



WELCOME



**WJU'SNEWIKNAQ**  
*WIND STRENGTH*

# Welcome

Community Information Session



**WJU'SNEWIKNAQ**  
*WIND STRENGTH*



# LAND ACKNOWLEDGEMENT



## Recognition of the Mi'kmaq and their Ancestral Territory

We acknowledge the ancestral and unceded territory of the Mi'kmaq people. We also acknowledge the Mi'kmaq as the past, present, and future caretakers of this land, Mi'kmaki.

As a Membertou Company, Wind Strength is committed to meaningful engagement, collaboration, and accountability with all partners and Rightsholders in the advancement of social and economic reconciliation.



# ABOUT WIND STRENGTH



Wind Strength, a Membertou company, is planning to jointly develop Bear Lake Wind Power Project with EverWind Fuels and RES. Wind Strength is a translation of the Mi'kmaq word "Wju'snewiknaq" (Wu-jew-sin-eh-wee-ginn-ah), which embodies the strength, resiliency, and environmental stewardship of the Mi'kmaq people through green energy leadership. For generations, Mi'kmaw were prevented from participating in and benefiting from the development of Canada's natural resources. Today, as the past, present, and future caretakers of this land, we are proud to be at the forefront of building a cleaner future for Nova Scotia and the world.

**Green**  
For a cleaner, greener future for Nova Scotia

**Teal Blue**  
The traditional Mi'kmaq colour found in artwork, beading and regalia from centuries ago and today.

**WJU'SNEWIKNAQ  
WIND STRENGTH**

**Wju'snewiknaq**  
Wu-jew-sin-eh-wee-ginn-ah-  
Mi'kmaq for Wind Strength

**The Seven Shapes**  
Representing the value to plan and act in accordance for the prosperity of the next seven generations.





# ABOUT EVERWIND



Headquartered in Halifax, EverWind Fuels LLC is a developer of green hydrogen and ammonia production, storage facilities, and associated transportation assets. The EverWind Fuels team is comprised of over 100 employees, mostly from the local community, who are further supported by full time contractors and consultants.

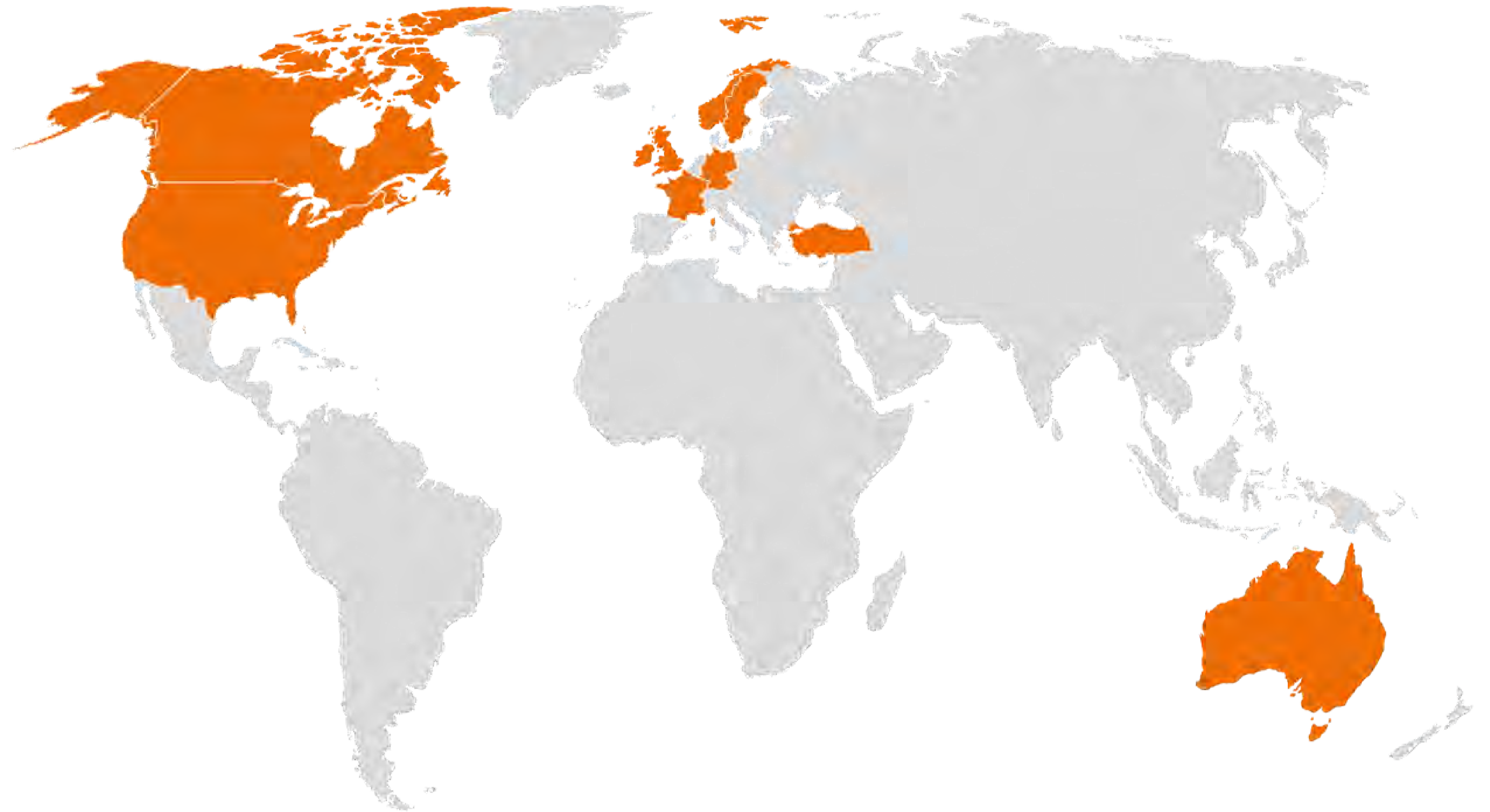
We are developers, owners, and managers with experience in almost every infrastructure sub-category in North America, and a track record of success and delivering socially and environmentally responsible developments for all of our stakeholders. The wind investments will benefit locals, rate payers, and support the development of cheap clean fuels in Nova Scotia.





# RES EXPERIENCE

RES is the world's largest independent renewable energy company. At the forefront of the industry for 40 years, RES has delivered more than 23 GW of renewable energy projects across the globe and supports an operational asset portfolio exceeding 12 GW worldwide for a large client base. RES employs more than 2,000 people and is active in 11 countries working across onshore and offshore wind, solar, energy storage and transmission and distribution.



