



# GEO THERMAL ENERGY ASSOCIATION

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## **National News**

### **Senate Completes Action on Stimulus Bill**

After a bipartisan group of Senators develop an amendment to cut over-all spending in the Senate’s version of the stimulus bill, the Senate invoked cloture on Monday, February 9 allowing passage of the measure today by a vote of 61-37. The amendment by the bipartisan group left most of the Senate bill’s renewable provisions intact, but it reduced funding for renewable loan guarantee programs by \$1 billion.

Both bills include a multi-year extension of the Production Tax Credit (through 2013 for new geothermal power projects), \$8 or \$9 billion for renewable energy project loan guarantees, billions of dollars in additional funding for DOE’s renewable energy and energy efficiency programs (with the House setting aside \$400 million for geothermal energy research), and an additional \$1.6 billion for Clean Renewable Energy Bonds. Provisions that are in disagreement include the House bill’s provision for a cash grant program in lieu of tax credits for renewable project developers and the Senate bill’s provision for a tax credit for renewable equipment manufacturers.

The House and Senate will now appoint Conferees to a special Conference Committee that will work to resolve differences between the bills, with the hopes of passing final legislation if possible as early as late this week. Details on the House and Senate bills can be obtained by searching for H.R. 1 at: <http://thomas.loc.gov/home/c111query.html>.

The Senate Energy Committee Democrats issued the following statement about the bill’s final clean energy provisions:

#### Down Payment on Economic Recovery, Clean Energy

By a 61-37 vote, the Senate today passed its \$838 billion economic recovery bill. The legislation contains significant investment in areas critical to the development of clean, efficient, made-in-America energy, which will save consumers money and create millions of jobs.

Chairman Bingaman: “We tried to hit the sweet spot of helping our economy recover while promoting clean energy. This bill does both.”

Bingaman, of course, championed many of the clean energy provisions included in the “American Recovery and Reinvestment Act.” For reporters keeping score, here are the highlights put together by Senate Finance’s Carol Guthrie and Senate Appropriations’ Rob Blumenthal.

## Subtitle B – Energy Incentives

### Long-Term Extension and Modification of Renewable Energy Production Tax Credit:

The proposal extends the placed-in-service date for wind facilities for three years (through December 31, 2012). The proposal also extends the placed-in-service date through December 31, 2013 for certain other qualifying facilities: closed-loop biomass; open-loop biomass; geothermal; small irrigation; hydropower; landfill gas; waste-to-energy; and marine renewable facilities. This proposal is estimated to cost \$13.1 billion over 10 years.

Temporary Election to Claim the Investment Tax Credit in Lieu of the Production Tax Credit: Under current law, facilities that produce electricity from solar facilities are eligible to take a 30% investment tax credit in the year the facility is placed in service. Facilities that produce electricity from wind, closed-loop biomass, open-loop biomass, geothermal, small irrigation, hydropower, landfill gas, waste-to-energy, and marine renewable facilities are eligible for a production tax credit, payable over a ten-year period. Because of current market conditions and the uncertain future tax positions of potential investors, it is difficult for many renewable projects to obtain financing. The proposal allows Section 45 property to receive the 30% investment tax credit under section 48 for the duration of the Section 45 extension, to 2012 (wind) and 2013 (other sources). This proposal is estimated to cost \$218 million over 10 years.

Business Energy Credit: The proposal removes the cap on the investment tax credit for small wind property and eliminates the current law basis reduction for subsidized energy financing. This proposal is estimated to cost \$604 million over 10 years.

Clean Renewable Energy Bonds (“CREBs”): The proposal authorizes an additional \$1.6 billion of clean renewable energy bonds to finance facilities that generate electricity from renewable resources. This proposal is estimated to cost \$578 million over 10 years.

Conservation Bonds: The proposal authorizes an additional \$2.4 billion for conservation bonds. This proposal is estimated to cost \$803 million over 10 years.

Energy-Efficient Existing Homes: The proposal increases the value of the energy-efficient existing homes credit to 30% for 2009 and 2010, modifies the standards for qualifying property, and sets the per-dwelling maximum for this period at \$1500 per taxpayer. The separate limitations on specific energy-efficient property are eliminated. This proposal is estimated to cost \$1.9 billion over 10 years.

Residential Energy Property: The proposal removes the \$2000 cap on the 30% credit for solar thermal and geothermal property, as well as the \$4000 cap on small wind property. The proposal also eliminates the current-law basis reduction for subsidized energy financing. This proposal is estimated to cost \$268 million over 10 years.

Vehicles: The proposal provides a 10% tax credit for 2-wheeled, 3-wheeled and low speed vehicles beginning for 2010 and 2011. The proposal also increases the number of vehicles sold in the U.S. under section 30D, the plug-in electric vehicles tax credit, from 250,000 vehicles sold to 500,000. This provision is estimated to cost \$115 million over ten years.

Smart Meters: The proposal temporarily modifies the depreciation schedule for smart meters, reducing the recovery period for this property from ten years to five years. This proposal is effective through 2010. This proposal is estimated to cost \$22 million over ten years.

Tax Credits for Alternative Fuel Pumps: The proposal increases the business credit for alternative refueling property from 30% (maximum \$30,000) to 50% (maximum \$50,000), and extends the credit for one year. The credit for individual alternative refueling property is doubled, to \$2000. The proposal also increases the cap on hydrogen refueling property to \$200,000, retaining its 30% cap. The proposal also requires that recharging stations eligible for the credit be interoperable with all electric vehicles. This proposal is estimated to cost \$53 million over 10 years.

Energy Research Credit: The proposal provides an enhanced 20% R&D credit in taxable years beginning in 2009 and 2010 for research expenditures incurred in the fields of fuel cells, energy storage, renewable energy, energy conservation technology, efficient transmission and distribution of electricity, and carbon capture and sequestration. This proposal is estimated to cost \$18 million over 10 years.

Carbon Capture and Sequestration: The proposal changes the monitoring and verification of the current law CO2 capture and sequestration credit. The proposal requires the same monitoring and verification for the \$10/ton EOR credit as is required of the \$20/ton permanent storage credit. This provision is estimated to have negligible revenue impact.

Top line spending of approximately \$43 Billion

- The Bill provides \$39 billion to the Department of Energy for development of clean, efficient, American energy. The Bill invests in boots-on-the-ground projects and activities that get people back to work as well as energy research, demonstration, and deployment that will provide for our future and assure a cleaner environment.

- o A total of \$2 billion is provided in grant funding for the manufacturing of advanced batteries systems and components and vehicle batteries that are produced in the United States, including advanced lithium ion batteries, hybrid electrical systems, component manufacturers, and software designers. Batteries are central to our efforts to decrease the oil dependence of our vehicles.

- o An additional \$2.6 billion is for energy efficiency and renewable energy research, development, demonstration and deployment activities to accelerate the development of technologies that will diversify the Nation's energy portfolio and contribute to a reliable, domestic energy supply. Biofuels, geothermal, water, wind, solar, and efficiency projects will be deployed to demonstrate and improve our use of renewable energy.

- o \$4.2 billion is provided for Energy Efficiency and Conservation Grants.

- o \$1.6 billion is provided for grants to make schools and hospitals, significant users of energy, more energy efficient.

- o \$2.9 billion is available for the Weatherization Assistance Program.

- o There is \$4.6 billion for Fossil Energy research and development, including \$2 billion for one or more near-zero emissions, \$1 billion for the Department's Clean Coal Power Initiative Round III Funding Opportunity Announcement and \$1.6 billion for a competitive solicitation for projects that demonstrate carbon capture from industrial sources.

- o The Bill provides \$350 million for grants administered through the Clean Cities program of the Department for acquisition and alternative fuel or fuel-cell vehicles once again decreasing our dependence on foreign oil.

- o The Bill provides \$200 million for grants to states to plan and deploy electrical infrastructure projects that encourage the use of plug-in electric drive vehicles and for near term large-scale electrification projects aimed at the transportation sector, including seaports.

- o The State Energy Programs are provided \$500 million.

- o The bill has a significant focus on the transmission system. This is in recognition of the fact that over the past decade electricity demand has grown by 20%, but transmission capability has only increased 5%. Further, as we push to get more renewable energy sources on line we will need to build out our bulk transmission lines to get stranded renewable energy on line. These stranded renewable resources are mainly in the west and the Great Plains.

- o With this recognition the bill includes \$4.5 billion for smart-grid related activities, including work to modernize the electric grid, enhance security and reliability, perform energy storage research, development, demonstration and deployment, and provide worker training. A smart-grid will help create greater energy efficiency, reliability, and security.

