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U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

U.S.-Danish Floating Offshore Wind Energy Mooring and Anchoring Research and Development

WETOFOA@ee.doe.gov

FOA Webinar

DE-FOA-0003362

10/17/2024

Notice

- NO NEW INFORMATION OTHER THAN THAT PROVIDED IN THE FOA WILL BE DISCUSSED IN THE WEBINAR.

- Attendance at the webinar does not affect the success of the applications

- Your participation is completely voluntary.

Notice

- All applicants are strongly encouraged to carefully read the Funding Opportunity Announcement DE-FOA-0003362 **("FOA")** and adhere to the stated submission requirements.

- This presentation summarizes the contents of FOA. If there are any inconsistencies between the FOA and this presentation or statements from DOE personnel, the FOA is the controlling document. Applicants should rely on the FOA language and seek clarification by submitting a question to WETOFOA@ee.doe.gov.

Anticipated Schedule:

FOA Issue Date:	09/24/2024
Submission Deadline for Full Applications:	01/14/2025 at 5:00pm ET
Expected Date for EERE Selection Notifications:	April 2025
Expected Timeframe for Award Negotiations:	Summer 2025

Agenda

1) FOA Description
2) Teaming Partner List
3) Topic Area/Themes
4) Award Information
5) Statement of Substantial Involvement
6) Cost Sharing
7) Compliance Criteria
8) FOA Timeline
9) Full Applications
10) Merit Review and Selection Process
11) Registration Requirements

FOA Description

The goals of this FOA are to:

- Advance floating offshore wind energy mooring technologies and methods towards cost-effective commercialization and industry growth;
- Encourage bilateral collaboration to increase the impact of research in the United States and Denmark; and
- Support research at U.S. minority-serving colleges and universities (MSI) and facilitate new relationships between MSIs, other researchers, and industry participants.

FOA Description

This funding opportunity is coordinated with Innovation Fund Denmark to support U.S.-Danish consortia collaborating on shared research objectives.

- EERE funds will be used to support the U.S. entity work through this FOA.
- Innovation Fund Denmark funds will be used to support Danish entity work through Innovation Fund Denmark's corresponding funding opportunity.

https://innovationsfonden.dk/en

FOA Description

Applicants applying to this EERE FOA must have a corresponding proposal submitted to Innovation Fund Denmark's funding opportunity on e-grant.

- This FOA is intended to support collaboration between U.S. and Danish efforts working in well-balanced consortia.
- Within each project consortium, members must apply to this EERE FOA and to Innovation Fund Denmark's corresponding funding opportunity on e-grant to be eligible for funding.
- Proposed U.S. projects will be assessed by EERE and proposed Danish projects will be assessed by Innovation Fund Denmark.
- Funding will only be provided to consortia with projects that are positively evaluated by both funders.
- Once the successful proposals have been determined, EERE will fund U.S. projects, while Innovation Fund Denmark will fund Danish projects.

FOA Description

The following definitions are used throughout the FOA:

- "U.S-Danish project consortium" – The combination of the U.S. project team and the Danish project team that are executing the two coordinated projects.
- "U.S. Project Team" – The members of the consortium that are proposing to this EERE funding opportunity. The U.S. project team comprises one proposed prime recipient and may include additional partners as subrecipients.
- "Danish Project Team" –The members of the consortium that are proposing to the Innovation Fund Denmark funding opportunity. Members of the Danish project team and U.S. project team must be distinct.
- "U.S. project" – Work by the U.S. project team including scope and tasks that are subject to an award under this EERE funding opportunity.
- "Danish project" – Work by the Danish project team including scope and tasks that are subject to an award under Innovation Fund Denmark and are distinct and complementary to the U.S. project. The U.S. project and coordinated Danish project work should be integrated and advance the topic area.

