

Geothermal Energy Weekly

www.geo-energy.org

National News.....	3
Leaders at National Clean Energy Summit 4.0 Foresee Bright Energy Future.....	3
Western Grid 2050 Report Favors Clean Energy Vision Over Business as Usual	4
Company News.....	5
Alterra Power: Mid Year Financial Results for HS Orka Released.....	5
Calpine Corp.: Settlement for 2004 Fire Reached for District and Property Owners	6
Gradient Resources: Groundbreaking Kicks Off Patua Geothermal Project.....	6
U.S. Geothermal: Loan Funding Received for Neal Hot Springs Project.....	7
State News	8
California: USGS Scientists Map Lassen's Volcanoes.....	8
California: Desert RE Conversation Plan Extended to Geothermal and Wind Energy.....	8
International News	8
Americas	8
Guatemala: AGER Urges Tender for Geothermal Development.....	8
Asia	9
India: Government Looking at Potential Geothermal Areas.....	9
Japan: Renewable Energy Law Passes Parliament	9
Taiwan: Geothermal Potential Abundant in Taiwan.....	9
Pacific.....	10
Australia: Havilah Resources, Geothermal Resources Looking at Merger.....	10
Indonesia: Country's Economy Rating Upgraded, Increased Renewable Development Could be Possible — Government Issues Tax Holiday Regulation, Geothermal Guarantee.....	10
New Zealand: Mighty River Earnings Up on Nga Awa Purua Geothermal Plant.....	11
Philippines: Geothermal Production Could Increase 75% by 2027; Maibarara Secures PPA.....	12
Middle East	13
Iran: Wells Drilled for First 5-MW Geothermal Plant	13
Europe.....	13
Iceland: Carbon Storage Experiment to Turn CO ₂ into Limestone	13
Africa	13
Kenya: Geothermal Development Advances in Kenya; Icelandic Firms Hired for Assessment	13



***Geothermal Heat Pumps and Direct Use* 14**

DOE Contractor Seeks GHP Installers and Manufacturers to Complete Survey 14

***Notices* 15**

New This Week 15

 GEA National Geothermal Summit Photos Available..... 15

 GEA Talks to CNN Money (Video)..... 15

Current Notices 15

 Call for Geothermal Abstracts, American Association of Petroleum Geologists (September 22) 15

 BLM Seeking Comments on Draft EIS for West Chocolate Mountains (September 29) 15

***Employment*..... 16**

Employment Opportunities..... 16

 Research Geologist/Geophysicist, United States Geological Survey 16

 Tenure-line Position, Energy Resources Engineering, Stanford University..... 16

 Reservoir Engineering Manager – Geothermal, Chevron, Jakarta, Indonesia 17

 Consultant, Geothermal Market in Turkey, EBRD 17

***Requests for Proposals*..... 17**

Proposal Announcements..... 17

 Procurement Notice, Geothermal Clean Energy Investment Project, World Bank, Indonesia 17

 RE&EE Awards, State Energy Program, DOE..... 18

 Request for Information on Geothermal Energy Expansion, HELCO, Big Island, Hawaii (August 31) 18

 Alaska Native Fund (October 15)..... 19

 Environmental Engineering, Energy for Sustainability, and Environmental Sustainability, NSF (February 17, 2012) 19

***Events*..... 20**

New This Week..... 20

 Sedimentary Basins Geothermal Workshop, National Science Foundation, Salt Lake City, UT (November 7–9) 20

 13th Oregon Geothermal Working Group meeting, Klamath Falls, OR (September 15)..... 20

 Geothermal Power Plant Tours at The Geysers, Calpine Corp. (Sept–Nov)..... 20

GEA and GEA-Sponsored Events 21

 Geothermal Energy Expo® and GRC Annual Meeting 2011, San Diego, CA (October 23–26)..... 21

 Renewable Energy World North America Conference and Expo, Long Beach, CA (February 14–16, 2012). 22

Other Events 22

 Geothermal Operations and Plant Optimization Conference, San Jose, California (September 15–16) 22



RETECH 2011, The Renewable Energy Technology Conference & Exhibition, Washington DC (September 20–22) 22

XIX Annual Congress of the Mexican Geothermal Association (September 22–23)..... 22

CanGEA's 4th Annual Conference and Investment Forum, Toronto, ON (September 14-15) 22

U.S.-Mexico Renewable Energy and Energy Efficiency Policy Roundtable, U.S. DOC, Mexico City, Mexico (September 26–27) 23

First UK Geothermal Symposium, London, UK (September 27) 23

Soultz Geothermal Conference, Soultz-sous-Forets, France (October 5-6)..... 23

Public Meeting on Geysers EGS Project, US DOE and Calpine Corp., Middletown, CA (November 4)..... 24

CanGEA's Annual Geothermal Power Forum, Calgary, AB (November 4) 24

Turkey Renewable Energy and Energy Efficiency Trade Mission, U.S. DOC, Ankara-Istanbul-Izmir (December 5–9)..... 24



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

National News

Leaders at National Clean Energy Summit 4.0 Foresee Bright Energy Future

National Clean Energy Summit 4.0 was held this week in Las Vegas, Nevada, focusing on a clean energy future. Vice President Joe Biden, Energy Secretary Steven Chu, and several governors and policy experts of note spoke at the day-long summit hosted by the Center for American Progress, Clean Energy Project, MGM Resorts International, Senate Majority Leader Harry Reid (D-NV), and the University of Nevada, Las Vegas.

One topic at hand was the groundbreaking of the world’s first solar-geothermal power plant by Enel. The 24-MW facility will combine 80,000 polycrystalline PV modules with traditional hydrothermal technology. “This is an incredible new technology that can be used across the country,” [said Energy Secretary Steven Chu](#).

Vice President Joe Biden carried the President’s message of [the importance of being a leader in the world in clean energy technology](#). The United States is at risk of making the "biggest mistake in its entire history,” he said — “If we don’t make these investments and set these goals we are going to lose. This negative argument that we hear all the time is not new in America.” He added, “There are naysayers in the political leadership who say that the government has no role and should not be setting a vision for the future by providing seed money for anything.”

U.S. Senate Majority Leader Harry Reid, who hosted the Summit, [told reporters a clean energy revolution is underway](#) but isn’t happening quickly enough. “Our dependence on foreign oil is making our nation less secure,



and is certainly damaging the health of our citizens,” he said. Reid expects clean energy projects to be part of jobs bills the Senate will consider when it returns to session.

