



TECHNOLOGY INCUBATOR FOR WIND ENERGY INNOVATIONS

FOA Webinar
DE-FOA-0000978
April 17, 2014

DE-FOA-0000978

TECHNOLOGY INCUBATOR FOR WIND ENERGY INNOVATIONS

Anticipated Schedule:

FOA Issue Date:	4/2/14
FOA Informational Webinar:	4/17/2014
Submission Deadline for Concept Papers:	4/28/2014
Submission Deadline for Full Applications:	5/30/14
Submission Deadline for Replies to Reviewer Comments:	6/25/2014
Expected Date for EERE Selection Notifications:	July 2014
Expected Timeframe for Award Negotiations:	July – September 2014

Notice

- All Applicants are strongly encouraged to carefully read the Funding Opportunity Announcement DE-FOA-0000978 (“FOA”) and adhere to the stated submission requirements. The content included in this presentation is intended to summarize the contents of FOA. If there are any inconsistencies between the content of this presentation and the information presented in the FOA please contact WWIncubator@go.doe.gov. In the event there is an inconsistency, the Funding Opportunity Announcement is the controlling document and applicants should rely on the FOA language.

Agenda

- 1) Registration Requirements
- 2) Award Information
- 3) FOA Information
- 4) Evaluation Process
- 5) Concept Paper
- 6) Full Application
- 7) Frequently asked Questions

FOA Description

- EERE is issuing "Incubator" Funding Opportunity Announcements (FOAs) 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 (see Section I.A.1).
- The Incubator Wind Program will allow EERE to assess new technologies for their potential to be “on ramped” to future MYPPs.
- Successful Wind 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.

Topic Areas/Technical Areas of Interest

- **Open-topic** – WWPTO seeks to fund R&D investments in technology approaches and solutions that are not currently represented in the wind portion of the Office’s Multi-Year Program Plan and/or existing wind project portfolio (see Section I.A.1) in a meaningful or significant way. This Incubator FOA represents an opportunity to support next-generation technology approaches and to ultimately facilitate identification and future inclusion of highly promising, emerging wind energy technology approaches into the Office’s Multi-Year Program Plans and future program portfolios. **The FOA will accept applications for any and all ideas that have a significant potential to advance the mission of the Wind Program.**
- **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.
- **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 structures and/or to construction equipment (e.g. lifting technology), or completely novel concepts that differ from currently mass-deployed wind technology systems (e.g. airborne wind systems).
- **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.
- **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 generation equipment.

Tier Levels

Tier	Maximum Federal Award	Project Period	Expected Technology Readiness Level (TRL)**	Category Objective
Tier 1	\$500,000	12-18 months	Start: TRL 2-3 End: at least TRL 3-4	Accelerate transition from a proof-of-concept of all critical components to an early stage functional prototype.
Tier 2	\$1.5M	12-18 months	Start: TRL 3-4 End: at least TRL 5	Accelerate transition of early stage functional prototype to the manufacturing stage and commercially relevant prototype made in the lab.
Tier 3	\$2M	18-24 months	Start: TRL 4-5 End: at least TRL 6	Develop the manufacturing processes and equipment processes to move from fully developed laboratory prototype to pilot-scale production.

Applications Specifically Not of Interest

The following types of applications will be deemed nonresponsive and will not be reviewed or considered (See Section III.D of the FOA):

- Applications not aligned with the Wind Program's LCOE goals;
- Technology approaches that are currently being funded by the Wind Program (see Section I.A.1);
- Existing commercial hardware technologies, products, or solutions – the primary objective of the Incubator Program is to identify innovative, early-stage ideas not adequately represented in the Wind Program's existing portfolio. Consequently, if a technology already exists as a commercial product that is currently available, then that technology is not eligible for an award under this FOA. Furthermore, applications for incremental improvements to existing products, conventional designs, or current production processes, while compelling and possibly offer significant advantages, do not qualify for awards under this FOA;
- Applications involving non-technical work towards market acceleration and deployment;
- Applications involving basic science or theoretical research and analysis;
- Technology development on an existing manufacturing line to enhance efficiency and/or reduce cost;
- Modeling and simulation activities and/or design tool development activities; or
- Applications for proposed technologies that are not based on sound scientific principles (e.g. violate the law of thermodynamics).

