A Wolastoqey Wind Farm Project

The St. Mary's First Nation and Eolectric have partnered to create an Indigenous business for the development of a 92.4 MW wind farm in Carleton North.

The wind farm project will be majority-owned by St. Mary's First Nation at 51% and by Eolectric at 49%.

Eolectric

About St. Mary’s First Nation

St. Mary's First Nation, also known as **Sitansisk** is one of six Wolastoqiyik or Maliseet Nations on the Wolastoq River in Canada.

Established in 1867, the St. Mary's reserve lies on the northeastern bank of the Wolastoq River, across from downtown Fredericton.

The community operates several economic development ventures, including St. Mary's Retail Sales and St. Mary's Entertainment Centre, and is the largest local employer in Fredericton North. **St. Mary's First Nation** is looking forward to the development of this wind farm Project on Wolastoqiyik unceded territory.

Eolectric : A Pioneer in Canada’s Wind Energy

Since 2001, Eolectric specializes in the development, financing, construction and operation of renewable energy projects in North America.

Together with its partners, Eolectric has developed more than 900 MW of now operational wind farms and has a portfolio of renewable energy projects representing nearly 2,000 MW.

Eolectric is building a long-term partnership and relationship with St. Mary’s First Nation which is fundamental to the success of the wind farm project.

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2023 NB Power REOI

On February 10, 2023, NB Power launched a Request for Expressions of Interest (REOI) for the supply of electricity using renewable generation technologies.

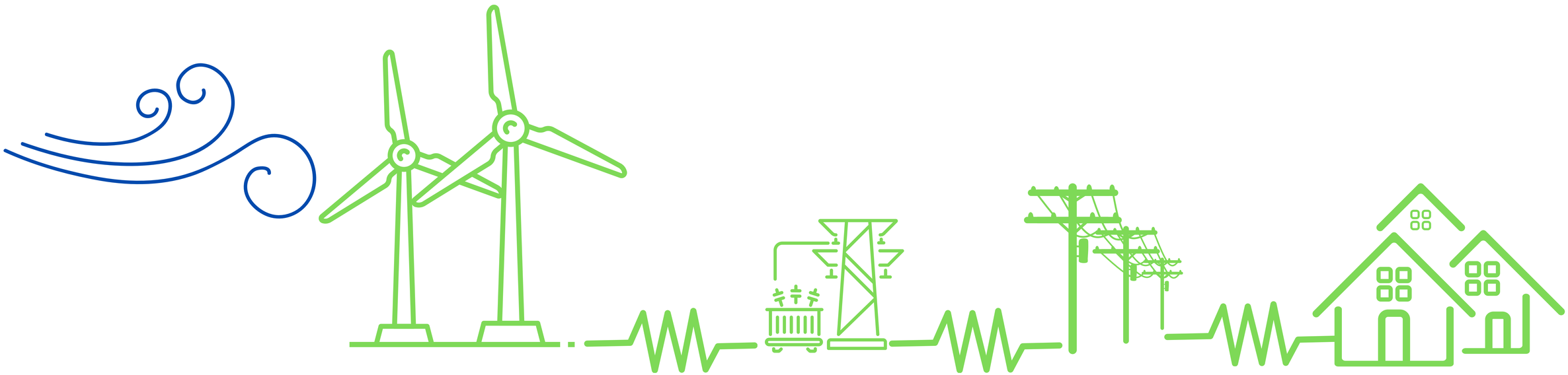
St. Mary's First Nation & Eolectric have submitted a project proposal for the development of a 50.4 MW wind farm in Carleton North.

Upon the selection of the project by NB Power, it was agreed to increase the installed capacity of the project to reach 92.4 MW, therefore lowering the cost of electricity and adding more renewable energy in the provincial grid.

Énergie NB Power

Eolectric

How Wind Power Works



Turbine blades rotate when the wind blows. They are connected to a gearbox in the nacelle, which turns the generator and produces electricity.

The electricity from each turbine is transmitted through the collector network to the substation and then to the NB Power grid which will provide renewable power to New Brunswick homes and businesses.

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A good project for New Brunswick

Reliability and affordability: This project will provide new and locally generated clean electricity at low cost to NB Power. It will increase grid independence and meet the needs of the equivalent of approximately 18,000 homes.

Air quality: This project will produce green and renewable electricity that is equivalent to removing 50,000 cars off the roads each year*.

Employment opportunities: During construction, the project will create approximately 100 jobs in the area, as well as contracting opportunities for local and First Nations businesses.

***https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator-calculations-and-references#vehicles**

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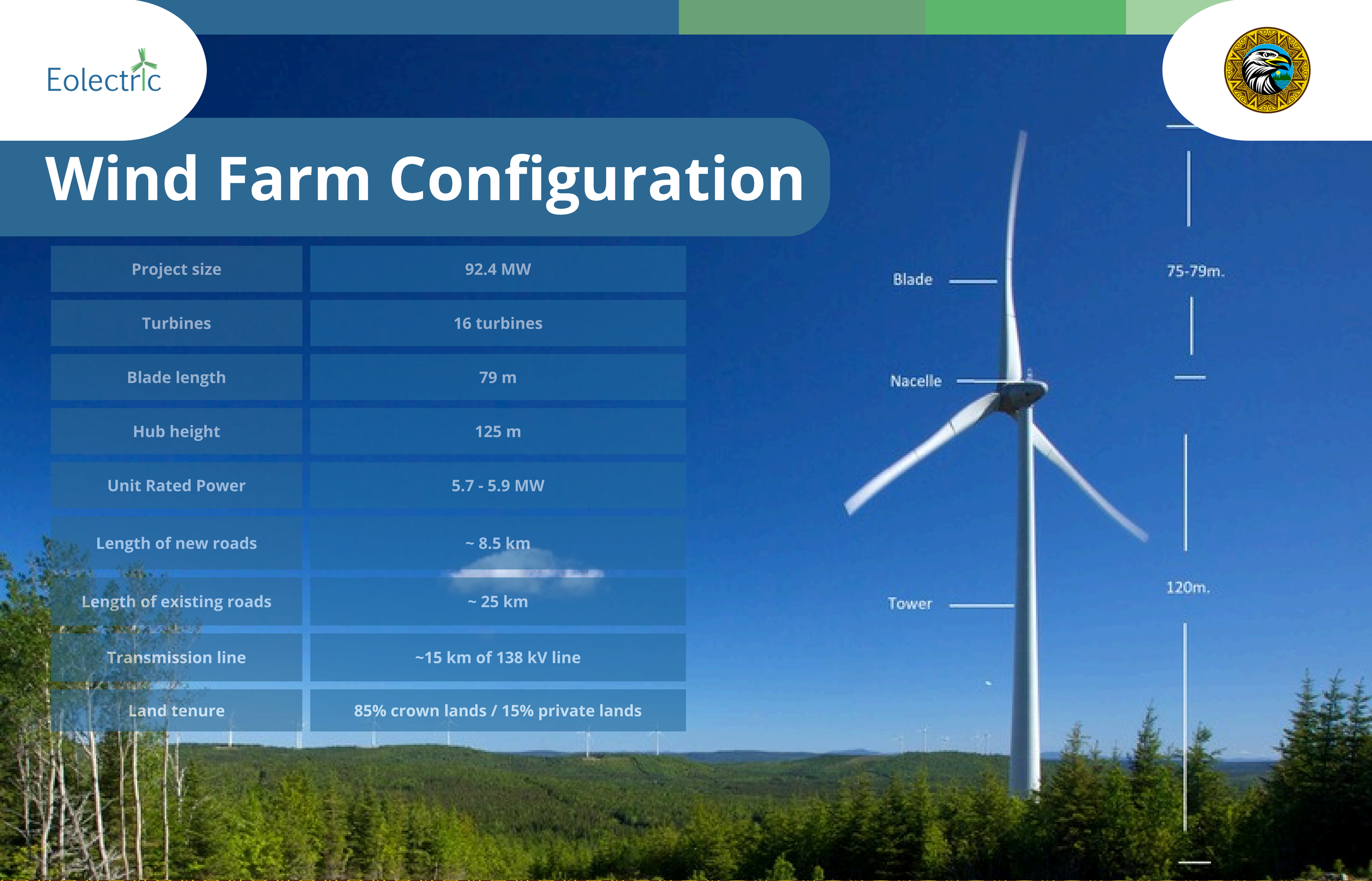
Wind Farm Configuration

