Winnifred Wind project

enerfín
elecnor group

OPEN HOUSE

Winnifred Wind Project

Seven Persons Community Hall,

426 Drinan Street,

Seven Persons, Alberta

September 12th, 2019

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WHO WE ARE

Enerfín

Enerfin was created in 1997 to develop and operate Elecnor Group's projects in the wind sector. With a long term vision, Enerfin currently manages over 1,200 MW of wind energy projects under operation and construction in Spain, Canada, Brazil and Australia and has gained worldwide recognition for its unique approach to the adoption of innovative technology combined with the sensitive integration of projects into local environments.

Elecnor Group

Enerfin is the wind energy investment arm of Elecnor Group, a global leader in advanced technologies, energy and infrastructure sectors.

Established in Spain more than 60 years ago, Elecnor has a long history of stable growth, which today sees the company active in 50 countries with over 13,000 employees.

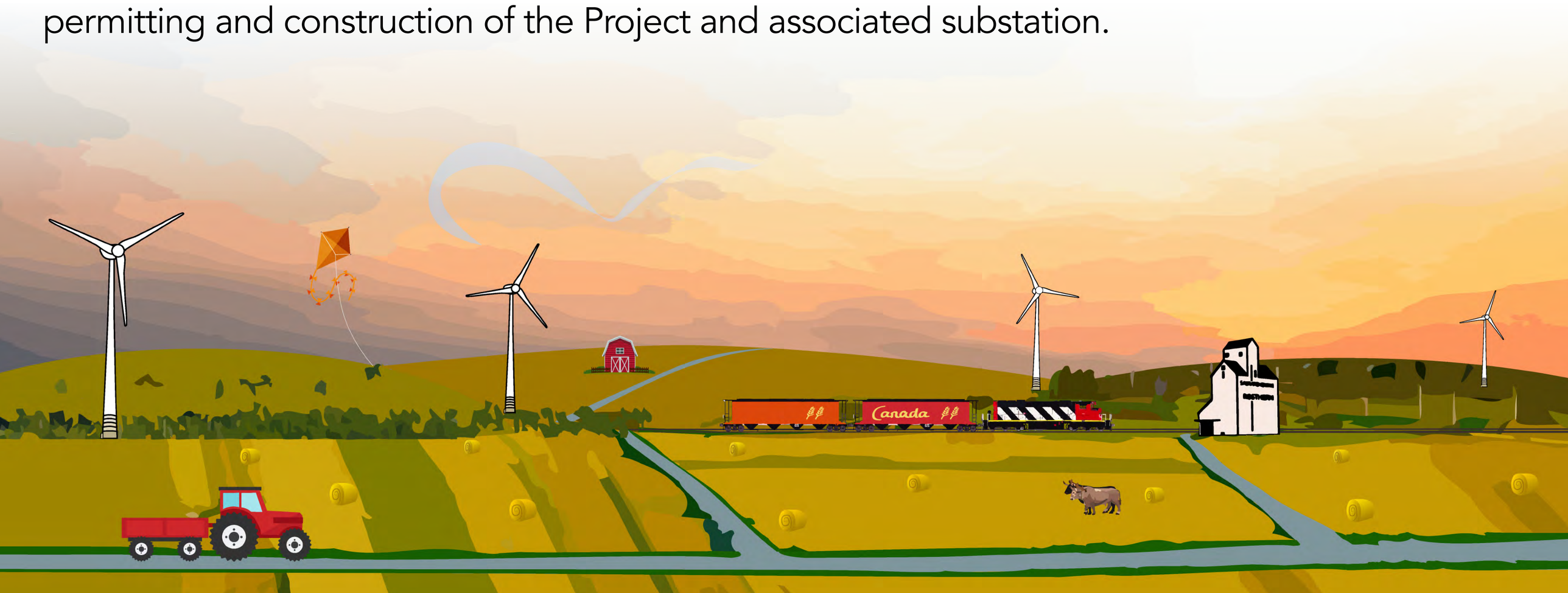
Enerfin's wind farm. Brazil

Project Overview

Enerfin began developing the Winnifred Wind Power Project (the Project) in 2017.

The Project is proposed up to 90 megawatts (MW) in size and is located on privately-owned land approximately 5.5 km north of the hamlet of Whitla, in the County of Forty Mile No. 8.

The Project proposes to connect to the existing Alberta Interconnected Electric System (AIES) via a new transmission line and associated interconnection facilities that are subject to a separate consultation and application process. Enerfin is responsible for the regulatory permitting and construction of the Project and associated substation.



