

Notice of Intent No. DE-FOA-0001045**Notice of Intent to Issue
Funding Opportunity Announcement No. DE-FOA-0000982**

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: Taller Hub Heights to Access Higher Wind Resources, and Lower Cost of Energy”**.

The proposed FOA will support the development of technologies that mitigate U.S. transportation and logistics constraints affecting the deployment of taller utility-scale wind turbine systems. Analysis indicates that continued turbine up-scaling and design advancements will increase turbine performance. Scaling to taller towers allows wind turbines to capture less turbulent and often stronger wind resources thereby increasing the amount of U.S. land area that can achieve a given wind project capacity factor.¹

The proposed FOA is intended to be forward-looking in addressing U.S. market dynamics and domestic manufacturing opportunities by proactively supporting partnerships between DOE and research and development (R&D) teams, including manufacturers, to seek innovative large-scale tower and installation solutions directly applicable to mitigating U.S. transportation constraints. The resulting designs should be manufacturable in the U.S. and may include intellectual property for license or manufacture by U.S. firms operating abroad.

Area of Interest

This FOA is expected to focus on innovative designs and processes for wind turbine tower manufacturing and turbine system installations which are demonstrably cost-competitive over the entire tower lifecycle of fabrication through decommissioning, for multi-megawatt turbine hub heights of at least 120 meters.

The FOA objectives are to:

1. Reduce the levelized cost of energy (LCOE) of land-based wind power by enabling the use of taller towers, allowing wind turbines to capture stronger wind resources aloft.
2. Increase the wind turbine deployment opportunities in lower wind speed regions across the country where wind energy has previously been more expensive to deploy.²
3. Increase US competitiveness in alignment with the EERE Clean Energy Manufacturing Initiative (CEMI).³

¹ Lantz, Eric, Wiser, Ryan, and Hand, Maureen. “IEA Wind Task 26: The Past And Future Cost Of Wind Energy”. May 2012. Available online at <http://www.nrel.gov/docs/fy12osti/53510.pdf>

² Roberts, Owen. “Land-based Wind Potential Changes in the Southeastern United States”. Presented September 2013. Available online at <http://www.nrel.gov/docs/fy14osti/60381.pdf>

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The WWPTO encourages industry engagement in this manufacturing competitiveness initiative through multi-organizational teams to invest in development of innovative products for an integrated tower manufacturing, assembly and turbine erection concept. Teams can include, but are not prescribed or limited to, the following:

- A tower designer;
- An original equipment manufacturer (OEM) turbine designer;
- A tower fabricator; and/or
- An installation equipment and logistics firm.

It is expected that all Federally Funded Research and Development Centers (FFRDCs) will be excluded from applying as either a prime or sub-recipient for this FOA.

The WWPTO is planning to fund the National Renewable Energy Laboratory (NREL) to provide support for technical analysis and LCOE modeling to each FOA awardee for the duration of the awards. Potential applicants should not contact NREL for assistance in preparing an application and will collaborate with NREL at DOE expense only if competitively selected and awarded.

Desired outcomes of the potential FOA include:

- Cost-competitive integrated tower and turbine erection solutions that address the challenges of fabrication, transportation, assembly, operations and maintenance, and decommissioning of towers for multi-megawatt turbine hub heights of at least 120 meters.
- Innovative concepts that result in a substantial net decrease in LCOE. Baseline cost assumptions and targets will be provided by DOE in the FOA.
- Project teams that facilitate research and development pathways to product commercialization.
- Meaningful progress towards 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:

1. Preliminary engineering drawings of conceptual system designs;
2. Computational design analysis and/or modeling;

³ The Clean Energy Manufacturing Initiative (CEMI) is a DOE-wide program aimed at increasing both U.S. competitiveness for the production of clean energy products, as well as across the board energy productivity. <http://www1.eere.energy.gov/energymanufacturing/>

3. Cost estimates of technology development and final product installation/deployment (with NREL collaboration); and
4. Preparation of a long term research, development and commercialization plan.

Documentation of these activities would be delivered to DOE by the awardees in conjunction with the final report package.

EERE envisions awarding multiple financial assistance awards in the form of cooperative agreements⁴. The estimated period of performance for each award will be approximately one year. The funding amount is anticipated to be a maximum of \$1,000,000 per award with a minimum required cost share of 20%.

This Notice is issued to make interested parties aware of the EERE's intention to issue a FOA on the topics summarized above. 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 during 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 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.

⁴ From the Federal Regulation 10CFR600
(http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&tpl=/ecfrbrowse/Title10/10cfr600_main_02.tpl):

On financial assistance - "...Financial assistance means the transfer of money or property to a recipient or subrecipient to accomplish a public purpose of support or stimulation authorized by Federal statute. For purposes of this part, financial assistance instruments are grants and cooperative agreements and subawards."

On cooperative agreements - "(b) When it is anticipated that substantial involvement will be necessary between DOE and the recipient during performance of the contemplated activity, the award instrument shall be a cooperative agreement rather than a grant. Every cooperative agreement shall explicitly state the substantial involvement anticipated between DOE and the recipient during the performance of the project...."

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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.

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