



FY 25 – 26 Multimodal Project  
Discretionary Grant Application

Dirigo Atlantic Floating Offshore Wind Port  
Sears Island, Maine



Project Outcomes

**FY25-26 Multimodal Project Discretionary Grant Program**  
***Dirigo Atlantic Floating Offshore Wind Port***  
***Maine Department of Transportation***

**Outcome Criteria**

This project is being submitted not only due to the numerous regional benefits that will result from the construction of the first purpose built floating offshore wind port in the Atlantic Ocean and the construction of a first-of-its-kind Jones Act compliant, U.S. flagged semi-submersible barge, but also due to the substantial national importance of such endeavors. The U.S. has a dearth of renewable energy import/export ports, and currently no operating floating offshore wind ports. A focus has been on converting U.S. ports to clean power ports. In other words, converting the source of power from fossil fuels to renewable ones. This is important to moving the U.S. economy away from fossil fuel dependence. However, there has been less emphasis on investing in ports that can create and support a renewable energy supply. This next step in the movement toward clean energy is critical. Wind energy is abundant and can be efficiently harnessed to provide millions of households across the country with clean energy. However, this energy cannot be harnessed and will remain offshore without significant investments in new port infrastructure that can support the massive and unique infrastructure necessary to accommodate floating offshore wind turbines.



Figure 1: Port Drawing

On May 1, 2024, the Bureau of Ocean Energy Management (BOEM) proposed eight lease areas for offshore wind in the Gulf of Maine with the potential to generate 15GW of floating offshore

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wind.<sup>1</sup> Further opportunity for floating offshore wind exists and is being planned for along the Atlantic Coast. Realizing the energy potential of this area will require a port capable of supporting floating offshore wind foundation assembly and wind turbine generation staging and integration. The installation of floating offshore wind turbines requires a unique port facility that meets the extreme heavy lift capabilities and substantial uplands footprint required for offshore wind deployment.

About two-thirds of U.S. offshore wind energy potential exists over waters too deep for today's fixed bottom wind turbine foundations.<sup>2</sup> These floating structures are massive and require the development of a robust domestic supply chain that has a strong backbone centered around ports.

No other ports on the East Coast exist to support floating offshore wind installation. The East Coast ports that have been constructed or are currently under development have been designed to service fixed bottom wind projects. While the criteria for fixed bottom and floating offshore wind ports is similar, there are additional requirements for floating offshore wind such as: additional quay length and structural capacity, additional upland area and federal and local access channels that can accommodate the large floating foundation tow.

There are no other ports that are being considered on the East Coast that can accommodate all aspects of floating offshore wind construction and deployment and that are within close proximity to the Maine WEA. There are alternative ports; however, each has a flaw that will make implementation a significant challenge. The New Jersey Wind Port has a sufficient footprint and quay length to support both main floating offshore wind activities; *however*, the tow distance from this port and the Maine WEA is approximately 520 nm. The federal access channels at the Salem Offshore Wind Terminal in Massachusetts are too narrow and shallow to allow for towing of foundations and the small footprint of the Marine Commerce Terminal in New Bedford, Massachusetts will likely preclude its use. In addition, these ports will be in use supporting fixed offshore wind projects and may be unavailable to support floating wind in the Gulf of Maine for the foreseeable future.

If a port capable of supporting both floating foundation assembly and wind turbine generator staging and integration is not built within a reasonable distance to the Maine WEA, risks associated with floating offshore wind installation will increase along with project costs, and the pace of final deployment will decrease.

This project addresses the Outcome Criteria detailed in the grant NOFO as detailed below.

### **Criterion 1: Safety**

Improving and promoting safety at port facilities and throughout the maritime industry at-large is a primary purpose for any project, and a key priority of the Biden Administration. This new port

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<sup>1</sup> [https://www.boem.gov/sites/default/files/images/GoME\\_PSN\\_LeaseAreas\\_Gray.png](https://www.boem.gov/sites/default/files/images/GoME_PSN_LeaseAreas_Gray.png)

<sup>2</sup> <https://www.energy.gov/eere/wind/articles/blowing-away-gaps-west-coast-offshore-wind-transmission-analysis>

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construction project is no exception, and its design has been informed to mitigate known safety challenges. It is critical to ensure safety during construction of the port as well as during assembly and delivery of the floating offshore wind turbines to the lease area. Due to the vast size of floating offshore wind components and the complexity of a heavy lift terminal to marshal and assemble floating offshore wind turbines, detailed civil and marine engineering will be necessary to ensure the terminal will be constructed and can be operated safely. Improving safety at the port during construction and operations will be achieved through its design, mandatory safety training of contractors, and the physical location of the port itself.