Teaming Partner List

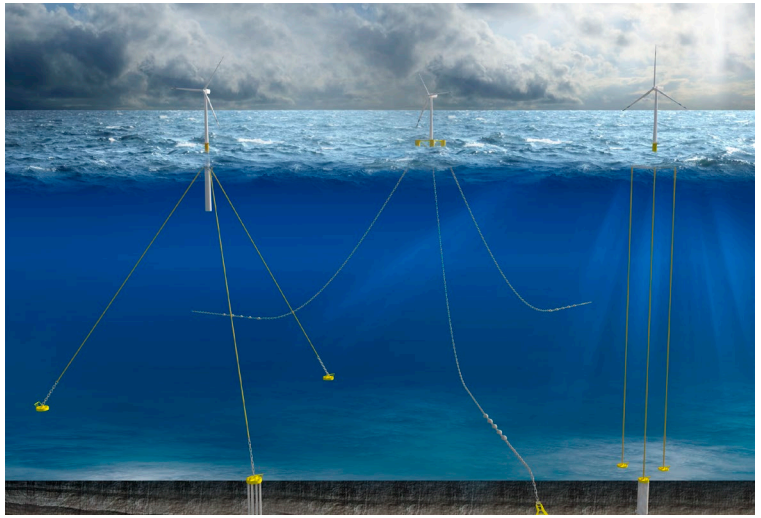
- To facilitate the formation of new project teams for this FOA, a Teaming Partner List is available at https://eere-exchange.energy.gov
- Any organization that would like to be included on this list should submit the following information in Exchange:
  - Organization Name, Contact Name, Contact Address, Contact Email, Contact Phone, Organization Type, Area of Technical Expertise, and Brief Description of Capabilities
- By submitting this information, you consent to the publication of the above-referenced information
- By facilitating this Teaming Partner List, EERE does not endorse or otherwise evaluate the qualifications of the entities that self-identify themselves for placement on the Teaming Partner List

Topic Area / Themes

Topic Area: Floating Offshore Wind Energy Mooring and Anchoring

“Mooring technologies” means any equipment to permanently secure a floating full-scale 15 megawatt+ wind turbine structure in position within a deep water (50m+) offshore wind energy array including mooring lines, anchors, and all associated components.

Expected impacts from this FOA are reduced risk, lower cost, enabling a sustainable supply chain, and improvement in the coexistence of floating offshore wind energy arrays with other ocean users and the environment.



Topic Area / Themes

Topic Area: Floating Offshore Wind Energy Mooring and Anchoring

Theme:

1. Compatibility strategies for mooring, cabling, and coexistence

Develop methods for reducing the impact of cables and mooring lines on other ocean users and the environment, and to support beneficial coexistence of ocean uses. This should include collaboration with the fishing industry, other ocean users, ecologists/biologists, or other environmental experts to establish and promote jointly developed approaches to subsea component configurations, technologies, and methods that maximize mutually beneficial opportunities for ocean co-use and minimize or offset negative impacts. Subjects of interest include, but are not limited to:

- Development of station-keeping systems that provide benefits to ocean users or are nature positive, i.e., result in a measurably better state of the environment.
- Mitigation, detection, or response to fishing gear or marine debris entangled on mooring components or dynamic power cables to help prevent wildlife entanglement and other risks to people and the environment.
- Floating platform emergency procedures or onboard station-keeping to mitigate risks following a mooring failure.

Topic Area / Themes

Topic Area: Floating Offshore Wind Energy Mooring and Anchoring

Theme:

2. Mass-producible, high-reliability moorings

Enable high-throughput fabrication of mooring components at the scale needed to supply 500 megawatt+ floating array projects. Cost-effective components should meet the load requirements of commercial-scale floating offshore wind energy systems. The components and full systems should meet the reliability requirements of the industry. Subjects of interest include, but are not limited to:

- Development or evaluation of scalable anchor designs, including but not limited to anchors made with concrete and novel reinforcement.
- Innovative manufacturing of mooring components.
- Market evaluation and forecasting of mooring components and material demand and supply.
- Assessment of the impact of extreme weather events (earthquakes and storms) on anchor design.

