Welcome
ABO Energy's Papoqji'jg Wind Project

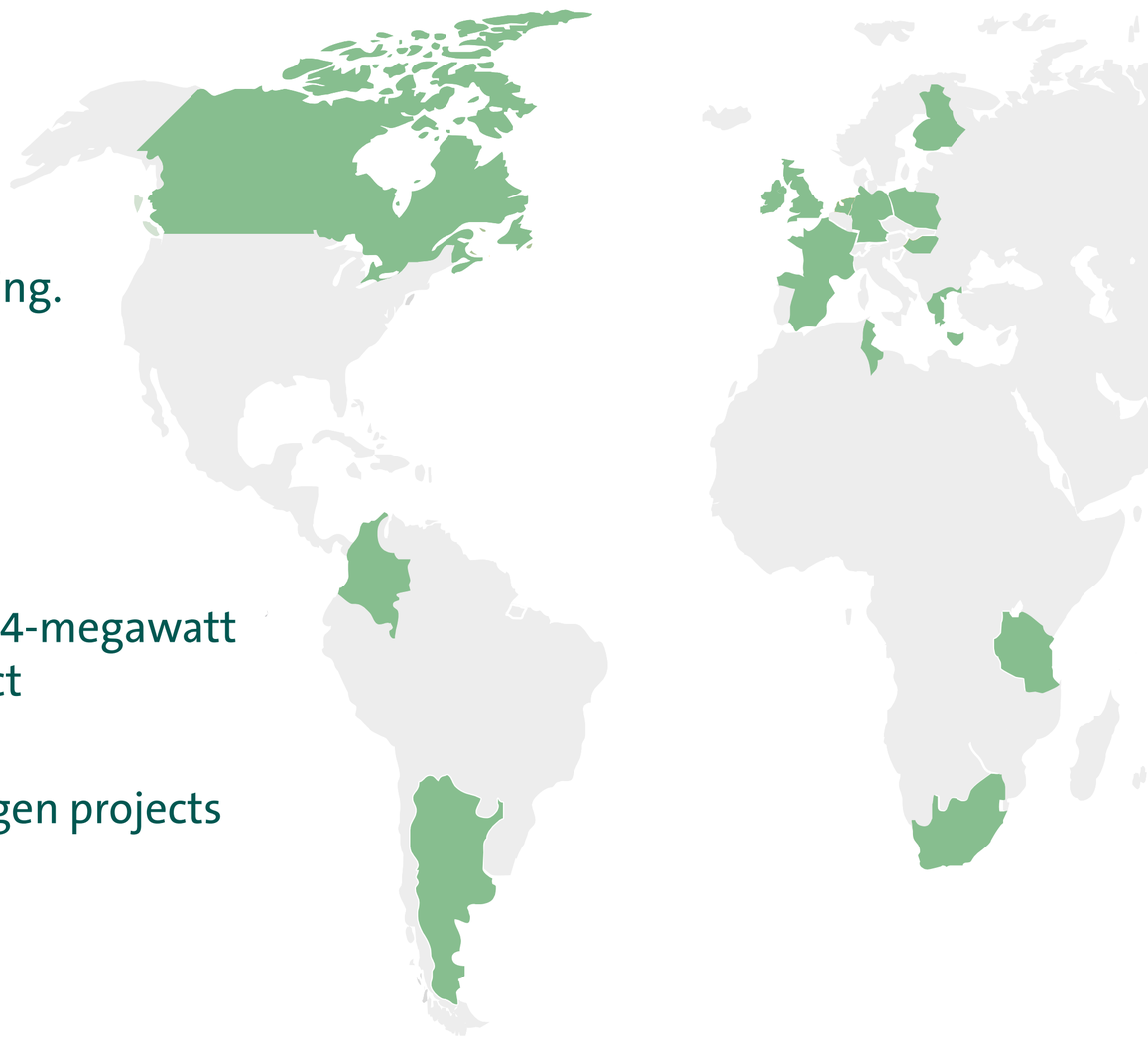
Papoqji'jg Wind Project

Thank you for coming to our information session and welcoming us to your community. ABO Energy is committed to ongoing engagement, transparent dialogue, listening to feedback and working collaboratively with you.

Who is ABO Energy?

ABO Energy (formerly ABO Wind) has been a company since 1996 with 1300 employees worldwide, with 35 in Canada. We now have 12 employees here in Atlantic Canada and are growing.

- Active in 16 countries in Europe, North and South America, and Africa. We take pride in our international expertise and our local focus.
- ABO Energy Canada started in 2017 in Calgary. We've planned and fully permitted Canada's largest wind farm to date - the 494-megawatt Buffalo Plains Wind Farm in Alberta. Construction on this Project is near completion.
- ABO is focused on wind, solar, battery storage and green hydrogen projects throughout Atlantic Canada.
- Our Halifax-based Atlantic Canada team is developing projects in NB, NS and NL.



Today, we're here to introduce our proposed Papoqji'jg Wind Project to you and hear your feedback.

Our team members are here to listen to you and provide information about this project currently being planned. We invite you to:

- Visit our posterboards that outline various elements of the Project.
- Provide feedback and ask our team any questions as you explore the posterboards.
- Fill out a comment card! Our team welcomes comments or questions and will follow up with you with more information as requested.

Visit our website, **www.papoqjijgwind.ca**

to stay up to date on the Project.

If you have questions or feedback at any time after this session, we invite you to reach out!

Heidi Kirby, Communications and Engagement Lead (Atlantic)
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About the Papoqji’jg Wind Project

A development of ABO Energy and Pabineau First Nation

In partnership with Pabineau First Nation, ABO Energy is proposing a wind project that will create economic opportunities and clean energy right here in New Brunswick.

As protectors of the environment, Pabineau First Nation is committed to clean energy, with operational renewable projects already existing.

Leveraging wind as a local renewable resource, the Project will help New Brunswick meet the rising demand for reliable, clean energy as we shift away from using fossil fuels.