Award Information

Total Amount to be Awarded	\$4.5 Million *
Average Award Amount	EERE anticipates making awards that range from \$500,000 to \$2,000,000
Types of Funding Agreements	Cooperative Agreements
Period of Performance	12 to 24 months

*Subject to the availability of appropriated funds

Statement of Substantial Involvement

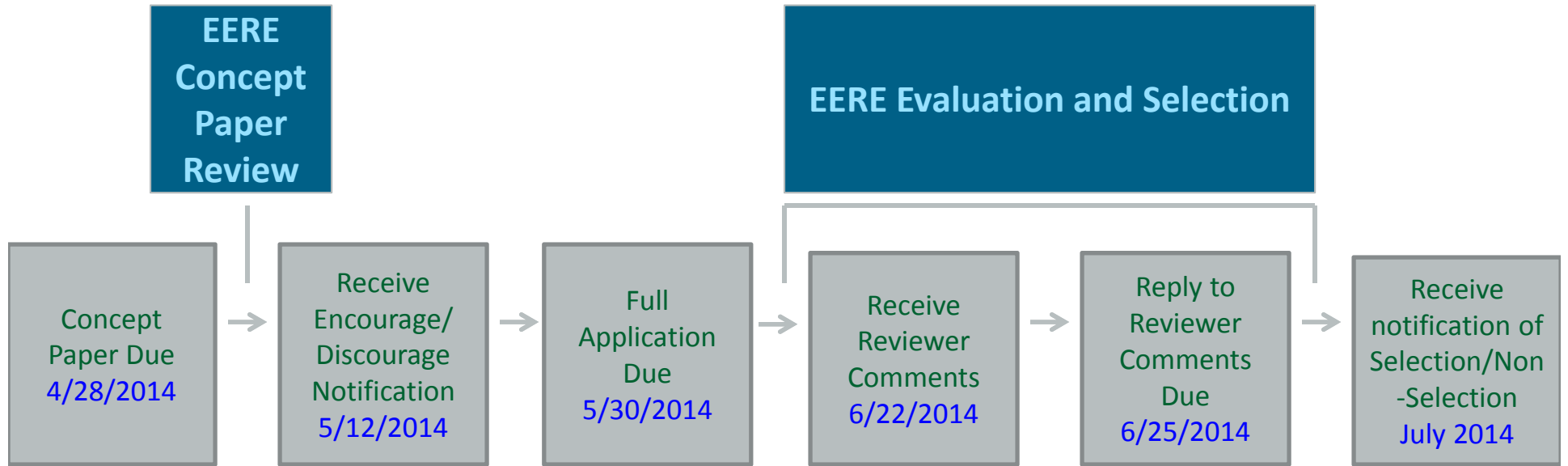
EERE has substantial involvement in work performed under Awards made following this FOA. Substantial involvement includes, but is not limited to, the following:

- EERE shares responsibility with the Recipient for the management, control, direction, and performance of the Project.
- EERE may intervene in the conduct or performance of work under this Award for programmatic reasons. Intervention includes the interruption or modification of the conduct or performance of project activities.
- EERE may redirect or discontinue funding the Project based on the outcome of EERE's evaluation of the Project at that the Go/No Go decision point.
- EERE participates in major project decision-making processes.

Multiple Applications

- Applicants may only submit one Concept Paper and the corresponding Full Application as a Prime Recipient for consideration under this FOA
 - The Concept Paper and Full Application must address no more than one technology innovation or solution relevant to wind energy
 - If an Applicant submits more than one Concept Paper or Full Application, EERE will only consider the last timely submission for evaluation.
 - Any other submissions received listing the same applicant will be considered non-compliant and not eligible for further consideration. **DOE FFRDCs** (see Section III.F)
- *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.*
- Non-DOE/NNSA FFRDCs and non-DOE GOGOs are eligible to apply for funding as a Subrecipient on multiple applications.