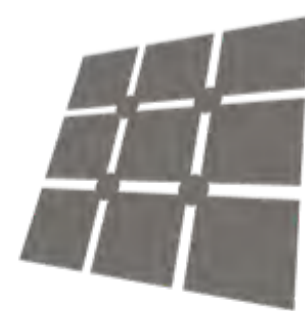
**23** GW PORTFOLIO

**40** YEARS OF EXPERIENCE

**12** GW ASSETS



WIND



SOLAR



STORAGE



T&D

**res**<sup>®</sup>  
power for good<sup>®</sup>



# ENVIRONMENTAL ASSESSMENT

The project is submitting to the province's rigorous **Environmental Assessment (EA) process**, which includes a comprehensive analysis of the potential environmental impacts of the project.

**Strum Consulting** is successfully guiding the process and conducting a series of detailed studies including:

- Watercourse and Wetland Surveys
- Vegetation and Habitat Surveys
- Bird and Bat Surveys
- Moose Surveys
- Sound and Visual Assessments
- Electromagnetic Assessments
- Archaeological Assessments
- Telecommunication Assessments

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CONSULTING





# ENVIRONMENTAL MONITORING

As part of the survey process, specialized equipment is used to help ensure we have comprehensive environmental information.



## Avian Radar

Radar systems are used to track biological targets (birds and bats) as they fly through the airspace. This data is used to help assess potential impacts on avifauna and to inform mitigation measures.

## Meteorological (MET) Tower

- MET Towers are temporary structures designed to collect Weather related information, such as wind speed, wind direction, and temperature.
- MET Towers are unassuming in the landscape. Each MET Tower requires just a 100m buffer. Any impact on the surrounding area is minimal.
- MET Towers have a concrete base with guy-wires for support. The wires typically extend 60 metres in 3-4 directions from the tower.
- Each MET Tower has a permit application approved by the Government of Nova Scotia

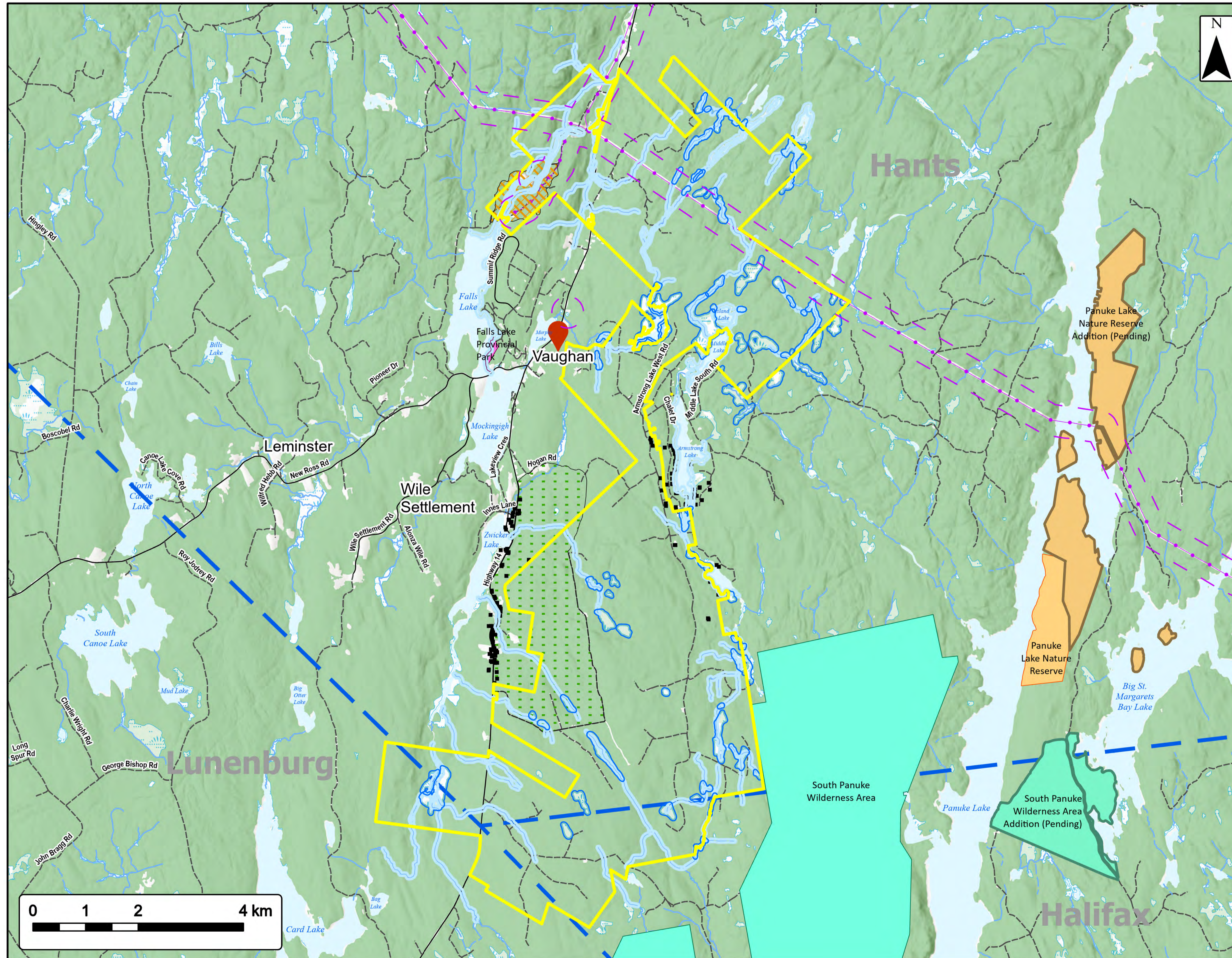




# BEAR LAKE WIND POWER PROJECT CONSTRAINTS



**WJU'SNEWIKNAQ**  
WIND STRENGTH



### Bear Lake Wind Power Project Constraints

<p><b>Study Area</b> </p> <p><b>County Boundary</b> </p> <p><b>You are here</b> </p> <p><b>Non Participating Building within 2km of Assessment Area</b> </p> <p><b>Type of Pending or Proposed Protection</b></p> <p>Nature Reserve </p> <p>Wilderness Area </p> <p>Provincial Park </p> <p><b>Transportation</b></p> <p>Road </p> <p>Unpaved Road </p>	<p><b>Significant Species &amp; Habitats</b></p> <p>Deer Wintering </p> <p>Other Habitat (Talus Slopes) </p> <p><b>Utilities (line)</b></p> <p>Existing Pipeline </p> <p>Existing Transmission Lines </p> <p>Powerline Setback </p> <p><b>Water Features</b></p> <p>Mapped Stream </p> <p>Mapped Indefinite Stream </p> <p>Mapped Lakes and Rivers </p> <p>Mapped Wet Area </p> <p>Watercourse Setback (30m) </p> <p>Wetland Setback (30m) </p>
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0 50 100 200 km