A safety benefit to locating the floating offshore wind port on Sears Island is that it is located within an existing channel with established ship traffic lanes, minimizing ship handling risks a key to reducing potential accidents and injuries. This region is under the jurisdiction of the Penobscot Bay Pilots who have a long history of guiding vessels in and out of the Searsport channel safely and with minimal disruption to existing fishing and lobstering activities in the area; this is particularly important as vessel traffic increases. Considering the magnitude of the wind turbines themselves it is critical that harbor pilots are available to navigate the vessels safely through the channel.

The north/south facing direction of the proposed 1,500-foot quay at Sears Island will also provide a better berthing arrangement for vessels and floating foundations moored at the facility and create a safe and reliable environment for marine cargo operations. Predominant seasonal wind directions are important considerations because these contribute to the “fetch,” the distance the wind blows over open water and generates wave action in a marine environment.

- Interviews and public presentations from the Penobscot Bay Pilots expressed favor for the Sears Island site as being the safest alternative due to prevailing weather conditions in Penobscot Bay emphasized by extreme tide and storm damage to existing sites with vessel berths in the Port of Searsport in 2023 and 2024.
- The proposed Sears Island site provided a safer quay orientation for vessels maneuvering on and off the quay due to the orientation of the berth parallel to the prevailing winds.
- The pilots presented that it would be safer and more reliable to maneuver a ship at the Sears Island alternative because the ship would be oriented north-south, aligning the berth with the stronger prevailing winds.

The primary purpose of the 1,500-foot quay allows for three berths that will permit the separation of wind turbine port operations. The three berths will allow for the separation of launching foundations, tower and wind turbine generator assembly, and deliveries of components by vessel. Furthermore, loading and unloading of components and materials to the terminal by ship or barge is done at one end of the quay. This separation increases safety allowing operations to work at the highest level of safety as the operations are not interacting in the same quay space. This is critical to ensuring worker safety throughout production.

Launching foundations, marshalling components, and assembly at one port location will reduce the towing and transportation distance for each floating offshore wind turbine. The nearest viable

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potential port is located in New Jersey, roughly five times the distance to the WEA from Sears Island. The North Atlantic is known to be extremely rough in the winter months and metocean conditions will likely lead ocean towing operations to seek windows of calm weather to conduct offshore towing operations.

The port is also a short tow distance from a wet storage area with deep, unobstructed water where completed foundations can be safely anchored. The foundations can be brought to the quay at the port when the wind turbine generator is ready to be assembled. Reducing these movements will significantly reduce the risk of injury but also will reduce the handling and transit time of foundations by ocean-going tugs needed to fully deploy this renewable energy.

Furthermore, the site has a dedicated roadway (Sears Island Road) to the offshore wind port. Sears Island Road connects the island directly to U.S. Route 1 and is designed to handle truck traffic and large loads traveling primarily through a forested area. This direct connection to Route 1 reduces the mixing of port traffic with local residential traffic and provides for safe access to and from the port. Supporting the actions identified in the National Roadway Safety Strategy, the port access road on Sears Island will be built to allow dedicated access to the port without moving through the conservation area on Sears Island. This bifurcation of the road will significantly protect vulnerable and non-motorized users by reducing port-related traffic conflicts with people enjoying the conservation areas of the island.

As a part of the State of Maine’s promotion of offshore wind development, Governor Mills signed "An Act Regarding the Procurement of Offshore Wind Energy Resources" (L.D. 1895, P.L. 2023 Chapter 481) into law, which authorizes the procurement process of at least 3,000 MW of offshore wind installed by 2040 and also includes workforce standards for contractors and subcontractors for offshore wind power and the port. Subsection A(2) requires that contractors and subcontractors meet state requirements that prescribe mandatory safety training.<sup>3</sup>

The semi-submersible barge will also be a commercial asset of considerable importance to the operation and existence of the port. Building a barge that is state-of-the-art is required to make the port the leading commercial producer of floating offshore wind turbines in the world, but proper safety considerations for these delicate float on/float off operations must be paramount. The Maine Department of Transportation (MaineDOT) intends to partner with a barge and marine operations company to construct the semi-submersible barge and design a world class floating asset that can deliver the largest floating offshore wind turbines that are currently being designed. Construction of a barge for safely launching floating projects across the U.S. will help to address the shortfall of this equipment with U.S.-engineered and -built solutions. The aforementioned research array will be the first floating offshore wind turbine foundation fabricated at the port and the first of its kind project in the U.S. and unique in the world. The float off operation will require a large semi-submersible heavy lift barge that can lift nearly 20,000 metric tons, de-ballast itself, and maintain enough stability to be safe throughout the operation. While there are similar barges being

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<sup>3</sup> Maine Legislature, Maine Revised Statutes, Title 26: Labor and Industry, Chapter 15: Preference to Maine Works and Contractors, Section 1317. Construction Safety Training Requirements for Craft Workers, <https://legislature.maine.gov/legis/statutes/26/title26sec1317.html>.



