



FALL 2021

## PROJECT UPDATES

The project team has been busy behind the scenes preparing and advancing the project with environmental studies, and field work since spring 2018. Since then, the project team:

- Completed seasonal environmental studies to ensure all studies are up to date;
- Continued discussions with various turbine manufacturers and met with interested

commercial off-takers to discuss economic opportunities of the project;

- Completed installation of more meteorological towers to gather more wind data, analyze the wind resource, and optimize the project layout from Q4 2019; and
- Conducted geotechnical investigations at key locations and tested a number of local gravel pits for quality.



## VIRTUAL OPEN HOUSE

We have created a virtual open house website where you can learn more about the project, such as:

- Updates to the proposed project
- The type of wind turbine technology under consideration
- The permitting and engagement processes, including timelines
- Benefits to the local community
- Construction and operations
- And more

You can also ask questions and share your feedback with the project team. Access the virtual open house anytime here: [https://bit.ly/Bull\\_Trail\\_Openhouse](https://bit.ly/Bull_Trail_Openhouse)

We look forward to connecting with you!



## COVID-19 UPDATE

We are adhering to all public health official guidelines and will continue to monitor the COVID-19 situation as it evolves. Your safety is our priority, and we are committed to ongoing open communication and engagement that will keep you and your family safe. We remain available for any comments and questions through phone, email and/or video conferencing.

## Anticipated project Timeline

**2018**

Commenced public consultation and environmental fieldwork in Q2 2018; first public mail-out to stakeholders; first open house



**Q1 2021**

AEP REPS submission



**Q4 2021**

Submission to the AUC



**Q3 2023**

Anticipated commercial operations



**Q4 2019**

Completion of environmental field studies



**Q3 2021**

AEP sign-off received  
Second public project specific information package to stakeholders  
Second open house (virtual)



**Q3 2022**

Anticipated AUC Approval  
Anticipated start of construction



*Schedule is subject to change.*



## ABOUT THE PROJECT

The proposed Bull Trail Wind Power Project is a renewable energy project with the capacity to generate up to 270-megawatts (MW) of electricity and will consist of up to 52 turbines. The project is owned by Bull Trail Renewable Energy Centre Limited Partnership, a subsidiary of EDF Renewables Canada Inc. ("EDF Renewables"). Bull Trail Renewable Energy Centre Limited Partnership will develop, construct and operate the project, which is located approximately 3 km south of the Hamlet of Irvine in Cypress County, Alberta. In Spring

2018, EDF Renewables distributed a Project-Specific Information Package (PSIP) and hosted an open house to introduce the project to the community. Since then, we have continued to engage with landowners and stakeholders to gather feedback about the project.

We have completed environmental work and submitted a Renewable Energy Project Submission (REPS) to Alberta Environment and Parks (AEP) in Q1 2021 and received sign-off in August 2021. We will be providing AEP a final project update in Q4 2021.

We will be submitting a Power Plant application to the Alberta Utilities Commission (AUC) in Q4 2021 under AUC Rule 007. This newsletter highlights project activities undertaken since 2018, including field studies, updated project timelines and the next steps.

We will be submitting a development permit application to the Cypress County in 2022. The project remains in compliance with all Cypress County bylaws.



## INDIGENOUS ENGAGEMENT

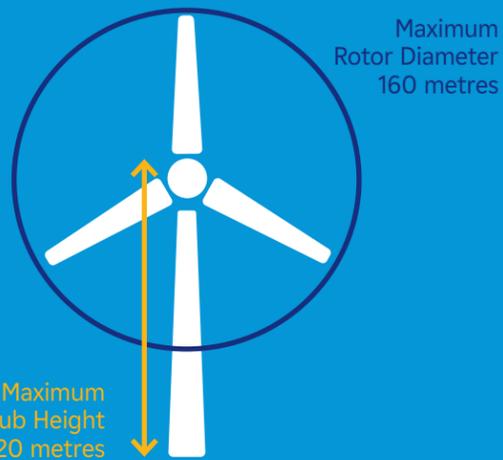
We believe in protecting natural resources and developing clean, renewable energy. Harmonious collaboration with Indigenous communities creates opportunities for a sustainable and innovative future. We are committed to sustainable stewardship of the unique traditions and culture of Indigenous communities. As part of this commitment, we are engaging with nearby communities, as appropriate, to better understand their traditions and priorities.



