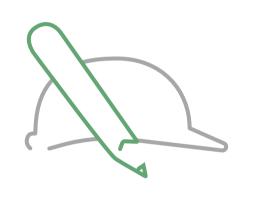
## ABO Wind Company Profile



~1,000 employees worldwide, ~25 in Canada Headquarters in Germany, 28 office locations worldwide



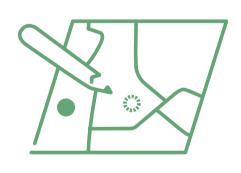
Internationally active in 16 countries Europe, North & South America, Africa



**Core business is development & construction** Wind, solar, green hydrogen and battery systems



**\$7 billion invested in Projects** Approx. 5,000 megawatts developed and sold



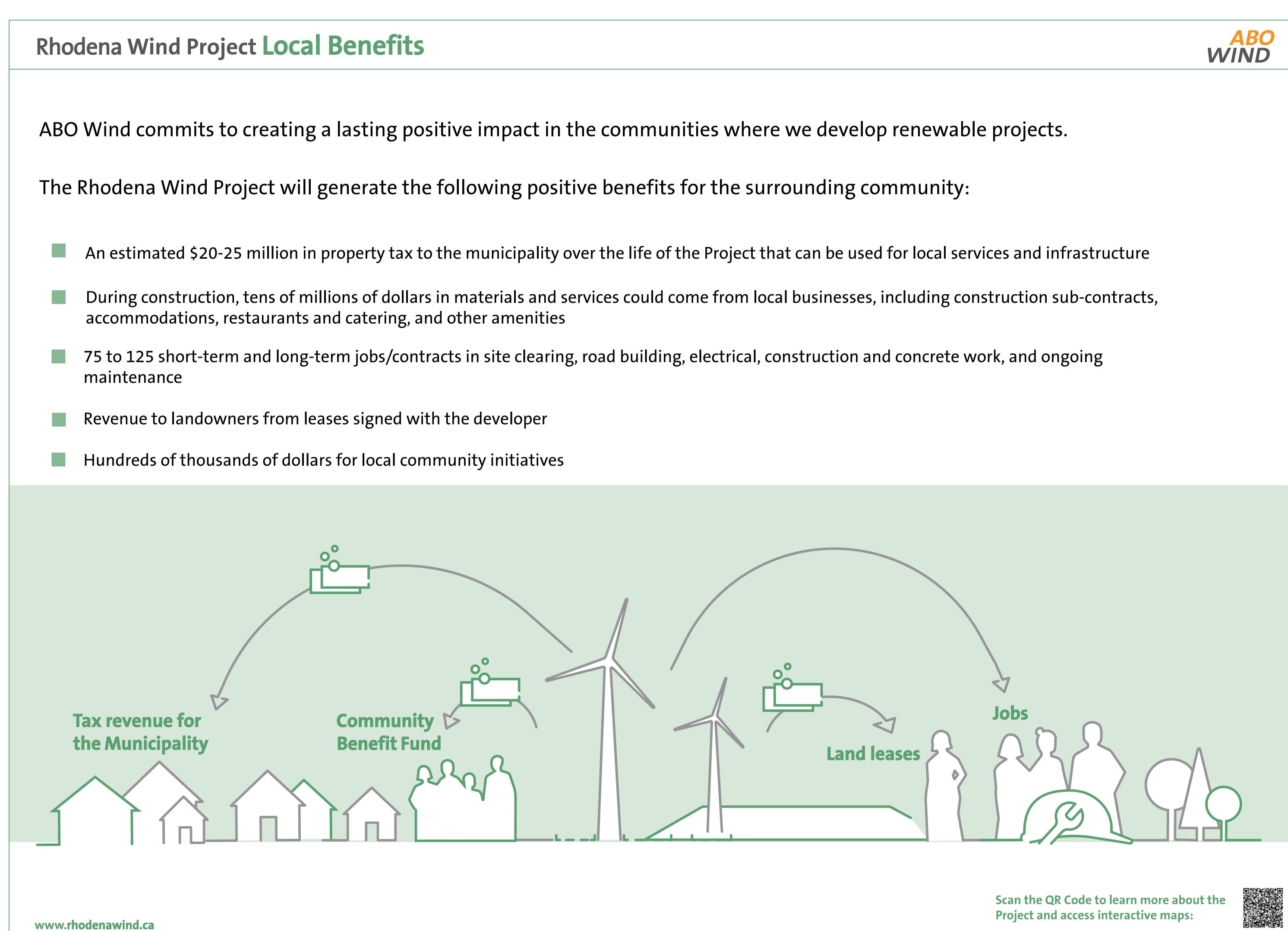
21,000 megawatts under development supported by \$200 million in equity & favourable financing



Listed on the stock market since 2012 Profitable since company's inception in 1996









# Rhodena Wind Project Part of Nova Scotia's Clean Energy Transition

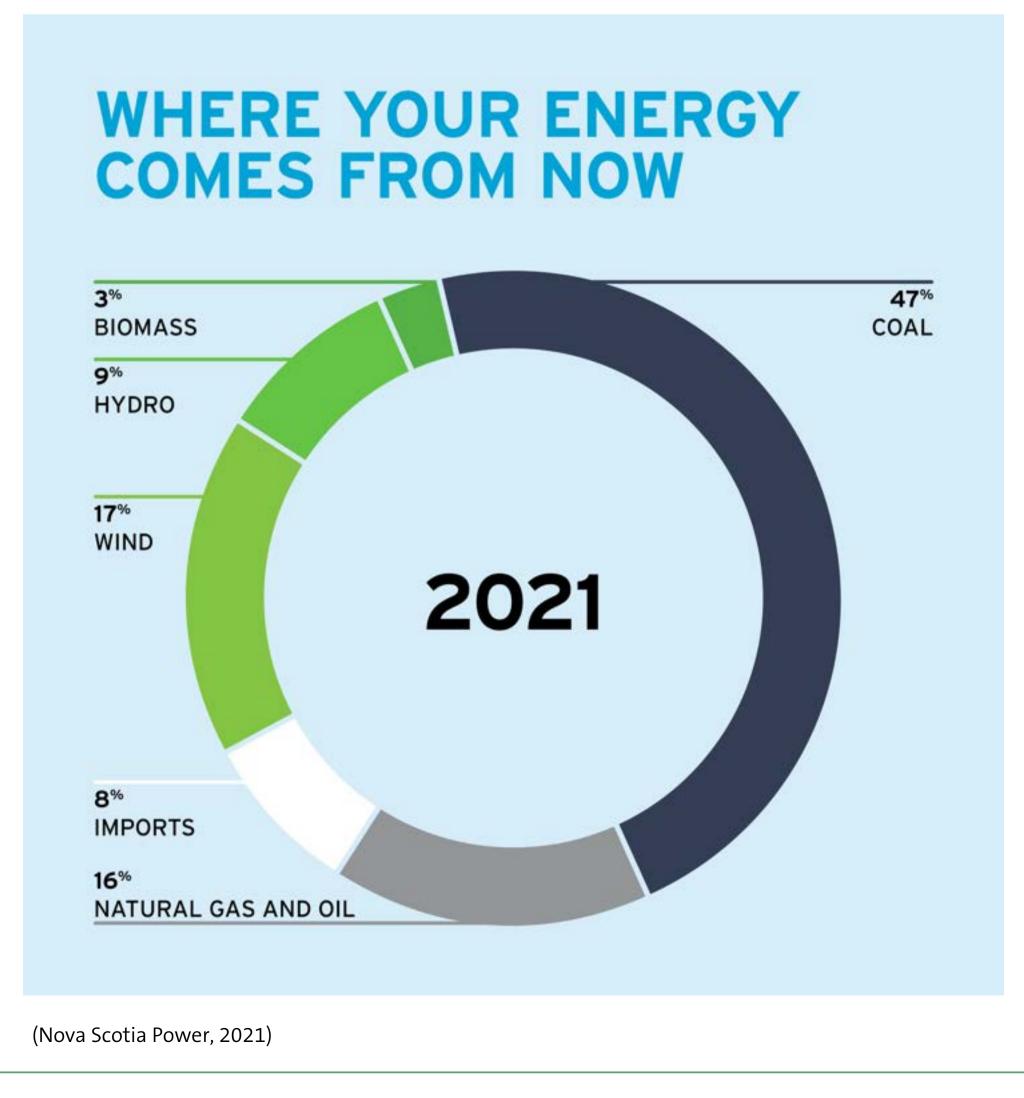
The Rhodena Wind Project is being proposed by ABO Wind Canada in response to the Green Choice Program. ABO Wind is partnering with Eskasoni First Nation to develop the Project. As a 51% partner, Eskasoni First Nation is actively collaborating with ABO Wind to create capacity building, employment and economic opportunities, and acting as an environmental steward for the land.

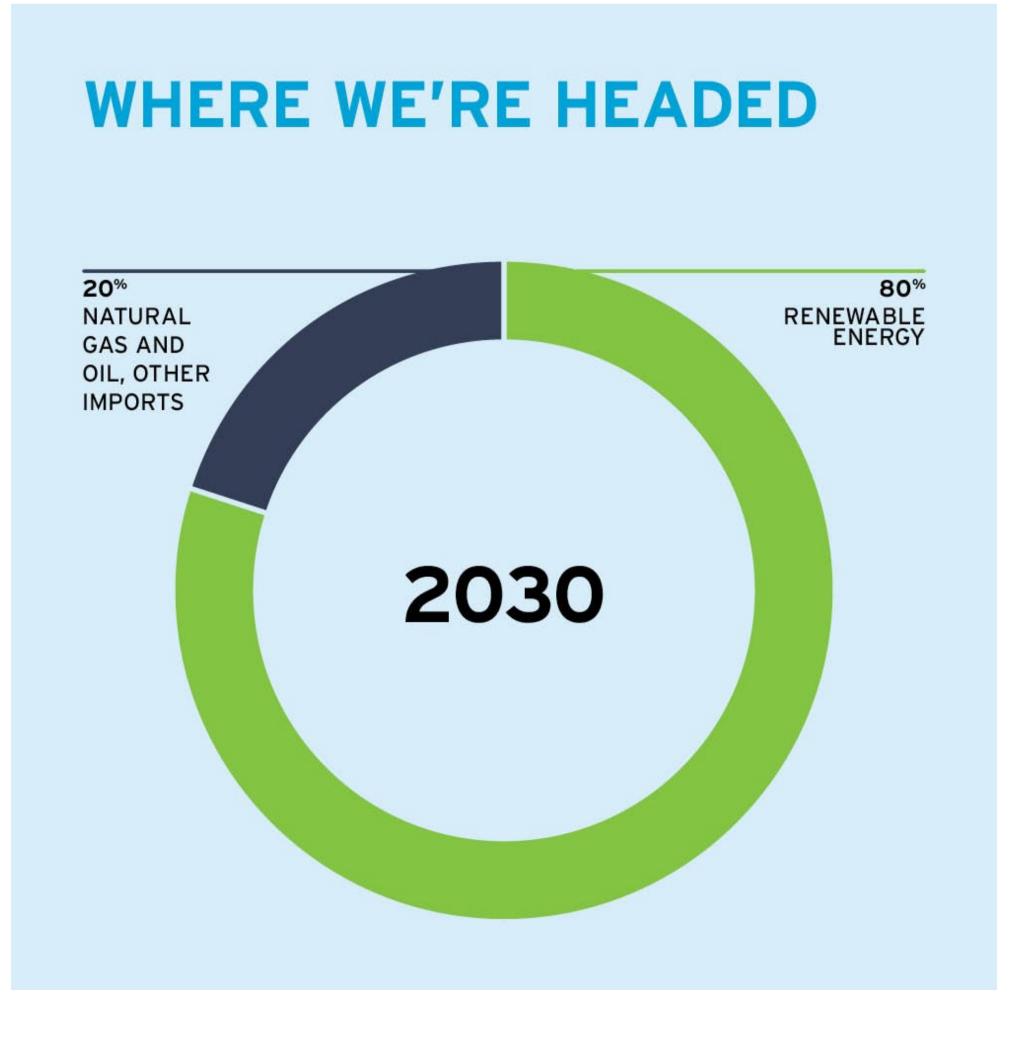
## Clean Energy for Nova Scotia, utilizing Cape Breton's World Class Wind Speeds