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constructed throughout the world, this barge will be U.S.-built and -flagged and available for domestic, Jones Act-compliant offshore wind and/or heavy-lift operations in the United States. The barge will be built to the highest standard and designed by the nation's leading experts in heavy-lift barge operations, resulting in jobs staying in America. The barge will also be built in a U.S. shipyard, which will ensure its construction is built to the highest United States Coast Guard (USCG) and International Maritime Organization (IMO) safety standards.

**Criterion 2: State of Good Repair**

This project satisfies the U.S. DOT's goals in promoting a state of good repair at port facilities and U.S.-built vessels. The project will create new infrastructure in a rural community in Maine. The port and barge will be owned by MaineDOT, which can confirm that the port and barge will be maintained in a state of good repair following construction completion. Both assets will be included in MaineDOT's asset management plan. MaineDOT has a long history of operating and maintaining transportation facilities in a state of good repair. The project will also address vulnerabilities in the transportation network that will threaten future mobility of goods and economic growth by creating a purpose-built port that will allow for the efficient implementation of robust floating offshore wind infrastructure in the Gulf of Maine leading to energy independence for the State of Maine and other parts of New England. There is also a need for U.S.-flagged, Jones Act-compliant operated barge and offshore-industry-specific vessel to serve the forthcoming floating wind market in the U.S.

Floating offshore wind is a newer and highly capital-intensive maritime industry that combines both transportation and renewable energy aspects. Currently, there are inadequate port facilities and floating equipment assets available to meet federal and state offshore wind energy goals. This is a major risk factor to meeting the Biden Administration's goals as well as the aggressive goals set by the State of Maine. There is also a need for equipment to launch and maintain the floating wind foundations and associated wind turbines. As of today, there are only novel solutions available to launch floating foundations; they are expensive with unknown reliability. The U.S. currently has no floating barges capable of conducting float-on/float-off operations for the biggest wind turbine foundations being designed. The only barges and equipment capable of doing this work are foreign flagged and require exorbitantly high day-rates for use.

The proximity of this port to the Gulf of Maine WEA is an important consideration. Floating offshore wind turbines are fully constructed at the port and then towed to the installation site within the WEA. Keeping this towing distance to a minimum will increase efficiencies, decrease overall project risks and costs, and allow for a faster and more reliable installation schedule. Co-locating the two main activities (foundation assembly and wind turbine generator staging and integration) will have similar effects on the project. It is significantly safer, less expensive, and more efficient to assemble foundations and integrate the wind turbine generator components onto the foundation at a single port rather than splitting the activities between two or more ports.

All finished components, and many of the supplies and materials, are too large and heavy to transport via road or railway, and the size and weight of the offshore wind components drive strict

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requirements on potential locations for port facilities. These construction, staging, and marshalling port facilities need sufficient acreage, quayside length, quayside bearing capacity, and navigation channel depth to safely produce and handle the turbine and balance of wind turbine generator (WTG) components. A minimum of 100 acres of solid, flat land is needed to construct the wind turbines and the floating platforms, and the turbines are upwards of 900 feet tall. All these requirements necessitate special purpose-built ports to be efficiently constructed and maintained.

Marshalling and integration ports, which are required for floating offshore wind, are capital-intensive, as they are generally larger than the ports used by fixed floating offshore wind projects because of the need to manufacture, store, and assemble floating foundations. These ports require wide and deep navigational channels and berths without air-draft impediments to accommodate the floating foundations.<sup>4</sup> The depth requirements as well as a need for high-acreage and heavy-lift capabilities at the port facility reduces the number of viable locations for port construction unless dredging occurs. Dredging in Penobscot Bay has been controversial and can greatly increase the risks to any project in that area. Sears Island has been dredged to a 40 foot draft which provides adequate depth negating the need to go through the dredging process.

Offshore wind port infrastructure investments are critical to the movement away from fossil fuels and in fact, “will unlock 16-to-29 times more investment in clean energy generation” and related significant emissions reductions and benefits across communities.<sup>5</sup> Ports developed to support offshore wind development and deployment are expected to be maintained and operational for more than 50 years, which would provide sustained long-term benefits for this short-term investment.<sup>6</sup> Likewise, the semi-submersible barge has a useful life of 30 years. With staging, integration, and marshalling capabilities available in the Gulf of Maine the state of Maine as well as the Biden Administration will see long term job growth, economic growth, and efficient supply chain activity that otherwise could be sourced in Canada which has a robust offshore wind industry, reducing the long-term benefits seen in the U.S.

### **Criterion 3: Economic Impacts, Freight Movement, and Job Creation**

MaineDOT believes that the floating offshore wind industry has the potential to transform Maine into a leader in renewable energy. The 18-month-long *Maine Offshore Wind Roadmap* effort, funded by the US EDA and led by the Maine Governor’s Energy Office (GEO) studied multiple areas and utilized a collaborative and inclusive process to make recommendations to the state for how to proceed with the offshore wind industry. There are currently more than 80 businesses across Maine engaged or interested in participating in the offshore wind market.