## PROJECT DETAILS

### Wind Turbines

The project will consist of 52 turbines with a potential size of between 3.0 MW and 5.2 MW per turbine. We have not chosen a turbine model for the project but are exploring options with a maximum hub height of approximately 120 meters (m) and a maximum rotor diameter of 160 m.



collector system will be buried underground, wherever practical. The project collector substation will be located in the middle of the project site (NE 21-10-2-W4M).

### Interconnection

Power generated by the project turbines will be transmitted through the electrical collector system to the substation, which is located within the project area. The substation will ultimately be connected to the provincial grid via a transmission line interconnection which will be constructed by AltaLink Management Ltd. ("AltaLink"). AltaLink will conduct a participant involvement program and file a separate application with the AUC to obtain the requisite authorizations to construct and operate the transmission line interconnection facilities.

### Access Roads and Other Facilities

During development and operations of the project, existing municipal roads will be used to access the project site, wherever practical. We will be working with Cypress County to develop a road-use agreement to ensure safety and compliance of construction processes. During construction, a temporary laydown area to store equipment or allow access to the project site may be required. For project operation, an Operation and Maintenance (O&M) building will be constructed on or near the project.

### Meteorological Towers

Five (5) temporary meteorological towers have already been installed at the project site to measure wind speed, wind direction, air temperature, and barometric pressure. Up to seven (7) permanent meteorological towers will be installed for monitoring during the operational phase.

### Collector System and Substation

Each turbine will be connected to the project substation by a medium voltage (34.5 kV) collector system. The

EDF Renewables believes that every renewable energy project is the beginning of a lasting partnership with the local community. We strive to be a good neighbour and work closely with community members to design our project in a way that is respectful to the needs, heritage and future of Cypress County.



## COMMUNITY INVOLVEMENT AND BENEFITS

EDF Renewables values the long-term benefits of working with the local community. We are involved in every phase of the project, ensuring quality of our installations and guaranteeing a high level of reliability and performance. During the construction phase of the project, the local community will benefit from the following but not limited to:

- Employment opportunities for the construction and operations of the project;
- Contract opportunities for local businesses;
- Local investments into hospitality and construction services during the development, construction, and operations phases of the project;
- Tax revenues throughout the life of the project;
- Reduction in air pollution.





## ENVIRONMENTAL AND TECHNICAL STUDIES UPDATE

EDF Renewables has completed desktop and environmental studies on the Bull Trail Wind site. Wildlife, vegetation and wetlands field work for the project was completed in 2018 and 2019. Additional studies will focus on noise and historical resources. The AEP REPS was submitted in January 2021 and sign-off was received in August 2021.

We will continue to complete the required field work to maintain the survey status as complete. Throughout the development of the project, we will work closely with AEP to ensure environmental compliance of the project site and address mitigation measures. If required, additional heritage resources work may be completed.

**Noise** We completed a third-party Noise Impact Assessment which follows AUC Rule 012: Noise Control, and includes cumulative sound emissions from nearby facilities, including oil and gas facilities. The results are outlined in the included map labeled: Project Layout, Noise, and Shadow Flicker Map. The project remains in compliance with AUC Rule 012 with the updated layout and proposed turbine technology.

**Shadow Flicker** The results of the shadow flicker analysis can be found in the included map labeled: Project Layout, Noise, and Shadow Flicker Map. This considers the probability of cloud cover, but it does not consider the orientation of the residences or the window location. Additional details available upon request.

