



## BACKGROUND | Atlantic Wind Energy Supply Chain Assessment & Pathways for Supply Chain Development

### Context & Drivers

Atlantic Canada has some of the best offshore and onshore wind resources in the world, with wind speeds exceeding 9 metres per second. Developing even a small fraction of this resource can support net-zero targets, local supply chain development, and clean growth overall. Atlantic Canada is increasing its focus on developing both onshore and offshore wind resources to help green the grid and pursue domestic and export green hydrogen opportunities.

Offshore wind (OSW) and onshore wind present major opportunities for Canada – as a domestic and export resources that could be developed to support increased electrification and green hydrogen production, as well as a supply chain and trade opportunity for local suppliers who have capabilities from experience working in offshore and marine industries.

#### *Offshore Wind*

Atlantic Canada's offshore represents a significant untapped renewable energy resource, with wind speeds of 10-11 metres per second and a technical OSW potential of 938 GW in Nova Scotia alone<sup>1</sup>.

To support the future development of OSW, federal and provincial governments have been spearheading significant legislative and regulatory processes, including the establishment of a joint management by amending the *Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act* and *Canada-Newfoundland and Labrador Atlantic Accord Implementation Act* ("The Accord Acts"), Regional Assessments (RA) for both offshore *Newfoundland and Labrador* and *Nova Scotia*, and the development of *Offshore Renewable Energy Regulations*. The Province of Nova Scotia has established an initial target of 5 GW of offshore wind leasing by 2030 with the intent to drive industry investment and growth, and Newfoundland and Labrador and the federal Government have entered into a Memorandum of Understanding on offshore wind in 2023 to enable the province to take the regulatory lead on offshore wind projects within 16 provincial inland bays. These initiatives are progressing on ambitious timelines with a goal of beginning OSW leasing in Atlantic Canada this decade, and in Nova Scotia by 2025-2026.

A critical component of ensuring sustainable growth of OSW in Canada will be the establishment of a capable and competitive supply chain to support industry requirements. Atlantic Canada has the advantage of many experienced suppliers and services that have worked in offshore and marine

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<sup>1</sup> Aegir Insights, 2023. "Value Mapping Nova Scotia's Offshore Wind Resources." <https://netzeroatlantic.ca/sites/default/files/2023-04/Value%20Mapping%20Nova%20Scotia%20Offshore%20Wind%20Resources.pdf>

industries for decades, with some already working in the international OSW market. However, OSW is a relatively new industry for many businesses. Even those currently working in OSW elsewhere, may face challenges in terms of capacity and competitiveness when it comes to domestic development. The capabilities of the local supply chain will also factor into OSW developers' decisions on supplier contracts and partnerships and investment in the region, as well how project/leasing bids are structured.

At this early stage in OSW industry development there is general uncertainty about the scope of a domestic supply chain, the timeframes needed to build critical resources, the level of investment required, the potential benefits to local workers and communities, and the significance of gaps in the existing suppliers/services (ex. manufacturing, port, vessels, workforce, etc.). Therefore, a robust analysis of regional supply chain strengths and gaps is integral to successful industry development and ensuring local economic benefits. Supporting a domestic pipeline of OSW projects, as well as the opportunities posed by international OSW development, warrants the need for a study to: 1) better understand supply chain demand 2) assess existing strengths and gaps and 3) create an action plan to facilitate local supply chain development that will help maximize local benefits from OSW projects.

### *Onshore Wind*

While onshore wind has been developed over the years in Atlantic Canada, this growth is expected to increase, driven by targeted plans launched by provincial governments over the past year. In 2022, Newfoundland and Labrador lifted its moratorium on onshore wind development and launched a competitive Crown Lands Call for Bids for Wind Energy Projects, placing approximately 1.7 million hectares of Crown Lands up for competitive development. As a result of that process, in August 2023, Newfoundland and Labrador announced over \$60 billion of private-sector onshore wind projects.