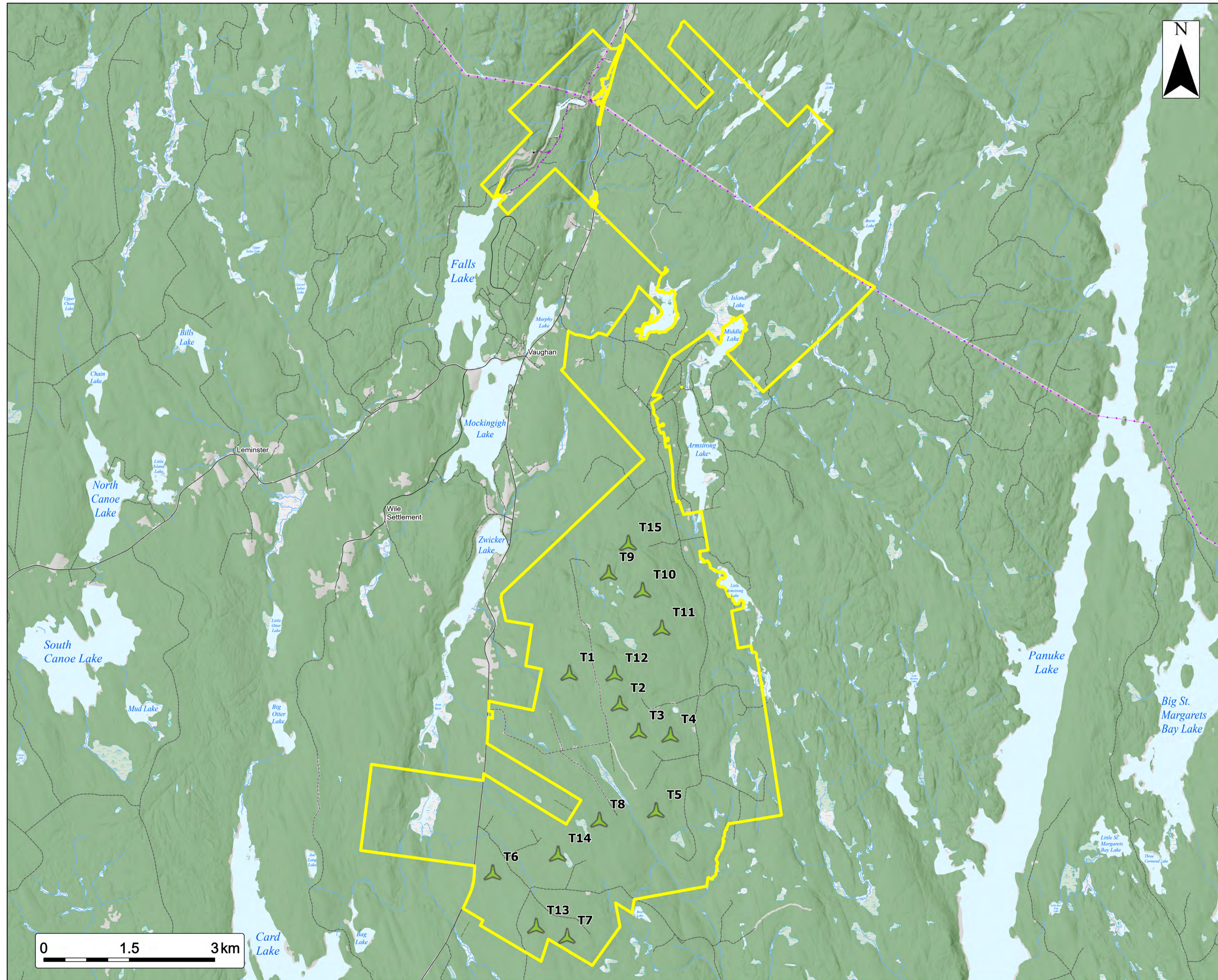
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Scale:	1:70,000	Drawing #:	<b>2</b>
Drawn By:	K. Wallace		
Checked By:	M. Savelle		



# BEAR LAKE SITE OVERVIEW



**WJU'SNEWIKNAQ**  
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**Bear Lake Wind Power Project**  
Site Overview

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Study Area

Proposed Turbine Location

**Transportation**  
Road   
Unpaved Road

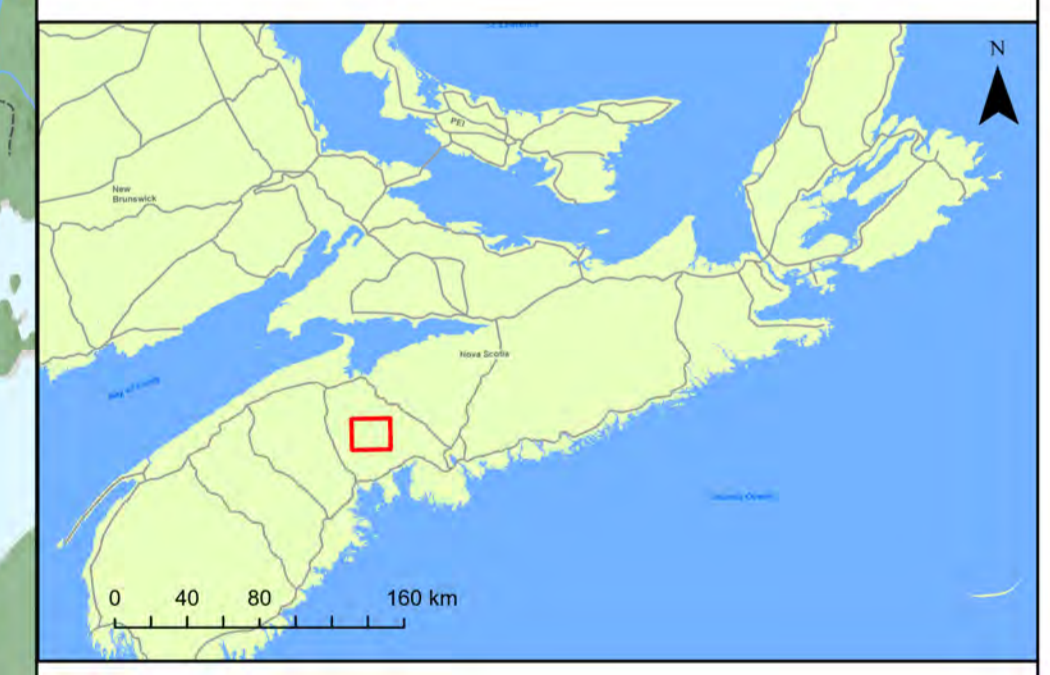
**Utilities (Line)**  
Existing Pipeline   
Existing Transmission Lines

