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CEC Proposing Revisions to Geothermal Grant & Loan; See Jan. 23 Staff Workshop Agenda

**Featured Notices**

GEA Seeks Information for 2013 US Geothermal Power Production and Development Report (by Feb. 12)

National Geothermal Academy, Rolling Applications (Starting Feb. 15)

35<sup>th</sup> New Zealand Geothermal Workshop to Take Place in Rotorua, NZ (Nov. 18-20)

**Featured Jobs**

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**Featured RFPs**

USTDA Seeks Geothermal Companies for Projects in Mexico

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State of the Geothermal Energy Industry Briefing, Washington, DC (February 26, 2013)

International Geothermal Energy Finance Forum, New York, NY (April 11, 2013)

National Geothermal Summit, Reno, NV (June 26-27, 2013)

**Featured Events**

Geothermal Energy and Waste Heat to Power: Utilizing Oil and Gas Plays, Southern Methodist University, Dallas, Texas  
(March 12-14, 2013)



## National News

### Feature Story: U.S.-East Africa Collaboration -- From Start-Up to Top-Gear in the Geothermal Industry

By Leslie Blodgett, Geothermal Energy Association -- The East African hotbed called the Rift Valley is already validated in the global geothermal sector by successful operations in Kenya and beyond nearby borders, and is poised to be one of the fastest growing and sustained geothermal markets in the world in the coming decades.



The region represents “a huge export market for U.S. geothermal companies,” noted Stephen Hirsch, Director of the U.S.-East Africa Geothermal Partnership (EAGP), a public-private partnership between the U.S. Agency for International Development (USAID) and the Geothermal Energy Association (GEA).

Some say U.S. companies may not be acting fast enough. Martin Mwangi, who founded GeoSteam Services Ltd in order to provide geothermal consultancy, goods, and services in the East African region, said that the Kenya Electricity Generating Company (KenGen) and Geothermal Development Company (GDC) recently procured a total of six rigs from China, with very little interest shown from U.S. companies to participate in these bids.

Mwangi first became involved in the geothermal sector in 1981 as an employee of KenGen at the Olkaria Geothermal of Project. “My general perception it that U.S. companies are not aggressively keen to get into the geothermal business in the East Africa region,” he told GEA.

He believes the U.S. companies have the technology and quality goods and services that are needed in the geothermal industry, however: “They need to compete and participate much more.” He suggested joining in initiatives similar to EAGP and participating in international tenders for goods and services, including for training.

#### Recent news briefs from the local geothermal news market:

Progress in East African geothermal markets has been touted by local news sources. These updates have also been in recent issues of GEA’s free weekly newsletter.

Late last year KenGen announced plans to seek public-private partnerships through competitive tendering processes in order to raise financing for up to 560 MW of geothermal resources (Engineeringnews.co.za). The company has also

completed a pilot 5-MW portable geothermal station and is now considering 14 smaller plants, with a combined capacity of 65 MW.

The U.S. Agency for International Development (USAID) and the African Union Commission just this month joined in a Memorandum of Understanding, laying out a plan to capitalize on development of the geothermal resource in East Africa.

The International Renewable Energy Agency has also gotten involved. In a report, they note African countries are experiencing some of the world's fastest growth economically ([irena.org](http://irena.org)).

A recent article on [Allafrica.com](http://Allafrica.com) highlights the community-level benefits of geothermal energy as the Olkaria geothermal plant brings first-time electricity to new areas in Kenya. There were fewer outages, people felt safer when out at night, and small business owners reported being able to stay open regular hours. Schools were able to stay open and small business owners were successful enough send their children to school for the first time.

*Timing is right for expanded geothermal through East Africa-U.S. partnerships:*

Sam Abraham of Geothermal Resource Group has been involved with geothermal drilling in Africa since Orpower 4, an Ormat subsidiary, started the expansion phase for the Olkaria power plant and the company became project coordinator in 2010.

"The East African geothermal sector is going through a very important phase where additional power capacity is being added by the three major players - KenGen, GDC and Orpower," Abraham told GEA. "At the same time, the transmission grid has to be upgraded, and the future looks really promising for Kenya especially as a major power exporter.

"[O]ther countries like Rwanda [are] ready to start drilling and increase the share of geothermal energy for their domestic power production," he added.

In conjunction with efforts coordinated by the EAGP, in November Abraham attended the 4th African Rift Geothermal Conference (ARGeo C-4), hosted by the Government of Kenya in partnership with the United Nations Environment Programme (UNEP) and the Geothermal Association of Kenya (GAK) in Nairobi, Kenya.

The conference brought together geothermal specialists, Cabinet ministers, diplomats, development partners, and other energy sector stakeholders from about 10 countries.

But Mwangi said in prior years the U.S. has been conspicuously absent from the conference and the East African geothermal sector. A main objective of the conference conceived in 2003 was aimed at mobilizing international companies, particularly U.S., but: "Unfortunately this did not happen," he said. Very few U.S. companies participated in the subsequent ARGeo conferences in Ethiopia (2006), Uganda (2008), and Djibouti (2010).

The U.S. industry is now taking note of the rapid development in the region and used the recent ARGeo Conference as a springboard to get acquainted with key players and opportunities in the sector.

In many ways, the ARGeo C-4 conference was also an opportunity for representatives of African entities to connect with U.S. representatives, and EAGP represented an umbrella support system to facilitate connection through personal ties between East African geothermal players and their U.S. counterparts.

*What sparked your interest in the East African geothermal markets?:*

Dr. Lisa Shevenell, President of ATLAS Geosciences Inc., is an expert in the U.S. industry and a newcomer to the East Africa geothermal markets. She attended the ARGeo conference in conjunction with EAGP efforts.

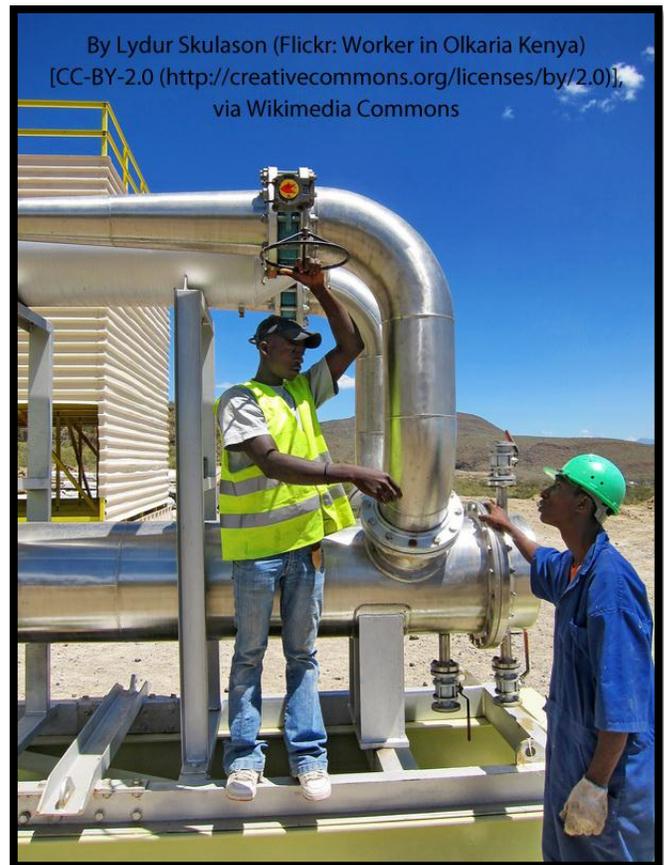
Shevenell told GEA that the East African Rift zone's significant potential for large, high-temperature geothermal systems caught her attention. "The countries have a demonstrated interest in pursuing economic development for their populations using indigenous sources of power," she said. "Kenya, in particular, is actively developing its geothermal resources and providing the financial backing to do so. Given they have a large resource base, this could translate into long-term development efforts by Kenya, and provide a variety of business opportunities for U.S. firms with experience in all aspects of geothermal development.

Additionally, the East African geothermal sector is "proactive about developing their geothermal resources, much more so than is the case in the U.S. at this time," she said.