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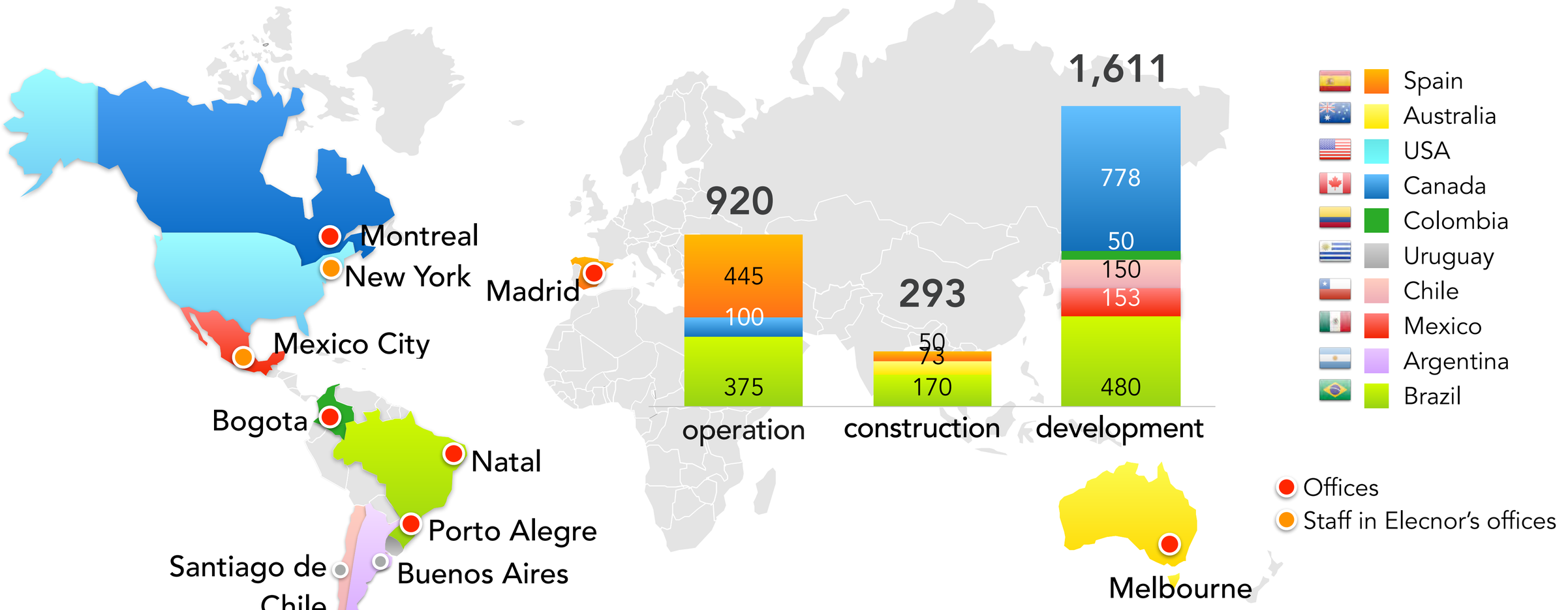
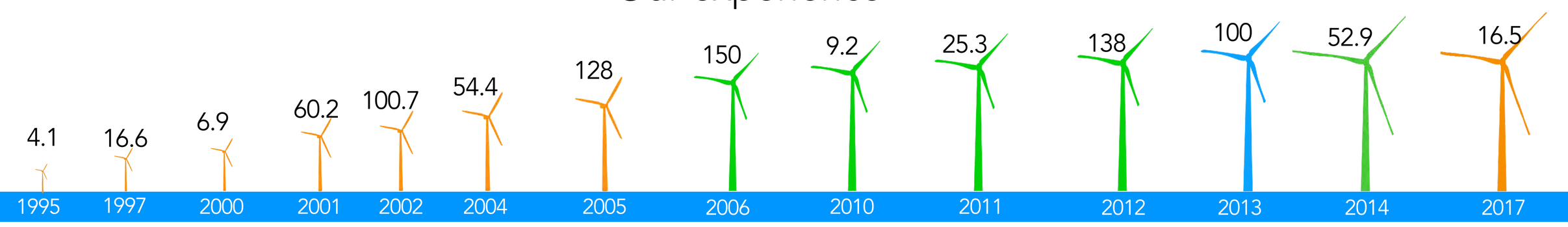
ENERFIN'S EXPERIENCE IN WIND PROJECTS

Enerfín's wind energy portfolio (MW)



> 1,000 MWs under assessment

Our experience



Enerfín capabilities

Project development

- Feasibility studies.
- Wind resource and technology assessment.
- Engineering and design.
- Environmental studies and Permitting.
- Stakeholders engagement.
- Negotiation of PPA or structuring of market participation.
- Financial modeling and capital structuring.

Construction supervision

- Project Contracts negotiation (TSA, BOP, O&M).
- Construction supervision.
- Implementation of HS&E policies.
- Stakeholders engagement.
- Lenders reporting.

Operation management

- Monitoring of operational data.
- Optimization of asset performance.
- Turbine O&M/supervision of O&M contracts.
- Energy sales management.
- I+D+I projects.
- Repowering strategies.

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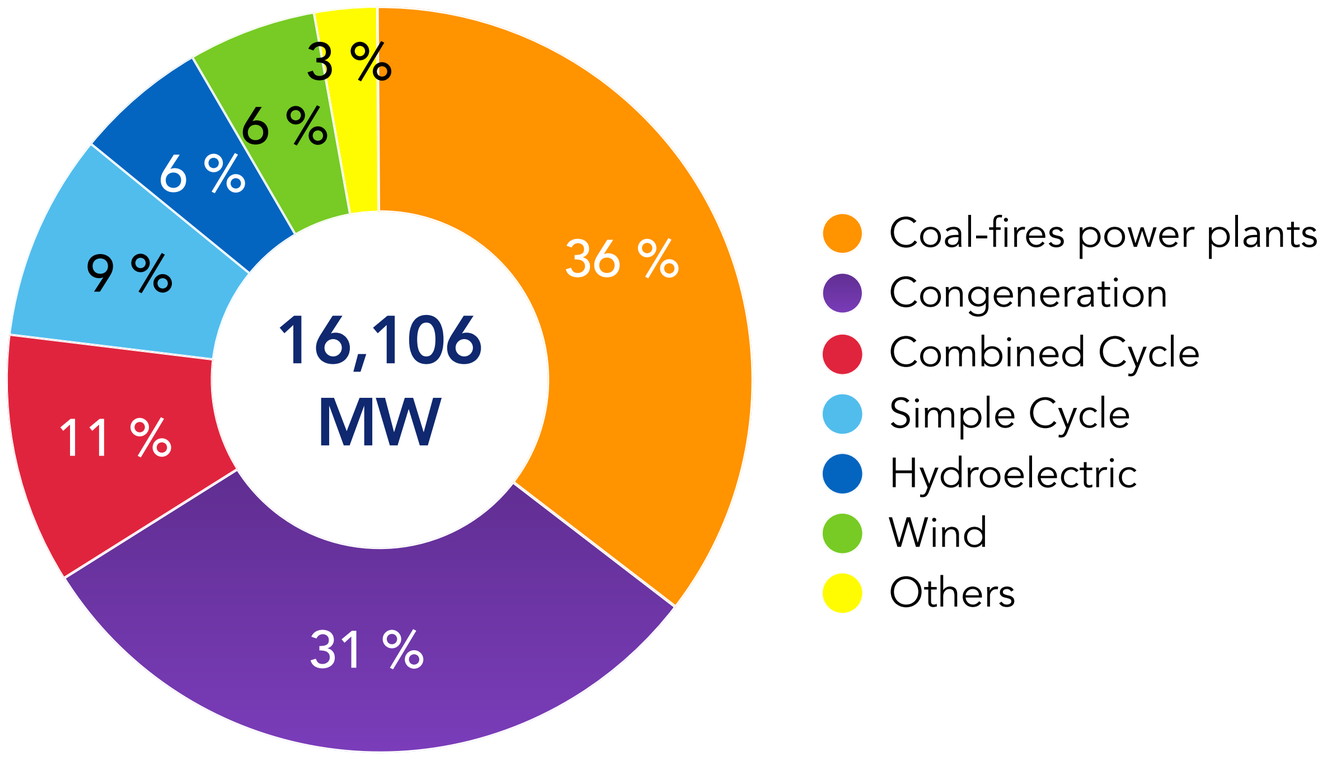
WIND ENERGY IN ALBERTA

Alberta has over 16,000 MW of power capacity installed, where approximately 36% (5,722 MW) comes from coal

Installed power generation in Alberta



Source: AESO 2019

The province has among the highest wind speeds in Canada, ranking third (after Quebec and Ontario) in installed wind power capacity (1,483 MW).