This Project will harness our Province's wind to produce enough clean energy for **34,000 homes annually**.

Nova Scotia has one of the most ambitious climate change plans in Canada with a target to close all the coal power plants and reach 80% renewable energy by 2030. These ambitious targets require more renewable energy in our province.

The Green Choice Program (www.novascotiagcp.com) was developed collaboratively between the Province of Nova Scotia, renewable energy developers, Nova Scotia Power, and large energy buyers. It will allow participating customers to purchase up to 100% of their electricity from local renewable energy sources.

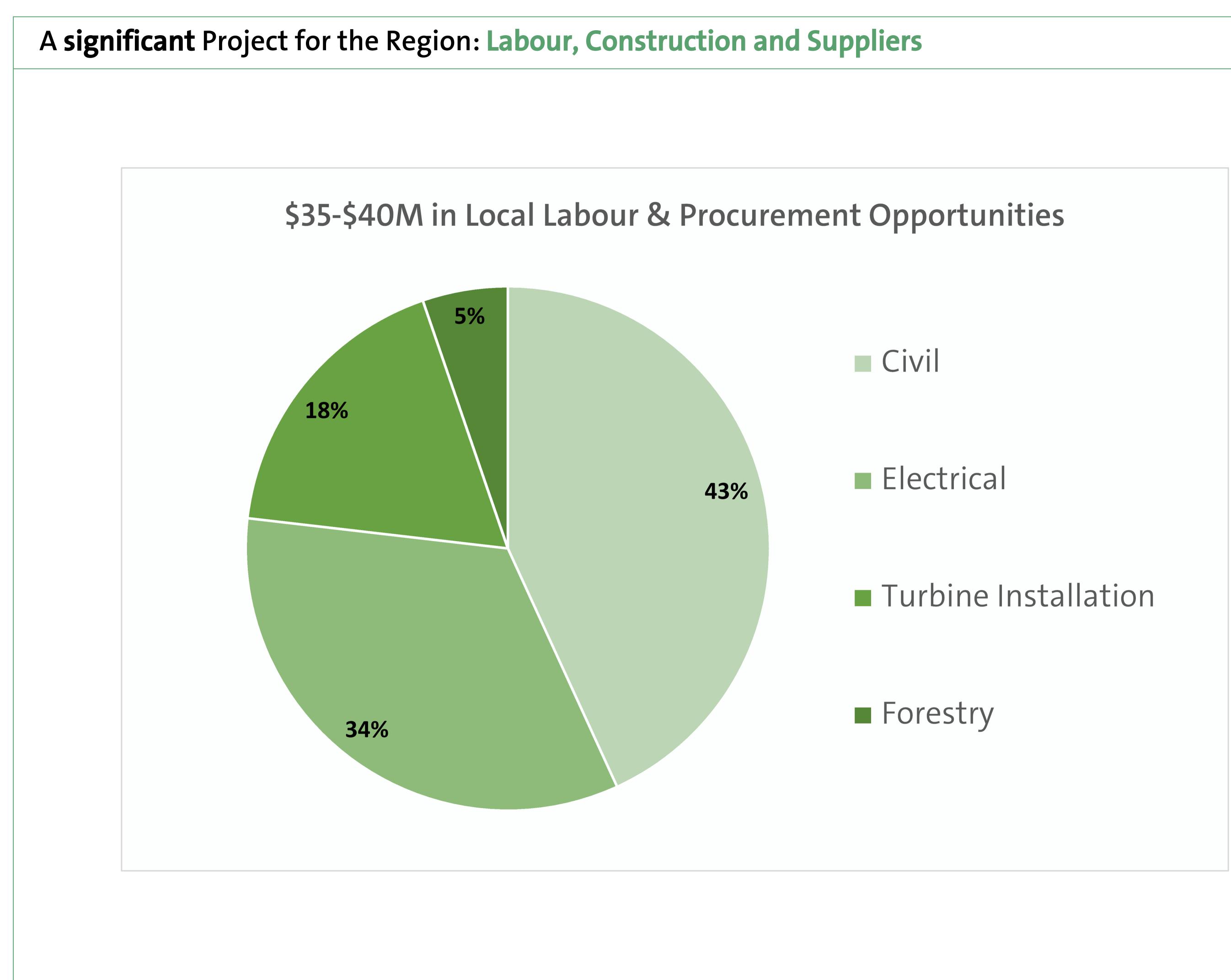






Scan the QR Code to learn more about the **Project and access interactive maps:** 







Rho	dena Wind Project Consultation and
	ABO commits to forthright and meaningful commun is timely and respectful.
	We aim to carry forth discussions with interested par consideration of feedback into our project planning in impact.
	We will discuss options, alternatives and mitigation r concerns where feasible.
	We will provide responses to questions in a clear and
	If you have questions or comments about the Rhoder
	Heidi Kirby (Halifax Office) by email at <b>heidi.kirby@abo-wind.com</b> or phone at: 902-329-9907 For more information about the Rhodena Wind Proje <b>www.rhodenawind.ca</b>
	Scan the QR Code to learn more about the Project and access interactive maps:

# Rhodena Wind Project Community Liaison Committee

ABO Wind invites interested individuals, including property owners/residents, First Nations, local businesses, elected officials, community or environmental groups to form a Community Liaison Committee (CLC). If you are interested, please reach out to Heidi Kirby, ABO Wind (contact detail noted above).

The purpose of a CLC is to act as an advisory body to a project proponent by providing input on existing or potential concerns of the community with respect to the project plan and activities; and to represent community interest by providing an avenue for the mutual exchange (Province of Nova Scotia, 2010).

# **Community Engagement**

nication that

rties and commit to the thoughtful in order to mitigate and avoid

measures related to presented

d easily understandable way.

ena Wind Project, please contact:

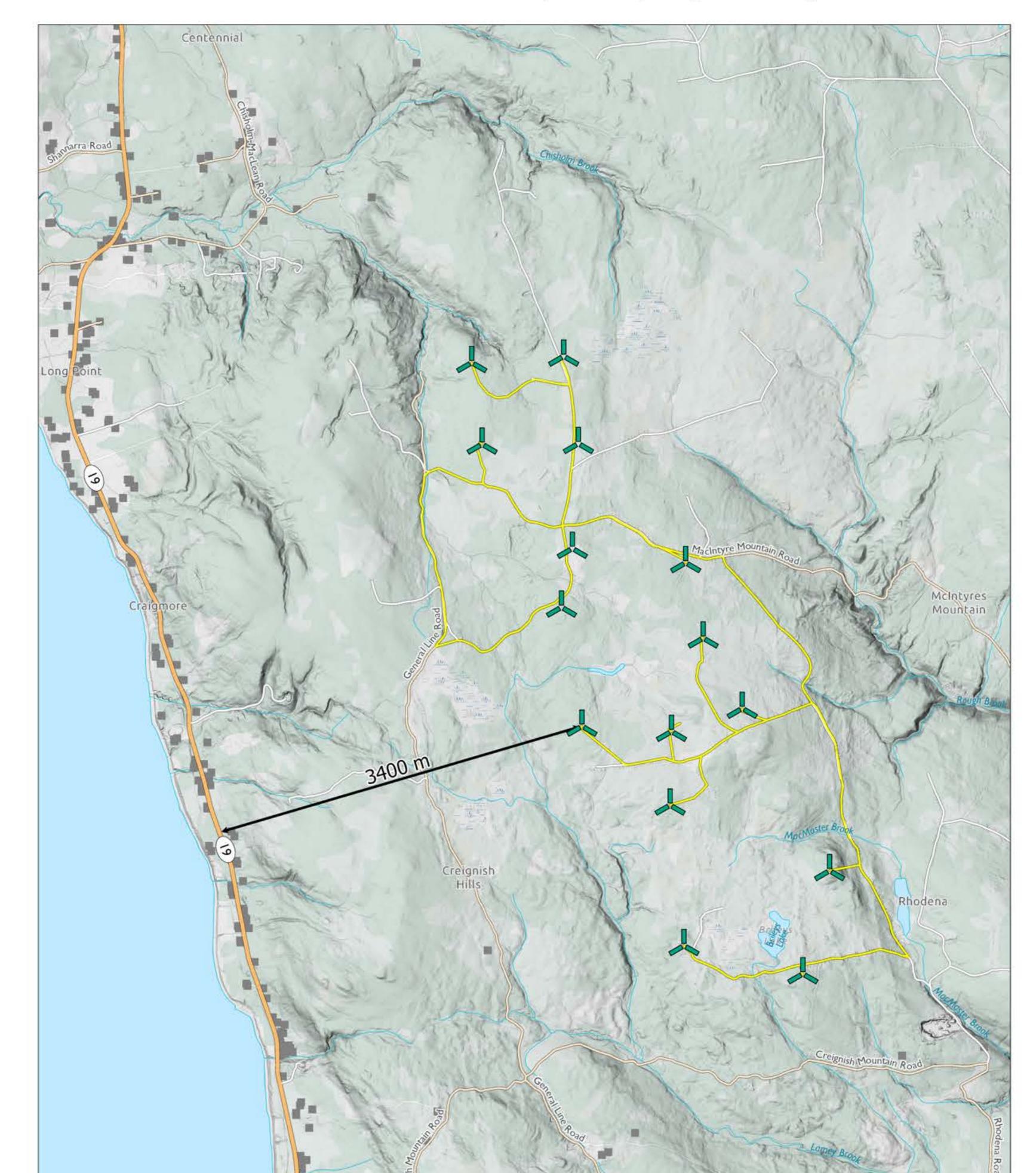
ect please visit:



Rhodena Wind Project Map



# Rhodena Wind Farm Revised Turbine Layout (May 2023)

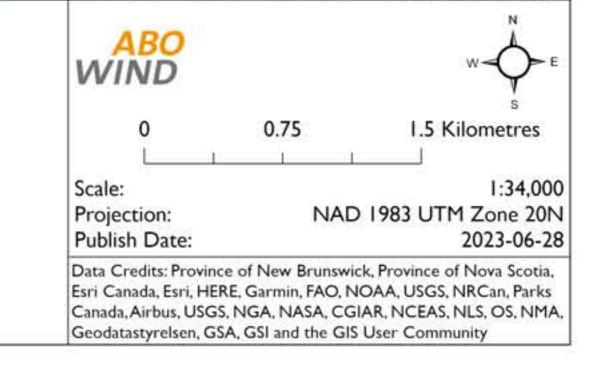




🙏 Potential Turbine Site

Building (residence)

Proposed Access Route & Collector Line



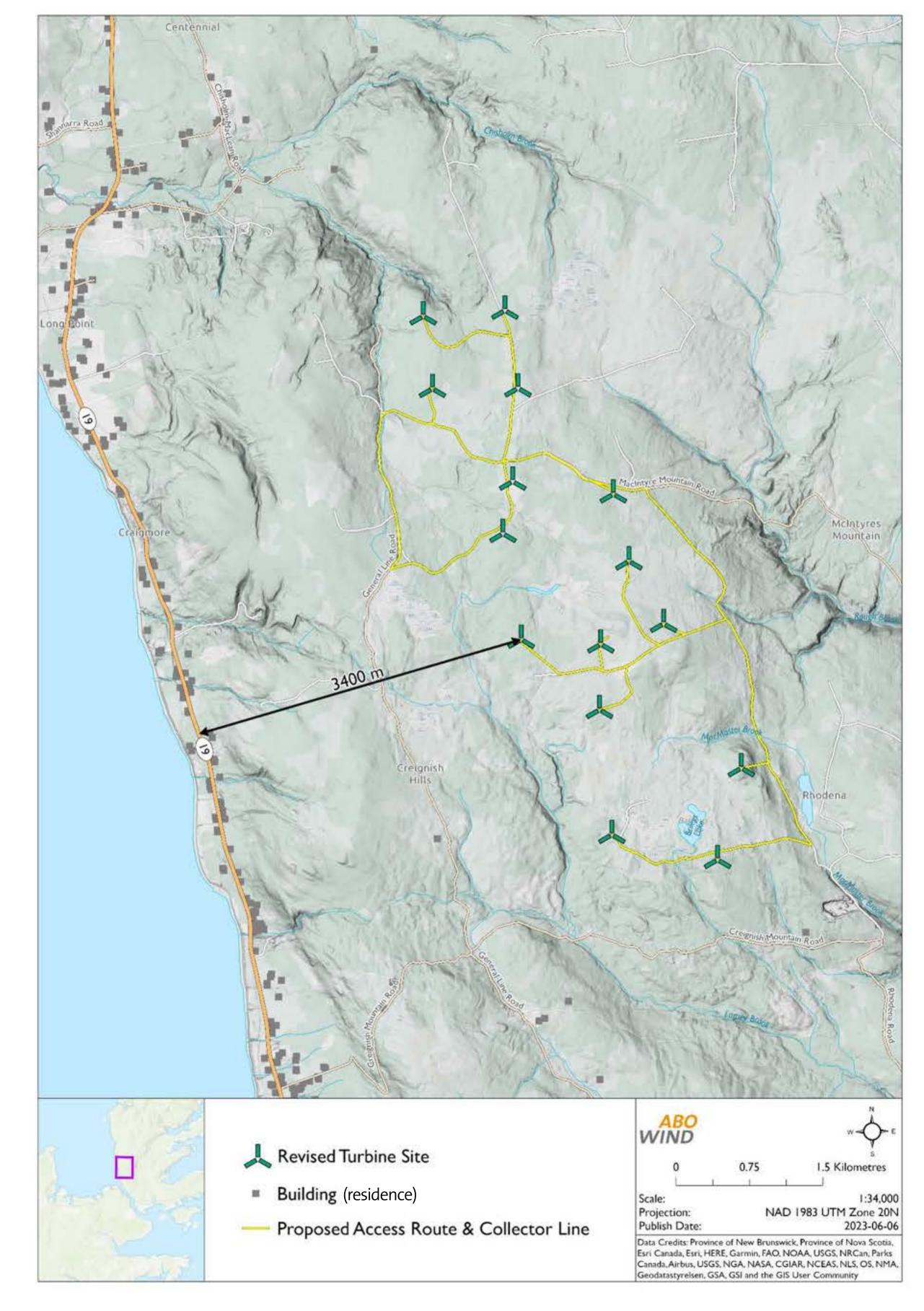
www.rhodenawind.ca

Scan the QR Code to learn more about the Project and access interactive maps:

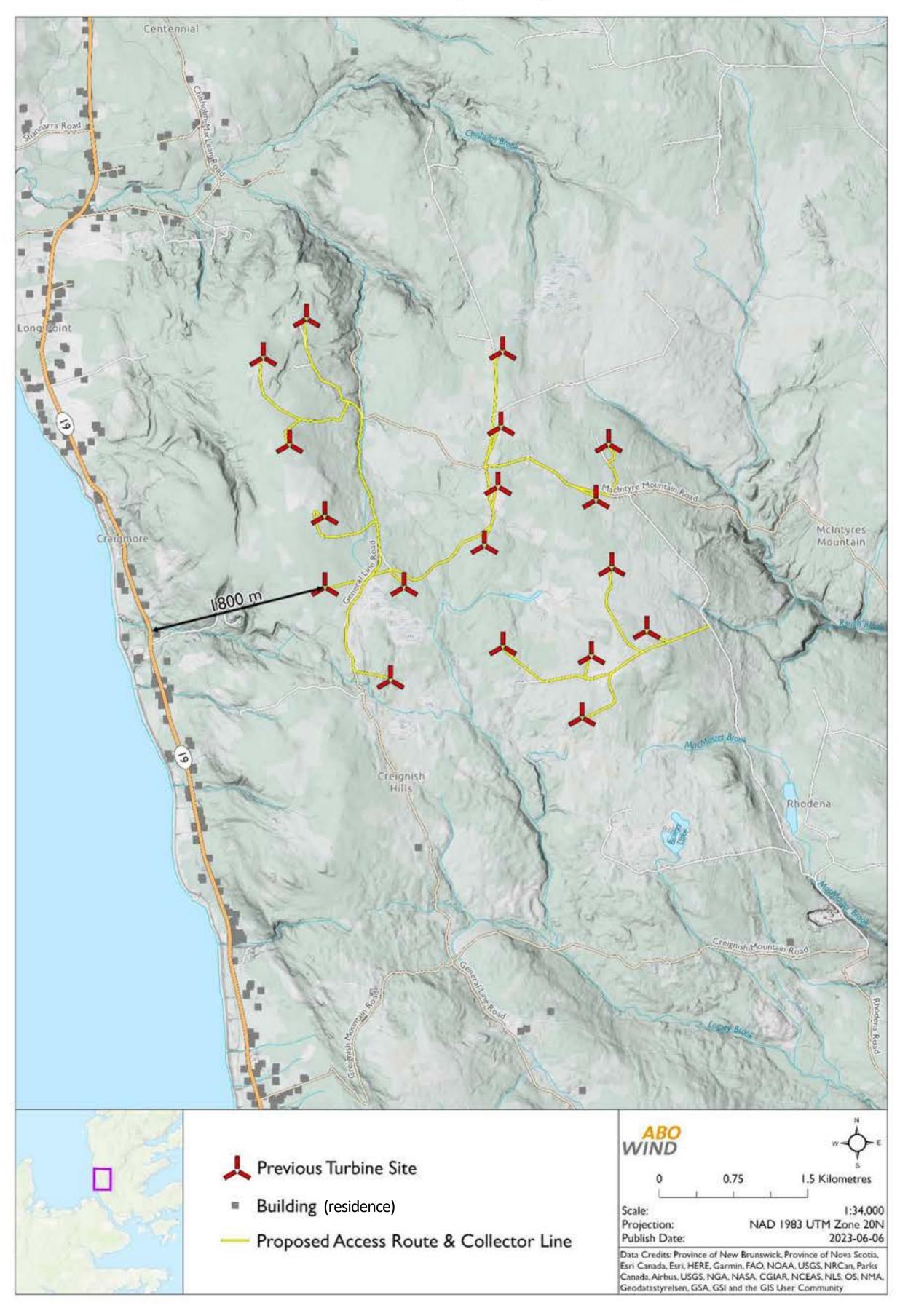


# Rhodena Wind Project Modified design based on public feedback

## Rhodena Wind Farm Revised Turbine Layout (May 2023)



## Rhodena Wind Farm Previous Turbine Layout (March 2022)





# **Rhodena Wind Project** Environmental Studies

### **Environmental Study Results**

#### Wildlife survey results

- Bird surveys were completed across all seasons (spring migration, breeding, fall migration, and winter).
- The amount of birds is not considered high relative to other Projects that have been approved in NS.
- Two Species at Risk are known in the area wood turtle and Canada lynx, so targeted surveys for both species were completed. Neither species was detected during surveys.
- Bat acoustic monitoring was completed and there were detections of bats.

#### **Environmental Mitigations and Reporting**

- Based on the field results ABO undertook additional infrastructure siting activities to avoid wetlands and wildlife features, where feasible. This includes avoiding Canada Lynx Range.
- Construction footprint and disturbance of regular activity reduced:
  - The majority of access roads (21 km or 86.2%) utilized by the Project are existing access roads to minimize the footprint of disturbance.
  - Only 4.78 km of new access roads are required to support the Project.
  - No gates are anticipated to be installed at the Project with the exception of fencing around the substation for safety reasons. Recreational use and hunting activities will not be disrupted, with the exception of some construction related safety measures and temporary road closures.

#### Aquatic habitat, lichen, and botany survey results

• 86 wetlands and watercourses throughout project area, 22 (2.61 ha) will be impacted by the Project.

• Four observations of a Species at Risk lichen (blue felt lichen), were identified. None of the occurrences will be directly impacted and 100 m setbacks will be maintained.

• No Species at Risk plant species were identified.