The Dewhurst Group's Kerry McCallum, Geothermal Exploration Engineer, agrees. "The East African geothermal sector is in many ways more active than the U.S. at the moment," he told GEA. The Dewhurst Group, a GEA member, is similarly new to the East African market and knew little about the corresponding programs prior to participating in the EAGP.

McCallum laid out two reasons the Dewhurst Group is convinced of major opportunities: First, "economic growth is driving demand for power in all sectors within the region," he said. Second, "vast un-exploited geothermal resources exist and there is a willingness from regional governments to realize the benefits reaped by having geothermal power in their energy portfolio."

"These factors create excellent market conditions for the geothermal industry and adventurous U.S. companies willing and able to provide goods and services," McCallum said.



By Lydur Skulason (Flickr: Worker in Olkaria Kenya) [CC-BY-2.0 (<http://creativecommons.org/licenses/by/2.0/>)], via Wikimedia Commons

“Innovative early-stage funding mechanisms such as the Geothermal Risk Mitigation Facility, or GMRF, greatly bolster chances for success,” McCallum added. “GMRF also enhances interest and attracts investment by U.S. firms desiring to expand into East African markets.”

*What is your perspective of the geothermal market in Africa?:*

McCallum called the ARGeo conference a “world class exposition,” saying that virtually every aspect of geothermal development was covered by papers and seminars. “Witnessing so many delegates from nearly every East African country including the world’s newest country, South Sudan, was remarkable,” he told GEA. “Gathering all of these groups together under one roof is a real credit to ARGeo organization and demonstrates their enthusiasm for promoting geothermal power development.”

“The conference successfully revealed the extent to which the East African community is striving to develop and expand the geothermal industry,” he said.

McCallum also shared a geothermal power theme song that was played during intermissions at the conference. “It is an instant hit,” he said. ([Click here to hear the song on YouTube](#)).

Since the conference trip, the company has submitted several formal proposals for work in East Africa and has been in contact with many of the officials and representatives in attendance.

“For a rapidly expanding small business like ours, this conference and EAGP’s support has been invaluable,” for gaining a foothold in that market, he said; and Hirsch is an “excellent ambassador for the U.S. geothermal industry,” with knowledge of local customs and an extensive contact network.

Shevenell of ATLAS GeoSciences similarly said that EAGP was instrumental during the conference, making introductions and arranging meetings with relevant people and entities.

“[Hirsch] has also been very helpful since the conference in follow-up on a number of business possibilities I have been pursuing in Uganda and Kenya,” Shevenell added. “His knowledge of the region and significant contact base are greatly aiding U.S. companies in establishing relationships in the East African region. Entering the East African market would be significantly more difficult without the efforts that [Hirsch] has made to assist in U.S. company involvement.”

Mwangi told GEA, “The ARGeo conferences are improving in terms of quantity and quality of papers, presentations and level of interaction of business people and government officials.

“The participation of U.S. companies in previous ARGeo conferences has been very low,” he said. “However, due to the EAGP initiative, about 10 U.S. papers were presented in the ARGeo-C4. These papers received very high interest from participants and also added flavor to the entire conference,” while Kuster Company and Geothermal Development Associates also had exhibition booths.

*Where are the markets headed in the future?:*

GEA's International Initiatives Coordinator Alison Holm, who works closely on EAGP initiatives, prepared the following statement on the state of the East African geothermal markets as of early 2013:

"East Africa is poised to be one of the fastest-growing and sustained geothermal markets in the world in the coming decades, representing a huge export market for U.S. geothermal companies. Kenya is leading the region's efforts with a goal of bringing 5000 MW of new geothermal capacity online by 2030. Planned geothermal development in Kenya alone is projected to result in an \$18 billion capital investment in the sector by 2030. Kenya currently has numerous rigs operating within its borders and expects to bring in an additional three rigs in the first half of 2013.

"Ethiopia and Rwanda are also actively pursuing new geothermal development, including an expansion to the Aluto Langano plant in Ethiopia, a planned 40 MW new plant at Tendaho (Ethiopia), and a 10 MW pilot plant at Karisimbi (Rwanda). Uganda has awarded geothermal exploration concessions to six local companies. Tanzania is following suit and exploring its own geothermal opportunities.

"There is widespread recognition among East African political leaders that geothermal presents a reliable, cost-effective, and sustainable energy development solution. The region is experiencing rapid increases in energy demand coupled with an insufficient and unreliable energy supply, due to the use of expensive, polluting thermal power plants and limited, drought-prone hydropower. The region's 15,000+ MW of potential geothermal resources are an attractive solution that is now being aggressively pursued."

Mwangi provided a perspective on needs of the market. "My experience so far has been that many initiatives tend to cover the exploration part of geothermal development but fail to proceed to exploration drilling." He favored the UNDP approach in Olkaria, in which the surface exploration proceeded to exploration drilling to a stage at which steam was proven. "It was therefore easier to finance the project after that," he said.

"Given that many other countries are in [a] hurry to develop the geothermal resources, it is important that the time it takes to approve and implement projects is shortened."

"Since the funds currently available to EAGP are limited, I think part of the current project would be clearly define the critical areas of assistance and lobby for more funds to move the projects to a critical level where both public and private sectors can then move them forward to completion.

"I am aware that there are some geothermal related activities that are being coordinated through USAID, such as the VEGA project on direct use; USTDA; and EXIM Bank; in addition to the EAGP. I would suggest that future attempts be made to consolidate all the U.S.-based geothermal activities through one entity in order to avoid confusion and duplicated particularly when dealing with recipient governments and implementing agencies," Mwangi suggested.

*To learn more about the East Africa Geothermal Partnership and receive programmatic updates, including information on business opportunities for U.S. companies in East Africa, contact Alison Holm at [Alison@geo-energy.org](mailto:Alison@geo-energy.org).*

## Democratic Members of Congress Form Bicameral Climate Change Task Force

Via *EESI Climate Change News* ([www.eesi.org](http://www.eesi.org)) -- On January 24, Rep. Henry Waxman (D-CA), ranking member on the House Energy and Commerce Committee, and Sen. Sheldon Whitehouse (D-RI), chairman of the Oversight Subcommittee of the Senate Environment and Public Works Committee, announced that they will be forming a bicameral Congressional task force on climate change. At a press conference, Waxman and Whitehouse said that they would encourage President Obama to lay out a plan for how the White House would address climate change. In addition, they stated that the task force had not entirely given up on the possibility of comprehensive legislation to address the issue. Sen. Whitehouse suggested that the group also would work through grassroots mobilization, stating, "We intend to reach out to the American public, and we intend to reach out to different elements and groups of the public, to make sure that they come here and force their way through those barricades of denial."

Their first task was to write a letter to President Obama, requesting that he lay out a clear plan for how he will address climate change during his State of the Union address. In the letter they wrote, "We believe, as you do, that climate change is a profound threat to our nation, that our window for preventing irreversible harm is rapidly closing, and that leaders have a moral obligation to act. Our goals are to raise awareness of the dangers of climate change in Congress, to provide a forum for the development of effective policies, and to achieve enactment of measures that reduce heat trapping emissions, spur new technologies, and enhance resiliency to climatic disruption." Rep. Ed Markey (D-MA) and Sen. Barbara Boxer (D-CA) have agreed to join the task force.

The climate change task force will operate in concert with the climate change clearinghouse proposed by Sen. Boxer (see [January 2 issue](#)). For additional information see: [Bloomberg](#), [The Nation](#), [Letter to the President](#).