FOA Review Timeline



EERE anticipates making awards by **September 2014**

Concept Papers

- Concept Papers due by April 28, 2014
- EERE conducts an initial eligibility review of Concept Papers.
- Eligibility requires:
 - Submit the Concept Paper through EERE Exchange
 - Include the required documents
 - Submit the Concept Paper by April 28, 2014
- See [Section IV.C](#) of the FOA for information on the content requirements for Concept Papers
- If an Applicant fails to submit an eligible Concept Paper, the Applicant will not be eligible to submit a Full Application

Concept Paper Review

- Each eligible Concept Paper will be reviewed based on the criteria in [Section V.A.1.](#) of the FOA
- Applicants will be notified of an Encourage/Discourage decision, and review comments on their Concept Paper will be available in EERE Exchange
 - Applicants will be provided approximately 30 days to prepare a Full Application
 - An Applicant who receives a “discouraged” notification may still submit a Full Application
 - By **discouraging** the submission of a Full Application, EERE intends to convey its lack of programmatic interest in the proposed project

Concept Paper Review Criteria

- **Criterion 1 (20%):** Extent to Which the Proposed Approach/Solution is New to the Office Portfolio
- **Criterion 2 (30%):** Impact of the Proposed Technology Relative to State-of-the-Art on Office Mission and National Energy Goals if Successful
- **Criterion 3 (50%):** Innovativeness of the Proposed Idea and Overall Scientific and Technical Merit

Full Application Eligibility Requirements

- Applicants must submit a Full Application by [5/30/2014](#)
- Full Applications are deemed eligible if:
 - The Applicant is an eligible entity [Section III.A of FOA](#);
 - The Applicant submitted an eligible Concept Paper;
 - The Cost Share requirement is satisfied [Section III.B of FOA](#);
 - The Full Application is compliant [Section III.C of FOA](#); and
 - The proposed project is responsive to the FOA [Section III.D of FOA](#)

Who's Eligible to Apply?

Eligible applicants for this FOA include:

1. Individuals
2. Domestic Entities
3. Foreign Entities
4. Incorporated Consortia
5. Unincorporated Consortia
6. DOE FFRDCs
7. *Non-DOE/NNSA FFRDCs and non-DOE GOGOs are eligible to apply for funding as a Subrecipient, but are not eligible to apply as a Prime Recipient.*
8. Federal agencies and instrumentalities (other than DOE) are eligible to apply for funding as a Subrecipient, but are not eligible to apply as a Prime Recipient.

For more detail about each eligible applicant, please see [Section III.A](#) of the FOA for eligibility requirements

Full Application Criteria

- **Criterion 1 (30%):** Impact on Office Mission and National Energy Goals if Successful
- **Criterion 2(45%):** Technical Merit, Innovation, and Quality of the Proposed Project Plan
 - Technical Merit and Innovation
 - Research Approach and Work Plan
 - Identification of Technical Risks
 - Baseline, Metrics, and Deliverables
 - Market Transformation Plan
- **Criterion 3 (25%):** Team and Resources

Cost Sharing Requirements

Tier	Maximum Federal Award	Project Period	Applicant Cost Share*	Expected Technology Readiness Level (TRL)**	Category Objective
Tier 1	\$500,000	12-18 months	≥20%	Start: TRL 2-3 End: at least TRL 3-4	Accelerate transition from a proof-of-concept of all critical components to an early stage functional prototype.
Tier 2	\$1.5M	12-18 months	≥20%	Start: TRL 3-4 End: at least TRL 5	Accelerate transition of early stage functional prototype to the manufacturing stage and commercially relevant prototype made in the lab.
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Cost Share Contributions

- Contributions must be:
 - Specified in the project budget
 - Verifiable from the Prime Recipient's records
 - Necessary and reasonable for proper and efficient accomplishment of the project
- Every cost share contribution must be reviewed and approved in advance by the Contracting Officer and incorporated into the project budget before the expenditures are incurred

