### Wind Project Company Profile





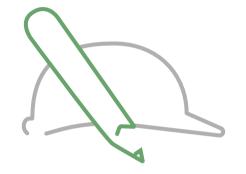
~1,000 employees worldwide

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

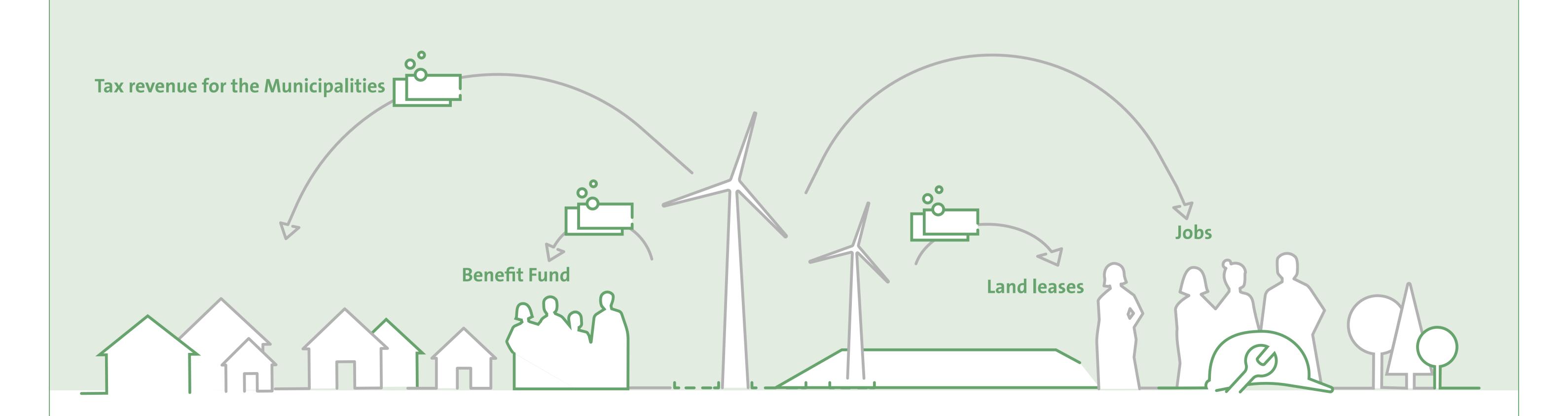


### Fox Meadows Wind Project Project Benefits



ABO commits to creating a lasting positive impact in the communities where we develop renewable projects. The Fox Meadows Wind Project will generate the following positive benefits for the surrounding community:

- Estimated tax revenue in the tens of millions for the Municipalities of Wainwright and Provost
- Estimated \$70 million in contracts to local Alberta goods and service providers, with preference given to regional entities
- To to 100 short-term and long-term jobs/contracts in site clearing, road building, electrical, construction and concrete work, and ongoing maintenance
- Revenue to landowners from leases signed with the developer
- Hundreds of thousands of dollars for local community initiatives



### Fox Meadows Wind Project Consultation



- The consultation process is guided by the Alberta Utilities Commission (AUC), Rule 007.
- ABO commits to forthright and meaningful communication that is timely and respectful.
- We aim to carry forth discussions with interested parties and commit to the thoughtful consideration of feedback into our project planning in order to mitigate and avoid impact.
- We will discuss options, alternatives and mitigation measures related to presented concerns where feasible.
- We will provide responses to questions and concerns in a manner that is clear and easily understood by the recipient.
- If you have questions or comments about the Fox Meadows Wind Project, please contact

#### David Berrade,

by email at dave.berrade@abo-wind.com or phone at: 587-576-5339

For more information about the Fox Meadows Wind Project please visit: www.foxmeadowswind.com





#### **Environmental Survey Results**

#### Wildlife survey results

- Red-tailed hawk and great horned owl nests
- Canadian toad, boreal chorus frogs, wood frogs
- Songbird species observed are common to the area
- Concentrated in treed, wetland, pasture areas
- High number of migrating birds
- High number of bats

#### Surface water and vegetation field work results

- Numerous wetlands and watercourses throughout project area
- Native grassland within 100 m of permanent infrastructure identified



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

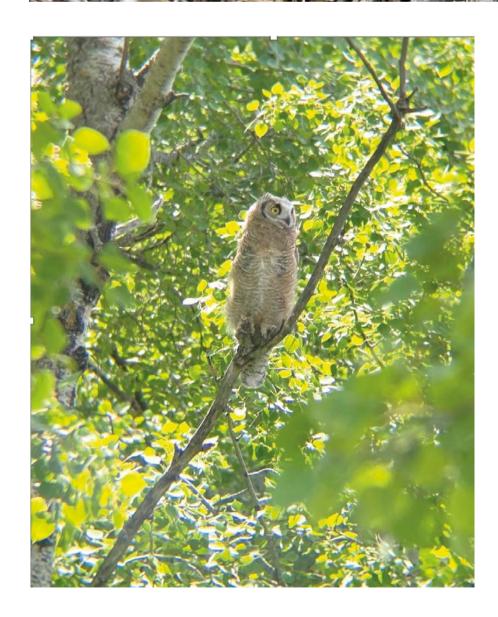
Based on the field results ABO undertook additional infrastructure siting activities to:

- Avoid wetlands and wildlife features, where feasible
- Avoid higher quality wildlife habitat (e.g., native grassland), where feasible

#### Next steps

- ABO will develop mitigation measures as part of the Environmental Protection Plan (EPP). These may include:
- Erosion and sediment control plans
- Construction during dry/frozen ground conditions
- The Project will be monitored for three years after construction for environmental impacts
- Submission of the Renewable Energy Submission
  Report to Alberta Environment and Protected Areas
  (AEPA)
- Preparation of an Environmental Evaluation (EE)
  that includes a summary of field work results will be
  included as part of the AUC Facility Application.
- A Conservation and Reclamation (C&R) Plan will be developed that detail plans for reclamation from construction stages to end of project life.





