

Geothermal Energy Utilization Associated with Oil and Gas Development

On June 17-18, 2008 Southern Methodist University's Geothermal Laboratory hosted its third annual **Geothermal Energy Utilization Conference**. Over 220 people from around the world attended to learn more about ways to develop geothermal energy in sedimentary basins from moderate temperatures. The attendance of people from industry, manufacturing, financing, investment, government, academia, and even real estate, not only made the conference enjoyable, but very productive. "The broad range of backgrounds fills a very important need in the geothermal industry and shifts us into new areas for development," stated one conference attendee.

During his dynamic talk, headlining speaker **Bernie Karl** of **Chena Hot Springs Resort** in Alaska issued a challenge to SMU to drill a well on campus to start development of geothermal resources at SMU and in Texas. Everyone who attended will remember Bernie Karl handing \$1,000 cash to **David Blackwell**, Director of the **SMU Geothermal Lab**, to start making it happen. This type of showmanship and marketing is what **Victor Liu** of Hunt Energy Enterprises emphasized in his presentation, discussing the importance of marketing and creative packaging of geothermal energy being as necessary as research and development.

Viewing geothermal through a different lens, **Ben Russo**, Director of Development, Contracts, and Regulation for **Cleco Power, L.L.C.**, pointed out that during natural disasters, a small geothermal power plant has the ability to come back online faster than any other type of power plant, making it a perfect fit for niche markets, such as high security locations. These mini power plants are able to serve as a back up source that other alternative and fossil fuel energy sources cannot match.

Although there was much discussion about geothermal developments in the U.S., **Peter Barnett** of **Hot Rock Limited**, and **Ben Norden** of **GeoForschungsZentrum** certainly showed that Australia and Germany were beyond talking about sedimentary basin geothermal projects and were actively drilling into them. It will be important for the U.S. geothermal industry to follow their activity and to learn from both their achievements in technology and governmental support.

This year's focus on technologies was highlighted by **Gulf Coast Green Energy's** on campus demonstration of the **ElectraTherm "Green Machine"**. It used the SMU campus hot and cold water supply lines to represent a geothermal set-up to produce the 50 kW/h of electricity, which gave the attendees a chance to see first hand electricity being generated from heat. The six technologies discussed at the conference show the advancements being made will increase the ability to develop projects at lower temperatures and fluid rates. Along with new technology came a new

methodology by **Karsten Pruess** of **Lawrence Berkeley Laboratory**, with his talk on using CO₂ instead of water as a fluid for increased heat extraction and reduced injection friction. The idea of a power plant being not just carbon neutral, but carbon negative is one to work towards.

Instead of waiting for geothermal power production to come online, **Jason Ryan**, of **RyanGlover L.L.P.**, encouraged attendees to develop five year plans now and to get involved with the government agencies for new regulations. With so much emphasis on renewable energy, state governments are already determining how to incorporate it into the transmission grid. **Susanne Vaughan** of **Austin Energy** also emphasized the importance of geothermal being a player in these discussions today.

The SMU Geothermal Energy Utilization Conference **Gold Sponsors** were **Iceland America Energy • Conoco Phillips • Vulcan Power Company • UTC Power**. The **Silver Sponsors** were **Chena Hot Springs Resort • SECO • SMU COX Executive Education • Roy M. Huffington Department of Earth Sciences**. **Bronze Sponsors** were **ORMAT • Altira Group L.L.C. • 3 W Energy, L.L.C. • U.S. Army ERDC • Deluge, Inc., • Energy America Geothermal L.L.C. • ElectraTherm Inc., • Gulf Coast Green Energy • Linear Power LTD. • Innovative Direct Media**. **Green Sponsors** were **RyanGlover L.L.P. • Geothermal Resources Council • Texas Alliance of Energy Producers**. Conference presentations are available on the SMU website: <http://smu.edu/geothermal/Oil&Gas/Oil&GasPresentations.htm>.