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National News

Interior Program Encourages Greater Development Of Geothermal Energy on Federal Lands

WASHINGTON – Assistant Secretary of the Interior C. Stephen Allred today unveiled the Department’s latest initiative to promote greater use of renewable energy, announcing new incentives to increase the development of geothermal resources on federal lands.

“Secretary Kempthorne is committed to developing alternative energy, such as geothermal, wind, and solar,” Allred said. “At his confirmation hearing, the Secretary emphasized the importance the President and Congress placed on renewable sources and pledged to develop their great potential to help increase and diversify our Nation’s energy supply while sustaining clean air and conserving and protecting other natural resources.”

The new regulations on geothermal energy production on public lands expand Interior’s efforts to encourage environmentally responsible development of renewable energy resources while ensuring a fair return to the United States, Allred said.

The regulations, which will be published in tomorrow’s Federal Register, require more competitive leasing, offer simplified royalty calculations and share \$4 million per year in current royalties with counties where production occurs. They were drafted and published by the Bureau of Land Management and the Minerals Management Service -- agencies within the Department.

Geothermal resources, such as steam and hot water, are used directly to heat buildings and in greenhouses and aquaculture, and indirectly to generate electric power. This energy accounts for 17 percent of the electricity generated from renewable sources in the United States. About half of the nation’s geothermal energy production occurs on federal land, much of it in California and Nevada, and 90 percent of the potential resources are located on public lands as well. Other states with geothermal activity include Oregon, Utah, Idaho and New Mexico.

The new rules require competitive leasing for geothermal development rights on nearly all federal lands designated for this type of development. If no bids are received, these resources would be available for leasing on a non-competitive basis for two-year periods.

The Bureau of Land Management currently administers about 423 geothermal leases; 55 of those are producing geothermal energy, including 34 power plants. The bureau has been expediting the application process for geothermal leases, issuing almost 300 leases since 2001, compared to 20 leases from 1996-2001.

The revamped Minerals Management Service’s regulations offer an easy-to-use fee schedule (in lieu of royalties) for the direct use of geothermal resources that provides incentives to encourage the development and expansion of this alternative energy source. The MMS rules also simplify the royalty calculations for electrical generation leases by basing royalties on a percentage of gross proceeds from the sale of electricity. This would reduce industry’s administrative costs to comply.

The two sets of rules, which were proposed last July for public comment, were written in response to the Energy Policy Act of 2005, which mandated comprehensive changes to leasing and royalty policies to encourage geothermal energy use without imposing additional administrative burdens on industry or government agencies.

The law mandates that 25 percent of the royalties from geothermal production be paid to the counties where the production occurs, increasing those local governments' revenues initially by \$4 million a year. MMS began making direct payments to counties shortly after the law was signed.

Half of the royalties are shared with state governments, and the remaining 25 percent go to the U.S. Treasury. Previously, geothermal royalties were divided equally between federal and state governments. Interior is currently able to use these funds to implement the geothermal provisions of the Energy Policy Act for a period of five years.

Geothermal leasing is permitted on Interior and other federal lands that are designated for this type of development, but not on restricted public lands, such as national parks, wilderness areas, recreation areas and other protected lands.

The final MMS rule can be accessed via the web at <http://www.mrm.mms.gov>.
The final BLM rule is available online at <http://www.blm.gov>.

GEA Executive Director Answers Question about MIT Report for Monthly Column

A recent Renewable Energy Access Ask the Experts column featured a question about the viability of EGS systems, following the recent publicity of the MIT report.

Karl Gawell, GEA's Executive Director, responded, in part:

"The MIT report suggests that 100,000 megawatts (MW) of electrical generation capacity could be met through EGS by 2050 with a modest investment in Research & Development (R&D). The group that performed the study is highly reputable, with scientists contributing from the European Union and Canada.

...As the MIT report points out, geothermal resource development is a continuum. By using EGS techniques to expand production from the hydrothermal resource base, we can help meet current energy needs while developing technology for the future. U.S. demonstrations of EGS technology were underway at sites in California and Nevada, near existing geothermal fields. But recent cutbacks in federal research funding have led to the cancellation of these projects.

While EGS potential is significant, the U.S. has unfortunately not done enough to develop the technology. According to Tester's Congressional testimony, "the geothermal option for the United States has been largely ignored."

...So how can the U.S. become a leader in EGS development? First, the White House should reinstate funding for the Department of Energy's Geothermal Technologies program, which has been zeroed out for the second year in a row.

Second, the program should be funded at the level needed to advance geothermal technology development. According to the MIT study, a modest investment in EGS over fifteen years -- \$800 million to \$1 billion -- would be sufficient to develop EGS potential. That's roughly what the Bush Administration proposes to spend on fusion energy research in just two years, or less than one-half of the expected cost of one next generation nuclear power plant, as estimated by another MIT study.