- o A total of \$8.5 billion is provided for new loan guarantees aimed at standard renewable projects such as wind or solar projects and for electricity transmission projects.

- o \$6.5 billion of increased borrowing authority is provided to the Bonneville and Western Area Power Administrations (\$3.25 billion each) to pursue the construction of new transmission and upgrading of electric power transmission lines and related facilities necessary to deliver power generated by renewable energy resources. WAPA and BPA will be critical entities in our push to bring large new sources of renewable energy on to the grid.

- GSA Federal Fleet: \$300 million to replace older motor fleet vehicles owned by the Federal Government with alternative fuel automobiles that will save on fuel costs and reduce carbon emissions.

- Green Buildings: \$2.5 billion for repair of federal buildings to increase energy efficiency using green technology. Funding will help eliminate the backlog of \$8.4 billion in building repair projects.

- \$613 million for energy efficiency upgrades and construction of alternative energy projects, including wind and solar power and photovoltaic roof systems, at Department of Defense facilities. The Department of Defense is the largest consumer of energy in the Federal government, and has made energy conservation a key component of new construction. As well as contributing to energy efficiency and innovation within the Department of Defense, energy-related military construction funding has the potential to stimulate construction and manufacturing jobs in the energy and alternative energy industry. Defense Department energy construction funding includes the following:

Energy Conservation Investment Program: \$118.5 million for energy conservation projects, energy upgrades, and construction of alternative energy projects such as wind power and photovoltaic systems at military installations Department-wide.

Navy Energy Construction and Improvements: \$494.4 million for Navy energy efficiency upgrades and construction of alternative energy projects, including wind and solar power and photovoltaic system installation.

- \$400 million for rural business initiatives including development of renewable energy.

- o Biorefinery Assistance: \$200 million for loans and grants to assist in the development of new and emerging technologies for the development of advanced biofuels.

- o Rural Business Programs: \$150 million to support \$3 billion in loans and grants to support income and employment expansion through improved business opportunities in rural areas. These programs serve as the primary USDA tools for business development in the rural sector and are made available to rural areas with a population of 50,000 or less. As sources of private credit have become more restrictive the demand for these programs has gone up. Additionally, the Small Business Administration has reduced its lending, shifting interest to these programs. It is estimated these funds will create 34,600 private sector jobs.

- o Rural Energy for America Program: \$50 million for loans and grants to promote energy efficiency and renewable energy development for agricultural producers and rural small businesses. These funds are used by agricultural producers, rural small businesses, and rural schools to become more energy efficient and to use renewable energy technologies and resources through investments in renewable energy systems and other energy efficient systems. It is estimated these funds will create 1,600 private sector jobs.

ENR Bonus: The Senate bill also includes \$1.4 billion for the Bureau of Reclamation which will create jobs while addressing a great backlog of work needed to address critical water resource needs in the West. The funding will be used to rehabilitate aging infrastructure, restore and protect degraded watersheds, improve water use efficiency through water reuse projects, construct infrastructure to deliver water to rural communities and improve energy efficiency at Reclamation facilities. These projects will help communities avoid water-related crises that might occur due to drought, climate change, increasing populations and environmental needs.

## **Senate Energy Committee Holds Hearing on National RPS**

The Senate Energy Committee held a hearing February 10 on legislation proposed by Senator Jeff Bingaman for a national renewable energy standard. Witnesses at the hearing included: Dr. Ralph Izzo - Public Service Enterprise Group; Mr. Don Furman - Senior Vice President for Business Development, Transmission and Policy, Iberdrola Renewables, Inc.; The Honorable David Wright - Commissioner, Representing SEARUC; Mr. Scott Jones - Executive Vice President, Forest Landowners Association; and Dr. Lester Lave - Professor, Carnegie Mellon University. Their statements and other materials about the hearing and legislation are available at:

<http://energy.senate.gov/public/index.cfm?FuseAction=Home.Home>

The Senate Energy Committee Democrats issued the following statement related to the hearing:

### **Helping Power Companies Go Green**

“During the past four Congresses we have passed a requirement that utilities provide a specified percentage of their electricity from renewable resources again and again. In the 107th, 108th, and 109th we passed it in the Senate but the House would not accept it. In the 110th the House passed it but we couldn’t get a vote in the Senate. I think that it is time that we finally pass this provision in both houses and get it to the President, for whom it is one of the highest priorities.

“The provision that the hearing is on today is a majority staff draft. It is similar as to its mechanics to the provisions that we have passed before, with some major differences. First, the requirement is raised from 15% by 2020 to 20% by 2021. Second, the resources that can be used to comply have been expanded. Up to one-quarter of the requirement can come from energy efficiency. We also have included new hydropower at existing dams that currently do not have generation.

“The reasons to pass such a provision are as compelling as ever, if not more so. A renewable standard can reduce our dependence on fossil fuel sources, reducing emissions of greenhouse gases and other pollutants. Another effect of this reduction is to cause a reduction in the prices of the fossil fuels displaced. Such a standard diversifies our resource base, lessening the effect of supply disruptions or shortages, creating greater economic stability. It reduces our dependence on foreign sources of energy, creating greater energy security. This standard would also spur the development of a national green energy economy, creating hundreds of thousands of jobs, many in rural areas.

“Over the years we have seen many economic analyses of renewable standards. All of them that are done by independent analysts conclude that the cost of implementing this standard range from negligible to positive, with many showing significant reductions in the overall cost of energy to Americans.

“When you add the fact that we are going to do something to put a price on carbon emissions, probably through a cap-and-trade system, you have to know that the cost of whatever we do to reduce carbon emissions will be greatly reduced by a significant spur to the renewable generation of electricity such as the RES.

“I think that the votes are present in the Senate to pass a renewable electricity standard. I think that they are present in the House. I think that we need to get on with figuring out what we can pass and move forward.

“I intend to work closely with Ms. Murkowski and the other members of the Committee on that task. The witnesses are here today to help us begin that process. I look forward to hearing their testimony.”

### **Bingaman Promotes New Plan: 30% Cash Grants for Renewables Producers**

From Sustainable Energy Coalition/SUN DAY Campaign, [U.S. Senator Bingaman Promotes New Financing Plan For Producers of Renewable Energy - Proposal Would Protect Taxpayers, Create/Preserve Jobs:](#)

To help meet President Obama’s goal of doubling renewable energy production in three years, U.S. Senator Bingaman plans to advance a proposal to enable renewable energy producers to claim a 30% cash grant from the U.S. Treasury Department in lieu of the 30% investment tax credit. Under this plan, the Treasury Secretary would award the grant only after determining that the producer has taken adequate actions to protect American taxpayers. Bingaman contrasted his approach with a provision in the House stimulus bill, which would allow for similar grants, but would be administered through the Department of Energy and not require participating firms to make tradeoffs to participate.

See

[http://energy.senate.gov/public/index.cfm?FuseAction=PressReleases.Detail&PressRelease\\_id=2d88670f-4045-4ac8-b9e1-1fedce29e75c&Month=2&Year=2009&Party=0](http://energy.senate.gov/public/index.cfm?FuseAction=PressReleases.Detail&PressRelease_id=2d88670f-4045-4ac8-b9e1-1fedce29e75c&Month=2&Year=2009&Party=0).

### **Markey-Platts Bill Would Increase Clean Energy Development, Jobs**

Reps. Edward J. Markey (D-MA) and Todd Platts (R-PA) introduced the American Renewable Energy Act which requires 25% renewable electricity by 2025, according to ucsusa.org. This would boost renewable energy generation by 135% in that time. Rep. Markey also introduced the Save American Energy Act for an energy efficiency resource standard that reduces electricity demand by 15% by 2020. Together, these measures will create more than a half million jobs and will save consumers more than \$180 billion. Twenty-eight states and the District of Columbia currently have state standards on renewable energy generation. UCS calculates that the federal standard would create enough clean electricity to power roughly 150 million typical homes by 2025, the article said.

See [http://www.ucsusa.org/news/press\\_release/new-20-by-2025-RES-bill-0193.html](http://www.ucsusa.org/news/press_release/new-20-by-2025-RES-bill-0193.html) and [http://globalwarming.house.gov/mediacenter/pressreleases\\_2008?id=0086#main\\_content](http://globalwarming.house.gov/mediacenter/pressreleases_2008?id=0086#main_content).

### **Organizations Report on Potential and Hurdles for New Grid**

With Congress and the public looking toward increased renewable energy production, a new transmission system to make this possible would cost up to \$100 billion, according to the *Wall Street Journal*. A new study sponsored by grid-running organizations says that to get 20% of U.S. electricity from renewable energy by 2024, 15,000 circuit miles are needed. The new grid would be built alongside existing infrastructure and would start in the Great Plains and Midwest, stretching to East Coast cities.

