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(1.08.09.13)

**U.S. DEPARTMENT OF ENERGY**  
**OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY**  
**NEPA DETERMINATION**



RECIPIENT: Multiple Recipients

STATE: Mult

**PROJECT TITLE :** Geothermal Play Fairway Analysis

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
DE-FOA-0000841		GFO-FOA0000841-001	

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:

**CX, EA, EIS APPENDIX AND NUMBER:**

Description:

<b>A9 Information gathering, analysis, and dissemination</b>	Information gathering (including, but not limited to, literature surveys, inventories, site visits, and audits), data analysis (including, but not limited to, computer modeling), document preparation (including, but not limited to, conceptual design, feasibility studies, and analytical energy supply and demand studies), and information dissemination (including, but not limited to, document publication and distribution, and classroom training and informational programs), but not including site characterization or environmental monitoring. (See also B3.1 of appendix B to this subpart.)
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## Rationale for determination:

As part of this Funding Opportunity Announcement (DE-FOA-0000841) the Department of Energy (DOE) was seeking applications to address the overarching theme of uncertainty quantification and reduction for geothermal exploration, specifically through the development of Geothermal Play Fairways. A play fairway analysis defines levels of uncertainty with respect to the presence and utility of geothermal system elements, and translates them into maps to high grade the geographic area over which the most favorable combinations of heat, permeability, and fluid are thought to extend. The analysis is conducted on a regional (basin) scale, with the resulting maps covering areas up to several thousand square miles.

DOE selected 11 projects to participate in Phase 1. Project recipients are listed below. For details of individual projects, please see the uploaded document Play Fairway FOA awardees.xlsx.

Utah State University  
 ATLAS Geosciences Inc.  
 Los Alamos National Laboratory  
 Cornell University  
 Washington Division of Geology and Earth Resources  
 University of Utah/EGI (2 awards)  
 University of California, Davis  
 Ruby Mountain Inc.  
 Nevada Bureau of Mines and Geology, University of Nevada, Reno  
 University of Hawaii

As described in DE-FOA-0000841 (FOA), these projects would adapt data analysis techniques commonly used in oil and gas exploration for use in geothermal exploration. The FOA specifically prohibits all field work in Phase 1, only desktop analysis of existing data would be performed. Phase 1 activities include only literature searches, compilation of data, GIS analysis, computer simulation, and presentation of results. This NEPA Determination is an analysis of Phase 1 for all 11 projects selected for negotiations under the FOA. Following a competitive down-select at the end of Phase 1, a few projects will be selected to move forward into Phase 2. Field work may be allowed in Phase 2, so once those projects are selected to move forward into Phase 2, each individual project will be required to submit individual Environmental Questionnaires detailing Phase 2 activities. Separate EQ-1's will be submitted for each project that is funded for Phase 2 and individual NEPA Determinations will be required for each of those projects.

Based on review of the FOA, DOE has determined that Phase 1 activities for all 11 projects would not have a significant individual or cumulative impact to human health and/or environment. DOE has determined that Phase 1 activities are consistent with actions contained in DOE categorical exclusion A9 "Information gathering, analysis, and

10/21/14

dissemination," and are categorically excluded from further NEPA review.

**NEPA PROVISION**

DOE has made a conditional NEPA determination for this award, and funding for certain tasks under this award is contingent upon the final NEPA determination.

Insert the following language in the award:

You are restricted from taking any action using federal funds, which would have an adverse affect on the environment or limit the choice of reasonable alternatives prior to DOE/NNSA providing either a NEPA clearance or a final NEPA decision regarding the project.

Prohibited actions include:

- Phase 2
- Phase 3

This restriction does not preclude you from:

- Phase 1

If you move forward with activities that are not authorized for federal funding by the DOE Contracting Officer in advance of the final NEPA decision, you are doing so at risk of not receiving federal funding and such costs may not be recognized as allowable cost share.

Note to Specialist :

This NEPA Determination requires tailored NEPA provisions.

Casey Strickland 07/29/2014

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature: Electronically Signed By: Kristin Kerwin Date: 7/31/2014  
NEPA Compliance Officer

**FIELD OFFICE MANAGER DETERMINATION**

- Field Office Manager review required

**NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:**

- Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.
- Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

**BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :**

Field Office Manager's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Field Office Manager