Western Grid 2050 Report Favors Clean Energy Vision Over Business as Usual

A new clean energy vision technical report, “Western Grid 2050: Contrasting Futures, Contrasting Fortunes,” looks at two possible energy investment pathways: business-as-usual or a new clean energy trajectory.

“The report finds that with intentional policymaking and planning today, the West can successfully transition to a clean energy economy that will deliver job, environmental and public health benefits for decades to come,” a [Western Grid 2050 Press Release](#) says. The report looks at 11 Western states.

Former Colorado Governor Bill Ritter called on Western state policymakers to prioritize clean energy and to help each other across state lines. “In my time as Governor, Colorado saw tremendous benefit from our commitment to clean energy,” said the former governor. “We can’t afford to wait for Washington, nor should we. The West is the land of frontiers, of pioneers and innovation. Let’s make good on that heritage. Let’s break with business-as-usual and build a more prosperous, safe, and sustainable energy future.”

In a comparison between a Business As-Usual approach and a Clean Energy Vision, the report found that with careful planning, the latter would have a number of benefits, including: creation of more local jobs, increase in energy reliability and security, significant reduction of the direct environmental impact of our power supply, it is achievable with manageable impact on Western lands, it improves public health, and it is likely a cost saver for consumers.

The Geothermal Energy Association applauds the report, Karl Gawell, Executive Director of GEA told press. “The Western Grid 2050 Report [guides] U.S. energy policy in the right direction by showing the clear economic and environmental advantages of expanding domestic renewable energy production, including a large increase in utility-scale geothermal energy,” Gawell said. “Geothermal energy has the potential to employ thousands of Americans while providing clean, baseload electricity, but we must have a grid that can harness this potential.”

“Western Grid 2050: Contrasting Futures, Contrasting Fortunes” is available at <http://www.cleanenergyvision.org/clean-energy-vision-technical-report/>.



Company News

Alterra Power: Mid Year Financial Results for HS Orka Released

Press Release ([Full story on PR Newswire](#)), Vancouver, August 26 — Alterra Power Corp. (TSX: AXY) announces that Icelandic geothermal company HS Orka hf ("HS Orka"), held 75% by Alterra, today released its audited financial and operating results for the six month period ended June 30, 2011. HS Orka prepares its financial statements in accordance with International Financial Reporting Standards and the statements are reported in Icelandic krona ("ISK"). These results can be accessed at <http://www.hsorka.is>.

Highlights comparing the six month period ended June 30, 2011 to the six month period ended June 30, 2010 (based on amounts converted into US\$ at an average rate of US\$0.00782 per ISK for the six month period ended June 30, 2010 and at an average of US\$0.00868 per ISK for the six month period ended June 30, 2011):

Revenue increased by 19.1% from \$27.7 million to \$33.0 million due to an increase in retail sales, higher aluminum prices, an improved currency conversion rate and a 1.7% increase in electricity production. Approximately 46% of the HS Orka's power sales agreements are indexed to the price of aluminum.

Gross profit increased by 28.0% from \$9.3 million to \$11.9 million due to the increase in revenue, offset by an increase in the pension, salary and depreciation expenses in 2011 and by the higher currency conversion rate.

EBITDA increased by 12.9% from \$11.6 million to \$13.1 million, including \$1.9 million in one-time arbitration costs and pension plan expenses. EDITDA for the 12 month period ended June 30, 2011 was \$24.1 million.

During the quarter ended June 30, 2011, HS Orka invested \$4.9 million to drill exploratory well RN-30 at Reykjanes. Results are expected later this year. RN-30 is part of the planned expansion of the Reykjanes plant capacity from 100 MW to 180 MW in two phases pending permitting and new power purchase agreements with one or more power purchasers. As at June 30, 2011, HS Orka had invested approximately \$46.5 million for this expansion.

HS Orka generated a net income increase of \$25.2 million, moving from a net loss of \$18.7 million to a net income of \$6.5 million. The increase in net income was due to the increase in EBITDA and recognition of a non-cash gain in fair value of embedded derivatives in sales contracts in 2011 compared to a loss in 2010, partially offset by non-cash currency losses and higher non-cash income tax expense in 2011. HS Orka financial results will be included in Alterra's consolidated financial statements.



Calpine Corp.: Settlement for 2004 Fire Reached for District and Property Owners

Calpine Corp. has paid a settlement in a 2009 lawsuit filed by Sonoma County's open space district and associated property owners to cover land values and natural resources damaged in a 2004 fire in the Mayacmas Mountains in Sonoma and Lake Counties. This is the latest settlement of about 50 claims that were filed against Calpine over the fire.

The open space district and associated property owners will get \$7.9 million. The county's share of the settlement is \$3.77 million. Much of the money will go to restore damaged lands. Bill Keene, the district general manager, told press money will support district activities, including additional land protection, in the Mayacmas Mountains.

The 12,525-acre blaze originated from a splice in a high-voltage line that short-circuited, showering dry grass with hot metal. The company has done inspections to avoid a similar occurrence, [Calpine's VP for geothermal operations Mike Rogers told press.](#)

Gradient Resources: Groundbreaking Kicks Off Patua Geothermal Project

Company Press Release — Reno NV, August 16 – Gradient Resources Inc., a privately held corporation headquartered in Reno, Nevada, held a groundbreaking event at the site of its 60 MW geothermal power plant located within Churchill County, near Fernley, Nevada. Present were representatives of federal, state and local government and elected officials, SAIC Constructors LLC., the primary contractor for the new power plant, representatives from Sacramento Municipal Utility District (SMUD) and NV Energy as well as the Gradient Resources Board of Directors and Gradient investors.



Gradient Resources CEO Craig Mataczynski described the new power plant; referring to artist renderings of the new generating station, "When this project is complete, we will have erected approximately \$300 million in steel, concrete and equipment, including the cost of labor. Of this \$300 million, approximately \$50 to \$60 million will be filtered back into the local economy. This is, in my view, a big deal and will have a positive impact on the City of Fernley, Churchill County and surrounding areas."



Nevada State Assemblyman Tom Grady congratulated Gradient Resources on bringing the project to its construction phase. Siting a 17.3% unemployment rate in nearby Lyon County, Grady said “We are anxiously waiting and will welcome the jobs this project will be providing in the state of Nevada”.