EGS offers the chance to extend our use of geothermal resources to new geographic areas, including most of the U.S. It also has the potential to expand geothermal energy production in places where conventional resources already exist. For example, one study by the University of Utah's Energy and Geosciences

Institute indicated that an area in Southern California roughly the size of one oil field could produce all of the electricity needed for the state using EGS technology! *To view the complete answer, please visit <http://www.renewableenergyaccess.com/rea/news/ate/story?id=48330>.*

Greenpeace Founder Prefers Geothermal, Nuclear and Hydro power

People must choose, and advocate for, the right means of making electricity in order for the economics to work, said Patrick Moore, co-founder of Greenpeace, and now chairman and chief scientist of Greenspirit, an environmental consulting group. Moore recently spoke at an "Environmental Energy Solutions" forum sponsored by the Worcester Regional Chamber of Commerce and the Massachusetts Affordable Reliable Electricity Alliance. Moore said \$20,000 invested in solar panels produces about \$100 worth of energy. On the other hand, \$20,000 invested in a ground source heat pump – known as geothermal energy – produces about \$1,300 worth of energy, Moore said. *To view the complete article, please visit http://wbjournal.com/j/index.php?option=com_content&task=view&id=1630&Itemid=142.*

Renewable News

Fifty Senators Call on Bingaman and Domenici to Pass Renewable Standard

A bipartisan group of fifty U.S. Senators sent a letter recently to Energy and Natural Resources Chair Jeff Bingaman and Ranking Member Pete Domenici calling for the inclusion of a strong renewable electricity standard in energy legislation reported out of the Committee. Renewable electricity standards (also known as renewable portfolio standards or RPS) have been enacted in more than 20 states. These policies require that utilities generate a certain percentage of their electricity from renewable sources. Such a standard has been passed by the U.S. Senate three times, in H.R. 4 in the 107th Congress, and in H.R. 6 in both the 108th and 109th Congresses. The Senators' letter notes that enactment of a strong RPS would provide several very real benefits including fuel diversity and a reduction in U.S. dependence on natural gas. According to studies by the Energy Information Agency, a Renewable Electricity Standard would work to reduce natural gas costs for both homeowners and large energy users like auto plants and steel mills. The letter goes on to point out the environmental benefits of increasing the market share for renewables including a reduction of nitrogen oxide, sulfur dioxide, mercury and greenhouse gas emissions from the utility sector. *To view the letter, please visit http://www.uspirg.org/html/50_senators_letter_4-30-07.pdf.*

Energy Leaders Call For Steady, Long-Term Commitments to Renewable Resources

If renewable energy is to reach its full potential, America needs coordinated, sustained federal and state policies that expand renewable energy markets, promote and deploy new technology, and encourage renewable energy use in all critical market sectors, according to a report issued recently by organizations leading the move to wider utilization of renewable resources in the U.S. Coordinated by the American Council On Renewable Energy (ACORE) the organizations projected how their industries can meet the demand for cleaner energy and fuels. Those projections include supplying 635 gigawatts of new electric generating capacity by 2025 and supplanting as much as 40% of U.S. petroleum products by 2030.

Said Karl Gawell, Executive Director, Geothermal Energy Association: "The ACORE report demonstrates that renewable technologies have the potential to support a fundamental transformation of our energy system. America can make the transition to a sustainable energy future through greater efficiency and expanded use of domestic, renewable energy resources."

Climate Change News

Climate Panel Reaches Consensus on the Need to Reduce Harmful Emissions

Delegates from 120 countries approved the first roadmap for stemming greenhouse gas emissions Friday. The report, released by Working Group III of the IPCC's Fourth Assessment Report, is a summary for policymakers of a study by a U.N. network of 2,000 scientists. The report says the world has to make significant cuts in greenhouse gas emissions through increasing the energy efficiency of buildings and vehicles, shifting from fossil fuels to renewable fuels, and reforming both the forestry and farming sectors. IPCC chair Rajendra Pachauri said the report was "stunning."

"If you want to stabilize around 450ppm, that means in a decade or two you have to start reducing emissions far below the current level," said Dr Pachauri. "So in other words, we have a very short window for turning around the trend we have in rising greenhouse gas emissions. We don't have the luxury of time." Under the most stringent scenario, the report said the world must stabilize the amount of greenhouse gases in the atmosphere by 2015—eight years from now—at 445 parts per million to keep global temperatures from rising more than 3.6 degrees over preindustrial levels.

As reported by the Washington Post, the United States was pleased that the report "highlights the importance of a portfolio of clean energy technologies consistent with our approach," said the head of the U.S. delegation, Harlan Watson. But James Connaughton, chairman of the White House Council on Environmental Quality, raised concerns about reaching the lowest emission targets proposed in the report, saying "it would cause a global recession."