## GEA's Geothermal State-of-the-Industry Briefing: Agenda Shaping Up

The Geothermal Energy Association will be releasing its 2013 Geothermal Industry Update at a half- day briefing on February 26 in Washington, DC. Registration is open, and the agenda will continue to shape up as the date approaches. Here is the current agenda:

8:00am: Welcome,

Karl Gawell, Executive Director, Geothermal Energy Association, confirmed

8:10am: Keynote Remarks (TBA)

8:30am: Presentation: GEA Industry Update for 2013, Release of Results

Ben Matek, Geothermal Industry Analyst, Geothermal Energy Association, confirmed

9:00am: Panel: Key Opportunities and Obstacles: An Industry Perspective

*Moderated by: Jonathan Weisgall, Vice President of Regulatory and Legislative Affairs, MidAmerican Energy Holdings Company, confirmed*

John Fox, CEO, ElectraTherm, confirmed

Paul Thomsen, Director, Policy and Business Development, Ormat Technologies, confirmed

Joe Greco, Sr. VP, Terra-Gen Power, confirmed

Doug Glaspey, President and COO, US Geothermal, confirmed

10:30am: BREAK

10:45am: Panel: Can technology address geothermal risk and expand potential production

*Moderated by: Karl Gawell, Executive Director, Geothermal Energy Association, confirmed*

Lauren Boyd, Acting EGS Program Manager, US DOE Geothermal Program, confirmed

Ann Robertson-Tait, Business Development Manager, GeothermEx, confirmed

David Blackwell, Hamilton Professor of Geophysics, Southern Methodist Univ., confirmed

Susan Petty, CEO, AltaRock Energy, tentative

11:45am: Panel: Opportunities to Shorten Permitting and Environmental Review Timeframes

*Moderated by: Allison Hull, Director of Federal Affairs, Calpine Corporation, confirmed*

Tom Williams, Laboratory Program Manager, Geothermal Technologies, National Renewable Energy Laboratory, confirmed

Kathy Benedetto, Legislative Staff, U.S. House Committee on Natural Resources, confirmed

Sheila Mallory, Geothermal Program Lead, BLM Nevada, confirmed

Patricia Beneke, Senior Counsel, U.S. Senate Energy Committee, confirmed

12:45pm: Adjourn. For more information on the event, contact Kathy Kent at [kathy@geo-energy.org](mailto:kathy@geo-energy.org). [Click here to see the latest agenda, or to register to attend.](#)

## **Registration Now Open for GEA International Geothermal Energy Finance Forum 2013 in New York**

*Press Release (Washington DC) January 30* — Registration is now open for the [Geothermal Energy Association's](#) annual [International Geothermal Energy Finance Forum](#). The event, to be held on April 11 at the Marriott Marquis New York, will bring together geothermal, finance, and investment community leaders for a full day of seminars and discussions focusing on finance's role in the growth of the global geothermal industry. As geothermal energy continues to grow exponentially across the globe, the event program will highlight not only geothermal expansion in the United States, but also projects, policies and development driving growth in the world's top markets.

"The International Geothermal Energy Finance Forum is a prime opportunity for key international players to discuss how to better foster geothermal growth in the United States and around the world," said GEA Executive Director Karl Gawell. "The event will provide both an update and outlook on industry development, while focusing closely on project finance from both the public and private finance sectors, geothermal risk and reward, and the policies that move geothermal projects forward on a global level."

Gawell, who will present the opening remarks for the event, joins a number of notable confirmed speakers. A worldwide geothermal development update will be presented by Benjamin Matek of GEA and Mark Taylor, head of geothermal and CCS research for Bloomberg New Energy Finance. This will be followed by a panel of CEO's from top geothermal companies including Enel Green Power, Ram Power, EnergySource, Ormat Technologies and Gradient Resources, who will be on hand to discuss recent worldwide geothermal projects. Closing remarks will be provided by Jonathan Weisgall, vice president of legislative and regulatory affairs for MidAmerican Energy Holdings and Keith Martin of Chadbourne & Parke LLP. Other organizations that will be represented include The World Bank, the Export-Import Bank of the United States, the United States Energy Association, and Prudential Capital Group.

The international geothermal market continues to expand at a significant rate, and 2012 saw a number of global breakthroughs. U.S. companies and agencies continued to maintain a strong presence in international markets including Indonesia, the Philippines, Japan, Kenya, Rwanda, Nicaragua, Turkey, Mexico, Chile and Germany, where leaders have begun to understand and embrace geothermal's economic and environmental benefits. [Click here for a complete schedule or to register for the International Geothermal Energy Finance Forum.](#) For sponsorship opportunities, please contact Kathy Kent, 202 454 5263, [kathy@geo-energy.org](mailto:kathy@geo-energy.org); to request press credentials, please contact Shawna Seldon, The Rosen Group, 917 971 7852 or [shawna@rosengrouppr.com](mailto:shawna@rosengrouppr.com).

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## GEA Member Companies

### Atlas Copco: Company Ranks 18th in Global 100's "Most Sustainable"

[Via Atlas Copco Press Release \(Commerce City, Colo.\)](#)

[January 29](#) – Atlas Copco Cited Among World's Most Sustainable Companies -- Atlas Copco ranks 18<sup>th</sup> among the 2013 Global 100 Most Sustainable Companies – a list presented on Jan. 23 at the World Economic Forum in Davos, Switzerland. This is the seventh time that Atlas Copco has appeared in the Global 100 rankings.

"Sustainability lies at the heart of Atlas Copco's innovative products and employee mindset," said Jim Levitt, president, Atlas Copco North America LLC. "Next month we are celebrating our 140<sup>th</sup> anniversary. As a company with a long and cherished history, we know that being socially and environmentally responsible is not only the right thing to do, but is critical for developing and growing our business in a profitable way."

Along with being named in this exclusive list, Atlas Copco AB is also a member of the Dow Jones World Sustainability Index and over the last two years has been recognized by *Forbes*, *Thomson-Reuters* and *Newsweek*, among others, for its commitment to innovation and sustainability.

Atlas Copco sustainability initiatives, both globally and in the U.S., include:

- Boosting customer energy efficiency by at least 20 percent between 2010 and 2020 by continuously designing and developing more efficient products.
- Membership by Atlas Copco Compressors with the U.S. Green Building Council.

- An initiative between Atlas Copco Secoroc and the U.S. Department of Energy, as part of President Obama's challenge to generate 80 percent of U.S. electricity from clean energy sources by 2035, to develop a down-the-hole (DTH) hammer design capable of low-cost, high-production drilling in the high temperatures of deep geothermal wells.
- Reducing Atlas Copco's water consumption and promoting clean drinking water in countries in need. The employee run Water for All organization will pass \$200,000 in donations in the U.S. in 2013.
- Increasing employee diversity in both nationality and gender.
- The Global 100 list is based on a selection of 4,000 developed and emerging market companies, which are measured against key performance indicators such as revenues in relation to consumption of energy and water. For more information, visit <http://global100.org>.

## **Davenport Newberry Holdings: EGS Stimulation Looks Promising**

Davenport Newberry Holdings LLC, a GEA member, is the Operator of the Newberry Geothermal Project in Bend, Oregon. Geothermal developer Davenport Newberry and start-up AltaRock, looking to test technology for EGS (enhanced geothermal systems) development, have been working in hopes of cutting costs and risks of EGS through creating multiple stimulated geothermal areas from a single well. The project has been in testing phases and has been seeing indications of success. Company AltaRock is testing technology AltaRock CEO and founder Susan Petty said in an interview with [Gigaom.com](http://Gigaom.com).

The partnership has been publishing a blog to detail the project ([blog.newberrygeothermal.com](http://blog.newberrygeothermal.com)). The January 24 blog update provides an overview of the last couple months: "On November 26th we finally got all the problems with the stimulation pumps ironed out and returned to full operating capacity," according to project operators. "Shortly after, we injected TZIM (thermo-degradable zonal isolation material) and witnessed about a 50% reduction in flow into the formation, as the TZIM plugged up flow zones in the well. Then as we increased the pressure, flow and microseismicity increased again as new fractures in the wellbore were enhanced.

"We injected more TZIM on December 3rd, and again watched flow decrease due to blocking previously enhanced zones. Again flow increased as the third stimulation zone was created. We stimulated zone 3 until December 7th when we turned off the pumps.

"The final EGS reservoir as defined by the microseismicity (yellow dots on map) eventually reached a dimension of about 2 x 1 km (6600x3300 ft). We injected about 11 million gallons or 34 acre-ft, half the water that we expected to use.

"We are now analyzing all the data that we collected and planning for the next field season. We will also be getting back into the swing of blogging. We will soon provide more details of what we experienced (besides the cold and snow) and what we are learning over the winter and spring."