#### Next steps

- Environmental Assessment Registration (late summer/fall 2023).
- ABO Wind will develop mitigation and monitoring plans. These plans will include:
- Wildlife Management Plan
- Bird and Bat Mortality Monitoring Program
- Sediment and Erosion Control Plan
- Surface Water Management Plan
- Contingency Plan
- Environmental Management Plan
- Complaint Resolution Plan





## Rhodena Wind Project Project Timeline\*

#### Activity

**Environmental Field Studies** 

**Project Information Mailout** 

**Open Houses** 

Community, First Nations and Government Engagement

Environmental Assessment submission to the Province, with additional opportunities for Project feedback

The Project will be submitted for the Green Choice Program

Anticipated Green Choice RFP Award

Construction begins with tree and road clearing

Commissioning – The Project is producing clean energy

\*Project timeline is preliminary and subject to change.

	Timeline	
	2022 - 2023	
	June - Early July 2023	
	July 11 - 12, 2023	
	Ongoing - Through the life of the Project	
	September 2023	
m	December 2023	
	March 2024	_
	2024	
	2026	



# **Rhodena Wind Project Turbine Distances to Residences and Sound**

#### Setbacks (Distance)

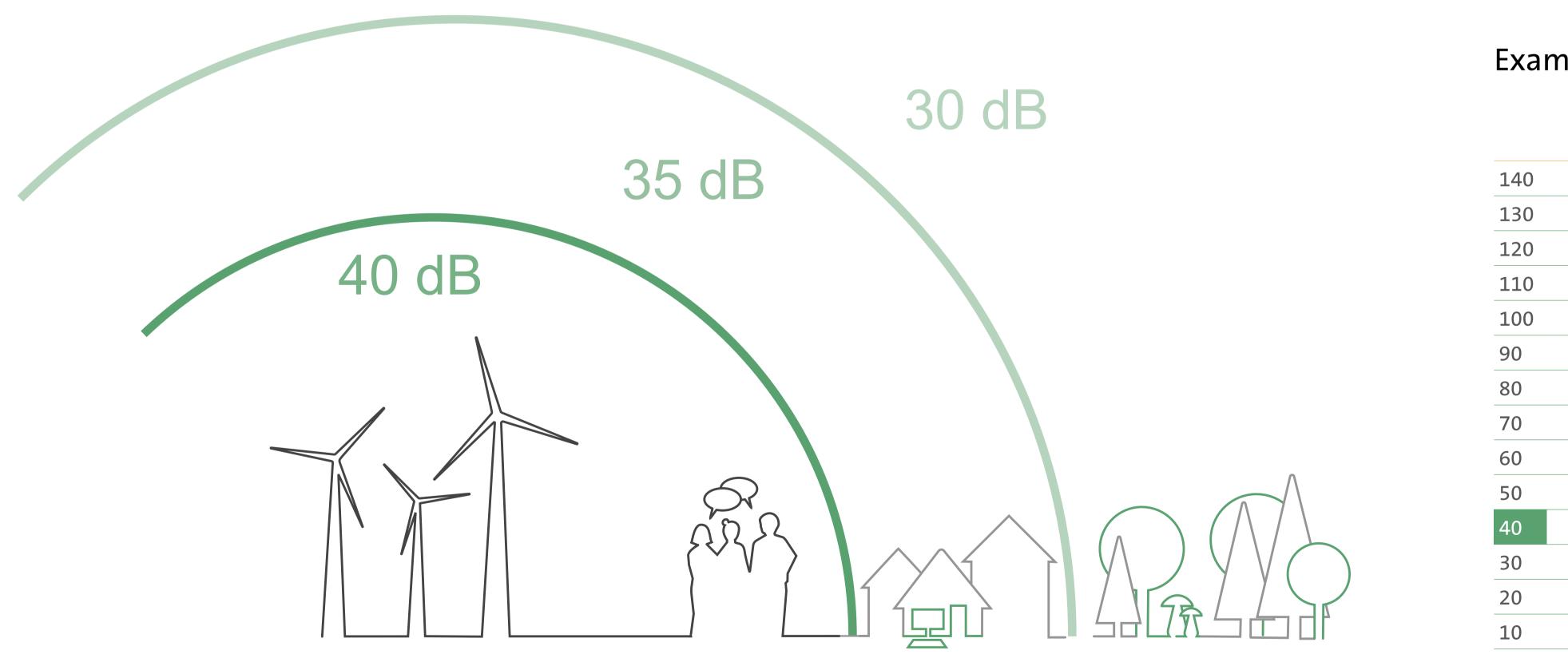
ABO Wind is aware municipal by-laws are in the process of possible amendment. ABO Wind will continue to comply with any existing by-laws, in addition to other requirements and considerations in place by the municipality and the Province.

Currently, ABO's setbacks from turbines to residences are significantly greater than the minimum current requirements of 600m distance.

#### Noise Levels

The Project will be designed in accordance with the Province of Nova Scotia's Environmental Assessment ("EA") requirements for Wind Power Projects. This Project not only meets, but exceeds the requirement for sound levels: "a proponent must ensure that the wind farm design and turbine siting does not cause sound levels to exceed 40 dBA (A-weighted decibels) at the exterior of receptors" (Province of Nova Scotia, 2021).

Our third-party expert's noise modelling study indicates that cumulative noise level, including turbine-generated noise, will not exceed 40 dBA at any existing receptors (residences). A 40 dBA sound level is similar to a quiet library or a suburban area at night.



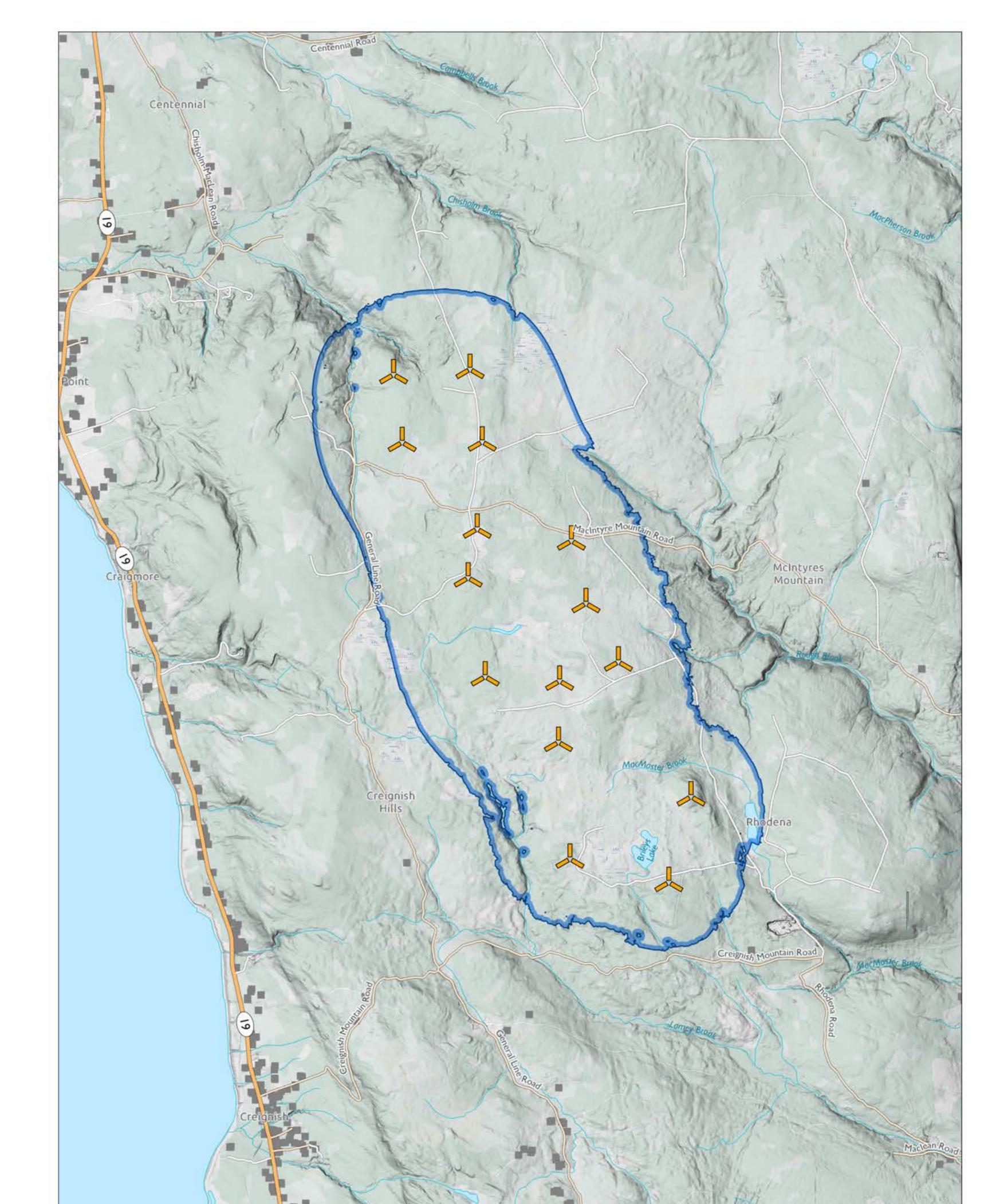
#### Examples of common sound levels (dBA)

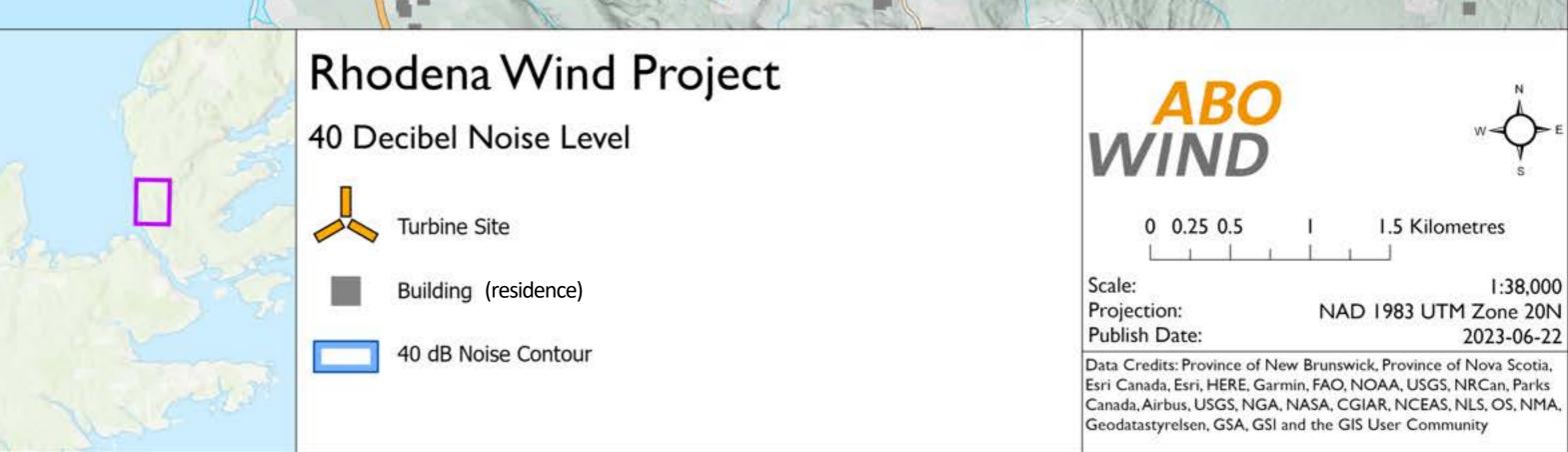


Threshold of pain		
Jet take off		
Rock concert		
Jackhammer		
Power saw		
Street traffic		
Doorbell		
Office		
Normal conversation		
Quiet urban neighborhood, daytime		
Library		
Soft whisper		
Ticking of a wrist watch		
Rustling leaves		