The clean power will feed into the New Brunswick Power grid for use within the province. Wind energy is a key component of New Brunswick’s energy transition.

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pabineau FIRST NATION

The name **Papoqji’jg Wind** (pronounced “Pa-book-chich”) originates from the traditional language of the Mi’kmaq First Nation and means small, gentle, quiet pool on a river.

- Papoqji’jg Wind would harness wind energy in rural New Brunswick to provide renewable energy directly to the power grid.
- This power will help residents and businesses in the province access more clean, renewable energy.
- The amount of renewable energy produced at the Papoqji’jg Wind farm could displace approximately 2.8M tonnes of CO2 during its lifetime and power more than 15,000 homes annually!

Project Details

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Size

- 7-9 turbines
- Depending on several factors the Project could vary between 49-megawatts to 63-megawatts (subject to change). Currently being planned as 56-megawatts.
- The turbines are estimated to be approximately 400 ft to the hub, 660 ft to the tip of the blades. For comparison, the CN tower is 1816 ft high!

Location

- 40-50km southwest of Bathurst, Papoqji'jg Wind will be located on Crown Lands in the rural areas of Restigouche and Northumberland County.
- The site is just southeast of Route 180 near the Caribou Depot site.

Site Benefits

- High wind speeds
- Previous forestry activity in the area
- Good distance from residential areas
- Access to nearby transmission infrastructure and the highway
- Bathurst area as regional service centre
- It is not anticipated that any established communities will see the turbines. Turbines would be visible from areas along route 180, particularly in the area of Caribou Depot.

Local Engagement

- Engagement and open dialogue will continue through the life of the Project with stakeholders and First Nations.
- Closer to construction, we look forward to further communicating specific contractor and employment opportunities in the local region.
- Currently, we are in the planning stage. There will be many opportunities to ask questions, make comments and provide input during the Project design stage prior to any construction.
- We will continue to provide Project updates and correspond on a timely basis, through our website, open houses, mail-outs, personal meetings and other communication channels.
- Our objective is to facilitate open, honest and respectful discussion with all those interested in the Project.

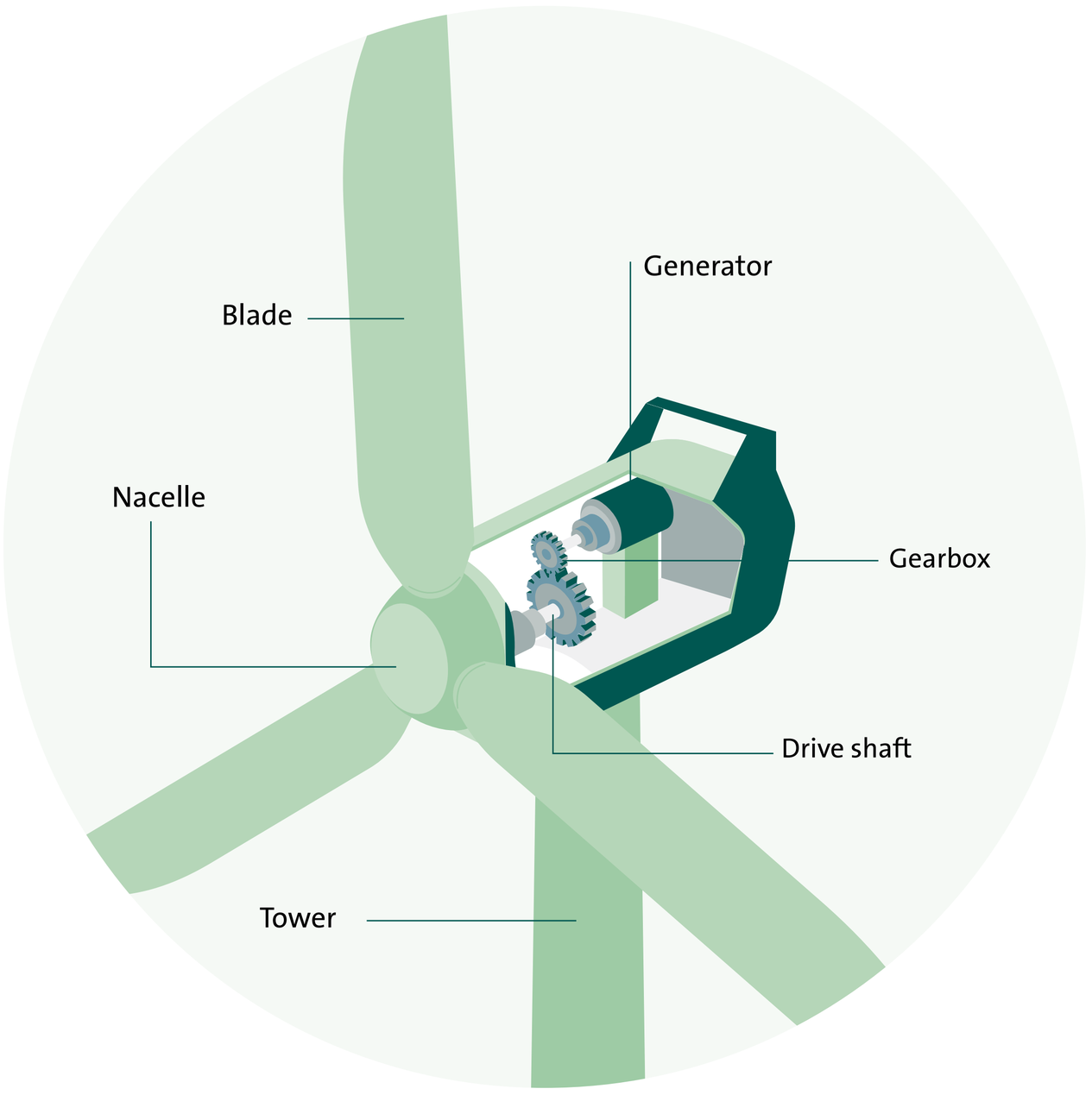
Construction

How is wind converted into electrical energy?