The purpose of the study was "to make clear that if you need large sums of energy that's not carbon-based, these are the kinds of numbers involved" to achieve it, Clair Moeller, head of transmission planning for the Midwest Independent System Operator, told press. Cost of the project is one hurdle, but in addition, the insertion of high-voltage power lines will require permission from local authorities and landowners, the article said.

Organizations participating in the report included the Midwest Independent System Operator, SERC Reliability Region, PJM Interconnection LLC, the Southwest Power Pool, the Mid-Continent Area Power Pool, and the Tennessee Valley Authority.

See <http://online.wsj.com/article/SB123414242155761829.html>.

## **Congress Plans Six Hearings Related to Energy**

In addition to the hearing above on a National RPS, recently announced hearings related to energy include:

### 1.) House Natural Resources Committee to Hold Hearing on Offshore Drilling:

Wednesday, February 11  
10:00 a.m.  
Room 1324  
Longworth House Office Building

Given last year's expiration of the offshore oil and gas leasing moratoria on the Atlantic and Pacific coasts, the House Natural Resources Committee, led by Chairman Nick J. Rahall (D-WV), will hold the first in a three-part series of oversight hearings during the month of February to examine the current state and future of the country's offshore drilling policy.

Federal lands and waters are critical to the Nation's energy supply and the economy, producing close to one-third of our domestically supplied oil and gas. Featuring witnesses from state governments, the oil and gas industry, the fishing industry, the tourism sector, and environmental organizations, the series is intended to address the question of where, and under what terms, future oil and gas development off America's coastlines will occur.

The first hearing - "Offshore Drilling: Environmental and Commercial Perspectives" - will feature testimony from witnesses on the need for environmental protections for the OCS and the importance of our oceans as a valuable national resource for all American's to enjoy.

### 2.) The Climate Crisis - National Security, Economic, and Public Health Threats:

House Committee on Energy & Commerce -- Subcommittee on Energy and Environment  
Thursday, February 12  
10:00 a.m.  
2123 Rayburn House Office Building

### 3.) Senate Commerce Committee Hearing on Nominations:

Thursday, February 12  
10:00 AM  
SR - 253

During this hearing, Committee Members will hear testimony from Dr. Jane Lubchenco, nominated to be Under Secretary of Commerce for Oceans and Atmosphere at the U.S. Department of Commerce - also known as the Administrator of the National Oceanic and Atmospheric Administration (NOAA) – and Dr. John Holdren, nominated to be Director of the Office of Science and Technology Policy in the Executive Office of the President.

### 4.) Senate Energy Committee Hearing on DOE Loan Guarantee Program:

Thursday, February 12  
10:00 AM  
Hearing Room SD-366

The full Senate Committee on Energy & Natural Resources will convene a hearing to receive testimony on the current state of the Department of Energy Loan Guarantee Program.

The purpose of the hearing is to receive testimony on the current state of the Department of Energy Loan Guarantee Program, authorized under Title 17 of the Energy Policy Act of 2005, and how the delivery of services to support the deployment of clean energy technologies might be improved.

5.) House Science Committee Hearing on Transportation R&D Priorities:

Thursday, February 12  
10:00AM  
2318 Rayburn House Office Building

The House Science & Technology Committee's Subcommittee on Technology and Innovation will conduct a hearing "An Overview of Transportation R&D: Priorities for Reauthorization."

6.) House Transportation Committee on Energy Efficiency in Federal Buildings:

Thursday, February 12  
2:00 PM  
2167 Rayburn House Office Building

The House Transportation & Infrastructure Committee's Subcommittee on Economic Development, Public Buildings, and Emergency Management will conduct a hearing "GSA's Economic Recovery Role: Job Creation, Repair, and Energy Efficiency in Federal Buildings and Accountability."

## **Company News**

### **Geysir Green Energy: Ownership in Envent Increases to 80%**

Press Release—February 6, [Geysir Green Energy Increases Stake in Geothermal Project](#)

MANILA, PHILIPPINES—Geysir Green Energy, the global geothermal company, has increased its ownership in Envent from 50% to 80%.

Envent is currently working on several geothermal projects in the Philippines and is committed to contributing to the Philippine government's target of an additional 1,200 MW of renewable energy by 2013. Envent's most advanced project in the Philippines is on Biliran island, located in the central Philippines, close to the Eastern Visayas power grid system. The Biliran project is being executed through Envent's associate company, Biliran Geothermal Incorporated. The project is currently progressing well with surface explorations scheduled to be completed in the second quarter of 2009.

Geysir's increased ownership of Envent complements the recently issued Philippines Renewable Energy Act of 2008. The Act seeks to accelerate the exploration and development of renewable energy resources in the Philippines. For example, it promotes the purchase, grid connection and transmission of electricity generated from renewable energy sources, and provides incentives such as exemption from various taxes and duties to renewable energy developers in the country.

Mr. Thor Gislason, Chief Technology Officer, Geysir Green Energy / Chairman of the Board, Envent:

"These are interesting times in the Philippines for renewable energy. The new Renewable Energy Act is an important stepping-stone for the power industry here and for the sustainability of the renewable power industry in the Philippines. We are pleased to increase our ownership in Envent and are committed to taking advantage of the benefits that the new Renewable Energy Act has to offer."

Mr. Gudmundur F. Sigurjonsson, President and Chief Executive, Envent:

"We are pleased with the increased attention that Geysir is showing our business in the Philippines. Our geothermal projects are making good headway; the surface exploration program in Biliran is now entering its final stage. Our business is well set to take advantage of the new Renewable Energy Act and to help the Philippines develop its substantial geothermal resources."

See <http://www.earthtimes.org/articles/show/geysir-green-energy-increases-stake-in-geothermal-project,708059.shtml>.

## **Renewable and Climate Change News**

### **Western Governor's Association Solicits Comments on Western States Renewable Energy Resource Zones Report**

By John McCaull ~ Western States Representative, Geothermal Energy Association

February 9, 2009. As part of their Western Renewable Energy Zone Project, the Western Governor's Association (WGA) has committed to analyzing the development potential of renewable energy resources in the Western United States. The Western Governors' Association and U.S. Department of Energy launched the Western Renewable Energy Zones (WREZ) Project in May 2008. The central goal of the WREZ Project is to identify those areas with vast renewable resources and then expedite the planning and development of new transmission lines to deliver clean and renewable energy to load centers throughout the West. Participating in the project are 11 states, two Canadian provinces, and areas in Mexico that are part of the Western Interconnection.

Public comments are being sought on several draft documents and maps developed by the Western Renewable Energy Zones' project. Comments may be submitted from February 2 through March 2, 2009. The three work groups listed below have produced draft documents and a map for which they are seeking public comments. To submit a comment, click on a work group name below and you will be directed to a page that contains background information, links to documents and a space for submitting comments to that specific work group. If you wish to comment on documents for another work group, you will need to go to that group's public comment page to view the documents and submit comments.

- Zone Identification and Technical Analysis Work Group
- Environment and Lands Work Group
- Generation and Transmission Work Group

GEA is represented on both the Technical Committee and two of the WREZ workgroups (the Zone Identification and Technology Analysis and Environment and Lands Work Groups). Each of the work groups and the Technical Committee include stakeholders representing non-governmental organizations, industry, advocacy groups and all levels of government. GEA is also in the process of securing a seat on the third work group (the Generation and Transmission Modeling work group). A consensus-based process is being used to develop work products.

As reported in the October 24, 2008 edition of the GEA Weekly Update, in cooperation with leading researchers and consultants assisting the WGA, the Geothermal Energy Association was successful last year in including the latest data on medium and high temperature resources in the WREZ resource mapping process. In the last 8 years, newly refined "heat flow" mapping techniques, technological advances and publication of comprehensive studies indicate that geothermal resources have the potential to generate renewable energy in the next 10-20 years on par with the highest estimates for solar and wind technologies. The WREZ initiative recognizes that there may be geothermal energy potential available on the order of a hundred thousand (100,000) MW or more in the Western Interconnection.

The Zone Identification and Technical Analysis (ZITA) work group is responsible for developing: 1) the methodology and criteria that identify those areas in the West with the best and most concentrated renewable energy resources and 2) the technology-specific information that can be used in the model developed through the WREZ process to determine the cost of renewable energy resources from the identified zones. The Environment & Lands work group is responsible for identifying potential conflicts with wildlife within Qualified Resource Areas using environmental, land use and wildlife criteria. The Generation and Transmission Modeling work group is responsible for developing a user-friendly modeling tool that can estimate the delivered cost of power from renewable energy zones to load areas. In those cases where multiple entities are interested in accessing resources in the same zone, the tool could also be used to evaluate whether there is the necessary critical mass to warrant building transmission to that area.