## Rhodena Wind Project Sound - 40 dBA Contour



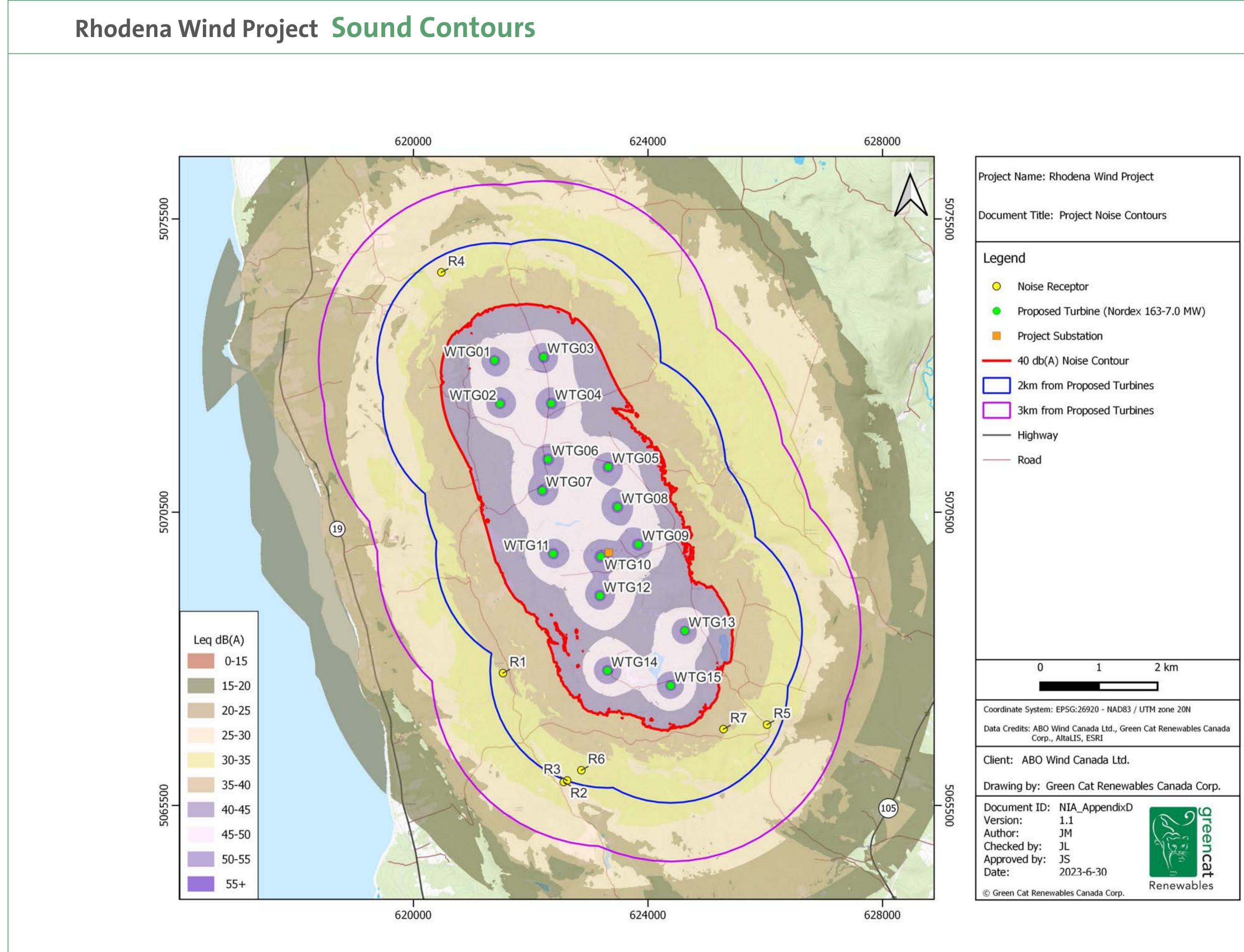




## Scan the QR Code to Learn more about the Project and access interactive maps:



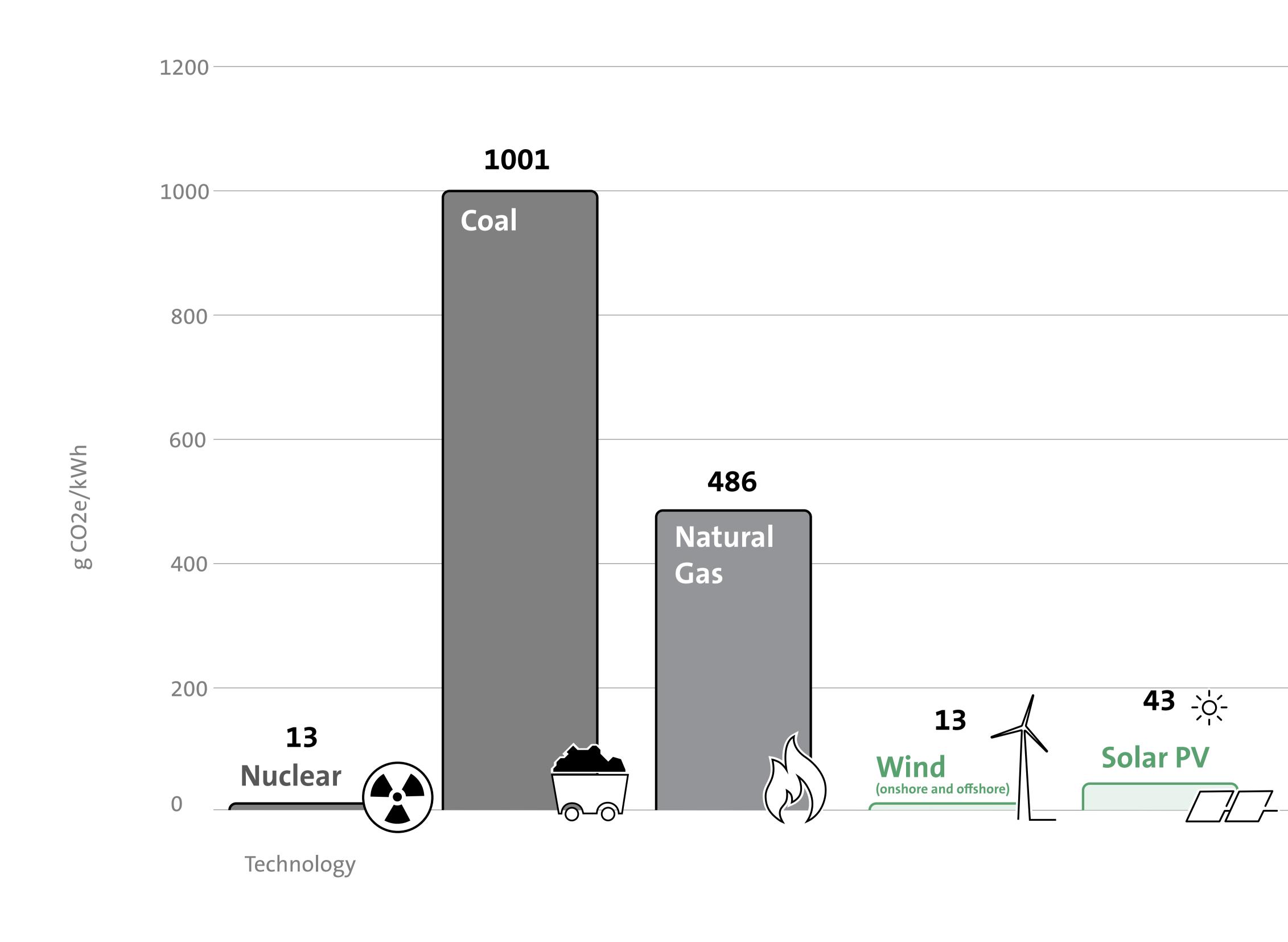
www.rhodenawind.ca



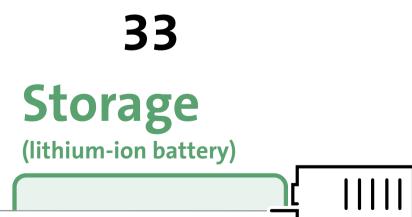


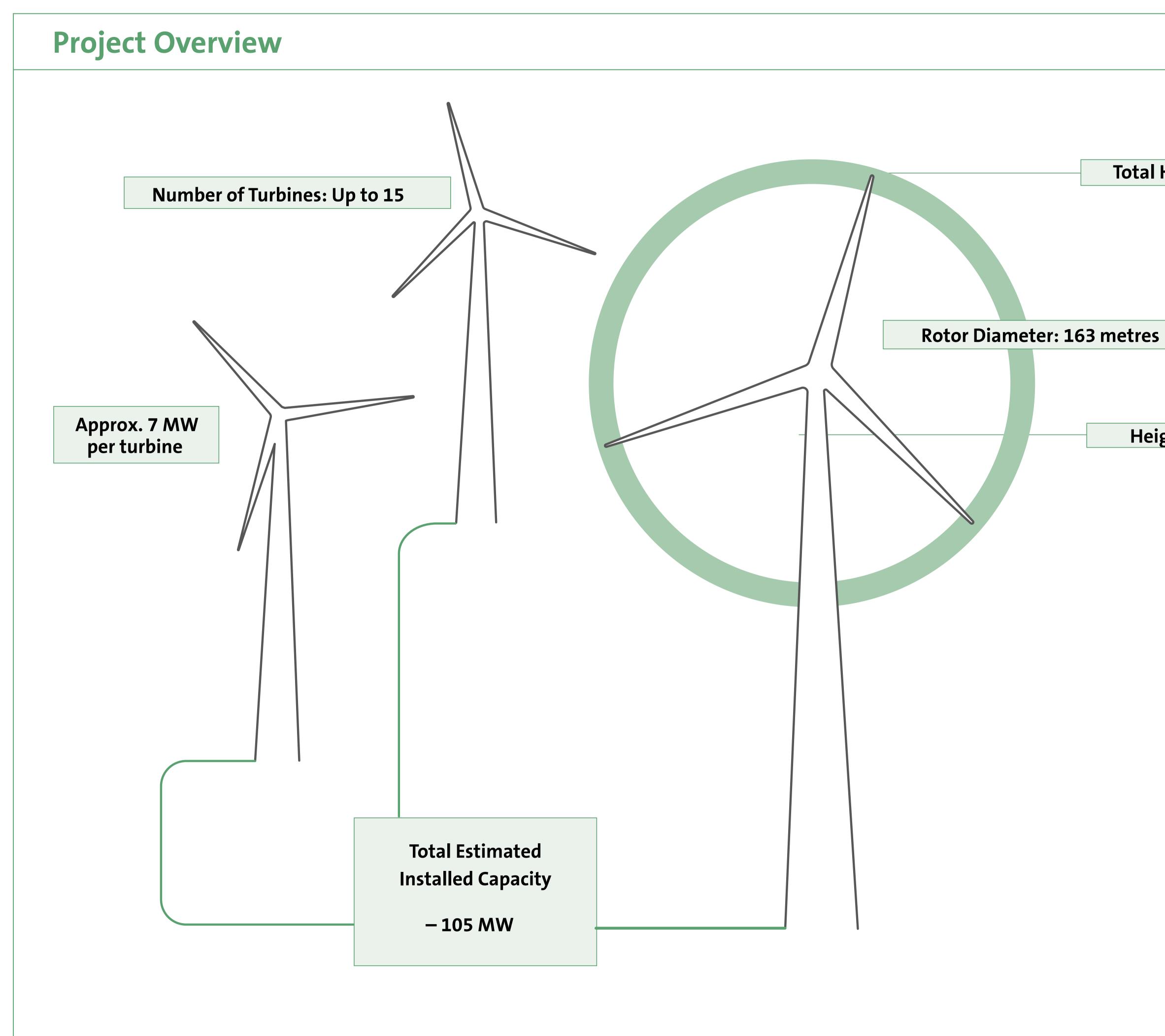
## **Emissions of various energy sources**

The chart shows the total life cycle emissions in grams of carbon dioxide equivalent per kilowatt-hour for different electricity generation technologies. Source: NREL's Life Cycle Greenhouse Gas Emissions from Electricity Generation: Update; September 2021











Total Height: 200 metres