For many delegates, the strongest message was that reaching the lowest targets could be done at less than 3 percent of the global gross domestic product by 2030. "I would say it (the GDP estimates) looks like a reasonable risk to take, compared to the impact of projected climate change," said Jayant Sathaye, a scientist at the Lawrence Berkeley National Laboratory in California. *Reported by EESI. For more information, please visit <http://www.washingtonpost.com/wp-dyn/content/article/2007/05/04/AR2007050400304.html>.*

Arctic Ice May Melt 30 Years Sooner

The Arctic icecap is melting much faster than expected and is about 30 years ahead of predictions made by the Intergovernmental Panel on Climate Change. This means the ocean at the top of the world could be free or nearly free of summer ice by 2020, three decades sooner than the global panel's gloomiest forecast of 2050, US ice expert Ted Scambos said. No ice on the Arctic Ocean during summer would be a major spur to global warming, said Mr Scambos, a glaciologist at the National Snow and Ice Centre in Colorado. "Right now ... the Arctic helps keep the Earth cool," Mr Scambos said on Monday. "Without that Arctic ice, or with much less of it, the Earth will warm much faster." That is because the ice reflects light and heat; when it is gone, the much darker land or sea will absorb more light and heat, making it more difficult for the planet to cool down, even in winter, he said. *To view the complete article, please visit <http://www.theage.com.au/news/world/arctic-ice-may-melt-30-years-sooner/2007/05/02/117788225123.html>.*

Rep. Honda Global Warming Amendment Adopted

On May 2, the House of Representatives adopted an amendment offered by Rep. Mike Honda (D-CA) to improve global warming and climate science education. The National Science Foundation (NSF) Authorization Act of 2007 (H.R. 1867) is the first direct vote on global warming in the House of Representatives, and will likely serve as a bellwether for future policy development on the issue.

The amendment will allow the National Science Foundation to support activities to develop formal and informal educational materials to improve the understanding of global warming and encourage broad public efforts to reduce the threat posed by climate change. These materials will include a K-12 curriculum, exhibits, and audiovisual materials. The amendment was adopted by a 252-165 vote, with 27 Republicans joining Democrats. The Honda Amendment was included in the final NSF bill, which passed the House by an overwhelming majority: 399-17. *To view the press release, please visit http://www.house.gov/apps/list/press/ca15_honda/globalwarming.html.*

Dingell, Boucher Release Industry, Environmental Views on Prospective Climate Change Legislation

Reps. John D. Dingell (D-MI), Chairman of the Committee on Energy and Commerce, and Rick Boucher (D-VA), Chairman of the Subcommittee on Energy and Air Quality, made public the responses of more than 70 industry groups, non-governmental organizations and labor unions to a letter soliciting recommendations on prospective climate change legislation. Leaders from the energy industry and environmental community responded to questions focusing on the ramifications of greenhouse gas emissions and cap-and-trade policy. This outreach effort is part of the Committee's ongoing examination of climate change. The Committee has conducted 11 climate change hearings featuring testimony from more than 50 witnesses, including former Vice-President Al Gore. *To view the responses and the complete press release, please visit http://energycommerce.house.gov/Press_110/110nr26.shtml.*

Kerry Plan Would Ban All New Coal Plants That Use Obsolete Technology

Senator John Kerry (D-Mass.) recently introduced the Clean Coal Act of 2007, which prohibits the construction of all new coal fired power plants in the United States unless they use state-of-the-art emissions reduction technology. The new technology limits the release of carbon emissions from power plants, which is one of the leading causes of global warming. Kerry's bill will mandate that all new coal plants - including the approximately 150 new plants proposed throughout the United States in the next decade - use technologies that significantly reduce emissions of air pollutants and greenhouse gases that contribute to global warming. *To view the press release, please visit <http://kerry.senate.gov/v3/cfm/record.cfm?id=273143>.*

China Looks to End Polluters' Tax Breaks, Other Perks to Combat Global Warming

Premier Wen Jiabao pledged to help clean China's air and water and combat global warming by phasing out tax breaks and discounts on land and electricity for highly polluting industries. "More work on energy conservation and emissions reduction is urgently required to deal with global climate change," Wen said. "Our country is a major coal producer and consumer, and reducing polluting emissions is a responsibility we should bear." China accounted for 15 percent of the world's greenhouse gases in 2000, second only to the United States' 21 percent, but the fast-growing Chinese economy is expected to surpass the U.S. in emissions in the next couple of years. In his speech, Wen took aim at local governments that routinely offer free or cut-rate real estate and utilities to developers looking to set up job-creating businesses, such as steel mills or chemical plants. The premier said the government would "clean up and rectify preferential policies that give land and electricity discounts or tax breaks to energy-intensive or highly polluting industries."