Topic Area / Themes

Topic Area: Floating Offshore Wind Energy Mooring and Anchoring

Theme:

3. Novel station-keeping systems and components

Conduct research development of technology to reduce loads, prevent failures, decrease costs, improve performance, or increase the capacity of floating offshore wind energy mooring systems. Subjects of interest include, but are not limited to:

- Developing methods or executing laboratory tests to determine the reliability and performance of vertically loaded anchors in seismic events, soil liquefaction, or seabed movement.
- Design advancement and laboratory tests to validate models of array configurations with shared mooring lines and shared anchors.
- Development of methods or equipment to reduce installation, repair, or removal costs.

Topic Area / Themes

Topic Area: Floating Offshore Wind Energy Mooring and Anchoring

Theme:

4. Monitoring and inspection technologies for moorings

Develop new instruments, maintenance strategies, and data collection and processing approaches that can better evaluate the health and reliability of subsea components at scale within a maintenance scheme for commercial scale floating wind energy arrays.

Topic Area / Themes

Topic Area: Floating Offshore Wind Energy Mooring and Anchoring

Theme:

5. Open Subject

Conduct research and development that more broadly supports mooring systems for industry-scale deployment of floating offshore wind energy. Subjects of interest include, but are not limited to:

- Identify best practices for holistic design and optimization of floating wind energy systems.
- How to co-optimize the turbines, platform, moorings, and control systems.

Non-Responsive Applications

The following types of applications will be deemed nonresponsive and will not be reviewed or considered for an award:

- Applications that fall outside the technical parameters specified in Section I.A or I.B of the FOA
- Applications for proposed technologies that are not based on sound scientific principles (e.g., violates the law of thermodynamics).
- Applications that seek to design/engineer/size a standard mooring system for a specific location without a unique research study or innovation.

Award Information

Total Amount to be Awarded	Approximately $2.1 million*
Average Award Amount	EERE anticipates making awards that range from $200,000 to $500,000
Period of Performance	12 to 36 months
Types of Funding Agreements	• Cooperative Agreements • Grants • Technology Investment Agreements • Work Authorizations • Interagency Agreements
Cost Share Requirement	20% of Total Project Costs

*Subject to the availability of appropriated funds

Statement of Substantial Involvement

EERE has substantial involvement in work performed under awards made following this FOA. EERE does not limit its involvement to the administrative requirements of the award. Instead, EERE has substantial involvement in the direction and redirection of the technical aspects of the project. 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 the Go/No Go decision point(s).
- EERE participates in major project decision-making processes.

Cost Sharing Requirements

Applicants are bound by the cost share proposed in their Full Applications if selected for award negotiations.

1. **For institutions of higher education and non-profit organizations:**

   The cost share requirement on this FOA is eliminated if the prime recipient is an institution of higher education or nonprofit organization.

2. **For all other entities:**

   The cost share must be at least 20% of the total project costs for research and development projects. The cost share must come from non-federal sources unless otherwise allowed by law. A project funded under Innovation Fund Denmark will be considered separate and distinct from a project funded under this FOA, and therefore funding provided by Innovation Fund Denmark and other funding towards the proposed Danish project does not count as cost share to the U.S. project proposed under this EERE FOA.

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
- If you are selected for award negotiations, 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
- Please note, vendors/contractors may NOT provide cost share. Any partial donation of goods or services is considered a discount and is not allowable.

Allowable Cost Share

- Cost Share must be allowable and must be verifiable upon submission of the Full Application
- Refer to the following applicable Federal cost principles:

Entity	Cost Principles
For-profit entities	FAR Part 31 *http://farsite.hill.af.mil/reghtml/regs/far2afmcfars/fardfars/far/31.htm*
All other non-federal entities	2 CFR Part 200 Subpart E - Cost Principles *https://www.ecfr.gov/cgi-bin/text-idx?node=2:1.1.2.2.1.5&rgn=div6*

For more information, see the Cost Share Appendix A in the FOA

Compliance Criteria

All applicant submissions must:

- Demonstrate coordination with a complementary and distinct Danish project and participation in a well-balanced consortium. The Danish project team must separately submit a coordinated and distinct application to Innovation Fund Denmark's corresponding funding opportunity on e-grant.

- Divide efforts appropriate to the funding contributions available. EERE funds will be used to support the U.S. entity work through this FOA. Innovation Fund Denmark funds will be used to support Danish entity work through Innovation Fund Denmark's corresponding funding opportunity.