Although the onshore wind sector is more mature in Atlantic Canada than OSW, the increase in activity will require a skilled supply chain that has the capacity to deliver on project requirements. Provinces have been setting targets and undertaking policy initiatives for onshore wind development that must be met to meet clean electricity, net zero, and economic development goals:

- New Brunswick's clean energy strategy [\*Powering our Economy and the World with Clean Energy – Our Path Forward to 2035\*](#): 1400 MW of new wind energy development by 2035
- Newfoundland and Labrador's [\*Renewable Energy Plan\*](#); removal of a moratorium on onshore wind development; and design and implementation of a process for [\*Crown Land for Wind Energy Projects\*](#): Four wind-to-hydrogen projects announced totalling over 14 GW of wind energy
- [\*Nova Scotia's 2030 Clean Power Plan\*](#): 1000+ MW of new wind energy development by 2030
- Prince Edward Island [\*Energy Blueprint\*](#) and new strategy are under development and signal the need for more wind energy (onshore and possibly offshore)

## Project Overview

Marine Renewables Canada (MRC), with funding support from the Atlantic Canada Opportunities Agency (ACOA), Nova Scotia Department of Natural Resources and Renewables, and Prince Edward Island Energy Corporation commissioned a study **to help support an overall goal of developing a Canadian offshore wind (OSW) supply chain and further growing capacity in the onshore wind supply chain in time to meaningfully support the installation of future OSW and onshore wind projects that will be in the pipeline** – onshore projects are already in queue and the OSW pipeline will begin with Nova Scotia’s leasing targeted for 2025-2026. Xodus Group and its partners Angler Solutions, Envigour Policy Consulting were selected to conduct the study, supported by an expert team of local industry advisors.

This project is intended to help industry, suppliers, governments, and other stakeholders strategically plan how to invest in local resources to both de-risk future deployments, establish a sustainable and self-sufficient industry and ultimately realize the significant benefits that can be achieved through an offshore and OSW industry in Atlantic Canada.

## Project Objectives

- Define the scope of offshore and onshore wind supply chain (with a focus on development and production).
- Establish an understanding of the current status and capabilities of the Atlantic Canadian wind supply chain.
- Provide an analysis of industry requirements for domestic OSW and onshore wind development and associated supply chain needs.
- Deliver an assessment of the OSW and onshore wind supply chain opportunity for Atlantic Canada to inform an action plan to enhance the regions OSW supply chain position.
- Develop strategies and actions to:
  - Address supply chain gaps and challenges.
  - Support existing Atlantic Canadian OSW and onshore wind companies.
  - Engage regional companies not already engaged in OSW and/or onshore wind.
  - Develop a strategy for partnership building between companies and workforce and the OSW and onshore wind industry.

## Project Scope Summary

Recognizing that there are significant differences between OSW and onshore wind supply chains, the project consists of two parts, focused on OSW and onshore wind, and a final part focused on results dissemination and supply chain engagement.

### PART 1: Offshore Wind Supply Chain

The OSW supply chain assessment and analysis is broken into three main phases:

- 1) OSW Industry Requirements and Supply Chain Demand



marine  
renewables  
canada

- 2) OSW Supply Chain Assessment (Regional/Atlantic Canada)
- 3) Pathways to Develop Atlantic Canada's OSW Supply Chain

### **PART 2: Onshore Wind Supply Chain**

The onshore wind supply chain assessment and analysis is broken into three main phases:

- 1) Onshore Wind Industry Requirements and Supply Chain Demand
- 2) Onshore Wind Supply Chain Assessment (Regional/Atlantic Canada)
- 3) Pathways to Develop Atlantic Canada's Onshore Wind Supply Chain

### **PART 3: Knowledge and Results Dissemination**

The outcomes of the study will be included in a final report targeted for March 2025. In April, MRC will host workshops in each Atlantic province to share the results of the study, provide research and assessment insights, and discuss the report recommendations.