Project size	92.4 MW
Turbines	16 turbines
Blade length	79 m
Hub height	125 m
Unit Rated Power	5.7 - 5.9 MW
Length of new roads	~ 8.5 km
Length of existing roads	~ 25 km
Transmission line	~15 km of 138 kV line
Land tenure	85% crown lands / 15% private lands



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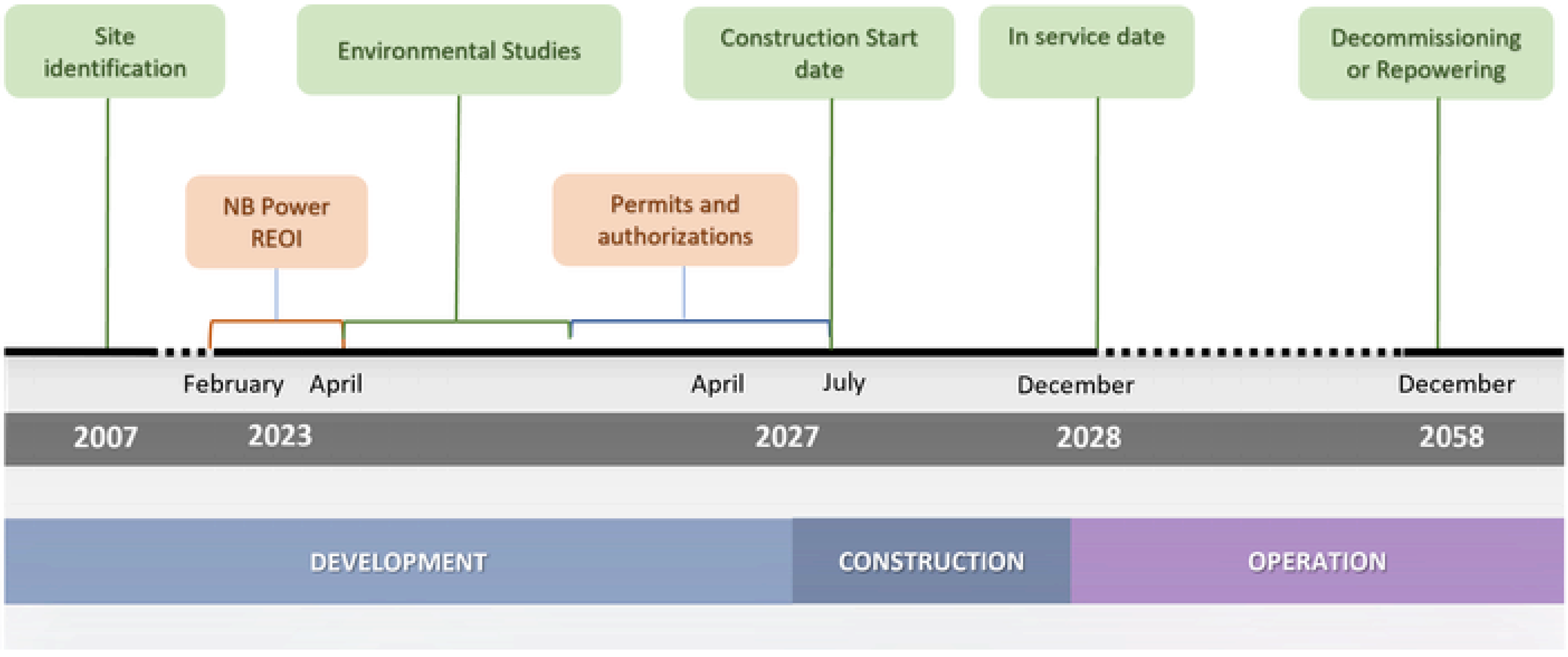
Project Schedule



