

**Finding of No Significant Impact
for
Kalina Geothermal Demonstration Project
Steamboat Springs, Nevada**

AGENCY: Department of Energy, Golden Field Office

ACTION: Finding of No Significant Impact

SUMMARY: The Department of Energy (DOE) has prepared an Environmental Assessment (EA) to provide the DOE and other public agency decision makers with the environmental documentation required to take informed discretionary action on the proposed Kalina Geothermal Demonstration project. The EA assesses the potential environmental impacts and cumulative impacts, possible ways to minimize effects associated with partial funding of the proposed project, and discusses alternatives to DOE actions. The DOE will use this EA as a basis for their decision to provide financial assistance to Exergy, Inc. (Exergy), the project applicant. Based on the analysis in the EA, DOE has determined that the proposed action is not a major Federal action significantly affecting the quality of the human or physical environment, within the meaning of the National Environmental Policy Act (NEPA) of 1969. Therefore, the preparation of an environmental impact statement is not required and DOE is issuing this Finding of No Significant Impact (FONSI).

COPIES OF THE EA ARE AVAILABLE FROM:

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BACKGROUND: Exergy, a private, for - profit company, is proposing to construct and operate a 6-megawatt (MW), advanced binary, geothermal power plant. The development of this power plant includes a single geothermal production well and a single injection well, as well as ancillary facilities [such as on-site access road(s) and electric transmission lines interconnected to existing geothermal power plants]. The proposed site to be developed is approximately 16 kilometers (km) [(10 miles (mi))] southeast of Reno in Washoe County, Nevada. The proposed geothermal power plant and associated components are known as the Kalina Geothermal Demonstration Project (KGDP). The proposed KGDP would be located on a private leasehold within the jurisdiction of Washoe County. The KGDP project would be located within the Steamboat Springs Unit Area in the Steamboat Springs Known Geothermal Resource Area.

A solicitation was issued by the DOE entitled "Demonstration of Economic Benefits of Improved Electrical Power Generating Systems for Geothermal Applications." Exergy submitted an application to this solicitation in which it offered to construct advanced binary geothermal power plant utilizing the Kalina Cycle System 11 (KCS11) at the Steamboat site. The DOE involvement would be to assist in the partial funding of the power plant. After a competitive process, Exergy was selected for a potential award. To support a decision to fund the proposed action, DOE prepared this EA to identify and evaluate potential environmental impacts from the construction and operation of the KGDP electric power plant.

PROPOSED ACTION: The proposed action consists of DOE providing financial assistance for a portion of the construction and operation of a 6-megawatt (net) geothermal power plant which includes one geothermal production well, one injection well, and ancillary facilities such as on-site access road(s) and interconnected to electric transmission lines to existing geothermal power plants. DOE's role in the proposed action would be limited to providing funding assistance for the construction and testing of the KCS11 equipment. Although DOE would review project activities, DOE would have no responsibility for construction supervision or facility operations.

ENVIRONMENTAL IMPACTS: The EA for the proposed demonstration project assessed environmental impacts on hydrologic resources, cultural resources, biological resources, socioeconomics, land use, geology, and impacts from upset conditions. Impacts to the hydrologic resource were evaluated with respect to the high and moderate reservoirs, groundwater and surface manifestations. The project is not expected to adversely impact any features of the geothermal resource.

A cultural resources investigation identified two sites of interest located within the project lease boundaries. A concurrence was made by the State Historic Preservation Office and the Western Office of the Advisory Council on Historic Preservation that no adverse effect would occur as a result of the construction or operation of the proposed action.

The Biological Assessment identified the Steamboat buckwheat, an endangered plant species within the project lease boundaries. However, the Steamboat buckwheat is not within the project disturbance area, and would not be impacted by the construction or operation of the proposed action. The U.S. Fish and Wildlife Service has concurred with the findings in the EA that the proposed action would not adversely effect the Steamboat buckwheat.

Project demands for construction and operational labor would be small and could be met from the local labor pool. As planned, the proposed action would not represent unfair or unequal treatment of low income or minority populations as required by E.O. 12898.

The total land disturbance is estimated to be approximately 3.4 hectares (ha) (8.4 acres). The proposed action is consistent with existing land use plans and is compatible with the existing adjacent land uses.

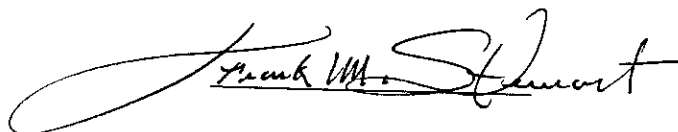
Potential impacts to public health and safety associated with the proposed action were assessed. Accidental ammonia releases and geothermal brine were modeled for operations and were determined to have no adverse off-site effects to human health or the surrounding environment. Project design features, compliance with the operation/maintenance program and adherence with specific regulatory requirements, would further reduce potential impacts.

ALTERNATIVES CONSIDERED:

No Action: Under the no action alternative, DOE would not fund the demonstration of the proposed KGDP. As a result of implementing the no action alternative, the commercial viability of this renewable energy technology, the energy efficiencies, and cost savings of the KCS11 would not be demonstrated at the project site.

DETERMINATION: Based on the information in the EA, DOE determines that the proposed action, *Kalina Geothermal Demonstration Project*, does not constitute a major Federal Action significantly affecting the quality of the human or physical environment, within the meaning of the National Environmental Policy Act. Therefore, the preparation of an environmental impact statement is not required, and DOE is issuing this FONSI.

Issued in Golden, Colorado, this 22 day of February, 1999.

A handwritten signature in dark ink, appearing to read "Frank M. Stewart", is written over a horizontal line.

Frank M. Stewart, Manager

U.S. Department of Energy

Golden Field Office