**Water Features**  
Mapped Stream   
Mapped Indefinite Stream   
Mapped Lakes and Rivers   
Mapped Wet Area

Coordinate System: NAD83 UTM Zone 20N  
Sources: ESRI Basemaps, GeoNOVA, SNSIS, NRCan, NSNRR, ACCDC, IBA Canada

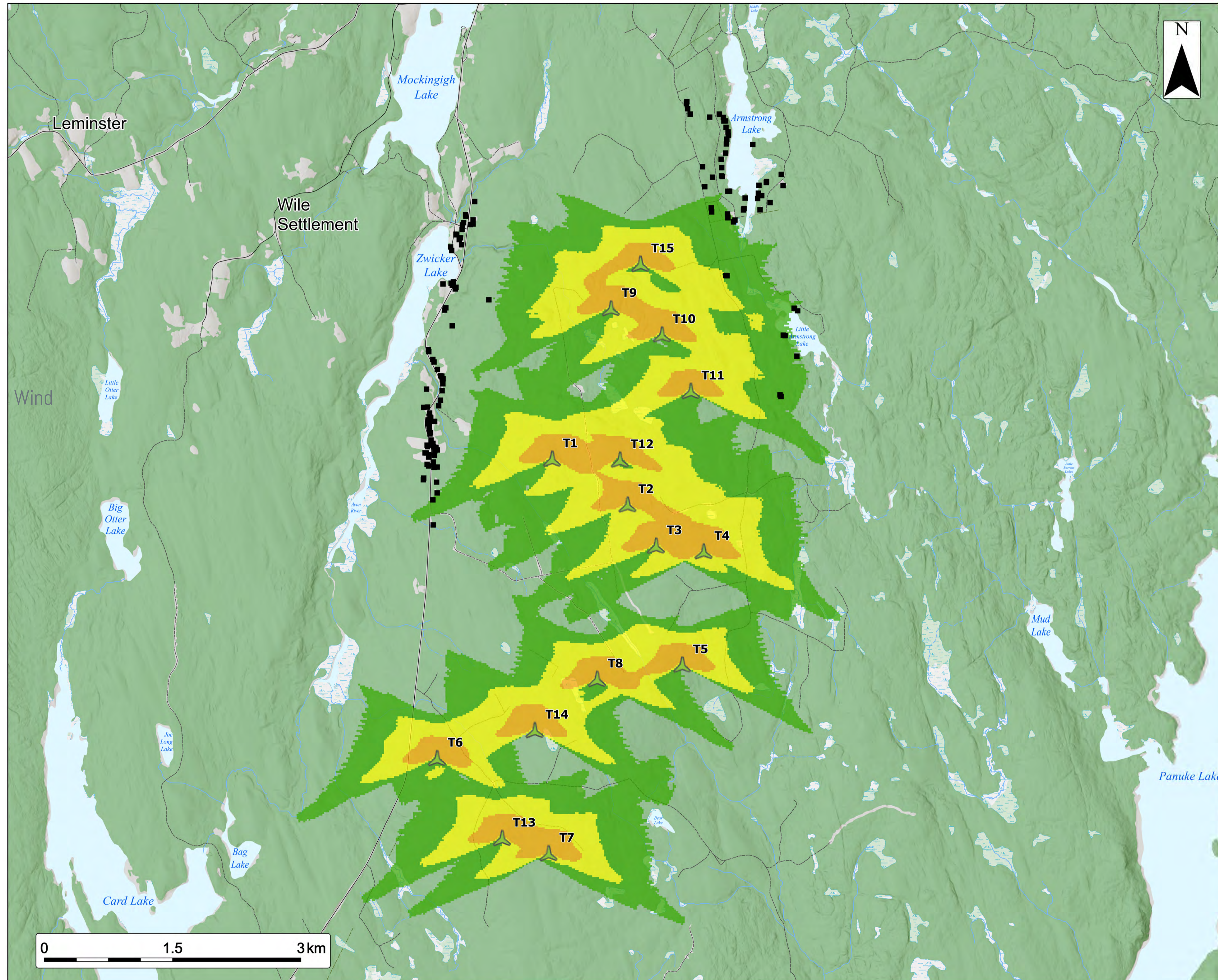
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Drawn By:	K. Wallace		
Checked By:	M. Savelle		

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# BEAR LAKE SHADOW FLICKER






**Bear Lake Wind Power Project**  
*Shadow Flicker Real Case*





Proposed Turbine Location 

Non Participating Buildings within 2km 





**Predicted Shadow Hours/Year (Real Case)**


- 10-30 
- 30-100 
- 100+ 

**Transportation**

- Road 
- Unpaved Road 

**Water Features**


- Mapped Stream 
- Mapped Indefinite Stream 
- Mapped Lakes and Rivers 
- Mapped Wet Area 



Coordinate System: NAD83 UTM Zone 20N Sources: ESRI Basemaps, GeoNOVA, SNSIS, NRCan, NSNRR, ACCDC, IBA Canada

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Drawn By:	K. Wallace		
Checked By:	M. Savelle		

