Opportunity Notice for Parties Interested in Partnering with NETL under Office of Energy Efficiency and Renewable Energy Funding Opportunity Announcement (FOA) No. DE-FOA-0000826

The National Energy Technology Laboratory (NETL) is interested in submitting an application under the Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE) Funding Opportunity Announcement DE-FOA-0000826 entitled, "Hydrogen Production Research and Development" to conduct research under Topic 3.

The Fuel Cell Technologies Office (FCTO) is a key component of the Department of Energy (DOE) Office of Energy Efficiency and Renewable Energy portfolio. The FCTO aims to provide clean, safe, secure, affordable, and reliable energy from diverse domestic resources, providing the benefits of increased energy security and reduced criteria pollutants and greenhouse gas emissions. The FCTO Hydrogen Production and Delivery (P&D) Program supports the goals of the DOE and FCTO by addressing critical challenges to integrating hydrogen technology and developing new and advanced technologies to produce hydrogen from diverse, domestic, and renewable resources and additionally, delivering it from where it is produced to the point of end use.

Under DE-FOA-0000826, applications are invited for research and development (R&D) in hydrogen production through renewable and/or low carbon pathways such as thermochemical conversion of bio-derived liquids, and carbon reduced integrated or hybrid systems for natural gas reforming (at distributed or semi-central scale production), as well as direct solar water splitting (at semi-central or central scale production). Topic 3 of the subject FOA, "Hydrogen Production Through Direct Solar Water-Splitting Technologies" calls for the development of advanced materials-based systems for direct solar water splitting for central or semi-central production of low-cost renewable hydrogen. Applications are invited for R&D at the following technology readiness levels (TRL):

- Technology concept and/or application formulated;
- Analytical and experimental critical function and/or characteristic proof of concept.

Parties interested in obtaining additional information about NETL's proposed approach aimed at solving the limitations of $TiO_2$-based water splitting technology by:

- Increasing the solar energy conversion efficiency using a novel focused illumination methodology;
- Increasing the conductivity and mechanical strength of $TiO_2$ using novel coatings; and
- Developing photo-catalytic novel materials;

are required to submit the attached non-disclosure agreement.

The NETL is seeking project partners that can contribute technical experience, services, and/ or equipment to meet the objectives of the research effort to be conducted under the EERE FOA,

DE-FOA-0000826. NETL is seeking qualified partners that have experience in (1) surface science and engineering with respect to controlling the surface electron state and microstructure tailoring on different scales for property control in the development of high-performance photo-catalytic materials and/or (2) modulation of the surface properties for various applications, including electron behavior and related electrochemical processes.

Qualified candidates interested in partnering with NETL under Topic 3 of DE-FOA-0000826, are invited to email a submittal to NETL no later than 8:00 AM EST January 6, 2014 (email address identified below). The submittal shall not exceed 3 pages in length and shall include the following: a) less than 2-page technical discussion addressing the requirements described above, a description of their overall interest in energy technology, and a description of relevant experience, key personnel, and facilities and equipment that might be utilized; and b) less than 1-page budget summarizing the overall cost of the proposed research effort.

Submittals will be evaluated on

(1) Technical Merit, i.e.,

   a) Potential for significant improvement in performance relative to the state of the art
   b) Uniqueness and innovation
   c) Potential for substantial impact on hydrogen production technology in terms of the EERE targets
   d) Potential to meet the FOA objectives and goals;

(2) capabilities and experience of proposed key personnel;
(3) organizational and management experience, including teaming; and
(4) reasonableness of budget.

Each criterion will carry equal weight.

Information provided by successful applicants to this Opportunity Notice will be incorporated into the application(s) NETL submits to EERE under the FOA described above. The NETL will not enter into a partnership arrangement unless and until NETL is selected for a reimbursable work opportunity by EERE under the FOA described above. NETL is not responsible for costs incurred by prospective partners in preparation of their submittals to NETL.

Submittals are due not later than 8:00 AM EST January 6, 2014 and shall be submitted to the email address below. NETL will render a decision regarding project partners by 8:00 PM EST January 13, 2014.

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