Over the last few years, improvements on turbine technology, as well as cost reductions, have positioned wind energy as the lowest cost option for new electricity in Canada.

Three rounds of competitive electricty-supply auctions were held by Alberta Electricity System Operator (AESO) in 2017 and 2018. They resulted in almost another 1,400 MW of new wind projects awarded, which will be in operation between 2019 and 2021, and will inject clean energy into the grid at prices as low as 3,8 cent/KWh on average.

Currently there are no new electricity-supply auctions planned in the short-medium term, but wind power can participate into the Alberta electricity market as any other power generator.

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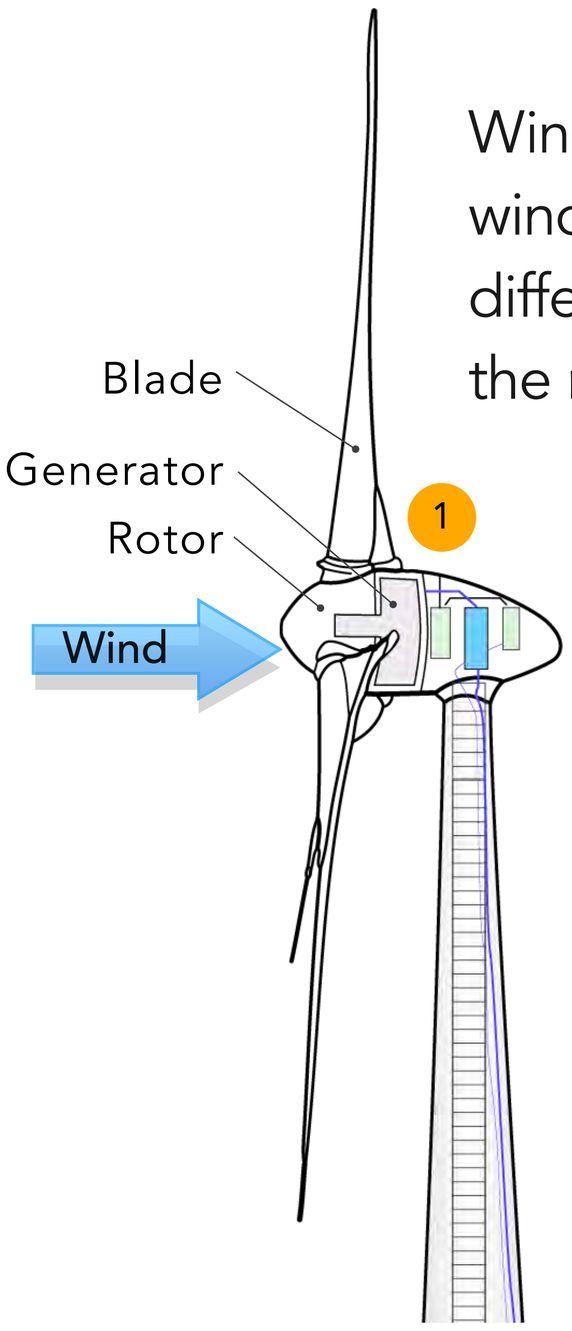
HOW WIND ENERGY WORKS

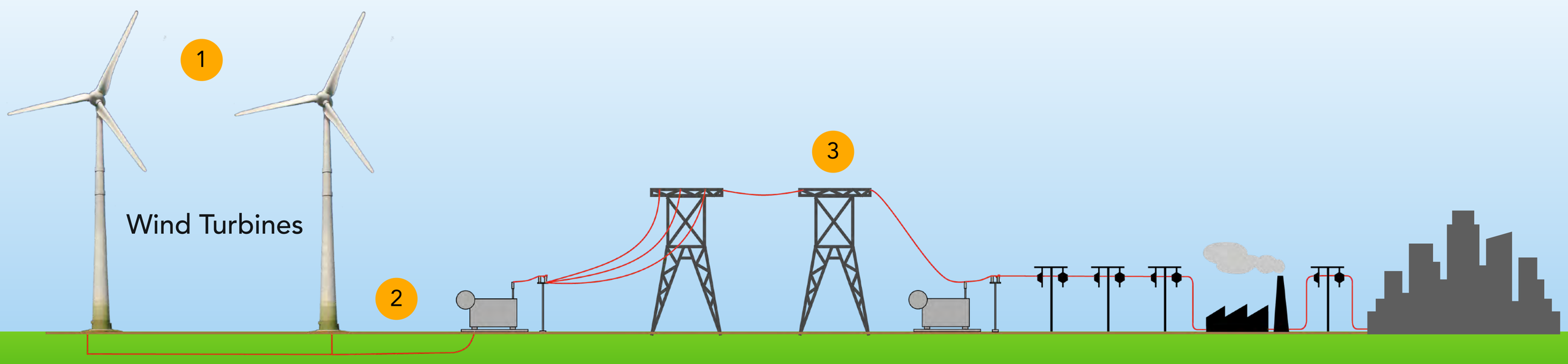


Wind turbines work on the same principle that allows airplanes to fly. The wind doesn't push the blades, but passes over them. The resulting pressure difference between the upper and lower surfaces creates lift, which causes the rotor to turn.

1. The power of the wind is transformed into electrical energy trough the rotation of the wind turbine's generator.

2. Inside the wind turbine there is electronic equipment to control the turbine, and a transformer that steps voltage up and connect with the underground collector system.

3. The collector system transmits the electricity to the wind farm substation, where voltage is stepped up, and where it connects to the utility electrical system by means of transmission lines.