Maine has been presented with an opportunity to affect meaningful change in the state economy and environment by responsibly pursuing offshore wind development. This new industry is fully dependent upon new port and heavy-lift infrastructure, which does not currently exist in the US. The

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<sup>4</sup> Building a National Network of Offshore Wind Ports, Oceanic Network, Sept. 20, 2023, <https://oceanic.org/building-a-national-network-of-offshore-wind-ports/>

<sup>5</sup> See id.

<sup>6</sup> See id.

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construction of the port and barge will create good paying jobs for the construction period. Post-construction of the wind port will create new high paying job opportunities that will allow families to create wealth well into the future as well as support emerging and existing businesses throughout the state. This project will be able to support a variety of different technologies and offer a state-of-the-art facility to fabricate floating foundations unlike any other facility in the world.

The development of a floating offshore wind port facility in Maine will provide a substantial economic benefit for the state. This is a once-in-a-lifetime opportunity to transform the Maine economy by introducing a new additive industry with a technology familiar to Maine and its construction industry by utilizing the UMaine VoltumUS floating offshore wind foundation; providing floating foundations for projects in the Northeast and U.S. East Coast to achieve clean energy goals and creating hundreds of good-paying and reliable maritime port jobs.<sup>7</sup> Developing an offshore wind project at a coastal port in Maine will have significant economic benefits that will positively impact Maine and the region.

### *Economic Impact*

This project directly and in the near term will result in greater public and private investment in land use productivity as the project will use land that has been designated specifically for a port and transportation purposes. The 100-acre parcel of land that will be utilized to construct the port was designated for port development in 2009. The development of the facility will put this parcel to its highest and best use.

Based on similar offshore wind developments, potential lease payments that are likely to be made by offshore wind energy generation companies can be estimated. Based on four recent similar lease agreements, payments are estimated between \$60,000 and \$280,000 per acre per year. Therefore, over a period of 25 years, a 100-acre site is likely to generate between \$125 million and \$560 million in private sector contributions to the State of Maine as a direct result of the port being constructed. While lease/contribution payments represent financial transfers, they are a good approximation for net benefits to society due to the improvement in efficiency of delivering offshore wind projects and will create a funding stream for the maintenance of the facility in a state of good repair. The barge asset will be in high demand for floating projects in the Gulf of Maine will likely be capable of providing services for offshore wind projects throughout the U.S. The U.S.-flagged, Jones Act-compliant barge will be made available on a project-by-project basis, and it is likely that more barges of similar design will be required to keep up with demand. A day rate to use the barge, which will be negotiated by MaineDOT and the operator of the barge, will be incorporated into the total cost. While float-on/float-off operations are not a novel concept, barges of this size have not been commonly used until they became a necessity for large scale oil, gas and renewable energy projects located offshore.

The project will also enhance recreational and tourism opportunities by constructing direct road access to the port site on the island which will separate access to hiking paths on the island so that

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<sup>7</sup> See University of Maine, Advanced Structures & Composites Center, VoltumUS  
<https://composites.umaine.edu/volturnus/>



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there will be no interaction with the operations at the port, except for a proposed viewing area for recreators interested in viewing the port activity. This is an important aspect of the development of the project. As noted above, the 100-acre site location has already been designated for port activity. Therefore, this newly constructed road directly to the port will protect access to the other 600+ acres of the island reserved for conservation. The Project Location File clearly illustrates the geography of the island highlighting the separation of the road at the entrance to the island giving visitors clear and protected access to the recreational portion of the island.

### *Freight movement*

This project will develop a coastal port that will provide direct access via barge and ship to deliver floating offshore wind turbine components. This new port will create access within the supply chain network. This is particularly important considering there are currently no other ports on the East Coast that can handle the delivery and construction of floating offshore wind turbines and platforms. Significantly, in September 2023 a Memorandum of Understanding on Offshore Wind Supply Chain Collaboration among the U.S. DOE, DOI, DOC, and DOT and nine states – including Maine – was signed to support the development of a coordinated, resilient, and sustainable regional offshore wind supply chain along the East Coast.<sup>8</sup> This coordinated approach will allow for the leveraging of the port and barge to advance the offshore wind industry in the U.S.

### *Job Creation*

The growth of the offshore wind industry offers the potential for many different occupational roles, with job opportunities across project development, manufacturing and supply chain, materials handling, stevedoring, maritime construction, vessel operations, and operations and maintenance. These workforce opportunities offer long-term, high-quality employment opportunities.

Maine Statute L.D. 1895 was passed into law in 2023 and was developed with input from several labor organizations, employee-owned companies, and other CBO's and includes establishing standards for local hiring, workforce development and safety, including recruiting traditionally underrepresented populations and developing registered apprenticeship programs under Maine law using industry approved training structures.<sup>9</sup>

Occupations that require basic and skilled trades in construction and manufacturing represent the largest employment opportunity in offshore wind. In fact, if continued investments in port facilities that can support floating offshore wind occur and capacity of offshore wind is fully realized, projections estimate the creations of 83,000 offshore wind industry jobs nationwide.