Building a Wind Farm

Access roads

Collector network

Foundations

Eolectric

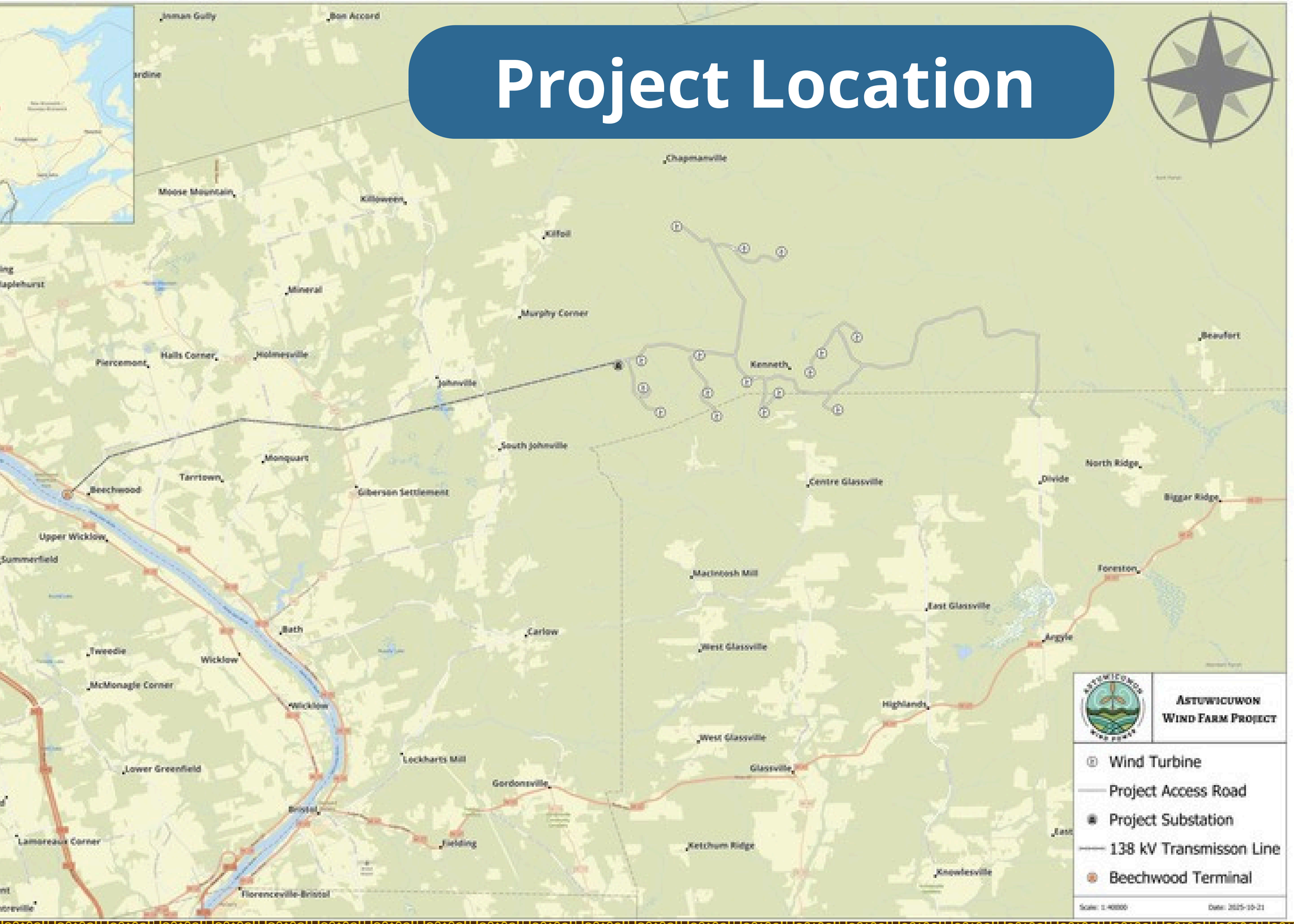
Building a Wind Farm

Tower installation

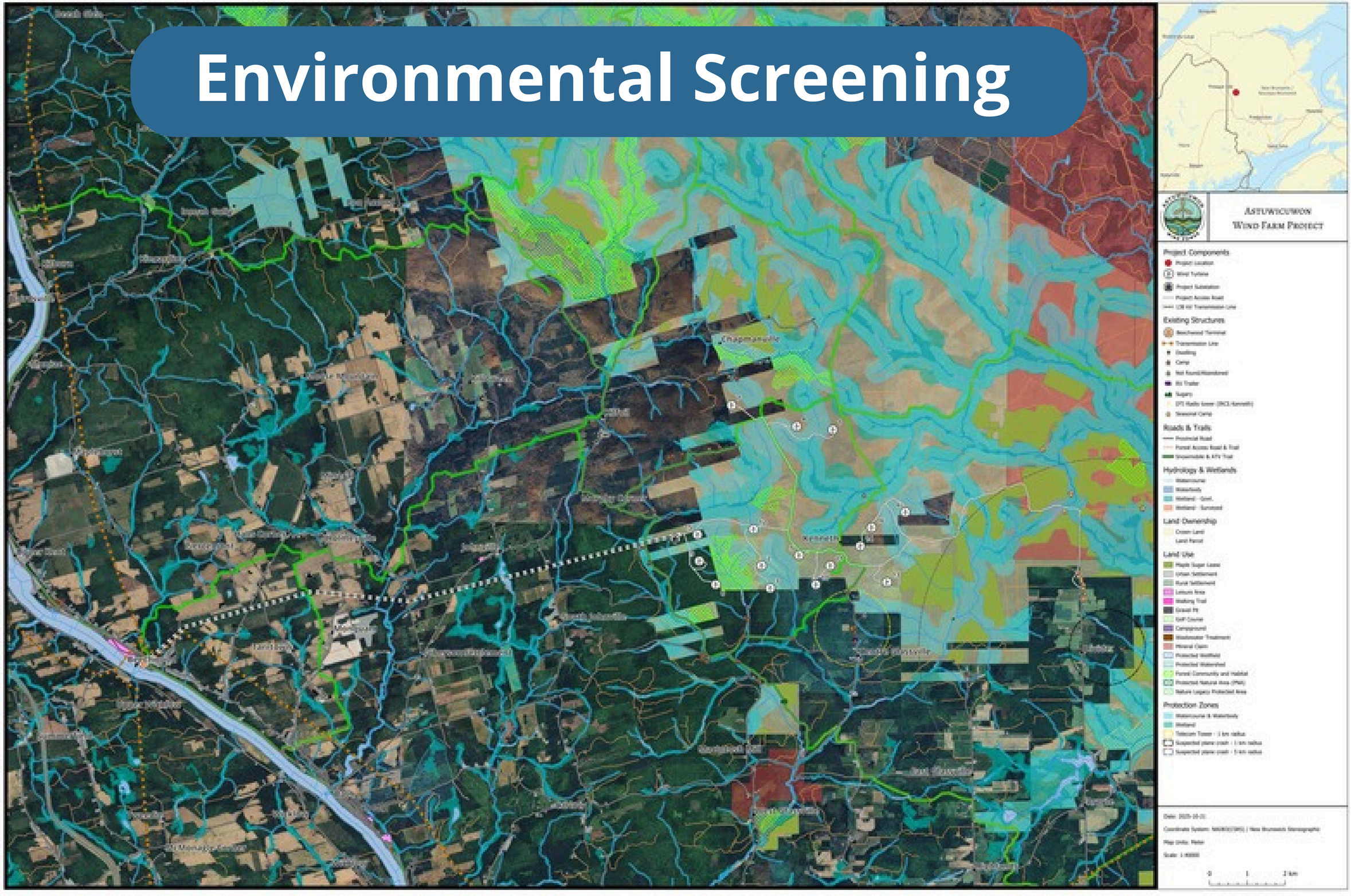
Blade transportation

Substation construction

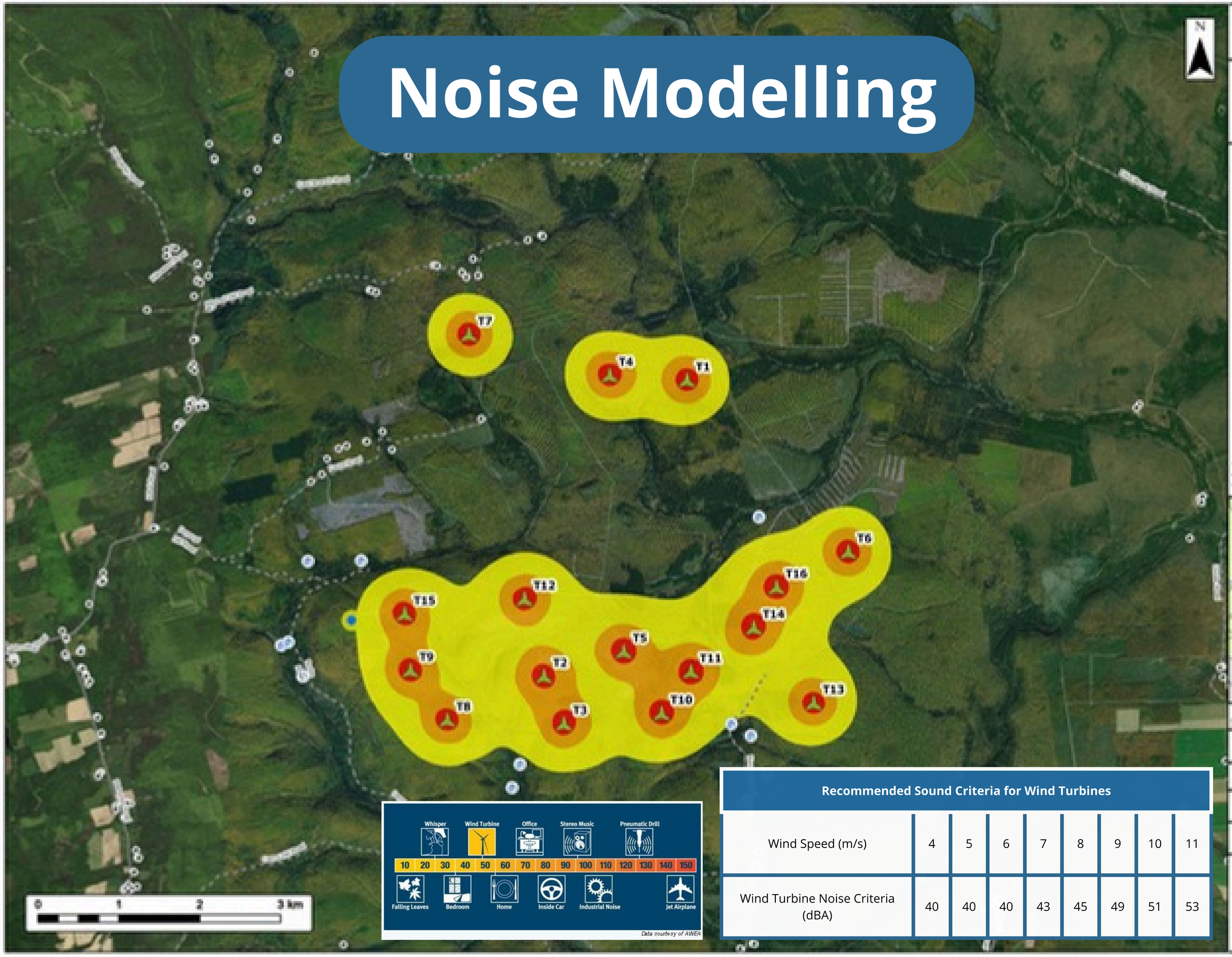
Project Location



Environmental Screening



Noise Modelling



Recommended Sound Criteria for Wind Turbines								
Wind Speed (m/s)	4	5	6	7	8	9	10	11
Wind Turbine Noise Criteria (dBA)	40	40	40	43	45	49	51	53

Astuwicuwon Wind Project

Noise Model

ASTUWICUWON WIND POWER