Wen also said China should work harder to create a system whereby polluters pay for environmental damage they cause, and enterprises investing in clean energy are rewarded. He also called for continued price reforms on natural gas, heating fuel and water to encourage energy conservation, without giving a timeframe for price increases. *To view the complete article, please visit <http://www.nwfdailynews.com/article/3512>.*

Representative Stark Introduces A Carbon Tax

U.S. Representative Pete Stark (D-CA), a senior member of the Committee on Ways and Means with jurisdiction over U.S. tax policy, introduced the Save Our Climate Act. This legislation would impose a tax on carbon-based fossil fuels to slow climate change. An initial tax of \$10 per ton of carbon content will be assessed on coal, petroleum and natural gas when these fossil fuels are initially removed from the ground or imported into the United States. The tax will increase by \$10 each year, freezing when a mandated report by the Internal Revenue Service and the Department of Energy determines that carbon dioxide emissions have decreased by 80 percent from 1990 levels. *To view the press release, please visit http://www.house.gov/stark/news/110th/pressreleases/20070426_carbontax.htm.*

President Bush and European Union Agree Climate Change is Problem

On April 30, President Bush and visiting European leaders agreed to define global warming as a serious problem requiring "urgent" action, but were deadlocked on what concrete remedies to apply. In a joint statement issued by the White House the leaders called for "urgent, sustained, global action" to battle global warming. The joint statement said "we are determined to ensure access to affordable, clean, and secure sources of energy to underpin sustainable global economic growth and to protect our environment [...] Tackling the challenge of energy security will also require unprecedented international cooperation."

President Bush said "one, we recognize that we have a problem with greenhouse gases; two, we recognize we have a problem with a dependence on oil; three, we recognize that we can use technologies to help solve this problem; and, four, we recognize we have an obligation to work together to promote the technologies necessary to solve the problem, and encourage the developing world to use those technologies."

The leaders said they had set up a United States-European Union conference on alternative-fuel standards to meet in the United States next year, and plan to take up climate change at the June G8 summit in Germany. *Reported by EESI. For more information, please visit <http://www.huliq.com/20564/bush-and-eu-agree-climate-change-is-problem>.*

State News

Hawaii: Legislator Discusses Renewable and Geothermal Potential

In a recent article about Hawaii's electricity future and current needs, Fred Hemmings, a Hawaiian Legislator, discussed the need for renewable energy. He wrote:

"Energy independence is vital environmentally, geopolitically and economically. Unfortunately, Hawaii relies on imported fossil fuels to meet approximately 92 percent of our energy needs -- a figure greater than that of any other state in the Union. This is a dangerous and needless reality. Hawaii should be one of the most self-sufficient states in the nation. Our state has been blessed with an abundance of renewable wind, solar, ocean and geothermal energy resources. We should be pioneering the shift away from energy dependence. We are the ones who ought to be spearheading the implementation of cutting-edge initiatives to avert future crises and alleviate current economic realities tied to disruptions in oil supply. Through the use of renewable energies, especially geothermal energy, Hawaii can produce hydrogen and become one of the first states to run its ground transportation propelled primarily by hydrogen fuel cells. This is an attainable goal -- evidenced by Iceland's successful utilization of hydrogen as an integral part of its national plan to reach energy independence by 2050." *To view the complete editorial, please visit <http://starbulletin.com/2007/05/06/editorial/commentary.html>.*

International News

Australia: Green Party Calls for Renewables Like Geothermal Rather than Nuclear

A recent Green Party press release begins, "Renewable energy sources, such as wind, solar, hydro, geothermal and potentially tidal and wave, offer a safe and climate friendly energy future to New Zealand." The release continues, "Nuclear power comes in large units that would destabilize the electricity grid. A 1000MW nuclear power plant near Auckland would need 1000MW of standby power ready to go for when it went offline, as the often do. Geothermal generation units can be built in the size that suits our grid. And nuclear power is expensive and requires massive government subsidy. Renewable energy generation is cheap, here now, and is not subsidized. We can have a carbon free electricity generating sector by investing in renewable energy without going down the nuclear path." *To view the press release, please visit <http://starbulletin.com/2007/05/06/editorial/commentary.html>.*

Australia: Climate Change Fund Established, Geothermal Energy Promoted as Option for Reducing Climate Change Emissions

A \$40 million fund to help fight climate change was a centerpiece of the Australian Government's Budget. Premier Alan Carpenter announced the establishment of a low-emissions energy development fund, to attract investment in renewable energy source projects. The Premier believes geothermal sources in particular have the potential to provide WA with clean energy that could reduce dependence on fossil fuels. The \$36.5 million low-emissions energy development fund will provide research grants for companies looking at renewable-energy technologies such as geothermal, solar, wind, tidal and wave and clean coal. Mr Carpenter's climate change statement will commit to reducing greenhouse gas emissions by 60 per cent in the next 40 years. But it is understood it will not mention nuclear power as a possible energy source of the future, with the Mr Carpenter arguing that geothermal and other renewable energy sources are far better options. *To view the complete article, please visit <http://www.news.com.au/perthnow/story/0,21598,21678224-2761,00.html>.*

