position simply stated that the legislature should not be in the business of picking and choosing among different technologies. We urged that the renewable tax code in Nevada have parity and leave the job of picking the best technology to the competition of the market. We need to all thank Senator Townsend for his leadership and vision in providing an amendment which included geothermal in this bill and will allow Nevada to stay at the forefront of geothermal development."

See <http://www.nevadaappeal.com/article/20090528/NEWS/905289974/1006/NONE&parentprofile=1058>.

Nevada: Congressional Delegation Announces Revenue-Sharing Green Energy Bill

The Renewable Energy Permitting Act, announced by Nevada's Congressional Delegation last week, directs portions of federal rental revenue from green energy projects to states and counties where they are located, according to titus.house.gov. This extends the current geothermal revenue-sharing program to solar

and wind resources. “Nevada is positioned for a green energy boom, which means clean energy and quality jobs,” according to Senator John Ensign, who announced the plan during his address to the state legislature. “Under this plan, it also means that states and localities will be compensated for federal land use. This would translate into millions of dollars for Nevada.”

The legislation distributes 50% of the revenue to states, 25% to counties, and 20% to a Renewable Energy Permit Processing Improvement Fund. The state of Nevada receives about \$10 million each year through the geothermal revenue-sharing program, according to the article.

See http://titus.house.gov/go/news_room/press_releases/nevada-delegation-green-energy-bill-could-generate.shtml.

International News

Unsubstantiated Claims Draw Response from Reykjavik Energy

News can travel quickly, even when it covers only one side of a story. An article published on May 26 by ipsnews.net claimed damage has been caused by the Hellisheidi geothermal plant in Iceland to the surrounding area over the past three years. But the article largely quoted anonymous sources, and the plant’s operators have confirmed that they were never contacted to comment on the claims.

Unfortunately, the IPS story was also re-run by several other news sources the following day. Apparently, none of these news sources contacted the plant’s operators asking for comments on the claims before republishing the article.

A day later the company replied. In a memorandum to the National Energy Authority, Reykjavik Energy representatives responded to each of the reporter’s statements. “In a serious way, Reykjavik Energy’s operations are slandered by [sources] unattributed, unsubstantiated and, on several occasions, not in compliance with scientific findings,” wrote Dr. Einar Gunnlaugsson, Reykjavik Energy Head of Research, and Eiríkur Hjálmarsson, Chief Press Officer.



Hellisheidi geothermal plant was visited in August 2008 by geothermal experts from the U.S., Australia, and Iceland who were associated with the kick-off event for the International Partnership for Geothermal Technology (see image). "It was a very impressive and attractive facility which was well designed for public access and education," said Karl Gawell, GEA's Executive Director. "If there were any problems as the article alleges, they were not apparent to the numerous experts who toured the facility, and Reykjavik Energy was clearly not trying to hide anything."

The IPS article attributes the accusations to increased levels of hydrogen sulfide (H₂S) emissions from the Hellisheidi plant. “The story correctly states that the highest 24-hour level measured in Reykjavik was 150 microgram per cubic meter,” Gunnlaugsson and Hjálmarsson stated. According to the article this threshold has been exceeded once. “As correctly stated in the article, the peaks measured in Reykjavik present no health problems to inhabitants,” they stated in their reply. In the U.S., H₂S is routinely abated at geothermal power plants, resulting in the conversion of over 99.9% of the H₂S from geothermal incondensable gases into elemental sulfur, which can then be used as a nonhazardous soil amendment and fertilizer feedstock. (See *A Guide to Geothermal Energy and the Environment*, GEA, April 2007, <http://www.geo-energy.org/publications/reports/Environmental%20Guide.pdf>).

One claim made in the article was that geothermal production caused black soot to appear on the silverware of Reykjavik residents. Gunnlaugsson and Hjálmarsson noted that geothermal water is conducted to residential water taps, but, "The connection made in the article between increased airborne H₂S and the need for more frequent silver polishing is unsubstantiated and highly speculative," they wrote.

Damaged rubber in the suspension and steering systems of area trucks was also attributed to geothermal production in the article. "This is the first time Reykjavik Energy hears of this complaint," the company's representatives noted.

Moss vegetation was damaged in several places, according to the article. But Reykjavik Energy studies showed damage to moss was similar to effects from weather observed in the control area 10 km away from the plant, where sulfur levels had not increased. Although increased levels were found within half a mile of the plant, in fact, Iceland's soil is naturally low in sulfur and an increase could have a fertilizing effect. "The reporter's statement on this issue is exaggerated and not in compliance with the aforementioned findings," wrote Gunnlaugsson and Hjálmarsson.

In addition, the article raises questions about whether geothermal energy is renewable. Quoting a professor of geochemistry, it asserts that "geothermal energy is not a renewable energy resource in the sense that the heat source is not replenished at a rate equal to or higher than it is extracted."

"This is rather like saying solar is not renewable because erecting a solar collector cools the ground underneath it," commented Karl Gawell, GEA's Executive Director. "You have to look at the bigger picture, and the heat flowing from the earth is immense. Utilizing the heat radiating from the center of the earth for energy production is using a renewable resource in any reasonable sense of the term."

Daniel Jennejohn, GEA's Research Associate, notes: "Geothermal energy is derived from heat found deep in the earth's core. This heat is brought to the surface by thermal conduction and by the upwards intrusion of magma from great depths. Current estimates of the total geothermal heat flux coming from the mantle put it at 44 terawatts; the geothermal industry currently uses just 0.01 terawatt. Given the large amount of energy being supplied from the Earth's core, it is difficult to imagine geothermal energy as a non-renewable resource, especially considering the fact that the Earth's mantle is expected to continue to provide heat to the surface for billions of years. Even if a single geothermal reservoir cools down it has little or no impact on the overall heat flow from the original energy source: the Earth's mantle."

"If the rate of extraction of the geothermal fluid exceeds the rate of recharge, a geothermal reservoir may see a decrease in reservoir pressure and temperature," Jennejohn added. "However, upon cessation of geothermal operations the reservoir will recover towards its original temperature and pressure."

Details on the Hellisheidi plant and environmental impact are available on the company's Web site at <http://www.or.is/English/Projects/HellisheidiGeothermalPlant/>.