Proposed Turbine Location

Proposed Substation Location

Nearest / Closest Receptors

Camp

Building

Transportation

Paved

Unpaved

Predicted Noise Level (dBA)

40-44

45-48

50+

Note: An ambient noise value of **35 dBA** was included at each receptor. Noise was modelled using using **WindPRO v4.0** software using the *ISO 9613-2 General* noise model.

Date: 2025-10-17	Project #: 24-10293
Scale: 1:45,000	Drawing #: 2
Drawn By: E. Johnson	
Checked By: M. Saveliie	

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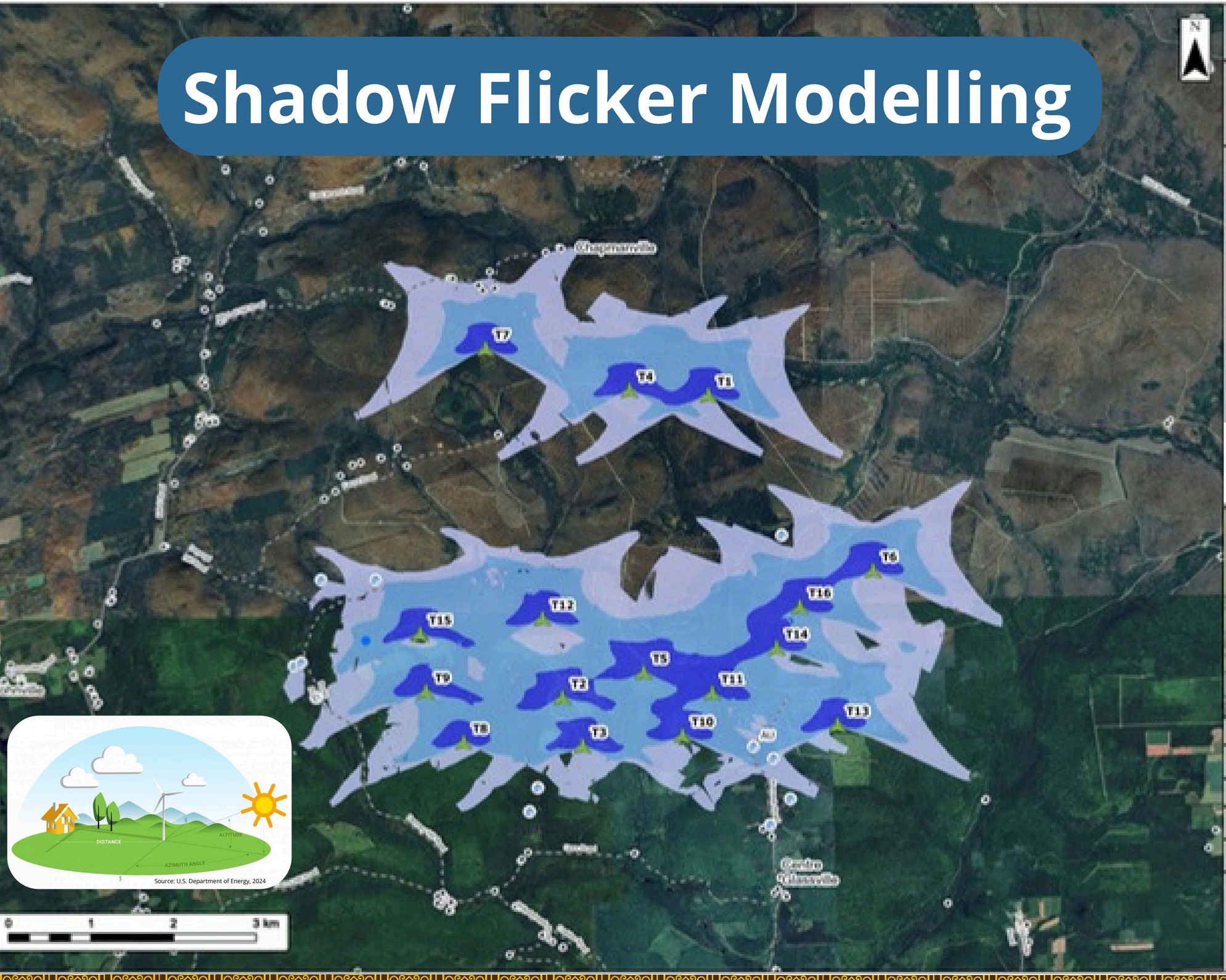
Shadow Flicker Modelling