- Wind causes the blades to rotate. The blades are connected to a gearbox in the nacelle, which turns the generator to produce electricity.

- The clean electricity is transmitted through cables and collected at a substation before feeding into the NB electrical grid through the existing overhead powerlines.

To get to this point, our Project will require many types of work to build this Project. We aim to involve local contractors wherever possible.



We encourage local suppliers and contractors to register on our Supplier Portal at this time to show interest in working with us!

We will further engage with the local and Indigenous business community through RFP opportunities and other ways, including supplier information sessions

Construction

Here are the various phases of construction:

Civil works

Ground movement on platforms

Construction of the foundation of a wind turbine base

Concreting of foundations (500-600 m3 per wind turbine)

Construction of the transformer substation

Transportation of large components, here the rotor blades

Trench for subway power line

Erection of the wind turbine

The first tower segment is bolted to the foundation

The tower segments are installed one after the other

Fitters take delivery of a new segment and adjust it

Once the tower has been erected, the gondola is placed on top

The drive rod is installed

The hub is attached

The three rotor blades are attached to the hub one after the other

Project Opportunities and Community Benefits

A significant Project in the region, valued at $85-95 million total

Clean, renewable energy will create significant opportunities in the region and throughout New Brunswick, including employment, contracts, and many spin-off benefits from food/accommodations services, materials sourcing and more.

ABO Energy is committed to ensuring that those living nearby benefit from the Project.
We have many mechanisms we use to capture this mindset, including out Local Economic Development Policy, Indigenous Inclusion Policy, and Community Benefit Funds.

Regional Benefits

Local Contracts and Jobs, Spinoff Revenue

- 30-50 jobs during construction, 2-3 long-term for operations and maintenance
- Many types and sizes of contracts to construct the project

Community Benefits

- Funds for communities in the vicinity of the Project to help local initiatives; starting in development at $3000/year for local donations and sponsorship
- Capacity building funding and initiatives for local First Nations

Tax Payments to Local Governments

Health Benefits

- The Project will offset emissions that would otherwise be emitted through burning fossil fuels
- It will generate clean, renewable electricity without emitting greenhouse gases or air pollutants, or using fresh water

Little to no turbines visible from local communities

Project Opportunities and Community Benefits

Anticipated Construction and Infrastructure Requirements:

During development and construction (30-50 jobs) and during operation (2-3 jobs).

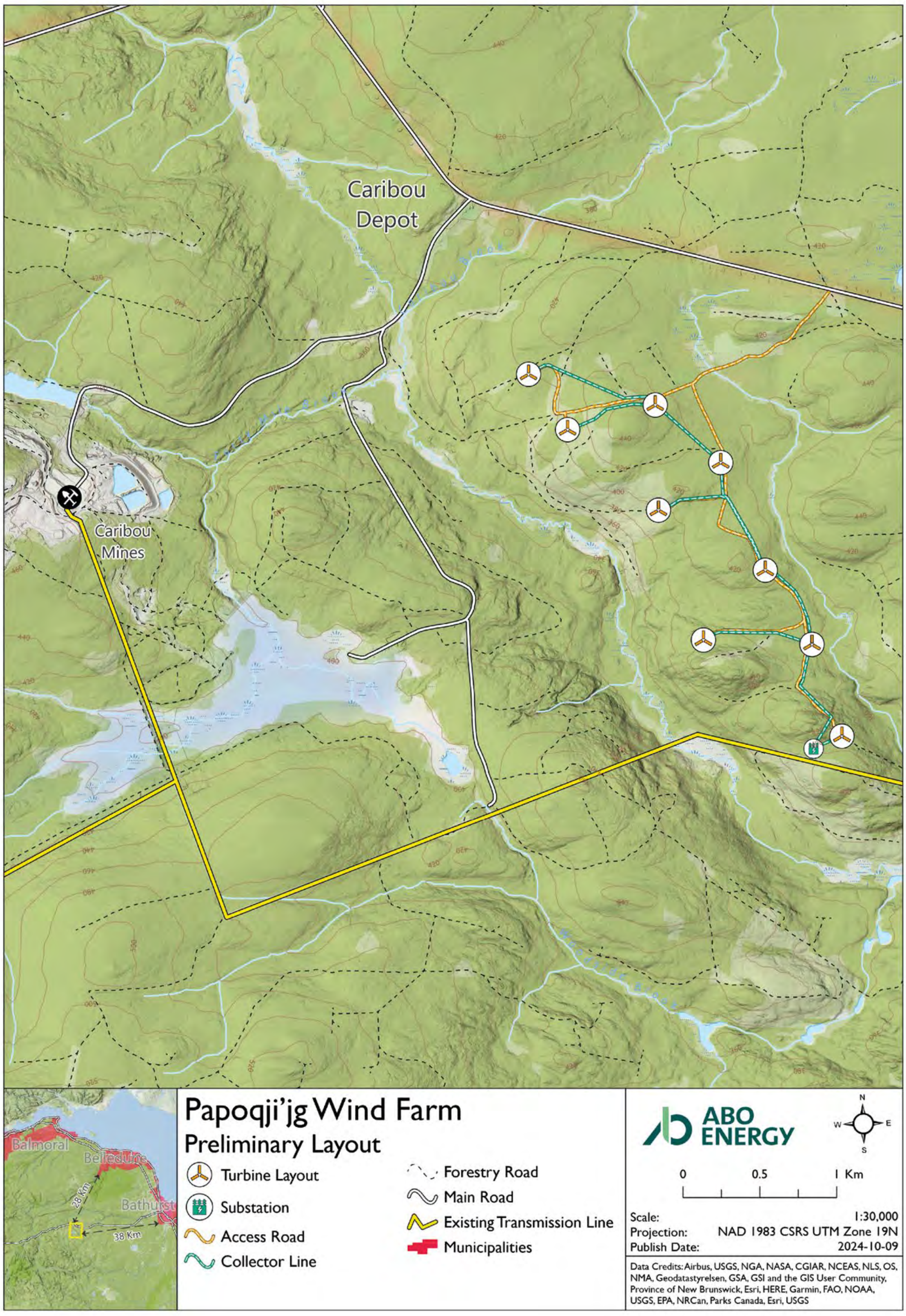
- Labourers, operators, truck drivers, safety officers, crane operators, operating engineers, and various types of trades
- Wind turbine technicians (program offered at Holland College, PEI and Wind/Solar Energy Technician Program offered at NBCC)
- Professional roles, including engineers, administrative support and much more.