Others addressing the 165 guests, authorities, and Gradient employees, included Ryan Cherry, representing U.S. Senator Dean Heller’s office, who presented a certificate commemorating the event, Gary Johnson from the Nevada BLM division of minerals, Gary Lawson of SMUD and Mike Gwyn, President SAIC Constructors, LLC. A letter from U.S. Senator Harry Reid, read by CEO Craig Mataczynski, stated “I am confident that together we can power Nevada and the United States with clean renewable energy, bolster a growing local industry, and create thousands of new jobs if we invest in our geothermal energy resources....”

The Patua Project will proceed in phases, the first being 60 MW, with a goal of up to 120 MW, to be delivered to SMUD. The process for developing the Patua Project was the result of a collaborative effort of Gradient’s development team together with investors, lenders, governmental agencies, and elected officials.

U.S. Geothermal: Loan Funding Received for Neal Hot Springs Project

Press Release, August 31 — U.S. Geothermal Inc., a leading renewable energy company focused on the development, production and sale of electricity from geothermal energy, today announced the first funding drawdown under the U.S. Department of Energy (“DOE”) \$96.8-million loan guarantee to construct its planned 23-megawatt-net power plant at Neal Hot Springs in Eastern Oregon. As of August 25, all conditions precedent to funding have been met, and the required project equity has been spent by USG Oregon LLC. USG Oregon is owned 80% by U.S. Geothermal Inc. and 20% by Enbridge USA Inc. On August 30, the Federal Financing Bank, as the project lender, issued payments to vendors, totaling \$2.3 million. Future project construction costs will also be paid directly by the Federal Financing Bank.

In February 2011, the Neal Hot Springs development project completed the closing of the loan guarantee under DOE’s Title XVII loan guarantee program, which was created by the Energy Policy Act of 2005 to support the deployment of innovative clean energy technologies. The loan guarantee backs the project loan to the Neal Hot Springs project from the U.S. Treasury’s Federal Financing Bank. The \$96.8-million DOE loan guarantee represents 75% of the \$130 million total project cost.



State News

California: USGS Scientists Map Lassen's Volcanoes

Dr. Patrick Muffler and Dr. Michael Clynne, scientists with the U.S. Geological Survey, have spent over 35 years surveying the volcanic features of Lassen National Park and have [published two detailed maps and a 110-page pamphlet](#) of the region.

Some of the findings were that the oldest rocks in the park go back about 3.5 million years, and that there have been over 300 volcanic eruptions. The maps show seven volcanic centers at Lassen. The most recent eruption was at Lassen Peak in 1915. For more, see <http://www.nps.gov/lavo/index.htm>.

California: Desert RE Conversation Plan Extended to Geothermal and Wind Energy

California Gov. Jerry Brown has signed a bill into law that extends a program for solar energy to include geothermal and wind resource development. ABx1 13 was introduced by Assemblyman Manuel Pérez (D-Coachella) and concerns the state's Desert Renewable Energy Conservation Plan. Under the program, to facilitate sometimes lengthy permitting, the Department of Fish and Game can offer project developers mitigation fees instead. The fees are then used to restore the habitats of species affected by the project. The law also authorizes up to \$7 million to Southern California counties to revise zoning ordinances to encourage alternative energy projects.

"By expediting renewable energy permitting and siting processes, we can achieve our state's renewable energy goals and create jobs in California," Pérez [said in a statement](#). "Smart policy choices such as this new law will help encourage a climate that spurs business investment and innovation and promotes a sustainable economic recovery." The text of the new law is available at www.leginfo.ca.gov.

International News

Americas

Guatemala: AGER Urges Tender for Geothermal Development

In a presentation to members of the Guatemalan Chamber of Commerce and Industry, The Association of Power Generators with Renewable Energy (AGER) asked for the promotion of a competition to attract geothermal developers to Guatemala in the form of a bid for the supply of up to 800 MW. [Vice President of AGER Rudolf Jacobs said](#) 800 MW could supply Empresa Electrica de Guatemala, SA and distributors Deocosa (west) and Deorsa (east).



The president of the National Energy commission said that the bid was not currently possible, but that efforts to promote geothermal are in progress. The country has over 1,000 MW of geothermal potential.

Asia

India: Government Looking at Potential Geothermal Areas

Speaking [at the 10th Darbari Seth Memorial Lecture](#), New and Renewable Energy Minister Farooq Abdullah said the government is seeking cooperation with Iceland and other countries to explore development of potential geothermal areas in India.

The Minister said some of the potential areas include Ladakh in Jammu and Kashmir and some places in Chhattisgarh. "There are number of areas in our country where geothermal energy can be made use of," he said, adding that his vision is for every Indian to have access to clean, reliable and affordable energy. India has an installed base of 20,000 MW of renewable energy and aims to increase to 70,000 MW in the next 10 years.

The lecture was organized by The Energy and Resources Institute.

Japan: Renewable Energy Law Passes Parliament

Japan's parliament [passed a law Friday](#) requiring power utilities to buy renewable energy at fixed prices. Utilities will then be able to pass extra costs from renewable energy sources such as wind, solar and geothermal on to their consumers. Kazuhiro Takasu, who heads operations at the country's first geothermal plant in Hachimantai, northern Japan, told press the country must accept that switching to renewables will carry initial extra costs.

The Hachimantai plant was built in 1966 and provides 23,500 kW of power. The plant never stopped running through the earthquake and tsunami disasters of March 2011, while two-thirds of Japan's nuclear reactors remain offline for safety checks.

Recent estimates have shown Japan could produce 80,000 MW with conventional geothermal technology and meet more than half its electricity needs. "Japan should no doubt make use of its volcano, magma and other geothermal energy," thermal-electric researcher Yoshiyasu Takefuji, a professor at Tokyo's Keio University told press. "The March 11 disaster caused a lot of sadness, but it has also changed people's thinking about energy."

Taiwan: Geothermal Potential Abundant in Taiwan

Experts are looking at geothermal energy in Taiwan. Sheng-Rong Song, a professor at National Taiwan University's Institute of Geology, and Lee Chao-shing, a professor at National Taiwan Ocean University's Institute of Applied Geosciences, are involved in an energy resources exploration project authorized by the National Science Council.



Song told press geothermal energy is abundant beneath Taiwan. "Estimates of the electricity-generating potential of geothermal energy in Taiwan total roughly 25.4 GW, equivalent to the total installed capacity of 9.7 Fourth Nuclear Power Plants," Song said [during a press conference on renewable energy](#). "Taiwan could reduce its reliance on nuclear power plants if it were to explore and develop geothermal power," Song said.