The ZITA work group used raw data and maps from the U.S. Department of Energy's National Renewable Energy Lab as the starting point for its analysis of the wind, solar, geothermal, biomass and hydropower resources within the Western Interconnection. Canadian wind data were obtained from two different sources. British Columbia wind data are from a resource assessment being carried out by BC Hydro, which quantifies the wind resource potential in areas with wind project developer interest across British Columbia. Alberta wind data are from the Alberta Electric System Operator queue and reflect wind projects planned by developers who are requesting access to the transmission grid. The Alberta data are points that approximate the planned locations of these wind projects, but do not identify their precise spatial extent. Canadian discovered conventional geothermal data were obtained from the same dataset from GeothermEx that also quantified US geothermal potential. British Columbia large and small hydropower data were obtained from BC Hydro and the BC Transmission Corporation. Alberta large hydropower data were obtained from Canadian Hydropower Developers and, indirectly, from a contact of TransCanada Energy.

After moving through a three step process (all renewable resources, candidate study areas, qualified resource areas), the WGA has now presented resource data for geothermal, solar, wind and other renewable resources across the West in what is called the qualified resource areas map. Of equal importance is how "exclusion areas" for steering renewable energy development away from environmentally and culturally sensitive resource areas are being developed and presented. This work has been occurring in the Environment and Land (E&L) work group. The Qualified Resource Areas were created by factoring in several criteria that are explained in the QRA methodology. These criteria would include areas that could not be developed, such as some military lands, wilderness areas, urban areas and bodies of water. Click here for a comprehensive list of those lands. The product of this analysis can be seen in two separate documents: the map of Qualified Resource Areas and the accompanying map notes and legend.

These maps do not include information on wildlife sensitivity. Additionally, some data for "exclude and avoid" areas were not received in time to be incorporated into the QRA maps. The QRAs will be further refined into Renewable Energy Zones once wildlife and complete data for exclude/avoid areas are included. Interested parties will be able to comment in late spring on the revised maps.

Finally, the Generation and Transmission Modeling work group is responsible for developing a user-friendly modeling tool that can estimate the delivered cost of power from renewable energy zones to load areas. In those cases where multiple entities are interested in accessing resources in the same zone, the tool could also be used to evaluate whether there is the necessary critical mass to warrant building transmission to that area. The Transmission Segments Sub-group created a map (click here for Load Centers and Segments List ) using information from many Western utility transmission experts that is a high-level representation of the existing bulk transmission system. The map shows the distance between representative segments and can be used to estimate the distance from Qualified Resource Areas to load zones when using the WREZ modeling tool. The map does not indicate proposed routes for transmission and is not a detailed depiction of every line in the West. Actual routes will be determined by transmission project sponsors and regulatory processes that are used to approve transmission projects.

GEA will be carefully analyzing the work product for all three groups, and providing detailed comments before the March 2, 2009 comment deadline. We will also solicit input from geothermal companies, state and federal agencies active in permitting geothermal resource development and other interested parties in the next two weeks to develop our comments, and circulate draft comments in advance of the comment deadline.

For more information, contact John McCaull, GEA's Western States Representative at [john@geo-energy.org](mailto:john@geo-energy.org) or at 530/979-7586.

## **Suffering Forest Industry Turning to Jobs in Renewable Energy**

The forest industry is becoming more involved in renewable energy projects, according to [Columbian.com](http://www.columbian.com). Many sawmills are closed or on limited production, the article said, and electricity generation is a way to provide jobs. Geothermal energy is one type of renewable energy that is being tapped by forest landowners. Weyerhaeuser leased geothermal rights on 667,000 acres in western Washington, Oregon, and California last September. Wood and paper wastes are also converted into electricity—a \$100 million energy plant in Tacoma by Simpson Investment Co. will power 44,000 homes. Foresters are looking at a variety of innovative ways to improve, with private foresters implementing reforestation and waste recovery programs.

See <http://www.columbian.com/article/20090203/BIZ01/702039984>.

## **State News**

### **California Legislature Begins Debate on Expanding Renewable Energy Mandate to 33% by 2020**

By John McCaull ~ Western States Representative, Geothermal Energy Association

February 9, 2009. As reported in the November 24, 2008 GEA Weekly Update, Governor Schwarzenegger signed [Executive Order S 14-08](#) that established a target that California “shall serve 33% of [its electricity] load with renewable energy by 2020. State government agencies are hereby directed to take all appropriate actions to implement this target in all regulatory proceedings, including siting, permitting, and procurement for renewable energy power plants and transmission lines.”

As the Governor's fact sheet indicated, the Order re-establishes California's already ambitious [Renewable Portfolio Standard \(RPS\)](#) at a new nation-leading level and calls for a restructuring of the process of developing renewable energy sites to make it easier to achieve our renewable goals. S-14-08 can't change the RPS statute, so Governor Schwarzenegger was flanked by a bipartisan group of legislators who promised to introduce legislation making much of the Executive Order, and in particular the 33% procurement target, into law by early 2009. As incoming Senate President Darrell Steinberg said, “Let's get this passed in the first 90 days of the session!”

The CPUC has reported that 29,000 GWh (gigawatt hours) of renewable energy is in existence today. An additional 31,000 GWh is necessary to reach the 20% RPS goal for a total of 60,000 GWh. To reach 33% an additional 41,000 GWh would be needed for a total of 101,000 GWh. Is it available in the necessary time frame? The Senate bill analysis cites the Phase 1B Report of the [Renewable Energy Transmission Initiative \(RETI\)](#) that indicates that more than 208,000 GWh of "cost-effective large scale" renewable resources are available in concentrated areas (identified as Competitive Renewable Energy Zones [CREZ]) within the State of California and immediately adjacent areas in bordering states, thus identifying resource areas to bring renewable resources far in excess of CA needs.

As promised, legislation was introduced in each house of the Legislature to implement the Governor's Executive Order. In the face of a \$42 billion budget deficit, and prolonged negotiations that have extended since last fall, Senator Steinberg still seems determined to fulfill his promise to at least begin hearings on the RPS expansion. The Senate Energy, Utilities and Communications Committee is set to take up [Senate Bill 14 \(Simitian\)](#) this week. The bill is co-authored by the Pro Tem, the Chair of the Energy Committee and several other legislative leaders on energy and environmental issues. The Assembly leadership also introduced [AB 64 \(Krekorian\)](#) which is not yet set for a hearing.

In typical legislative fashion, it is clearly not enough to just stick with the basics. Current law requires investor-owned utilities (IOUs) and energy service providers (ESPs) to increase their existing purchases of renewable energy by 1% of sales per year such that 20% of their retail sales, as measured by usage, are procured from eligible renewable resources by December 31, 2010. This is known as the [Renewable Portfolio Standard \(RPS\)](#). Current law also exempts publicly owned utilities (POUs) from the state RPS program and instead requires these utilities to implement and enforce their own renewable energy purchase programs that recognize the intent of the Legislature to encourage increasing use of renewable resources.

The heart of SB 14 follows the Governor's Executive Order: the bill requires IOUs, POUs, and ESPs to increase their purchases of renewable energy such that at least 33% of retail sales are procured from renewable energy resources by December 31, 2020. An important qualification for IOUs and ESPs, is that the 33% mandate is only required if the California Public Utilities Commission determines that achieving these targets will result in just and reasonable rates. The bill also includes a variety of penalty and compliance reporting provisions.

Then things get complicated. The financial underpinnings of the RPS mandate is a CPUC regulatory procurement process for renewable resources by IOUs which includes the determination of a benchmark for the market price ([market price referent or MPR](#)) for energy against which renewable contracts are evaluated for reasonableness in price. If the costs of those contracts exceeds specified thresholds then the IOU's RPS purchase mandate is waived (aka a cost cap) SB 14 eliminates the calculation and use of the MPR and the cap on costs and instead directs the CPUC to continue its "prudence review" of contracts and also consider the cost impact of procuring renewable resources as part of the IOU procurement process, the rate impacts, effects on system reliability and the environment and economic benefits of renewable procurement. This highly contentious issue threatens to split the renewable energy industry by technology, with solar and geothermal companies supporting the elimination of the MPR, and wind energy companies asking for its retention.