The Project would require the construction and installation of various infrastructure, along with ongoing maintenance, including:

- Tree clearing/harvesting as needed
- Geotechnical studies (ground assessments)
- Access roads (clearing and other civil works) and snow clearing
- Transmission infrastructure (collector system, substation, etc.)
- Storage yard construction, onsite security, etc.
- Construction of concrete foundations for turbines
- Wind turbine installation (transport to site, erection)
- Operations and Maintenance Facilities

Contractors and vendors are invited to register on ABO Energy‘s supplier portal to show interest in providing services to this Project:

Project Map


Caribou
Depot
Caribou
Mines
Trout Brook
Trout Brook
Woodside Brook
Papoqji'jg Wind Farm
Preliminary Layout
Turbine Layout
Substation
Access Road
Collector Line
Forestry Road
Main Road
Existing Transmission Line
Municipalities
Balmoral
Belledune
Bathurst
28 Km
38 Km
ABO ENERGY
N
W
E
S
0
0.5
1 Km
Scale: 1:30,000
Projection: NAD 1983 CSRS UTM Zone 19N
Publish Date: 2024-10-09
Data Credits: Airbus, USGS, NGA, NASA, CGIAR, NCEAS, NLS, OS, NMA, Geodatastyrelsen, GSA, GSI and the GIS User Community, Province of New Brunswick, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, NRCan, Parks Canada, Esri, USGS

Wind Farm Life Cycle

What happens at the end of the wind farm's life?

The life of a wind farm is 25-30 years. After, it may be decommissioned or repowered.

During the life of a wind farm, maintenance occurs to replace parts – just like your vehicle. Operations and maintenance workers will fulfill this important task during the life of the wind farm.

Decommissioning

Due to economics, regular wear and tear and other factors, it may make most sense to remove the project and return the land to its original state.

There will be a decommissioning and reclamation plan required for the Project. After operations conclude, this plan will be implemented to remove or reclaim the Project infrastructure, and restore the site.

Can wind turbine components be recycled?

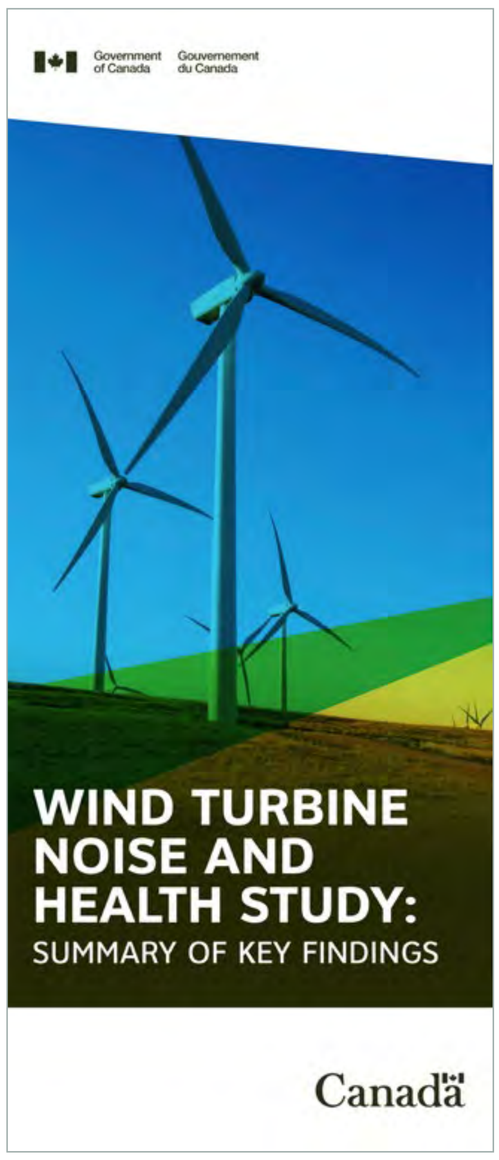
The main components of a wind turbine that can be recycled, repurposed, or salvaged include steel tower sections, steel reinforcements, electrical equipment and cables, precious metals, and concrete. Other materials that cannot be recycled, repurposed or salvaged will be disposed of according to provincial regulations.

Did you know? Two of the largest turbine manufacturers have created turbine blades that are fully recyclable! The use of these blades will be evaluated for this Project.

Repowering

As another option, older wind turbines or other components can be upgraded with newer, more efficient equipment in some cases.

Health and Safety is a Priority



Human Health

Health Canada conducted the largest study in the world of people living, working, and playing near wind turbines. Over 1,200 people participated, who live in homes near wind farms.

Result: The study found no evidence of an association between exposure to wind turbine noise and the prevalence of self-reported or measured health effects beyond annoyance.

Largest study ever undertaken around the world on wind turbines and health. 1,238 people participated, including those in homes as close as 820 ft out to 7 miles from wind turbines.

The study involved self-reported questionnaires and, for the first time included objective health measures such as sleep studies, hair cortisol (stress), and blood pressure testing.

Safety

- Setback distances in place from property lines, roads, and homes to protect public safety.

- For the safety of workers and residents, I, there would be periods of limited access in zones that are under active construction (i.e., turbine installation, foundation pouring, etc.).