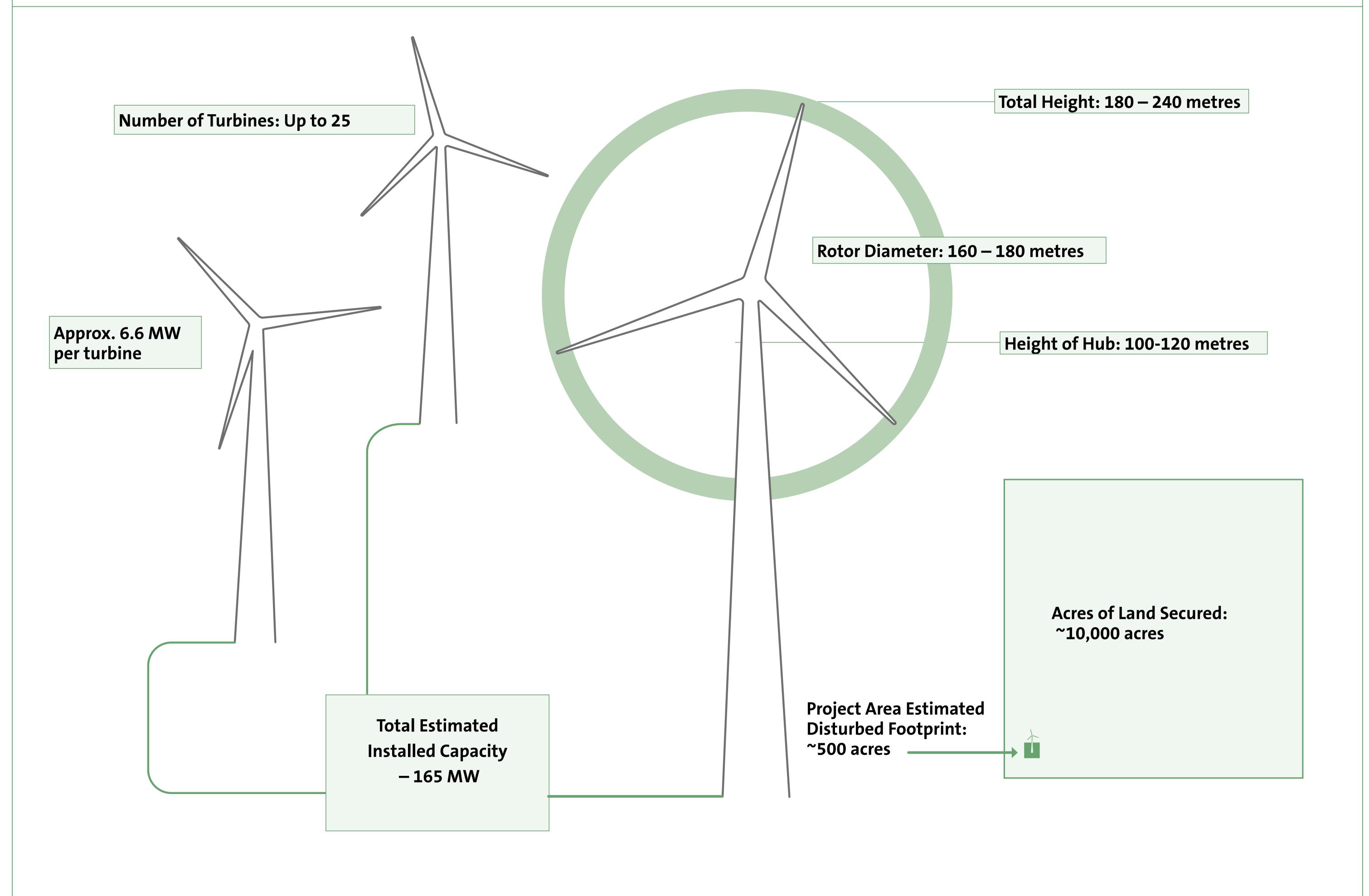




# Fox Meadows Wind Project Project Overview

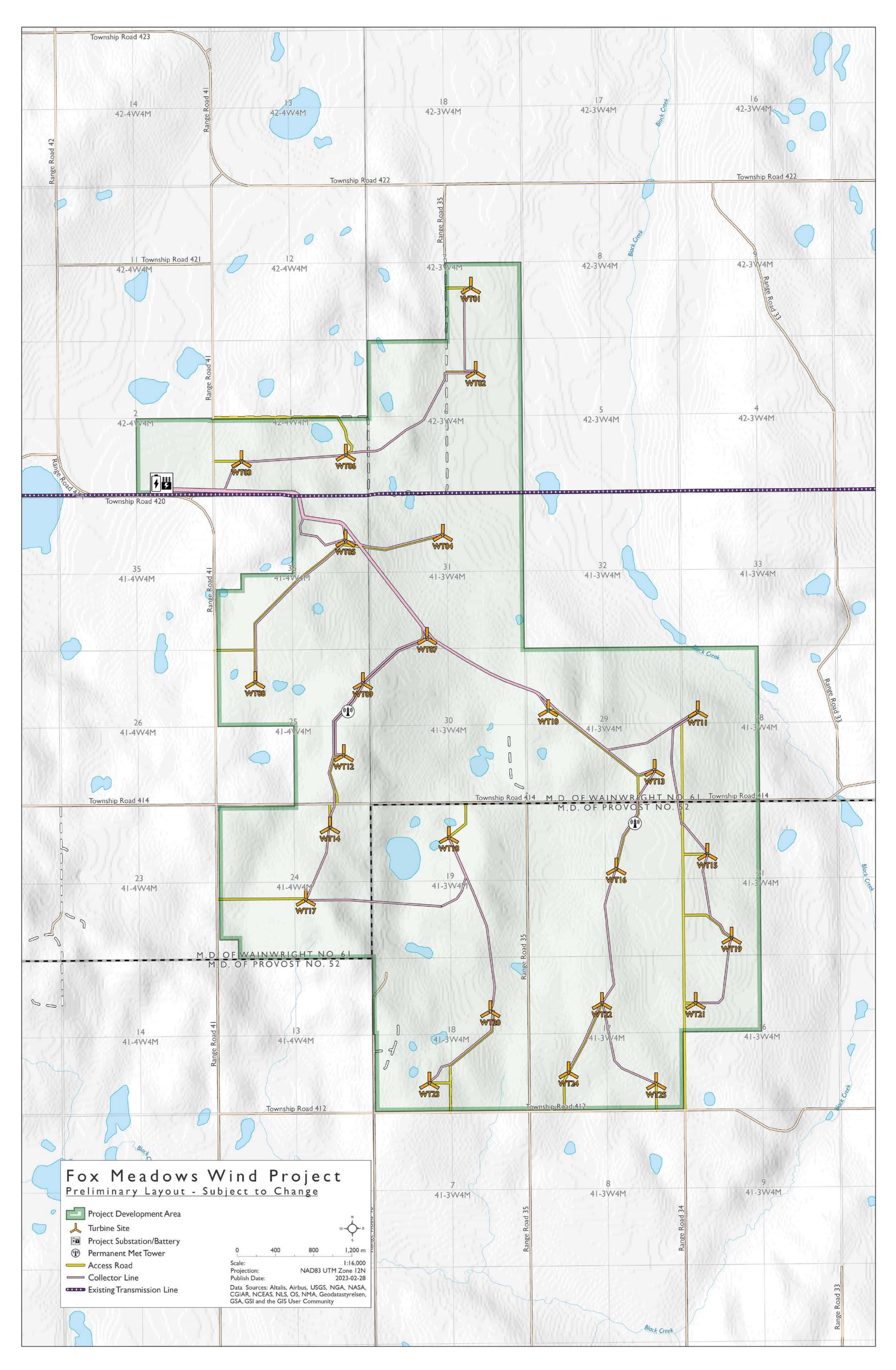
www.foxmeadowswind.com





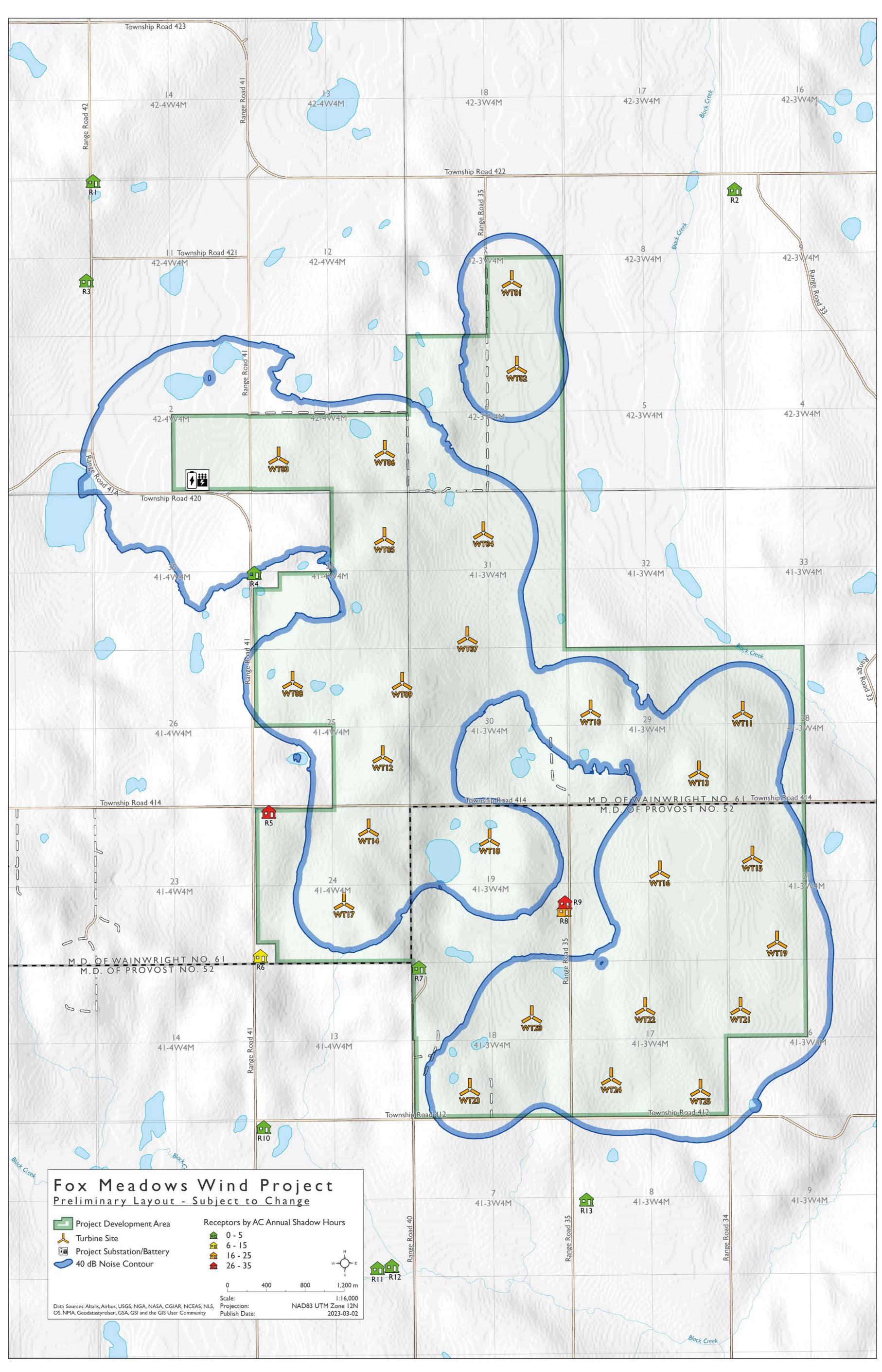
### Fox Meadows Wind Project Map





# Fox Meadows Wind Project Noise and Shadow Flicker





# Fox Meadows Wind Project Project Timeline



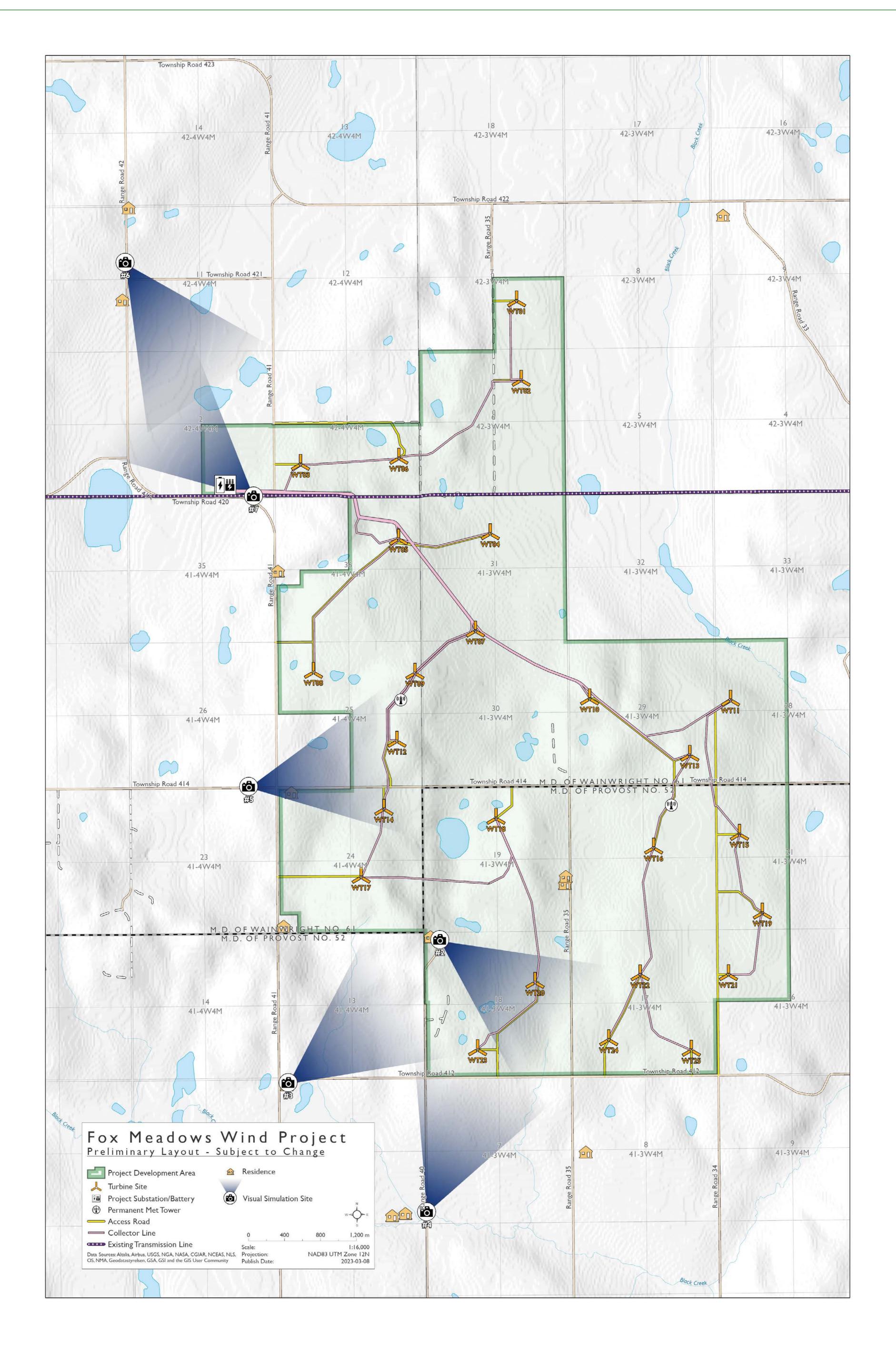
Activity	Timeline
Public Notification and Project Information Package 1	July 2022
First Open House	August 10, 2022
Environmental Field Studies	Spring 2022 to Fall 2022
Project Information Package 2	December 2022
Submission of Renewable Energy Project Submission Report to Alberta Environment and Parks	Q1 2023
Second Open House	March 21, 2023
Project Information Package 3	May 2023
AUC Application Submission	July 2023
AUC Review and Approval	Q3 2024
Start of Construction	Oct 2024 (assuming two seasons for construction)
Commencement of Operation	Q4 2026

<sup>\*</sup>Project timeline is preliminary and subject to change.



### Fox Meadows Wind Project Visualizations Map





# Fox Meadows Wind Project Visualizations





35mm 1.5 AGL Viewpoint 02



Viewpoint 03

# Fox Meadows Wind Project Visualizations





Viewpoint 04



1,470m (Not in view) Printed image size: 820 x 260mm 1,518m (In view)

Viewpoint 05

# Fox Meadows Wind Project Visualizations





**View Direction:** 841 x 297mm Viewpoint 06



Nearest BESS:

841 x 297mm

19/10/2022 15:49

Viewpoint 07

### **Battery Storage Concept**



#### What does battery storage do?

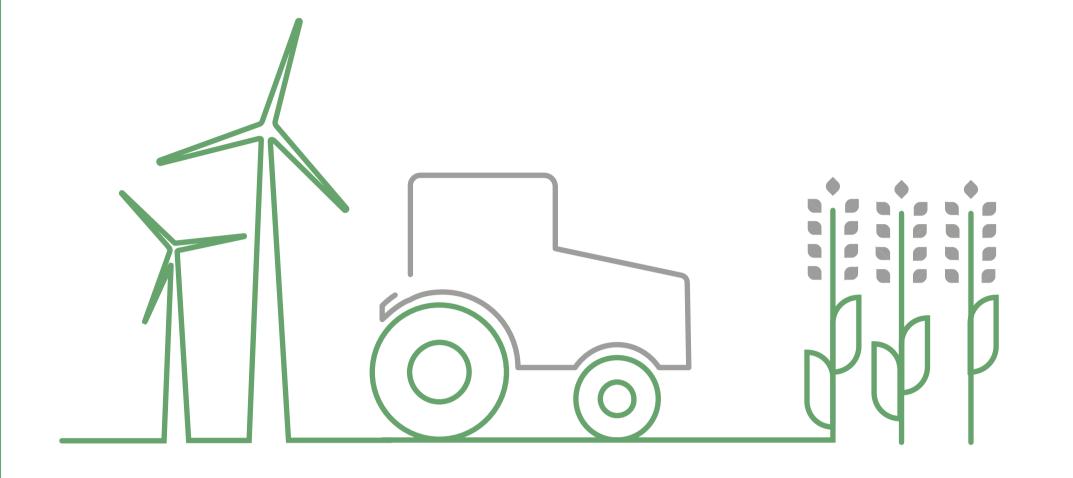
Battery Storage (one of several types of energy storage) allows electricity to be stored for use at a later point in time. Battery Storage systems will charge a set of batteries using electricity and discharge that same electricity at another point in time, when desired. This is similar to the use of a cellphone. We typically charge a cellphone battery with electricity and discharge that same electricity as we use the cellphone daily, when desired.

# Why do renewable energy projects have battery storage?

Renewable energy projects typically use battery storage systems to allow for the charging of batteries when the wind is blowing, or the sun is shining and to allow for the discharging of the batteries when Albertans need it. Battery storage systems make our electrical grid more flexible, reliable, and can help to avoid costly electrical grid upgrades.









A wind facility occupies a small percentage of the land throughout its life. Farming and ranching will be ongoing throughout the entire operational life of the facility. At many wind facilities landowners can use access roads and will farm and ranch right up to the equipment (turbines, access roads, substation). Once the project has been decommissioned and the land reclaimed, the small percentage of land that was occupied will be available for farming or ranching. Effective soil management practices during construction and facility access guidelines during operations ensure that land used for a facility is suitable for farming and ranching after operations come to an end.



#### **Reclamation Certificate**

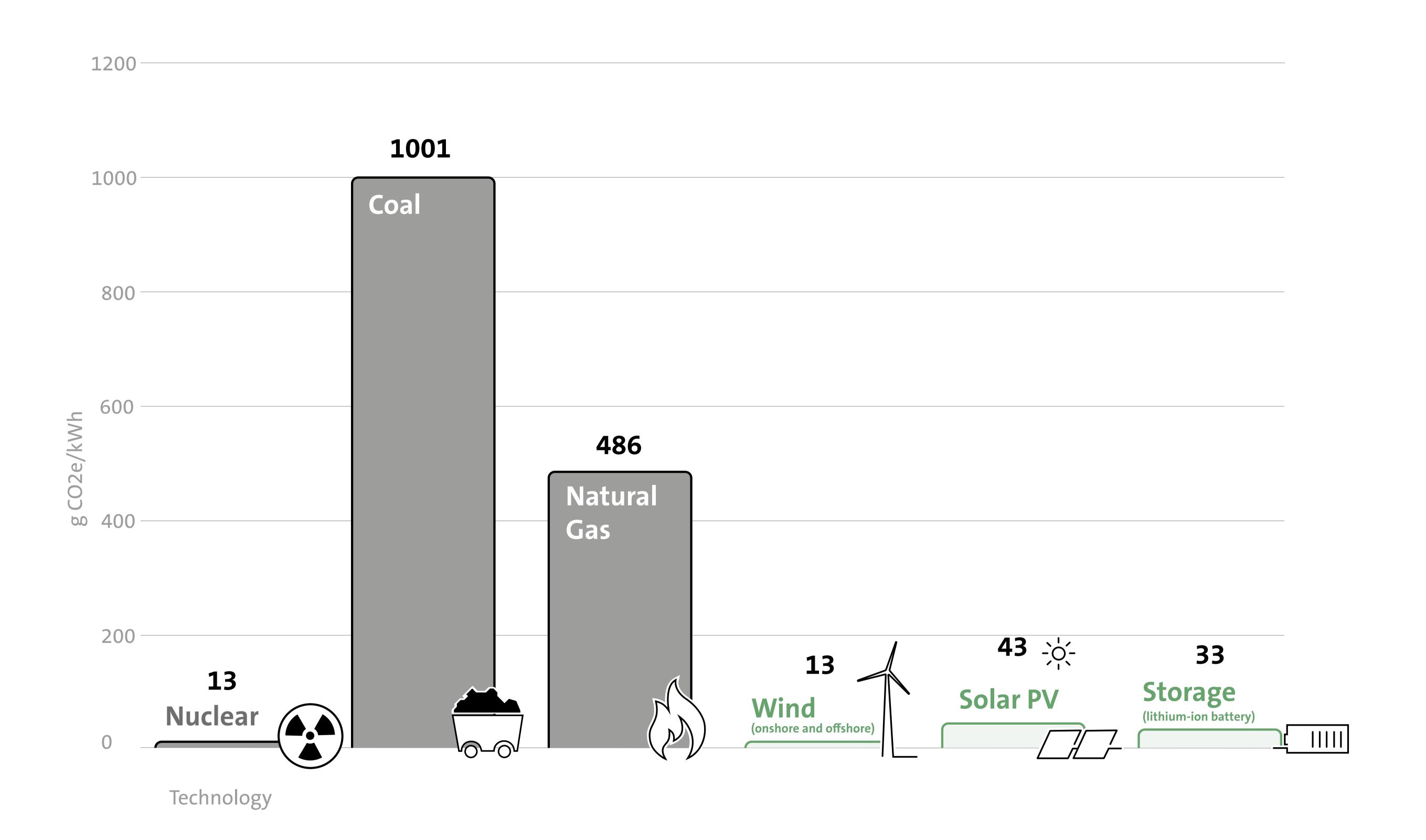
Provincial regulations have stringent requirements to obtain a Reclamation Certificate. A proponent would need to demonstrate the decommissioned site meets these criteria to the governing body before a certificate would be issued.

