

# ABO Wind – Globally Connected, Locally Focused

# ABO WIND



## ABO Wind in Canda

A company since 1996, now over 1200 employees worldwide, 30 in Canada, with a growing team in NL including Project Managers, a Communications and Engagement Lead, and a Project Coordinator. Newfoundland's office is in St. John's, with plans for an additional presence in the local region.

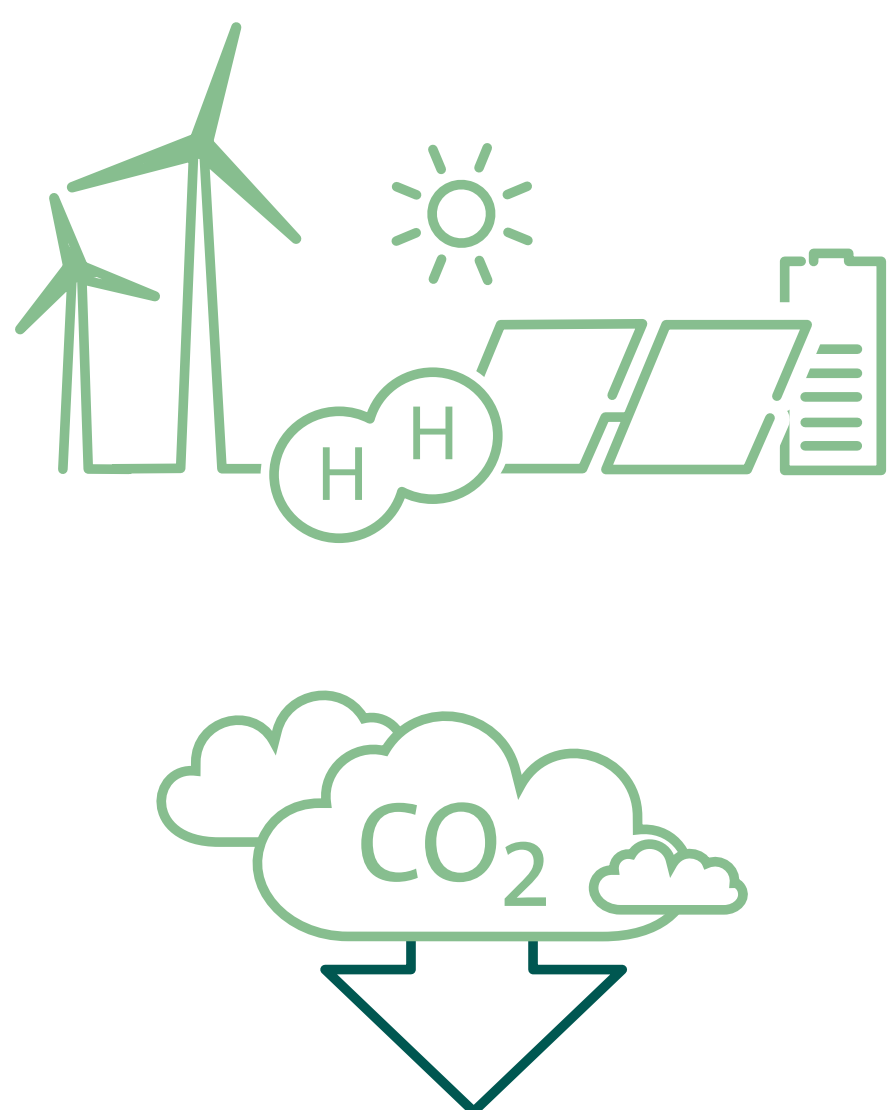
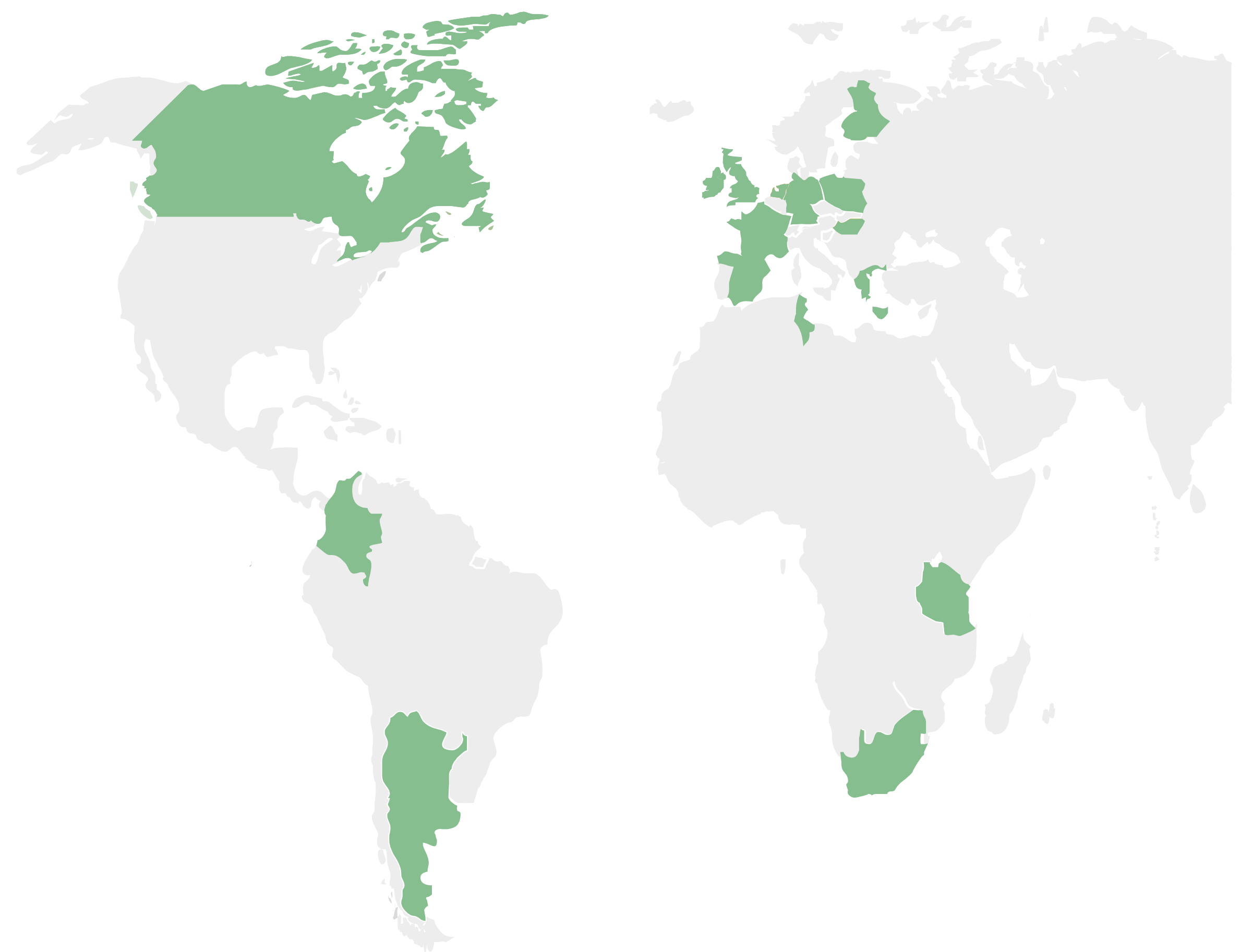
ABO Wind Canada Ltd. is a subsidiary of ABO Wind AG and was founded in 2017. ABO Wind Canada Ltd. developed Canada's largest wind development to date, the 515 megawatt (MW) Buffalo Plains Wind Farm in Alberta.

