

## Preliminary Considerations Analysis of Offshore Wind Energy in Atlantic Canada

### Description

Offshore wind represents a potentially significant source of low-carbon energy for Canada, and ensuring that relevant, high-quality data and scientifically sound analyses are brought forward into decision-making processes will increase the chances of success for any future deployment of offshore wind in Canada. To support this objective, CanmetENERGY-Ottawa (CE-O), a federal laboratory within Natural Resources Canada (NRCan), completed a preliminary analysis of relevant considerations for offshore wind, with an initial focus on Atlantic Canada. To conduct the analysis, CE-O used geographic information system (GIS) software and methods and engaged with multiple federal government departments to acquire relevant data and obtain insights from subject matter experts on the appropriate use of these data in the context of the analysis. The purpose of this work is to support the identification of candidate regions within Atlantic Canada that could become designated offshore wind energy areas in the future.

The study area for the analysis included the Gulf of St. Lawrence, the western and southern coasts of the island of Newfoundland, and the coastal waters south of Nova Scotia. Twelve input data layers representing various geophysical, ecological, and ocean use considerations were incorporated as part of a multi-criteria analysis (MCA) approach to evaluate the effects of multiple inputs within a consistent framework. Six scenarios were developed which allow for visualization of a range of outcomes according to the influence weighting applied to the different input layers and the suitability scoring applied within each layer.

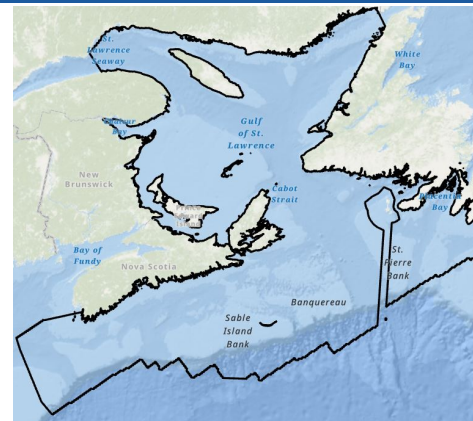
This preliminary assessment resulted in the identification of several areas which could be candidates for future designated offshore wind areas, including the areas of the Gulf of St. Lawrence north of Prince Edward Island and west of the island of Newfoundland, and areas surrounding Sable Island. This study is subject to several limitations, namely missing and incomplete data, lack of emphasis on temporal and cumulative effects, and the inherent subjectivity of the scoring scheme applied. Further work is necessary to address data gaps and take ecosystem wide impacts into account before deployment of offshore wind projects in Canada's coastal waters. Despite these limitations, this study and the data compiled in its preparation can aid in identifying promising locations for further review.

A description of the methodology used to undertake this study is contained in the accompanying report, available at the following link: <https://doi.org/10.4095/331855>. This report provides in depth detail into how these data layers were compiled and details any analysis that was done on the data to produce the final data layers in this package.

Geographic Extent SW:-72.623 38.97, NE:-48.716 51.736



### Preview Image



### Data Classification

GC Core Subject Thesaurus	Climate, Renewable energy, Renewable resources, Wind, Wind energy, Environment, Assessment
Topic category	Environment
Topic category	Oceans

### Metadata Contact

Organization Name	Government of Canada; Natural Resources Canada; Canmet ENERGY Ottawa/ Energy Technology Sector/Buildings and Renewables/ Renewable Heat and Power
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Organization Name	Government of Canada; Natural Resources Canada; Canmet ENERGY Ottawa/ Energy Technology Sector/Buildings and Renewables
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Role

Collaborator

**Data Resources**

Name	Resource Type	Language	Format
<a href="#">Preliminary Considerations Analysis of Offshore Wind Energy in Atlantic Canada</a>	Web Service	English	ESRI REST
<a href="#">Preliminary Considerations Analysis of Offshore Wind Energy in Atlantic Canada</a>	Web Service	French	ESRI REST
<a href="#">Preliminary Considerations Analysis of Offshore Wind Energy in Atlantic Canada</a>	Web Service	English	WMS
<a href="#">Preliminary Considerations Analysis of Offshore Wind Energy in Atlantic Canada</a>	Web Service	French	WMS
<a href="#">Preliminary Considerations Analysis of Offshore Wind Energy in Atlantic Canada</a>	Dataset	English	FGDB/GDB
<a href="#">Preliminary Considerations Analysis of Offshore Wind Energy in Atlantic Canada</a>	Dataset	French	FGDB/GDB
<a href="#">metadata Preliminary Considerations Analysis of Offshore Wind Energy in Atlantic Canada</a>	Supporting Document	English	PDF
<a href="#">metadata Preliminary Considerations Analysis of Offshore Wind Energy in Atlantic Canada</a>	Supporting Document	French	PDF

**Distributor Contact**

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**Additional Information****Dataset Identification**

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Maintenance and Update Frequency	As needed
Use Limitation	Open Government Licence - Canada ( <a href="http://open.canada.ca/en/open-government-licence-canada">http://open.canada.ca/en/open-government-licence-canada</a> )
Access Constraints	License
Use Constraints	License
Spatial representation type	Grid
Metadata language	English
Metadata language	French

**Distribution Information****Distribution format**

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Version	10.6

### Distribution format

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### Distribution format

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Version 1.4 (Acrobat 5.x)

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### Reference System Information

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