Australia: New Drilling Rig to be Used in SA Geothermal Power Station

A drilling rig worth \$32 million will arrive in South Australia in June to be used in Australia's first commercial geothermal power station, a recent article reported. The rig has been bought by Brisbane firm Geodynamics. Chief executive Adrian Williams says the rig can drill to depths down to six kilometers. Mr Williams says it will be taken to a site in the state's far north-east, where it should be producing 500 megawatts of power by 2010. "The well that we're about to drill, Habanero 3, that will be the first commercial scale hot rock well in Australia," he said. "That will be drilled to about 4,500 meters - that will make it the deepest onshore well ever drilled in this country." *To view the complete article, please visit <http://www.abc.net.au/news/newsitems/200705/s1910882.htm>.*

Canada: Geothermal Viable Option But Receives Little Awareness

A recent Op-Ed piece discusses the important contribution geothermal energy could make to the country's electricity needs: "Replacing [natural gas] with clean, emission-free heat under the Earth's crust, a completely feasible option according to a recent research report out of the Massachusetts Institute of Technology, would go an enormous way toward achieving a halt, and eventually a decline, in Canada's carbon emissions. The problem is, nobody is making noise about it. ...Not even environmental groups. When the Harper government released its much-anticipated "green plan" in late April, there was no mention of geothermal in the oil sands. Gary Lunn, federal minister of Natural Resources Canada, has never publicly touted the option. ...How, in good conscience, can our political leaders be talking about nuclear or CCS without giving equal consideration to a less complex, and possibly more affordable, "clean" option like geothermal?" *To view the complete article, please visit <http://www.thestar.com/article/211080>.*

In related news, The Canadian government has published its strategy on climate change, which acknowledges that the country will not meet its Kyoto Protocol commitment. Its new target is to cut emissions by 20% between now and 2020. Environment groups have labeled the strategy a sham, and say that when combined with industrial policies, the country's emissions could rise. Canada is the first nation to publicly abandon its Kyoto target without leaving the protocol. *For more information, please visit <http://news.bbc.co.uk/2/hi/science/nature/6600585.stm>.*

Guatemala: Study of the Tecuamburro Geothermal Field

Guatemala's state power company Inde recently launched an international bidding process to carry out a geophysical exploratory study of the Tecuamburro geothermal field. The tender aims to advance development of the country's geothermal potential since Guatemala's only geothermal production comes from US firm Ormat's operations in the country. BNamericas, a news outlet, spoke with Hugo Fernando Navas, head of Inde's geothermal development division, to find out what role this generation source will play in the country's energy plans and to learn about regulatory and legislative expectations.

During a QandA, Navas indicated that "Inde currently represents 35% of the country's entire generation and its goal right now with the ministry of energy and mines is to outline strategies that will increase geothermal power by about 480MW. So the country's strategy is to continue growing by building thermal plants that use renewable energy rather than burn fuel. Geothermal power is the most appropriate, the most affordable and the best option in every sense because you can get generation prices as low as US\$15/MWh." He went on, "There have been 12 here in Guatemala but only two have been developed: Zunil and Amatitlan. So the idea is to prepare three more fields for development right away at top speed so we can have around 100-150MW/h in the next 4-5 years." In terms of potential, Navas said, "There is potential for 1GW but a more realistic figure is 480MW."

Navas concluded, "there are eight institutions or countries that have knocked on Inde's door to support and participate in geothermal development: Enel of Italy; Ormat of Israel; Iberdrola of Spain; Gesur of Guatemala; Kepco and WestJEC of Japan; Turkey; and Russia. There are also financial organizations interested in supporting development, such as the IDB, World Bank, HSBC and Cabei. *To view the complete article, please visit http://www.google.com/search?hl=en&rls=com.microsoft%3A*%3AIE-SearchBox&rlz=117RNWN&q=Inde++guatemala.*

India: Company Plans to Enter Geothermal Sector

India's National Thermal Power Corp. plans to set up a 30-50 megawatt geothermal power plant as part of diversification plans. NTPC is looking for a suitable location to build the new plant, which would be its first geothermal power facility. The company identified three locations in the Himalayan states of Uttarakhand, Himachal Pradesh and Ladakh, which have the potential to produce power through heat generated from within the Earth, The Business Line newspaper reported Friday. India does not have any commercial geothermal-based power plants. An NTPC spokesman said private geothermal plants could be small and in the range of 50-100 MW. The spokesman said the move to diversify was aimed at reducing dependency on fossil fuel and adding cleaner sources to its fuel mix. The proposed geothermal project is in its initial stages while the company works out financial and other considerations. *To view the press release, please visit http://www.upi.com/Energy/Briefing/2007/05/04/indias_ntpc_to_enter_geothermal_sector/.*

New Zealand: Increasing Greenhouse Gas Emission Highlight Importance of Renewables

