

MINUTES

HOUSE ENVIRONMENT, ENERGY, & TECHNOLOGY COMMITTEE

DATE: Tuesday, February 10, 2015
TIME: 1:30 P.M.
PLACE: Room EW41
MEMBERS: Chairman Thompson, Vice Chairman Anderst, Representative(s) Raybould, Hartgen, Vander Woude, Nielsen, Anderson, Mendive, Trujillo, Beyeler, Chaney, Nate, Scott, Smith, Rusche, Jordan, Rubel
ABSENT/EXCUSED: Representative(s) Raybould, Hartgen, Vander Woude
GUESTS: John Chatburn, Scott Pugrud, Office of Energy Resources (OER); Ken Miller, Snake River Alliance

Chairman Thompson called the meeting to order at 1:30 p.m.

Dr. Robert Podgorney Director for Snake River Geothermal Consortium, spoke to the committee to raise awareness to the huge potential for geothermal energy in Idaho and of a research proposal in the Idaho National Laboratory. Dr. Podgorney explained why geothermal energy is so important it is renewable and clean. It is available twenty-four hours a day, seven days a week as an abundant source with large potential for expansion. The inexhaustible supply of heat from the earth's core has nearly zero GHG emissions and no intermittence issues like solar or wind. A conventional (hydrothermal) system is made up of three general components; a heat source, a reservoir, and a heat transfer fluid.

Frontier Observatory for Research in Geothermal Energy (FORGE) proposed DE-FOA-0890 which **Dr. Podgorney** advised would promote transformative science and engineering to validate and optimize enhanced geothermal systems (EGS) technology, perfect productive and sustainable reservoirs, capture data for all stakeholders and ensure reproduction for commercial scale-up. The Federal role is to take technical risks not possible in the private sector and work under aggressive time frames. This could direct benefits to multiple areas of subsurface research in seven years or less. EGS would greatly expand the number of locations that could produce electricity. Few places have all three characteristics for conventional geothermal development and finding them can be difficult and expensive.

Dr. Podgorney said the Snake River Plain in southeastern Idaho located along the track of the Yellowstone Hot Spot was chosen because it emplaced vast amounts of heat in the subsurface and was identified by the MIT study as one of the top locations for EGS in the United States. The Snake River Plain was also attractive for EGS due to high heat flow and subsurface temperatures, regional water system, and lack of earthquakes. USGS estimates Idaho's EGS potential power production to be 47 to 90 GW. There are also economic and educational benefits providing regional jobs by research and developments teams needed and regional adoption and engagement by the construction and operation industry. The education would start with the K-12 outreach, fellowships, STEM internships, and support from the Idaho Universities faculty and students. Student research supports and prepares them for the workforce.

According to **Dr. Podgorney** currently they are in phase one which is the screening level to complete up to ten projects, that are expected to be final at the end of 2015. They expect to hear back about their proposal soon and end the year with a down select of up to three sites. Phase two can take twelve to twenty four months to site characterization permitting which includes significant field work and permitting and this phase will end with a down select to one site. Phase three establishes the field lab. A total of five years planned for the duration until 2023. This includes deep well drilling, flow tests, and other research yet to be determined.

In response to questions, **Dr. Podgorney** explained that Europe is working in small scales to test the theory and he is using different technology which should be more efficient. The holes drilled are up to a mile in depth and not the same as fracking because different physics are used. The advisory panel is by invitation and currently is a panel of ten people. They chose the Snake River Plain partially due to less slip which could cause an earthquake. There have been a number of hot springs overdrawn which can stop the hot spring and depressurize. TNL has developed technological drilling to expand resources and there has been no detrimental effects to the environment essentially. There is an outreach plan, by which all data is streamed, free, in real time as a way to advance technology. Unlike, fracking which destroys the water by adding massive amounts of salt, that are three times the oceans salinity, this process leaves the water good by United States standards and at near drinking water quality.

Tom Wood, Associate Director Advanced Energy Studies, Twin Falls, endorses this project as educational and scientific. He said this uses a residual heat and with INL, and other partners, many graduate students can go forward with great knowledge and careers.

In response to questions, **Mr. Wood** explained there are two sources that cause the center of the earth to be so hot. Fifty percent is residual heat and the other fifty percent is radioactive decay. By increasing knowledge the risk can be taken away and power provided to places that have never had power before.

Doug Glaspie, self, stated he is one of the founders of the first plant, Raft River, in the early seventies and during the energy crisis they had to find another source for energy. He said using Idaho started this project with funds and grants. He said this is using technology and he wanted to share that the industry can grow.

MOTION: **Rep. Rusche** made a motion to approve the minutes of January 28, 2015. **Motion carried by voice vote.**

MOTION: **Rep. Beyeler** made a motion to approve the minutes of February 2, 2015. **Motion carried by voice vote.**

ADJOURN: There being no further business to come before the committee, the meeting adjourned at 2:32 p.m.

Representative Thompson
Chair

Heidi McKay
Secretary