**Visual Simulations** EDF Renewables conducted visual simulations which illustrate what views might look like if the project is approved. These representative simulations include turbine height, width, and overall size.



## EDF RENEWABLES

EDF Renewables North America is a market leading independent power producer and service provider with 35 years of expertise in renewable energy. The Company delivers grid-scale power: wind (onshore and offshore), solar photovoltaic, and storage projects; distribution-scale power: solar and storage; and asset optimization: technical, operational, and commercial expertise to maximize performance of generating projects. The Company's PowerFlex subsidiary offers a full suite of onsite energy solutions: solar, storage, EV charging, energy management systems, and microgrids.

EDF Renewables' North American portfolio consists of 20 GW of developed projects and 13 GW under service contracts. EDF Renewables North America is a subsidiary of EDF Renouvelables, the dedicated renewable energy affiliate of the EDF Group.



## NEXT STEPS

As the project advances through regulatory and permitting processes, we remain committed to ongoing open communication and engagement with stakeholders. The project team will continue to engage with community members, local government officials and local businesses to ensure the project is constructed and operated in a socially, environmentally and economically sustainable manner.

We truly appreciate the feedback we have received so far, and we encourage you to continue to provide us with comments and concerns. We will provide a comprehensive summary of stakeholder feedback as part of our application to the AUC, which we anticipate submitting in Q4 2021.

# 2,602+ MW

Put into Service,  
Under Construction  
or In Development  
in Canada

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# VISUAL SIMULATIONS



## BULL TRAIL WIND FARM

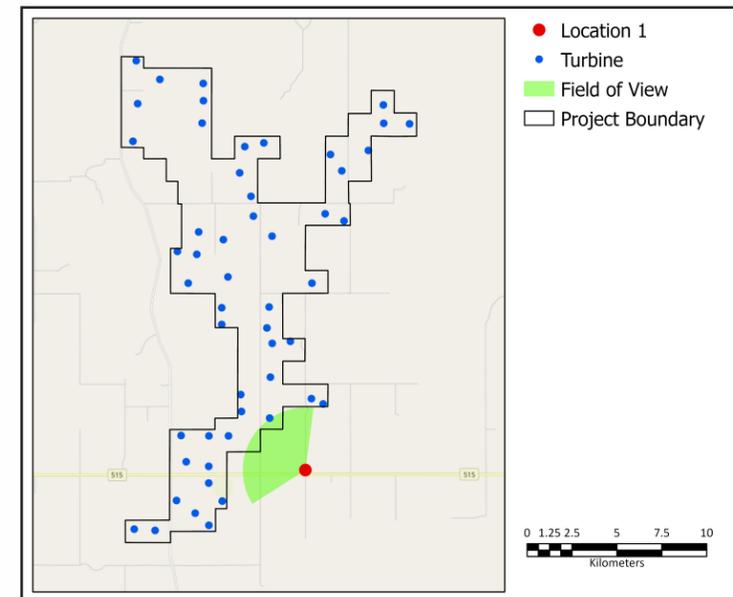
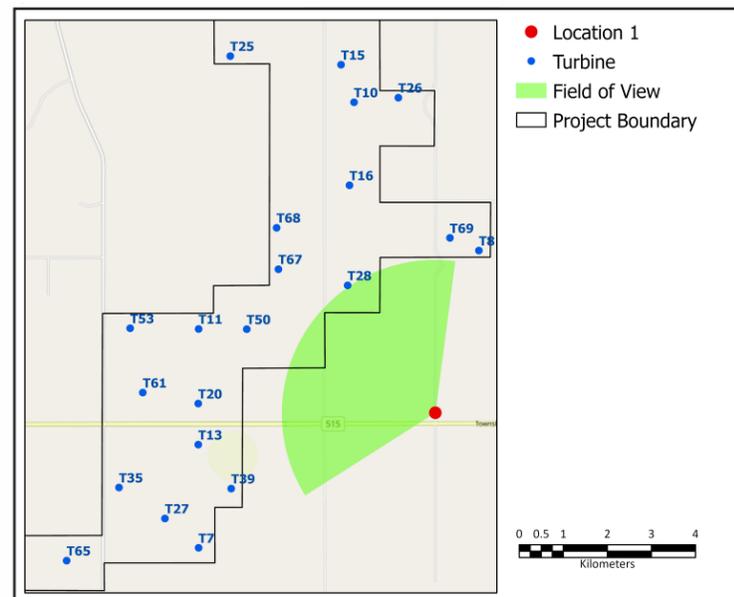
### Visual Simulation: Location 1