Importantly, SB 14 also addresses what is perceived to be the biggest barrier to meeting the current 20% RPS mandate, and the eventual 33% goal: a lack of adequate transmission to bring new power to the grid. SB 14 clarifies that, for electricity to be considered delivered to the state, the generation of the resource must be simultaneous with the delivery to the California grid.

The legislation also requires the CPUC to approve a Certificate of Public Convenience and Necessity (CPCN) for a line that will facilitate the transmission of renewable generation within one year of the filing of a completed CPCN application as long as the CPUC has not made specified findings including substantial harm under the California Environmental Quality Act or that the line is not reasonable and necessary for grid reliability. SB 14 goes even further by directing the Independent System Operator to adjust its market structure to meet 33% and, in an effort to mitigate the cost and aggregate amount of new transmission, work with public and private operators and builders of transmission, and pursue joint ownership of transmission by IOUs, merchant operators, and POUs.

SB 14 also directs the CEC to facilitate the development of annual statewide transmission plans with the ISO that incorporate all planned and existing publicly and privately owned transmission with the goal of minimizing the aggregate amount and cost of new transmission; siting and approval of new transmission that can be jointly owned, utilized and/or operated; seams agreements between the ISO, POUs and IOUs that optimize the available transfer capacity of all transmission grid systems. Finally, the bill addresses various direct access and residential ratepayer protection issues that date back to the energy crisis of 2000-2001.

The bill was amended on January 29, 2009 so it is unclear who is currently in support versus opposition to the bill. The major environmental groups, the Independent Energy Producers and various clean energy companies clearly support the bill. It is unclear where the major utilities are at this point, and whether the amendments have satisfied their concerns. GEA will continue to report on this important matter in future weekly updates as it begins to move through the legislative process.

## **California: Los Angeles to Purchase Geothermal Power from Mexican Company**

The Los Angeles Department of Water & Power has signed an agreement with Mexico's Comision Federal de Electricidad, according to [labusinessjournal.com](http://labusinessjournal.com). DWP can make wholesale purchases of up to 100 MW from CFE's Prieto Geothermal facility in Baja California. DWP purchased 25 MW of geothermal power from CFE in December 2008 and 50 MW last month.

Los Angeles Mayor Antonio Villaraigosa's goal is for renewable to reach 20% of the total power portfolio by 2010. This agreement takes DWP's renewable contributions to 10%.

See

<http://www.labusinessjournal.com/article.asp?aID=53592768.28885.1740505.9758993.6749442.734&aID2=133876>.

## **California: Why Aren't More Geothermal Projects Moving Forward in California?**

By Karl Gawell ~ Executive Director, Geothermal Energy Association. Reprinted from Renewable Energy World

Geothermal energy produces more power in California than wind and solar combined, comprising almost 5% of the state's electricity. As the state moves forward, it will need significant new production from geothermal and other renewable technologies to meet the aggressive climate change goals set by the governor and the legislature. While there is a lot of pressure to accelerate production and a host of federal and state initiatives proposing to help, we need to make sure they are addressing all of the critical hurdles.

When I asked the question at a recent industry meeting, "Why aren't more projects moving forward in California?" the response was rather quick and direct. While I could have expected a discussion of investment problems, the slow economy, or the need to develop new technology, what I was told was: leases and permits are simply not being issued.

Here's one example I was given: a lease that won with a very substantial bid from the Bureau of Land Management (BLM) almost two years ago was still waiting for a drilling permit to be issued. This particular lease is not in a pristine area, but to the contrary, it is almost totally within an existing geothermal field.

Another example was the continued delays in decision-making at one geothermal site due to off-road vehicle users. Despite completion of a full EIS, development at one new site in Southern California, known as Truckhaven, is not proceeding because leases have yet to be issued, let alone subsequent permits approved. The problem is opposition to the project from recreational off-road vehicle users who like to drive their four-wheel-drive vehicles around the area. The project is delayed while the BLM seeks to assuage their concerns.

While these two examples might just seem to be the kind of problems endemic to working on public lands, they are just the tip of the iceberg. In a state where federal and state lands play a significant role, most of the public lands have effectively been off limits for decades because the land-use plans of federal agencies simply didn't consider geothermal energy when they were prepared.

Before a lease can be issued on public lands the land-use plan for the area has to have adequately considered geothermal leasing and made a decision that the lands could be open to leasing. Also, the land-use plan has to have an adequate and up-to-date environmental analysis (EA or EIS) supporting it. Because BLM (and the FS) simply have not done their homework in the land-use plans prepared over the past 25 years, most areas in California have been de facto closed to geothermal leasing and development.

That is why in 2007 and 2008 the BLM and Forest Service prepared a Programmatic Geothermal EIS (PGEIS) to address this history of neglect. Now, as part of their Record of Decision (ROD) on this

document, the Department of the Interior is amending plans in California and other western states to either allow leasing or close lands to leasing on the basis of the results of their analysis. For California, the ROD proposes to amend land-use plans in 11 California BLM planning areas to open 10 million acres to possible geothermal leasing. At the same time, the ROD will close 5 million acres in these 11 BLM planning areas to geothermal leasing.

If someone cannot obtain a lease to develop a geothermal project, there is simply no incentive to explore for or develop new resources. Now, the BLM has in place the plans and environmental documents necessary to make a decision if someone nominates BLM lands for competitive leasing. But for the past two decades, 10 million acres of public land in California with geothermal potential were off-limits due to bureaucratic oversight.

This is a lot of land and the PGEIS analysis indicated that a lot of it does have geothermal potential. Today, there are only about 50,000 acres of federal geothermal leases in production nationwide which support about 1200 MW of power capacity. So, how much geothermal potential might there be on these 10 million acres?

Let's do a quick back-of-the-envelope calculation; if 10% of the land now open to leasing is eventually developed at the same proportion to existing leased acreage, geothermal production would increase 2000%. This is just from the lands in California — the PGEIS also made decisions for 11 other western states. And, while that sounds like a lot of land to develop, geothermal power has one of the smallest footprints of any energy technology. Only a small fraction of each lease is actually utilized for power production.

Let's get back to the question we started with: why aren't more geothermal projects moving forward in California and what needs to be done about it?

Congress and the new administration have set some high goals for expanding renewable energy production, including geothermal energy. Don't get me wrong, I think making an investment in new technology is vitally important. We need that investment. It's also exciting to see the emphasis on providing effective incentives for doubling or tripling renewable power production over the next three years. The rollercoaster of federal and state policies supporting renewable energy has unquestionably been part of the problem.

But we also need to address the bureaucratic hurdles that could stand in the way of achieving this goal. Timely decisions regarding leasing and permitting must not be ignored — they are fundamental to achieving expanded geothermal energy production in California and the West. Sometimes when I am asked what the hurdles are to moving geothermal and other renewable production forward, I feel like invoking the wisdom of the comic strip character, Pogo, who would often remark: "We have met the enemy, and them is us."

See <http://www.renewableenergyworld.com/rea/news/article/2009/02/why-arent-more-geothermal-projects-moving-forward-in-california-54659>.

## **Nevada: Companies Band to Form Renewable Energy Team**

Team Nevada, a private-public initiative to attract support for renewable energy technology, has been formed and will present at the Renewable Energy World Conference & Expo North America on Mar. 10 to 12 in Las Vegas, according to [energycurrent.com](http://www.energycurrent.com). The team is led by the Nevada Commission on Economic Development and NV Energy and includes county and regional development agencies.

See <http://www.energycurrent.com/index.php?id=3&storyid=15823>.

## **Utah: Energy Research and Development is on the Rise**

Utah is one of the top areas in the U.S. to explore for energy research, says an article on [examiner.com](http://www.examiner.com). The Office of Economic Development has adopted the USTAR (Utah Science, Technology, and Research)

initiative to bring more high-tech sciences to the state. Raser Technologies' success last year in building an industrial-scale geothermal power plant in only six months is an indicator of Utah's rich resources.

Governor Huntsman recently declared his desire to make Utah a "premiere destination in America for renewable energy." Salt Lake City Mayor Ralph Becker has also offered his support. Utah has seen remarkable growth in research and development of renewable energy, compared to California and Texas—the two leaders in renewable energy, the article said. Utah has immense undeveloped potential for both geothermal and solar power.

See <http://www.examiner.com/x-3153-Salt-Lake-City-Business-Technology-Examiner~y2009m2d6-Utahs-Energy-Boom>.

