

MODIFICATION

All modifications to the Notice of Intent (NOI) are highlighted in yellow in the body of the NOI.

Mod. No.	Date	Description of Modifications
0001	03/13/2014	Inclusion of eligibility language for ALL Applicants and specifically for DOE Federally Funded Research and Development Centers (FFRDCs)

This is a Notice of Intent (NOI) only. EERE may issue a FOA as described herein, may issue a FOA that is significantly different than the FOA described herein, or EERE may not issue a FOA at all.

Notice of Intent No. DE-FOA-0001047**Notice of Intent to Issue
Funding Opportunity Announcement No. DE-FOA-0000978**

The Office of Energy Efficiency and Renewable Energy (EERE) intends to issue, on behalf of the Wind and Water Power Technologies Office (WWPTO), a Funding Opportunity Announcement (FOA) entitled “Technology Incubator for Wind Energy Innovations”.

EERE is an organization focused on achieving aggressive and well-defined mid-to-long term clean energy goals for the United States of America. In that context, EERE has established multi-year plans and roadmaps. EERE focuses the majority of its resources on a limited number of "highest probability of success" pathways/approaches to ensure that the program initiatives are supported at a critical mass (both in terms of dollars and time) for maximum impact.

This roadmap-based approach is one of EERE's greatest strengths, which can create challenges in recognizing and exploring unanticipated, game changing pathways/approaches which may ultimately be superior to the pathways/approaches on existing Office roadmaps.

To enhance the responsiveness of the roadmap approach, EERE is issuing "Incubator" Funding Opportunity Announcements within its existing Offices and programs to support innovative technologies and solutions that could help meet existing goals but are not represented in a significant way in the Offices' existing Multi-Year Program Plans (MYPPs) or current portfolios. The Incubator programs will allow EERE to assess new technologies for their potential to be “on ramped” to future MYPPs. Successful incubator projects will reduce the risk associated with potentially breakthrough approaches and technologies so that they could be viable candidates for inclusion in future program roadmaps.

The planned “Technology Incubator for Wind Energy Innovations” FOA continues the work of the Wind Program within EERE, and supports the long-term goals of WWPTO, which include:

- Lower the Levelized Cost of Energy (LCOE) of land-based utility-scale wind energy systems from 2011 reference costs¹ of 7.2 ¢/kWh (cents per kilowatt hour) to 4.2 ¢/kWh by 2030.
- Lower LCOE of fixed-bottom offshore utility-scale wind energy systems from 2011 reference costs¹ of 22.5 ¢/kWh to 13.7 ¢/kWh by 2030.

The FOA encompasses applications for any and all ideas that have a significant potential to advance the mission of the Wind Program. All high-impact applications will be considered. To help guide applicants, WWPTO has identified the following topics as areas of special interest where innovative ideas have significant potential to enhance WWPTO’s wind research roadmap:

¹ Tegen, S., Lantz, E., Hand, M., et al. “2011 Cost of Wind Energy Review,” National Renewable Energy Laboratory Technical Report NREL/TP-5000-56266, March 2013.

This is a Notice of Intent (NOI) only. EERE may issue a FOA as described herein, may issue a FOA that is significantly different than the FOA described herein, or EERE may not issue a FOA at all.