In 2022, ABO Wind Canada opened an office in Halifax. In 2023, with the advancement of proposed activities in NL, we saw the need to create a foundation in the region.

## Internationally active in 16 countries:

### Europe, North and South America, Africa

- Bringing international wind and hydrogen expertise to this Project, working alongside the local team
- Core business is renewable development and construction



## We work for our future:

- ABO Wind takes a holistic approach in the fight against the climate crisis through developing wind, solar, green hydrogen, and battery systems
- Green hydrogen from renewable energy will play a major role in decarbonizing hard-to-abate sectors in industry, peak power generation and transport
- Over 2 million tons of carbon dioxide emissions avoided each year as a result of ABO Wind's existing renewable energy projects

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Project: [www.toqlukutikproject.com](http://www.toqlukutikproject.com)



## Toqlukuti’k Wind and Hydrogen

A multi-phased, integrated Project that will harness wind energy, using wind turbines, to:

- Provide green hydrogen to further decarbonize production at Braya’s refinery in Come By Chance.
- Provide green ammonia for export to the global market, positioning Canada at the forefront of a global green energy supply.

ABO Wind intends to develop a total of 5 gigawatts (GW) / 5000 megawatts (MW) of wind power capacity on the Island of Newfoundland, powered by the province’s significant wind speeds.

In August 2023 ABO Wind Canada was awarded the exclusive right to pursue development of its Toqlukuti’k Wind and Hydrogen Project through the Government of Newfoundland and Labrador’s Crown Land Call for Bids for Wind Energy Projects.

Now, ABO Wind and partners Miawpukek First Nation and Braya Renewable Fuels are developing Toqlukuti’k Wind and Hydrogen Ltd.

## Location

The Project will be developed within the areas highlighted on our map, including areas close to the Isthmus of Avalon and closer to Clarenville, but we will not be using all lands within these areas.

Prior to construction there will be ongoing wind measurement campaigns, environmental and engineering studies, and public engagement, to help refine exactly what lands will be used for the Project.

In 2025, we will be applying for specific parcels of Crown land within the area temporarily reserved for ABO Wind as part of the Crown Land Call for Bids for Wind Energy Projects.



This name was a collaboration with Miawpukek First Nation and originates from the traditional Mi’kmaq language of the Miawpukek First Nation, meaning “working together” (pronounced ‘dok loo- gu-tik’), a reference to our partnerships.



# Timeline and Environmental Considerations

## Project timeline

Toqlukuti’k Wind and Hydrogen is broken down in three phases, to be constructed over the next decade or so.

Pending regulatory approval, construction is currently anticipated to begin in 2026 for the Phase 1 portion of the Project.

## Environment

Like any major infrastructure project in NL, Project Toqlukuti’k will be subject to an Environmental Assessment, with an ongoing goal to mitigate the Project’s impact on the environment.

- ABO Wind has retained a local environmental consultant and completed desktop studies of environmental features in the areas of interest prior to beginning field work.
- We are also working closely with the NL government’s Department of Environment and Climate Change to mitigate the project’s impact on the environment.
- We are partnered with and working with Miawpukek First Nation for this Project. This will also include thorough consultation, collaboration, and traditional land use studies.
- Knowledge of additional constraints to avoid through information sessions, meetings with residents and other interested groups, environmental studies, and specific Environmental Assessment requirements will together determine the Project’s footprint.

