

# New York State Offshore Wind

Advancing Research to Support Responsible Development



## Nearshore Studies to Support Planning for Offshore Wind

In support of New York's Climate Leadership and Community Protection Act (Climate Act), the New York State Energy Research and Development Authority (NYSERDA) is advancing the cost-effective and responsible development of at least 9,000 megawatts (MW) of offshore wind energy by 2035. With more than 4,300 MW in active development, New York has contracted nearly half of its goal.

As offshore wind energy projects continue to develop, a standardized approach is needed to identify and assess project-related environmental impacts and benefits to gain a comprehensive understanding of the cumulative impacts associated with meeting the State's 2035 goal. To inform the State's continued planning efforts, NYSERDA has conducted the following studies, which augment the supporting reports of the 2018 New York State Offshore Wind Master Plan. These studies evaluate:

- Potential cumulative impacts of port development relating to offshore wind energy development
- Vessel traffic and associated navigation risks resulting from port usage and development
- Possible undersea cable constraints important to understanding potential transmission design approaches

These studies provide greater understanding of the potential effects of concurrent use of the State's waterways (within three nautical miles from the shore) to support offshore wind development.

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### *Offshore Wind Ports: Cumulative Impacts Study (2022)*

*Prepared by: HDR, Inc.*

**The goal of this Study is to assist with planning for current and upcoming offshore wind energy projects.** In addition to providing a clearer understanding of the cumulative potential environmental, socioeconomic, and navigational effects of port upgrades, the study also provides opportunities for efficiencies for port developers working through the regulatory permitting process.

The Study analyzes the concurrent development of 12 port sites across the Capital Region, New York Harbor, and Long Island, representing the manufacturing and fabrication, staging and installation, and operations and maintenance facilities needed to support the production of 9,000 MW by 2035 and maximize economic opportunities in the State.

The findings describe the cumulative impacts across resource areas and identify best management practices and mitigation measures for developers to consider early in the environmental review and permitting processes to minimize the potential for cumulative impacts occurring throughout the State from offshore wind port development.



**Offshore  
Wind**

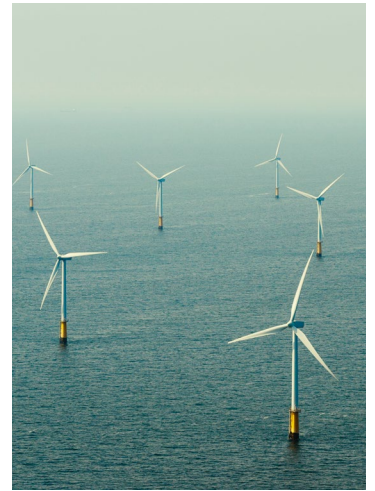
**Offshore Wind Ports: Cumulative Vessel Traffic Assessment (2022)  
and Vessel Traffic Risk Assessment Supplement (2022)**

**Prepared by: COWI**

**The goal of the study is to understand potential changes in port usage relating to offshore wind energy development and assess how these changes will affect shipping and navigation.** The study includes an assessment of key inputs across New York State's five currently active offshore wind-related ports (Port of Albany, Port of Coeymans, South Brooklyn Marine Terminal, Port Jefferson Harbor, and Port of Montauk Harbor) and develops a design envelope for both known and potential future offshore wind-related port uses.

The Study develops a vessel traffic model and hotspot analysis to be used as inputs for future Navigation Safety Risk Assessments (NSRA) completed in accordance with the U.S. Coast Guard procedure "USCG, Requirements WWM Navigation Safety Risk Assessment, United States Coast Guard (2015)," as required by BOEM. The general process is to identify and quantify the risk and suggest any potential mitigation.

Using assumptions from the Cumulative Vessel Traffic Assessment, the Risk Assessment Supplement evaluates risks of vessels striking fixed objects and ship-ship collision. Key findings indicate that the largest increase in annual rate of growth is at Ambrose Channel, Tompkins Cove, and Port of Coeymans, where offshore wind vessels correspond to an increase of 2–4%.



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**Offshore Wind Cable Corridor Constraints Assessment (2023)**

**Prepared by: WSP Global**

**The goal of this Study is to better understand siting offshore wind cables in New York State waters, at landfall, and along overland routes.** The Assessment coordinates the analysis and evaluation of potential resource constraints, including natural and environmental, socioeconomic, and infrastructure, within corridor segments to support future decision making and policy development to achieve New York State's mandates and allow for commercial innovation. The Assessment may inform what actions New York State can consider, helping to ensure maximum benefits of renewable offshore wind energy while minimizing conflicts and impacts on activities and infrastructure. Finally, the Assessment includes coordination between New York State agencies and ongoing engagement with key stakeholders.

The Assessment assigns a constraint ranking – Low, Medium, High – to undersea and overland resources based on spatial distribution data and professional judgement of subject-matter experts. It recommends minimizing the use of space and impacts on environmental, cultural, and social resources by incorporating accepted siting principles – such as applying parallel routing, bundling cables, minimizing infrastructure crossings, and avoiding anchorage areas and navigation channels – and innovation to address site-specific constraints and opportunities.

## **Learn more about offshore wind in New York State.**

To learn more about NYSERDA's offshore wind program and to view a comprehensive list of studies and resources, visit our website: [nyserdera.ny.gov/offshorewind](https://nyserdera.ny.gov/offshorewind)



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