## 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

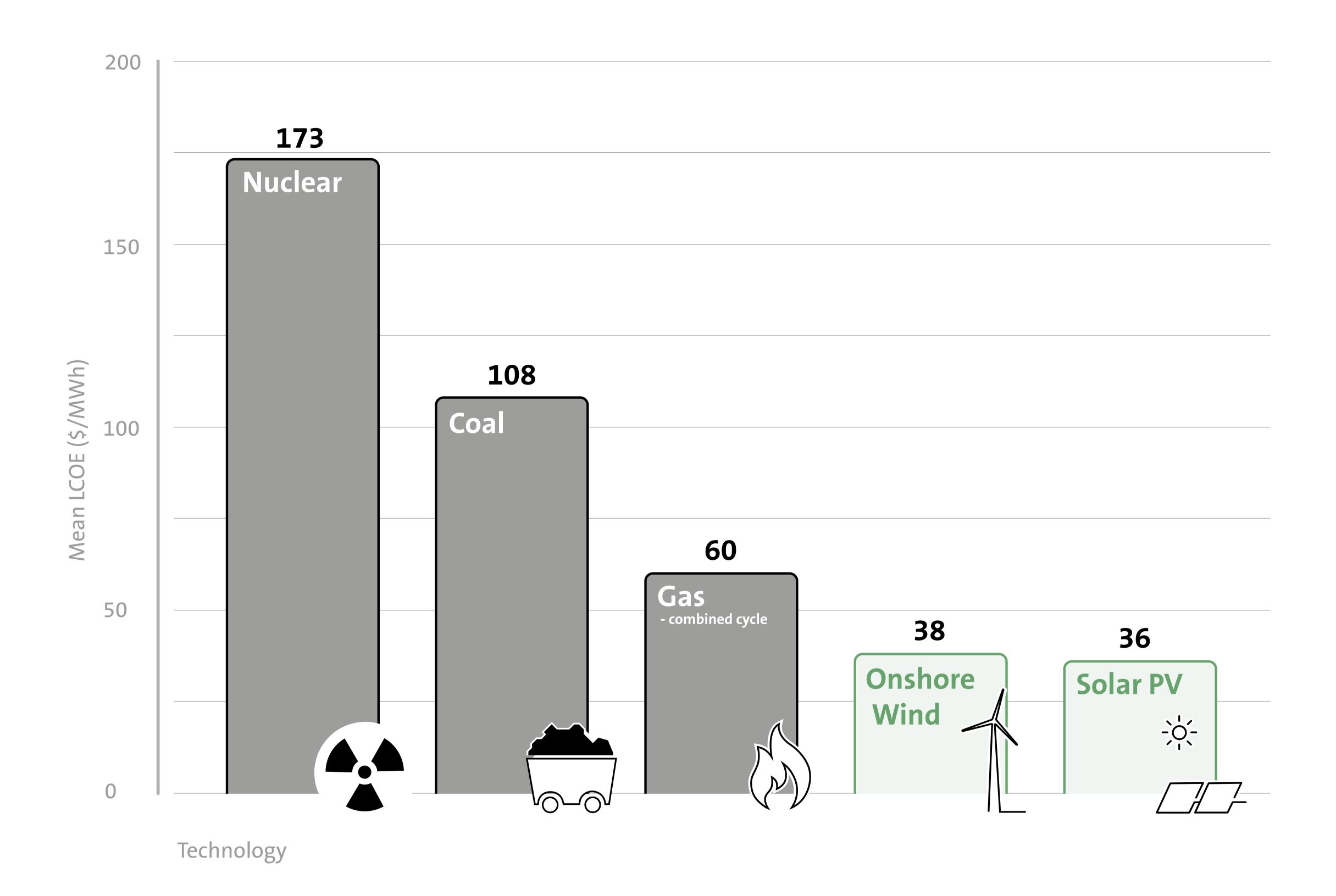


### What does energy cost?



The chart shows the Levelized Cost of Energy Comparison (LCOE) in \$/MWh of different energy sources.

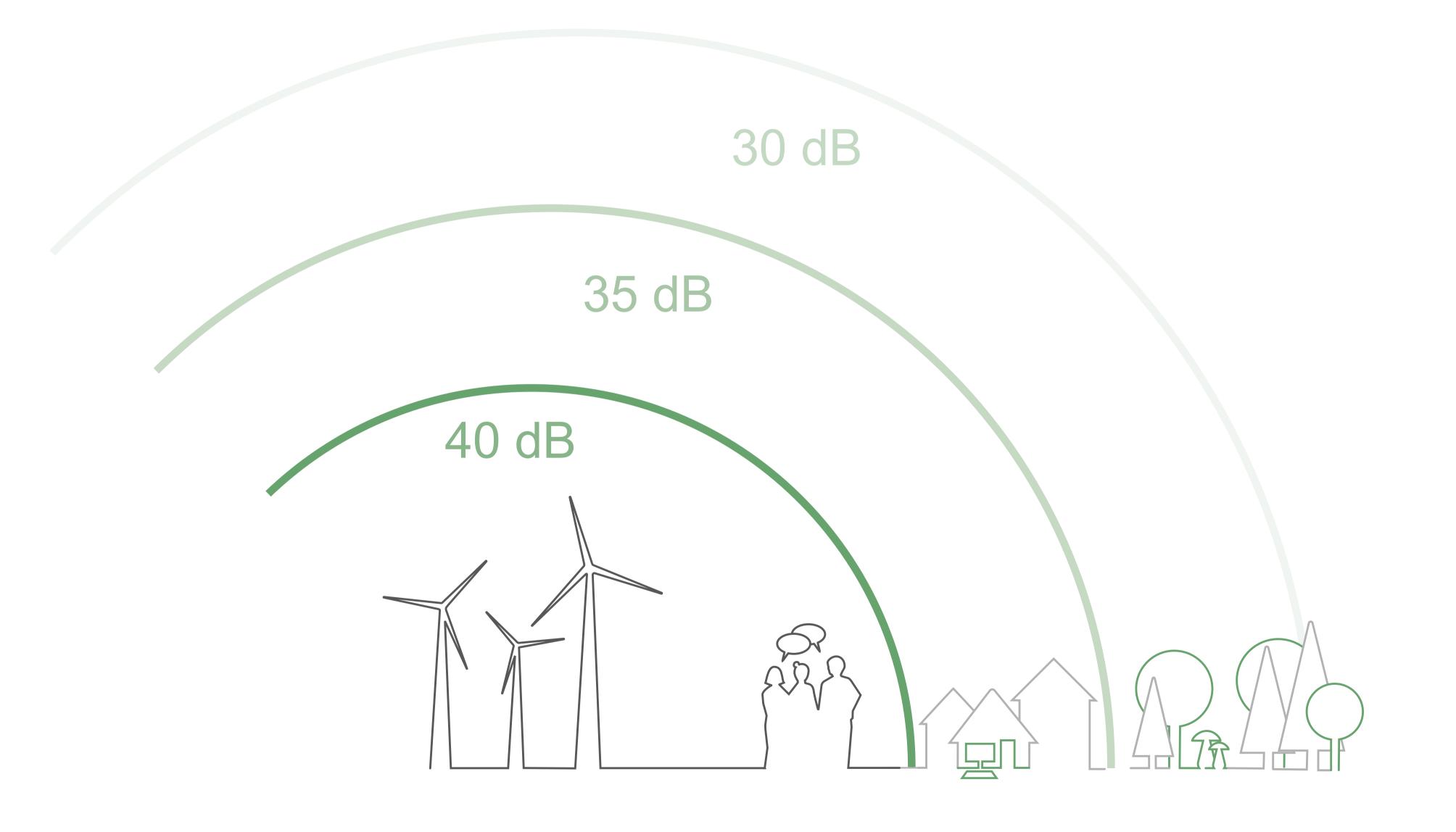
Source: Lazard's Levelized Cost of Energy Analysis — Version 15.0, October 2021





