



**New York State Offshore Wind
Maritime Technical Working Group (M-TWG)**

**Study on Autonomous Vessel Usage for Offshore Wind in New York
Draft Scope V1 for NYSDOS and NYSERDA Review
January 23, 2025**

Project Understanding

There is a need to understand the implications of emerging autonomous and unmanned technologies for potential use in planning, development, construction, operations, and maintenance of offshore wind infrastructure. This study will examine the current state of autonomous technologies for maritime and offshore wind uses and explore the potential future use of these technologies in the New York region. The intent of the study is to be a reference document, and a resource for M-TWG members, and their professional networks, to better understand this emerging technology and its potential applications and constraints within the New York metro region.

Work Plan

Task 1: Literature Review

The WSP team will review the current literature and practices around autonomous technologies for maritime, and particularly, offshore wind use. The literature review is intended to include:

- a. Sources from peer reviewed papers, industry reports, policy memos and white papers, and other potentially relevant documents from government, inter-governmental agencies, non-governmental organizations, and industry organizations
- b. A review of both surface and subsurface technologies
- c. Non-technical descriptions, including images and photographs, explaining the different categories of equipment and types of applications
- d. Summaries of autonomous technology use and regulatory practices in the oil industry and/or the Unmanned Aerial Vehicle (UAV) industry

Deliverables

- Literature Review Memo

Task 2: Stakeholder Engagement

The WSP team will work with NYSDOS and NYSERDA to identify 5-10 stakeholders to interview for the purposes of capturing a wide array of stakeholder perspectives about the potential use of



autonomous vessel technologies, with a focus on the New York region. Stakeholders may include members of the M-TWG, State and Federal policy and regulatory leaders, industry leaders, technology leaders, and academic institutions.

- a. List of stakeholders to be interviewed, for review and approval by NYSDOS and NYSERDA
- b. Conduct up to 5-10 interviews with key stakeholders
- c. Interview questions will be provided to NYSDOS and NYSERDA in advance for review and approval. Full transcripts will be provided as an appendix to the Stakeholder Engagement Memo

Deliverables

- Interview plan: list of stakeholders, list of interview questions, method for interview, outreach strategy and outcomes, date/time/details
- Full interview transcripts
- Stakeholder Engagement Memo (includes summary of approach, methods, and key findings of stakeholder interviews)

Task 3: Case Studies

Building on the findings from Tasks 1 and 2, the WSP team will work with NYSDOS and NYSERDA to identify up to four (4) case studies of domestic and/or international autonomous vessel usage/pilot projects and assess their potential applicability in U.S. / New York region. At a minimum, the case studies will include:

- a. An overview of the company/organization utilizing autonomous vessels
- b. A catalogue of available suppliers and markets for the technologies, to better understand their application in the U.S. supply chain and New York region. Include images and photos
- c. The geographic region and surrounding port facilities and maritime assets
- d. Process and timeline for deploying the technologies, noting any market, policy, or industry opportunities and constraints that shaped implementation
- e. Assessment of key issues of interest by M-TWG members and stakeholders from Task 2, such as: navigational safety and security, liability risks, workforce and training, implications of relevant State and Federal regulations, etc.
- f. Lessons learned and applications for U.S. and New York region

Deliverables

- List of up to four (4) case studies
- Case Study Memo

Task 4: Review of Impacts of Autonomous Vessels

The WSP team will develop a summary of the implications of using autonomous technologies for the offshore wind development in the New York region. It is expected that this review will include an assessment of impacts to the following:



- a. Safety and Security
- b. Workforce & Training, with special consideration given to how leveraging these technologies can support the industry and existing workforce
- c. Costs – including operations & maintenance of the autonomous vessels (maintenance requirements, sourcing of replacement materials, location of services, etc.)
- d. Data Transfer & Data Management
- e. Fuel options, preferred fuels and runtime
- f. State and Federal policy, existing as well as potential new rules and regulations
- g. Implications of Jones Act (ties in with research agenda topic)

Deliverables

- Impacts of Autonomous Vessels Memo

Task 5: Opportunities & Constraints

Building from the work completed in Tasks 1-4, the WSP team will develop an assessment of the opportunities and constraints, including a qualitative risk evaluation, of advancing autonomous technologies for offshore wind in the New York region. This assessment will include a review of current Federal policies and regulations as well as the standards of the International Maritime Organization.

Deliverables

- Opportunities and Constraints Memo

Task 6: Final Report

The WSP team will compile the findings of Tasks 1-5 into a technical report for review by NYSDOS, NYSERDA, and M-TWG. At this time, it is assumed that each memo will be a report chapter.

Deliverables

- Draft Final Report for Review
- Comment-response matrix
- Final Report

Task 7: Knowledge Share

The WSP team will develop presentations of draft and final findings for sharing at future M-TWG meetings. As an optional subtask, WSP may also work with NYSDOS, NYSERDA, the C&C, and M-TWG members to develop a workshop panel with outside experts to supplement the technical research and enhance knowledge sharing. This workshop presents an opportunity for cross collaboration with other TWGs and industry organizations.

Deliverables

- Draft and Final Presentation summarizing the project and its findings



- Optional: Workshop panel for M-TWG members

Schedule

Task	Project Schedule										
	1	2	3	4	5	6	7	8	9	10	11
	2025										
	February	March	April	May	June	July	August	September	October	November	December
1. Literature Review		◆									
2. Stakeholder Engagement			◆								
3. Case Studies				◆							
4. Impacts Assessment						◆					
5. Opportunities & Constraints								◆			
6. Draft & Final Report									◆		◆
7. Knowledge Share											◆