- Once turbines and other infrastructure are installed if there is not active construction happening, in-season hunting, hiking, ATV use, snowmobiling, and other activities can occur in/ around the Project site.

- A Project-specific Emergency Management Plan will be developed. It will be informed by industry best-practices, ABO‘s global and Canadian expertise in developing wind farms, and local emergency responders.

Did you know?

Failures, fires, and ice throw from wind turbines are extremely rare events
Blade failure occurs at about 1 in 10,000 per year
Fires are rare with less than 1 incident per year in Canada
Ice throw can happen but only reaches distances equal to the height of the turbine [End Box]

Next steps toward renewable energy harnessed from New Brunswick's wind

The Project is currently in its early development stage. This schedule is subject to change:

Community, First Nations and Government Engagement	Ongoing
Environmental Field Studies	2023/2024 (2025 if required)
Environmental Impact Assessment Registration	February 2025
Engineering and Detailed Geotechnical Works	2025
Construction	2026/2027/2028
Operation	2027/2028

Learn more about ABO Energy's stages of planning and development for wind farms:

Environmental Impact Assessment

Environmental Studies

Comprehensive environmental studies (desktop and field) were completed in 2023 and 2024 to characterize the existing environment including:

- Birds and Bats
- Wetland Delineation and Functional Assessments
- Fish and Fish Habitat
- Vegetation, Rare Lichen, Ecological Land Classification
- Species at Risk and Species of Conservation Concern
- Archaeology
- Ground and Surface Water
- Visual Setting (Shadow Flicker)
- Noise Impacts
- Etc.

Impact Assessment, Mitigations and Reporting

Survey data is analyzed by Subject Matter Experts where findings are considered throughout the Project planning stage to minimize and mitigate for any potential impacts associated with the proposed Project. Where avoidance isn't possible, mitigation measures are presented based on Site specific data.

Some mitigation measures include:

- Incorporating existing access roads into the design
- Citing turbines outside of wetland and watercourse buffers
- Completing Post Construction Monitoring for Birds and Bats
- Minimizing tree clearing;

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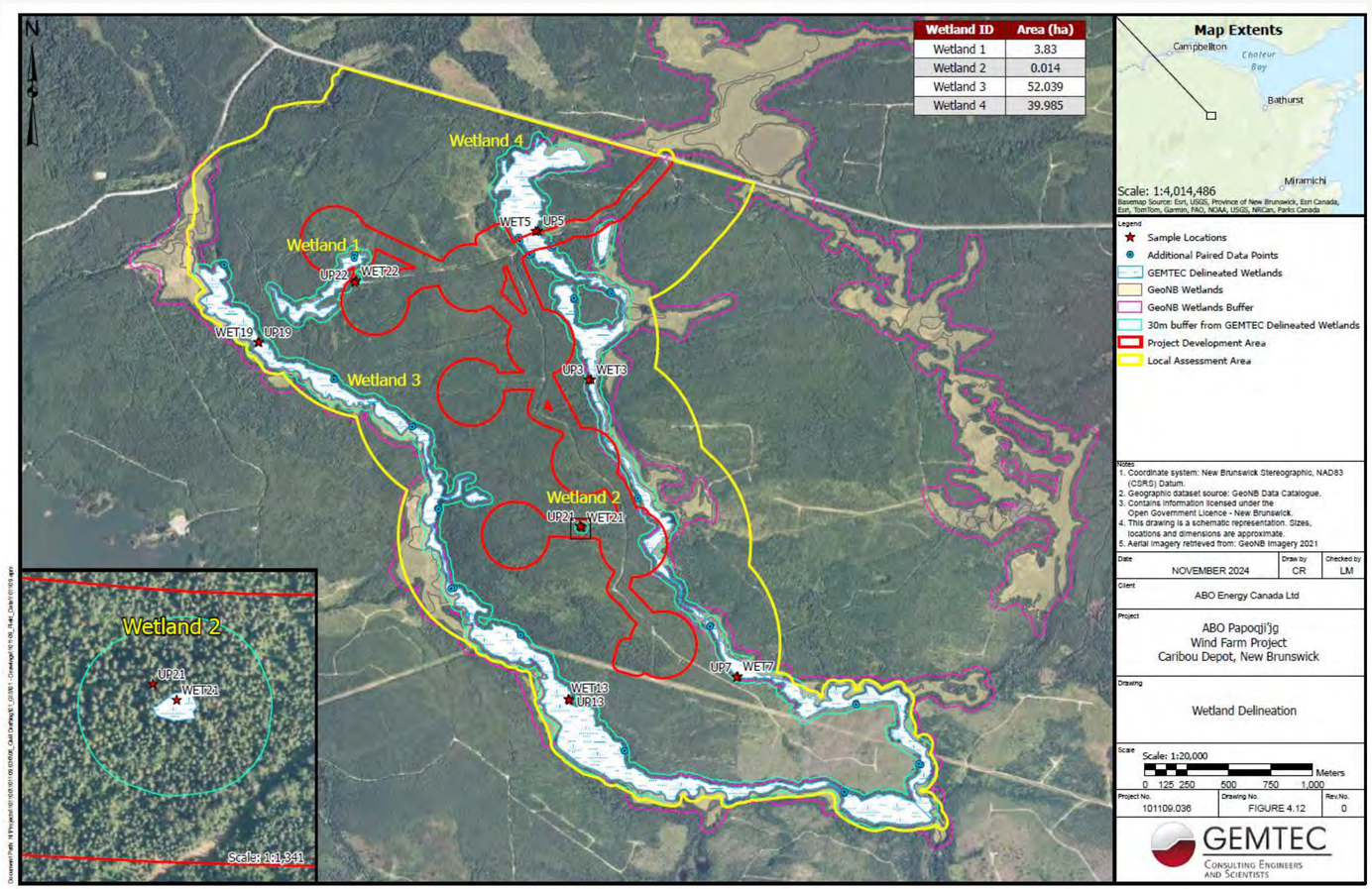
Wetlands and Watercourses