The Project will be designed in accordance with the Alberta Utilities Commission (AUC) Rules 012 (Noise Control), which is intended to "ensure noise from a facility, measured cumulatively with noise from other energy-related facilities does not exceed permissible sound level calculated in accordance with this rule".

This rule does not allow sound pressure levels from energy-related sources, measured in dBA, to exceed the permissible sound level applicable at each receptor within 1.5km from the sound-emitting Project infrastructure. A noise impact assessment will be carried out by a third party consultant and once completed, will be included as part of our application to the AUC. Moreover, studies will be done that adheres to any applicable municipal bylaws as part of the Development Permit Application.



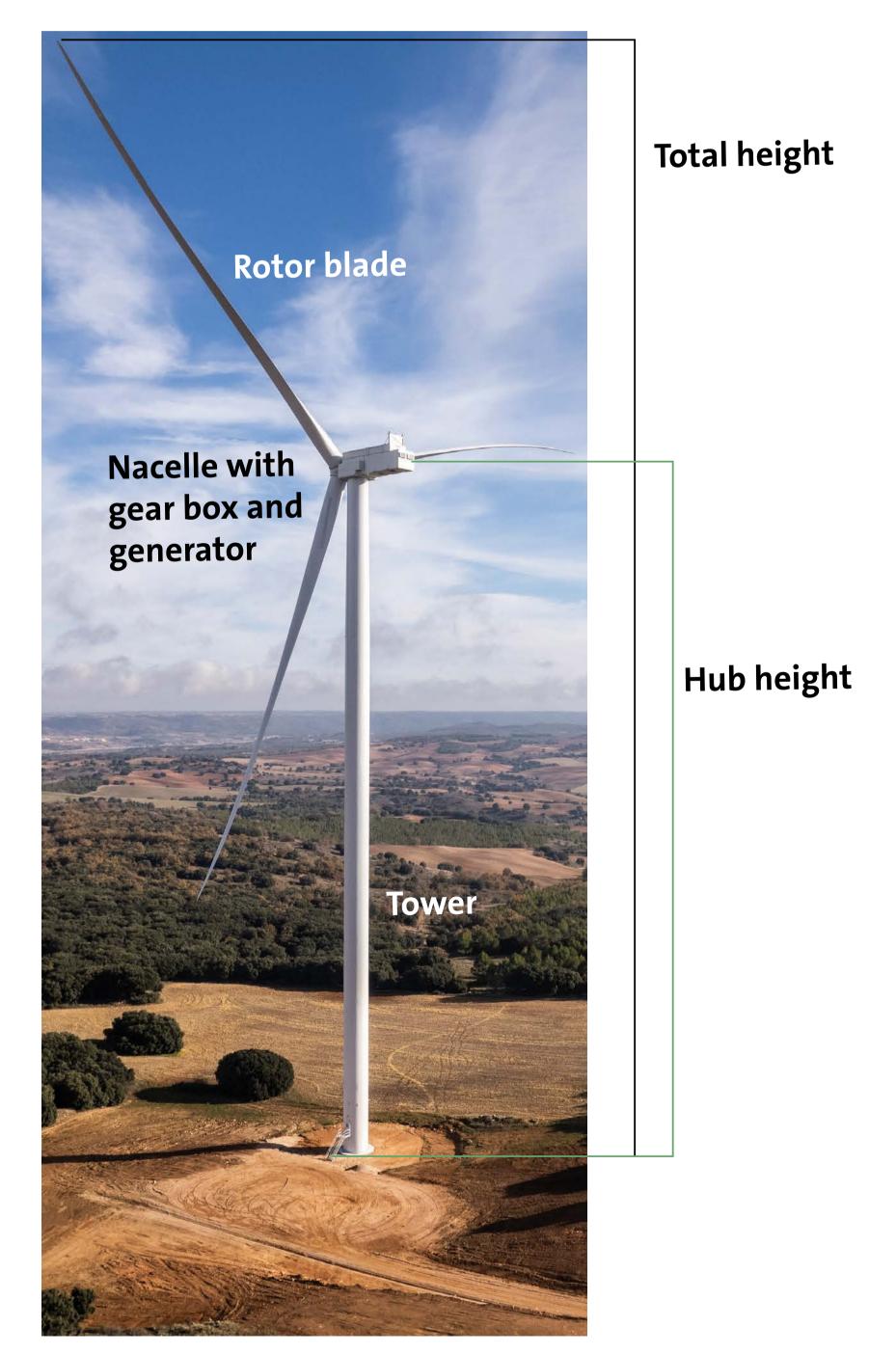
#### Examples of common sound levels (dBA)