Compliance Criteria

All applicant submissions must:

- Include significant effort by one or more minority-serving institution(s). At a minimum, 40% of the award funding must go to a participating MSI(s) either as a prime recipient or a sub-recipient.

Full Applications

Some of the required Full Application documents include:

- **Technical Volume**: The key technical submission - info relating to the technical content, project team members, etc.
- **SF-424 Application for Federal Assistance:** The formal application signed by the authorized representative of the applicant.
- **SF-424A Budget & Budget Justification:** a detailed budget and spend plan for the project.
- **Summary for Public Release**
- **Summary Slide**

- **Resumes**
- **Letters of Commitment**
- **Current and Pending Support**
- **Statement of Project Objectives**
- **Subrecipient Budget Justification (if applicable)**
- **Location(s) of Work**
- **SF-LLL Disclosure of Lobbying Activities**
- **Transparency of Foreign Connections**
- **Potentially Duplicative Funding Notice**
- **Administrative Documents (if applicable):** e.g., DOE Work Proposal for FFRDC, FFRDC Authorization, Potential Tribal Impact Considerations, Waiver Requests

Please note: This list is non-exhaustive and should not be considered complete. For all required Full Application documents, review section IV.C. of the FOA.

Full Applications: Technical Volume Content

Applicants must submit an identical technical volume to both EERE and Innovation Fund Denmark's e-grant to be eligible for funding under this FOA. The Technical Volume scope, tasks, deliverables, and milestones should describe the effort to be performed by the whole U.S.-Danish project consortium, including both the EERE funded U.S. project as well as Innovation Fund Denmark funded Danish project. The technical volume should describe distinct and complementary proposed efforts by the U.S. project team and the Danish project team.

Content of Technical Volume	Page Limits
Cover Page	1 page
Summary Abstract	1 page, 400 words maximum
Project Relevance and Objectives	2 pages
Project Workplan	4 pages
Consortium Participants	2 pages

Full Application Eligibility Requirements

- Applicants must submit a Full Application by 01/14/2025 at 5:00pm E.T.
- Full Applications are eligible for review if:
  - The Applicant is an eligible entity per Section III.A;
  - The Cost Share requirement is satisfied per Section III.B;
  - The Full Application is compliant per Section III.C;
  - The proposed project is responsive per Section III.D; and
  - The Full Application meets any other eligibility requirements listed in Section III.

Who is Eligible to Apply?

Eligible applicants for this FOA include:

1. U.S. citizens and lawful U.S. permanent residents
2. For-profit entities
3. Educational institutions
4. Nonprofits
5. State, local, and tribal government entities
6. DOE/NNSA FFRDCs

For more detail about eligible applicants, please see Section III.A of the FOA

Nonprofit organizations described in Section 501(c)(4) of the Internal Revenue Code of 1986 that engaged in lobbying activities after December 31, 1995, are not eligible to apply for funding.

Prime Recipients must be incorporated (or otherwise formed) under the laws of a State or territory of the United States and have a physical location for business operations in the United States. See Section III.A.ii for requirements applicable to foreign entities applying under this FOA.

Multiple Applications

An entity may submit more than one Full Application to this FOA, provided that each application describes a unique, scientifically distinct project.

Merit Review and Selection Process (Full Applications)

- The Merit Review process consists of multiple phases that each include an 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, to make the selection decisions

Technical Merit Review Criteria

Applications will be evaluated against the technical review criteria shown below. All criteria are of equal weight.

Criterion 1: Impact (34%)

This criterion involves consideration of the following factors:

• The degree to which the proposal exhibits good knowledge of the market and demand for the proposed solution;

• The extent to which the proposed solution addresses a core technical barrier that is not being addressed by others, and has the potential for wide-scale replicability;

• The degree to which the proposal is feasible, innovative, and will make significant progress toward solving the identified problem;

• Where appropriate, adequacy of a plan to commercialization, with the relevant partners in place

Technical Merit Review Criteria

Applications will be evaluated against the technical review criteria shown below. All criteria are of equal weight.

