Regional Assessment of Offshore Wind Development in Newfoundland and Labrador: Summary of the Final Report

The Final Report for the Regional Assessment of Offshore Wind Development in Newfoundland and Labrador includes:

- an overview of the purpose of the assessment;
- a summary of Indigenous, fisheries, stakeholder, and public engagement;
- a map of initial offshore wind energy licencing areas for further consideration for offshore wind development and the process for identifying these areas;
- the positive and negative effects of offshore wind on our environment, health, communities, and economy;
- suggestions for ways to lessen negative effects and enhance positive ones;
- existing information gaps that need to be addressed; and
- recommendations for planning, licencing, and impact assessments of offshore wind projects.

This document summarizes each section of the Final Report.

Introduction

The goal of the Regional Assessment is to provide information to federal and provincial governments to help them plan for offshore wind development in Newfoundland and Labrador, and complete impact assessments of offshore wind projects.

Federal and provincial Ministers appointed an independent committee, comprising five members of diverse backgrounds and expertise to conduct the assessment. The Committee's priority is to conduct a fair and transparent process to achieve the goals set out in the Terms of Reference

Starting in May 2023, the Committee engaged with Indigenous peoples, fishers, other ocean users, municipal leaders, federal and provincial governmental agencies, environmental organizations, research groups, offshore wind developers, and individuals that have information, knowledge, and interests relevant to the Regional Assessment. Over the last 20 months, the Committee hosted over 90 meetings and engagement sessions, attended by nearly 500 participants.

Description of Offshore Wind Development Activities

An offshore wind project consists of turbines, subsea cables, substations, and converter stations. An offshore wind turbine is made up of a foundation, a tower, a rotor (a hub with blades that spin), and a nacelle (a facility that converts mechanical energy to electrical

energy). Offshore wind development occurs in several phases; however, the Regional Assessment focuses on the construction (including expansion), operations (which includes maintenance activities), and decommissioning and abandonment phases.

In each phase, there are activities that may create potential negative or positive environmental, health, social, and economic effects. It is important to understand these activities. These include using vessels to transport turbines from a port out to sea and pile-driving or anchoring turbine foundations to the ocean floor during the construction phase and using underwater vehicles for inspections during the operations phase.

The lifetime of an offshore wind project can be 30 years from the time construction starts to when the project is decommissioned. Construction is the shortest (two to three years) but most active phase, while operation is the longest (20 years) but least active phase.

Defining the Regional Assessment Focus Area

The Committee used water depths and information about icebergs and current offshore wind technology to select a Focus Area. The Focus Area is a portion of the Study Area more likely to see offshore wind development in the near future. The Committee then continued its information gathering and analysis within the Focus Area. The Committee is of the opinion that portions of the Study Area outside the Focus Area will become suitable for offshore wind as information and data gaps are filled and as technology advances.

Identifying Initial Offshore Wind Energy Licencing Areas

Within the Focus Area, the Committee removed areas where there are higher chances of environmental, health, social, and economic impacts. These include, for example, avoiding Marine Protected Areas, sensitive areas nearshore, and commercial fishing areas. The remaining areas are where offshore wind development is most likely technically feasible and will likely have the least impact, based on current public information.

The Committee recommends these initial licencing areas be considered and further refined by the governments of Canada and Newfoundland and Labrador, who will ultimately decide where licencing areas will be located. The Committee anticipates licencing areas will evolve as more information and data become available and as experience is gained in offshore wind in Atlantic Canada.

Assessment of Environmental, Health, Social, and Economic Components

The Committee considered the following environmental, health, social, and economic components:

- air quality and greenhouse gases (GHGs)
- aerofauna (i.e., birds, bats, and flying insects)
- marine fish and fish habitat
- marine mammals and sea turtles
- protected and special areas

- Indigenous communities, activities, interests, and rights
- fisheries
- other ocean uses
- visual aesthetics and viewscapes
- acoustic environment
- physical and cultural heritage
- health
- communities and economy

For each component, the Regional Assessment describes existing conditions, potential effects, measures to mitigate negative effects and enhance positive effects, engagement outcomes, data gaps and limitations, and Committee conclusions and recommendations. While there is potential for negative effects to all components throughout all phases of development, the construction phase has the greatest potential for negative effects. Key components of concern are aerofauna; marine fish and fish habitat; marine mammals and sea turtles; Indigenous communities, activities, interests, and rights; and fisheries. Avoiding high impact areas through careful licencing area selection and project siting is the primary means of mitigating these negative effects regionally and at the project level. There are many measures learned from experiences in other offshore wind producing jurisdictions to minimize effects where avoidance is not possible.

The benefits of offshore wind development are most apparent in the communities and economy component, and there are steps governments, industry, and communities can take to enhance these benefits locally.

The Committee identified data gaps and limitations across all components and makes recommendations for how those gaps and limitations may be addressed. These include recommendations regarding project level assessments, studies on specific components, and collaboration with Indigenous communities.

Cumulative Effects

There are many challenges to cumulative effects analysis in the Regional Assessment, including the lack of data and the complexity of the marine environment. The Committee's process for identifying offshore wind licencing areas was based on avoiding areas where there are higher chances of environmental, health, social, and economic impacts. This was the primary means of considering cumulative effects in the Regional Assessment. The Committee has made recommendations in support of planning, licencing, and impact assessment processes that improve cumulative effects knowledge and management. This includes recommendations in support of marine spatial planning and strategic assessment, and research on specific components.

Accidental Effects and Effects of the Environment on Offshore Wind Development

Though extremely rare, accidents can happen with offshore wind projects. A turbine blade could become loose, a vessel could collide with a turbine, a harmful chemical could be

released, or a fire could occur. In some cases, the environment can cause an accidental event. For example, a strong hurricane could cause a turbine tower to buckle. These accidental events could affect marine life and the lives of personnel working in the vicinity of the incident. However, offshore wind projects are designed, sited, constructed, and operated to withstand environmental effects and ensure maximum safety. The Committee's review of the industry's track record supports the effectiveness of the operational safety measures.

Sustainability, Climate Change Commitments, and Environmental Obligations

Sustainability is the ability to protect the environment, contribute to the social and economic well-being of the people of Canada, and preserve their health in a manner that benefits present and future generations. Offshore wind may be developed in a sustainable manner if done in a way that minimizes impact to the environment and positively impacts our communities. Development of an offshore wind industry aligns with federal and provincial climate change commitments and environmental obligations, including investing in renewable energy, decreasing reliance on fossil fuels, and reducing emissions.

Intersectionality

The Committee was tasked with considering the intersection of sex and gender with other identity factors and to make recommendations for how future impact assessments should consider and address these factors. This required application of Gender Based Analysis Plus (GBA Plus). GBA Plus contributes to a better understanding of the positive and negative effects that future offshore wind development may have on diverse populations.

Future impact assessments of offshore wind projects can be tailored to better meet diverse needs in anticipating and mitigating barriers that various individuals and groups might face and to ensure that all people can benefit from offshore wind development. The Committee establishes linkages across the environmental, social, health, and economic components to illustrate intersectional and diverse effects, and mitigation and other measures.

Conclusion

The Committee's findings and recommendations are intended to inform future planning, licencing, and impact assessment processes with respect to offshore wind development.

It is important to know that the Committee's recommendations are not binding on the Ministers. The Committee submitted its Final Report directly to Ministers on January 23, 2025. The Ministers will make the Final Report available to Indigenous groups, fisheries organizations, industry stakeholders, and the public.