49.7787507, -110.185577

West-northwest view

Notes: Photo and turbine locations and perspective are approximate and based on photos and turbine information provided.

The simulation employs a turbine with 160 meter rotor diameter and 120 meter hub height.



Prepared by: ArcVera Renewables

Author: Matthew Gagne

Date: 9/20/2021

Review: Bill Colgrove

Bull Trail Visual Simulation - Location 1

v3.pdf Version: 3



## BULL TRAIL WIND FARM

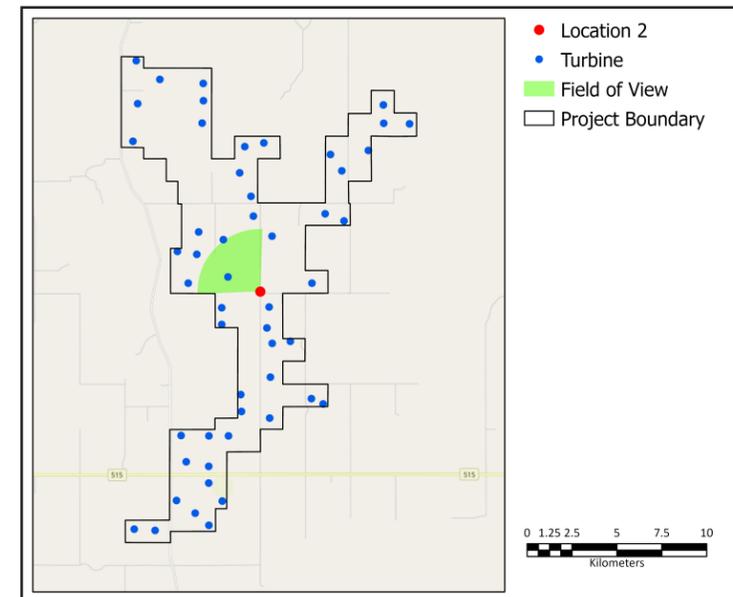
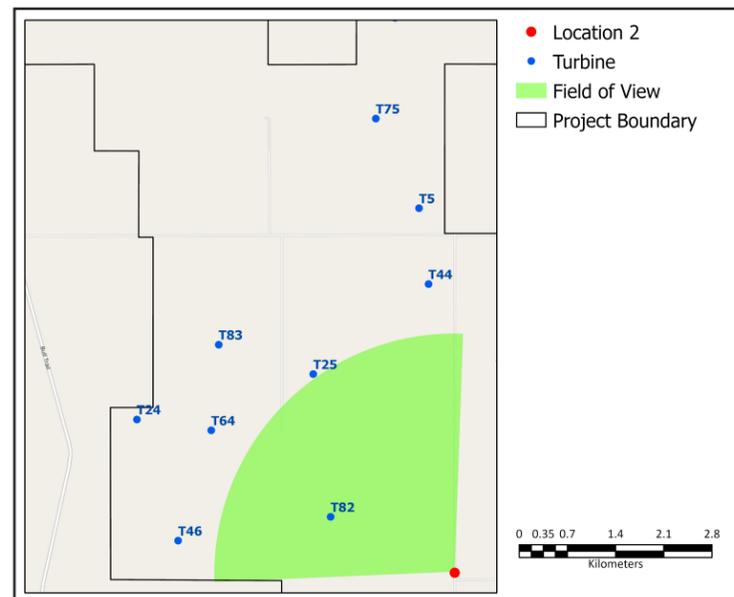
### Visual Simulation: Location 2

49.844982, -110.208161

Northwest view

Notes: Photo and turbine locations and perspective are approximate and based on photos and turbine information provided.