Argentina: Neuquén Province Opens Bids for 30-MW Geothermal Plant

The Neuquén province has opened bidding for a 30-MW geothermal plant at Las Mellizas mine in Copahue, according to bnamericas.com. Data packages are available for 25,000 pesos (US\$6,694) from the Neuquén province development agency (ADI) in Buenos Aires, and offers will be opened July 13, the article said.

See

http://www.bnamericas.com/news/electricpower/Neuquen_launches_bidding_for_30MW_geothermal_plant.

Australia: Greenerth Confirms Elevated Heat Flows Below Loy Yang

Press Release—May 27, [High Modeled Temperatures Beneath the Loy Yang Power Stations](#)

Greenerth Energy Limited (“GER”) announces significant results from heat flow investigations in its Geothermal Exploration Permits areas 12 and 13 in the Latrobe Valley area of Gippsland, Victoria.

The heat flow investigation, carried out by Greenerth Energy’s consultants, Hot Dry Rocks Pty Ltd, advanced the earlier work presented in the Greenerth Energy IPO Prospectus in late 2007. The results confirmed that there is a trend of elevated heat flow through the Latrobe Valley from Moe towards Sale.

The heat flow investigation, across 10 wells, returned estimates ranging up to 101 ± 26 mW/m². Such values are significantly higher than the 60 mW/m² that is regarded as the global average for heat flow, which confirms the high level of prospectivity throughout major areas of both Greenerth Energy’s Gippsland geothermal exploration permits.

One of the most significant temperature projections is that of the Petroleum Well Loy Yang 2. Loy Yang 2 was drilled in 2005 by Lakes Oil N.L. (ASX:LKO) and is situated within the grounds of the Loy Yang A brown coal fired power station. Due to the strategic alliance with Lakes Oil N.L., Greenerth Energy was able to gain access and complete precision temperature logging to a depth of 713m. This combined with log data, original temperature readings, stratigraphic information and thermal conductivity measurements assigned to the sandy and silty sedimentary sequences in the Cretaceous rocks of the area, enabled a reliable estimate of heat flow of 90 mW/m² for this location.

Based on this information a heat flow model was used to predict the temperature down the well. The model was used to predict temperatures at depth based on assumed deeper geology. The geology is known to 1,736m from the nearby Loy Yang 1A well and below 1,736m, a scenario was modeled down to 3,500m. An estimated temperature of 150°C, was achieved considering the geological scenario presented, at a projected depth of $2,900 \pm 400$ m

Greenerth Energy’s Managing Director, Mark Miller, said “This modeling shows excellent temperatures at around 3km beneath the Latrobe Valley. Any porous sandy sediment at that depth in the Latrobe Valley area should exhibit sufficient permeability to yield adequate fluid flow for the generation of electricity utilizing an Organic Rankine Cycle (ORC) geothermal power plant.

“The Loy Yang 2 Well has established high heat flows in the heart of the industrial power generation hub of Victoria. This area is adjacent to major electricity generation and transmission facilities and further underpins the company’s view of the significant geothermal potential of the Latrobe Valley area.

“Additionally we believe these units have the potential for further investigation in terms of their ability to act as onshore CO₂ storage sites at the point of generation.

“The potential to generate emissions free base-load renewable electricity, heat for industrial processes as well as onshore CO₂ geo-sequestration at the point of generation represents a unique opportunity for the State that requires a collaborative approach to funding for research and ultimately development.”

See <http://www.greenerthenergy.com.au/reports/>.

Australia: Geothermal Acreage Released for Bid in WA

High levels of bidding for geothermal exploration rights in the Perth and Carnarvon basins are the precursor to a second geothermal acreage released by the Western Australia Government, according to

Australia.to. The new acreage is along the onshore south-eastern region of Western Australia, including Albany and Esperance.

“Judging by the strong response to the first geothermal acreage release for the Perth basin, there is clearly significant interest in tapping into the State’s geothermal energy,” Mines and Petroleum Minister Norman Moore told press. “The Perth Basin acreage release received more than 60 valid bids covering a total land area of 12,160 sq km, making it one of Australia’s most successful geothermal releases.” The Minister added that \$560m is expected to be spent on geothermal exploration in the Perth Basin over the next six years.

See http://www.australia.to/index.php?option=com_content&view=article&id=10293:high-level-of-geothermal-interest-prompts-acreage-release-in-states-south&catid=74:business-news&Itemid=198.

Mexico: Alstom Wins Contract for 25-MW Geothermal Plant

Alstom has won a €45 million contract to build the 25-MW Los Humeros II geothermal power plant, according to their Web site. The project is scheduled for completion in October 2011 and will provide power to the eastern Puebla state, reducing Mexico’s CO₂ emissions by 230,000 tonnes per year.

“Los Humeros II geothermal project represents the return of Alstom to the geothermal market since 2000 when four units of 25 MW were built in Los Azufres, Mexico” Guy Chardon, Senior Vice President Alstom Power Thermal Products told press. “Alstom’s Geothermal line builds on the group’s proven solutions such as steam turbines, generators, pumps and control systems to expand its renewable offering to its customers.”

See

http://www.alstom.com/home/news/news/business_news/58344.EN.php?languageId=EN&dir=/home/news/news/business_news/

Poland: Lodz University Announces Geothermal Project

The City of Lodz Council and Lodz Technical University (Politechnika Lodzka) will jointly develop a geothermal project at the school, according to energydigger.com. The project will include both heating and electricity generation and will take two years to construct. Work will start later this year with a test well funded by the National Foundation for the Protection of the Environment and Water Resources. Cost is estimated at PLN 130m (USD 39.5m) and will be funded by the sports and education ministries, the city and county budgets, and Lodz University.

See <http://www.energydigger.com/archives/article.asp?id=1242925000-6328>.

Notices

DOE Announces New Geothermal Funding Opportunities

See story, page 2. Links to all funding opportunities authorized through the Recovery Act are posted at <http://www.energy.gov/recovery/funding.htm>. Two amendments were also posted, one for Enhanced Geothermal Systems Component Research and Development/Analysis at <https://e-center.doe.gov/iips/faopor.nsf/UNID/762FF27668B2EE82852575C30070422D?OpenDocument>, the other, Enhanced Geothermal Systems Demonstration at <https://e-center.doe.gov/iips/faopor.nsf/UNID/DFEA0DAF24386352852575C30077E428?OpenDocument>.