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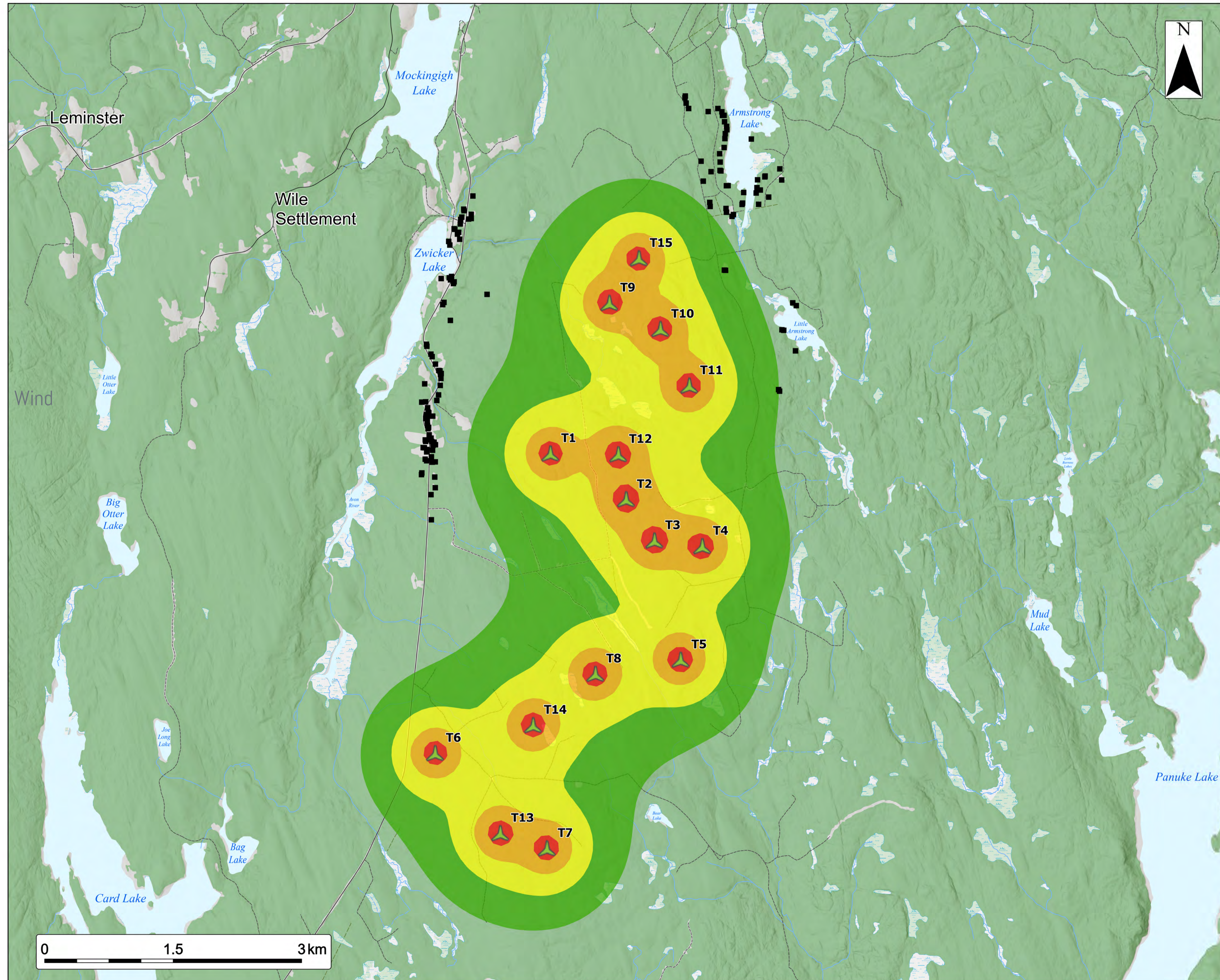




# BEAR LAKE SOUND MODELLING



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## Bear Lake Wind Power Project Sound Modelling



- Proposed Turbine Location
- Non Participating Buildings within 2km
- Predicted Sound Level (dBA)**
  - 35-39
  - 40-44
  - 45-49
  - 50+
- Transportation**
  - Road
  - Unpaved Road
- Water Features**
  - Mapped Stream
  - Mapped Indefinite Stream
  - Mapped Lakes and Rivers
  - Mapped Wet Area



Coordinate System: NAD83 UTM Zone 20N		Sources: ESRI Basemaps, GeoNOVA, SNSIS, NRCCan, NSNRR, ACCDC, IBA Canada	
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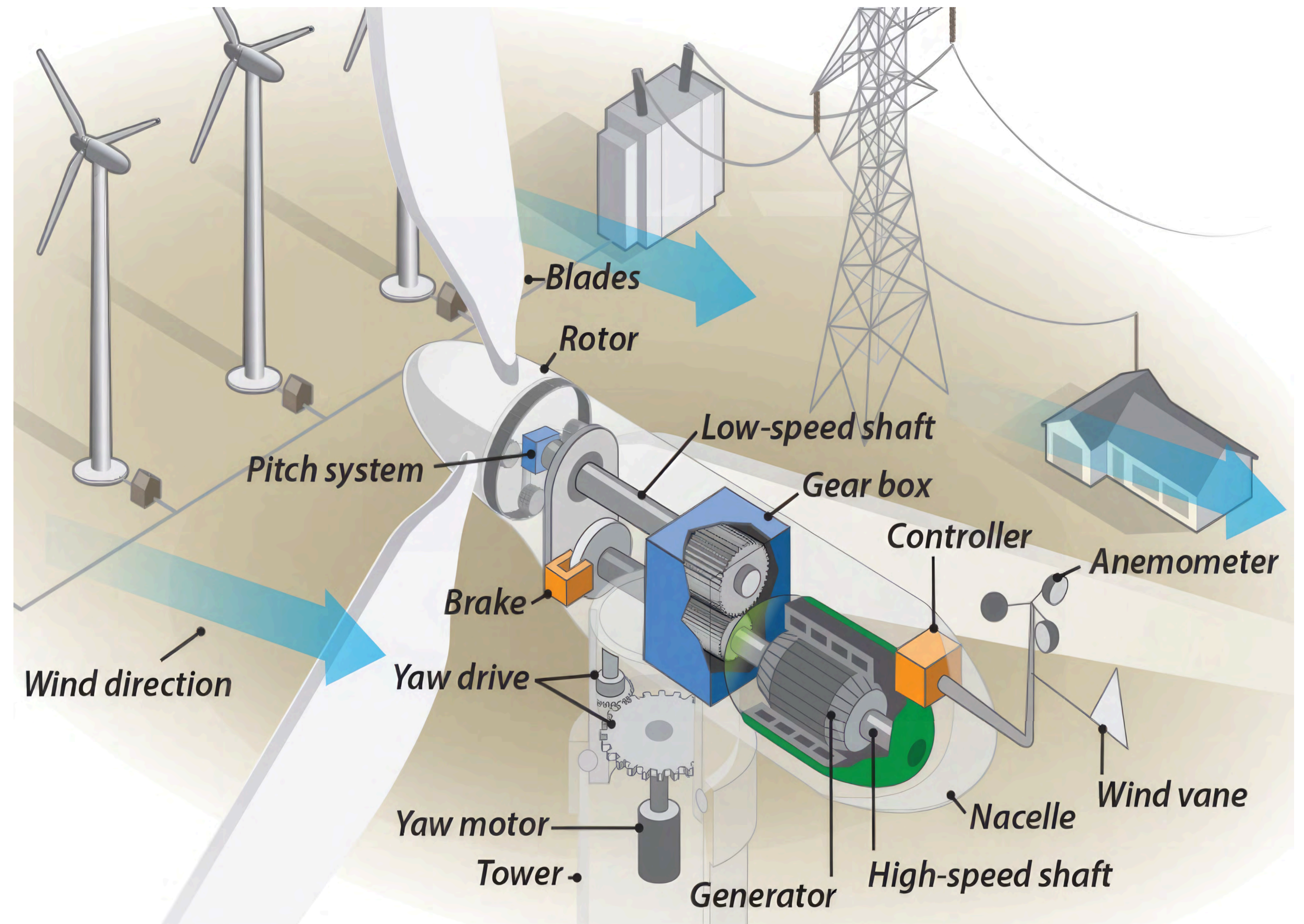


# HOW WIND POWER WORKS

Modern turbines have three main components: the tower, the nacelle (or generator) and the blades.