Source: U.S. Department of Energy, 2024

Astuwicuwon Wind Project

Shadow Flicker - Assessment Scenario B - Hours per Year

ASTUWICUWON WIND POWER

Proposed Turbine Location

Proposed Substation Location

Nearest / Closest Receptors

Camp

Building

Transportation

Paved

Unpaved

Shadow Flicker Hours/Year (Assessment Scenario B)

10-29

30-99

100+

Date: 2025-10-17	Project #: 24-10293
Scale: 1:45,000	Drawing #: 3
Drawn By: E. Johnson	
Checked By: M. Saveile	

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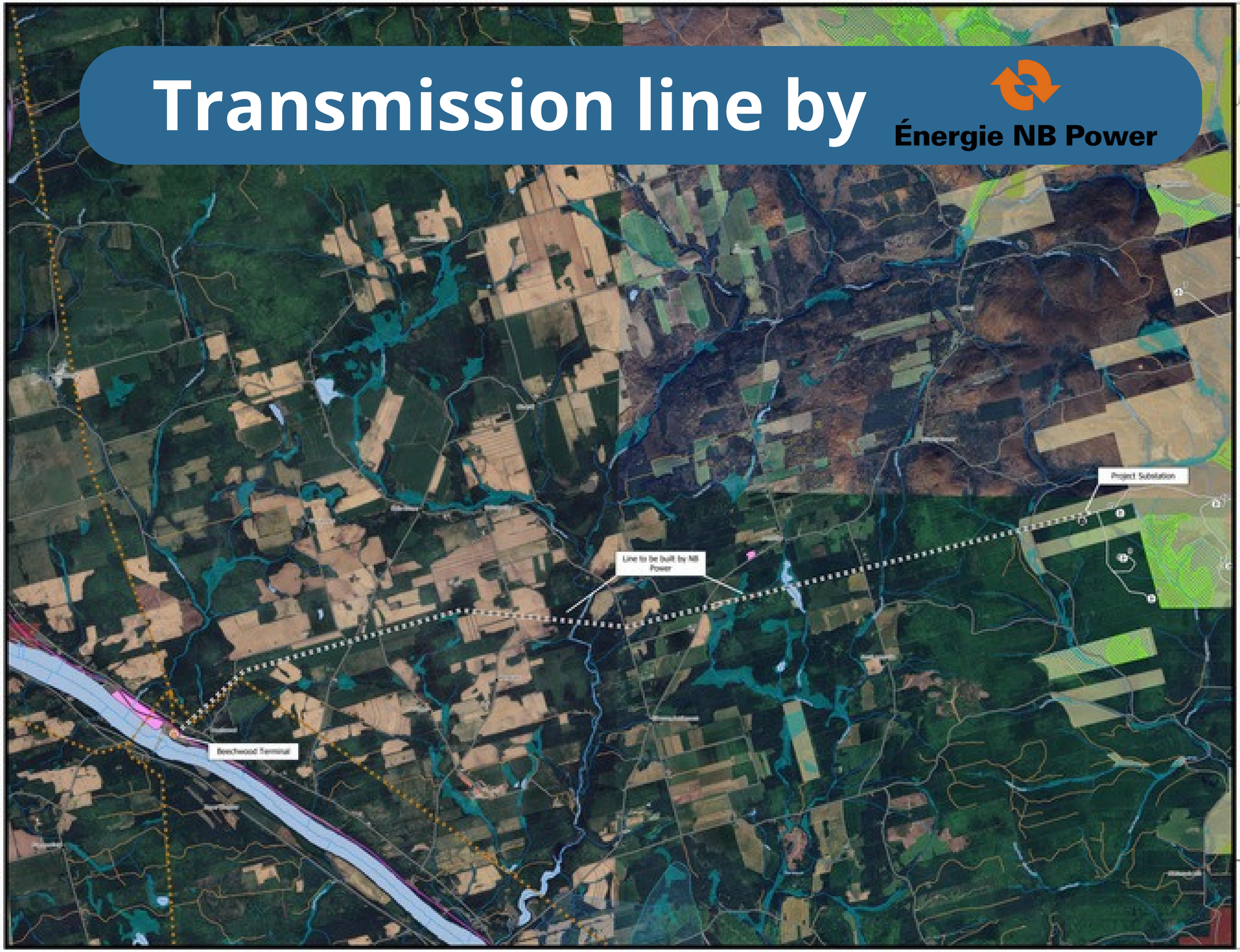
Transmission Line Works

A 138 kV transmission line of approximately 15 km will be built to connect the project to the provincial grid between the project and the existing Beechwood terminal.

Construction Type – Wood Pole with OHGW

Énergie NB Power

Transmission line by Énergie NB Power



Astuwiculmoh
Wind Farm Project
138 kV Line

Project Components
Wind Turbine
Project Substation
Project Access Road
138 kV Transmission Line

Existing Structures
Beechwood Substation
Transmission Line

Roads & Trails
Provincial Road
Forest Access Road & Trail

Hydrology & Wetlands
Watercourse
Waterbody
Wetland - Govt.
Wetland - Project

Land Ownership
Crown Land
Land Parcel

Land Use
Maple Sugar Lease
Lessee Area
Walking Trail
Gravel Pit
Mineral Claim
Protected Waterbed
Protected Watershed
Forest Community and Habitat
Protected Natural Area (PNA)
Nature Legacy Protected Area

Date: 2025-10-21
Coordinate System: NAD83(CSRS) | New Brunswick Stereographic
Map Units: Meter
Scale: 1:25000

VISUAL SIMULATION

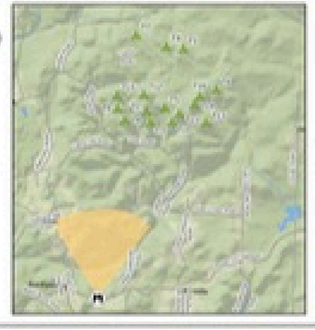
UNRENDERED PHOTO

ASTUWICUWON WIND PROJECT

Eolectric

TECHNICAL INFORMATION

Visual Simulation Location:	Location 1 (Highway 107)
View Coordinates:	Latitude: 46.4733°N Longitude: 67.4811°W Easting: 616606.0m Northing: 5147765.0m
Distance to Nearest Turbine:	10.15km
Direction of View:	Northeast, 17°
Camera Make/ Model:	Canon EOS REBEL T7
Lens:	50 mm
Image Resolution:	6000 x 4000
Weather Conditions	Overcast
Date of Photo:	2024/07/02
Time of Photo:	17:32
Photo Credit:	Eolectric