AltaRock has the support of a \$21.4 million Department of Energy grant and has also raised \$26 million from Google, Kleiner Perkins, Khosla Ventures and Vulcan Capital. Plans will move forward to build a demonstration power plant if all continues to go well, and eventually, a utility-scale power plant.

## **Nevada Geothermal Power: Reorganization Plan, New Name Announced**

[Via NGP Press Release \(Vancouver, B.C.\) January 29](#) -- Nevada Geothermal Power Inc. (the "Company") (TSX.V: NGP) is pleased to announce that it will implement a reorganization plan that was approved earlier by shareholders at the Annual and Special General Meeting on July 24, 2012. In addition, the Company will explore opportunities for asset sales, project development, acquisitions and potential mergers.

It is proposed that the Company name will be changed to "Alternative Earth Resources Inc." upon completion of the reorganization plan, and there will be approximately 24,482,000 shares outstanding following a 1 for 5 reverse split of the stock. Completion of the reorganization is subject to the acceptance of the TSX Venture Exchange.

On closing of the Blue Mountain equity transfer agreement as announced January 16, 2013, the Company will have ownership interests in four geothermal development properties in the western US (Crump Geyser, New Truckhaven, Pumpnickel and North Valley) and no long-term liabilities. The Company will not have an ownership interest in the Blue Mountain project, however it will operate the Blue Mountain geothermal power plant through a transition period up to 12 months. The Company expects to have sufficient cash and income to cover project costs, lease payments, staffing and corporate overhead beyond the end of the transition period.

The Company will seek buyers and/or joint venture partners for its advanced-stage geothermal projects. New tax legislation passed by the US Senate and Congress in early January, 2013 should provide significant Production Tax Credit ("PTC") and Investment Tax Credit ("ITC") incentives for prospective partners. Under old rules, qualifying renewable energy projects needed to have started construction in 2012 with an additional requirement to be "placed in service" by January 1, 2014. The fixed completion date requirement caused several projects that were underway, like the Company's Crump project with Ormat, to drop out after having started construction. Under new rules, geothermal projects will be eligible for the PTC or a 30% ITC on certain project costs if project construction commences before January 1, 2014. Significantly, there is no preset date for a project to be placed in service once construction starts, which helps reduce project financing risk. Project sponsors or financing partners must choose between the PTC, currently valued at \$22/MWh and applied with an inflation index through the first ten years of production, or the 30% ITC. The Company has completed planning under which its Crump Geyser, New Truckhaven and Pumpnickel projects can be ready for development drilling or start of construction in 2013.

## **Ormat Technologies: Partnership Transaction of Eight Geothermal Power Plants Announced**

[Via Ormat Press Release \(RENO, Nev.\) January 28](#) -- Ormat Technologies, Inc. (NYSE: ORA) announced today that Ormat Nevada Inc., a wholly-owned subsidiary (Ormat Nevada), and JPM Capital Corporation (JPM) entered into a tax equity partnership transaction involving eight geothermal power plants in California and Nevada.

Under the transaction, Ormat Nevada transferred the plants into a new subsidiary, ORTP, LLC (ORTP), and sold an interest in the limited liability company to JPM. In connection with the closing, JPM paid approximately \$35.7 million to Ormat Nevada

and will make additional payments estimated by Ormat at approximately 25% of the value of production tax credits generated by the portfolio over time. The additional payments are expected to be made until December 31, 2016 and total approximately \$8.7 million.

Certain consents to facilitate the transaction were obtained from the holders of the senior secured notes issued by Ormat Nevada's subsidiaries, Orcal Geothermal and Ormat Funding, which are the intermediate holding entities of the eight geothermal power plants included in ORTP. Ormat Nevada will continue to operate and maintain the power plants.

"Our partnership with JPM, began in early 2011 when they invested in our OPC portfolio. Their decision to participate in a second transaction is a demonstration of their confidence in Ormat and its management," said Dita Bronicki, chief executive officer of Ormat. "This transaction will enable us to maximize the use of our available production tax credits and accelerated depreciation that we would not have otherwise been able to utilize either at all or for a long time due to the fact that as a growth company we generate more deductions for tax purpose than we are currently able to utilize. We would like to thank JPM for their continued confidence and look forward to continuing to take advantage of similar transactions when they are appropriate. Going forward, we will continue to take steps to ensure that we maximize the use of our assets to drive value for shareholders."

RLR Consultants advised Ormat Nevada on the structuring and placing of the transaction, and Chadbourne & Parke LLP represented Ormat Nevada as transaction counsel.

## **Ram Power: Corporate Reorganization Announced**

*Ram Power Press Release (Reno, Nev.) January 28* -- Ram Power, Corp. (TSX: [RPG](#)), a renewable energy company focused on the development, production and sale of electricity from geothermal energy, announced a corporate reorganization and strategic initiatives to enhance long-term cash flow and shareholder value. In January 2013, the Board of Directors (the "Board") requested the Special Committee composed of the independent directors to conduct an extensive review of its current corporate structure with a focus on maximizing long-term cash flow. The Board, based on the recommendations of the Special Committee, approved a series of actions as follows:

*Corporate Reorganization:* The Company will conduct a reorganization of its corporate office in Reno, Nevada, reducing both expenses and staffing levels to better align the organization to focus primarily on its Nicaragua operations including the continuing operation of the San Jacinto resource, the development of a binary unit at San Jacinto, and the exploitation of its Casita resource. The corporate reorganization will take place during the current quarter. The reorganization is expected to save approximately \$4 million a year annually in corporate administrative cash expense or approximately 50% of the Company's current forecast for 2013 and 2014. After severance and other costs, the Company expects that the net impact of the reorganization in 2013 will be a savings of approximately \$3 million.

In addition to the reduction in general staff at the Company's head office, Acting CFO Selby "Bud" Little's contract service agreement with the Company will not be renewed following its expiration on March 31, 2013 and current Chief Executive Officer and Director Shuman Moore will resign from the Company and the Board effective February 15, 2013. Antony

Mitchell will continue as Executive Chairman and will remain the senior executive of the company. Further, Jose Antonio Rodriguez, Vice President, Operations and Chief Operating Officer of Latin America, who has played a key role in the San Jacinto operations over the past 24 months, will assume a more active role in establishing the strategic focus for our future development efforts in Nicaragua. Mr. Rodriguez has 18 years of experience in a number of senior management positions focused in developing and operating geothermal plants in Central America, and the Company will be utilizing this experience to further enhance the operations and profitability of our Nicaragua assets.

Antony Mitchell, Ram Power's Executive Chairman, stated, "Shuman Moore came to Ram Power at a very challenging time. His management and international business skills, geothermal knowledge and project execution experience were exactly what was needed to get the Company's flagship Nicaraguan project, consisting of two 36 MW units, built and in service on time and on budget. With all his objectives accomplished, and in alignment with the Company's revised corporate strategy, Mr. Moore will be returning to his previous energy consulting business in mid-February. We wish Shuman every success in his future endeavors."

#### Strategic Initiatives:

- Geysers Project - The Company's Special Committee, with its strategic advisors, has been evaluating various strategic directions for the 26 MW (net) Geysers Project over the last several months. As a result of the analysis, the Company has decided to either joint venture or sell the Geysers Project to a third party with the objective of maximizing the value to our shareholders and increasing the Company's corporate cash reserves. The Company is currently evaluating potential third party partners/buyers for the Geysers Project.
- Corporate Credit Facility - The Company through its Special Committee has commenced discussions with its investment advisors to initiate efforts to re-finance the Company's \$50 million Corporate Credit Facility (the "Credit Facility"). The primary objectives in our re-financing efforts for the Credit Facility are to convert the facility into a longer term loan with a significant reduction in the Company's annual interest expense.

Antony Mitchell, Ram Power's Executive Chairman, stated, "While it is always challenging to reduce staffing, the Company's goal was not a given number of job reductions, but rather the elimination of duplicating efforts in Reno, and at our subsidiary level in Nicaragua," added Mr. Mitchell. "The Company will become leaner, and more efficient in its support of the development of projects in Central America while safeguarding expenses and risks, thereby delivering long-term value for shareholders." Mr. Mitchell further commented that the combination of the reduced expenses from the corporate reorganization and the anticipated cash improvements from the strategic initiatives will significantly improve the Company's balance sheet."