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

Electricity is then converted to a medium voltage AC current, transmitted via cables and is collected at a substation before being transmitted by overhead lines to the main electrical grid.





## Bear Lake Wind Power Project Details

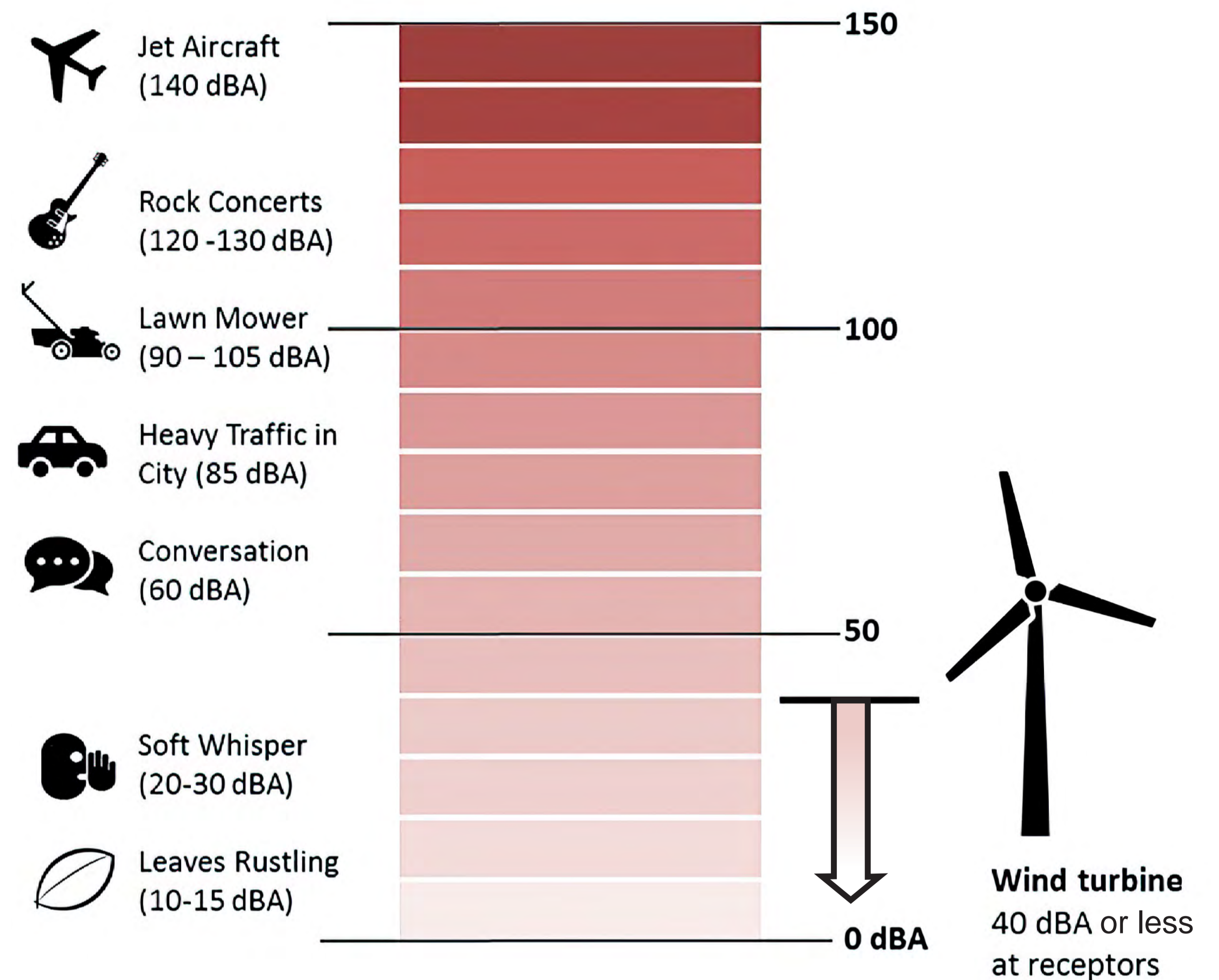
- Total installed capacity of up to 89 MW
- Comprises no more than 17 turbine locations
- Turbines with a generation capacity of around 5.2 to 6.6 MW each
- Will include a substation, operations and maintenance building and a temporary laydown yard
- Will include temporary wind measurement tower, and likely one long-term wind measurement tower to assess and monitor wind resource plus additional mid-term wind measurement devices.

\*Although Turbine selection has not yet been made, turbine hub height is typically between 95 m to 120 m and blades can measure up to 85 m long



## BEAR LAKE NOISE IMPACT ASSESSMENT

- Nova Scotia's EA Guidelines for wind power projects regulates that wind farm design and turbine siting must not cause sound levels to exceed **40 dBA** at the exterior of receptors (dwellings).
- A noise assessment will be completed by Strum Consulting. Noise modeling will consider other operational projects and noise sources in the area.





# CONSTRUCTION



## Roads

We will use existing roads to minimize impact to land.

## Electrical

Collector lines will be over head and transmission lines will follow project roads.

## Turbine Footprint

Excavation of roughly half an acre is needed per turbine, reduced to less than a quarter acre after construction.



## Did you know?

Wind farms are designed to last at least 25 years, but they are likely to last longer and modern turbines require very little maintenance.