In 2020, Maine Governor Janet Mills announced a goal of 30,000 clean energy jobs in the state by 2030, and the state is already more than halfway toward achieving the goal. Analyses for *The*

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<sup>8</sup> For Memorandum of Understanding please see <https://www.maine.gov/mdot/grants/infra/>.

<sup>9</sup> For LD 1895 language, see <https://www.maine.gov/mdot/grants/infra/>

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*Maine Offshore Wind Roadmap* identified 117 key occupations essential for floating offshore wind development, requiring a range of skills and education levels from high school diplomas with apprenticeships to PhDs. The Sears Island development provides an unprecedented opportunity to expand on Maine’s existing talent and generate 1,300 family-supporting jobs during port construction and 350 jobs during ongoing port operations, which will initially serve the state-led floating offshore wind Research Array planned in the Gulf of Maine.<sup>10</sup> As Maine DOT advances the planning and construction of Sears Island, it will do so in accordance with the workforce components of Maine P.L. 2023, Chapter 481, which provides for compensation and benefit thresholds, hiring guidelines, and apprenticeship program requirements.

Community based organizations (CBOs), companies, and labor organizations in Maine are already preparing for Sears Island and the Research Array opportunity as a precursor to full commercial scale floating offshore wind development in the Gulf of Maine. The Maine Community College System has partnered with Ironworkers Union Local 7 to develop offshore wind training at no cost to participants with support from the Governor’s Energy Office’s Clean Energy Partnership (CEP) Program. The Maine Community College System, Maine Maritime Academy, and the Maine Building and Construction Trades Council have Memoranda of Understanding to provide high quality workforce opportunities with the developers of the Research Array project that is planned to be constructed at Sears Island. Further, the University of Maine has developed a series of multi-disciplinary micro-credential courses on offshore wind, including undergraduate and graduate-level courses on offshore wind, and established an undergraduate concentration program in offshore wind with support from the CEP to prepare Maine’s future offshore wind workforce.

**Criterion 4: Climate Change, Resiliency, and the Environment**

Maine, is unfortunately, the most heating oil-dependent state within the United States: six in ten homes are heated by oil or kerosene. Residents spend more than \$4 billion a year importing fossil fuels. The State of Maine is committed to transforming the state into a clean-energy economy; in fact, the *Maine Won’t Wait Climate Action Plan* provides among other goals for Maine to be 100 percent carbon neutral by 2045 and highlights the need for floating offshore wind development.<sup>11</sup> Advancing these goals resulted in the development of a stakeholder-driven comprehensive plan, the *Maine Offshore Wind Roadmap*. Following the recommendations of the *Roadmap*, the Maine Legislature, in line with other east coast states, recently mandated the procurement of three gigawatts (GW) of responsibly developed offshore wind energy by 2040.<sup>12</sup>

Within the past decade, the University of Maine’s Advanced Structures and Composites Center has been pioneering research and development into a floating-hull technology center. Numerous

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<sup>10</sup> BOEM will release the next round of leases for the Gulf of Maine in second quarter of 2024.

<sup>11</sup> Maine Won’t Wait, Maine Climate Council, A Four-Year Plan for Climate Action, Dec. 2020, [https://www.maine.gov/climateplan/sites/maine.gov.climateplan/files/inline-files/MaineWontWait\\_December2020\\_printable\\_12.1.20.pdf](https://www.maine.gov/climateplan/sites/maine.gov.climateplan/files/inline-files/MaineWontWait_December2020_printable_12.1.20.pdf) (last visited May 4, 2024).

<sup>12</sup> The *Maine Energy Plan: Pathway to 2040* identifies the need for at least three GW of OSW in multiple scenarios with the goal of 100 percent clean energy by 2040. Maine has statutory authority to procure 3 GW of OSW power by 2040.

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Maine engineering, construction, and manufacturing firms are engaged in the national and global offshore wind industry. Offshore wind has the potential to diversify and boost Maine's renewable energy sources by releasing a significant amount of energy that is now locked up in the Gulf of Maine winds. Because offshore winds are the highest and most dependable in winter when regional power demand for heating peaks, offshore wind has great energy potential in states like Maine. With moderate restrictions on the amount of onshore renewable energy accessible, Maine would require 2.1 to 2.8 GW of offshore wind by 2050 to fulfill rising energy requirements and lessen its dependency on fossil fuels.

*Resilience and the Environment*

MaineDOT will ensure that the purpose-built, climate resilient port will consider any increase in sea level that may impact the utility of the port in future years.