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PROJECT CHARACTERISTICS

The project is situated on privately owned land, in the County of **Forty Mile No.8**.

Name Plate Capacity

* **90 MW**

Approximate Number of Turbines:

* **16-25**

Turbine Model

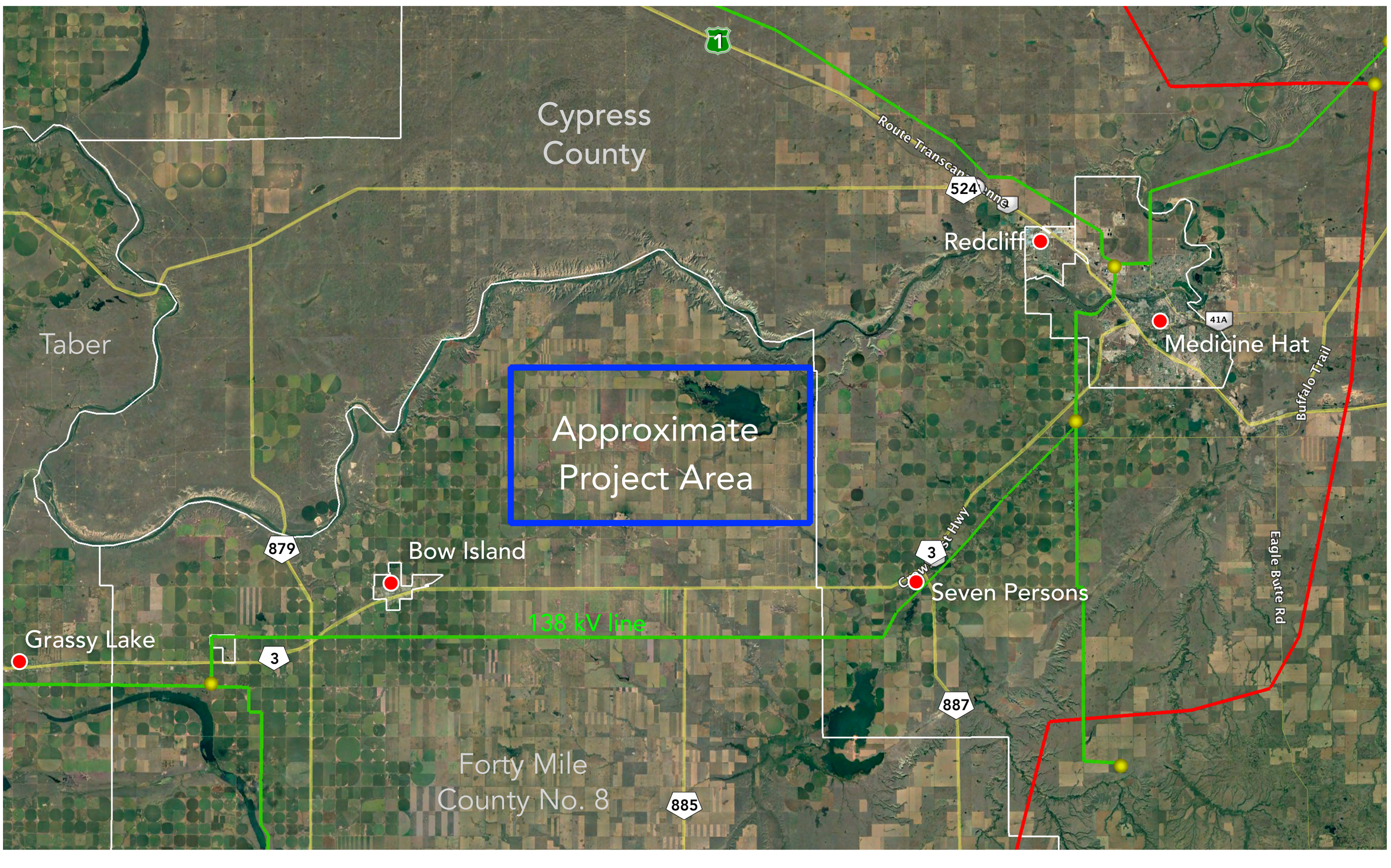
* To be determined
  - Up to 5 MW/turbine
  - Up to 120 m hub height

Interconnection

* 10km south, to existing 138kV line

Generation of Clean Energy

* to power 40,000 Alberta homes



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TYPICAL PROJECT COMPONENTS

Wind Turbines

- Blades (up to 83 m)
- Nacelle
- Tower (up to 120 m)
- Hub
- Foundation

New Access Roads and road upgrades

Collector System

(Underground or aerial cables)

Substation

(within Project Area)