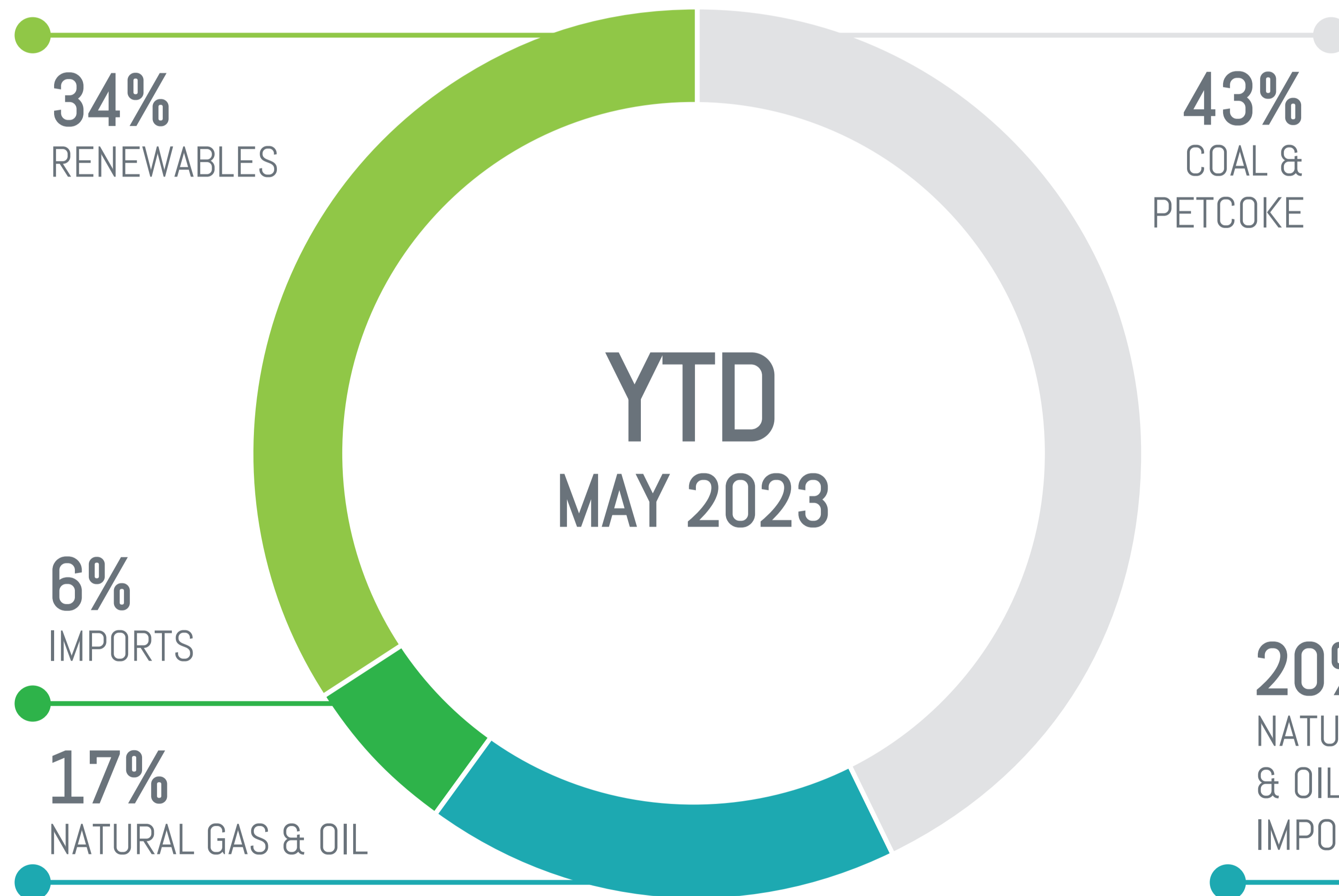
Various factors are considered during project development including:

- Wind resource
- Electrical infrastructure - transmission and distribution lines
- Environmental constraints – wetlands and water courses, wildlife
- Noise considerations and shadow flicker
- Archaeological and cultural features
- Mi'kmaq environmental knowledge study (MEKS)
- Municipal Bylaws, land use order guidelines and setbacks
- Community input and other interested stakeholders and agencies
- Transportation infrastructure - highways, roads, railways