Lee noted that CPC Taiwan Corp. built a geothermal power plant in Qingshui in 1981 that had an installed capacity of 3 million watts. It was the 14th successful geothermal producing plant in the world, but closed 12 years later.

Pacific

Australia: Havilah Resources, Geothermal Resources Looking at Merger

Havilah Resources holds part of Geothermal Resources, and the Board has committed to a binding takeover of the remaining 41.32% it does not hold. The two companies share offices, and their three shared directors own shares in the companies, meaning newly appointed director Martin Janes (former Terramin Australia chief financial officer) is taking the lead on the Geothermal perspective.

The deal would offer one Havilah share for every four Geothermal shares, about a 40% premium. Geothermal shareholders would receive an interest in a more diversified company with better access to capital. Both parties have agreed to the exchange of confidential information that will allow bidder's and target's statements to be prepared.

Indonesia: Country's Economy Rating Upgraded, Increased Renewable Development Could be Possible — Government Issues Tax Holiday Regulation, Geothermal Guarantee

Geothermal energy potential is known to abound in Indonesia, but its policies have not always been seen as inviting for potential investors. Things may be looking up — the country's credit rating is improving internationally, and the Ministry of Finance has issued a guarantee of payment on geothermal projects as well as a tax holiday for several sectors including renewable energy industries.

The Japan Credit Rating Agency (JCRA) upgraded [Indonesia's sovereign credit rating as investment grade](#), indicating confidence in the country's economy, and was the first major rating agency to do so. Standard & Poor's (S&P), Fitch Ratings, and Moody's Investors Service upgraded the country's credit rating to one notch below investment grade earlier this year.

JCRA said the upgrade reflected several areas of improvement. A sustainable economic growth outlook in Indonesia is underpinned by solid domestic demand. Public debt has been alleviated by prudent fiscal



management. Resilience to external shocks stemming from accumulated foreign exchange reserves and overseas debt management capacity has been reinforced.

Bank Indonesia Governor Darmin Nasution said “this confidence is recognition of our discipline and prudent macroeconomic policy implementation.”

Good news for investors has also been announced from the country’s Ministry of Finance. Answering to the hesitancy of some geothermal investors who had refused to sign PPAs with the state power company, Finance Minister Agus Martowardojo [signed a ministerial decree](#) that PT PLN will be able to pay for electricity from independent producers, including geothermal power plants. The decree states that geothermal producers will receive letters guaranteeing PLN’s ability to fulfill obligations, and that the decree will expire in 48 months if investors haven’t found financial backing.

The government hopes to assuage fears and invite investment. “Investors have been waiting for this decree for quite some time. They have very strong interests in developing geothermal energy to generate electricity in Indonesia,” Vice President Boediono said in a press statement.

Indonesian Geothermal Association chairman Abadi Poernomo told press he had not seen the new decree. But, “if the content of the decree is not in line with investors’ aspirations, I’m afraid many geothermal projects will stall because we’ll find great difficulties in acquiring financial backing,” he said.

The Finance Ministry Regulation also [issued a Corporate Income Tax Exemption](#), often called a tax holiday, for investors committing at least one trillion rupiah (US\$117mil) into qualifying sectors. Some priority will be given to basic metals, petroleum refineries, basic organic chemicals derived from petroleum and natural gas, machinery, renewable resources, and telecommunications equipment.

Under the tax holiday, investors would be exempted from paying taxes for a period of between five and 10 years after their companies start operations — the duration was still being discussed. Indonesia hopes to spur new levels of foreign direct investment.

See also: [“Renewable Energy’s Slow Road in Indonesia,”](#) The Jakarta Globe.

New Zealand: Mighty River Earnings Up on Nga Awa Purua Geothermal Plant

Press Release ([Full story on scoop.co.nz](#)), August 30 — *Financial Results For The Year Ended 30 June 2011* — Financial Results Mighty River Power’s 2011 financial results released today reflect the Company’s success in maintaining residential electricity sales volumes in a highly competitive market, while significantly increasing generation production from a combination of new geothermal plant and better hydro generation conditions.



Chair, Joan Withers, said with no growth in national electricity consumption during the year, Mighty River Power had increased its market share of generation significantly - displacing competitors' more expensive thermal generation with hydro and geothermal renewables.

Earnings (EBITDAF) for the year ended 30 June 2011 were \$443.1 million. This compares with EBITDAF (earnings before interest, taxation, depreciation, amortisation and financial instruments) of \$327.8 million the previous year, and is in line with market guidance for FY2011 of \$435-450 million.

Mrs. Withers said key factors in the result were record electricity generation of 6,833GWh (up 17%) driven by an outstanding first full year's production from the jointly-owned 140-MW Nga Awa Purua geothermal plant and above-average hydro production, together with a strong sales portfolio performance. Underlying earnings were up 16% from \$139.6 million to \$162.2 million, despite significant increases in depreciation and interest charges.

"The quality of the Nga Awa Purua geothermal investment has been demonstrated by its contribution to the 35% lift in the Company's operating earnings in its first full year of operation. This investment has enabled a step-change in the Company's profitability," she said.

Philippines: Geothermal Production Could Increase 75% by 2027; Maibarara Secures PPA

Current proposed projects in the Philippines could add a total 1,495 MW of geothermal energy production capacity to the three main grids by 2027, a 75% increase. Of that, only 70 MW have been committed — two expansion projects in Palinpinon, Negros Oriental and Mt. Apo, North Cotabato with a combined cost of around P9.45 billion.

Projects now in the pipeline could top P200 billion. The remaining 1,425 MW of expected additional capacity are power projects still in exploratory stages. The majority are expected to be commissioned between 2016 and 2020.

One project that is underway is The Maibarara Geothermal Inc., operating the Maibarara geothermal facility in Laguna, which has [secured an agreement](#) with the National Grid Corp. of the Philippines for up to 20 MW of power to the Luzon grid. The consortium announced in May that steam output was viable for commercial operation. It has said it is undertaking studies and negotiations for electricity sales, financing, and construction. Trans-Asia holds a 25% participating interest in while PetroGreen Energy Corp. holds 65%, and PNOC-Renewable Energy Corp. holds 10%.

The Philippines [DOE said the initiatives could significantly decrease costly fuel imports](#). The country's current installed geothermal capacity is 1,966 MW.