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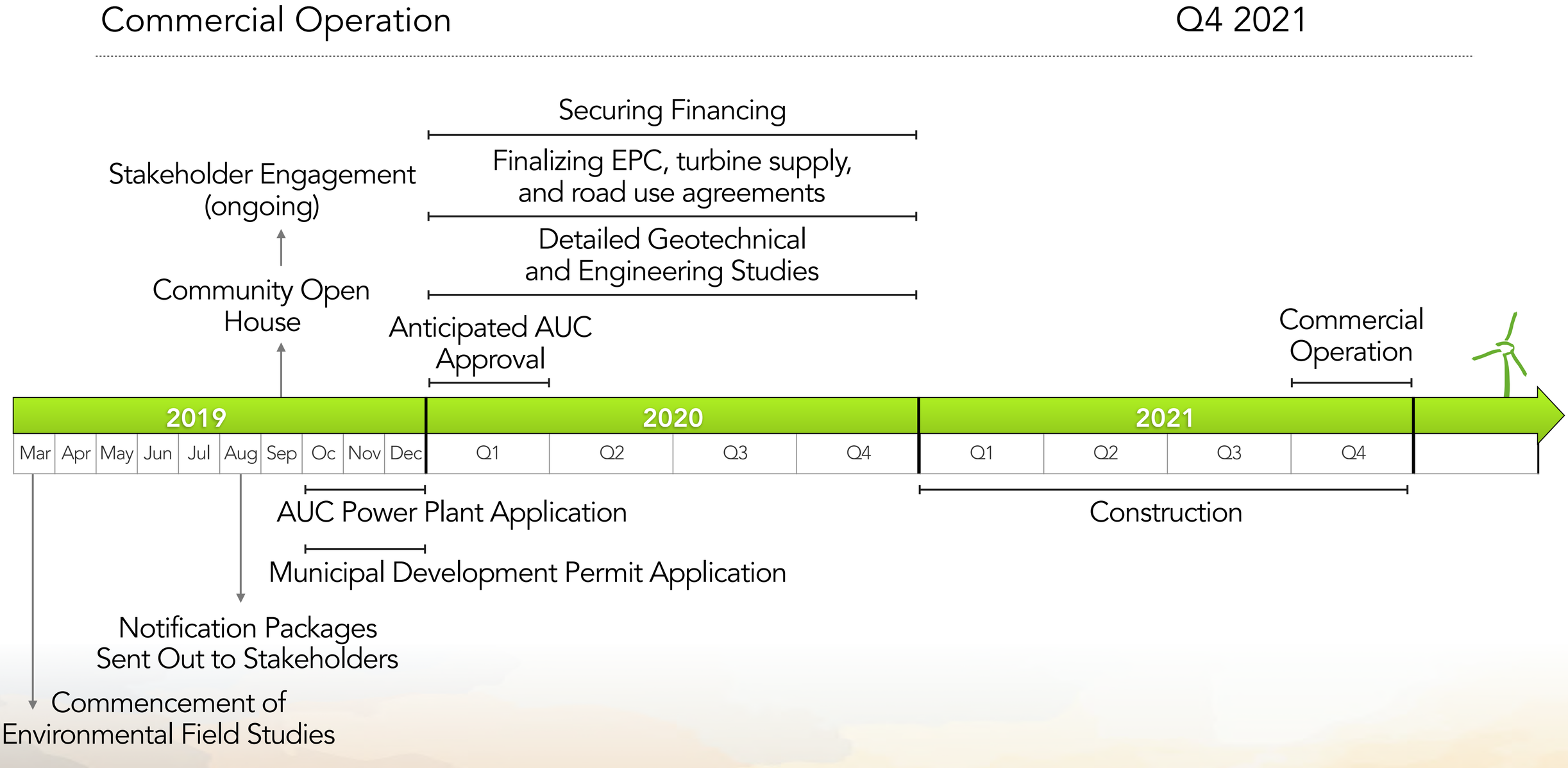
WINNIFRED PROJECT ESTIMATED TIMELINE

Project Milestones	Timeline
Commencement of Environmental Field Studies	March 2019
Notification Packages Sent Out to Stakeholders	August 2019
Community Open House	September 2019
Stakeholder Engagement (ongoing)	September 2019
AUC Power Plant Application	Q4 2019
Municipal Development Permit Application	Q4 2019
Anticipated AUC Approval	Q1 2020
Detailed Geotechnical and Engineering Studies	2020
Finalizing EPC, turbine supply, and road use agreements	2020
Securing Financing	2020
Construction	2021
Commercial Operation	Q4 2021



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ENVIRONMENTAL STUDIES

Field studies were initiated in March 2019 and are ongoing. Enerfin will provide assessment results to Alberta Environment and Parks (AEP) for their revision. Copies of all environmental studies and the AEP report will be included as part of the Alberta Utilities Commission (AUC) application process.

Enerfin hired McCallum Environmental Ltd. to complete the environmental field surveys and studies of the Project Area. Key features considered in the assessment included:

- Spring / Fall Migration Surveys.
- Breeding Birds / Sharp Tailed Grouse LEK Surveys.
- Burrowing Owl Surveys.
- Raptor and Raptor nests surveys.
- Amphibian and Wetlands Surveys.
- Spring / Fall Bat Surveys.
- Vegetation and Historical Resources.

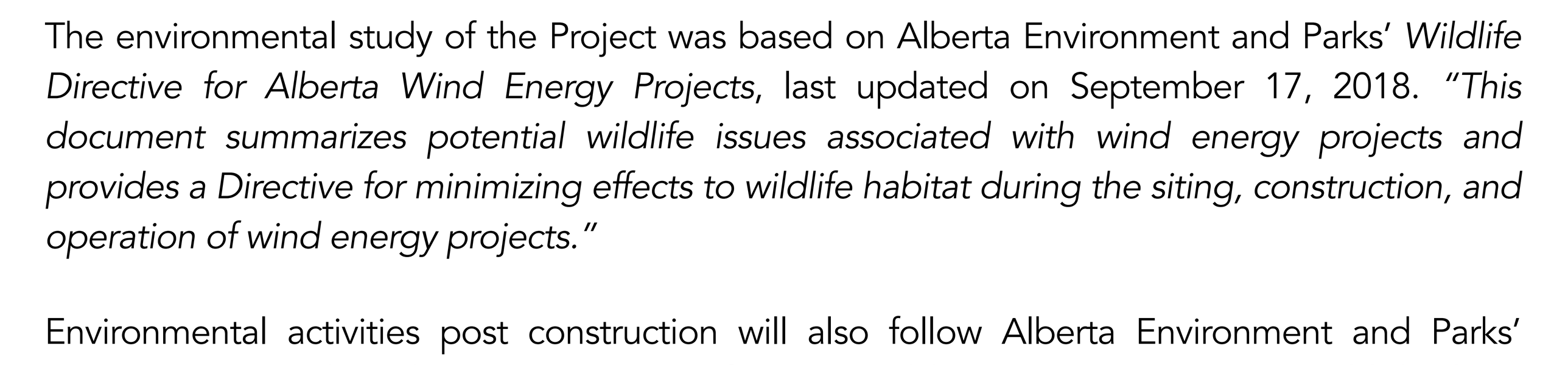
McCallum Environmental Ltd.

Additional Studies performed by others will also cover:

- Noise: Modeling and impact assessment.
- Shadow Flicker: Impact assessment.

The environmental study of the Project was based on Alberta Environment and Parks' *Wildlife Directive for Alberta Wind Energy Projects*, last updated on September 17, 2018. *"This document summarizes potential wildlife issues associated with wind energy projects and provides a Directive for minimizing effects to wildlife habitat during the siting, construction, and operation of wind energy projects."*

Environmental activities post construction will also follow Alberta Environment and Parks' *Conservation and Reclamation Directive for Renewable Energy Operations*, published on September 14, 2018.