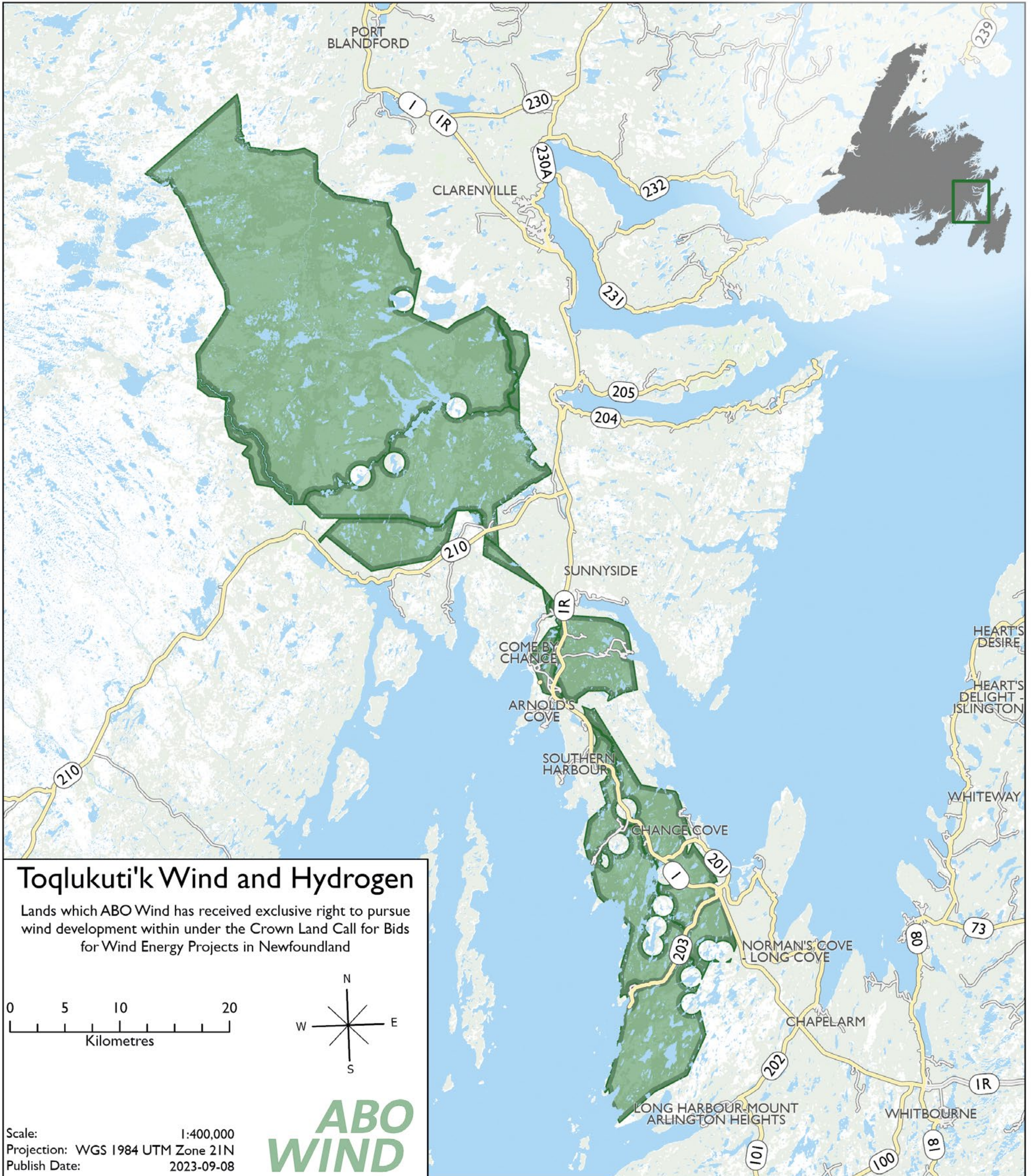
## Our environmental consultant

- GEMTEC Consulting Engineers and Scientists have been retained to complete environmental baseline studies as part of the Environmental Assessment Registration.
- Preliminary desktop studies, including site specific environmental constraint analysis and regulatory consultation, were completed in 2023 to gain an understanding of the Site’s existing conditions and support project planning purposes.
- In 2023 and early 2024, the following field programs were completed:
  - Site Reconnaissance for accessibility, surface geology, and high-level ecological components.
  - Breeding Bird Assessment, Wildlife Acoustic Monitoring, targeted Bat acoustic detection, and avifauna overwintering surveys.
- In 2024, baseline studies will continue to provide a comprehensive assessment of the site’s existing conditions.

<b>Ongoing</b>	Consultation and engagement with local community groups, land users, businesses, First Nations, government, and other relevant organizations in the region. Consultation will continue throughout the life of the Project
<b>2024</b>	Environmental field studies, MET (wind measurement tower) will be installed, geotechnical (ground) and engineering feasibility studies begin
<b>2025</b>	First Environmental Assessment Registration and Crown Lands applications for parcels within the larger areas that ABO has been awarded the exclusive right to pursue development by the Government of Newfoundland and Labrador’s Department of Industry, Energy and Technology (IET)
<b>2026</b>	Construction is anticipated to begin (further local hiring and connecting with contractors, technical specialists and other relevant vendors will occur as we ramp-up to construction)
<b>2027-2029</b>	Phase 1 operational – Green Hydrogen for Refinery, Powered
<b>2028-2030</b>	Phase 2 operational – Powering Electrolyzer to Prepare for Green Ammonia Export
<b>2032-2034</b>	Phase 3 operational – Ammonia Expansion: Global Export of Green Ammonia