Allowable Cost Share

- Cash Contributions
 - May be provided by the Prime Recipient, Subrecipients, or a Third Party
- In-Kind Contributions
 - Can include, but are not limited to: personnel costs, indirect costs, facilities and administrative costs, rental value of buildings or equipment, and the value of a service, other resource, or third party in-kind contribution

Unallowable Cost Share

- The Prime Recipient may not use the following sources to meet its cost share obligations including, but not limited to:
 - Revenues or royalties from the prospective operation of an activity beyond the project period
 - Proceeds from the prospective sale of an asset of an activity
 - Federal funding or property
 - Expenditures reimbursed under a separate Federal Technology Office
 - Independent research and development (IR&D) funds
 - The same cash or in-kind contributions for more than one project or program

Merit Review and Selection Process - Overview

- The Merit Review process consists of multiple phases that each include an initial eligibility review and a thorough technical review
- Rigorous technical reviews are conducted by reviewers that are experts in the subject matter of the FOA
- Ultimately, the Selection Official considers the recommendations of the reviewers, along with other considerations such as Program Policy Factors, in determining which applications to select
- See [Section V.A.2](#) of the FOA for information on the review criteria for Full Applications

Replies to Reviewer Comments

- EERE will provide Applicants with reviewer comments in EERE Exchange following evaluation of all eligible Full Applications
- Applicants will have approximately three business days to prepare a short Reply to Reviewer Comments responding to comments however they desire
- Reviewers will consider the responses to reviewer comments in their final evaluation
- Please see [Sections IV.F. and V.A.3](#) for additional information regarding replies to reviewer comments

Registration Requirements

- To apply to this FOA, Applicants must register with and submit application materials through EERE Exchange: <https://eere-Exchange.energy.gov>
- Obtain a “control number” at least 24 hours before the first submission deadline
- Although not required in order to submit an Application, the following registrations must be complete to received an award under this FOA:

Registration Requirement	Website
DUNS Number	http://fedgov.dnb.com/webform
SAM	https://www.sam.gov
FedConnect	https://www.fedconnect.net
Grants.gov	http://www.grants.gov

Means of Submission

- Concept Papers, Full Applications, and Replies to Reviewer Comments must be submitted through EERE Exchange at <https://eere-Exchange.energy.gov>
 - EERE will not review or consider applications submitted through other means
- The Users' Guide for Applying to the Department of Energy EERE Funding Opportunity Announcements can be found at <https://eere-Exchange.energy.gov/Manuals.aspx>

Key Submission Points

- Check entries in EERE Exchange
 - Submissions could be deemed ineligible due to an incorrect entry
- EERE strongly encourages Applicants to submit 1-2 days prior to the deadline to allow for full upload of application documents and to avoid any potential technical glitches with EERE Exchange
- Make sure you hit the submit button
 - Any changes made after you hit submit will un-submit your application and you will need to hit the submit button again
- For your records, print out the EERE Exchange Confirmation page at each step, which contains the application's Control Number

Applicant Points-of-Contact

- Applicants must designate primary and backup points-of-contact in EERE Exchange with whom EERE will communicate to conduct award negotiations
- It is imperative that the Applicant/Selectee be responsive during award negotiations and meet negotiation deadlines
 - Failure to do so may result in cancelation of further award negotiations and rescission of the Selection

Questions

- Questions about this FOA? Email WWIncubator@go.doe.gov
- All Q&As related to this FOA will be posted on EERE Exchange
 - You must first select this specific FOA Number in order to view the Q&As
 - EERE will attempt to respond to a question within 3 business days, unless a similar Q&A has already been posted on the website
- Problems logging into EERE Exchange or uploading and submitting application documents with EERE Exchange? Email EERE- ExchangeSupport@hq.doe.gov.
 - Include FOA name and number in subject line
- All questions asked during this presentation will be posted on EERE Exchange