California Proposes Changes to Oil, Gas, & Geothermal Resources Regulations (June 15)

The Division of Oil, Gas, and Geothermal Resources has filed a Notice of Proposed Rulemaking with the State of California Office of Administrative Law. The Notice of Proposed Rulemaking proposes to amend Subchapter 4 (State-Wide Geothermal Regulations) of Division 2, Chapter 4 of Title 14 (Natural Resources) of the California Code of Regulations. Beginning on May 1, there will be a 45-day official comment period on this proposed action. This comment period will end at 5:00 p.m. on June 15. Any interested person, or his or her authorized representative, may submit written comments relevant to the proposed regulatory action to the Division. Please visit <http://www.consrv.ca.gov/dog/geothermal/Pages/Index.aspx> to review these proposed changes.

If you have any comments on these regulation changes or would like to propose additional changes to regulations, please submit these comments in writing to Elizabeth Johnson, ljohnson@consrv.ca.gov or Michael Woods, mwoods@consrv.ca.gov by June 15, 2009. These comments may be submitted via conventional mail or e-mail.

USDA Announces REAP Grant/Loan Guarantee Funding (July 31)

Today USDA announced the long-awaited availability of funding for the 2009 program year for the Rural Energy for America Program (REAP). The Department is now accepting REAP applications for grants and loan guarantees for renewable energy and energy efficiency systems, and also is including funding for feasibility studies. The deadline for applying for REAP funding is July 31. This year \$60 million is available for projects. USDA has made some changes to the application process for REAP, incorporating statutory changes from the 2008 Farm Bill. A summary of these changes and the full notice may be found here: <http://farmenergy.org/news/usda-announces-reap-funding-for-2009>.

Resource Development Opportunity, Contact, Nevada

Seeking someone to do a feasibility study and/or development of property to generate commercial electricity. The property is 30 acres of commercial property on highway 93, approximately 15 miles from the Idaho/Nevada border in Contact, Nevada. The property is in a hot water zone.

In the mid 1970's Phelps Dodge had many drilling sites for copper approximately three quarters of a mile from the property. Phelps Dodge was drilling and hit hot water that was too hot for them to continue drilling.

The property is also three quarters of a mile from high power transmission lines running north and south.

Please contact Ted Reddy, at 25653 S. Brentwood Dr. Sun Lakes, AZ 85248, by phone 480-707-2574, or by email, reddyteddy@hotmail.com.

Hannon Armstrong Announces Advisory Services for DOE Loan Guarantees

The American Recovery and Reinvestment Act expanded DOE Loan Guarantees and U.S. Treasury Tax Grants, providing renewable energy project developers a path for project funding, according to the Hannon Armstrong Web site. The company has launched an advisory service offering for industry members seeking to apply.

Vice President of Analytics and Structuring Nate Rose told press, "The outcomes vary rather substantially from existing project finance models, and vary between solar, wind, geothermal and biomass projects."

"Given our team's experience with DOE and OPIC loan guarantees, and our appreciation of how challenging this process is, we decided it makes sense to expand our Federal finance offer to include not

just the application and its negotiation, but also the monetization of the capital required with this new structure," said Jeffrey Eckel, President and CEO.

See http://www.hannonarmstrong.com/index.php?option=com_content&task=view&id=28.

FOA for Advanced Research Projects Agency–Energy, DOE (June 2)

This is the first solicitation for the Advanced Research Projects Agency–Energy (ARPA–E), a new organization within the Department of Energy (DOE). It includes \$150 million for geothermal energy.

This solicitation was created specifically to foster research and development (R&D) of transformational energy-related technologies.

The concept paper opening date is May 12 at 8:00 am EST; the closing date is June 2 at 8:00 pm EST.

See Funding Opportunity Announcement Number DE-FOA-0000065. For the link to the full announcement, go to <http://www07.grants.gov/search/search.do?oppld=47045&mode=VIEW>.

Resource Development Opportunity, Rosebud Sioux Tribe, Rosebud, SD

The Native American Tribe near Mission SD has a deposit of geothermal energy under their large Rosebud Reservation in South Dakota. See U.S. News & World Report, November 7, 2007, DOE map of U.S. Geothermal Hotspots, p. 52, reference to deposit p. 50.

Leigh Bryant-Zarse, the architect, engineer, and consultant in Wisconsin who is submitting this solicitation, attended a meeting of the Tribe Council on September 16, 2008. The Tribe presented him with a resolution to approach developers with free exploration rights on their reservation, and agreed to split 1/10 of 1% of the energy profits for a period of 2 years, if found. These parties are looking for help to develop the resource. The reservation exists under a sole ownership, making it easy to deal with.

Contact: Leigh Bryant-Zarse, Architect-Engineer-Consultant, 1812 Mountain Ave., Wauwatosa, WI 53213-2336, phone and fax: 414-259-1812

Rosebud Sioux Tribe: Chief Rodney Bordeaux, PO Box 430, Rosebud, SD 57570, phone 605-747-2381

Employment Opportunities

Director of Development, California Operations, CalEnergy

CalEnergy Operation Corporation is an international leader in the development and production of energy from diversified fuel sources including geothermal, natural gas and hydroelectric. CalEnergy is currently looking for a Director of Development for California-based operations.

This individual will direct, coordinate and exercise functional authority over all activities associated with the development of the new geothermal power plants and other platform development opportunities:

- Administers the project construction contract, manages the use of consultants, and has fiscal responsibility for all costs to build the new plants.
- Directs and oversees the integration of the new plants into the current Imperial Valley operations consistent with the organization's policies and objectives. Qualified candidates will have a bachelor's degree in engineering, business administration, or related field or equivalent work experience.
- Eight years experience in managing power plant development and installation projects or power plant operations including three years supervisory responsibilities.
- Excellent oral and written communication skills, including presentation skills.
- Effective interpersonal skills and leadership abilities.

To apply for this position and view a complete job description please visit www.calenergy.com.

Senior Account Manager for Geothermal Energy

A Fortune 100, multi-billion dollar electronics, engineering and renewable energy company seeks a Senior Account Manager responsible for the sales of geothermal renewable energy. This is a newly created position so there are very few walls and the territory will be wide open for this individual. They are seeking an individual with a minimum of 2 years experience in selling renewable energy, specifically sales of geothermal renewable energy. The candidate basically can live anywhere in the U.S. as long as they are open to travel, by airplane and car.