Between 2004 and 2005 New Zealand's greenhouse gas emissions rose 2.8%, largely spurred by an increase in fossil fuel generated power sources, such as coal and gas. Dry weather during the period meant hydro lake levels dropped forcing the use of alternative power generators. Climate change minister David Parker says the figures show a need to develop more renewable energy sources "in order to reduce the greenhouse gas emissions that contribute to climate change." Nearly half (49%) Of New Zealand's greenhouse gas

emissions, 43% are produced by the energy sector and 49% are from the agriculture sector. Wind and geothermal power are alternatives already being investigated and in some cases implemented. "Already this year Contact Energy has announced it is putting on hold development of further fossil fuel generation, as it advances \$2 billion of renewables in the form of geothermal and wind generation," says Parker. *To view the complete article, please visit <http://tvnz.co.nz/view/page/411415/1097276>.*

Tasmania: Allegiance to Investigate Geothermal Energy Potential of Western Part of Country

Allegiance Mining NL, through its wholly-owned subsidiary Geothermal Energy Tasmania Pty Ltd, plans investigating the potential of deeply buried granites in western Tasmania to generate geothermal energy. Geothermal Energy Tasmania has applied for a 3,000 sq km Special Exploration License over areas of western Tasmania which it believes may be underlain by hot granitic rocks capable of meeting the necessary criteria for hot rock geothermal energy production. This view is supported by abnormally high thermal gradients experienced in several deep West Coast mining operations which are known to lie above deeply buried granites. Geothermal Energy Tasmania will initially be assessing all available relevant data on the area, and undertaking preliminary studies and surveys to validate the concept and demonstrate the potential for hot rock geothermal power generation. *To view the press release, please visit <http://www.allegiance-mining.com.au/docs/Announcements/2007/2007%2005%2002%20Geothermal%20Announcement.pdf>.*

Notices

Gary Shulman, Geothermal Pioneer, Passes Away After Lengthy Illness

Gary Shulman passed away early Tuesday morning, May 1, 2007, after a lengthy illness. According to his obituary, "Gary, from an early age had looked at the world as one filled with possibilities. His talent for designing new applications for existing machinery led him to his most significant life work, that of developing geothermal power. In 1969, Gary founded Geothermal Power Company, Inc. Using surplus US Navy steam turbines, he re-engineered and modified those turbines to generate power from underground steam reservoirs. Gary became one of the pioneers in geothermal power development. He built a number of successful power plant installations around the world, including the first geothermal power plant in Indonesia. Gary became a recognized expert in this field and later was asked to testify before a congressional committee regarding geothermal development." *To view the complete obituary, please visit <http://www.legacy.com/Star-Gazette/Obituaries.asp?Page=Lifestory&PersonId=87705278>.*

Nominations Sought for Individual "Shaping the Future of the Utility Landscape" (Due May 31)

The Knowledge2007 Utility CIO of the Year award program will recognize a CIO who has demonstrated exceptionally innovative leadership through effective use of technology in support of the strategic initiatives of his/her organization. Nominate a deserving leader who is shaping the future of the utility landscape. Submit your abstract TODAY and help shape the program. Award nominations must be submitted no later than May 31, 2007. Winners will be announced November 14, 2007 at Knowledge2007 in Austin, Texas.

Nominations are being accepted in two award categories

- Large Utilities (those with more than one million customers)
- Small Utilities (those with less than one million customers)

The individual or organization making the nomination may be a peer, superior or subordinate of the nominee and does not have to be a member of the information technology department.

For more information, please visit www.knowledge2007.com.

Energy Institute Accepted Entries for Organizations that Set New Standards of Excellence and Innovation (Deadline June 29)

For the last seven years, the Energy Institute has recognized individuals and organizations in the global energy industry for setting new standards of excellence and innovation. The 8 categories cover a broad range of areas which enables companies and projects of all sizes, across the wide energy spectrum to compete against each other.

The eight categories are:

- Communication sponsored by AMEC
- Community Initiative
- Environment sponsored by Total
- Innovation sponsored by ExxonMobil
- International Platinum sponsored by TNK-BP
- Outstanding Individual Achievement Award sponsored by Norman Broadbent
- Safety sponsored by Shell
- Technology sponsored by BG Group

Full details of all the criteria as well as an entry form are available at www.eiawards.com.

DOE Offices Release Best Practices for Distributed Energy Interconnection Procedures For State Consideration

The U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE) and Office of Electricity Delivery and Energy Reliability (OE) have jointly developed voluntary "best practices" for use by States in implementing interconnection requirements that allow for simple connection of distributed energy technologies to the electric grid. Recognizing that Section 1254 of the Energy Policy Act of 2005 requires each State to consider interconnection procedures and complete its determination by August 8, 2007, EERE and OE offer these "best practices" to assist States in those determinations. *For more information, please visit http://www1.eere.energy.gov/news/progress_alerts/progress_alert.asp?aid=221.*

Requests for Offers/Proposals (RFPs)

Request for Information on Geothermal Co-Production

The DOE Golden Field Office has posted a new Request for Information entitled, "Demonstration of Electric Power Generation Using Geothermal Energy Co-Produced with Oil and/or Gas Wells." Please note that this is a Request for Information (RFI) and not a Funding Opportunity Announcement. DOE is simply seeking information from the geothermal industry and academia regarding the technical feasibility and economic viability of electric power generation using geothermal energy co-produced with oil and/or gas wells and is not accepting applications for financial assistance on this topic at this time. See <https://e-center.doe.gov/iips/faopor.nsf/UNID/50D3734745055A73852572CA006665B1?OpenDocument> for details. Questions regarding the content of this RFI should be submitted through the "Submit question" feature of the DOE Interactive Procurement System (IIPS) at <http://e-center.doe.gov>.