Middle East

Iran: Wells Drilled for First 5-MW Geothermal Plant

Wells have been drilled in the town of Meshkin-Shahr, northern Iran, for a 5-MW geothermal pilot plant, planned to be the [first geothermal plant in Iran](#).

Iranian engineers have also drilled a 35-km deep well in the Sabalan mountains for geothermal sources.

Europe

Iceland: Carbon Storage Experiment to Turn CO₂ into Limestone

CarbFix, a joint American and Icelandic venture, is beginning the [first phase of a new experiment in storing carbon pollution](#) underground. The plan is to artificially create seams of limestone by pumping carbon dioxide into the basalt rock where, if successful, it will react and turn the dissolved CO₂ into limestone. One application is that geothermal power stations could then get rid of the carbon dioxide that is accessed through drilling.

This is the first carbon storage project that actually turns the CO₂ into stone, meaning it cannot escape back into the atmosphere, a fear with underground gas storage. The USD 10-million project located at Hellisheidi is funded by Reykjavik Energy, France's National Centre of Scientific Research, the US Energy Department, the European Union, and from Scandinavian funds.

Africa

Kenya: Geothermal Development Advances in Kenya; Icelandic Firms Hired for Assessment

[Press Release](#) — Reykjavik, Iceland, August 30 — The Icelandic consulting firms Mannvit, ISOR, Vatnaskil and Verkís recently signed an agreement with Kenya Electricity (KenGen) for a capacity assessment and feasibility study of the Olkaria geothermal fields.

The Icelandic consulting firms Mannvit, ISOR, Vatnaskil and Verkís recently signed an agreement with Kenya Electricity (KenGen) for a capacity assessment and feasibility study of the Olkaria geothermal fields. The agreement is the conclusion of an international tender.

The Olkaria geothermal field is located in Kenya's Rift Valley, which is northwest of Nairobi and south of Lake Naivasha. Utilization of the area began more than three decades ago and included consultation from Icelandic scientists and engineers. Currently there are three power plants producing a total of 200 MWe. Plans for two 140 MW power plants are underway and KenGen anticipates that the harnessing capacity of the area is approximately 1000 MWe.



Mr. Sigurdur Arnalds, Manager of Energy at Mannvit commented, "We were active participants during the first development of the Olkaria geothermal fields some three decades ago, so we are pleased to be back to continue the geothermal exploration and harnessing of this large resource for power production. We are also excited about the country's ambitious plan for harnessing geothermal energy at several locations in the next decade."

Responsibilities of the four consulting firms are as follows: Vatnaskil and ISOR will be developing a model to simulate the behavior of the geothermal reservoir to predict the future capacity of the area. Mannvit and Verkís will be conducting technical and economic assessments of the current power plants as well as for future power plants and prepare an environmental report. The project's local partner in Kenya is the consulting firm Armstrong and Duncan. The project has commenced and estimated time for completion is one year.

Geothermal Heat Pumps and Direct Use

DOE Contractor Seeks GHP Installers and Manufacturers to Complete Survey

A DOE Recovery Act project is [looking for geothermal heat pump ground loop installers to complete the Ground Loop Survey](#), which seeks to help ascertain how a nationwide deployment of geothermal heating and cooling systems would benefit the country economically, environmentally, and socially.

The survey is part of the GHPsRUS Project, whose final report will be completed in early 2013. The results will affect planning in the GHP industry and could also affect the development of a DOE GHP program. The project supports the goal established by The National Renewable Energy Laboratory Geoexchange Heat Pump Roadmap of one million GHPs installed each year by 2016.

The GHPsRUS Project is headed by contractor Bob Lawrence & Associates Inc. The survey forms for both geothermal installers and manufacturers may be found at <http://ghpsrus.com>.



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



Notices

New This Week

GEA National Geothermal Summit Photos Available

Did you attend last month's GEA National Geothermal Summit in Reno, Nevada? Look for your photo on our Flickr page: <http://www.flickr.com/photos/geo-energy/>.

GEA Talks to CNN Money (Video)

Paul Thomsen, Policy Director at Ormat and President of GEA, and Karl Gawell, Executive Director of GEA, talk to CNN Money: http://money.cnn.com/video/technology/2011/08/29/t_bsg_geothermal_reno.cnnmoney/.

Current Notices

Call for Geothermal Abstracts, American Association of Petroleum Geologists (September 22)

The Energy and Minerals Division of the American Association of Petroleum Geologists will hold a Geothermal Session at the 2012 annual meeting to be held in Long Beach, California on April 22-25. The Geothermal Session will be hosted under Theme 7: Alternative Energy and will be chaired by W.C. "Rusty" Riese of Rice University and Stephen Testa of the California State Mining & Geology Board. The Geothermal Session Chair will be Richard Erdlac.

Abstracts are requested related to the exploration, development and production, and economics of geothermal energy especially as associated to production from SEDIMENTARY ROCK. These abstracts could discuss geothermal in sedimentary basins or in any region where sedimentary rock has provided the trapping mechanism for geothermal resources. Of special importance would be papers that indicate how in-place oil/gas well assets can be converted to producing hot water for geothermal energy.

Submissions at <http://www.aapg.org/longbeach2012/guidelines.cfm>. The closing date for Abstract submission is September 22, 2011.

BLM Seeking Comments on Draft EIS for West Chocolate Mountains (September 29)

BLM's California Desert District Office, working with Ecology and Environment, Inc. has prepared an environmental impact statement (EIS) addressing solar and wind energy ROWs and geothermal leasing in the West Chocolate Mountains Renewable Energy Project Area in Imperial County. The BLM must receive written comments on the Draft CDCA Plan Amendment and Draft EIS within 90 days following the date the



Environmental Protection Agency publishes its Notice of Availability for the Draft EIS in the Federal Register. (Notice posted July 1, 2011).

Comments related to the West Chocolate Mountains Renewable Energy Evaluation Area may be submitted by any of the following methods:

- E-mail: wcm_comments@blm.gov.
- Fax: (951) 697-5299.
- Mail: Bureau of Land Management, California Desert District Office, 22835 Calle San Juan de Los Lagos, Moreno Valley, California 92533-9046, Attn: Peter Godfrey.

