Department of Energy
Washington, DC 20585

DOE/EA-1676

FINDING OF NO SIGNIFICANT IMPACT
DEPARTMENT OF ENERGY LOAN GUARANTEE FOR U.S. GEOTHERMAL'S NEAL HOT SPRINGS GEOTHERMAL FACILITY IN VALE, OREGON

AGENCY: U.S. Department of Energy, Loan Guarantee Program Office

ACTION: Finding of No Significant Impact

SUMMARY: The U.S. Department of Energy (DOE) has conducted an environmental assessment (EA) that analyzed the potential environmental impacts associated with the construction and startup of the U.S. Geothermal Neal Hot Springs 22MW electric power facility in Vale, Oregon. DOE, through its Loan Guarantee Program Office (LGPO), proposes to provide a Federal loan guarantee pursuant to Title XVII of the Energy Policy Act of 2005 (EPAct 05) to U.S. Geothermal to support the construction and startup of the proposed facility[1]. The purpose of DOE's proposed action is to expedite the deployment of a new energy technology into commercial use in the U.S. and to reduce emissions of greenhouse gases and other air pollutants.

U.S Geothermal would employ an innovative geothermal electricity production process which demonstrates an increase in power conversion efficiency up to 15 percent when compared to binary cycle systems currently available. The facility would use a non-toxic and non-flammable refrigerant in a closed-loop system with a gas scrubber to prevent the release of gas products to the atmosphere. These features would help to avoid air pollutants and anthropogenic emissions of greenhouse gases that would otherwise be produced to supply the energy through today's less efficient geothermal systems. The air cooled geothermal plant would have no direct emissions, and the indirect and equivalent CO_2 emissions from the Neal Hot Springs geothermal plant would be less than .04 pounds per kilowatt.

All discussion and analysis related to the potential impacts of construction and operation of the proposed U.S. Geothermal facility are contained in the Final EA (DOE/EA-1676), which is incorporated here by reference. DOE examined potential impacts on the following resources and found none to be significant: floodplains; wetlands; water resources and water quality; threatened or endangered species and critical habitats; prime or unique farmlands; geology and soils; visual, recreational, and aesthetic resources; property of historic, archaeological, or architectural significance; Native American concerns; environmental justice; public health and safety; air quality; global climate change; waste management; transportation; socioeconomic conditions; noise; and terrorism-related impacts.

In accordance with applicable regulations and policies, DOE sent a notification letter regarding the Department's determination to prepare an EA to the Oregon Governor's Office and the City

[1] The amount requested for the loan guarantee is not being disclosed at this time because it is business sensitive. Moreover, should DOE approve a loan guarantee, the amount may differ from the original request.

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of Vale on June 8, 2009. The letter described the proposed action and stated that a draft EA would be sent to the state for review. On October 6, 2009, DOE sent the draft EA to the Oregon Governor's Office, Eastern Region Department of Environmental Quality, and the City of Vale inviting their comments on the draft. The draft EA was also posted on the Loan Guarantee Program Office website. DOE received no comments on the draft EA.

DETERMINATION: On the basis of the Final EA, DOE has determined that providing a Federal loan guarantee to U.S. Geothermal for construction and startup of a 22MW geothermal electricity generating facility in Vale, OR, will not have a significant affect on the human environment. The preparation of an environmental impact statement is therefore not required, and DOE is issuing this Finding of No Significant Impact.

Copies of the Final EA are available at the DOE Loan Guarantee Program Office website at http://www.lgprogram.energy.gov/NEPA-1.html or from

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Additional information on the DOE NEPA process is available from

Office of NEPA Policy and Compliance
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1000 Independence Avenue, SW
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Issued in Washington DC on the 2nd day of December in the year 2009.

Jonathan Silver
Executive Director, Loan Programs