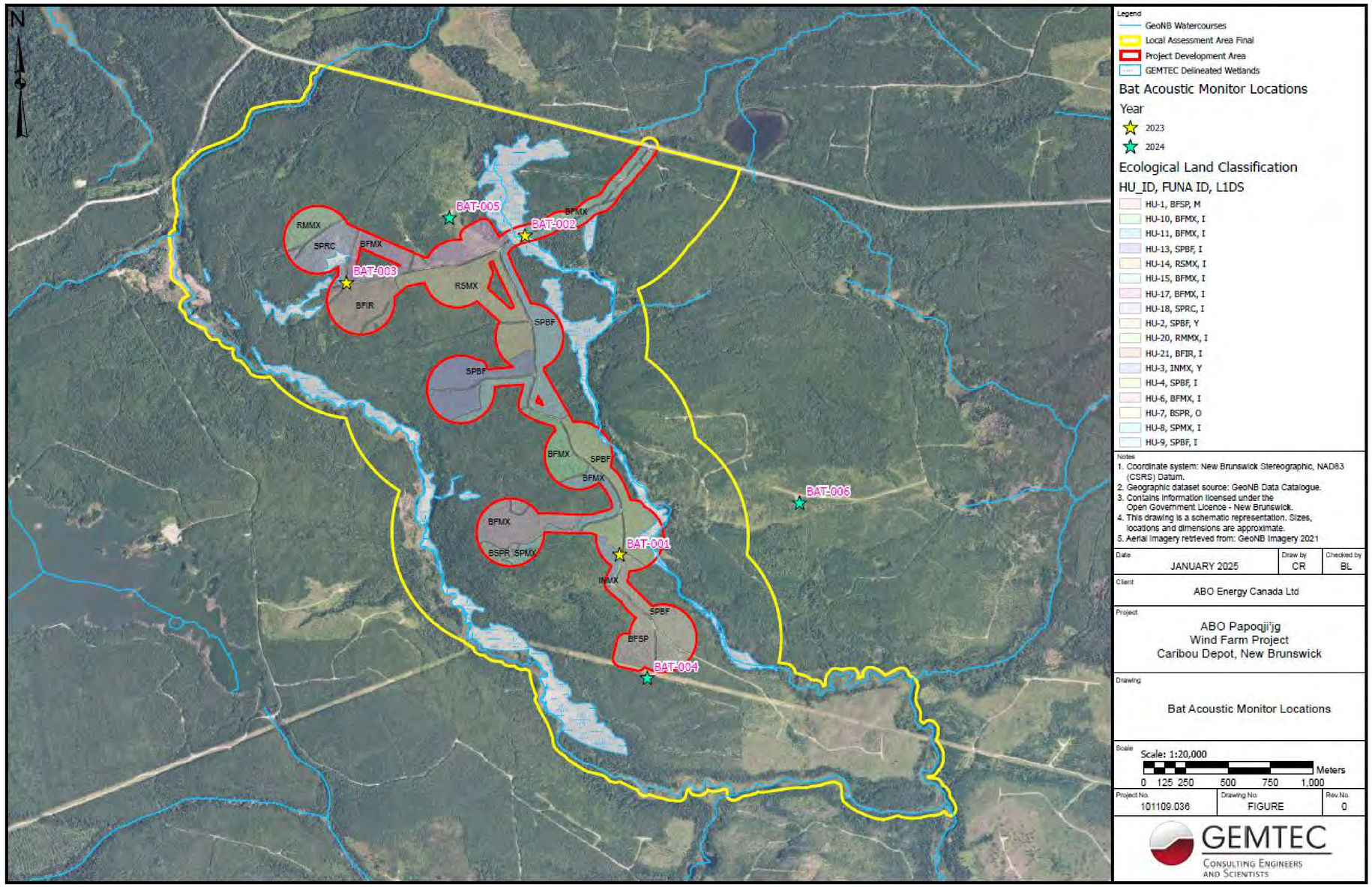
Site is located between two tributaries of Forty Mile Creek

The Project Development Area intersects with 3.55 ha of wetland and 6.84 ha of regulated wetland buffer

Riparian Wetlands are common in the PDA.

Delineations are completed to assess vegetation, soils, and hydraulic indicators

Bat Studies and Results



3 Acoustic Bat Monitors

Installed from:

- June 29 – September 9, 2023
- May 13 – October 30, 2024

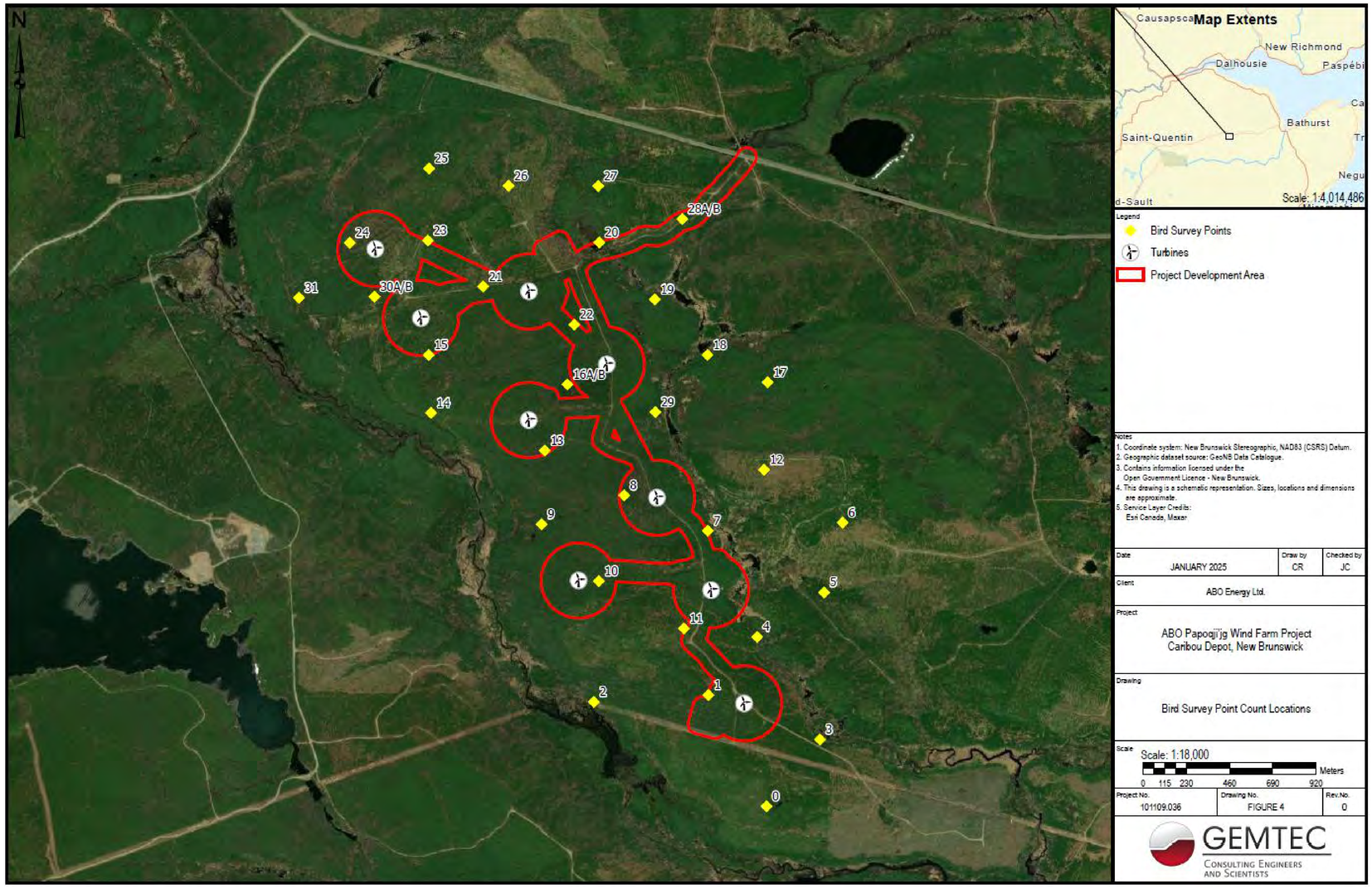
1 Radar Unit Installed:

- Spring 2024
- Fall 2024

Species Detected:

- Big Brown Bat
- Eastern Red Bat
- Hoary Bat
- Silver-haired Bat
- Little Brown Myotis

Bird Studies and Results



Radar Detection:

- Spring and Fall migration period

Passage Migration and Stopover

- Passage surveys - 58 Species
- Stopover surveys -50 Species

Nocturnal Acoustic Monitors

- 21 Species Detected (Aug 23 – Oct 28, 2023)
- 17 Species Detected (Apr 17 – May 15, 2024)
- 6 Species Detected (Sep 19 – Oct 9, 2024)

Breeding Bird Surveys

- 55 Species Recorded
- No Bicknell's Thrush were found

Nightjar and Owls

- Common nighthawk
- No owls during nocturnal surveys

Overwintering Surveys

- 14 Species Recorded

Species at Risk

- Bald eagle
- Canada warbler
- Common nighthawk
- Evening grosbeak

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Shadow Flicker

Shadow flicker is the moving shadow created when wind turbine blades pass in front of the sun, which can occur at certain times of the day and year but is minimized through careful planning and mitigation

39 Receptors (Residential/Commercial Buildings) identified within 4km radius with the nearest receptor (residential dwelling) 1.5km from a turbine

Based on the Worst-Case Scenario - 1 in 39 receptors will receive shadow flicker

- Maximum 18hrs and 59 mins per year or 26 mins per day.

- This is below maximum allowed shadow flicker in compliance with the *New Brunswick Additional Information Requirements for Wind Turbines)*

