Minutes of the
Seventh Meeting of the Oregon Geothermal Working Group

Bend, OR, November 7, 2006

The workshop was divided in two sessions: 1) How geothermal power development is regulated by federal and state government, and 2) How geothermal energy works and how it can be developed to generate electricity.

The meeting began with introductions from the record high 66 registered attendees. Following that a trio of working group members - Al Waibel, Alex Sifford and Roger Hill - related highlights from the Geothermal Resource Council's and GeoPowering the West annual meetings.

Note: most of the following speakers used power point presentations, which are posted on the same ODOE web page as these Minutes.

Patrick Geehan, the US Department of Interior Bureau of Land Management (BLM) Deputy Oregon State Director for Minerals addressed his agency's role and responsibilities. The BLM leases both fluid and solid minerals on federal lands. Beginning with resource definitions, he explained the agency administration of geothermal leasing, bonds, operation, utilization and royalties. The recently enacted Energy Policy Act of 2005 modified many leasing provisions. One of the best changes in this speaker's opinion is the change to calculating royalties based on gross kWh sales. (Sean Haggerty of the California State BLM office added that the agency was revising royalty rates to conform with the law and also performing a nationwide environmental impact statement.) Patrick ended his talk with an impromptu presentation to the next speaker, Bob Fujimoto for his years of federal service.

The US Department of Agriculture Forest Service responsibilities were presented by Bob Fujimoto, Mineral Leasing Coordinator in the Regional Foresters Office. His presentation covered activities the Forest Service as surface manager approves outright such as surface exploration on unleased land. Bob also addressed activities the Forest Service advises the BLM on such as exploration on Newberry Volcanic National Monument lands and reclamation. This advice many times shows up in conditions to leases and permits.

Curtis Dixon of the US Department of Agriculture briefly discussed federal rural development incentives available through his agency. For more information, please check the USDA web site at www.rurdev.usda.gov/or/rbs.htm

John Lund of the Geo-Heat Center at Oregon Institute of Technology in Klamath Falls outlined his college's ambitious plans to expand geothermal energy use. Proposed projects include power generation, both low- and high-temperature technologies, plus aquaculture and greenhouse direct use applications.

Carel DeWinkel of ODOE covered the state of Oregon Energy Facilities Siting law. Geothermal plants greater than 38.85 MW in size come under state power plant siting law

and administrative rules. The Energy Facilities Siting Council reviews applications based on standards. The Council issues a Site Certificate binding the applicant and all political subdivisions. State agencies issue permits with the Council's conditions. Standards to be met include wildlife habitat, soil protection, land use, protected areas, structural, threatened and endangered species, organizational expertise, retirement of the facility and financial assurance, and public services. One valuable question from the audience in his talk related to an agreement between federal and state agencies covering well inspection and bonding requirements. Such an agreement does indeed exist between BLM and DOGAMI.

Clark Niewendorp, with the Oregon Department of Geology and Mineral Industries discussed his agency beginning to develop a geothermal Geographic Information System covering all known well and spring data in Oregon. The work is just beginning and will continue through June 2007.

Cylvia Hayes, Director of 3EStrategies presented a number of energy challenges and resulting opportunities facing Oregon. The result is her forecast of many opportunities in central Oregon for geothermal and other renewable energy firms.

A "Geothermal Energy 101" talk - what geothermal energy is and how is it used – was presented by Alex Sifford, Sifford Energy Services. He also walked through the general process for developing a geothermal power plant: exploration, leasing, environmental assessment, and permitting.

Doug Perry, President of Davenport Power LLC briefly discussed his firm's Newberry Geothermal Project development efforts following the signing of a power purchase agreement with Pacific Gas & Electric Co. His firm finished exploration activities within the last week.

Brian Fairbank, President of Nevada Geothermal Power provided a current update of his firm's activities in Nevada and Oregon. The Crump Geyser project in Lake County Oregon is the company's second priority exploration prospect. Magnetic and resistivity surveys have been completed. Nevada Geothermal commissioned GeothermEx to estimate reserves. The firm's conclusion was 40 MW of probable and 60 MW of most likely reserves.

Alex Sifford presented a case study of geothermal development in Mammoth Lakes, California. One clear lesson in building a geothermal power plant in an area physically and economically similarly to Deschutes County is to establish an advisory committee before, during and after development. Property taxes to Mono County for the 40 MW (gross) plants exceed $860,000 each year. Royalties to the county are about $39.000.

Dave McClain, McClain and Associates ended the session with a talk on Central Oregon's unique geothermal opportunity. Starting in Latin (fitting for the former Catholic school the meeting was held in) Dave gave his list of top local prospects: Klamath Falls, Newberry and Crump Geyser. He ended by discussing the Confederated Tribes of Warm Springs approach to possible development, a "four legged stool" of providing for the future generations, energy, economy and culture.

Following the official meeting, a reception was held with comments from the local state Representative Chuck Burley. It was an opportunity to speak directly with the presenters and the representatives from geothermal development projects in Oregon.