

U.S Manufacturing Commitments

Supporting offshore wind development in the United States will benefit hundreds of supply chain companies resulting in tens of thousands of manufacturing jobs spread throughout the country¹. The National Offshore Wind Research and Development Consortium will support this job growth by removing barriers to development and accelerating technology transfer to the U.S. offshore wind supply chain.

If selected for funding, the Applicant agrees to the following commitments on behalf of the Consortium members as a condition of that funding:

1.0 Offshore Wind Products

Consortium-supported offshore wind plant technology research will reduce U.S. production costs for towers, blades, nacelles and drivetrain components and deliver advanced technology solutions for the U.S. supply chain. This will encourage U.S.-based manufacturing of foundation and substructure equipment for both floating and fixed installations, as well as basic construction materials (concrete, rebar, gravel, etc.) to support these installations.

The Consortium will prioritize and competitively solicit projects with the greatest potential impact on both Levelized Cost of Electricity (LCOE) and benefit to the U.S. supply chain. Members of the Consortium's Manufacturing, Supply Chain and Service Provider Council (MSCC), such as General Electric, bring invaluable insight on barriers and opportunities to offshore wind manufacturing in the United States as well as deep knowledge of global supply chain interactions. Through regular interactions with the Consortium technical staff as well as participation in Consortium-sponsored conferences, MSCC members will help to prioritize research activities that remove U.S. manufacturing barriers and lower costs, as well as capitalize on US manufacturing opportunities such as cross-industry transferability. This will encourage investment in domestic manufacturing to serve the U.S. offshore wind market, creating jobs while reducing overall LCOE.

The Consortium's approach is similar to that of the Offshore Wind Accelerator, which has helped develop products throughout the European supply chain including floating LiDAR and access vessels. Consortium partner Carbon Trust will apply their experience working with the Offshore Wind Accelerator to achieve the same success for the U.S. supply chain.

2.0 Offshore Wind Infrastructure

The Consortium will encourage expansion in port facilities, staging sites and other coastal infrastructure by addressing barriers to installation including shipping logistics and construction vessel access. Lower cost foundation designs and construction methods will support the marine industry by allowing more U.S.-built vessels to participate in offshore wind construction. Working with partners such as Texas Tech, the Consortium will leverage expertise from the American oil and gas industry. Solutions adapted from technologies such as offshore drilling will

¹ National Renewable Energy Laboratory (NREL) (2015). Offshore Wind Jobs and Economic Development Impacts in the United States: Four Regional Scenarios. Accessed from <https://www.nrel.gov/docs/fy15osti/61315.pdf>

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accelerate offshore wind development, while supporting companies and jobs in the existing U.S. coastal energy supply chain.

3.0 Technology Testing

The Consortium's extensive network of test facilities at universities and national labs will provide the U.S. supply chain an unparalleled opportunity for rapid technology validation and reliability demonstration. In addition, NYSERDA has submitted a Policy Options Paper (case number 18-E-0071) to the New York Public Service Commission recommending that evaluation of procurement proposals for offshore wind in New York consider the inclusion of test sites to support research and development activities. Any such test sites resulting from procurement in New York wind resource areas would potentially be available to support Consortium activities.

Consortium Board member Sam Aronson, director *emeritus* of Brookhaven National Laboratory, is uniquely qualified to represent the perspective of U.S. National Laboratories and Federally Funded Research and Development Centers (FFRDCs). Part of Dr. Aronson's charter will be to connect Consortium research activities with long-term supply chain development activities ongoing at those national facilities.

4.0 Technology Development and Licensing

The Consortium's industry focus and commitment to technology transfer will give its member companies in the U.S. manufacturing industry a decisive competitive edge. Research projects will be prioritized according to their benefit to the industry and executed under the oversight of an industry-led Board, ensuring that development occurs in direct response to market needs and with a commercialization path defined at project inception.

The Consortium's Tech Transfer and Legal Staff are responsible for establishing and maintaining an Intellectual Property (IP) framework and agreements that will catalyze tech transfer and licensing to facilitate dissemination of technical advances. Key elements of this IP framework include:

- A standard non-disclosure agreement (NDA) clearly outlining ownership rights for all parties to whom a potential invention may be disclosed as well as the status of background IP.
- A Technology Transfer Plan including identification of potential licensing and commercialization partners within the Consortium. Tech Transfer staff will encourage favorable royalty terms and cross-licensing opportunities as a reflection of the partnership benefits provided by the Consortium.
- A Data Management Plan covering the storage, dissemination and treatment of business confidential and personal information.
- A mechanism for resolving disputes between members related to IP, with any issues that cannot be resolved within the Consortium referred to independent arbitration.

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5.0 Tech to Market Support

Each research project awarded by the Consortium will be assigned an advisor or advisory group consisting of industry members focused on technology commercialization and supply chain opportunities. These advisors will guide researchers to address technology barriers of highest value to the industry and with the best potential to reduce supply chain costs. Further, they will provide a path for validating innovative technologies and bringing them to market. This will have a catalyzing effect on technology development, shortening time to market.

The Consortium's Tech to Market (TTM) group includes public and private investors, including venture capitalists with interest in innovative technology investment. This group will provide mentorship and private investment to help supply chain companies fully develop and commercialize their new technologies.

Finally, it is recognized that continued collaboration between Consortium members will be critical to success in the offshore wind marketplace. Consortium-sponsored conferences will focus on bringing supply chain partners and technology innovators together with DOE and EERE representatives to continually prioritize and develop innovations for the benefit of U.S. offshore wind and manufacturing industries.