Collaboration Opportunity Announcement (COA) for Parties Interested in Partnering with the National Energy Technology Laboratory (NETL) under FY 24 Energy and Emissions Industry Funding Opportunity Announcement (FOA) DE-FOA-0003219

Introduction

The National Energy Technology Laboratory (NETL) is a part of the U.S. Department of Energy (DOE) national laboratory system and is owned and operated by the DOE. NETL supports the DOE mission to advance the energy security of the United States. NETL is interested in submitting an application to the DOE Office of Energy Efficiency and Renewable Energy (EERE) FY24 Energy and Emissions Intensive Industries FOA. This FOA was issued by the Industrial Efficiency and Decarbonization Office (IEDO) and is focused on subsector-specific decarbonization approaches for the highest emitting and most challenging to address industrial subsectors.

The Research and Innovation Center (RIC) at NETL nurtures and exercises core technical competencies that support NETL's efforts in energy technology discovery, development, and deployment. NETL's technical research and development areas, include:

- Computational Engineering
- Energy Conversion Engineering
- Geological and Environmental Systems
- Materials and Manufacturing Engineering
- Systems Analysis & Engineering

NETL's portfolio of technology available for commercialization can be found at the following link:

http://www.netl.doe.gov/business/tech-transfer/available-technologies

NETL is seeking partners to collaborate on a proposal for the development of alternative iron making technologies for the upcoming IEDO EERE FOA in Topic Area 2 (Decarbonizing Iron and Steel) under Area of Interest 1 (Alternative Iron Making). NETL is making this announcement to: (1) locate a primary partner to provide a sodium-based iron ore reduction technology; and (2) identify an alkali metal consultant to provide expertise on methods and safety.

Background

The mission of the DOE IEDO is to provide funding, management, and the strategic direction necessary for a balanced national program of research, development, and demonstration (RD&D), as well as technical assistance and workforce development, to drive improvements in energy, materials, and production efficiency and to accelerate decarbonization across the industrial sector. IEDO and its programs are critical to putting the nation on a pathway to achieve net-zero carbon emissions by 2050.

Specifically, this FOA will advance the Biden Administration's goals to "deliver an equitable, clean energy future, and put the United States on a path to achieve net-zero emissions, economy-wide, by no later than 2050 to the benefit of all Americans."

To attain these goals, IEDO's RD&D strategy focuses on two complementary approaches: tackling subsector-specific decarbonization challenges through the energy- and emissions-intensive industries and pursuing cross-sector challenges that are common across many industries. This FOA focuses on subsector-specific decarbonization approaches for the highest emitting and most challenging to address industrial subsectors.

For this application, NETL is looking to partner with one primary research partner and one alkali metal consultant for a project duration of 24 months and an anticipated start date of January 2025.

Partner 1: Technology Partner- This primary technology partner will provide a sodium-based iron ore reduction technology to NETL. The technology should have a Technology Readiness Level of 3, and the project will last 30 months. Cost sharing is mandatory, and the technology partner is required to provide up to $1,000,000.00 in cost share funds. These funds will contribute to NETL's modification of an existing experimental facility and NETL conducting experiments to determine the kinetic rates for reduction of the iron oxide and regeneration of the sodium reductant as well as the development and testing of a semi-continuous process. In the case of NETL, an outside participant must provide the matching funds via a Cooperative Research and Development Agreement (CRADA).

Partner 2: Alkali Metal Consultant-This consultant will provide expertise on methods and safety for the sodium-based iron ore reduction technology. The project will last 30 months. The Alkali Metal Consultant will receive funds not to exceed $300,000. The Alkali Metal Consultant will be participating as a vendor on the project.

It is anticipated both opportunities will be available in FY24. NETL invites private sector companies to collaborate with NETL on submitting applications in the development of alternative iron making technologies.

Instructions

Each submittal shall include the following: a) Cover Page that identifies the entity name, address, and point of contact information and applicant's choice of the project role on which they would wish to partner; b) Project-concept Discussion (not to exceed two pages) which addresses the basic description of the type of tasks to be completed for the project as well as a description of relevant experience, key personnel and their contributions, and the facilities and equipment that might be utilized; and c) Budget Page summarizing the overall proposed project cost with a clear delineation of the cost-share components.

Please limit responses to a maximum of five pages of text, single spaced, 12-point font, with 1-inch margins. Illustrations, maps, figures, and tables may be used to supplement your response; but the maximum length of your response including illustrations, maps, figures, and tables is 10 pages. Responses must be provided as a PDF attachment to an email, not to exceed 10 MB in size.

Responses Due

Responses to this Opportunity Notice are due no later than **11:59 PM ET on June 13, 2024.** 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-May 2024@netl.doe.gov. DOE will treat all responses marked as confidential business sensitive information accordingly.

Applicants can expect to receive a response from NETL by approximately **June 18, 2025.**

Evaluation Criteria

Submittals will be evaluated on the following criteria:
(1) Overall technical understanding and merit (20%);
(2) Overall commercialization understanding of the technology application and market (10%);
(3) Qualifications and experience of proposed key personnel including organizational and management experience (20%);
(4) Adequacy of proposer's technical expertise (20%); and
(5) Adequacy and feasibility (reasonableness) of the proposed budget and cost-share (30%).

The selection decision will be based on overall best value.

Contacts

For questions regarding this Collaboration Opportunity Announcement, please to contact NETL at RIC-STRATEGIC-PARTNERS-May 2024@NETL.DOE.GOV.

Administration by Federal and Non-Federal Personnel: When considering responses to this Collaboration 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.

DISCLAIMER: This is only an opportunity notice. Any information contained in this opportunity notice is subject to change. DOE will not respond to individual submissions or publish a compendium of the responses made to this opportunity notice. A submittal in response to this opportunity notice shall not constitute or create a binding commitment to develop or pursue the project or ideas discussed within a particular submittal. DOE is under no obligation to partner or collaborate with any entity who submits a response to this opportunity notice. DOE may choose to partner or collaborate with one or more or none of the responding entities. The terms and conditions of any resulting partnership or collaboration shall be memorialized in a future written agreement. The costs incurred to submit a response to this opportunity notice will not be borne by the Government.