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ENVIRONMENTAL SCREENING

Land Use

Environmental Constraints

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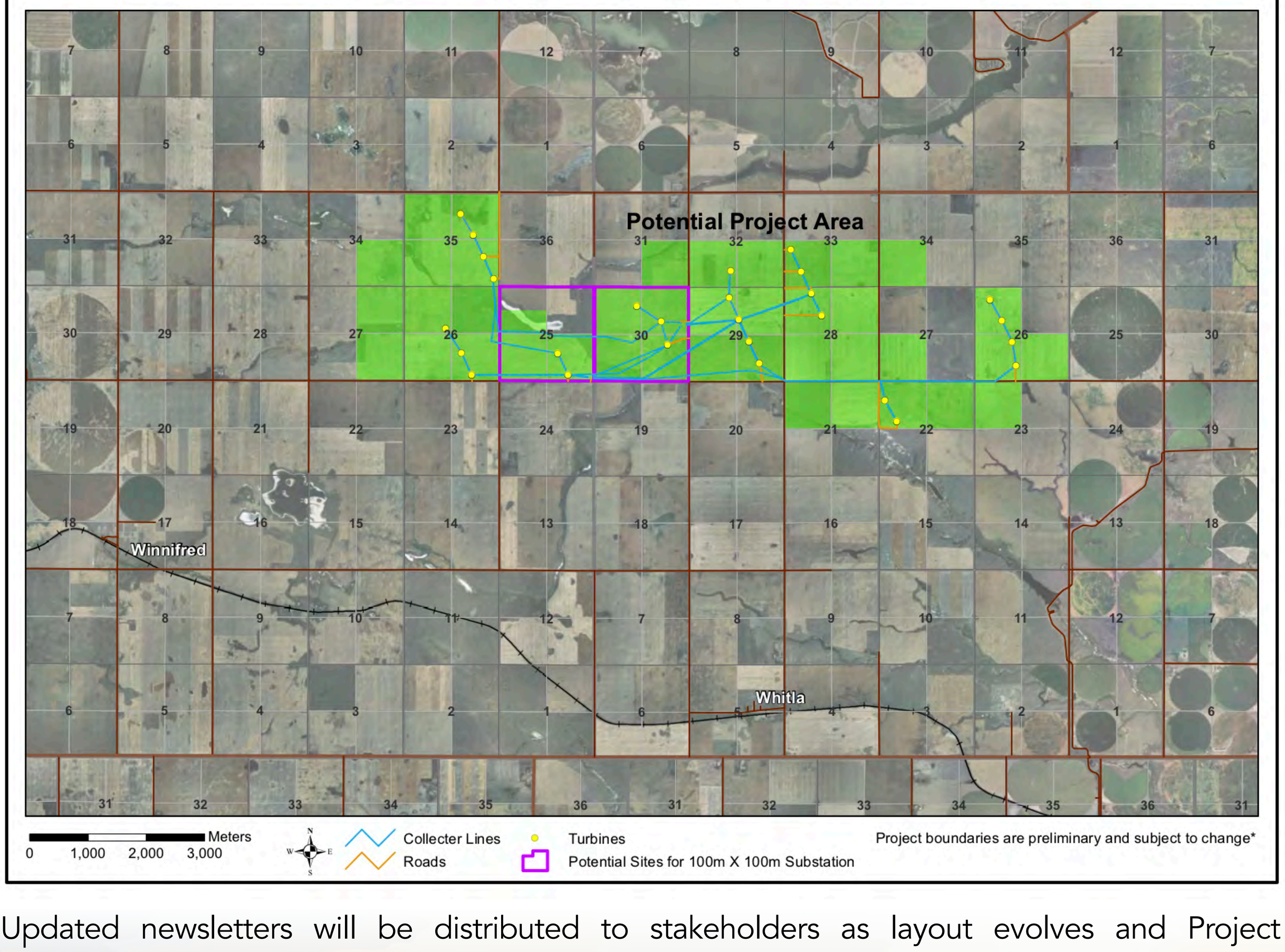
PRELIMINARY LAYOUT

A first Project layout has been designed by a local engineering taking into account the preliminary outputs of the environmental studies.

Project layout is still under review, and will evolve as a result of subsequent environmental work, stakeholder engagement, wind measurement campaign, engineering and geotechnical studies.



Updated newsletters will be distributed to stakeholders as layout evolves and Project progresses through the different stages of the permitting process.

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POTENTIAL PERCEIVED IMPACTS

CONSTRUCTION ACTIVITIES

The construction phase will cause an increase in traffic of trucks, cars and heavy machinery which can cause noise and dust if not controlled properly.

Mitigation measures for the construction phase will include the use of dust suppressant, reduced speed areas and fixed working and delivery hours in order to minimize impacts during construction.

Road use or development agreements will be negotiated with the county of Forty Mile in order to minimize traffic impacts and ensure proper rehabilitation of roads in the event that heavy loads damage the road surface.

VISUAL IMPACT

Due to their height, wind turbines can be seen from a certain distance in relatively flat terrain, as may be the case for the Project Area and its surroundings. Wind turbines have to be spaced well apart from each other to allow the air flow circulate through them without turbulences, which reduces significantly visual impact.

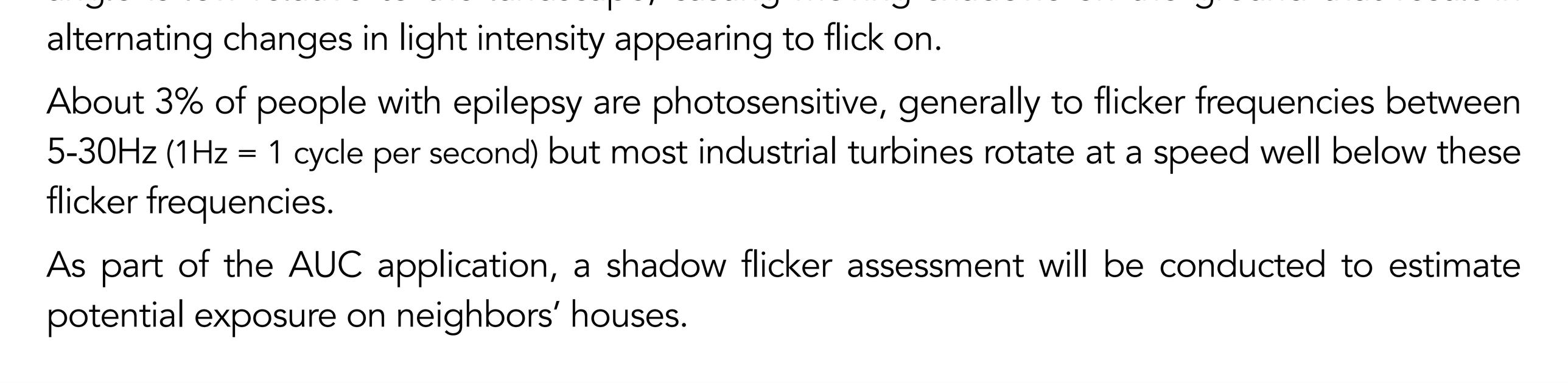
As part of the AUC application, a visual simulation will be conducted from each neighbors' house.