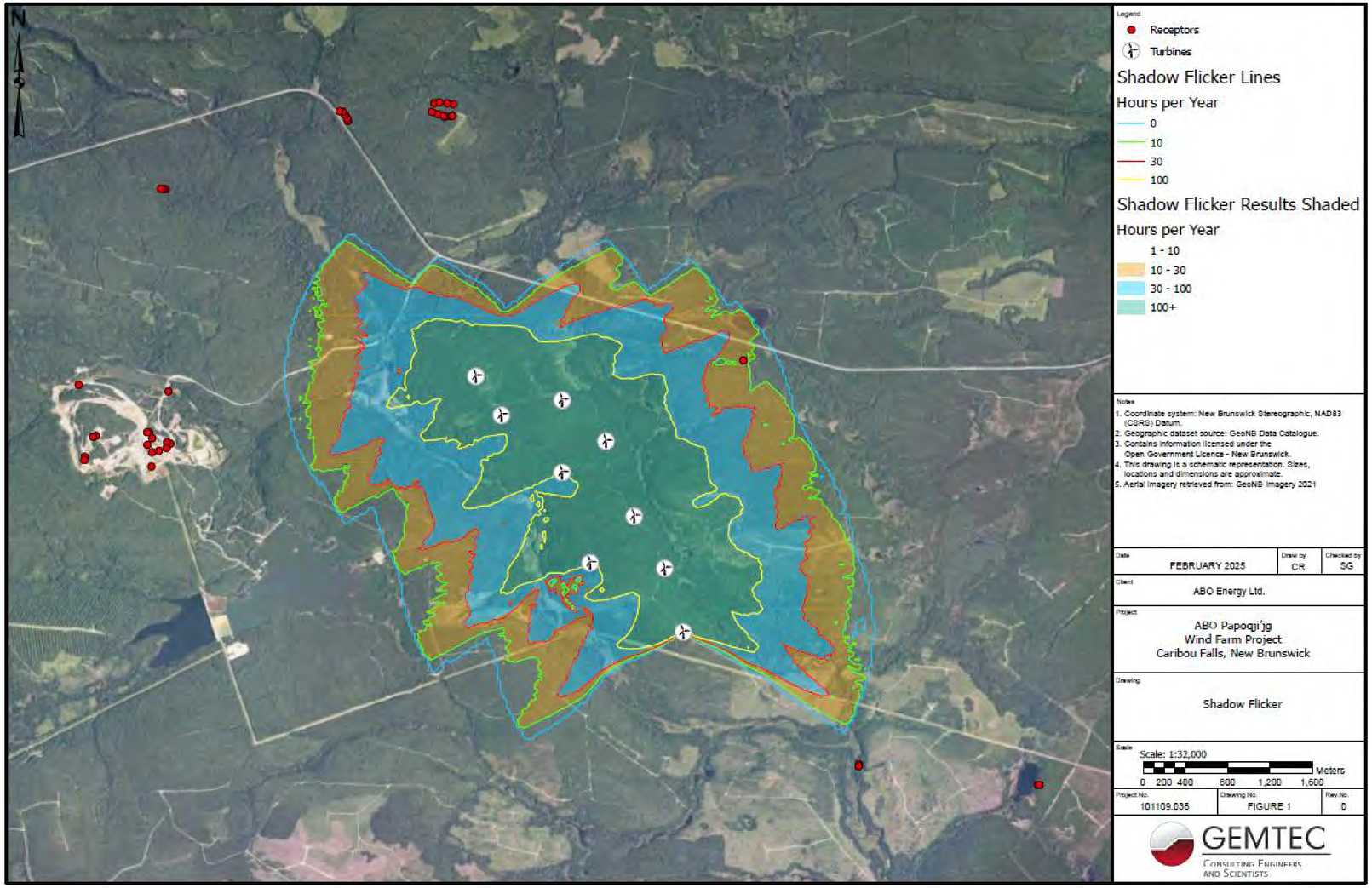
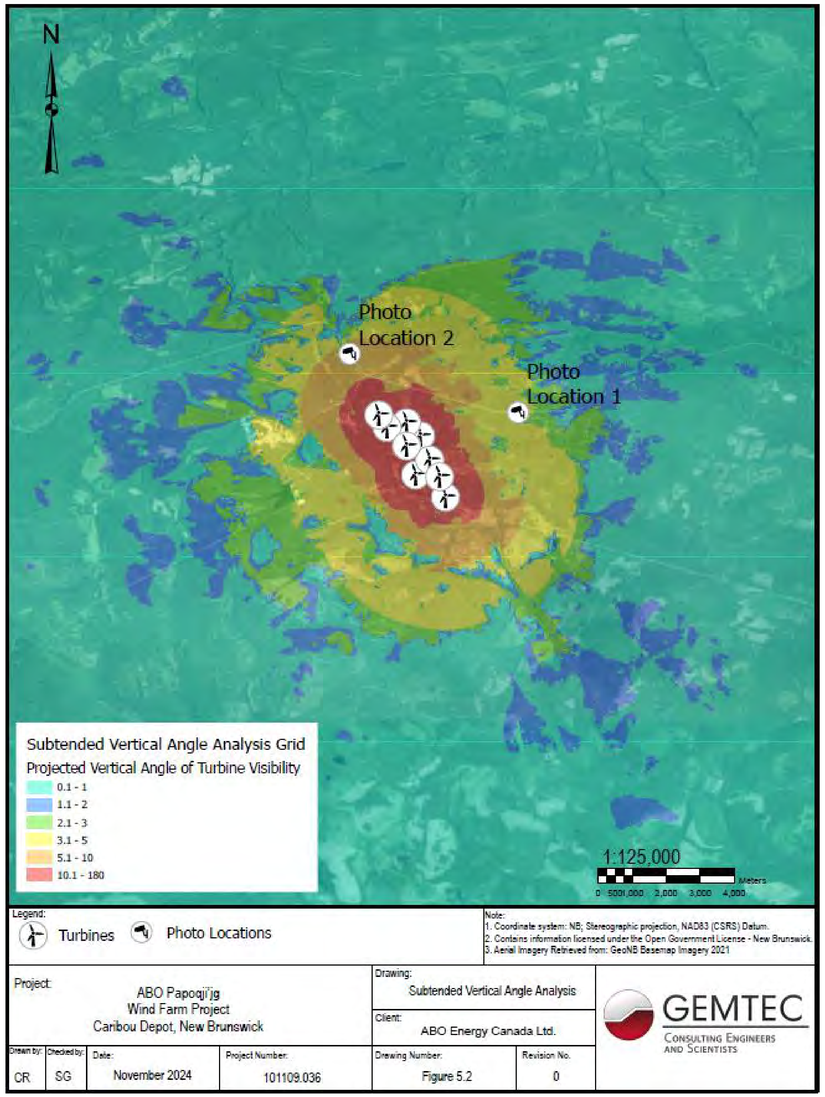


Photo Montage



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Noise Impact Assessment

- 39 receptors located within a 4 km radius
- Nearest receptor (residential dwelling) 1.5 km from a turbine
- All receptors are below the NBDELG Recommended Sound Criteria for Wind Turbines

Receptor ID	Max Sound Level from WTGs [dB(A)]	Distance to nearest WTG (m)
L	40.3	1507.4
AE	34.7	2082.4
AF	34.6	2088.5
D	33.9	2470.8
E	33.9	2472.5
F	33.9	2480.4
G	33.9	2471.7
C	33.7	2506.4
B	33.6	2534.1
K	33.5	2582.4
J	33.4	2596.6
H	33.3	2612.3
I	33.3	2613.3
AI	32.7	2702.2
AJ	32.6	2725.9