### **U.S. Geothermal: Company Ranked in ENR's Top Companies for Construction Expenditures**

Via [U.S. Geothermal Press Release \(Boise, Ida.\) January 24](#) -- U.S. Geothermal Inc. CA:GTH -2.86% (nyse mkt:HTM), a leading renewable energy company focused on the development, production and sale of electricity from geothermal energy, has been ranked by ENR (Engineering News-Record [www.enr.com](http://www.enr.com)) in 2012 to finish in 222nd place out of 425 companies. This list ranks publicly held companies based on the 2011 construction-in-progress figures they supplied to the U.S. Securities and Exchange Commission.

Companies are ranked here by capital expenditures-funds used for additions to a company's property, plant or equipment. The expenditures include capital leases, increases in construction funds and re-classification of property, plant or equipment inventory. The capital expenditures do not include discontinued operations, changes resulting from foreign-currency fluctuations, decreases in construction funds presented as a use of funds or an acquired firm's property, plant and equipment.

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## Climate Change

### Article Discusses Threats of Natural Gas on Climate

An article on [Kcet.org](http://Kcet.org) discusses the problems of natural gas as it is itself methane, a powerful greenhouse gas. Natural gas can be a boon to the climate if no more than 3.2% of natural gas used leaks to the atmosphere (see "[Greater focus needed on methane leakage from natural gas infrastructure](#)" by Alvarex et al). However, researchers with the National Oceanic and Atmospheric Administration (NOAA) and the University of Colorado at Boulder (UC Boulder) found leakage rates of about 4% from a gas well field near Denver; and the team also found leakage rates of 9% from a gas field in Uinta Basin, Utah. The article also notes that some solar thermal plants use natural gas to keep fluids hot while the sun is not shining, such as the Ivanpah Solar Electric Generating System, being built by BrightSource. Methane has been rated by the Intergovernmental Panel on Climate Change as posing a threat to Earth's climate about 21 times the threat of carbon dioxide per ton.



## State News

### Alaska: State Considers Augustine Island Geothermal Energy Lease

In a January 14 document exploring environmental impacts of geothermal studies, the Alaska Department of Natural Resources Division of Oil and Gas gave the thumbs up for companies to take the first steps toward discovering the feasibility of producing the resource on Augustine Island (Click here to [see Augustine Island Geothermal Resources Disposal, PDF](#)). “Potential positive effects may be development of renewable energy sources for Alaska industries and residents,” according to the document.

The department supports the leasing of the 65,992 acres in the next state sale, usually held in the spring. [DOG Deputy Director Jonne Slemons was quoted](#) by press that officials are responding to an elevated private interest in the geothermal resource, which was included in the same 2007 call for interest as the Mount Spurr resource (*Peninsulaclarion.com*). Mount Spurr is being explored by geothermal company Ormat Technologies.

“In general the continued support for geothermal development is encouraging and we’re going to do everything we can to try to bring online successful project,” Paul Thomsen, Ormat’s Director of Policy and Business Development and President of the GEA was quoted in the article. “The more people [that are] doing that, the better the odds of having a successful project in Alaska.”

### California: Perez Introduces Geothermal Assembly Bills - Salton Sea Authority to Weigh

Three “Salton Sea restoration” bills were introduced by Assemblyman V. Manuel Pérez (D-Coachella) this month and will be considered by the Salton Sea Authority in February ([Articles.ivpressonline.com](#)). A.B. 71 calls back last year’s efforts to place leadership and coordination of Salton Sea restoration in local hands through the Authority. Authority staff recommends the bill, with caveats related to needing greater urgency for funding a feasibility study; staff support for using restoration-related revenues for restoration purposes; and that air quality impacts may not be able to be eliminated, but could be mitigated “to a reasonable level,” according to staff recommendations.

A.B. 147, the Salton Sea Pollution Mitigation Act, seeks to quantify dust pollution and chemicals from the exposed lakebed, while A.B. 148, the Salton Sea Renewable Energy and Bio-Fuel Research and Development Program, sees renewable energy (specifically geothermal energy and biofuel energy) potential as a way to fund restoration.

### California: Planning Commission Delays Decision on Extending Bottle Rock Power Permit

The Lake County Planning Commission held off a decision on whether to extend the Bottle Rock Power geothermal steam field use permit until June 2043, in order to accommodate local residents who may not have known about the pending decision. Notification had been previously given to property owners within the mandatory radius of the project area and had been published in the newspaper, but the Commission agreed to delay deciding on the proposed use permit time

extension until Feb. 28. Bottle Rock Power general manager Brian Harms said the company "relied entirely on the (county) staff's understanding of how the notifications were made" and did not object to the continuance, noted [Record-bee.com](http://Record-bee.com).

### **California: Healdsburg Pipeline to Connect with Geysers Wastewater Project**

The Healdsburg City Council this week approved a plan for a wastewater pipeline that will irrigate the area as well as eventually connect to The Geysers pipeline, which uses recycled wastewater from Santa Rosa for generation activities at The Geysers geothermal field. The \$857,000 contract with low bid by MJ Hughes Inc. is planned as part of a \$9 million first phase of the reclaimed water irrigation system. The initial construction is expected to be completed by July, with the first phase finished within about two years. The North Coast Regional Water Quality Control Board has said Healdsburg must end its wastewater discharges into the Russian River during the dry months of May through September by 2015 ([Pressdemocrat.com](http://Pressdemocrat.com)).

### **Hawaii: Geothermal Assessment and Roadmap Now Available**

Hawaii's Geothermal Assessment and Roadmap is now available for public release. The report sought to assess interest in developing new geothermal energy resources on the part of the state, industry, and utilities. This report was compiled by the Pacific International Center for High Technology Research (PICHTR) under contract to Hawaii Natural Energy Institute, University of Hawaii. Geothermal Energy Association (GEA) staff provided input and comments in support of the report and has a copy of the final report for distribution upon request.

PICHTR focused on three questions to develop the Hawaii geothermal assessment and roadmap, asking:

Q. Is there interest in developing more geothermal?

A. They found that Yes, industry and government are taking steps to pursue geothermal.

Q. If the state pursues a significant increase in geothermal, are the agencies prepared?

A. They found State agencies will benefit from coordination and capacity building.

Q. How should geothermal development proceed?

A. They found that two stages of development are preferred, first to benefit individual islands, and in a second phase, exploring Interisland Cable Options.

The Executive Summary lays out key conclusions to accomplish this:

- Geothermal resource information and royalties – invest in developing publicly available resource data.
- Expanding development opportunity – reach out to industry globally to expand competition in Hawaii.
- Technical aspects of future geothermal development – hire staff and consultants with up-to-date
- Technical expertise
- Keeping Costs Low – support policy that lowers cost of drilling and drilling risk; target projects in range of \$0.07-0.16/kwh
- Geothermal as part of a portfolio solution – utilize systems solutions to lower cost while increasing

- Renewable energy utilization
- Importance of planning – align state, county, and utility plans into one clear vision for Hawaii’s energy future.
- Land use and permitting – clarify rules of engagement for geothermal on public lands; continue permit facilitation activities.
- Education and outreach – provide timely, factual information to communities. A community benefit – emphasize lower electric rates and other direct community benefits in planning and requests for proposals.
- Recommendations For Government – Help Reduce Development Costs Through Smart Policy, Permitting, And Planning, As Well As Through Investment In Resource Characterization

See also: “HELCO Files Final Proposed Geothermal RFP, Hawaii,” in the **Community Notice Board** section of this week’s newsletter.

## International News

### IGA, IRENA Announce MoU to Promote Geothermal Energy

*Submitted by International Geothermal Association --* On 17 January 2013 the International Geothermal Association (IGA) signed a Memorandum of Understanding (MoU) with the International Renewable Energy Agency (IRENA). The signing ceremony took place in Abu Dhabi at the occasion of the World Future Energy Summit and Abu Dhabi International Renewable Energy Conference where the IGA had also organized a Geothermal Session. The MoU was signed by the President of the IGA, Roland Horne and the Director General of IRENA, Adnan Z. Amin. A first collaboration was started in five Andean countries aiming at promoting geothermal energy by advising decision makers, awareness raising and an identification of the current status and needs for geothermal energy development. Joint activities are training courses, workshops and advisory.

