

Notice of Intent No. DE-FOA-0001277

**Notice of Intent to Issue
Funding Opportunity Announcement No. DE-FOA-0001214**

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 “U.S. Wind Manufacturing: Larger Blades to Access Greater Wind Resources and Lower Costs.”

This FOA will support Research and Development (R&D) partnerships leading to innovative designs and processes for the manufacturing and assembly of wind turbine blades in order to facilitate deployment of the next generation of multi-megawatt wind turbines. Supported projects will develop cost-competitive integrated solutions that address the challenges of fabricating, transporting overland and assembling rotor blades longer than 60m, with design concepts scalable to greater lengths, and installing them at wind turbine hub heights of at least 120m. Multi-organizational teams including at least an original equipment manufacturer (OEM) turbine designer, a blade manufacturer and an installation/logistics firm are expected.

The proposed FOA is intended to be forward-looking in addressing U.S. market dynamics and domestic manufacturing opportunities through innovative solutions to constructing and assembling larger blades directly applicable to mitigating U.S. transportation constraints¹. Awards under the FOA will support partnerships between DOE and research and development (R&D) teams, including manufacturers. The resulting designs must be manufacturable in the U.S. in accordance with the U.S. Manufacturing Plan to be submitted as part of the application.

It is anticipated that the FOA may include the following Area of Interest:

Area of Interest:

This FOA focuses on R&D projects intended to raise new wind turbine blade manufacturing and installation technologies from Technology Readiness Levels (TRL) of 2-3 to 3-4. New innovations in blade design as well as incremental improvements in manufacturing and assembly processes are expected outcomes of this FOA. Solutions may include, but are not limited to, modular, segmented or site-fabricated blade technologies. Resulting designs and associated manufacturing, logistics and installation requirements may be applicable to both land-based and offshore wind plants.

Applications specifically not of interest will be those that fall outside the technical parameters specified in the FOA, including but not limited to the following:

¹Cotrell, J.; Stehly, J.; Johnson, J.; Roberts, J. O.; Parker, Z.; Scott, G.; Heimiller, D. (2014). Analysis of Transportation and Logistics Challenges Affecting the Deployment of Larger Wind Turbines; NREL Report No. TP-5000-61063. <http://www.nrel.gov/docs/fy14osti/61063.pdf>

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.

- Applications that address only one element of an integrated system without considering the other elements necessary for its success;
- Applications for new turbine designs;
- Applications for new materials research;
- Applications for blade designs that are feasible solely for offshore wind deployment;
- Applications that focus only on transportation technologies; and
- Applications for proposed technologies that are not based on sound, practical scientific principles.

The objectives of this FOA are to:

1. Enable access to previously untapped regional wind resources by supporting development of innovative rotors, a key sub-system of cost-effective taller, larger turbine systems.
2. Increase energy capture by increasing rotor swept area while reducing lifetime Levelized Cost of Energy (LCOE).
3. Mitigate the constraints on deployment of larger blades caused by limitations in transport infrastructure and regulations, as well as addressing challenges and high costs of on-site assembly and installation.
4. Identify innovative ways to reduce total system costs from sourcing materials through manufacturing, logistics and final assembly.
5. Increase the technology advantages and market competitiveness of U.S. manufacturers in alignment with the EERE Clean Energy Manufacturing Initiative (CEMI).²

State, local, and tribal government entities, Federally-Funded Research and Development Centers (FFRDCs), and Government-Owned, Government-Operated (GOGOs) national laboratories will not be eligible to apply as prime recipients under the FOA, however they may participate as subrecipients on awards. Inclusion of an FFRDC or GOGO on a proposed project team is in itself neither an advantage nor disadvantage to the applicant and will be evaluated solely in the context of the FFRDC or GOGO contribution to the proposed scope of work.

The desired outcomes of this FOA include:

- Cost-competitive integrated rotor blade subsystem designs that address the challenges of fabricating, transporting overland and assembling blades longer than 60m, with design concepts scalable to greater lengths, and installing them at wind turbine hub heights of at least 120m.
- Innovative concepts that result in a substantial net decrease in LCOE. Baseline cost assumptions and targets will be provided by the Department of Energy in the FOA.

² The Clean Energy Manufacturing Initiative (CEMI) is a DOE program aimed at U.S. competitiveness in the production of clean energy products, as well as increasing across-the-board energy productivity.
<http://www1.eere.energy.gov/energymanufacturing/>

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.

- Project teams that identify viable research and development pathways to product commercialization.
- Demonstrated progress on the path toward product commercialization during the course of the project.

It is envisioned that project funds will support the following research and development tasks related to concept development:

- Engineering drawings of system designs;
- Technology analysis and modeling;
- Component and/or proof of concept testing (if applicable);
- Fabrication, logistics, installation, and operations and maintenance cost estimates (with substantiation) incorporated into a full system LCOE analysis; and
- Research, Development, and Demonstration (RD&D) plan with follow-on activities towards commercialization, including how quality assurance and IEC certification requirements will be met.

Under this FOA, EERE envisions awarding multiple financial assistance awards in the form of cooperative agreements. The estimated period of performance for each award will be approximately 18 months. The funding amount is anticipated to be a maximum of \$900,000 per award with a minimum required cost share of 20%.

This Notice is issued so that interested parties are aware of the EERE's intention to issue this FOA in the near term. All 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.

EERE plans to issue the FOA on or about March 12, 2015 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 steps, which are **required** for application submission:

- Register and create an account in EERE Exchange at <https://eere-exchange.energy.gov/>. This account will 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

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.

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 http://www.fedconnect.net/FedConnect/Marketing/Documents/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.