Height of Hub: 118 metres

## **Shadow Flicker**

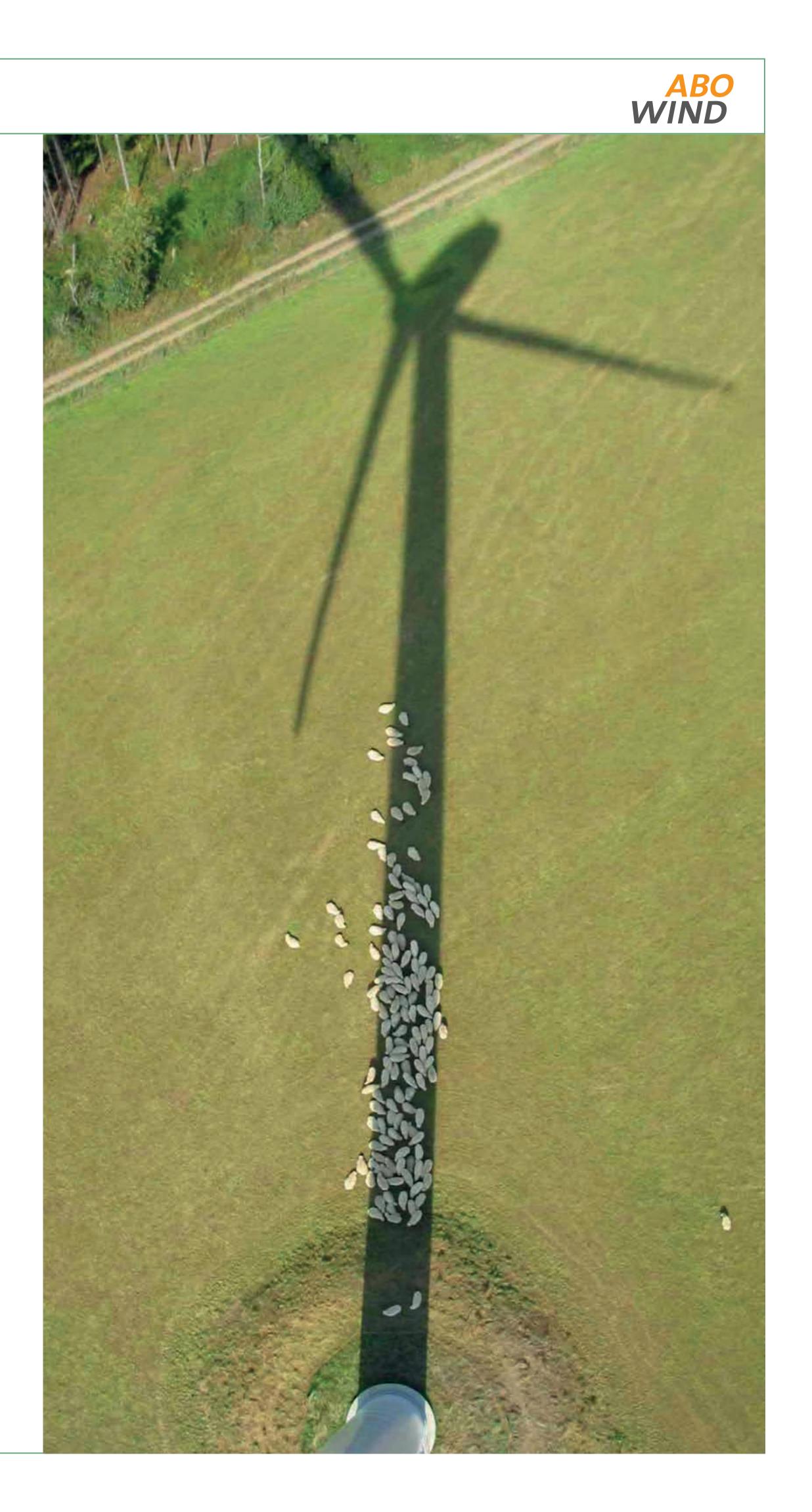
Shadow flicker occurs when the spinning rotor is located between the sun and a building, and the turbine blades alternately block and allow the sunlight to shine through. This causes a 'flicker' effect and only occurs when certain conditions are met such as the sun shining and turbine(s) operating.

A Shadow Flicker study has been conducted to assess the potential for shadow flicker at nearby receptors (residences).

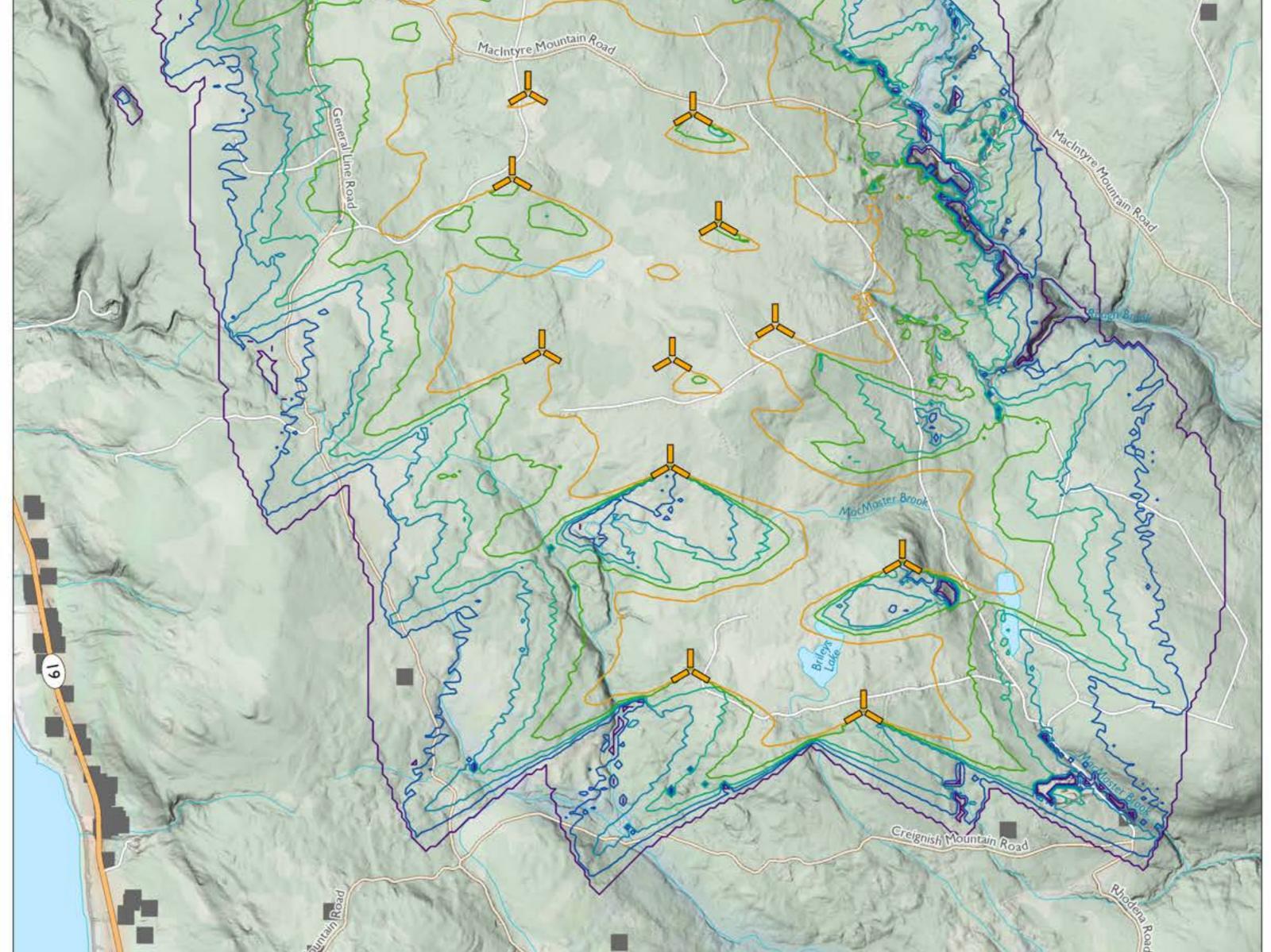
The assessment will be included in the Project Environmental Assessment that is being submitted to the Province of NS for approval.