\*Schedule is preliminary and subject to change





# Green Hydrogen produced from Wind

ABO  
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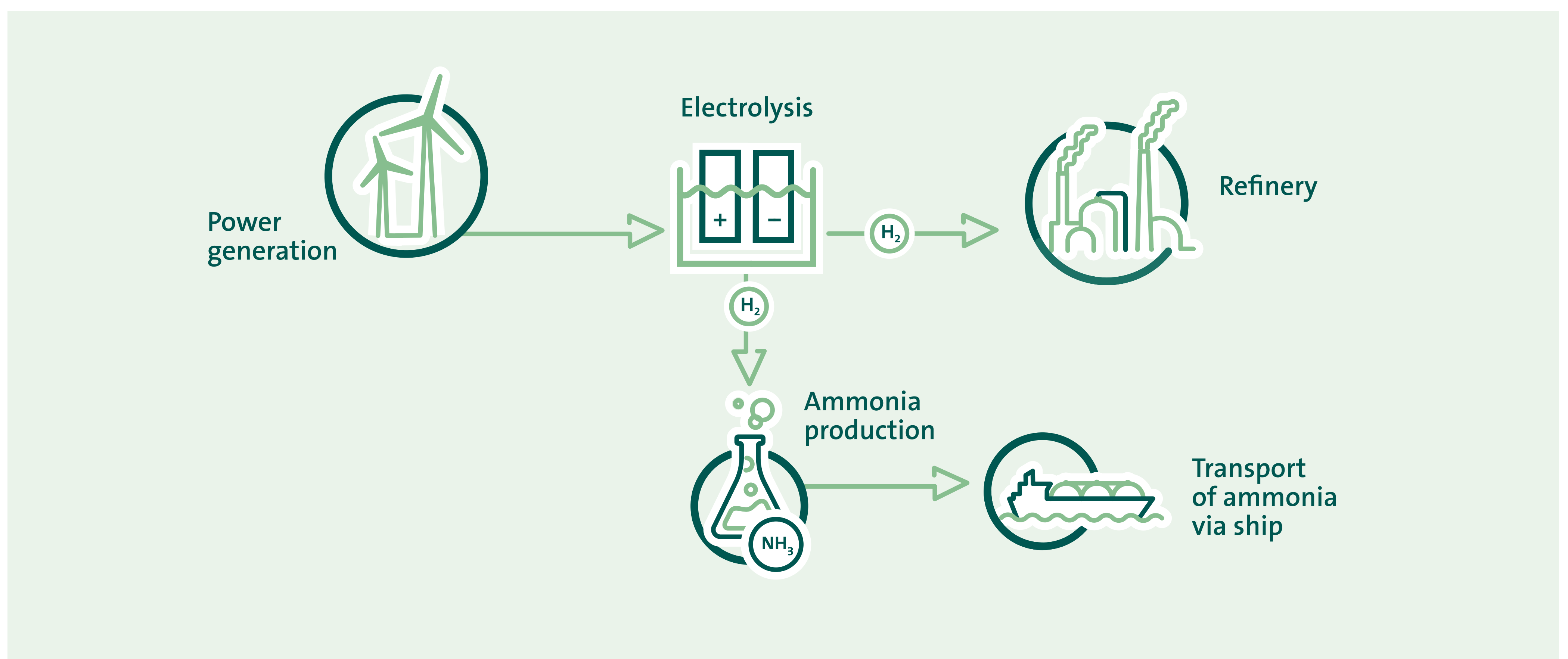
Unlike a typical grid-tied wind farm the purpose of this Project is to power an electrolyzer facility for the production and export of green hydrogen and green ammonia.

## What is it?

Green hydrogen (“GH2”) is hydrogen that is produced by splitting water using an electrolyzer, in a process called electrolysis. The electricity for the electrolyzer must be generated from renewable sources, such as wind in this case, if the resulting hydrogen is to be labeled green. This ensures that no carbon dioxide (CO<sub>2</sub>), or other environmentally harmful byproducts, are released during hydrogen production.

## How will it be used?

- **Local Use for Come By Chance Refinery:** Renewable energy from wind turbines in the region will provide green hydrogen to further decarbonize the renewable fuels produced at Braya Renewable Fuels’ refinery in Come By Chance.
- **Export to the global market:** Green hydrogen is one of the key elements to assist Europe to reach its climate targets and to ensure energy security. Green hydrogen can be a solution to Europe’s energy problems for several reasons, including its low carbon intensity, ability to be stored for a longer time prior to distribution, and its versatility in uses.



## Did you know?

The war in Ukraine has highlighted the need for European countries to have clean, secure, and ethical energy sources. In recognition of this, Canada and Germany signed the Canada-Germany Hydrogen Alliance in 2022. As the subsidiary of a German parent company, ABO Wind Canada is uniquely positioned to fulfill the ambition of that Agreement.