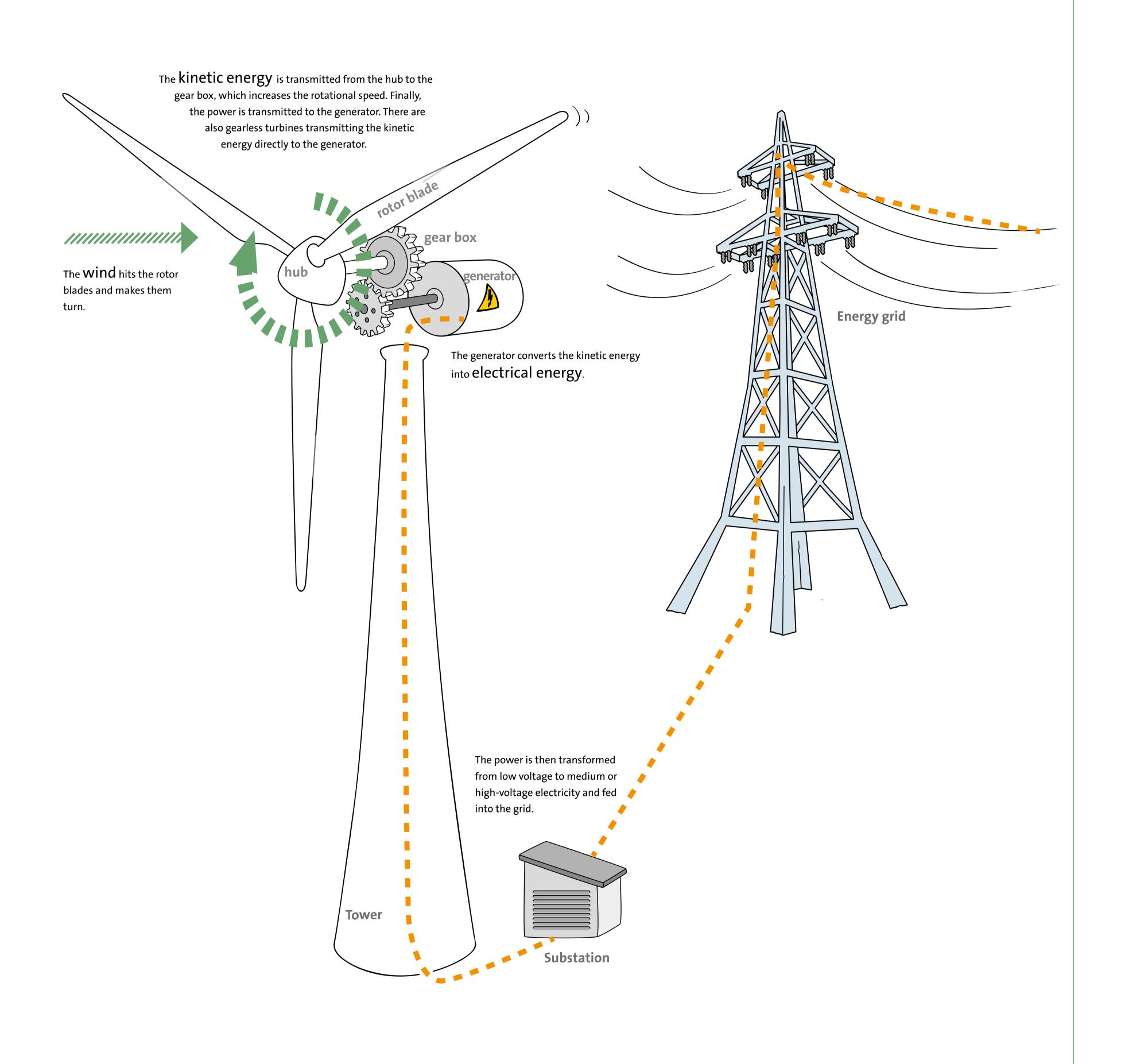
140	Threshold of pain
130	Jet take off
120	Rock concert
110	Jackhammer
100	Power saw
90	Street traffic
80	Doorbell
70	Office
60	Normal conversation
50	Quiet urban neighborhood, daytime
40	Library
30	Soft whisper
20	Ticking of a wrist watch
10	Rustling leaves



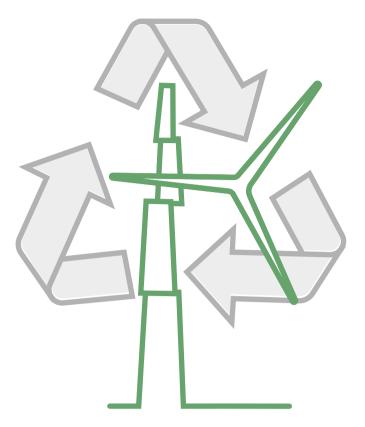
### **Wind Turbine Components**

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.





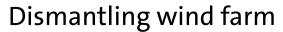




### What will be recycled and who will pay?

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.







Deconstruction of foundation

#### **Shadow Flicker**



Shadow flicker occurs when the spinning rotor is located between the sun and a building, and the turbine blades alternatively block and allow the sunlight to shine through (taken from the original poster board – incl diagram as well). 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 will be conducted to rely on findings of potential shadow flicker at nearby receptors. Results from the study will be shared with local stakeholders once completed. Moreover, the assessment will be included in the application to the AUC.

#### **Expected Case Modeling assumptions:**

- Long term climatic data will be used to model expected sun and shade dates for shadow flicker to occur
- Wind data will be also used to estimate times when there would not be enough wind to turn the turbines or the wind is too high for the turbines to operate, and thus no flickering would occur
- Obstacles such as trees or walls surrounding specific receptors will be included in the model further reducing the amount of shadow flicker observed