SHADOW FLICKER

Shadow flicker only occurs when the blades of a turbine rotate in sunny conditions and the sun angle is low relative to the landscape, casting moving shadows on the ground that result in alternating changes in light intensity appearing to flick on.

About 3% of people with epilepsy are photosensitive, generally to flicker frequencies between 5-30Hz (1Hz = 1 cycle per second) but most industrial turbines rotate at a speed well below these flicker frequencies.

As part of the AUC application, a shadow flicker assessment will be conducted to estimate potential exposure on neighbors' houses.



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POTENTIAL PERCEIVED IMPACTS

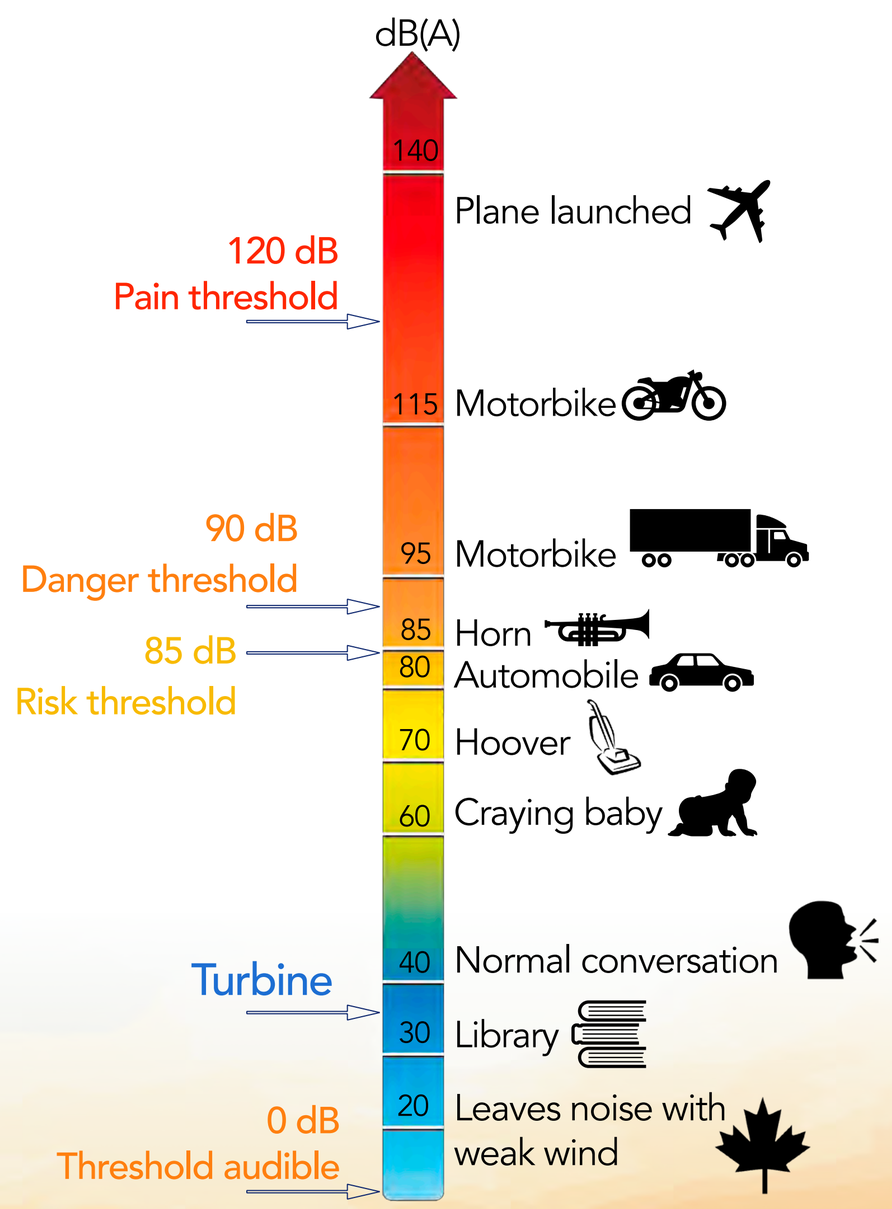
SOUND

Noise studies are conducted to ensure the project is in compliance with regulation.The noise studies comprise the following steps:

* **Step 1:** Identify points of reception – dwellings (typically houses) that are within 2km of the wind turbines.
* **Step 2:** Obtain wind turbine specifications and noise emission ratings from the manufacturer.
* **Step 3:** Using an initial wind turbine layout, predict the noise levels generated at points of reception using a noise prediction model to ensure allowable limits are not exceeded. The noise model is designed in accordance with standards set by the AUC.
* **Step 4:** Using the noise model results, revise the Project's layout as necessary to ensure that the final layout meets all applicable noise guidelines.

Noise requirements under AUC Rule 012 - Noise Control

* "The purpose of this rule is to ensure that the noise from a facility, measured cumulatively with noise from other energy-related facilities, does not exceed the permissible sound level calculated in accordance with this rule."
* "The cumulative sound level includes the assumed or measured ambient sound level, any existing and approved, but not yet constructed energy-related facilities, and the predicted sound level from the applicant's proposed facility."



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PROJECT BENEFITS

Potential Economical Benefits

- Stable source of revenues for landowners participating in the Project, through option and lease payments.
- Long-term tax revenues for the County of Forty Mile and the province.
- Potential improvement of existing infrastructures, such as private and municipal roads.
- A boost to the local economy including local services and retail businesses.
- Direct investments in the form of contracts for raw material.