## **International News**

### **Australia: Penola Project Increases Panax Geothermal**

Press Release—February 6, [Panax Geothermal's Penola Project Adds Huge Potential for Geothermal Energy](#)

Panax Geothermal (ASX:PAX) has provided an update from Managing Director Bertus de Graaf on the previous quarter and outlook:

During the quarter, the Osiris Energy acquisition was successfully completed as a result of support from shareholders. As a consequence of this important transaction, the Limestone Coast Geothermal Project was strongly enhanced through the inclusion of the Penola Trough. This trough contains a hot sedimentary aquifer, previously intersected by a large number of deep petroleum exploration wells and has extensive 3D and 2D seismic survey cover.

As a result, the two vital economic inputs for geothermal development, namely: temperature and flow rate, can now be established with a high degree of certainty. The scope of the Penola Project is substantial as can be gauged from our recently released "Resource Statement".

Panax Managing Director Bertus de Graaf said, "we will continue to be focussed on drilling a production well in mid-2009. This well is designed to become part of the first module of a geothermal power plant, scheduled to be on line (maingrid) in 2011. To realise this, Panax completed and submitted an application for a \$7 million grant from the Commonwealth's Geothermal Drilling Programme, whilst our efforts to raise additional funds on acceptable terms are ongoing."

"To achieve our chances to succeed, Panax will focus on raising the profile of the Penola Project. As such, Shareholders can look forward to a partial upgrade of the released "Inferred Resources" to the "Indicated" and/or "Measured" category. Also, we are planning to release an independently reviewed pre-feasibility study of the Penola Project, focussing on the total cost of power generated (capital and operating costs). Indications are that cost per MWe generated will be highly competitive with wind."

See <http://www.proactiveinvestors.com.au/companies/news/821/panax-geothermals-penola-project-adds-huge-potential-for-geothermal-energy-0821.html>.

### **Czech Republic: CEZ to Build First Geothermal Plant**

CEZ AS is central Europe's biggest power company, according to Bloomberg.com, and is in planning stages to build its first geothermal energy plant, possibly beginning later this year. It will cost about 1 billion koruna and produce less than 10 MW of power, the article said. The power will go to the city of Liberec.

See [http://www.bloomberg.com/apps/news?pid=20601095&sid=adt50zdY\\_FUY](http://www.bloomberg.com/apps/news?pid=20601095&sid=adt50zdY_FUY).

## **Japan: Geothermal Development Expected to Increase**

Geothermal development in Japan will be on the rise, with a government panel of experts expected to call for increased investment in the renewable resource this April, according to guardian.co.uk. Residents of the town of Kusatsu has expressed concern that the plans will negatively affect their hot springs, which they depend on for tourism, while government sees increased development as a way to ease dependence on foreign oil and honor Kyoto protocol commitments on CO<sub>2</sub> levels.

"In Japan, the steam used in geothermal power generation is turned to water and returned underground," Yuzuru Ashida, a professor at Kyoto University told press. "There is no scientific proof that geothermal power generation negatively impacts hot springs."

See <http://www.guardian.co.uk/world/2009/feb/07/geothermal-power-stations-japan>.

## **Notices and Employment Opportunities**

### **GEA Seeking Input for New Geothermal Industry Update**

GEA is preparing its next industry update to be released in early March 2009 and would appreciate help identifying new projects geothermal projects, and is seeking other constructive comments or suggestions to make this report more effective.

In August 2008, the Geothermal Energy Association published a report outlining the status of geothermal projects currently operating and those under development in the United States for the past two years. This last update, U.S. Geothermal Power Production and Development Update: August 2008, is at: [http://www.geo-energy.org/publications/reports/Geothermal\\_Update\\_August\\_7\\_2008\\_FINAL.pdf](http://www.geo-energy.org/publications/reports/Geothermal_Update_August_7_2008_FINAL.pdf).

If you have information to add to the new update, or other constructive suggestions, please contact Kara Slack at [kara@geo-energy.org](mailto:kara@geo-energy.org), or by phone at 520.904.4879.

### **California Division of Oil, Gas, & Geothermal Resources Offices Furloughed**

Effective February 6, California Division of Oil, Gas, & Geothermal Resources offices will be closed on the first and third Friday of each month. Please call 916-322-1110 (Northern California including Mono County) or 714-816-6847 (Southern California) for on-demand field tests or emergencies. They apologize for any inconvenience this may cause.

### **Employment: Chief Reservoir Engineer, CalEnergy**

Collects and processes information on well-field and plant performance, diagnoses well problems and designs procedures to fix them. Requires a leadership role in data collection and problem solving. Uses advanced interpretation techniques of reservoir simulation to provide essential information for the resource department's function of reservoir development and forecasting. The data is also used to support plant operations and comply with governmental reporting.

Qualifications:

Bachelor's degree or higher in engineering, preferably petroleum. At least fifteen years of related experience and/or additional resource engineering-related training. Geothermal resource engineering experience is required and some petroleum engineering experience in oil and gas is also desired.

To apply for this position and to view a complete job description, please visit our web site at [www.calenergy.com](http://www.calenergy.com).

### **Employment: Director of Geothermal Resources, CalEnergy**

This position manages and directs the geothermal resources of the company. Responsibility of all geothermal well fields in which MidAmerican Energy Holdings Company has an interest, including the operating well fields of the Salton Sea (Imperial Valley, CA) and non-operating prospects in inventory and development projects. This position manages the drilling and resource departments, including drilling operations on a 24/7/365 basis and other well maintenance work as required. This position is also responsible for providing a broad range of technical and scientific support to power generation operations, including resource and drilling operations, environmental compliance, development and other departments as required. As the top resource oriented technical position in the company, this position represents the company for resource technical issues in manners such as testimony before legal or regulatory agencies such as the California Energy Commission or the California Department of Oil, Gas and Geothermal Resources, or discussions to partners, financial institutions, trade groups, or environmental groups on well field related issues.

#### Qualifications:

Minimum of a bachelor's in engineering, earth sciences or related field. Have advanced degrees, training, and certifications specific to resource related topics. Has a minimum of 10-15 years of demonstrated application of a diverse technical knowledge in all resource disciplines including reservoir engineering, drilling engineering, production engineering, reservoir modeling, geology, geophysics and geochemistry. Must have excellent skills in economics and planning. Must have shown successful managerial leadership in the fields of reservoir engineering and earth sciences, with a minimum of 10 years of management experience in this area. Must have working knowledge of geothermal power plant operations in relation to their relative effect or demands on the resource/well field operations in relation to plant operation. Knowledge of thermodynamics and metallurgy required. Advanced spreadsheet and computer database skills a must.

To apply for this position and to view a complete job description, please visit our web site at [www.calenergy.com](http://www.calenergy.com).

### **Employment: Senior Environmental Coordinator, CalEnergy**

The senior environmental coordinator works with operating unit personnel to ensure awareness of and compliance with environmental regulations, policies and procedures and requirements of the company, assisting the operating group in the development of solutions to environmental issues. Monitors chemical, physical and biological hazards that could be present. Investigates environmental incidents and reports incidents to appropriate regulatory agencies. Assists with the development and delivery of environmental procedures and training. Implements environmental compliance self-inspections and recommends appropriate action to facility management. Recommends improvements in processes, design, procedures and operations to minimize environmental incidents. Maintains close contact with environmental health and safety, laboratory, operations and maintenance and other company departments. Assists in maintaining facilities' environmental licenses, permits and authorizations.

#### Qualifications:

Bachelor's degree in chemistry, environmental sciences or related field and 3-5 years environmental experience or equivalent work experience. (Typically six years of related, progressive work experience would be needed for candidates applying for this position who do not possess a bachelor's degree.) Five years of related experience. Background working in all environmental media. Demonstrated air, water, or waste/land use experience is required. A broad diversity of environmental work experience in private industry, governmental, and consulting is preferred.

To apply for this position and to view a complete job description, please visit our web site at [www.calenergy.com](http://www.calenergy.com).

### **Participants Sought for ESP Design Meeting (February 11, 2009)**

Participants sought for an all-day design meeting for the ideal ESP, to be held in Palo Alto on Wednesday, February 11.

A limited number of participants are being sought for a one-day design meeting. The goal of the meeting is to develop the criteria for the ideal ESP (e.g., temperature, horsepower, diameter, efficiency, etc). Individuals knowledgeable in down hole submersible pumps and high temperature motors are explicitly sought. Representatives from pump companies are welcome.

Elevated temperatures in confined subsurface environments pose a unique set of challenges not encountered in other areas of energy retrieval. Recognizing this, a geothermal prize is being developed to spur innovation and accelerate the manufacturing of robust geothermal pumps. The goal is a set of design criteria for an ESP pump that is technically feasible within the next five to seven years.

The initial stages of this prize project are being funded by the Lemelson Foundation. To learn more about this project please contact Lawrence Molloy at [Lawrence.Molloy@gmail.com](mailto:Lawrence.Molloy@gmail.com).