For more information visit: [prepared an environmental impact statement \(EIS\)](#)

Click here to read the draft EIS: <http://www.blm.gov/ca/st/en/fo/elcentro/nepa/wcm.html>

Employment

Employment Opportunities

Research Geologist/Geophysicist, United States Geological Survey

The USGS in Menlo Park, California, has an opening for a Research Geologist/Geophysicist to conduct research in support of geothermal energy assessments, with a focus on the structural, geomechanical, thermal, and hydrologic properties of fault-hosted hydrothermal systems. Detailed information on the position can be found at <http://tinyurl.com/USGSGeothermalJob>. Individuals must apply online at <http://www.usajobs.gov/> to receive consideration. For more information about the USGS, visit: <http://www.usgs.gov/ohr/great.html>.

Tenure-line Position, Energy Resources Engineering, Stanford University

The Department of Energy Resources Engineering at Stanford University [invites applications for a tenure-line faculty appointment](#). The position is at the assistant professor level. It is desired that the selected candidate be able to start by January 2012.

The Department of Energy Resources Engineering focuses on a wide range of activities related to the recovery of the Earth's energy resources (e.g., hydrocarbons, geothermal, and renewables). The Department also has active research programs on carbon sequestration and clean energy conversions. ERE offers degrees in both energy resources engineering (B.S., M.S., Ph.D.) and petroleum engineering (M.S., Ph.D.). The ideal candidate should have research and teaching interests beyond traditional petroleum engineering disciplines.

We seek scholars with a Ph.D. in a relevant field with novel and innovative research interests in energy resources, such as in one or more of the following areas:



1. Energy systems modeling and optimization, for example integration of energy recovery and carbon sequestration
2. Engineering of enhanced geothermal systems
3. Recovery of unconventional energy resources, such as coalbed gas, shale gas or gas hydrates
4. Renewable energy resources

Please apply online at <https://academicjobsonline.org/ajo/jobs/685/> in electronic format (pdf only) with the following application material:

- cover letter
- curriculum vitae
- a statement outlining research and teaching interests
- the names of three references including e-mail addresses
- copies of up to five selected papers published in refereed journals over the past three years

We will begin reviewing applications on April 15, 2011 and will continue until a suitable candidate is identified.

Reservoir Engineering Manager – Geothermal, Chevron, Jakarta, Indonesia

Chevron Asia Pacific Exploration and Production is accepting online applications for the position of Reservoir Engineering Manager located in Jakarta, Indonesia. To learn more about this exciting position and to apply visit www.chevron.apply2jobs.com and search by requisition 081116435. All applicants must apply via the Chevron online application process.

Consultant, Geothermal Market in Turkey, EBRD

The European Bank for Reconstruction and Development is considering a wide range of renewable energy proposals in Turkey, some of which are in the geothermal sector, and as such requires a consultant to provide an assessment of the Geothermal Market in Turkey. See <http://www.ebrd.com/pages/homepage.shtml> and <http://www.balkans.com/open-news.php?uniquenumber=91332>

Requests for Proposals

Proposal Announcements

Procurement Notice, Geothermal Clean Energy Investment Project, World Bank, Indonesia

From USTDA: We would like to take this opportunity to pass on the procurement notice for the World Bank's Geothermal Clean Energy Investment Project, a \$574.7 million investment in new geothermal resource development, and encourage all of those interested to pursue contract and procurement opportunities.



This project will be implemented by PT Pertamina Geothermal Energy (PGE) and will necessitate numerous contracts, including contracts for confirmation of geothermal resources and steam field development, as well as construction of the Steamfield Above-Ground System (SAGS) and power plants of approximately 110 MW and approximately 40 MW at the Ulubelu and Lahendong (Tompaso) geothermal fields, respectively.

Other contract opportunities may include:

- a) FEED Consultant for the design of the steam gathering station and power plant
- b) Supervision Consultant for Infrastructure to supervise the infrastructure works related to the development of certain fields;
- c) Supervision Consultant for EPC to supervise the process of power generation installation.

Consulting services will be procured in accordance with the World Bank's Guidelines: Selection and Employment of Consultants by World Bank Borrowers. Interested bidders should immediately contact PGE, procurement@pgeindonesia.com, and register to receive the Specific Procurement Notices as they are issued. A pre-qualification notice is expected to be released in the month of September.

More information for potential bidders can be found at the project homepage:

<http://web.worldbank.org/external/projects/main?pagePK=64283627&piPK=73230&theSitePK=40941&menuPK=228424&Projectid=P113078>

U.S. companies interested in learning more about World Bank procurement guidelines should contact Mr. David Fulton, Advisor & Director of Business Liaison from the U.S. Department of Commerce at the Office of the U.S. Executive Director, dfulton@worldbank.org.

RE&EE Awards, State Energy Program, DOE

The U.S. Department of Energy requests proposals for the State Energy Program. This program provides formula grants to State and Territorial energy offices to design and carry out renewable energy and energy efficiency priorities. \$39 million expected to be available, up to 56 awards anticipated. Due dates based on state/territorial program years. For more info, contact Sheldon Funk at sheldon.funk@netl.doe.gov or go to: <https://www.fedconnect.net/fedconnect/?doc=DE-FOA-0000507&agency=DOE>. Refer to Sol# DE-FOA-0000507. (Grants.gov 6/23/11)

Request for Information on Geothermal Energy Expansion, HELCO, Big Island, Hawaii (August 31)

In a request for information (RFI), Hawaii Electric Light Company [seeks information on expanding geothermal energy on Hawaii](#) Island from stakeholders including potential geothermal developers and interested landowners on next steps that take into account the renewable energy goals and clean energy policy of Hawaii within the



state's unique community, cultural, historical, and environmental context. The full RFI is available at <http://GeothermalRFI.heco.com>. Responses requested by August 31.

Alaska Native Fund (October 15)

The Alaska Conservation Foundation requests proposals for the Alaska Native Fund. The Fund seeks to advance Alaska Native priorities for protecting land and sustaining ways of life. The 2011 priority issues include: Climate Change, Food Security, Sustainable Economies, Energy, and Holistic Wellness. \$100K expected to be available, individual awards NTE \$20K. Letters of Inquiry are required, and are due 7/25/11, final proposals due 10/15/11. For more info, go to: <http://alaskaconservation.org/grant-opportunities/alaska-native-fund/>. (Tribal Climate Change Newsletter 6/2011)

Environmental Engineering, Energy for Sustainability, and Environmental Sustainability, NSF (February 17, 2012)

The National Science Foundation requests proposals for the following programs, with responses due 2/17/12. :