Our client offers a competitive base salary as well as a lucrative commission structure. Furthermore, they offer full health, dental, and vision benefits (which start day one of employment) as well as a 100% matching 401k plan up to 6% employee contribution, and excellent incentives such as a company car, cell phone, laptop, expenses, and much more.

Contact Information:

Apply to Position AMRE

E-mail resumes to: sherryl@swaffordresources.com

Fax resumes to: 281-858-5852

Senior Director, Business Development, Major Geothermal Company

The Senior Director, Business Development is responsible for overseeing the Business Development function in North America for geothermal market. This role could quickly grow into a VP role and will oversee a sales team currently consisting of 8 sales reps and will grow it by 50%.

Essential Functions:

- Direct and execute the business development strategy to achieve company goals and objectives.
- Identify and develop key strategic partnerships, both internally and externally.
- Responsible for negotiating PPAs and contract changes.
- Evaluate and analyze market expansion opportunities
- Build and lead a business development team that will assist the company towards completion of company goals
- Build relationships with internal departments so that all areas of the company are ready to execute when necessary.

Education, Experience, and Skills Required:

- Bachelor degree in engineering and MBA
- 10–15 years experience in Sales, Marketing, Business Development or Operations roles (preferably a mix of sales and operations in energy industry)
- Willingness to travel up to 60% nationally and internationally
- Ability to negotiate contracts with potential business affiliates
- Experience in the renewable energy field a strong plus
- Proven track record maintaining confidentiality and dealing with company proprietary information

Contact:

Paige Carratturo

Executive Recruiter

Richard Wayne & Roberts

877-236-0899 (direct)

206-855-9746 (fax)

paige@rwr.com

<http://www.linkedin.com/in/paigecarratturo>

Geothermal Project Supervisor, Central American Bank for Economic Integration, Costa Rica

The Central American Bank for Economic Integration (Banco Centroamericano de Integración Económica, BCIE) is looking for an expert in geothermal energy to supervise a project in Costa Rica. It is called Las Pailas and it is financed through BCIE.

Contact:

Ana Karina Rubi de Reyes, Oficial de Consultorias, BCIE-Tegucigalpa, Honduras

Tel. +504-240-2243, Ext. 5214

Fax. +504-240-2228

Visit the BCIE Web site, www.bcie.org - www.cabei.org

Project Director, Municipal Clean Energy Project, Alliance to Save Energy

The Alliance to Save Energy is seeking a Project Director to start-up and to lead the Municipal Clean Energy Project (MCEP). The MCEP is a new multi-year, national initiative to encourage investment in, and deployment of, energy efficiency and clean energy programs and policies by publicly owned power utilities in the U.S.

The Project Director will have oversight and responsibility for the entire MCEP program, will report to the Vice President of Programs for the Alliance as well as to the MCEP Steering Committee, and will liaise with key project partners.

The successful candidate must have at least five years of program management experience and three years of experience in one of the following areas: publicly owned utilities, municipalities and/or energy efficiency. The candidate must also demonstrate organizational, writing and communications expertise and have the ability to work with senior level executives to both design and lead multi-faceted programs and initiatives. S/he must have a demonstrated ability to build and lead partnerships and/or coalitions. The candidate will work in a fast-paced environment with highly motivated staff in a rapidly growing, energy efficiency-focused organization. The position requires a modest amount of travel, mostly within the U.S. Candidates must have at minimum a Bachelors degree, Masters preferred.

Initial funding has been secured from a major foundation for the development of this initiative and the donor has expressed their interest in the future expansion of the program. Additional proposals have already been submitted to other funding sources. The current funding cycle is through 2011.

The position responsibilities include, but are not limited to, the following:

- Manage MCEP logistics, including budgeting, communications reporting, maintenance of the project web site, and supervision of project personnel and contractors;
- Liaise with the MCEP Steering Committee and project partners;
- Compile, field test and produce “best practice” tool kits for use by MCEP participants;
- Coordinate with project partners in the delivery of MCEP workshops and the tracking of workshop outcomes;
- Manage special events, including a project launch and Municipal Clean Energy Summits;
- Integrate the activities of the MCEP with other leading clean energy policy initiatives.

Salary is competitive based upon experience. The Alliance to Save Energy offers a generous benefits package and a comfortable work environment in downtown Washington DC convenient to Metro. Consideration of candidates will begin immediately and continue until the position is filled. The Alliance is an equal opportunity employer.

Applicants should send a cover letter, resume, salary history and references no later than December 1, 2008 by mail to Dianne Streat, Director of Administration, Alliance to Save Energy, 1850 M Street, N.W, Suite 600, Washington, DC 20036, or via email to dstreat@ase.org. No calls please.

Research Associate II, SMU Geothermal Laboratory

Position: The SMU Geothermal Laboratory, Dallas, Texas, has an opening for a Research Associate II for an appointment of 2 years. The research is supported in part by a grant from GOOGLE.org to SMU. The activities associated with the position relate to the temperature field of the U.S. lithosphere. The outcome is the ability to make sound resource related renewable energy decisions. This research will build on the extensive thermal data sets used to produce the 2004 Geothermal Map of North America by collecting new data and modeling the regional thermal structure.

Qualifications: A PhD in geosciences is strongly preferred or an MS in geophysics and 3 years of work experience. Candidates must demonstrate strong analytical/critical thinking skills to identify issues and information requirements, apply appropriate research and analytical procedures, and review data with a strong focus on attention to detail and accuracy.

Apply online at <http://smu.edu/hr/recruit/> search for “geothermal”
Contact: Dr. David Blackwell, blackwel@smu.edu, 214-768-2745

Geothermal Engineering Analyst, National Renewable Energy Laboratory

Geothermal Engineering Analyst—Requisition #114BR or 115BR—Washington, D.C.

Job/Research Summary: This position performs technology, market and economic analysis, with an emphasis on geothermal energy technology, systems, and infrastructure. Work carried out will support R&D and decision-maker support activities within the Geothermal program through the use of analysis methodologies such as economic feasibility, market transformation, risk, portfolio balance, and cost-versus-benefit. Design novel approaches for systems and infrastructure analysis. Deliver quality products that synthesize the inputs of team members, researchers, market players, and other analysts. Innovate new methods, tools, and approaches that enable greater understanding of geothermal systems.