The simulation employs a turbine with 160 meter rotor diameter and 120 meter hub height.



Prepared by: ArcVera Renewables  
 Author: Matthew Gagne  
 Date: 9/19/2021  
 Review: Bill Colgrove

Bull Trail Visual Simulation - Location 2  
 v2.pdf Version: 2



**BEFORE**



**AFTER**

## BULL TRAIL WIND FARM

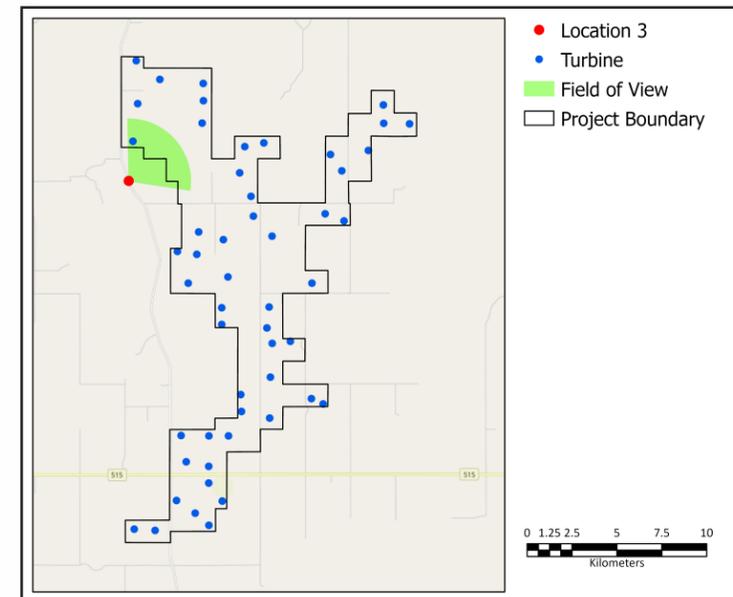
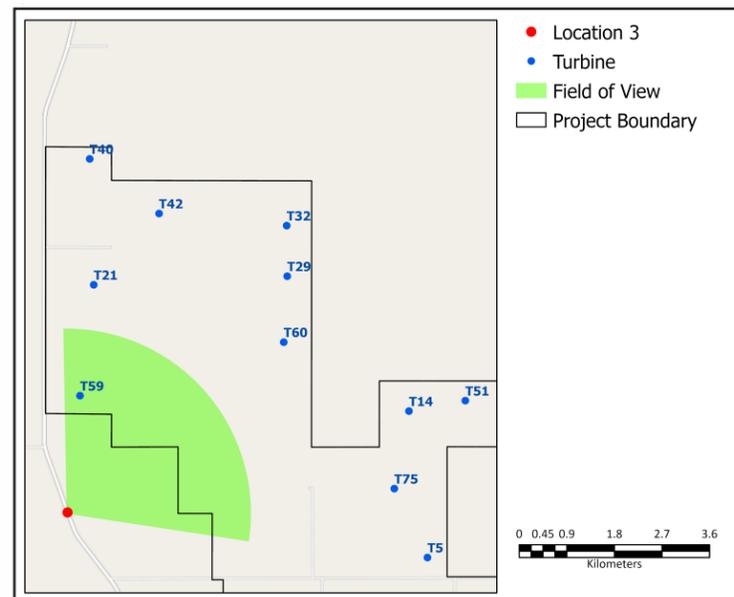
### Visual Simulation: Location 3