*Develops and Deploys Solutions that Reduce Climate Change Risks*

This project will create a purpose-built port that is designed to construct, assemble, and deploy floating offshore wind turbines that will help the U.S. become energy independent and help Maine residents rely on renewable energy rather than fossil fuels for energy throughout the year. The risks created by climate change to the infrastructure network are significant. One way to address and reduce these risks is to create transportation infrastructure that will work in tandem with renewable energy assets. Without good port transportation infrastructure, renewable energy creation particularly offshore wind energy creation is not possible, and the U.S. will not be able to unlock the massive potential of wind energy.

As noted in the National Climate Resilience Framework, companies often struggle to move promising ideas from the research and development phase to the scaling and commercialization phase.<sup>13</sup> Bridging the gap that separates the “lab” and the “market” often requires dedicated support which the construction of the port and barge will provide. Specifically, the project will advance Objective 3 “Mobilize capital, investment, and innovation to advance climate resilience at scale,” through two actions. First, it will support research-to-market pathways for floating offshore wind development on the East Coast and globally. The partnership with the University of Maine and Diamond Offshore Wind will drive development and implementation of innovative approaches to deploy floating offshore wind. Second, it will utilize the power of procurement. Maine, in alignment with the Memorandum of Understanding on Offshore Wind Supply Chain Collaboration involving the U.S. DOE, DOI, DOC, and DOT and nine states is utilizing the power purchase agreements to develop offshore wind and leverages energy procurement for the advancement of offshore wind development.

*Renewable and Resilient Power*

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<sup>13</sup> The White House, National Climate Resilience Framework, Sept. 2023, <https://www.whitehouse.gov/wp-content/uploads/2023/09/National-Climate-Resilience-Framework-FINAL.pdf> (last visited May 4, 2024).

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This project will continue to advance key stakeholder-based priorities identified in the *Maine Won't Wait Climate Action Plan* and *The Maine Offshore Wind Roadmap*, which included hundreds of representatives from communities, businesses, organizations, government leaders, and youth. Led by the Governor's Energy Office, the *Roadmap* identified the importance of offshore wind to help ensure an adequate and affordable clean energy supply to meet the state's renewable energy targets and generate economic growth and resiliency. The *Roadmap* underscored the importance of offshore wind energy as a powerful response to climate change and energy volatility driven by global events. Rising ocean and land temperatures threaten heritage industries of fishing, farming, and forestry. Higher sea levels endanger coastal communities, and more frequent and powerful storms damage infrastructure and public health. At the same time, Maine residents are experiencing higher energy price increases driven by unstable global markets and our over-reliance on fossil fuels.

There are key characteristics of offshore wind that uniquely position it to offset fossil fuel generation and impact Low Income/Disadvantaged Communities (LIDACs). Offshore wind generates the most energy during afternoon and evening high-wind periods. This ensures that offshore wind can reduce peak demands on the electric grid year-round.

Offshore wind provides reliable renewable energy generation in winter seasons, a period with significant fossil fuel dependence in New England. This will become increasingly important as electric demand grows with heating electrification. Without new offshore wind generation, the region will have to increase its reliance on thermal generation. This may include the increased use of peaker plants mainly fueled by natural gas and high emission fuel oil.<sup>14</sup> As these systems are able to be utilized less, resultant air pollution and greenhouse gas (GHG) emissions in localized communities surrounding peaker plants will be reduced.

Additionally, since offshore wind does not require a fossil fuel source, customers will benefit from more reliable pricing. Electricity generated using natural gas and oil are subject to global market price fluctuations. This volatile price risk is in turn included in the cost of energy passed down to customers in electricity rates. This was seen in New England in the past two years following Russia's invasion of Ukraine and the subsequent natural gas volatility in Europe.

Indirectly, the new floating offshore wind developed will support broader decarbonization efforts in the transportation sector. Transportation emissions disproportionately impact environmental justice communities. The availability of reliable clean energy at port locations will help the port to prepare to support decarbonization and electrification efforts directly at the port in addition to the wider communities served through the region's electric grid.