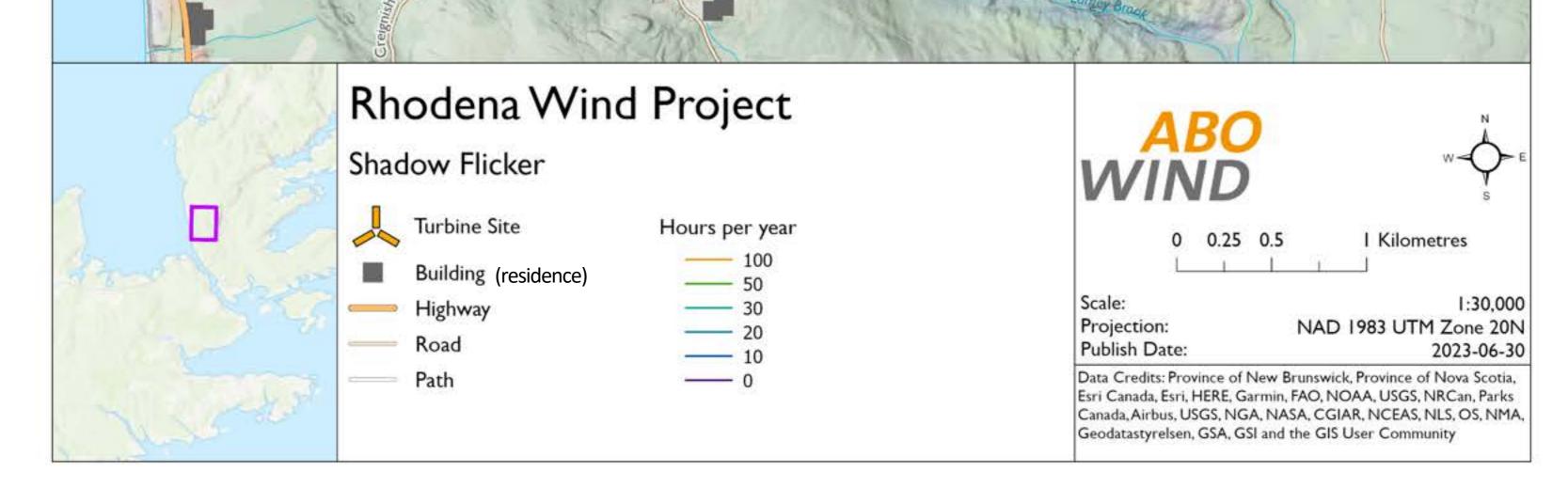
#### Shadow Flicker Study Results:

- Shadow flicker modeling indicates that regulatory thresholds will be met by the Project.
- There are no predicted exceedances of 30 mins per day and/or 30 hours per year at any existing residential receptors.



# Rhodena Wind Project Shadow Flicker Map

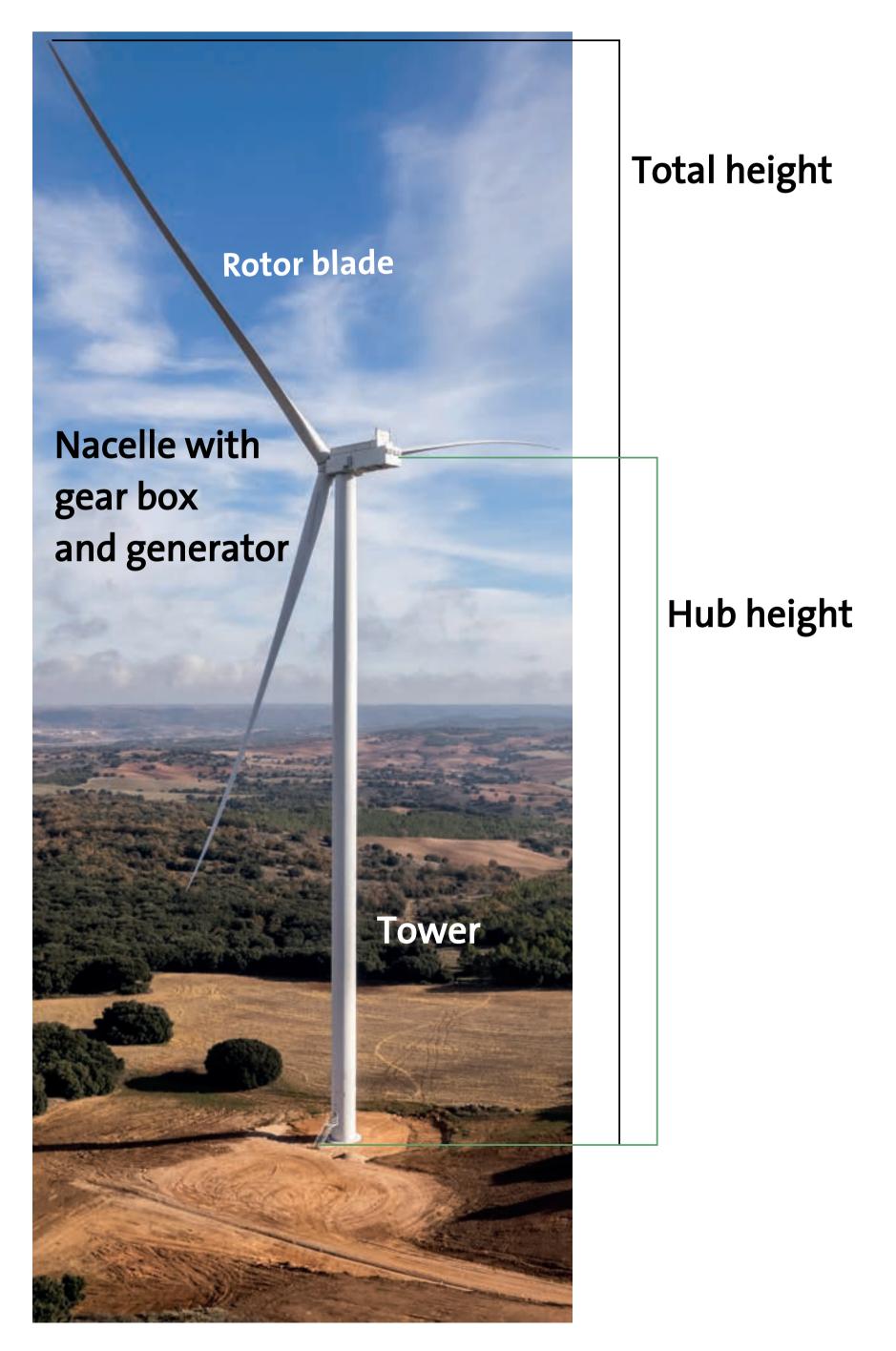


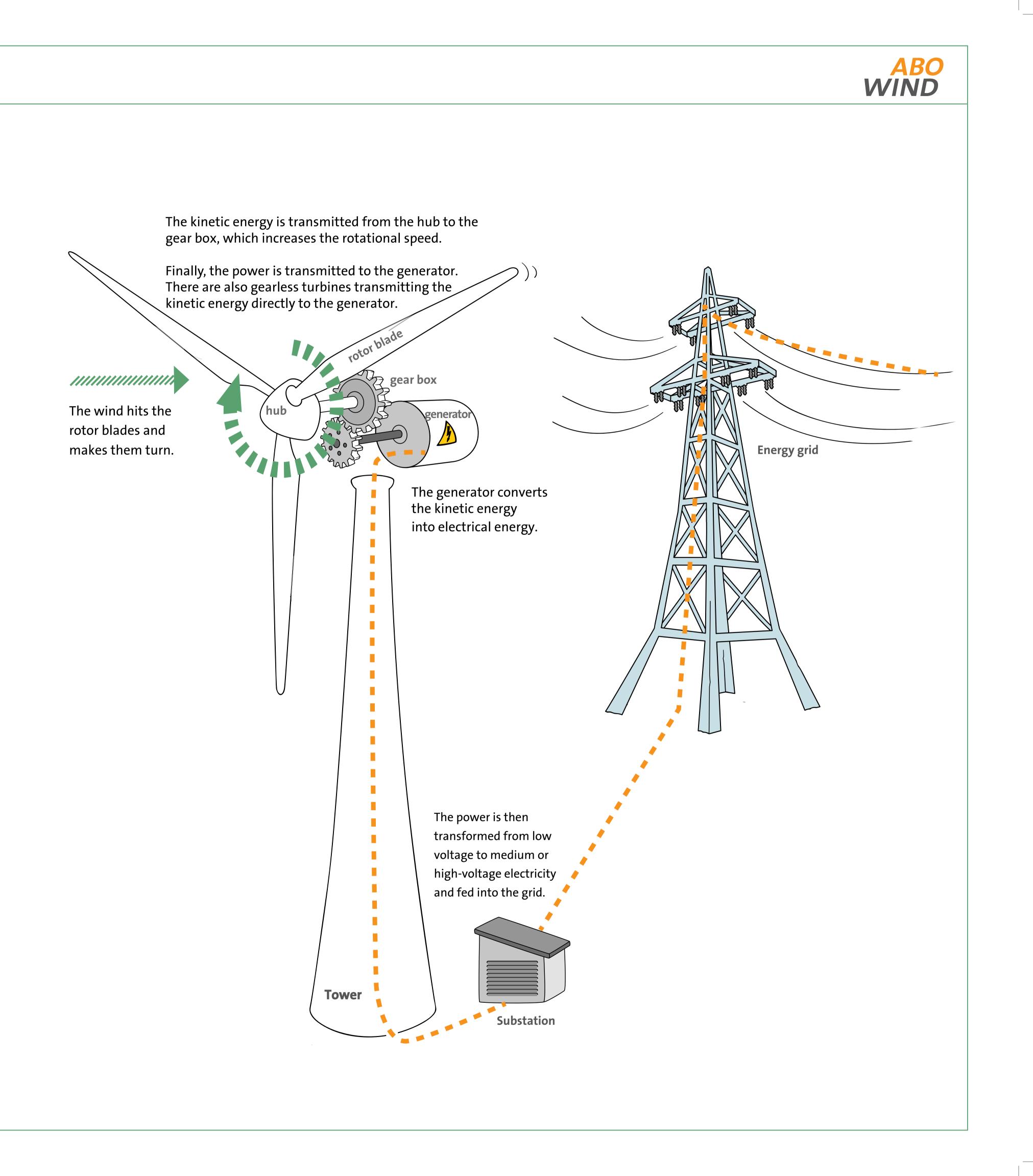


## How does a wind turbine work?

## Wind Turbine Components

The main components of a wind turbine are the tower, nacelle and three blades attached to the hub. Put simply, the energy in the wind turns the blades around the hub. The hub is connected to a generator via a drive shaft, which creates electricity when the blades spin.