- Environmental Engineering. The goal of this program is to encourage transformative research which applies scientific principles to minimize solid, liquid, and gaseous discharges into land, inland and coastal waters, and air that result from human activity, and to evaluate adverse impacts of these discharges on human health and environmental quality. \$9.4 million expected to be available, up to 44 awards anticipated. For more info, contact Paul Bishop at pbishop@nsf.gov or go to: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=501029. Refer to Sol# PD-12-1440. (Grants.gov 6/8/11)
- Energy for Sustainability. This program supports fundamental research and education in energy production, conversion, and storage and is focused on energy sources that are environmentally friendly and renewable. Sources of sustainable energy include: Sunlight, Wind/Wave, Biomass, and Geothermal. \$9.2 million expected to be available, up to 42 awards anticipated. For more info, contact Gregory Rorrer at gorrer@nsf.gov or go to: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=501026. Refer to Sol# PD-12-7644. (Grants.gov 6/8/11)
- Environmental Sustainability. This program supports engineering research with the goal of promoting sustainable engineered systems that support human well-being and that are also compatible with sustaining natural systems. \$5.4 million expected to be available, up to 45 awards anticipated. For more info, contact Bruce Hamilton at bhamilto@nsf.gov or go to: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=501027. Refer to Sol# PD-12-7643. (Grants.gov 6/8/11)



Events

New This Week

Sedimentary Basins Geothermal Workshop, National Science Foundation, Salt Lake City, UT (November 7–9)

Cosponsored by GEA: the "Tracking an Energy Elephant: Science and Engineering Challenges for Unlocking the Geothermal Potential of Sedimentary Basins" NSF-sponsored workshop will be held November 7–9 in Salt Lake City, Utah. Visit www.SedHeat.org or contact Devri: DevriRoubidoux@boisestate.edu.

The goal of this workshop is to focus on an under-studied portion of the renewable energy portfolio - the geothermal energy of sedimentary basins. The workshop will provide a road map for how NSF's community, through fundamental research, facilities development, data sharing and cyberinfrastructure, and education, can help make the vast geothermal potential of sedimentary basins a significant part of the nation's renewable energy portfolio.

The ability to translate that potential into productive use lies in the application of basic science and engineering to overcome challenges that currently restrain the utilization of these complex systems for electrical base load. Effective use also lies in reducing the economic risk of geothermal exploration and development which inhibits attracting financial investors to this energy sector. In addition, it is also important to provide federal and state decision makers and agencies with the information they require to make sound decisions about geothermal energy. Thus, the long-term vision is integrate NSF-sponsored research, education and cyberinfrastructure to build a partnership among researchers, industry, and state and federal agencies to insure that geothermal energy can meet its potential as a major and sustainable contributor to our nation's energy grid. This workshop is a step toward that goal.

13th Oregon Geothermal Working Group meeting, Klamath Falls, OR (September 15)

The 13th Oregon Geothermal Working Group meeting is planned for September 15, 2011, 8:30 AM - 2:30 PM, at the Oregon Institute of Technology (OIT): Mt. Mazama Room, College Union, Klamath Falls, OR 97601.

Details and the agenda are available at: <http://www.oregon.gov/ENERGY/RENEW/Geothermal/OGWG-Meetings.shtml>. Preregistration is encouraged — please register by September 5. Email linda.ross@state.or.us with the following: name, organization, address, e-mail address and phone number.

Geothermal Power Plant Tours at The Geysers, Calpine Corp. (Sept–Nov)

Calpine is offering free tours of a geothermal power plant at The Geysers. Reservations are required and can be made by going to www.geysers.com. Three tours remain this year:



- Saturday, September 10, Cloverdale Street Celebration, 9 a.m. – 1 p.m., Calpine Sponsoring a Booth at The Street Celebration and Free Guided Tours to The Geysers
- Saturday, October 1, Calpine Visitors Center, Middletown CA, Calpine's Community Tour Event, 9 a.m. – 1 p.m., Calpine Offering Free Bus Tours to The Geysers and Geothermal Presentations at Calpine's Visitors Center
- Friday, November 4, Calpine Visitors Center, Middletown CA, Calpine's Geothermal Education Day, 9 a.m. – 1 p.m., Calpine Hosting Free Geothermal Presentations and Guided Tours of The Geysers at Calpine's Visitors Center



GEA and GEA-Sponsored Events

Geothermal Energy Expo® and GRC Annual Meeting 2011, San Diego, CA (October 23–26)

The GEA Geothermal Energy Expo is the world's largest gathering of vendors providing support for geothermal resource exploration, characterization, development, production and management. It provides a unique opportunity for exhibitors to showcase their projects, equipment, services and state of the art technology to the geothermal community.

“The 2011 Expo is certain to be the largest-ever gathering of the geothermal community,” said GEA Marketing and Events Director Kathy Kent. “Each year the growing geothermal industry comes together for this event and it has become the most vital gathering for companies and leaders developing geothermal resources around the world.” The 2010 Expo in Sacramento featured more than 2,500 attendees from 42 different states and 13 different countries. The sold-out Expo Hall featured 162 exhibitors coming from 34 different states and 10 different countries. Please contact Kathy Kent, Kathy@geo-energy.org for information, registration, sponsorship opportunities, etc.

Sponsorship Opportunities Available for GEA Events

Your company has the opportunity for high visibility at GEA's events. In addition to providing the financial support needed for GEA to undertake successful events, GEA events feature media availabilities with sponsors which garner extensive coverage in mainstream press outlets. Sponsorship details are posted online: <http://www.geo-energy.org/images/GEA2011SponsorshipOpps9.pdf>.



Renewable Energy World North America Conference and Expo, Long Beach, CA (February 14–16, 2012)

The 2012 Renewable Energy World North America Conference and Expo event will take place February 14-16 in Long Beach, California — please save the date! GEA is on the planning committee and looks forward to highlighting geothermal energy at the event. If you have attended this in the past and would like to discuss next year's event or offer suggestions for the planning committee please contact Leslie Blodgett at GEA, leslie@geo-energy.org.

Other Events

Geothermal Operations and Plant Optimization Conference, San Jose, California (September 15–16)

The conference will feature keynote presentations from Alterra US and Iceland, Ram Power, Pacific Gas and Electric and the Geothermal Program Office - US Navy; Exclusive power plant maintenance and reservoir management workshop; The latest solutions from PowerChemTech, GE Global Research and Baker Hughes; and Technology updates from Potter Drilling, Veizades & Associates and Global Power Solutions. To register - visit www.geothermalinsider.com/operations or phone US toll free: 1 800 814 3459 ext 7565

RETECH 2011, The Renewable Energy Technology Conference & Exhibition, Washington DC (September 20–22)

This year, RETECH will be held at the Walter E. Washington Convention Center in Washington DC. For information and to register, visit <http://www.retech2011.com>.