### **Employment: 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](mailto:dstreat@ase.org). No calls please.

### **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: 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](mailto:blackwel@smu.edu), 214-768-2745

### **Employment: 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/](http://www.nrel.gov/employment/)  
NREL is an equal opportunity employer committed to diversity and a drug-free workplace.

## **Employment: 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](mailto:Chris@redfishtech.com).

## **Employment: 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](http://www.ncpa.com)

### **Requests for Proposals (RFPs)**

#### **RFP for Small Business Technology Transfer, National Science Foundation (February 25)**

The National Science Foundation requests proposals for the Small Business Technology Transfer Program (STTR). STTR seeks to stimulate technological innovation in the private sector by strengthening the role of small business concerns in meeting Federal R&D needs, increasing the commercial application of federally supported research results, and fostering and encouraging participation by socially and economically disadvantaged and women-owned small businesses. Areas of interest include: Materials for Sustainability, Bio-inspired Materials and Systems, Smart Materials and Structures, and Nanostructured Materials. \$5 million expected to be available, up to 35 awards anticipated. Letters of Intent are required and are due 1/14/09, final proposals due 2/25/09.

For more info, contact Cheryl Albus at [calbus@nsf.gov](mailto:calbus@nsf.gov) or go to: [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=nsf08608](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf08608). Refer to Sol# 08-608. (Grants.gov 9/22/08)

#### **RFP for Energy Efficiency, Renewable Energy, and Transmission Technologies, DOE (February 26)**

This solicitation announcement (DE-PS01-08LG00001) invites the submission of applications for loan guarantees under Title XVII of the Energy Policy Act of 2005, 22 U.S.C. 16511-16514 (“Title XVII”), from the U.S. Department of Energy in support of debt financing for projects in the U.S. that employ energy efficiency, renewable energy, and advanced transmission and distribution technologies that constitute New or Significantly Improved Technologies. Copies of related regulations may be found at <http://www.lgprogram.energy.gov/>.

DOE is actively promoting projects that fall within the following three general but distinct project type categories: (1) manufacturing projects, (2) stand-alone projects, and (3) large-scale integration projects that may combine multiple eligible renewable energy, energy efficiency and transmission technologies in accordance with a staged development scheme.

The applicant is requested to specify which, if any, of the following project types and technology categories most accurately represents its project: (1) Alternative Fuel Vehicles, (2) Biomass, (3) Efficient Electricity Transmission, Distribution and Storage, (4) Energy Efficient Building Technologies and Applications, (5) Geothermal, (6) Hydrogen and Fuel Cell Technologies, (7) Energy Efficiency Projects, (8) Solar, and (9) Wind and Hydropower.

With questions, email the LGPO at [lgprogram@hq.doe.gov](mailto:lgprogram@hq.doe.gov). Please include in the subject line "RETDEE Solicitation Question." Completed applications due February 26, 2009 Full announcement can be found at <http://www.lgprogram.energy.gov/keydocs.html>.

### **RFP for Renewables, Oklahoma Gas and Electric (February 27)**

The Oklahoma Gas and Electric Company seeks 300 MW of eligible wind energy resources that will be interconnected to the Southwest Power Pool and operational by 12/31/10. Notice of Intent to Bid due 2/9/09, final proposals due 2/27/09.

For more info, go to: <http://www.oge.com/es/rfp/wind2008-rfp.asp>. (Green Power Network 12/10/08)

### **RFP for Alternative Fuels & Clean Cities, U.S. DOE (February 27)**

The U.S. Department of Energy requests proposals for Clean Cities FY 09 Petroleum Reduction Technologies Projects for Transportation Sector, for projects covering a range of alternative fuel and transportation-related technology deployment and educational activities. Areas of interest include: 1) Refueling Infrastructure for Alternative Fuels, 2) Incremental Costs of Dedicated Alternative Fuel Vehicles, and 3) Education and Outreach Workshops for Petroleum Reduction Fuels and Technologies. Up to \$6 million expected to be available, up to 24 awards anticipated. Responses due 2/27/09.

For more info, contact Janet Laukaitis at [janet.laukaitis@netl.doe.gov](mailto:janet.laukaitis@netl.doe.gov) or go to: <https://e-center.doe.gov/iips/faopor.nsf/0ba000b968a07c9885256c3f0067b90d/1a2666e72e53ddb8e85257527005b80df?OpenDocument>. Refer to Sol# DE-PS26-09NT01236-00.

### **RFP for Environmental Sustainability, National Science Foundation (March 1)**

The National Science Foundation requests proposals for the Environmental Sustainability Program. This program supports engineering research that seeks to balance society's need to provide ecological protection and maintain stable economic conditions. The four principal research areas include: Industrial Ecology, Green Engineering, Ecological Engineering, and Earth Systems Engineering. Responses due 3/1/09.

For more info, contact Bruce Hamilton at [bhamilto@nsf.gov](mailto:bhamilto@nsf.gov) or go to: [http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=501027](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=501027). Refer to Sol# PD-09-7643. (Grants.gov 12/5/08)

### **RFP for Environmental Implications of Emerging Technologies, National Science Foundation (March 1)**

The National Science Foundation requests proposals for the Environmental Implications of Emerging Technologies Program. This program provides support to develop and test the environmental effects of new technologies and emphasizes engineering principles underlying technology impacts. Innovative production processes, waste reduction, recycling, and industrial ecology technologies are of particular interest. Responses due 3/1/09.

For more info, contact Paul Bishop at [pbishop@nsf.gov](mailto:pbishop@nsf.gov) or go to: [http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=501030](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=501030). Refer to Sol# PD-09-1179. (Grants.gov 12/5/08)

## **Comments Sought on Draft Documents, Map, Western Renewable Energy Zones Initiative (March 2)**

The Western Renewable Energy Zones Initiative urges all interested parties to comment on areas that have been identified through the WREZ process as having high quality and developable renewable resources. The aim of the WREZ initiative is to expedite the development and delivery of electricity generated by renewable energy.

### Key Dates and Events:

- Present - April 2009 - ZITA and E&L work groups continue to refine recommendations
- February 2 - March 2, 2009 - Public comment period
- April 23 - 24 2009 - Technical Committee meeting in Salt Lake City, Utah to recommend final REZs, and next steps for Phases 2 - 4 to the Steering Committee
- April TBD - Comment period on revised REZ maps that identify areas with wildlife sensitivities
- April - May 2009 - Steering Committee acts on Technical Committee recommendations
- June 14 - 16, 2009 - WREZ Phase 1 report on the identification and mapping of commercial renewables, including REZs, presented to the governors and premiers at WGA's Annual Meeting
- Fall 2009 - Phase 2 conceptual transmission planning report completed. Phase 3 discussion begins among utilities on coordinated procurement. Phase 4 collaborative efforts begin among state and federal agencies in the review of permits for interstate transmission.

For general questions, contact Madeleine West, Energy Program Associate, [mwest@westgov.org](mailto:mwest@westgov.org), 303-623-9378 ext. 125

Several draft documents and a map are available for review and comment. Background on the WREZ project is provided below and can be viewed online at:

[http://rs6.net/tn.jsp?et=1102433942863&e=001eKTxUuCS9bosPScXmm03jt4vgEMtGWGxxHec00s6q99ERneXH\\_nquSz2jicR8Z7Fg6WfYyF9Q4VPIQPMwEMH\\_oW9hXV20VRgvrWKMM-A2henMQwejPltdtqrMtv3eNPmj3e-Z3J9NIj3VPbFtipDakrurHYafn2fBoHBQGEgs8=](http://rs6.net/tn.jsp?et=1102433942863&e=001eKTxUuCS9bosPScXmm03jt4vgEMtGWGxxHec00s6q99ERneXH_nquSz2jicR8Z7Fg6WfYyF9Q4VPIQPMwEMH_oW9hXV20VRgvrWKMM-A2henMQwejPltdtqrMtv3eNPmj3e-Z3J9NIj3VPbFtipDakrurHYafn2fBoHBQGEgs8=).

## **RFP for Community Action for a Renewed Environment, U.S. EPA (March 16)**

The U.S. Environmental Protection Agency requests proposals for the Community Action for a Renewed Environment (CARE) program. CARE is a community-based, community-driven, multimedia demonstration program designed to help communities understand and reduce risks due to toxic pollutants and environmental concerns from all sources. \$3 million expected to be available, up to 18 awards anticipated. Responses due 3/16/09.