SMUD Renewables RFO (Scheduled to Open in May)

The Sacramento Municipal Utility District (SMUD) announces its intent to release a Request for Offers (RFO) for renewable energy power purchase agreements (PPA) and project ownership options. SMUD will consider RFOs for the following renewables: Wind, geothermal, small hydroelectric, landfill gas, biomass and biodiesel, photovoltaic, solar thermal (with and without natural gas assist), biomass gasification, digester gas, fuel cells using qualifying renewable fuels, qualifying municipal solid waste conversion, ocean wave, ocean thermal, tidal current, and innovative storage coupled with qualifying

intermittent renewables. The RFO is scheduled to open in May 2007. *For more info, contact Marco Lemes at mlemes@smud.org or go to: <http://www.bids.smud.org/>.*

National Science Foundation RFP for the Small Business Innovation Research and Small Business Technology Transfer Programs (Due May 13)

The National Science Foundation requests proposals for the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs. The SBIR/STTR Programs stimulate technological innovation in the private sector by strengthening the role of small business concerns in meeting Federal R&D needs, increasing the commercial application of federally supported research results, and fostering and encouraging participation by socially and economically disadvantaged and women-owned small businesses. Areas of interest include: Emerging Opportunities, Advanced Materials, Chemical Technology, and Manufacturing Innovation, Biotechnology, Electronics and Information technology. \$16.25 million expected to be available, up to 150 awards anticipated. Responses due 6/13/07. For more info, go to: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf07551. Refer to Sol# 07-551. (Grants.gov 3/21/07)

U.S. & China Clean Water and Clean Energy (RFP Opens May 15)

The U.S. Agency for International Development (USAID) announces its intent to request applications for US - China Clean Water and Clean Energy University Partnerships. The purpose of this initiative is to provide technical assistance to China to improve access to water and sanitation services and to increase private sector investment in clean energy. USAID intends to issue one or more awards to U.S. universities in partnership with a Chinese university. The RFP is scheduled to open on or about 5/15/07. *For more info, contact Maria Arenas at marenas@usaid.gov or go to: <http://www.grants.gov/search/search.do?mode=VIEW&oppId=13554>.*

Energy Innovations RFP (Due May 31)

The California Energy Commission requests proposals for the Energy Innovations Small Grant (EISG) Program. EISG provides funding to small businesses, small non-profits, individuals and academic institutions for establishing the feasibility of new energy concepts. Projects must develop innovative and original energy concepts that address a clear market need, provide benefit for CA electricity ratepayers and target one or more areas of interest: Industrial/agriculture/water end-use efficiency; building end-use efficiency; environmentally preferred advanced generation; renewable generation; energy-related environmental research; energy systems integration. Grants for hardware projects requiring physical testing NTE \$95K, modeling projects NTE \$50K. Responses due 5/31/07. *For more info, contact eisgp@energy.state.ca.us or go to: <http://www.energy.ca.gov/contracts/smallgrant/index.html>.*

Update on PG&E Renewable RFO (Submission of Bids Due May 18)

The CPUC is expected to vote on the proposed decision on February 15, 2007. PG&E will file an updated Solicitation Protocol on March 2, 2007. Pending this decision, the tentative schedule for the RFO is as follows:

2007 Renewables RFO Schedule (tentative)

Event	Date
PG&E Issues RFO	March 12
Notice of Intent to Bid Due	March 19
Bidders Conference	Week of March 19th
Deadline for Submission of Bids	May 18
PG&E selects Shortlist	June 29
Execution of final Agreements	Q3-Q4 2007

The key differences between the 2007 RPS Solicitation and the 2006 Solicitation are as follows:

- Updated time of delivery (TOD) factors will be applied.
- The power purchase agreements (PPAs) will include an expanded Dispatch Down Period to ensure inclusion of all situations where curtailment is necessary due to, including but not limited to: California Independent System Operator (CAISO) orders, CAISO System Emergencies, anticipated System Emergencies, CAISO-defined over-generation, forecasts of over-generation, and orders by Participating Transmission Owners.
- Collateral requirements will be reduced during project development.
- Participants whose projects have delivery points that are outside of the CAISO-controlled grid are requested to provide two separate prices: one for delivery onto the CAISO-controlled grid and one for delivery outside the CAISO-controlled grid.
- Terms will be conformed to changes in the RPS statute pursuant to Senate Bill (SB) 107, which became effective on January 1, 2007.
- The two forms of As-Available PPA (one with EIRP and one without) will be combined into one.
- Redundancy in evaluation protocols will be eliminated.