Job Duties: Combines broad, in-depth knowledge of chemical and/or mechanical engineering with an emphasis on process, heat transfer, and fluids engineering with strong economic analysis capabilities. Performs engineering/economic analyses of geothermal systems and electric transmission in cooperation with research community to gather and understand field data. Documents work in detailed technical memos and internal milestone reports; publishes and presents key results in peer-reviewed journals and at regional, national, and international scientific meetings and conferences. Supports the development of annual operating plans and assists with strategic planning efforts. Works with Department of Energy on technology goals and opportunities.

Minimum Qualifications: Bachelor's Degree in science and/or engineering, or equivalent/relevant education/experience. 3 years of relevant R&D experience.

Preferred Qualifications: Multidisciplinary research exposure to both chemical and mechanical engineering systems, especially those related to the development of cost-effective geothermal systems for utility-scale applications. Familiarity with value chain analysis, risk analysis, and dynamic modeling. Experience in the development and evaluation of applied technology aimed at entering the marketplace. Previous industry experience in renewable energy and geothermal technologies, with experience in related analysis. Established base of contacts with individuals and institutions relevant to energy analysis. Experience working with the federal government. Some experience with computer modeling of energy markets.

Pre-employment drug testing required.

Please visit our website for more information and to apply online: www.nrel.gov/employment/

NREL is an equal opportunity employer committed to diversity and a drug-free workplace.

Sales Manager, Ormat Technologies

Ormat Technologies has an immediate opening for a full time Sales Manager located in our Reno, NV. The ideal candidate will 10+ years in related Sales experience in the energy/renewables industry.

Position Title: Manager of Sales, Geothermal Development; Department: Business Development; Location: Corporate Office Reno, NV; Reports to: Director, Geothermal Development; Position Summary: The Manager of Sales, Geothermal Business Development, will be responsible for the sales and marketing of renewable energy products. The selected candidate will help lead the commercialization and sales efforts for Ormat's latest geothermal supply of geothermal plant equipment, electrical power generation projects, as well as the supply of engineering and construction services for 3rd Party power projects.

Essential Functions: Develop detailed sales and marketing strategies to grow sales within the power generation industry; Conduct market segmentation research, identify lead databases and determine sales channels to establish customer opportunities and spearhead direct sales efforts; Manage customer relationship from initial feasibility trials through to field deployment.

Other Responsibilities: Work flexibly within a dynamic, multidisciplinary team.

Education, Experience and Skills Required: Minimum of 10 years experience in a similar position; Bachelor's degree in Marketing or related field or equivalent experience and/or technical qualifications relevant to the geothermal applications, as well as Engineering and Construction; Experience in marketing or application engineering; Experience working directly with customers in a sales organization with strong communication and interpersonal skills.

Physical Requirements: Must be able to travel regularly

To apply for the position please send a resume to Chris@redfishtech.com.

Engineer V, Geothermal Experience Preferred, Northern California Power Agency

Performs engineering tasks relating to plant reliability/ performance efficiency, primary technical resource for CMMS, supervises implementation of system/equipment repairs/upgrades, PM for plant efficiency upgrade/retrofit projects, construction mgr for public works projects, supervises plant chemical lab & environ, health/safety staff. First 4–6 months, position assigned to NCPA HQ office/Roseville, then GEO Plant, Middletown, CA thereafter. During initial period in Roseville, temp housing provided if required.

Requires BA in electrical/mechanical engineering; MA preferred; and min 10 yrs exp plant/production engineering, preferably within geothermal industry; 2 yrs experience plant reliability/ maintenance engineering & 2 yrs mgmt. exp preferred. Requires knowledge/experience in industry codes/standards; CMMS, Root Cause Failure Analysis, Reliability Centered Condition Based/Mntc, CBM equip; steam turbine plant monitoring & power plant electrical sys; writing, analyzing/interpreting scientific/tech info.; making presentations and some travel in CA. Starting salary: \$96 to \$121K plus exc employer benefits inc CalPERS retirement/medical.

Application at www.ncpa.com

Requests for Proposals (RFPs)

RFP for Smart Grid Demonstrations, DOE, American Recovery and Reinvestment Act

The U.S. Department of Energy announces its intent to request proposals for Smart Grid Demonstrations. Through this RFP, DOE seeks regionally unique demonstrations to verify smart grid technology viability, quantify smart grid costs and benefits, and validate new smart grid business models, at a scale that can be readily adapted and replicated around the country. Areas of interest include: Smart Grid Demonstrations, Synchrophasors, and Energy Storage. \$615 million expected to be available, up to 36 awards anticipated. Closing date to be announced with release of RFP. For more info, contact Keith Carrington at keith.carrington@netl.doe.gov or go to:

<http://www07.grants.gov/search/search.do;jsessionid=9x3VJydGP2TfWHPRK9mfnpHLqsWpm1TQmDJTzS6XLDp1QJKpb2SM!-1267850137?oppId=46836&flag2006=false&mode=VIEW>. Refer to Sol# DE-FOA-0000036. (Grants.gov 4/16/09)

RFP for State Energy Program, DOE

The U.S. Department of Energy requests proposals for the State Energy Program (SEP). This program provides formula grants to State and Territorial energy offices to design and carry out renewable energy and energy efficiency priorities. \$25 million expected to be available, up to 56 awards anticipated. Due dates based on state/territorial program years. For more info, contact Lisa Kuzniar at lkuzni@netl.doe.gov or go to: <http://www.grants.gov/search/search.do?mode=VIEW&flag2006=false&oppId=46791>. Refer to Sol# DE-FOA-0000073. (Grants.gov 4/14/09)

RFP for Contribution of Cost Share for Transportation Related Recovery Act RFPs, CEC

The California Energy Commission requests proposals for the American Recovery and Reinvestment Act Cost Share: Alternative and Renewable Fuel and Vehicle Technology Program. Through this RFP, the CEC will contribute cost share to applicants who are submitting proposals to the Federal government in response to a transportation-related Recovery Act funding opportunity announcements. All projects must be based in California. Eligible Recovery Act solicitations include, but are not limited to: Transportation Electrification (Round 1), DOE, DE-FOA-0000028; Energy Efficiency and Renewable Energy Research – Electric Drive Battery and Component Manufacturing Initiative, DOE, DE-FOA-0000026; Clean Cities (Rounds 1 and 2), DOE, DE-PS26-09NT01236-04; and Transit Investments for Greenhouse Gas and Energy Reduction, DOT, FTA-09005-TIGGER-TRI. \$176 million expected to be available, due dates vary by solicitation. For more info, contact Sarah Williams at skawilli@energy.state.ca.us or go to: <http://www.energy.ca.gov/contracts/transportation.html#PON-08-010>. Refer to PON-08-010.