Proposed Turbine Location

Photo Location

Viewpoint Field of View

N

References

Date:	2025-10-17
Project #:	24-10293
Drawn By:	E. Johnson
Drawing #:	1A
Checked By:	M. Savelle

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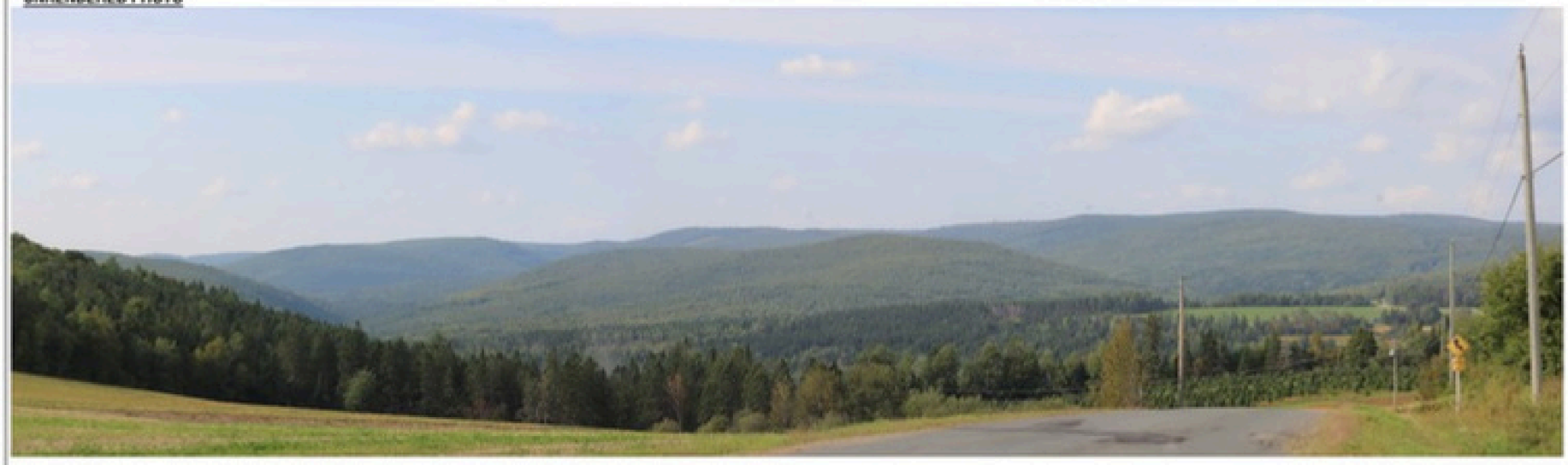
VISUAL SIMULATION

UNRENDERED PHOTO

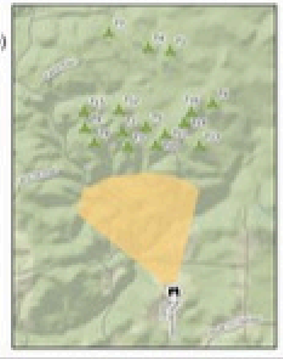


ASTUWICUWON WIND PROJECT

Eolectric

TECHNICAL INFORMATION

Visual Simulation Location:	Location 7 (Centre Glassville)
View Coordinates:	Latitude: 46.508°N Longitude: 67.4193°W Easting: 621264.76m Northing: 5151643.73m
Distance to Nearest Turbine:	6.4km
Direction of View:	Northwest, 343°
Camera Make/ Model:	Canon EOS REBEL T7
Lens:	50 mm
Image Resolution:	6000 x 4000
Weather Conditions	Cloudy
Date of Photo:	2024/08/26
Time of Photo:	17:27
Photo Credit:	Strum Consulting



Proposed Turbine Location

Photo Location

Viewpoint Field of View

N

References

Date: 2025-10-17	Project #: 24-10293
Drawn By: E. Johnson	Drawing #: 1E
Checked By: M. Saveille	

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VISUAL SIMULATION

UNRENDERED PHOTO

ASTUWICUWON WIND PROJECT

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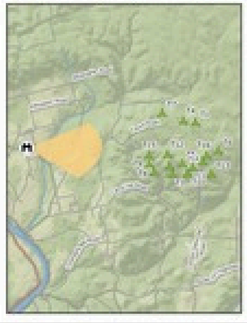
TECHNICAL INFORMATION

Visual Simulation Location:	Location 4 (Highway 565)
View Coordinates:	Latitude: 46.5752°N Longitude: 67.6019°W Easting: 607050.0m Northing: 5158930.0m
Distance to Nearest Turbine:	9.58km
Direction of View:	East, 85°
Camera Make/ Model:	Canon EOS REBEL T7
Lens:	50 mm
Image Resolution:	6000 x 4000
Weather Conditions	Overcast
Date of Photo:	2024/08/27
Time of Photo:	12:34
Photo Credit:	Strum Consulting



Proposed Turbine Location
Photo Location
Viewpoint Field of View

N

References

Date:	2025-10-17
Project #:	24-10293
Drawn By:	E. Johnson
Drawing #:	1D
Checked By:	M. Savelle

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VISUAL SIMULATION

UNRENDERED PHOTO

ASTUWICUWON WIND PROJECT

Eolectric

TECHNICAL INFORMATION

Visual Simulation Location:	Location 3(Johnville Rd)
View Coordinates:	Latitude: 46.5650°N Longitude: 67.5565°W Easting: 610641.0m Northing: 5157850.0m
Distance to Nearest Turbine:	6.181km
Direction of View:	Northeast, 74°
Camera Make/ Model:	Canon EOS REBEL T7
Lens:	50 mm
Image Resolution:	6000 x 4000
Weather Conditions	Cloudy
Date of Photo:	2024/08/27
Time of Photo:	11:52
Photo Credit:	Strum Consulting

Proposed Turbine Location

Photo Location

Viewpoint Field of View

N

References

Date:	2025-10-17
Project #:	24-10293
Drawn By:	E. Johnson
Drawing #:	1C
Checked By:	M. Savelle