For more info, contact Dennis O'Connor at [occonnor.dennis@epa.gov](mailto:occonnor.dennis@epa.gov) or go to: [http://www.epa.gov/air/grants\\_funding.html](http://www.epa.gov/air/grants_funding.html). Refer to Sol# EPA-OAR-IO-09-02. (Grants.gov 12/17/08)

## **RFP for Combined Heat and Power, California Energy Commission (March 19)**

The California Energy Commission requests proposals for the Combined Heat and Power and Combined Cooling, Heating, and Power Grant Solicitation. Through this RFP, the CEC seeks RD&D projects that will advance the science, technology, and market penetration in CA of grid-connected, Combined Heat and Power (CHP) systems, which are closely integrated with prime movers (engines, turbines, and fuel cells). Proposals due 3/19/09.

For more info, go to: <http://www.energy.ca.gov/contracts/pier.html>. Refer to PON# 08-005.

## **Upcoming Events**

### **34th Stanford Geothermal Workshop, February 9–11, 2009 (Stanford, CA)**

This workshop will bring together Engineers, Scientists and Managers involved in geothermal reservoir studies and developments; provide a forum for the exchange of ideas on the exploration, development and use of geothermal resources; and enable prompt and open reporting of progress.

Papers will be presented on recent research relating to geothermal reservoirs including:

- \* Case Studies: reservoir response to production, effects of injection, scaling characteristics
- \* Enhanced Geothermal Systems (EGS): current and future activities
- \* Engineering Techniques: reservoir simulation, empirical methods, well tests, tracers
- \* Field Management: strategies for exploitation, injection, scale inhibition
- \* Exploration: geophysics, geochemistry, geology, heat flow studies, outflows
- \* Drilling and Well Bore Flows: well stimulation, bore flow modeling, hydro-fracturing, scaling
- \* Low Enthalpy Systems: applications of heat pumps, hot dry rock technology
- \* Geosciences: application of geophysics, geochemistry, thermodynamics and fluid mechanics.

*For more information such as abstract submission, last year's workshop format, and more visit <http://pangea.stanford.edu/ERE/research/geoth/conference/workshop.html>.*

### **Workshop on Feed-in Tariffs, California PUC, February 10 (San Francisco, CA)**

The California Public Utility Commission (PUC) will hold a workshop on "Renewable Feed-in Tariffs" on February 10, 2009 in San Francisco.

The workshop notice is the first formal response by the PUC to the recommendations by the California Energy Commission that the PUC immediately implement a system of differentiated feed-in tariffs for renewable energy projects less than 20 MW.

The workshop is to determine whether the PUC should open an existing docket to include expanding the present feed-in tariff for projects up to 1.5 MW that has been largely ineffectual.

Prior to the workshop, staff will issue a data request that will identify the topics of the workshop and contain questions seeking comment. Contact Jaelyn Marks at [jm3@cpuc.ca.gov](mailto:jm3@cpuc.ca.gov) <<mailto:%20jm3@cpuc.ca.gov>> or 415-703-2257 for more details.

Wisconsin has also opened a formal docket into Advanced Renewable Tariffs, a system of feed-in tariffs differentiated by technology, size, application, and resource intensity.

Hawaii's Public Service Commission has also opened a docket on feed-in tariffs.

The commissions in both Wisconsin and Hawaii are on expedited schedules. Hawaii's feed-in tariffs are to be implemented by mid-summer.

### **GeoFund–IGA Geothermal Workshop, February 16–19, 2009 (Istanbul, Turkey)**

Partnership International, Inc would like to invite you to the GeoFund - IGA Geothermal Workshop in partnership with the IGA (International Geothermal Association) and the World Bank this February 16-19, 2009 at the President Hotel in the heart of old-city Istanbul, Turkey.

The goal of the Workshop is to educate participant and thereby enable geothermal development via World Bank and IFC GeoFund as well as private sector financing. These GeoFunds will enable the development

of bankable geothermal existing and greenfield projects, and help mitigate the risk of explorations in Europe Central Asia region. As outlined by the World Bank's GeoFund initiative, the workshop aims to help educate participants on how to secure these funds for geothermal developments in 2009:

**Direct Investment:** GeoFund, via the World Bank, will support selected project developers by providing low cost loans, contingent grants and outright grants which would cover part of the project cost through monetization of external benefits. GeoFund via the IFC, the GeoFund will help improve the performance of existing geothermal installations through renovation of existing facilities, and will support bankable business plans greenfield facilities where the resources are promising.

**Geological Risk Insurance Window:** GeoFund will partially insure project developers/investors against the short-term and medium-term geological risks. This insurance will help mitigate the risks associated with geothermal energy exploration.

For more information, please see that attached Application, or visit the website: <http://www.partnership-international.com/GeothermalEnergy.php>.

If you are interested in a Best Practice Geothermal Kiosk please visit the website: [http://www.partnership-international.com/Geothermal\\_Kiosk.php](http://www.partnership-international.com/Geothermal_Kiosk.php).

For information on being a Corporate Sponsor in the workshop – please contact Tracy Mathieu for further information: <http://www.partnership-international.com/GeothermalSponsors.php>.

### **Featured Event: Renewable Energy World Conference and Expo North America 2009, March 10–12, 2009 (Las Vegas, NV)**

North America's Premier Renewable Energy Conference & Expo Is Now in its 6th Year!

The Renewable Energy World Conference & Expo North America (formerly POWER-GEN Renewable Energy & Fuels) has a proven track record— now in its 6th year— as renewable energy's leading conference. It offers a worldwide audience who will hear papers, panel discussions and presentations during technical sessions related to technology, markets, business strategies and policy covering the wind, solar, biomass, hydro, geothermal, ocean/tidal/wave, bio-power, bio-fuels hydrogen and energy sectors. There has never been a better time to be a part of the exciting, ever-growing world of renewable energy!

Connecting 5,000 renewable energy power professionals with 300 exhibitors for three days of networking, new business negotiation, and the exchange of important ideas and information impacting the renewable energy industry today.

REenergize with new technologies, new companies, new strategies and new views!

The Geothermal Energy Association will be exhibiting at this event. GEA has also organized panels for Wednesday and Thursday on “Enhanced Geothermal Systems,” “US Geothermal Market,” and “Geothermal Finance and Incentives.” GEA's Executive Director, Karl Gawell, will also be among the Keynote Session speakers on Tuesday, March 10<sup>th</sup>.

For more information and to register, visit <http://rewna09.events.pennnet.com/fl/>.

### **New Date: Canadian Geothermal Energy Association Conference and AGM, April 22–24, 2009, (Vancouver, B.C.)**

The Canadian Geothermal Energy Association (CanGEA) announces their Workshop, Tradeshow, Conference and AGM on April 22–24, 2009 in Vancouver, BC.

CanGEO also announces that its 2009 membership drive has begun. CanGEO welcomes all members interested in advancing the development of Canada's vast resources. In addition, members receive premium benefits on one of the world's most popular geothermal websites.

Visit the Web site for information: <http://www.cangea.ca/>.

### **Featured Event: GEA Project Showcase, Newseum, May 6, 2009 (Washington, DC)**

GEA will be inviting the DC energy policy and technology community to see geothermal energy projects under development in the West at the Newseum in Washington DC. Leading geothermal companies in the U.S. will show their new geothermal projects either near completion or just coming online. Companies will share footage (video or stills) and talk about their projects. A panel discussion with moderator is also expected to be part of this half-day event. For more information contact Kathy Kent at [kathy@geo-energy.org](mailto:kathy@geo-energy.org).

### **Featured Event: GEA Geothermal Finance and Development Workshop, Washington Convention and Trade Center, June 3, 2009 (Seattle, WA)**

GEA will hold its next in a highly successful series of Finance and Development Workshops in Seattle, WA on June 3. The agenda of this workshop will include a U.S. Geothermal update, panel of project developers, technology panel, finance panel, community/environmental panel, tribal and power company perspectives, keynote presentations by the Mayor of Seattle and other notable invitees. While encompassing development across the U.S., some presentations will focus on the Pacific Northwest. This event will be promoted nationwide and to the media. For more information contact Kathy Kent at [kathy@geo-energy.org](mailto:kathy@geo-energy.org).

### **Featured Event: GEA Direct Use/Small Power Finance Workshop, Oregon Institute of Technology (OIT), August 12-13, 2009 (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](mailto:kathy@geo-energy.org).



#### ***GEA Update***

A newsletter for GEA Members written by Leslie Blodgett and Karl Gawell. For more information contact GEA at: 209 Pennsylvania Avenue SE, Washington, D.C. 20003. Phone: 202-454-5261; Fax: 202-454-5265; E-mail: [research@geo-energy.org](mailto:research@geo-energy.org)