RFP for Renewables Purchase in Southwest, U.S. Navy

The U.S. Department of the Navy announces its intent to request proposals for the purchase of competitively priced renewable electrical power through power purchase agreements at Naval and Marine Corps installations in the Naval Facilities Engineering Command Southwest AOR. The Navy seeks systems that are constructed, owned, operated, maintained and repaired by the successful offeror(s) on Government property located within the installation boundaries. Up to 5 awards anticipated. The RFP will be issued “within the next month.” For more info, contact Russell Dominy at Russell.dominy@navy.mil or go to:

<https://www.fbo.gov/?s=opportunity&mode=form&id=2d9716078bff363ae320d7e111d4b2d0&tab=core&cvview=1>. Refer to Sol# N6258309R0085. (FBO 4/17/09)

RFP for Technology and National Research Priorities, American Recovery and Reinvestment Act

The National Institute of Standards and Technology requests proposals for the Technology Innovation Recovery Act Measurement Science and Engineering Research Grants Program: Providing the Technology Infrastructure to Address National Priorities. Priority research areas include, but are not limited to: Energy, environment and climate change; manufacturing; and physical infrastructure. \$35 million expected to be available, up to 60 awards anticipated. Responses accepted on a continuous basis. For more info, contact Christopher Hunton at christopher.hunton@nist.gov or go to: <http://www.grants.gov/search/search.do?mode=VIEW&flag2006=false&oppId=46063>. Refer to Sol# 2009-NIST-ARRA-MSE-RESEARCH-01. (Grants.gov 3/16/09)

RFP for Energy Efficiency and Renewable Energy Training Programs, Appalachia (May 29)

The Appalachian Regional Commission requests proposals for Renewable Energy and Energy Efficiency Training and Certification Programs. Funded projects must focus on training and certification programs, supporting the development of trained employees for jobs in the renewable and energy efficiency fields, as well as providing certified installers to the marketplace. Implementation of energy efficiency education curricula, such as USGBC LEED programs, ASHRAE programming, IECC, or other energy efficiency coursework will also be supported. Projects must take place in the ARC Region which includes all of WV and parts of AL, GA, KY, MD, MS, NY, NC, OH, PA, SC, TN, and VA. \$250K expected to be available, up to 10 awards anticipated. Responses due 5/29/09. For more info, go to: <http://www.arc.gov/images/rfp/ARC%20Energy%20RFP%20Training%20and%20Certification.pdf>.

RFP for Renewable Energy and Energy Efficiency for K–12 Schools, Appalachia (May 29)

The Appalachian Regional Commission requests proposals for Renewable Energy and Energy Efficiency for K-12 Schools. This program will underwrite costs of installing renewable energy and energy efficiency equipment in K–12 schools in Appalachia, and provide support for the implementation of associated science, environment, and business curricula in the classroom. Eligible renewable energy equipment includes: Wind, solar, fuel cells, biofuels, and geothermal systems. Projects must take place in the ARC Region which includes all of WV and parts of AL, GA, KY, MD, MS, NY, NC, OH, PA, SC, TN, and VA. \$250K expected to be available, up to 10 awards anticipated. Responses due 5/29/09. For more info, go to: <http://www.arc.gov/images/rfp/ARC%20Renewable%20Energy%20For%20Schools%20Program.pdf>.

RFP for Transformational Energy R&D, DOE, American Recovery and Reinvestment Act (June 2)

The U.S. Department of Energy, Advanced Research Projects Agency (a new DOE Agency created specifically to foster R&D of transformational energy related technologies) requests proposals for Advanced Research Projects. Transformational technologies are defined as those that disrupt the status quo; not merely better than current technologies, but significantly better. This RFP supports the Nation's need to overcome the threats posed by climate change and energy security. Concept papers are required, and are due 6/2/09. Final proposals accepted by invitation only. For more info, contact Bradley Poston at bradley.poston@hq.doe.gov or go to: <http://www.grants.gov/search/search.do?mode=VIEW&flag2006=false&oppId=47045>. Refer to Sol# DE-FOA-0000065. (Grants.gov 4/27/09) (FBO 4/29/09)

RFP for Renewable Energy Certificates, U.S. Air Force (June 4)

Request for Proposal SP0600-09-R-0407-0002 for Renewable Energy Certificates, for ultimate transfer to the U.S. Air Force and various Federal Civilian customers. Contract(s) are anticipated to be one time deliveries starting on September 30, 2009. Total contract quantity is 251,822,000 kWh. This is a combined synopsis/solicitation for commercial items prepared in accordance with the format in Subpart 12.6, as supplemented with additional information; proposals are being requested and a written solicitation will not be issued. This announcement and the document, which can be accessed at the URL identified below, constitute the only solicitation. The solicitation is issued as a Request For Proposal (RFP) and has incorporated provisions and clauses as in effect through Federal Acquisition Circular (FAC) 2005-29. Additional requirements may be added by Amendment. All responsible sources may submit a proposal, which shall be considered. The RFP is available through the DESC-AEA electricity web site: <https://www.desc.dla.mil/DCM/DCMSolic.asp?SolicID=1529>. If you are unable to access the solicitation via the Internet, please contact DESC-AEA for a printed copy.

Points of Contact:

Cynthia Ralph, 703-767-8566, Cynthia.ralph@dla.mil

Leslie Simpson, 703-767-8536, leslie.simpson@dla.mil

For all Small Business issues, please call Lula Manley at (703) 767-9465 or Lula.Manley@dla.mil.

RFP for Rural Energy Audits and Renewable Energy Development, DOA, American Recovery and Reinvestment Act (June 9)

The U.S. Department of Agriculture requests proposals for the Rural Business Enterprise Grant Program. USDA seeks proposals from eligible entities to provide energy audits and renewable energy development assistance for agricultural producers and rural small businesses. Individual awards NTE \$100K. Responses due 6/9/09. For more info, go to: <http://www.rurdev.usda.gov/rbs/>. Refer to Sol# RDBCP-09-RBEG-ARRA. (Grants.gov 3/27/09)

RFP for Energy Innovations Small Grant Program, CEC (June 11)

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 California's electric market. Individual hardware awards NTE \$95K, individual modeling awards NTE \$50K. Responses due 6/11/09. For more info, go to: http://www.energy.ca.gov/contracts/smallgrant/09-01_electricity/index.html. Refer to Sol# 09-01.