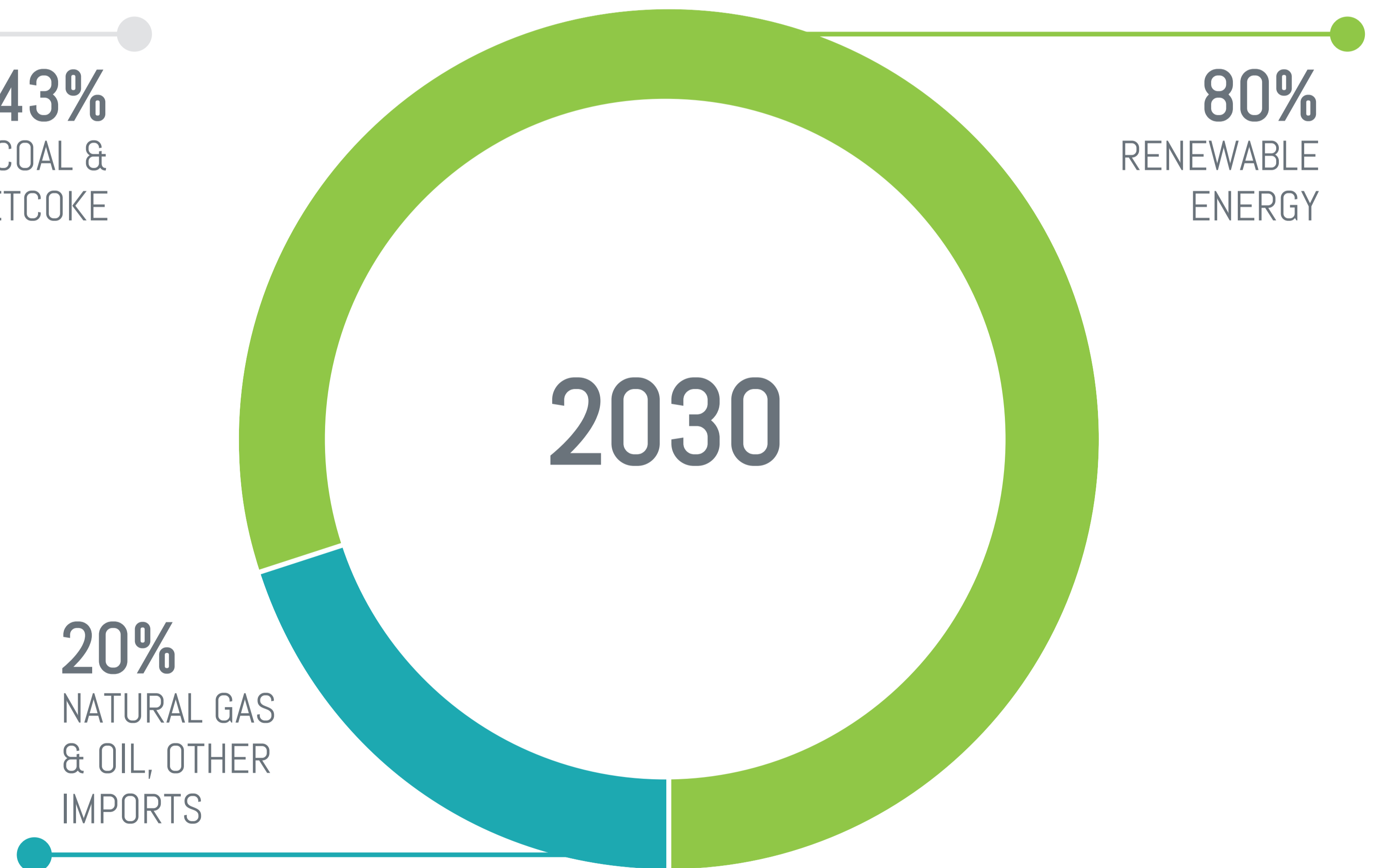


# NOVA SCOTIA'S CURRENT ENERGY MIX

## WHERE YOUR ENERGY COMES FROM NOW



## WHERE WE'RE HEADED





# COMMUNITY BENEFITS



**We believe our projects are net positives for the local communities in which we work.**

## Benefits Include:

- ✓ Local tax revenues throughout the life of the project
- ✓ First Nation Partners to maximize contracting and employment opportunities
- ✓ Contracting opportunities for First Nations & community businesses
- ✓ Project creating local employment through the development, design and engineering phase
- ✓ Construction and operations jobs and support services during construction and throughout the life of the project
- ✓ Increased local spending on goods and services during the project's development, construction and operational phases



# COMMUNITY CONTRIBUTIONS

Wind Strength, EverWind and RES seek to be a good corporate citizens in the community and typically supports various fundraising events and special initiatives that benefit the local community

## Examples of activities or organizations we have supported:

- Economic development
- Local charities
- Local sports teams
- Museums and libraries
- Agricultural associations
- ...and many more!

Do you have an idea of ways we can support your community?  
**Let us know!**





# LOCAL JOB CREATION



**This project is generating local employment through the development, construction operational phases and for the life of the project.**

**125-150** Temporary Jobs During Construction:

- ✓ General labour
- ✓ Civil construction trades
- ✓ Electricians
- ✓ Transmission line technicians
- ✓ HV equipment trades
- ✓ Crane operators
- ✓ Wind technicians

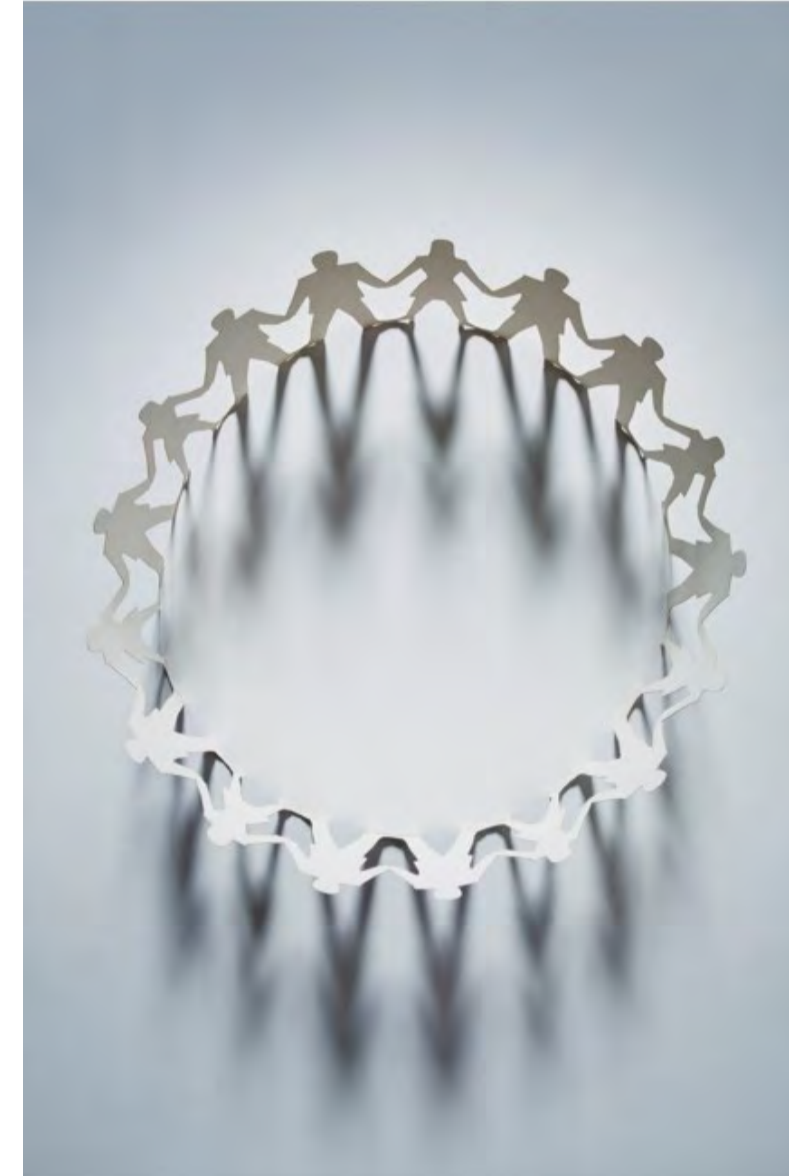
**5+** Permanent Jobs During Operations and Maintenance:

- ✓ HV technicians/electricians
- ✓ Wind technicians
- ✓ Other indirect jobs for items such as road maintenance

*On the job training for some positions*



# DIRECT BENEFITS FOR THE LOCAL COMMUNITY



- ✓ **Electricity subsidy fund:** Once project design is finalized, eligible homeowners will be contacted directly to sign up for the program which will begin after the first year of operation. The program will offer to cover a portion of homeowners annual electricity bill. The program will be in effect throughout the life of the project.
- ✓ **Community vibrancy fund:** Once the project becomes operational, an annual financial allocation will be earmarked and remain accessible throughout the project's lifespan to support community. The fund's oversight will be entrusted to a committee comprising community members, council representatives, and project representatives.
- ✓ **Bursary fund:** Prior to commercial operations., a fund will be made available to community members who want to train the renewables industry.

**We would love to discuss with you and garner your feedback on how we can support the community**



# CONCLUSION



# Thank you.

We appreciate you taking the time to join us. We would be happy to follow-up with you if you have any other questions about the Project. Please fill out a feedback form.