1. **Novel Measurement Techniques for Turbine-Wake Measurements** – WWPTO is interested in exploring robust non-invasive wake measurement technologies that can be deployed in wind farms, are environmentally safe, and are capable of measuring wake velocities, wake meandering, and wake-added turbulence. These technologies must be able to capture the spatial and temporal resolutions necessary to characterize wake formation, convection, and interaction with downstream turbines.
2. **Energy Capture Above 500ft** – WWPTO is interested in exploring innovative R&D projects that enable low cost wind energy capture above 500ft, meet the WWPTO wind LCOE goals, and are scalable to gigawatt deployments. Proposed systems may involve innovations to contemporary horizontal axis wind turbine designs (e.g. novel towers), innovations to support structure and construction equipment (e.g. lifting technology), or completely novel concepts that differ from currently mass-deployed wind technology systems (e.g. airborne wind systems).
3. **Remote Sensing Concepts for Wind Resource Assessment & Characterization** – In order to fully explore the physics impacting offshore wind, WWPTO is seeking low-cost, environmentally-safe, and weather-proof sensor packages that can be deployed for long periods of time on future offshore sites for resource monitoring during pre-installation site assessment as well as during normal operation. The proposed package should show clear economic benefit over existing met-tower approaches and be capable of capturing observations at multiple locations across a project site.
4. **Prognostic Structural Health Monitoring** – WWPTO is interested in exploring low-cost, innovative technologies that enable prognostic health monitoring for premature failure and fault detection, proactive fault mitigation, predictive operations and maintenance (O&M) scheduling, and improved survivability of wind power generation equipment.
5. **Other** – In addition to the above topic areas, the FOA is open to applications that aim to bring to market a novel, non-incremental technology relevant to wind energy.

EERE envisions awarding multiple financial assistance awards in the form of cooperative agreements. The estimated period of performance for each award will be approximately 12 to 24 months.

DOE Federally Funded Research and Development Centers (FFRDC) are restricted to a maximum of two applications: ONE application as a Prime Recipient and ONE application as a Subrecipient. DOE FFRDCs must partner with at least one other DOE FFRDC when submitting applications as a Prime Recipient. DOE expects substantial effort from the participating FFRDCs for each application.

All other Applicants may only submit for consideration one Concept Paper and the corresponding Full Application as a Prime Recipient. This limitation does not prohibit non-DOE FFRDC applicants from collaborating on other applications (e.g., as a potential Subrecipient or partner) so long as the entity is only listed as the Prime Applicant on one Concept Paper and the corresponding Full Application.

This is a Notice of Intent (NOI) only. EERE may issue a FOA as described herein, may issue a FOA that is significantly different than the FOA described herein, or EERE may not issue a FOA at all.

This Notice is issued so that interested parties are aware of EERE's intention to issue this FOA in the near term. Any of the information contained in this Notice is subject to change. EERE will not respond to questions concerning this Notice. Once the FOA has been released, EERE will provide an avenue for potential Applicants to submit questions.

DOE plans to issue the Funding Opportunity Announcement (FOA) in the first quarter of calendar year 2014 via the EERE Exchange website (<https://eere-exchange.energy.gov/>). If Applicants wish to receive official notifications and information from EERE regarding this FOA, they should register in EERE Exchange. When the FOA is released, applications will be accepted only through EERE Exchange.

In anticipation of the FOA being released, Applicants are advised to complete the following, which are **required** for application submission:

- Register and create an account on EERE Exchange at <https://eere-exchange.energy.gov/>. This account will then allow the user to register for any open EERE FOAs that are currently in EERE Exchange. It is recommended that each organization or business unit, whether acting as a team or a single entity, use only one account as the contact point for each submission.

Questions related to the registration process and use of the EERE Exchange website should be submitted to: EERE-ExchangeSupport@hq.doe.gov

- Obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number (including the plus 4 extension, if applicable) at <http://fedgov.dnb.com/webform>
- Register with the System for Award Management (SAM) at <https://www.sam.gov>. Designating an Electronic Business Point of Contact (EBiz POC) and obtaining a special password called an MPIN are important steps in SAM registration. Please update your SAM registration annually.
- Register in FedConnect at <https://www.fedconnect.net/>. To create an organization account, your organization's SAM MPIN is required. For more information about the SAM MPIN or other registration requirements, review the FedConnect Ready, Set, Go! Guide at https://www.fedconnect.net/FedConnect/PublicPages/FedConnect_Ready_Set_Go.pdf
- Register in Grants.gov to receive automatic updates when Amendments to a FOA are posted. However, please note that applications will not be accepted through Grants.gov. <http://www.grants.gov/>. All applications must be submitted through EERE Exchange.

This is a Notice of Intent (NOI) only. EERE may issue a FOA as described herein, may issue a FOA that is significantly different than the FOA described herein, or EERE may not issue a FOA at all.