Opportunity Notice for Parties Interested in Partnering with the National Energy Technology Laboratory (NETL) under FOA No. DE-FOA-0001601

Background Information

The U.S. Department of Energy's (DOE) Geothermal Technologies Office (GTO) seeks to conduct feasibility studies of large-scale, low-temperature deep-well geothermal systems coupled with advanced direct-use applications and cascaded surface technologies whose applications will extend the reach of geothermal into geologically distinct parts of the country beyond the western U.S. These systems are referred to herein as deep direct-use or DDU. Feasibility studies funded under Funding Opportunity Announcement (FOA) No. DE-FOA-0001601, titled "Deep Direct-Use Feasibility Studies" will support subsequent geothermal direct-use applied research and analysis projects, also known as renewable thermal applications, which seek to harvest heat from geothermal brines and use it to directly heat (or cool) buildings, as well as for other beneficial thermal processes. By displacing high-temperature power generation with low-to-medium temperature geothermal fluids, significant energy conservation gains can be achieved for end-use processes with moderate temperature requirements. Direct-use geothermal applications have the potential to provide cost-effective, renewable thermal energy in large portions of the U.S.

Need

NETL has recently completed work that examined potential for such energy use and based on that work understands that additional feasibility assessments are needed to support a demonstration project. Furthermore, new investigations are needed on ways to make DDU competitive with current commercial energy solutions, and this could include deep heat storage for waste heat from industrial sources. NETL is interested in submitting one or more applications under FOA No. DE-FOA-0001601 and is seeking partner organizations to complement its capabilities. NETL anticipates using flexible proposal development pathways to assemble one or more project concepts and teams based on the best combination of project partners.

Any entities interested in partnering with NETL will need to provide the minimum cost share required under the FOA which is 20% of the total project costs. Please reference DE-FOA-0001601 for additional information regarding cost share.

Requirements / Qualifications

To develop DDU opportunities in the eastern U.S., NETL is seeking the following:

- Expertise in above ground thermal energy utilization technologies suitable for retrofitting existing buildings currently having traditional hydronic space heating (165^{o}F to 180^{o}F feed water temperatures) systems. NETL is particularly seeking advanced HVAC systems or other industrial thermal energy systems well adapted to very low temperature (less than 180^{o}F) geothermal sources, and optimization strategies for achieving low-cost retrofit solutions.
- Expertise in below ground geothermal resource development, including drilling technology, well completion and fracturing methods, and other enhancement techniques to improve heat extraction from deep sedimentary rock strata and/or achieve low-cost solutions.

- A consumer with a power and/or heating requirement that can be met by DDU geothermal energy. This partner would be the future "end user" for the work conducted under the FOA, and would eventually provide a site to develop a real DDU system. The site must include sufficient surface rights and subsurface rights (or a reasonable expectation of obtaining the necessary rights at reasonable costs) in an area greater than 200 acres.
- A supplier or consumer with access to a waste heat source (>180^{o}F); a (potential) district heating system serving more than 10,000 ft^{2} of residential, commercial or industrial floor space; and a site that includes sufficient surface rights and subsurface rights (or a reasonable expectation of obtaining the necessary rights at reasonable costs) in an area greater than 100 acres and having sedimentary strata suitable for heat storage at depths greater than 3,000 ft.

Instructions

Each submittal shall include the following: a) Cover Page that identifies the entity name, address, and point of contact information; b) Technical Discussion (not to exceed 2-pages), which addresses the requirements and qualifications identified above as well as the evaluation criteria identified below including key personnel contributions and facilities and equipment; and c) Budget Page summarizing the overall proposed project cost contribution.

Please limit responses to a maximum of 4-pages of text, single spaced, 11-point font, with 1-inch margins. Illustrations, maps, figures, and tables may be used to supplement your response; the maximum length of your response including illustrations, maps, figures, and tables is 7 pages. Responses must be provided as a PDF attachment to the email, not to exceed 10 MB in size.

Responses Due

Responses to this Opportunity Notice are due no later than 8:00 AM EST January 25, 2017
Responses are to be submitted electronically in Adobe Acrobat PDF to the National Energy Technology Laboratory (NETL) at the following e-mail address: RIC-STRATEGIC-PARTNERS-RFI@NETL.DOE .GOV

Proposers can expect to receive a response from NETL by the end of January 2017.

Evaluation Criteria

Submittals will be evaluated on the following criteria:

(1) Overall technical understanding and merit;
(2) Qualifications and experience of proposed key personnel including organizational and management experience;
(3) Adequacy of proposer's site, facilities and equipment and/or for DDU, if proposed; and
(4) Adequacy and feasibility (reasonableness) of the proposed budget including required cost share.

Each criterion will carry equal weight. The selection decision will be based on overall best value.

Contacts
For questions regarding this Opportunity Notice, please to contact NETL at RIC-STRATEGIC-PARTNERS-RFI@NETL.DOE .GOV

Administration by Federal and Non-Federal Personnel: When considering responses to this Opportunity Notice, Federal employees are subject to the non-disclosure requirements of a criminal statute, the Trade Secrets Act, 18 USC 1905; the Government may also 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 DOE 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.