

Risk and Uncertainty Management in Geothermal Exploration

DATE: March 24, 2015

SUBJECT: Request for Information (RFI)

DESCRIPTION: The U.S. Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy (EERE) is seeking information on risk quantification and management in geothermal exploration, especially as it pertains to decision making in late stage exploration activities such as drilling and advanced geophysical surveys.

BACKGROUND: In 2014, DOE Geothermal Technologies Office (GTO) funded eleven projects revolving around the concept of risk and uncertainty quantification in early stage geothermal exploration. Those projects will utilize methods borrowed from the oil and gas industry commonly known as 'Play Fairway Analysis'. This RFI lays the groundwork for a planned 2015 Funding Opportunity Announcement (FOA) that will carry the same ideas into later stage, more focused exploration activities.

PURPOSE: The purpose of this RFI is to solicit feedback from industry, academia, research laboratories, government agencies, and other stakeholders on issues of cost and risk reduction related to geothermal exploration. This is due in part to the lack of response to the 2014 Play Fairway Analysis FOA by Geothermal Industry operators and developers. GTO is specifically interested in information on current opportunities to develop, test, and validate risk and uncertainty models for prospects that have already been identified by industry. This is solely a request for information and not a FOA.

DISCLAIMER AND IMPORTANT NOTES: This RFI is not a FOA; therefore, EERE is not accepting applications at this time. EERE may issue a FOA in the future based on or related to the content and responses to this RFI; however, EERE may also elect not to issue a FOA. There is no guarantee that a FOA will be issued as a result of this RFI. Responding to this RFI does not provide any advantage or disadvantage to potential applicants if EERE chooses to issue a FOA regarding the subject matter. Final details, including the anticipated award size, quantity, and timing of EERE funded awards, will be subject to Congressional appropriations and direction.

Any information obtained as a result of this RFI is intended to be used by the Government on a non-attribution basis for planning and strategy development. This RFI does not constitute a formal solicitation for proposals or abstracts. Your response to this notice will be treated as information only. EERE will review and consider all responses in its formulation of program strategies related to the identified materials of interest that are the subject of this request. EERE will not provide reimbursement for costs incurred in responding to this RFI. Respondents are advised that EERE is under no obligation to acknowledge receipt of the information received or provide feedback to respondents with respect to any information submitted under this RFI. Responses to this RFI do not bind EERE to any further actions related to this topic.

This is a Request for Information (RFI) only. EERE will not pay for information provided under this RFI and no project will be supported as a result of this RFI. This RFI is not accepting applications for financial assistance or financial incentives. EERE may or may not issue a Funding Opportunity Announcement (FOA) based on consideration of the input received from this RFI.

PROPRIETARY INFORMATION: Responses containing confidential, proprietary, or privileged information must be conspicuously marked as described below. Failure to comply with these marking requirements may result in the disclosure of the unmarked information under the Freedom of Information Act or otherwise. The U.S. Federal Government is not liable for the disclosure or use of unmarked information, and may use or disclose such information for any purpose. In addition, GTO may hold a session at the 2015 GTO peer review to publicly discuss information received that is not marked as confidential. Identity of submitter will not be disclosed.

If your response contains confidential, proprietary, or privileged information, you must include a cover sheet marked as follows, identifying the specific pages containing confidential, proprietary, or privileged information:

Notice of Restriction on Disclosure and Use of Data:

Pages [list applicable pages] of this response may contain confidential, proprietary, or privileged information that is exempt from public disclosure. Such information shall be used or disclosed only for the purposes described in this RFI DE-FOA-0001328. The Government may use or disclose any information that is not appropriately marked or otherwise restricted, regardless of source.

In addition, (1) the header and footer of every page that contains confidential, proprietary, or privileged information must be marked as follows: “Contains Confidential, Proprietary, or Privileged Information Exempt from Public Disclosure” and (2) every line and paragraph containing proprietary, privileged, or trade secret information must be clearly marked with double brackets or highlighting.

EVALUATION AND ADMINISTRATION BY FEDERAL AND NON-FEDERAL

PERSONNEL: Federal employees are subject to the non-disclosure requirements of a criminal statute, the Trade Secrets Act, 18 USC 1905. The Government may seek the advice of qualified non-Federal personnel. The Government may also use non-Federal personnel to conduct routine, nondiscretionary administrative activities. The respondents, by submitting their response, consent to EERE providing their response to non-Federal parties. Non-Federal parties given access to responses must be subject to an appropriate obligation of confidentiality prior to being given the access. Submissions may be reviewed by support contractors and private consultants.

REQUEST FOR INFORMATION CATEGORIES AND QUESTIONS:

CATEGORY 1: Engaging Industry

In what way can GTO best engage the geothermal industry in advancing the state of the art in risk and uncertainty management for geothermal exploration?

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CATEGORY 2: Current Technology

Describe the state of the art in managing risk and uncertainty when moving from regional scale reconnaissance to resource validation. What are the key tools for decision making at this stage of exploration, and what are the limitations of these tools? Are there tools originating in other industries that could be adapted for these purposes in geothermal exploration?

CATEGORY 3: Responses to 2014 Funding Opportunity DE-FOA-0000841 “Geothermal Play Fairway Analysis”

None of the large geothermal developers submitted applications in response to the 2014 Play Fairway funding opportunity. Please identify any requirements in the FOA that prevented your organization from submitting an application. How could this be mitigated in the next FOA? What is the level of interest in partnering with one of the current play fairway projects for Phase 2 exploration?

CATEGORY 4: Potential Projects for 2015-2016 Exploration

Note: Any responses that contain proprietary information should be clearly labeled as such, following the instructions on the previous page. Describe any potential projects that would be good candidates for developing, testing, and/ or validating technology as described in Categories 1 and 2 above. GTO is especially interested in areas meeting one or more of the following attributes:

- technologies that directly address key market barriers to exploratory drilling, i.e. investor confidence
- areas that already have a favorable land access status;
- military installations of strategic U.S. interest;
- technologies that, once validated, are readily transferrable to multiple sites

REQUEST FOR INFORMATION RESPONSE GUIDELINES: Responses to this RFI must be submitted electronically to playfairway@ee.doe.gov no later than 5:00pm (ET) on 4/24/2015. Responses must be provided as attachments to an email. Responses must be provided as a Microsoft Word (.docx) attachment to email, of no more than 5 pages in length, 12 point font, 1 inch margins. Only electronic responses will be accepted.

Please identify your answers by responding to a specific question or topic if possible. Respondents may answer as many or as few questions as they wish.

EERE will not respond to individual submissions or publish publicly a compendium of responses. A response to this RFI will not be viewed as a binding commitment to develop or pursue the project or ideas discussed.

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Respondents are requested to provide the following information at the start of their response to this RFI:

- Company / institution name;
- Company / institution contact;
- Contact's address, phone number, and e-mail address.

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