Criterion 2: Quality of the Idea and Capability (33%)

This criterion involves consideration of the following factors:

• Extent to which the proposal identifies a problem fully aligned and essential to the advancement of the topic area;

• Level of understanding of the current state-of-the-art and identification of key research areas that will have an impact on the current state and increase knowledge;

• Demonstrated positive value from the combination of U.S. and Danish partners– technological, managerial and financial capacity – to the consortium beyond that of each team or partner on their own;

• Capability of the U.S. and Danish teams including a strong technical background with the relevant and necessary expertise and access to relevant/suitable facilities to complete all aspects of the proposed work;

Technical Merit Review Criteria

Applications will be evaluated against the technical review criteria shown below. All criteria are of equal weight.

Criterion 3: Quality of Execution (33%)

This criterion involves consideration of the following factors:

• Sufficiency of measures in place to ensure good communication and interaction between the U.S. and Danish entities;

• Comprehensiveness of the implementation strategy that is well-conceived, appropriate for the current stage of development, and has a sound plan for measuring progress and success;

• Clarity of the project plan, with fully developed tasks, subtasks, milestones and deliverables that will enable effective project management; and

• Discussion of the technical and programmatic risks that are clearly understood and fully disclosed, with well-considered mitigation plans that have a high probability of ensuring project success.

Selection Factors

The Selection Official may consider the merit review recommendation, program policy factors, and the amount of funds available in arriving at selections for this FOA

Program Policy Factors

The Selection Official may consider the following program policy factors in making his/her selection decisions:

- The degree to which the proposed project exhibits technological diversity when compared to the existing DOE project portfolio and other projects selected from the subject FOA;
- The degree to which the proposed project, including proposed cost share, optimizes the use of available EERE funding to achieve programmatic objectives;
- The level of industry involvement and demonstrated ability to accelerate commercialization and overcome key market barriers;
- The degree to which the proposed project will accelerate transformational technological advances in areas that industry by itself is not likely to undertake because of technical and financial uncertainty;
- The degree to which the proposed project, or group of projects, represent a desired geographic distribution (considering past awards and current applications);
- The degree to which the proposed project incorporates applicant or team members from Minority Serving Institutions (e.g., Historically Black Colleges and Universities (HBCUs)/Other Minority Institutions (OMIs)); and partnerships with Minority Business Enterprises, minority-owned businesses, woman-owned businesses, veteran-owned businesses, or Indian Tribes;
- The degree to which the proposed project will employ procurement of U.S. iron, steel, manufactured products, and construction materials;

Program Policy Factors

The Selection Official may consider the following program policy factors in making his/her selection decisions:

- The degree to which the project promotes increased coordination with nongovernmental entities for demonstration of technologies and research applications to facilitate technology transfer; and
- The degree to which the proposed project supports complementary efforts or projects, which, when taken together, will best achieve the research goals and objectives.

FOA Description

Applicants applying to this EERE FOA must have a corresponding proposal submitted to Innovation Fund Denmark's funding opportunity on e-grant.

Funding will only be provided to consortia with projects that are positively evaluated by both funders.

See Innovation Fund Denmark's website for information on the Danish funding opportunity:

- https://innovationsfonden.dk/en

Registration Requirements

- To apply to this FOA, Applicants must submit application materials through EERE eXCHANGE:
  - Applicants must have a Login.gov account to access EERE eXCHANGE. Please ensure that the email address associated with Login.gov matches the email address associated with your eXCHANGE account. For more information, refer to the eXCHANGE Multi-Factor Authentication (MFA) Quick Guide in the Manuals section in eXCHANGE.
- Obtain a "control number" at least 24 hours before the submission deadline.

- Although not required to submit an Application, the following registrations must be complete to received an award under this FOA:

Registration Requirement	Website
SAM	https://www.sam.gov
FedConnect	https://www.fedconnect.net
Grants.gov	http://www.grants.gov

Means of Submission

- Full Applications 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 to 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 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 cancellation of further award negotiations and rescission of the Selection

Questions

- Questions about this FOA? Email WETOFOA@ee.doe.gov
  - All Q&As related to this FOA will be posted on EERE eXCHANGE
    - You must 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