RFP for Energy Efficiency and Conservation Block Grants, DOE, American Recovery and Reinvestment Act (June 25)

The U.S. Department of Energy request proposals for Energy Efficiency and Conservation Block Grants (EECBG). This program will provide financial assistance to eligible states, cities, counties and Indian Tribes to create and implement strategies to reduce energy use and fossil fuel emissions, and improve efficiency in the building, transportation, and other appropriate sectors. Areas of interest include, are not limited to: Development of efficiency and conservation strategies and programs for buildings and transportation, technical consultant services; building energy audits; energy efficiency retrofits; building codes programs; reduction and capture of methane and greenhouse gases; traffic signals and street lighting; and renewable energy technologies on government buildings. \$3.1 billion expected to be available. Applications from States due 5/26/09. Applications from Local Governments and Tribes due 6/25/09. For

more info, contact Lisa Kuzniar at lkuzni@netl.doe.gov or go to:
<http://www.grants.gov/search/search.do?mode=VIEW&flag2006=false&oppId=46340>. Refer to Sol# DE-FOA-0000013. (Grants.gov 3/26/09)

RFP for American Recovery Program, Department of Commerce (June 30)

The U.S. Department of Commerce, Economic Development Administration (EDA) requests proposals for the EDA American Recovery Program, for projects that advance economic growth by assisting communities and regions experiencing chronic high unemployment and low per capita income to create an environment that fosters innovation, promotes entrepreneurship, and attracts increased private capital investment. Priority consideration will be given to regions that have experienced sudden and severe economic dislocation and job loss due to corporate restructuring. Applicants may apply for the following programs: 1) Public Works and Economic Development Facilities Program, and 2) Economic Adjustment Assistance Program. Responses due 6/30/10. For more info, including Region-specific contacts, go to:
<http://www.grants.gov/search/search.do?mode=VIEW&flag2006=false&oppId=45786>. Refer to Sol# DA03102009RECOVERYACT. (Grants.gov 3/5/09)

RFP for Green Jobs Training, DOL, American Recovery and Reinvestment Act (June 30)

The U.S. Department of Labor announces its intent to request proposals for Recovery Act Competitive Grant Opportunities. DOL anticipates \$500 million will be targeted at research, labor exchange, and job training projects that prepare workers for careers in energy efficiency and renewable energy as defined in the Green Jobs Act: Energy efficient building, construction, and retrofitting; renewable electric power; energy efficient and advanced drive train vehicles; biofuels; deconstruction and materials use; energy efficiency assessment for residential, commercial, or industrial sector, and manufacturing of sustainable products using sustainable processes. \$250 million will be targeted at other high growth and emerging industry sectors. DOL intends to post the RFPs no later than 6/30/09. For more info, go to:
<http://www.grants.gov/search/search.do?mode=VIEW&flag2006=false&oppId=46337>. (Grants.gov 3/26/09)

RFP for Environmental Implications of Emerging Technologies, NSF (September 15)

The National Science Foundation requests proposals for Environmental Implications of Emerging Technologies, for research to develop and test the environmental effects of new technologies. Areas of interest include, but are not limited to: The development and refinement of sensors and sensor network technologies; innovative production processes, waste reduction, recycling, and industrial ecology technologies; and evaluation of the effect of increased usage of renewable resources on water supply and land use. Individuals awards generally NTE \$80K each. Responses due 9/15/09. For more info, contact Paul Bishop at pbishop@nsf.gov or go to: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=501030. Refer to Sol# PD-09-1179. (Grants.gov 3/23/09)

RFP for Energy for Sustainability, National Science Foundation (September 15)

The National Science Foundation requests proposals for the Energy for Sustainability Program. This program supports research and education in energy production, conversion, and storage, and is focused on energy sources that are environmentally friendly and renewable, including solar, wind and biomass. Average individual awards \$100K. Responses due 9/15/09. For more info, contact Trung Nguyen at tnguyen@nsf.gov or go to: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=501026. Refer to Sol# PD-09-7644. (Grants.gov 3/6/09)

RFP for Thermal Transport Processes, National Science Foundation (September 15)

The National Science Foundation requests proposals for the Thermal Transport Processes Program, for engineering research aimed at gaining a basic understanding of the microscopic and macroscopic levels of thermal transport phenomena (heat and mass transfer) underlying energy conversion and conservation, the synthesis and processing of materials, cooling and heating of infrastructure and equipment, and more. An active understanding of thermal transport in energy conversion and conservation processes is vital to reduce the nation's dependence on petroleum. Awards NTE \$100K. Responses due 9/15/09. For more info, contact Theodore Bergman at tbergman@nsf.gov or go to: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13367. Refer to Sol# PD-09-1406. (Grants.gov 3/9/09)

RFP for National Lab Partnerships for Energy Research, DOE (November 9)

The U.S. Department of Energy requests proposals for Experimental Program to Stimulate Competitive Research (EPSCoR); Building EPSCoR-State/National Laboratory Partnerships. This RFP will support collaborative partnerships between National Laboratories and academic or industrial researchers to conduct nationally competitive, energy-related research. \$1.7 million expected to be available, maximum awards generally \$600K. Pre-applications are required and are due 6/5/09, final proposals due 11/9/09. For more info, contact Marilyn Oyler at marilyn.oyler@science.doe.gov or go to: <https://e-center.doe.gov/iips/faopor.nsf/UNID/33EE94649665FEA8852575A1006CCB0A?OpenDocument>. Refer to Sol# DE-PS02-09ER09-11. (Grants.gov 4/23/09)

RFP for Renewable Energy Resources, Los Angeles (March 11, 2010)

The Los Angeles Department of Water and Power (LADWP) has issued a rolling request for proposals (RFP) designed to seek renewable energy proposals on a continuous basis throughout the year. The rolling RFP calls for proposals for approximately 1,000 GWh per year of renewable energy resources such as solar, wind and geothermal power. This amount represents nearly 4% of LADWP's power sales.

LADWP is looking to acquire renewable energy resources through either immediate ownership of power generation facilities or through long-term power purchase agreements. Under the terms of the new RFP, green power providers can submit their proposal anytime throughout the year. LADWP will open and consider the proposals on a monthly basis, and could then begin evaluation and negotiation of a particular project right away.