For continued updated information regarding PG&E's 2007 Renewables RFO please save the following link:

http://www.pge.com/suppliers_purchasing/wholesale_electric_supplier_solicitation/renewables2007.html.

Applications for CREBs Sought

IRS Notice 2007-26 solicits applications for the allocation of the available clean renewable energy bond national limitation under Section 54 of the Internal Revenue Code and provides other guidance with respect to the issuance and post-issuance compliance of clean renewable energy bonds. This notice will be published in Internal Revenue Bulletin 2007-14, dated April 2, 2007. *For more information, please visit <http://www.irs.gov/newsroom/article/0,,id=167605,00.html?portlet=2>.*

REEEP Offers 3 Million Euro for Clean Energy Projects in Developing Countries

The Renewable Energy and Energy Efficiency Partnership (REEEP) has launched a call for project proposals to support the development of markets for renewable energy and energy efficiency. The project call is REEEP's largest in its four year history with more than 3 million Euros available for projects in least developed countries and emerging market economies. The project received funding from a consortium comprised of Ireland, Italy, New Zealand, Norway and the United Kingdom. Norway, the new major donor of REEEP, and the United Kingdom will be pooling funds allowing for larger investments into projects. Ireland and Italy will continue their focus on Africa and New Zealand will bring small island states in the Pacific into focus. The REEEP call is an open tender seeking projects from priority countries -- China, India and Brazil and from across the developing world. Based on the experience gained over the last two years with a bottom-up approach to selecting projects, REEEP will be piloting a combination of bottom-up and top-down commissioned strategic projects. *For more information, please visit http://www.greenbiz.com/news/news_third.cfm?NewsID=34695.*

Upcoming Events

SMU Geothermal Conference: "Geothermal Energy Utilization Associated with Oil & Gas Development," June 12-13, 2007, Dallas Texas

In the 1970's and 1980's Oil and Gas companies diversified into geothermal exploration because of the similarities in the industries. Most of these companies left geothermal when the price of oil dropped in the late 1980's or because of failed exploration projects. Today, the Oil and Gas Industry can use a known

producing field and not have high exploration costs to expand their portfolio into geothermal. Plus they benefit from the additional years of experience by the Geothermal Industry. To facilitate this happening, the first ever conference titled Geothermal Energy Generation in Oil and Gas Settings was held on March 13-14, 2006 at Southern Methodist University, Dallas, Texas. *For more information about this event, please contact Maria Richards, SMU Geothermal Lab, mrichard@smu.edu, or 214-768-1975. You can also visit the website at <http://www.smu.edu/geothermal>.*

4th Renewable Energy Finance Forum - Wall Street, June 20-21, New York, NY

REFF Wall Street is designed to be a one-stop-shop for discussion of the complete spectrum of financing opportunities for all renewable energy technologies, and consequently provides a unique forum to meet and network with delegates from all walks of the RE industry, together with high level financiers. The event had over 600 delegates from 18 countries in 2006. *For more information and to register, please visit <http://www.euromoneyenergy.com/default.asp?Page=11&eventid=ECK162&LS=REA&site=energy>.*

10th Annual Sustainable Energy Coalition Expo, June 14, Washington, DC

This year's SEC Expo will feature a variety of renewable energy and energy efficiency technologies. GEA's booth will feature displays from Ormat Technologies and UTC Power, as well as materials from the Geothermal Education Office and GEA. Besides an exhibit portion showcasing the companies and technologies that are developing renewables and efficiencies today, the Expo will also feature panel discussion and presentations on the most important energy topics of the day – global warming, U.S. competitiveness, and renewable/efficiency potential over the next ten years. The event will kickoff with a keynote address by Jon Holdren.

GEA Trade Show/GRC Annual Meeting, September 30-October 3, Reno, Nevada

The GEA 2007 Trade Show will be held at John Ascuaga's Nugget Hotel & Casino in Reno, Nevada, September 30 - October 3, 2007. To see the floor plan, sponsorship opportunities, or register for an exhibit space go to: <http://www.geo-energy.org/tradeShow/invitation.asp>

For more information about the GEA Trade Show contact Daniela Stratulat at 202-454-5263 or email Daniela@geo-energy.org.

The Trade Show is held concurrently with the Geothermal Resources Council's (GRC) Annual Meeting. For information about the GRC Annual Meeting contact GRC at 530-758-2360 or email grclib@geothermal.org.



GEA Update

A newsletter for GEA Members written by Alyssa Kagel and Karl Gawell.

For more information contact GEA at: 209 Pennsylvania Avenue SE, Washington, D.C. 20003. Phone: 202-454-5261; Fax: 202-454-5265; E-mail: research@geo-energy.org