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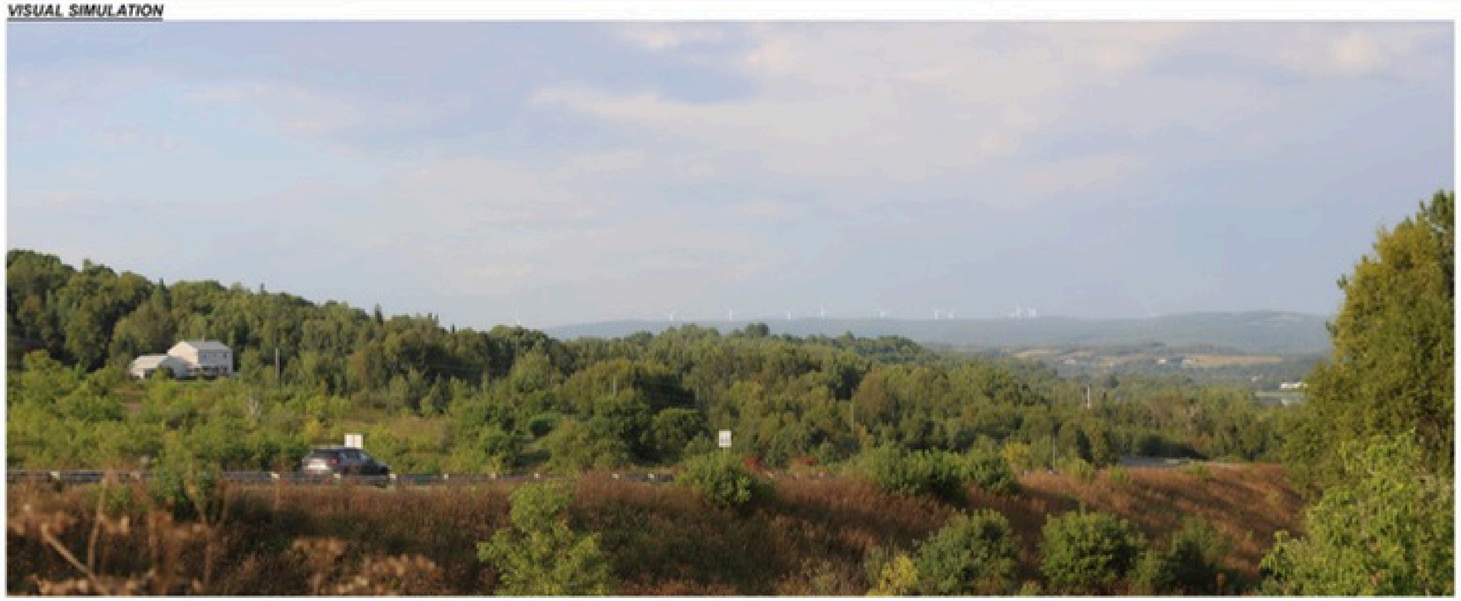
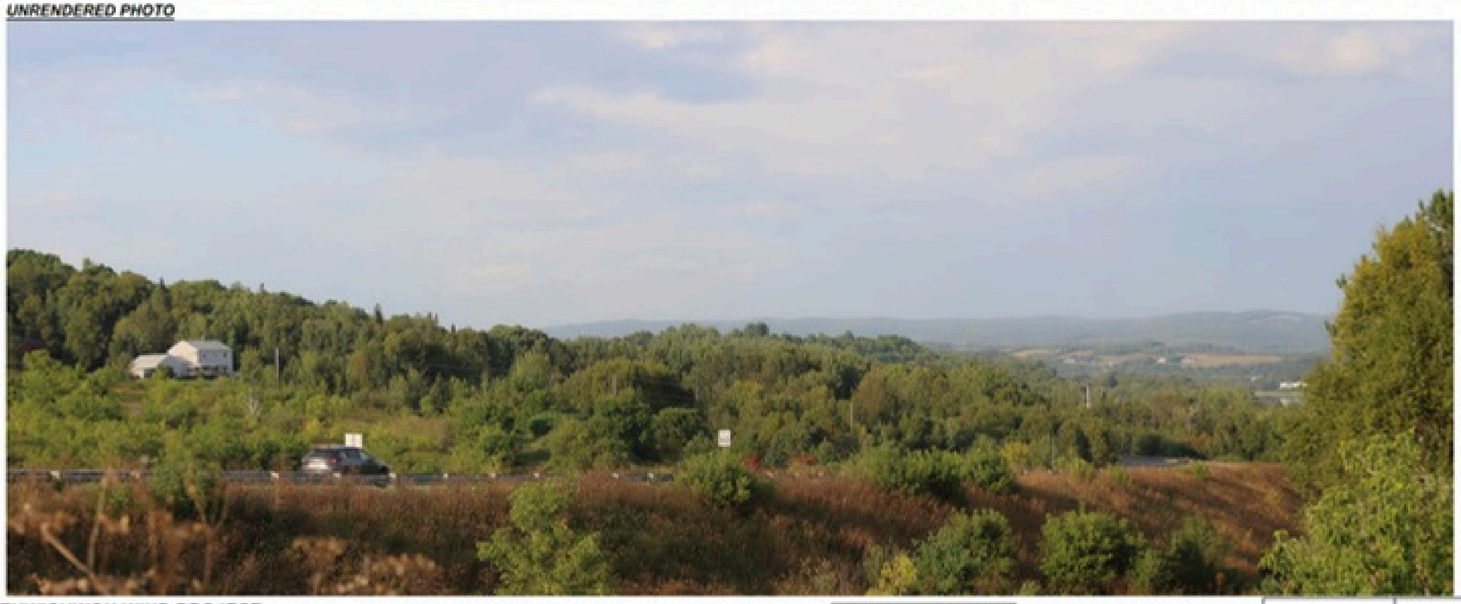
VISUAL SIMULATION



UNRENDERED PHOTO

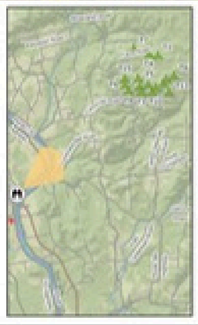


ASTUWICUWON WIND PROJECT

Eolectric

TECHNICAL INFORMATION

Visual Simulation Location:	Location 2 (Highway 110)
View Coordinates:	Latitude: 46.4529°N Longitude: 67.6212°W Easting: 605815.0m Northing: 5145298.0m
Distance to Nearest Turbine:	17.01km
Direction of View:	Northeast, 41°
Camera Make/ Model:	Canon EOS REBEL T7
Lens:	50 mm
Image Resolution:	6000 x 4000
Weather Conditions	Overcast
Date of Photo:	2024/08/26
Time of Photo:	18:58
Photo Credit:	Strum Consulting



Proposed Turbine Location

Photo Location

Viewpoint Field of View

N

References

Date:	2025-10-17
Project #:	24-10293
Drawn By:	E. Johnson
Drawing #:	1B
Checked By:	M. Savelle