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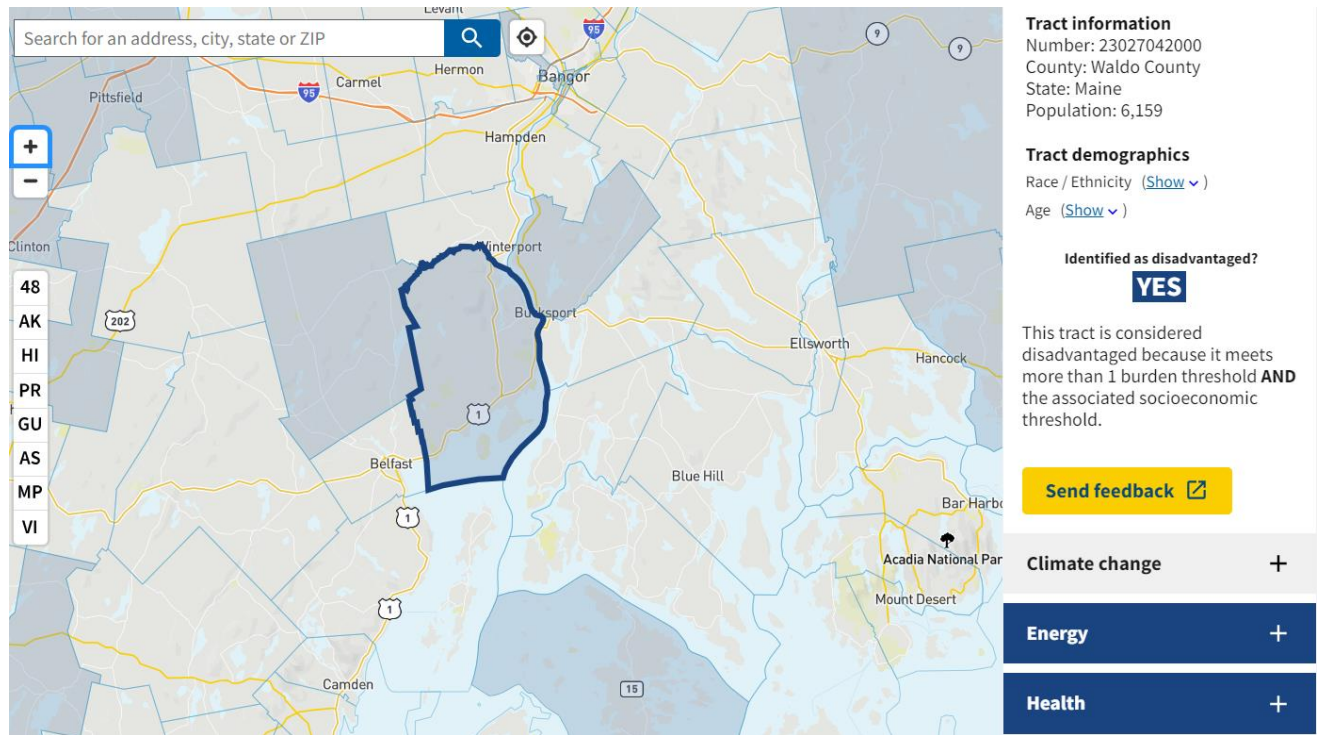
<sup>14</sup> "A peaking power plant (or "peaker plant" for short) is a power plant that grid operators call on at times of particularly high electricity demand on the grid. Peaker plants supply power that is not only high in cost but also typically high in greenhouse gas emissions." Enel North America Blog, <https://www.enelnorthamerica.com/insights/blogs/what-is-a-peaking-power-plant> (last visited April 22, 2024).

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**Criterion 5: Equity, Multimodal Options, and Quality of Life**

*Equity and Barriers to Opportunity*

MaineDOT and the Maine Port Authority believe that the essence of equity in transportation is to ensure that all Maine people have access to safe and reliable transportation options that support economic opportunity and quality of life regardless of a person’s economic, social, ethnic, racial, age, sexual orientation, physical, mental, or geographic circumstance. These agencies are committed to providing equitable delivery of the programs and services. More specifically, this project will support economic and clean energy initiatives to bring quality jobs and affordable energy to all areas of the state regardless of economic status and region.



While there will be significant benefits to the workforce in the Searsport region, once a commercial scale wind port is constructed, the Searsport project will generate long-lasting and quality jobs and workforce opportunities for LIDACs in the area and will prepare workers for continued careers in offshore wind Maine P.L. 2023, Chapter 481 was developed with input from several labor organizations, employee-owned companies, and other CBO’s and includes establishing standards for local hiring, workforce development and safety, including recruiting traditionally underrepresented populations and developing registered apprenticeship programs under Maine law using industry approved training structures.<sup>15</sup> The proposed project will help inform Maine’s future

<sup>15</sup> See <https://www.maine.gov/mdot/grants/infra/>.



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Power Purchase Agreements (PPAs) to ensure good paying jobs for Maine people, broad distribution of economic opportunities and benefits, and meaningful stakeholder engagement.

*Equity Impact Analysis*

Work to date on offshore wind in Maine includes the *Maine Offshore Wind Roadmap* which is the product of 18 months of work, led by the expert advisory committee and dedicated working groups. Their work explored how Maine should approach energy markets, ports and infrastructure, manufacturing and supply chains, workforce development, socioeconomic impacts, and equity, while at the same time preserving the Gulf of Maine ecosystem, communities, and heritage industries.

Maine is committed to ongoing engagement about offshore wind from all stakeholders — paying particular attention to those who may be most impacted and those who often lack access to or input on new opportunities for economic growth. This includes working to finalize an agreement to provide funding and assistance to the Penobscot Nation for the hiring of counsel to begin the process of developing a community benefits agreement.