Speakers during the IGA Geothermal Session at the Abu Dhabi International Renewable Energy Conference (ADIREC) included Roland Horne (Stanford University, US) as session moderator, Surya Darma (Indonesian Director IGA), Albert Genter (Soutz Project, France), Agnes de Jesus (Energy Development Corporation, Philippines) and Ladislaus Rybach (GEOWATT AG, Switzerland).

## Africa

### USAID, AUC Lay Out Plan to Capitalize on Geothermal Development

The U.S. Agency for International Development (USAID) and the African Union Commission (AUC) joined in a Memorandum of Understanding on the Development of Geothermal Energy in East Africa, the [two entities announced this week](#). The signing ceremony took place in Addis Ababa, African Union Headquarters. “This event comes at a time when the AUC – with assistance from KFW – has started phase one of geothermal exploration in five East African countries represented at the event. The MOU lays out the plan for geothermal development, capitalizing on opportunities offered by the AUC’s exploration program in Eastern African countries geothermal potential,” according to official statement.

## Americas

### Jamaica: Geothermal Energy Plant in the Running for Clean Energy Bid

There may soon be a geothermal power project progressing in Jamaica, which currently has no geothermal generation. The idea is one vying for Office of Utilities Regulation (OUR) support in a recently opened bid for up to 115 MW of clean energy projects ([Jamaica-gleaner.com](http://Jamaica-gleaner.com)). More than 200 prospective investors, 25% of which were foreigners, attended a recent OUR consultation on clean energy.

Krishna Vaswani, a geographer and businessman, is involved in the geothermal scheme. He was one of six entrepreneurs pitching plans at a recent Jamaica Stock Exchange and Investment and Capital Markets Conference. He is part of a team of investors, including oil and gas specialists and financial analysts, which plans to raise \$4 million of the needed \$15 million via equity, the remainder as debt. They estimated Jamaica's geothermal energy capacity at 100 MW.

GEA's [Geothermal: International Market Overview Report \(May 2012\)](#) noted, "Geothermal energy has the potential to help meet the Caribbean's rising electricity demand, mitigate its high electricity prices, and make it less dependent on fossil fuel generation." *See also the **Community Notice Board** in this newsletter issue: "Jamaica Issues RFP for RE Generation up to 115 MW (due April 2)"*

pilot geothermal heat and power plant is expected to take about six months to construct. Experts estimate that the nearby Campi Flegrei, or Phlegraen Fields, a caldera and geothermal field west of Naples, produces power equivalent to that of four large nuclear power plants. "I am convinced that with a democratic, non-invasive geothermal energy of the surface and with reinjection, new generation plants, we will be able to open up a new future for the city of Naples," city councillor Antonio Luongo was quoted in press ([Globalwarmingisreal.com](http://Globalwarmingisreal.com)).

## GHPs & Direct Use

### GT Energy, EON Moving Forward With Manchester Geothermal Heating Plant

GT Energy (Ireland) has raised nearly enough capital for its part in funding the Manchester geothermal facility, planned to become operational by 2015 ([Ohsonline.com](http://Ohsonline.com)). GT Energy has raised about £2.6 million (\$4 million), while the total cost is expected to be about £17 million (\$26 million).

The project is expected to be supported by U.K.'s Renewable Heat Incentive, noted [Bloomberg.com](http://Bloomberg.com). The project is being developed with EON. "RHI support is welcome and is at the level recommended by industry," EON, Managing Director Padraig Hanly was quoted. "That said, the industry needs legislation to be put in place to create a licensing regime similar to oil and gas. If we can get over the link, we would expect to see European geothermal investors enter the U.K."

### Naples Approves Geothermal Heat and Power Pilot Plant

The city of Naples is looking to tap into geothermal energy, approving construction of a geothermal plant that will tap into the energy from Mount Vesuvius, infamous for its destruction of Pompeii, Herculaneum and Stabiae in 79 AD. The privately-funded

**Chinese City Lauds Benefits of Geothermal Heating, Plans Further Resource Studies**

Baoding, in Hebei province of China, has used geothermal energy for heating and bathing since the resource was explored in 1974. The city boasts four large geothermal fields, which have grown in importance since then to today account for servicing 90% of homes in Xiongqian county, and the area also capitalizes on hot spring tourism and agricultural benefits. "The utilization of geothermal resources has never been more important," Ma Yufeng, the city's mayor told press ([English.peopledaily.com.cn](http://English.peopledaily.com.cn)). "We also are pursuing the development of the economy, which means that further exploration of this clean resource will be one of our priorities."

**Community Notice Board****New This Week****Report: DOE Geothermal Technologies Office Releases FY 2012 Annual Report**

*Via U.S. DOE* -- The U.S. Department of Energy, Geothermal Technologies Office (GTO), is pleased to announce the release of our Fiscal Year 2012 Annual Report, showcasing GTO's project updates and key milestones. The report can be found on the Geothermal Technologies Office website, or by following [this link directly to the report \(PDF\)](#).

**HELCO Files Final Proposed Geothermal RFP, Hawaii**

As of January 25, Hawaii Electric Light Company (HELCO) has filed its final proposal on the Request for Proposals (RFP) for 50 MW of Dispatchable Renewable Geothermal Firm Capacity Generation on the Island of Hawaii. Once approved, respondents will have 60 days to respond. [Click here to check the latest from the HELCO official site for this RFP.](#)

The Proposed Final Geothermal RFP incorporates revisions to the Draft as proposed by incorporates revisions to the Draft Geothermal RFP proposed by the Independent Observer, Boston Pacific, registrants at the December 5, 2012 Technical Conference Webinar, and interested parties and prospective Bidders. Questions or comments related to Geothermal RFP may be submitted in writing to [GeothermalRFP@helcohi.com](mailto:GeothermalRFP@helcohi.com).

The Commission engaged the services of Boston Pacific Company to serve as the Independent Observer, to monitor and advise on all steps of the competitive bidding process. Contact information for the Independent Observer: Miguel Campo, Managing Director, Boston Pacific Company, Inc., 1100 New York Ave., NW, Suite 490 East, Washington DC 20005, 202-296-5520 ext. 226, [mcampo@bostonpacific.com](mailto:mcampo@bostonpacific.com)

**Job Announcement: Mechanic at Geothermal Power Plant, Nevada Geothermal Power**

*Submitted by Nevada Geothermal Power* -- Nevada Geothermal Power has an immediate opening for a Power Plant Mechanic at its Blue Mountain Geothermal Power Plant located 25 miles west of Winnemucca, Nevada. To qualify for this position you must have hands-on, journeyman level experience with troubleshooting, repair and maintenance of mechanical seals, pumps, piping, valves, gearboxes, fans, bearings and turbines. You must also be proficient with welding, cutting, fabrication, rigging and heavy equipment operation. Computer proficiency is a plus. Additional job duties will be to

assist managing the preventive maintenance system and training of junior employees. Working hours will be dayshift, 40 hours per week, with callouts when needed. Email resumes to: [careers@nevadageothermal.com](mailto:careers@nevadageothermal.com)

**Job Announcement: Deputy Program Director, U.S.-East Africa Geothermal Partnership (EAGP), Wash., DC**

Category: Program Management, Technical Consulting, International Development

Term: Full-Time Position; # of Positions: One



Summary: The United States Energy Association (USEA) seeks an experienced Deputy Program Director with technical expertise in geothermal energy, international development experience, and knowledge of East Africa to assist with the management of a U.S. Agency for International Development (USAID)-funded project to advance geothermal energy development in East Africa and expand business opportunities for U.S. geothermal companies.

