

Notice of Intent: \$10.6 Million Funding Opportunity for Floating Offshore Wind Technology

The National Offshore Wind Research and Development Consortium (NOWRDC) intends to run a competitive solicitation titled “Solicitation 4.0 - Innovations in Floating Offshore Wind”.

This solicitation will fund \$10.6 million of projects that address several major areas of need for floating offshore wind, including innovation in ports and vessels, transmission technology, and uncrewed underwater vehicles for environmental monitoring.

This solicitation is a collaborative effort with anchor funding from the California Energy Commission (CEC), and leveraged funding from the New York State Energy Research and Development Authority (NYSERDA), the U.S. Department of Energy, the Massachusetts Clean Energy Center (MassCEC), and the Bureau of Ocean Energy Management (BOEM).

NOWRDC expects to include the following topic areas in the solicitation to address various technological, environmental, and cost barriers to help accelerate the deployment of floating offshore wind. Projects proposed under this solicitation should focus on novel solutions and advances in knowledge to fill gaps not being addressed by other public funding or developer-specific initiatives.

Topic Area 1: Innovations in Ports and Vessels to Support Floating Offshore Wind Installation

Purpose

This topic area seeks to spur innovation in the vessels and port infrastructure required to facilitate floating offshore wind development. Project emphasis should be on novel and adaptable port and vessel innovations that can accelerate floating system assembly and deployment timelines. Innovations should increase process efficiency and cost effectiveness and be versatile and adaptable to various platform and turbine designs and sizes. The scope does not include the actual design or engineering of floating offshore wind turbine platforms or substructures themselves.

Proposed Innovation

Projects funded under this initiative will propose innovations addressing one of the following technical subject areas:

1. Port Infrastructure: Explore concepts for modular or flexible work areas to accommodate the floating offshore wind system manufacturing, assembly, maintenance, wet storage, and transportation processes. Develop innovations that can supplement or be easily integrated into existing facilities, minimizing the need for extensive modifications and relieving space constraints. Innovations should have applicability in multiple regions of the United States.

2. Installation Vessels and Installation Support Vessels: Research and development of novel vessel concepts or upgrades to existing Jones Act compliant vessels to support floating offshore wind fabrication and installation demands.

Projects Not of Interest

- Floating offshore wind turbine platform design and engineering efforts.
- Operations assessments or feasibility studies of existing vessels and applications without technology innovation.
- Designs or constructability studies applicable to only one specific port or location.

Topic Area 2: Floating Offshore Wind Transmission Technology Advancement

Purpose

Projects that conduct feasibility analysis, product design, or demonstration/piloting of High-Voltage Direct Current (HVDC) dynamic cables and floating substations could de-risk transmission development and accelerate delivery of mature technology solutions to floating offshore wind markets.

Proposed Innovation

1. Design and test innovative solutions for floating substation platform station keeping challenges, including active control systems and mooring load reduction devices.
2. Design and test HVDC dynamic power cables for floating substations, including innovative solutions for dynamic cable connections to floating platforms and static export cables.

Topic Area 3: Uncrewed Underwater Vehicles for Environmental Monitoring Around Floating Offshore Wind Infrastructure

Purpose

This topic area is specifically designed to spur innovation in uncrewed underwater vehicles (UUVs) that can facilitate sustainable floating offshore wind development along the U.S. West Coast. Project emphasis should be on 1) the role of emerging UUVs that can be incorporated into a regulatory strategy to streamline floating system permitting timelines, or 2) technological advancements to enable the use of UUVs in floating offshore wind infrastructure. Innovations should enable environmental data collection to support evaluations of impacts of floating offshore wind development such as physical oceanography, marine mammals, and benthic habitats. This may also include ways to mitigate or minimize impacts to National Oceanic and Atmospheric Administration (NOAA) Fisheries scientific surveys.

Proposed Innovation

Projects funded under this initiative will advance innovations addressing one of the following areas, as they relate to U.S. West Coast floating offshore wind development:

1. UUV Portfolio Innovation: Conduct an integrated systems analysis that evaluates the role of UUVs in supporting environmental monitoring of floating offshore wind. The analysis should consider three different component levels (i.e., autonomous platform to

carry sensors, sensor technology to collect environmental data, data processing and data transmission) and how they need to work together as one system.

2. Innovative UUV Technology Advancement: Develop and/or demonstrate enhanced UUV capability to address floating offshore wind-specific midwater or benthic monitoring challenges. Proposed innovations should integrate novel vehicle platform/type, sensor technology, and data transmission suitable for floating offshore wind. Projects addressing one or more of these areas will also be considered.

Key Dates

Notice of Intent Publication	June 17, 2024
Full Solicitation 4.0 Publication	Anticipated August 2024
Solicitation 4.0 Close and Application Due Date	Anticipated November 2024

Basic Eligibility Parameters

The lead applicant must be based in the geographic United States. For any subcontractors not based in the geographic United States, the applicant must justify why the proposed subcontractor scope is based abroad and how their work benefits a U.S.-specific offshore wind challenge.

Proposers are not required to provide any form of cost-share. However, it is recognized that, for projects such as demonstration projects, project team members may wish to provide additional funding or in-kind contribution to maximize the benefit of the project. Proposers are encouraged to provide an indication of any additional funding or in-kind contribution that will be used to support the delivery of a project.

The results of all research projects funded by NOWRDC must be published. If awarded, the proposer must agree to presentation of the results at symposia, national or regional professional meetings, and other forums, and to publication in journals, theses, or dissertations, the methods and results of all projects.

Additional Information

This is a Notice of Intent (NOI) only. NOWRDC may issue the described funding opportunity announcement, may issue a solicitation that is significantly different than the described solicitation, or may not issue a solicitation at all.

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

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