Landowner farming at Enerfin's wind farm. Québec

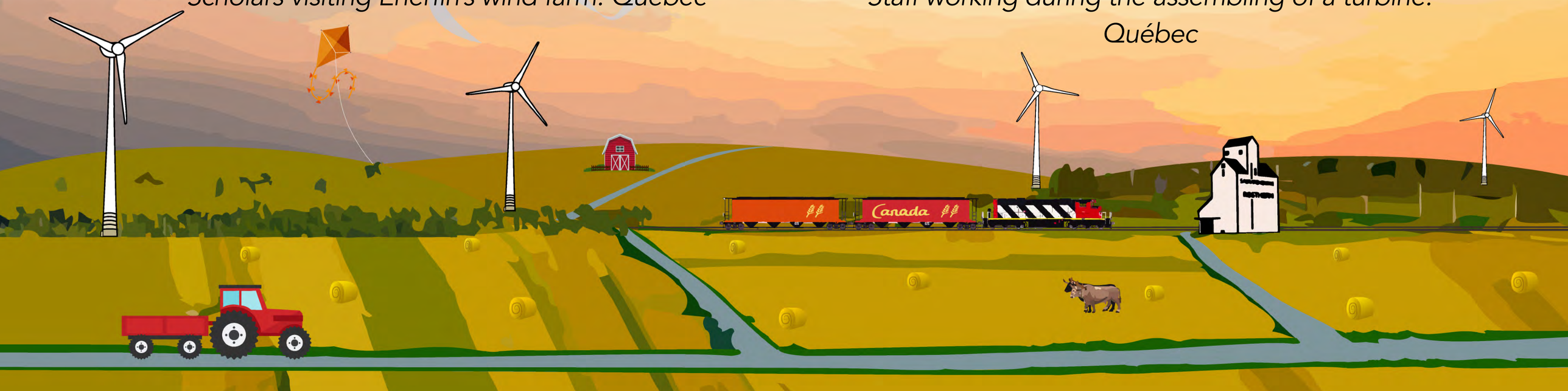
Employment Opportunities

- During the construction, large demande of direct and indirect jobs; special consideration will be given to local contractors.

- During the operation, demande for high quality local jobs:
  - 5-8 permanent full time jobs for Wind farm Operation & Maintenance will be created.
  - As well as seasonal and part time jobs.

Scholars visiting Enerfin's wind farm. Québec

Staff working during the assembling of a turbine. Québec



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KEY REGULATORY AGENCIES CONSULTED

Several Regulatory Agencies are notified and consulted about the Project. Key Agencies include:

Federal Agencies:

Provincial Agencies:

Local Municipalities:

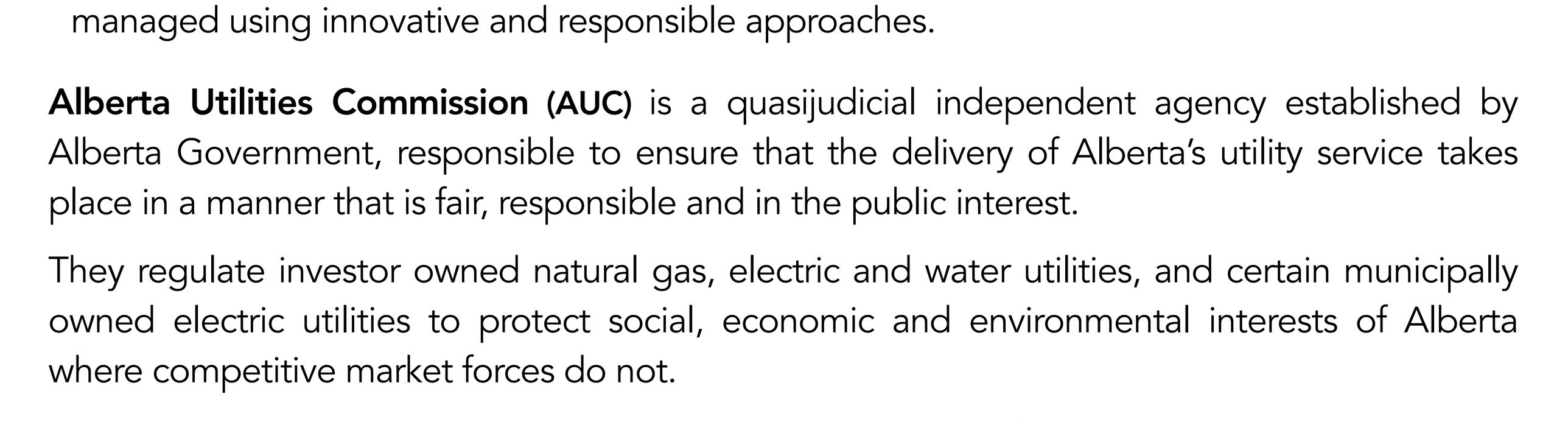
Alberta Environment and Parks (AEP) is the provincial ministry responsible for environmental policy and sustainable resource development, and has the following responsibilities:

- Work to protect and enhance Alberta's environment and ecosystems to ensure a sustainable future, making life better for Albertans.
- Work with Albertans, Indigenous communities and stakeholders to ensure the province's environmental, social and economic outcomes for the future are met.
- Engage Albertans to understand the challenges in ensuring Alberta's natural resources are managed using innovative and responsible approaches.

Alberta Utilities Commission (AUC) is a quasijudicial independent agency established by Alberta Government, responsible to ensure that the delivery of Alberta's utility service takes place in a manner that is fair, responsible and in the public interest.

They regulate investor owned natural gas, electric and water utilities, and certain municipally owned electric utilities to protect social, economic and environmental interests of Alberta where competitive market forces do not.

For more information on the AUC process please ask us for a brochure, visit www.auc.ab.ca or contact them at (780) 427-4903 (toll-free by dialing 310-000 before the number) or at consumer-relations@auc.ab.ca



OPEN HOUSE

Thanks for your attention!

We are very interested in hearing your views on the Project

Please take a few minutes to fill out our questionnaire.

Your feedback is important to identify potential issues for us to consider.

You can also contact us by:

Telephone: 403-261-6583

Samantha Brown, Manager Power,

Scott Land & Lease Ltd.

Email: sbrown@scottland.ca

www.winnifredwindproject.ca

we think of a better world