## Why is Green Hydrogen often converted into Ammonia for transport during export?

It is possible to transport hydrogen as a compressed gas or liquid. However, compared to hydrogen, ammonia has several advantages in terms of long-distance transport. Characteristics including high energy density and ease of liquefaction allow it to be used in existing plants, transportation, and terminal facilities.

## Safety:

A number of hydrogen’s properties make it safer to handle and use than fuels commonly used today; it is also non-toxic.

Ammonia and hydrogen have already been produced on a large-scale for industrial applications for more than a century; handling and transport of these products is well understood.

Nonetheless, full analysis of all safety risks and emergency response plans and mitigations would be in place prior to any production. ABO Wind and any other companies or contractors involved in this Project must have safety at top of mind and follow all safety and emergency response protocols, from site visits to construction and operations.

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## **ABO is committed to ongoing engagement, transparent dialogue, listening to feedback and working together with you.**

- The ABO team looks forward to spending time in the region, and plan to set up rotating community offices for accessible and open communication in 2024.
- We have already had productive and ongoing dialogue with representatives from local communities to help inform our approach.
- We are committed to giving back to the communities in the region and have already provided local donations and sponsorships to date.
- We will host additional information sessions and supplier sessions as the Project planning advances, and will continue to provide information through meetings, open office hours and mailouts.
- We will continue to identify and reach out to various stakeholder groups, land users, and the communities at-large.

## **Your feedback matters:**

- We will not be applying for all Crown Land parcels we have in reserve that you see highlighted in green on our map; we are spending the next year determining exactly what is needed for a viable project, adding on any buffers or understanding areas that are not needed or not desirable for the Project.
- What lands we use for the Project will be based on many factors, considering mitigations, areas to avoid, and constraints informed by local feedback, environmental studies, feasibility/engineering studies and measurement campaigns.
- We recognize and respect your use of the land. We will work together with you to ensure shared and safe continued use of lands, where and when it is safe to do so.

We aim to reduce the impact on land use while ensuring a viable Project for all involved!



# A Major Project with Significant Opportunities

**ABO  
WIND**

Clean, renewable energy production will create significant opportunities in the region, and across the province.

Newfoundland and Labrador is competing in a global marketplace with several strategic advantages:

- World class wind resources, deep water ports, skilled labour and experienced contractors (working at home and away), and a strategic location to Europe for exports.

ABO Wind Canada recognizes the importance of strong local connections and leveraging local expertise and knowledge.



## Local Economic Development Policy:

- Communities in proximity to our projects should receive preferential attention and access to business and employment opportunities as we develop the project.
- Intent to maximize economic benefits for communities and their residents and promote long-term commercial growth through access to goods and service contracts, capacity training, and employment.



## This Project is expected to provide sizable local job and procurement opportunities:

- Based on initial calculations, we anticipate 5500 jobs including construction making up a large percentage of the work and lasting for approximately 8-10 years and Operations & Maintenance (long term).
- The Project will also help to ensure job security for the approximately 300 permanent refinery workers.
- Overall, the Project will bolster local employment in the growing renewable energy sector and the regional economy from direct contracts to spin-off opportunities. Construction is expected to begin in 2026 for Phase 1, occurring for close to a decade to complete all phases.



## Vendors and Suppliers

If you are a local vendor interested in providing your goods and/or services to ABO Wind Canada Ltd. we ask that you submit your company information via our 'Supplier Registration Form' located on our website, [www.toqlukutikproject.com](http://www.toqlukutikproject.com)



## Construction & Infrastructure

There are a variety of key infrastructure components that the Project would include, broken down into Wind and Hydrogen facilities. Many types of professions and trades will be involved in all elements of constructing and operating this Project.

Infrastructure associated with the Wind Farm would be located on Crown Lands in the Isthmus region, and in later phases of the Project, towards the Clarenville area.

- Wind turbines and measurement towers
- Access roads
- Electrical transmission lines and collector lines, and substations
- Operations and maintenance facilities

Infrastructure associated with the Hydrogen Facility would be located within close proximity to the existing Come By Chance refinery.

- Including hydrogen and ammonia production and storage facilities
- Export facilities

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