Viewpoint Elevation: 8m AOI View Direction: Nearest Turbine:

Principal Distance Printed image

53.5" (planar 812.5mm 841 x 297mm 820 x 260mm

Camera height: Date and time:

NIKON D608 35mm 1.5 AGL 28/06/2022 07:30



Viewpoint Elevation: 14m AOD View Direction: Nearest Turbine:

171\* 9.6km

Principal Distance: 812.5mm 841 x 297mm Paper size: Printed image size: 820 x 260mm

Camera: Lens: Camera height: Date and time:

35mm 1.5 AGL 28/06/2022 10:20



Viewpoint 01: Port Hood

Viewpoint 02: St. Andrews Catholic Church



Viewpoint Elevation: View Direction: Nearest Turbine:

incipal Distance Paper size: Printed image size:

m AO

43.5° (plana/ 812.5mm 841 x 297mm 820 x 260mm

amera Lens: Camera height: Date and time:

NIKON D600 25mm 1.5 AGL 28/06/2022 10:55



Viewpoint Location: E619320 N5075141 Viewpoint Elevation: 75m AOD View Direction: Nearest Turbine:

126\* Paper size: 2.9km

53.5\* (planar) Principal Distance: 812.5mm 841 x 297mm Printed image size: 820 x 260mm

Camera: Lens: Camera height: Date and time:

NIKON D600 35mm 1.5 AGL 28/06/2022 11:35



Viewpoint 03: Baxters Cove

Viewpoint 04: MacLean Road



Viewpoint Elevation: View Direction: 40\* Nearest Turbine:

Nearest Turbine:

13.1km

Paper size: 11.0km

812.5mm 841 x 297mm Printed image size: 820 x 260mm

Printed image size:

820 x 260mm

Date and time:

29/06/2022 11:30

Camera height: Date and time:

35mm 1.5 AGL 29/06/2022 10:10





Viewpoint 05: Havre Boucher Harbour

Viewpoint 06: Shore Road



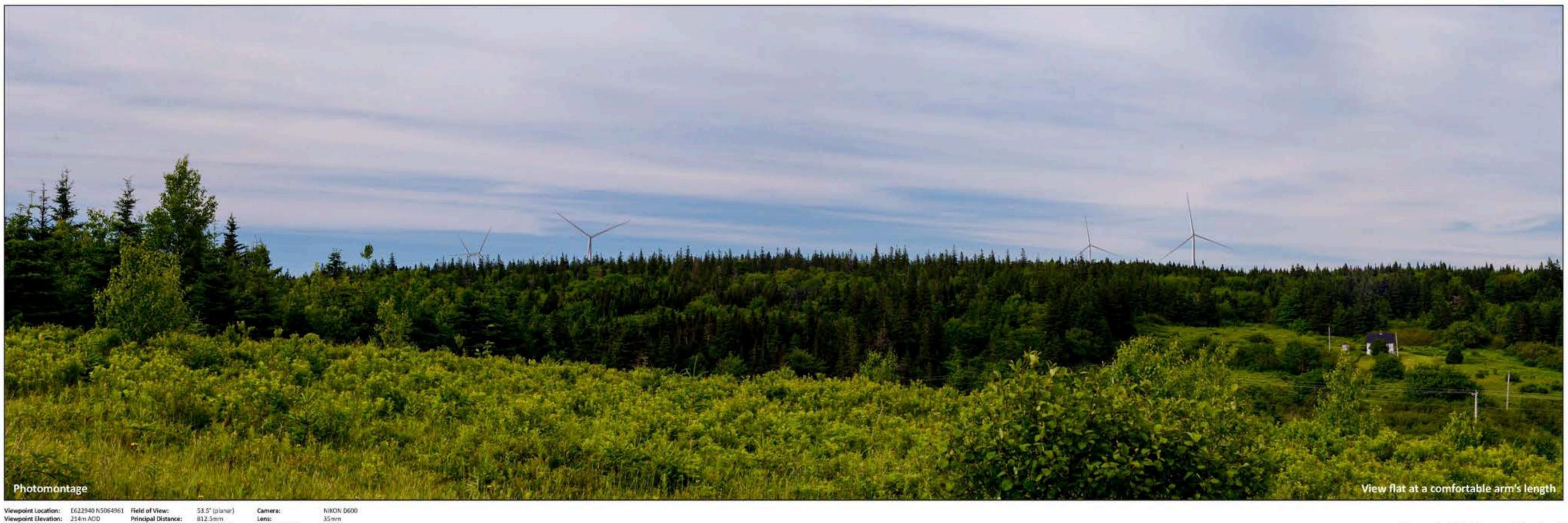
vpoint Elevation View Direction: Nearest Turbine:

125m AOD incipal Distance Paper size: Printed image size:

812.5mm 841 x 297mm 820 x 260mm

Camera Camera height: Date and time:

NIKON D600 35mm 1.5 AGL 29/06/2022 11:57



View Direction: Nearest Turbine:

15" 2.9km

Principal Distance: 812.5mm Paper size: 841 x 297mm Printed image size: 820 x 260mm

Lens: Camera height: Date and time:

35mm 1.5 AGL 29/06/2022 14:00



Viewpoint 07: Austin's Lane

Viewpoint 08: General Line Road





View Direction: 274\* Nearest Turbine:

7.6km

Paper size: Printed image size:

841 x 297mm 820 x 260mm

Camera height: Date and time:

35mm 1.5 AGL 29/06/2022 14:45



Viewpoint Elevation: 64m ACD View Direction: Nearest Turbine: 4.3km Nearest Visible Turbine: 4.6km

327" Paper size:

53.5" (planar) Principal Distance: 812.5mm 841 x 297mm Printed image size: 820 x 260mm

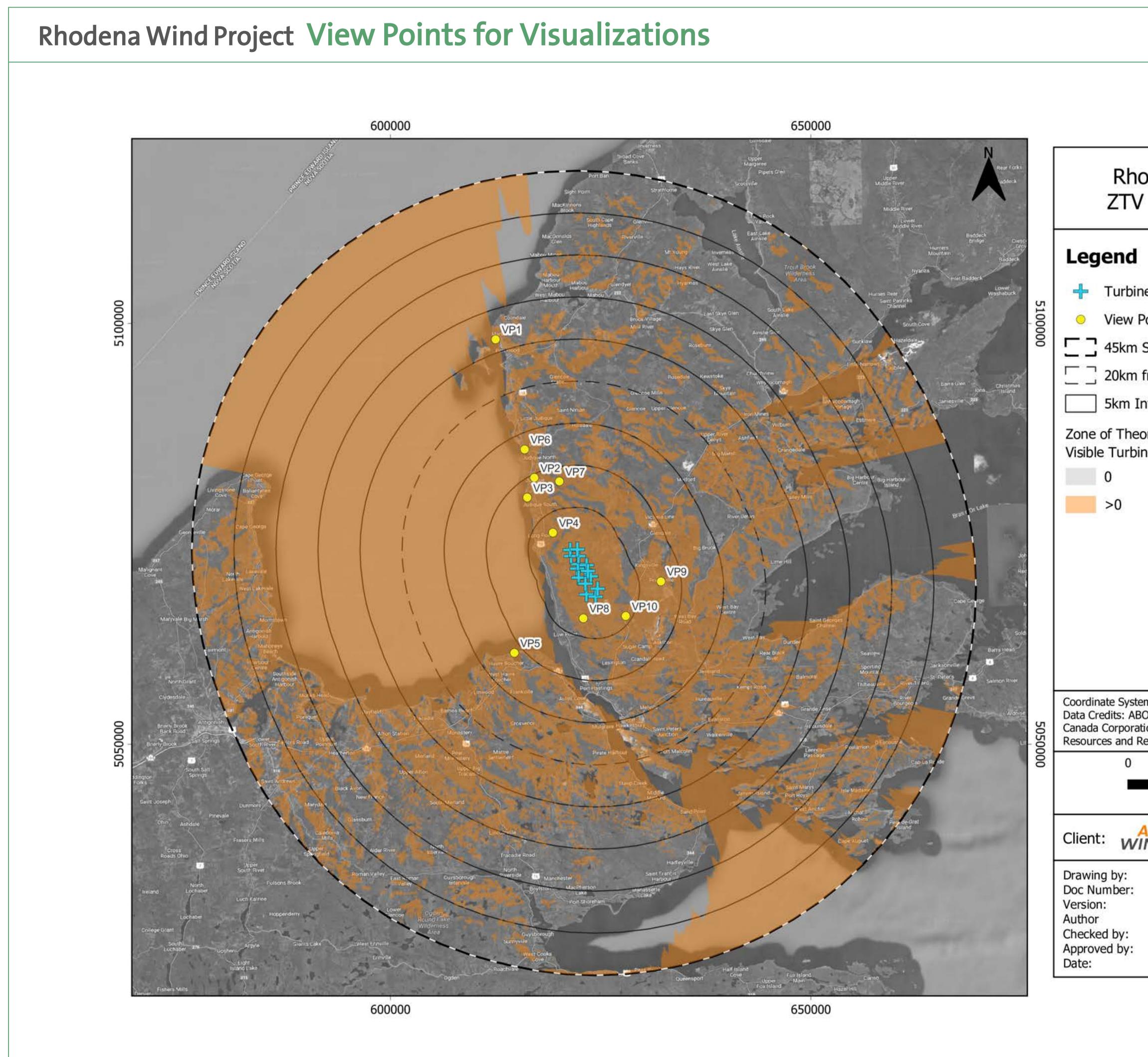
Camera: Lens: Camera height: Date and time:

35mm 1.5 AGL 29/06/2022 15:20



Viewpoint 09: Princeville

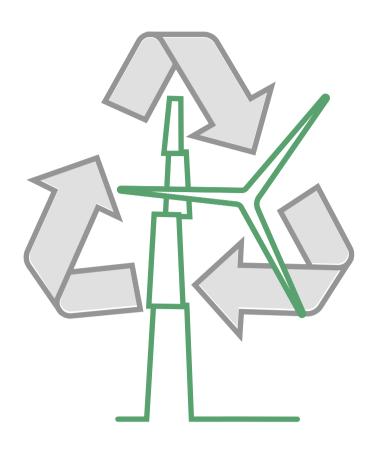
Viewpoint 10: Highway 105





odena Wind Project ' Map (Total Height)
ne (199.5m Total Height)
Point
Study Area
from Turbines
ntervals from Turbines
oretical Visibility (ZTV) nes
em: ESPG 26920 - NAD83 / UTM zone 20N O Wind Canada Ltd., Green Cat Rewnewables tion, Nova Scotia Department of Natural Renewables - Forestry.
10 20 km
1:510,000
ABO
Green Cat Renewables Canada Corp.
ROA_ZTVMap_TH
JG G
AW JS
2023-03-31 Renewables

## Decommissioning



## What will be recycled and who will pay?

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

Two of the largest turbine manufacturers have created the first set of turbine blades that are fully recyclable. The use of these blades will be evaluated for this project.



Dismantling wind farm



Deconstruction of foundation