Project Description: The U.S.-East Africa Geothermal Partnership (EAGP) is a program sponsored by USAID and the U.S. Geothermal Energy Association (GEA), and is being implemented through the framework of an existing program that USAID has established with the U.S. Energy Association. The EAGP seeks to highlight the development of geothermal energy resources in East Africa during 2012 and 2013 and encourage and facilitate the involvement of U.S. geothermal companies and experts in the region. The program mandate includes all East African countries with substantive geothermal resources, but will primarily focus on Rwanda, Kenya, Ethiopia, Uganda, and Tanzania. Other East African countries that could potentially be covered under EAGP include Djibouti, Comoros, Burundi, Democratic Republic of the Congo, Malawi, Zambia, and Mozambique.

The mission of the U.S.-East Africa Geothermal Energy Partnership is to improve standards of living in the Rift Valley region of East Africa (EA) through increased use of geothermal resources for power generation as well as direct use. This will be achieved by fostering collaboration and information exchange between African governments, Africa-based private companies and financial institutions, U.S. geothermal companies, U.S. Government agencies, U.S. educational institutions, private investors and other bilateral and multilateral agencies. The initiative includes the provision of U.S. technical, educational, and financial support to enable interested East African governments, through increased use of geothermal resources, to increase the reliability and to decrease the costs associated with their grid-based power generation systems, train host country geoscientists and engineers, build government and private sector capacity, promote private investment, and secure multiple environmental benefits.

Responsibilities: The Deputy Program Director will be responsible for assisting the Program Director with the planning, implementation, and reporting for the project. Assistance with program management, technical direction, budget management, and oversight of at least one support staff are additional responsibilities.

Other key responsibilities include but are not limited to:

- Serving as alternative point-of-contact with USAID, GEA, and industry partners
- Developing and implementing project work plans and activities

- Traveling up to 35% of the time to several countries in East Africa, including Ethiopia, Kenya, Tanzania, Rwanda, Uganda, and others
- Complying with all applicable U.S. Government , USAID and USEA regulations, policies and procedures affecting the project
- Assisting with the establishment and maintenance of strong relationships with American geothermal energy companies, and securing their involvement in technical assistance, training and partnership activities as appropriate
- Tracking and reporting on performance indicators for program efficacy, including specific geothermal development and trade promotion achievements
- Assisting with the preparation and implementation of informational seminars for E. African regional and U.S. representatives on programmatic, and technical issues

The Deputy Program Director will also carry out tasks including:

- Working collaboratively with the GEA to establish and maintain a geothermal industry information collection and dissemination system to keep U.S. industry informed of geothermal business opportunities in East Africa
- Developing and maintaining a roster of active and interested, potential U.S. geothermal technical assistance partners
- Planning and hosting delegations of East African geothermal officials in the U.S. and third countries
- Preparation and publishing of digital and hard copy reference and marketing materials

The Deputy Program Director will report directly to the EAGP Program Director, and, will consult with the USEA International Energy Partnership Program Manager on administrative matters. He/she will consult with the Director of USAID's Africa Infrastructure Program as necessary.

Requirements -- The ideal candidate would possess:

- Bachelor's degree or higher in engineering, business administration, economics, finance , African studies, and/or international development
- At least 5 years of experience in program development and management, especially with U.S. Government programs (experience in Africa preferred)
- At least 5 years of energy sector experience, including basic knowledge of energy economics, project financing, and geothermal operations
- Familiarity with the steps involved in geothermal project development (early stage geoscience through to plant commissioning/ operation and maintenance), issues related to public and private sector participation and U.S. geothermal company capabilities
- Demonstrated experience with project-related record keeping, reporting, and information collection, dissemination and filing/classification
- Previous work experience in a developing country (preferably, but not necessarily in Africa)

## Required:

- Understanding of programs, policies, and politics of World Bank, IFC, AFDB, KfW, USTDA, USDOE, US ExIm Bank and USAID in relation to energy development projects
- Good written, verbal, and cross-cultural communication skills
- Ability to travel to developing countries
- Valid U.S. passport

How to Apply: Candidates who meet the position requirements and are available to begin work in Spring 2013 should email a cover letter, resume, and three professional references to Steve Hirsch, EAGP Program Director, U.S. Energy Association, 1300 Pennsylvania Avenue, NW, Suite 550, Washington, DC 20004-3022 at [shirsch@usea.org](mailto:shirsch@usea.org) and to Andrew Palmateer at [apalmateer@usea.org](mailto:apalmateer@usea.org), no later than March 2, 2013.

**Public Workshops, Investment Plan Development for Auction Proceeds, California Cap-and-Trade Program**

The State of California invites you to participate in a public workshop to provide input on the development of an investment plan for the auction proceeds from the Cap-and-Trade program to reduce greenhouse gases. The workshop will be held in three locations as indicated below; each workshop will cover the same topics:

Fresno Workshop: February 19, 2013

Sacramento Workshop: February 25, 2013 (also webcast)

Los Angeles Workshop: February 27, 2013

[Click here for further information on the investment of the State portion of the auction proceeds, including the detailed notice for these workshops, on the California ARB Web site.](#)

**CEC Proposing Revisions to Geothermal Grant & Loan; See Jan. 23 Staff Workshop Agenda**

The Agenda for the January 23, 2013, Pre-Rulemaking Staff Workshop on Proposed Revisions to the Geothermal Grant and Loan Program Regulations is now available on our Web site. [Click here for more information.](#)

In the [January 24 issue of GEW](#), we wrote: *CEC Staff Initiate Cleanup of GRDA Geothermal Loan Program* -- On January 23, California Energy Commission (CEC) staff met for a pre-rulemaking workshop on proposed revisions to the regulations of California's unique grant geothermal grant and loan fund program known as the Geothermal Resources Development Account (GRDA). GRDA promotes the development of new or existing geothermal resources and technologies and is funded from geothermal royalty revenues. The CEC is initiating a formal rule-making process in the next few weeks that will be open for public comment. GRDA's next round of applications will be coming this October 2013.

Elise Brown, Assoc. Director of the California Geothermal Energy Collaborative (CGEC) at UC Davis Energy Institute, attended the workshop and spoke to GEA afterward. Brown noted that the proposed rule changes largely include cleanup

in order to present a more streamlined program. "Cheryl Closson and other CEC staff are making an honest and earnest effort to clean up the GRDA regulations and streamline the proposal process," Brown told GEA. "This effort will help not only the existing geothermal industry, but also smaller communities with geothermal potential but scarce financial resources. The CGEC commends the CEC for this effort."

## Featured Notices

### **GEA Seeks Information for 2013 US Geothermal Power Production and Development Report (by Feb. 12)**

GEA is gathering information for its 2013 US Geothermal Power Production and Development Report. If you are a new company or organization involved in developing geothermal projects in the U.S., and you would like to submit information on that project for inclusion in the

2013 report, please contact Benjamin Matek at [ben@geo-energy.org](mailto:ben@geo-energy.org) or at (202) 454 5291 no later than February 12<sup>th</sup>, 2013. We would like to release the report by February 26<sup>th</sup>, 2013. A copy of the 2012 industry report can be accessed through GEA's [Web site](#).

### **National Geothermal Academy, Rolling Applications (Starting Feb. 15)**

The 2013 National Geothermal Academy is a four week intensive summer course at the University of Nevada, Reno about geothermal energy development and utilization. The July 8-August 2, 2013 program is offered for 3 credits at either the undergraduate or graduate level. Individual weeks are also offered for professional development.

#### Schedule:

Week 1: Introduction to Geothermal Energy - July 8-12, 2013. An introductory week with different topics each day. Jeff Tester and Michal Moore will cover geothermal utilization and economics; Mark Demuth and John McKinsey will cover environmental policy and business principles; Joe Moore will cover geology and geochemistry; Dave Blackwell will cover geophysics; Louis Capuano III, Louis Capuano Jr, and Bill Livesay will cover drilling engineering.

Week 2: Reservoir Engineering - July 15-19, 2013. Roland Horne will cover the basic principles of reservoir engineering and management. Reservoir characterization methods will be presented as well as the elements of managing a resource. Individual topics will include the fundamentals of reservoir properties and flow mechanisms, the analysis of well measurements, and the estimation of well performance characteristics.