XIX Annual Congress of the Mexican Geothermal Association (September 22–23)

The XIX Annual Congress of the Mexican Geothermal Association (AGM) will be held in Los Humeros, Pue., Mexico, on 22-23 September 2011. Visit <http://www.geotermia.org.mx>.

CanGEA's 4th Annual Conference and Investment Forum, Toronto, ON (September 14-15)

The event will showcase Canadian development, activities of Canadian and international companies, and plug in a comprehensive finance and investment element as part of its Investment Forum. The event also features two workshops on geothermal energy and the Canadian Geothermal Code for Public Reporting on September 13, 2011. Details about the event and workshops can be found at: www.cangeaevents.ca/toronto



U.S.-Mexico Renewable Energy and Energy Efficiency Policy Roundtable, U.S. DOC, Mexico City, Mexico (September 26–27)

The Government of Mexico has set an ambitious goal of 15% renewable energy production by 2020; this is coupled with a significant interest in energy efficiency improvements. To accomplish these goals, significant investment over the next decade is needed – providing export opportunities for U.S. companies.

Participants in the U.S.-Mexico Renewable Energy and Energy Efficiency Policy Roundtable will:

- Accompany a senior-level Department of Commerce official to meetings with the Government of Mexico on renewable energy and energy efficiency policy;
- Receive an invitation to an Ambassador's reception to network with Mexican officials and companies;
- Participate in a closed-door U.S.-Mexico Roundtable on Renewable Energy and Energy Efficiency Policy;
- Be invited to showcase products or services at the Green Expo's technical seminar; and
- Receive in-depth market information from the International Trade Administration on opportunities in the Mexican RE&EE market.

Cost is \$500; Participants are responsible for making their own travel arrangements. **Deadline for registration is August 15.** To register for the policy roundtable email: ryan.mulholland@trade.gov or aliza.totayo@trade.gov.

First UK Geothermal Symposium, London, UK (September 27)

Where: The Institute of Directors, 116 Pall Mall, London SW1, on Tuesday 27 September 2011, 3.00pm–7.45pm

Contact: 08456 435 208 / assistant@egs-energy.com (spaces are limited)

Details: www.egs-energy.com

The first UK Geothermal Symposium, "Engineered Geothermal System Energy – in the UK and a Global Perspective" is taking place in London/ UK, September 27, 2011. Geothermal energy could provide at least 10% of UK electricity demand. Government support is needed through ROCs and RHI and a commitment to geothermal licensing. Agenda will be followed by Networking, Drinks and Canapés.

Soultz Geothermal Conference, Soultz-sous-Forets, France (October 5-6)

The first Soultz Geothermal Conference is scheduled for October 5-6, 2011. The conference will give an overview of the geothermal activity in the Upper Rhine Valley and will focus on various technical and scientific challenges. The status of those geothermal projects will be presented in terms of design, concept, exploration, drilling, exploitation, monitoring, field testing, laboratory experiments and various modeling. Scope of the conference and all the details are presented at: www.geothermie-soultz.fr



Public Meeting on Geysers EGS Project, US DOE and Calpine Corp., Middletown, CA (November 4)

The Department of Energy and Calpine Corp. plan to hold public meetings on the EGS demonstration projects underway at the Geysers. The venture will present progress reports at 2 p.m. Friday, Nov. 4. The meeting will be held at The Calpine Geothermal Visitors Center, 15500 Central Park Road, Middletown. Phone 707-987-4270. For more information on the program, visit www.geothermal.energy.gov.

CanGEA's Annual Geothermal Power Forum, Calgary, AB (November 4)

CanGEA takes part in the upcoming Global Clean Energy Congress in Calgary November 1-3, 2011 (<http://globalcleanenergycongress.com>) through a geothermal panel, and will hold its Annual Power Forum in the city on November 4, 2011. Details at: www.cangeaevents.ca/calgary

Turkey Renewable Energy and Energy Efficiency Trade Mission, U.S. DOC, Ankara-Istanbul-Izmir (December 5–9)

Turkey's renewable energy investments will exceed US \$20 billion during the next 5 years. The country ranks Number 2 geothermal energy development potential in Europe and 5th in the world. A new Renewable Energy Law passed on December 12, 2010 increasing guaranteed prices for renewable energy resources, and additional incentives are in place.

Participants in this Trade Mission will gain:

- A senior U.S. Department of Commerce executive will lead the mission and facilitate valuable introductions to key Turkish energy industry decision-makers;
- A U.S. Export-Import Bank representative will travel with the delegation in all three cities and advise the participants on trade finance solutions;
- 10-15 pre-scheduled meetings with potential partners, distributors, end users, or local industry contacts;
- Meetings with key government decision makers and private sector firms;
- Pre-travel webinars on subjects ranging from industry briefings to business practices in Turkey;
- Meetings with CS Turkey's energy specialists in Ankara, Istanbul and Izmir, Turkey;
- Transportation to all mission-organized meetings inside Turkey (all air transportation within Turkey is the responsibility of the mission participant);
- The Trade Mission visit will provide visibility for participating American firms at networking receptions at the U.S. Ambassador's residence and U.S. Embassy press releases

Who should participate?: U.S. renewable energy equipment and systems manufacturers, RE project developers, engineering firms, energy efficiency systems and equipment suppliers, project finance companies, and any other RE & EE companies. Cost for small and medium size firms: \$3,285; large companies: \$4,055. To apply, go to: <http://export.gov/california/kern/trademissions/>.

**Contact:**

Glen Roberts, Director, Bakersfield & Fresno U.S. Export Assistance Centers

2100 Chester Ave., Ste. 110, Bakersfield, CA 93301

Tel: 661 637-0136, Glen.Roberts@trade.gov, www.buyusa.gov/kern

Serdar Cetinkaya, Renewable Energy Specialist, American Embassy - Ankara, Turkey

Dir. Tel. +90-312-457-7203, Cell: +90-532-311-6885, Serdar.Cetinkaya@trade.gov

GEOTHERMAL ENERGY WEEKLY

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

Copyright © 2011 Geothermal Energy Association

209 Pennsylvania Avenue SE, Washington, D.C. 20003

Phone 202-454-5261 Fax 202-454-5265

leslie@geo-energy.org