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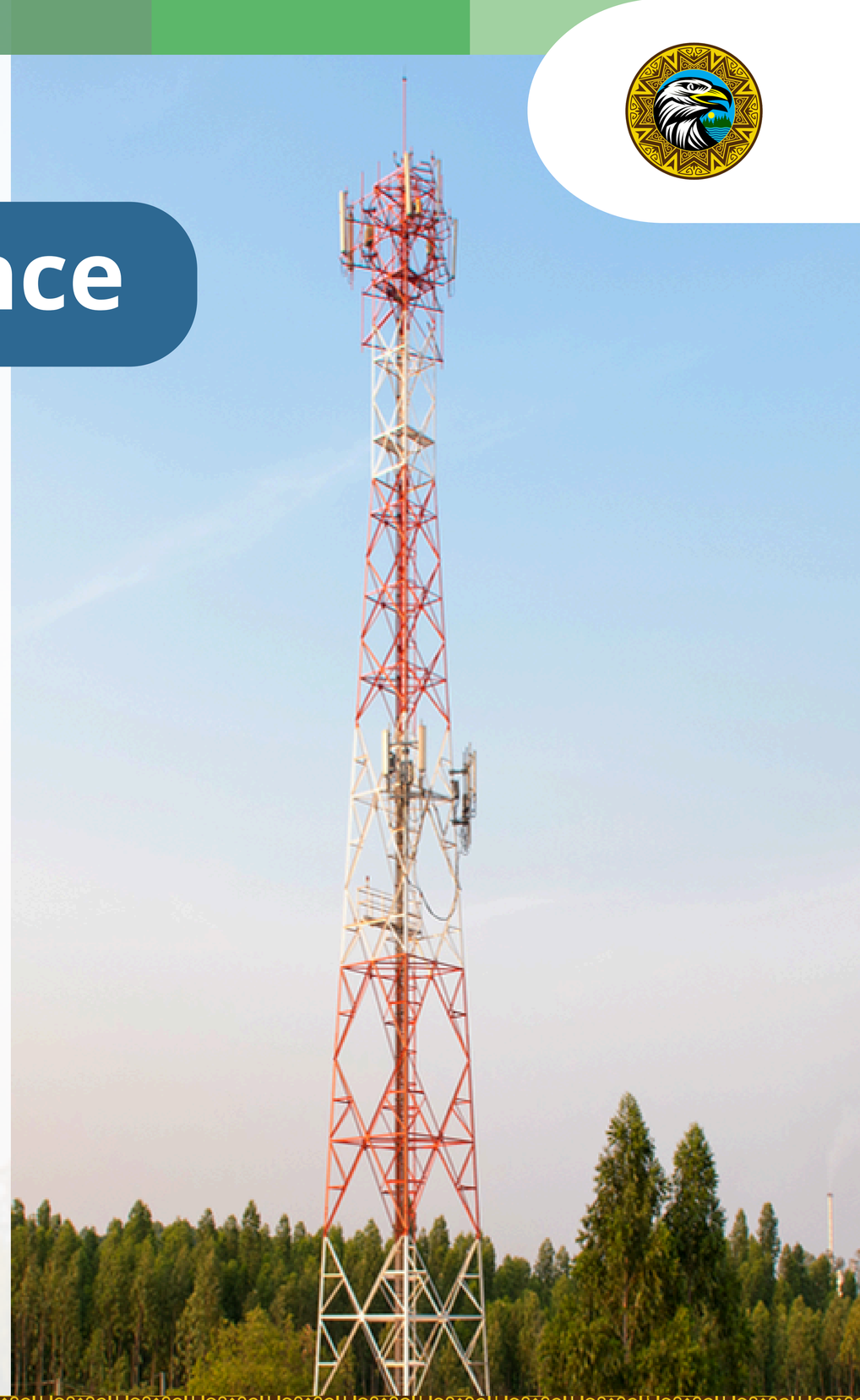
Electromagnetic Interference

The telecommunication system inventory and preliminary analysis was completed by an independent specialized consultant for every telecommunication system listed in the ISED Canada database and located within 100 km of the Astuwicuwon wind project area.

This permitted to determine the absence of impact for all of the identified systems that could potentially suffer interference from this wind farm project.



Environmental Studies

In February of 2025, St. Mary's & Eolectric have submitted an application for the New Brunswick **Environmental Impact Assessment (EIA)** process, which includes an analysis of the potential environmental impacts of the project.

As part of the EIA, the following detailed biophysical field studies have been completed at the project location:

- Environmental constraints analysis
- Bats survey & ultrasonic bat sampling (spring & fall)
- Birds, owl and woodpecker surveys, watch count, transect, breeding bird surveys
- Vegetation & rare plant surveys
- General wildlife analysis
- Wetlands: Delineations and Functional Assessments

Other ongoing studies include:

- Archaeological studies
- Geotechnical Investigations (soil)
- Bird radar and acoustic campaigns

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Community and Stakeholder Consultations

- Consultation with the District of Carleton North
- Consultation with local communities
- Consultation with Wolastoqiyik communities
- Consultation with WNNB
- Consultation with snowmobile clubs
- Consultation with ATV clubs

Repowering or Decommissioning

DECOMMISSIONING

At the end of their useful life (30-35 years), wind projects may be decommissioned for the following reasons:

- The power purchase agreement has expired
- Components become too expensive to maintain ;
- The project can no longer be operated in a commercially viable way

Generally, the decommissioning phase will follow these steps :

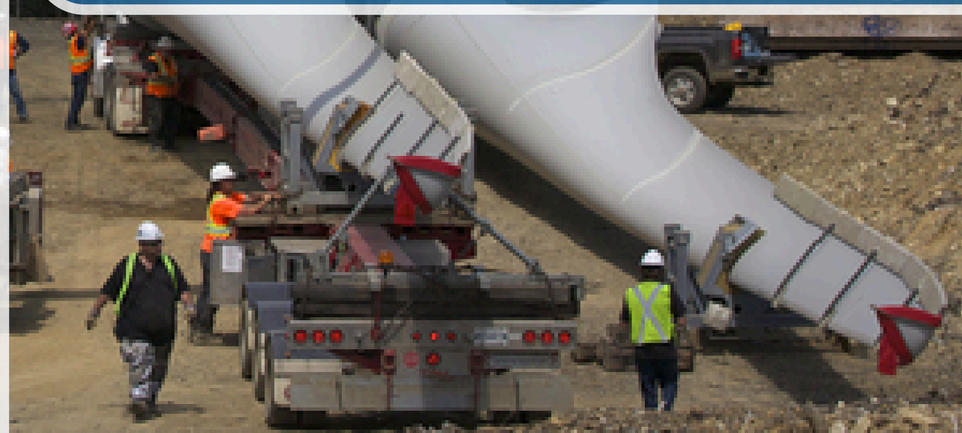
- Dismantling and removal of the turbines
- Removal of the turbine foundations down to 1m below grade
- Removal of power collection system, conductor, and poles
- Reclamation of the land

REPOWERING

Global trends favor repowering due to ever increasing needs for renewable energy and scarce land availability.

Repowering leverages existing investments, relationships, and data making it a logical and affordable option for the project to be repowered.

Technological advances enable efficient turbine replacements, often doubling power output with fewer turbines.



Wood Logging

The project site has already been extensively logged by the wood industry.

Total project area that would need to be cleared is less than 100 ha out of an area where vast portions have already been collected by the industry.

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Economic Benefits

- **300 million dollars** investment.

- **10 million dollars** in municipal taxes over the project lifetime for the district of Carleton North.

- **Compensation** for participating landowners for the duration of the project.

- Around five full time and part time jobs and **up to 100 jobs** during construction.

- Direct and indirect **economic benefits** during construction and operation.

Eolectric

First Nation Ownership Initiatives

St. Mary's First Nation & Eolectric seek to be a good Indigenous Business and corporate citizen taking initiatives such as:

- Job fairs prior to start of construction
- Training opportunities for construction and operation jobs
- Educational visit of the wind farm
- Local charities
- And many more!