Week 3: Power Plant Design and Construction - July 22-26, 2013. Ronald DiPippo and Brian Anderson will cover the fundamentals of geothermal power plant design, analysis, and construction. Specific topics will include dry steam, single- and double-flash, and binary systems, with a discussion of all major plant components. Emphasis is placed on the use of REFPROP in the design and analysis of power plants.

Week 4: Direct Use Applications - July 29-August 2, 2013. This week will be conducted on the Oregon Institute of Technology campus in Klamath Falls, Oregon. Toni Boyd and John Lund will cover the basic principles relating to direct use applications of geothermal fluids, geothermal heat pumps, and small-scale power generation.

*Students:* Four week program fee: \$1,500. Optional room and board: \$1,600. Students must be actively enrolled in school or recent graduates (within 3 years) who are not yet professionally employed. Room and board is available for an additional cost.

*Professionals:* Early Bird program fee: \$1,000 per week. Late program fee: \$1,200 per week. Professionals may attend any weeks of the NGA. A Certificate of Achievement will be presented upon completion. Professionals are not offered room and board.

Applications are available online at <http://www.gbcge.org/education-NGA.php>. Student & Early Bird Professional applications accepted February 15-March 31, 2013; Late Professional applications accepted April 1-May 15, 2013. Visit <http://www.gbcge.org/>; Please email questions to [geothermal@unr.edu](mailto:geothermal@unr.edu).

### **35<sup>th</sup> New Zealand Geothermal Workshop to Take Place in Rotorua, NZ (Nov. 18-20)**

Via the [Institute of Earth Science and Engineering](#) -- The 35<sup>th</sup> New Zealand Geothermal Workshop will be held 18-20 November 2013 in Rotorua, New Zealand in conjunction with the 26<sup>th</sup> International Applied Geochemistry Symposium. For event details, check at [www.geothermalworkshop.co.nz](http://www.geothermalworkshop.co.nz)

## **Featured Jobs**

### **Switzerland, Univ. of Neuchatel and ETH Zurich -- Geothermal Positions**

Via the *Swiss Federal Department of the Environment, Transport, Energy and Communications* -- Three various openings at the professional level are open in Switzerland, all related to geothermal energy.

One position is at the University of Neuchatel: The University of Neuchâtel, Switzerland, invites applications for a position of Full Professor or Assistant Professor in Geothermics. The successful candidate will establish a dynamic research program in fundamental and applied geothermics as part of a competence center for hydrogeology and geothermics. Contact: Prof. D. Hunkeler, [Daniel.hunkeler@unine.ch](mailto:Daniel.hunkeler@unine.ch).

The other two are at ETH Zurich (Swiss Federal Institute of Technology in Zurich). The Department of Mechanical and Process Engineering ([www.mavt.ethz.ch](http://www.mavt.ethz.ch)) at ETH Zurich invites applications for a full professorship or an assistant professorship (tenure track) in Geoenergy Process Technologies; The Department of Earth Sciences ([www.erdw.ethz.ch](http://www.erdw.ethz.ch)) at ETH Zurich invites applications for a professorship in Geothermal Reservoir Engineering, covering deep geothermal energy and related processes in geological reservoirs. Contact: Prof. P. Rudolf von Rohr, [vonrohr@ipe.mavt.ethz.ch](mailto:vonrohr@ipe.mavt.ethz.ch)

## Featured RFPs

### USTDA Seeks Geothermal Companies for Projects in Mexico

*Submitted by 3E Consulting* -- 3E Consulting LLC (3E) has been contracted by the US Trade and Development Agency to perform a Definitional Mission for Environmental Sector Projects in Mexico to identify areas for Technical cooperation in the electric power sector. 3E visited Mexico in October, identifying two potential Comision Federal de Electricidad (CFE) geothermal projects. 3E will work with CFE to identify priority projects that meet USTDA's funding criteria and write up terms of reference for technical cooperation studies to advance projects or technical cooperation ventures. Contact: A. John Rezaian, President, [jrezaian@verizon.net](mailto:jrezaian@verizon.net); [rezaian@3EConsulting.biz](mailto:rezaian@3EConsulting.biz); 410-908-4987; Skype: john rezaian

### Jamaica Issues RFP for RE Generation up to 115 MW (due April 2)

The Office of Utilities Regulation (the Office/ OUR) is inviting interested entities to submit proposals for the supply of one or more plants of varying configurations greater than 100kW and up to 115 MW of renewable generating capacity to the national grid on a Build Own and Operate (BOO) basis. The request for renewable electrical energy and/or capacity from renewable sources is in keeping with the Government of Jamaica's (GOJ) target for renewable energy sources by 2015. Contact: Office of Utilities Regulation, Third Floor, PCJ Resource Centre, 36 Trafalgar Road, Kingston 10, Jamaica, W.I. Mr. Peter Johnson, Manager, Utility Monitoring, (876) 968 6053 or [115MWrfp@our.org.jm](mailto:115MWrfp@our.org.jm); Facsimile: (876) 929 3635. RFP at <http://www.our.org.jm/>; Proposal Document due April 2.



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## Events

### GEA and GEA-Sponsored Events

Your company has the opportunity for high visibility at GEA's events. In addition to providing the financial support needed for GEA to undertake successful events, sponsors garner extensive coverage through media availabilities in mainstream press outlets. Contact: Kathy, [kathy@geo-energy.org](mailto:kathy@geo-energy.org). [Geo-energy.org/events](http://Geo-energy.org/events)

*Why Should You Attend GEA Events?* As the national trade association for the geothermal industry, the Geothermal Energy Association (GEA) creates and delivers educational events involving the full range of the geothermal industry, reflecting the dynamic growth of the geothermal market, and communicating the benefits of geothermal energy. GEA events provide important

opportunities to learn and network within the geothermal community as well as inform and educate companies and organizations outside today's industry that are interested in learning more. The revenue generated from GEA events is used to advance the goal "to expand the production and use of geothermal energy in the U.S. and around the world" through future events, PR and outreach efforts, policy related activities and analysis, internet publications, and other initiatives designed to help achieve this goal. Only GEA puts your dollars to work in all of these ways to advance the future of the geothermal energy industry. GEA does not sell your email or postal address to junk mailers or spammers.

### State of the Geothermal Energy Industry Briefing, Washington, DC (February 26, 2013)

Event summary: This will be a half day program focused on the results of GEA's Annual Industry Update. The target audience will be congressional staffers, government agencies and GEA members.

### International Geothermal Energy Finance Forum, New York, NY (April 11, 2013)

Event summary: This full day program will bring geothermal industry together with the finance and investment community. With monumental geothermal growth internationally this program will not only highlight U.S. geothermal development and the keys to getting projects done in our back yard but also projects, policies, and development driving geothermal growth in the world's top markets.

### National Geothermal Summit, Reno, NV (June 26-27, 2013)

Event summary: GEA will host its third annual National Geothermal Summit which brings together companies and individuals in the geothermal industry with experts, government officials and other key decision makers. The Summit will

feature policy leaders discussing the status and future of geothermal power in the Western states. New additions to the Summit in 2013 will be a panel discussing the state of geothermal technology and an expanded exhibit space to accommodate more vendors.

## Featured Events

### **Geothermal Energy and Waste Heat to Power: Utilizing Oil and Gas Plays, Southern Methodist University, Dallas, Texas (March 12-14, 2013)**

The SMU Geothermal Laboratory, a leader in research on the conversion of oil and gas fields into geothermal energy projects, welcomed 200 attendees at its 5th conference dedicated to Geothermal Energy and Waste Heat to Power: Utilizing Oil and Gas Plays. The conference focuses on an exciting part of the industry: taking these wells and energizing them with geothermal power instead of abandoning them. Request updates on this event from Maria Richards:

[mrichard@smu.edu](mailto:mrichard@smu.edu). [Smu.edu/geothermal](http://smu.edu/geothermal)



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**GEOHERMAL ENERGY WEEKLY** A newsletter for the geothermal industry

by Leslie Blodgett and Karl Gawell

**CONTACT, SUBSCRIBE, SUBMIT POSTS** [leslie@geo-energy.org](mailto:leslie@geo-energy.org) ~ 202 454 5241

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