The *Roadmap* includes strategies and actions that commit to an equitable pathway for Maine’s offshore wind industry, calling for studies and actions to understand and avoid disproportionate impacts on priority communities. This includes detailed recommendations to address potential impacts on fishing to improve co-existence between industries.

The *Roadmap* also includes targeted workforce and supply chain strategies to provide opportunities for all Maine people, including historically disadvantaged communities and those with overwhelming dependence on a single economic sector. Further, the *Roadmap’s* strategies to promote cost-effective offshore wind energy speak to the importance of securing stable, affordable, renewable energy for all Maine people and businesses, particularly low-income residents.

*Workforce Opportunities*

The State of Maine has an opportunity to affect momentous change in the state economy and environment by responsibly pursuing floating offshore wind development. Moreover, Maine Port Authority and MaineDOT have a strong commitment to advance workforce development by creating opportunities for an expected 350 to 400 workers per day, six days per week.

Floating offshore wind provides an opportunity to attract new talent to Maine by expanding training programs. Maine and its partners can work to ensure disadvantaged populations and communities have access to career exploration programs, training and apprenticeship programs, post-secondary education, and career opportunities in the industry. Governor Mills has set a goal of 30,000 clean energy jobs in Maine by 2030, and the growth and development of offshore wind plays an essential role in reaching that goal.

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These opportunities will require increased commitment to job-specific training — an area where Maine also has deep experience. Throughout the state, training and registered apprenticeship programs have helped to ensure the availability of qualified workers to accommodate growth and compensate for regular worker attrition.

*Inclusive Hiring Practices*

Maine P.L. 2023, Chapter 481 requires that any floating extraterritorial wind project proposal include provisions for agreements between labor and contractors including a description of how the project will supply construction workers in all crafts needed for the project. This includes activity at the port involved with fabrication concrete or steel of floating foundations. Projects will also be required to produce a plan for consultation with federally recognized tribes, economic and community development plans, fishing community’s investment plans, environmental and fisheries plans, stakeholder engagement and Diversity Equity and Inclusion plans.

*Establishing a Fund*

Maine P.L. 2023, Chapter 481 requires the Maine Public Utilities Commission to evaluate bids to provide Maine with power from offshore wind and in a cost-effective manner and to prioritize bids that protect fishing areas, provide employment and contracting opportunities to disadvantaged communities including tribes per the U.S. Climate and Economic Justice Screening Tool or the U.S. EDA criteria, and offer opportunities to certified businesses.

**Criterion 6: Innovation Areas: Technology, Project Delivery, and Financing**

*Technology*

The port will be a state-of-the-art hallmark of innovation for the U.S. and Maine and help propel the nation into an entirely new industry and future of energy independence. This can only happen with the necessary infrastructure from ports. The project will include the first U.S. flagged, Jones Act compliant semi-submersible barge that will be purpose-built for the floating offshore wind industry. This asset will help standardize the fabrication and installation of floating offshore wind turbines and help drive down the costs of these expensive projects.

*Innovative Project Delivery*

The project is currently at 30 percent design and is expected to be fully designed in 2025. MaineDOT has been working on feasibility, planning, and preliminary design since 2020 and has moved through several different sites and iterations of the project.

MaineDOT is applying innovative methods with respect to the National Environmental Policy Act (NEPA) and permitting for this project through programmatic agreements to ensure timely and consistent reviews and accelerate project delivery.

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MaineDOT and various other state and federal departments have executed agreements to expeditiously but thoroughly review environmental impacts from projects. MaineDOT will take advantage of the following agreements, where applicable, to streamline the environmental review and approval process:

1. Programmatic Agreement among the Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Advisory Council on Historic Preservation, Maine State Historic Preservation Office (SHPO), and Maine Department of Transportation Regarding Implementation of the Federal Aid Highway and Federal Transit Programs in Maine.
2. Cooperative Agreement among the U.S. Department of the Interior Fish and Wildlife Service (USFWS), FHWA and MaineDOT for State Transportation Reviews by the USFWS in Maine.
3. Programmatic Agreement for the State of Maine concerning identification of listed and proposed species and designation of non-federal representative under the Federal Endangered Species Act involving FHWA, Maine Division of the U.S. Army Corps of Engineers (U.S.ACE), and MaineDOT.
4. Programmatic Agreement for the State of Maine concerning identification of listed and proposed species and designation of non-federal representative under the Federal Endangered Species Act among FHWA, Maine Division of the U.S.ACE, and MaineDOT.
5. Memorandum of Agreement for Stormwater Management Between MaineDOT, the Maine Turnpike Authority, and the Maine Department of Environmental Protection.
6. Memorandum of Agreement between the U.S. ACE, New England District and MaineDOT for Expediting Permit Application Evaluations under Section 214 of the Water Resources Development Act of 2000, as amended, and Section 139(j) of Title 23, United States Code, Assistance to Affected State and Federal Agencies, July 2022.