LADWP says it will give preference to proposals that offer immediate facility ownership or to long-term PPAs that have an ownership option. Additionally, LADWP is targeting solar projects located in the high deserts of California, close to LADWP's existing transmission system. The application deadline is March 11, 2010.

RFP for Smart Grid Investments, DOE, American Recovery and Reinvestment Act (March 31, 2010)

The U.S. Department of Energy announces its intent to request proposals for the Smart Grid Investment Grant Program. Through this program, DOE seeks to stimulate the rapid deployment and integration of advanced digital technology that is needed to modernize the nation's electric delivery network for enhanced operational intelligence and connectivity. The program will support projects that promote deployment, including development of component technologies. Individual award range anticipated to be \$500K to \$5 million. The RFP will open on or about 6/17/09. Three due dates anticipated: 7/29/09, 12/2/09, and 3/31/10. For more info, contact Donna Williams at Smart-Grid.NOIComments@hq.doe.gov or go to: <https://e-center.doe.gov/iips/faopor.nsf/UNID/39C0D96768F2083F8525759A0068F216?OpenDocument>

<http://www07.grants.gov/search/search.do;jsessionid=9x3VJydGP2TfWHPRK9mfnpLqsWpm1TQmDJTzS6XLDp1QJKpb2SM!-1267850137?oppId=46833&flag2006=false&mode=VIEW>. Refer to Sol# DE-FOA-0000058. (Grants.gov 4/16/09)

Upcoming Events

GEA: U.S. Geothermal Finance and Development Workshop, June 3 (Seattle, WA)

GEA will hold its next in a highly successful series of Finance and Development Workshops in Seattle, WA on June 3.

“The West has a huge untapped geothermal energy potential,” according to Karl Gawell, GEA’s Executive Director. “This workshop will help realize this potential by encouraging collaboration between leading geothermal developers, finance and investment specialists, government officials, lawyers, and technology experts from around the nation.”

The day-long workshop is being held in cooperation with the Mayor of Seattle’s office and with the support of Gold Level Sponsors Ormat, Pratt and Whitney Power Systems, and Enel North America. It will include an update on the U.S. geothermal market and keynote presentations by the Mayor of Seattle, Greg Nickels, and other notable government and industry leaders.

Panels and discussion will include:

- Project development, including presentation from leading project developers on new geothermal projects and keys to successful development
- Technology, including a basic tutorial on understanding geothermal resources and technology and discussion on new and future developments in geothermal technology
- Finance, including information on the federal stimulus, the status of federal and state incentives, and approaches to project financing
- Community/environmental issues and tribal and power company perspectives, with environmental and tribal leaders speaking to geothermal issues and benefits on a local scale.

For more information please go to www.geo-energy.org or contact Kathy Kent at GEA by emailing kathy@geo-energy.org.

GEA: Direct Use/Small Power Finance Workshop, Oregon Institute of Technology (OIT), August 12-13 (Klamath Falls, OR)

GEA in cooperation with OIT will host a geothermal direct-use and small power workshop in Klamath Falls, Oregon in the summer of 2009. The format would be an all day workshop with a site tour the following day. Included in the workshop agenda will be the how-to’s of financing a small power/direct use project, direct use technology, presentations of small projects and direct use projects today and information about drilling and exploration for such projects. For more information contact Kathy Kent at kathy@geo-energy.org.

GEA: Geothermal Energy Expo/GRC Annual Meeting, October 4-7 (Reno, NV)

The 2009 Geothermal Energy Expo and GRC Annual Meeting will be held October 4-7 at the Peppermill in Reno, Nevada. For more information about the Geothermal Energy Expo, visit: <http://www.geo-energy.org>.

Renewable Energy Indonesia 2009 Trade Show, October 14–17 (Jakarta, Indonesia)

Indonesia has 45% of the world's geothermal energy resources. Renewable Energy Indonesia 2009 is the 5th international exhibition for all renewable energy technologies. It will be held at the International Exhibition Centre at Kemayoran, October 14–17, 2009.

For more information: www.pamerindo.com.

New Date! SMU Geothermal Conference, November 3–4 (Dallas, TX)

SMU Geothermal Laboratory has announced new dates for this year's conference, Geothermal Energy Utilization Associated with Oil and Gas Development. From SMU: We postponed the June 18–19 conference to November to give more time for working with companies responding to the many requests for proposals, and to give new projects time for installation so they can report the progress. We apologize for any inconvenience by changing the dates. Looking forward to seeing you in November!

Topics Presented: Power Generation Technology Advancements, Geothermal Resource Exploration and Assessment, Reservoir Engineering, Fracturing, Geopressure Development, Tight Gas Sands Development, Enhanced Geothermal Systems – International, Green Power for Utilities, Renewable Energy Credits and Tax Incentives, Economics and Business Plan, Transmission Needs, Regulation Laws and Leasing, Financing, Demonstration Sites

Submit abstracts for consideration to: blackwel@smu.edu or call 214-768-2745 to discuss an idea. Deadline for submission is September 1, 2009.

More conference details online - <http://smu.edu/geothermal>.

XVII Annual Congress and Annual Assembly, Mexican Geothermal Association, November 13 (Mexico)

The Mexican Geothermal Association (AGM: Asociación Geotérmica Mexicana) will hold its XVII Annual Congress and Annual Assembly by November 13, 2009, at the CFE (Comisión Federal de Electricidad) offices in Morelia, Mich., Mexico.

Preliminary program:

9:00 – 10:00 hours: Registration
10:00 – 13:00 hours: Technical presentations
13:00 – 14:00 hours: Lunch
14:00 – 17:00 hours: Technical presentations
17:00 – 18:30 hours: Ordinary Assembly

Fees: AGM's members: 750 Mexican pesos (~55 USD). Non-members: 1,100 Mexican pesos (~85 USD). Students and retired: 50%. Fee includes lunch, transactions and coffee breaks.

Deadlines:

Submission of abstracts: July 24
Acceptation notification: August 7
Submission of extended papers: September 4
Pre-registration: November 3

Complete call for papers (in Spanish) at: <http://www.geotermia.org.mx> (See: Congreso 2009)

More information: Luis C.A. Gutiérrez-Negrín (AGM's secretary): l.g.negrin@gmail.com.



GEA Weekly Update

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