49.880534, -110.273956

Northeast view

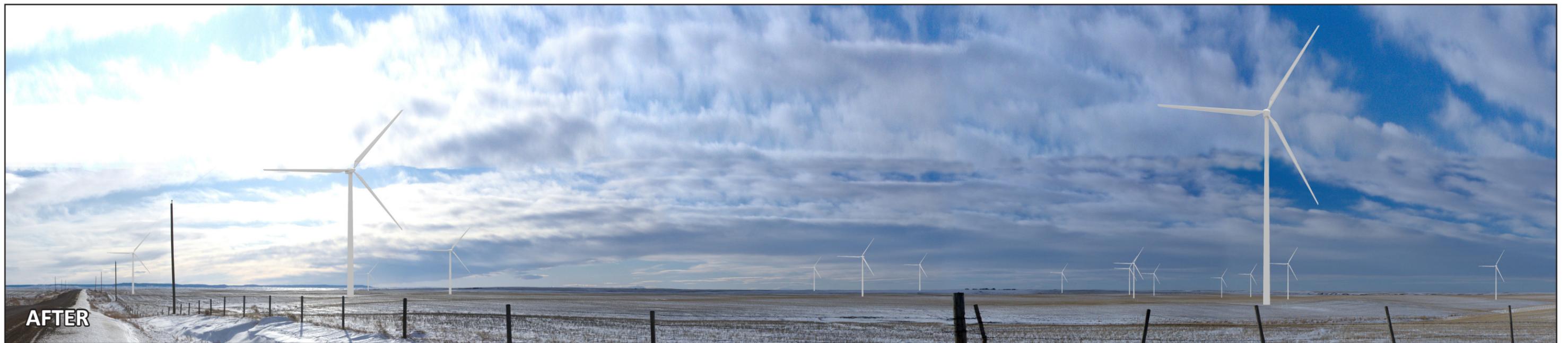
Notes: Photo and turbine locations and perspective are approximate and based on photos and turbine information provided.

The simulation employs a turbine with 160 meter rotor diameter and 120 meter hub height.



Prepared by: ArcVera Renewables  
 Author: Matthew Gagne  
 Date: 9/20/2021  
 Review: Bill Colgrove

Bull Trail Visual Simulation - Location 3  
 v2.pdf Version: 2



## BULL TRAIL WIND FARM

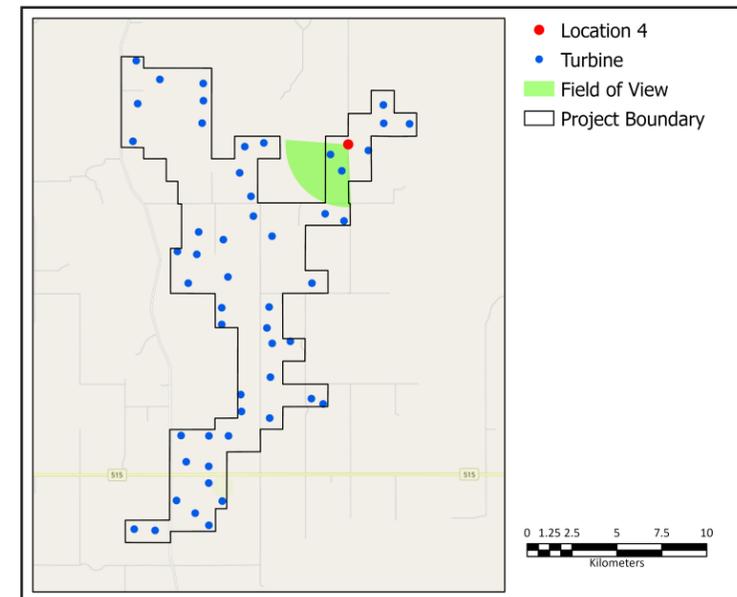
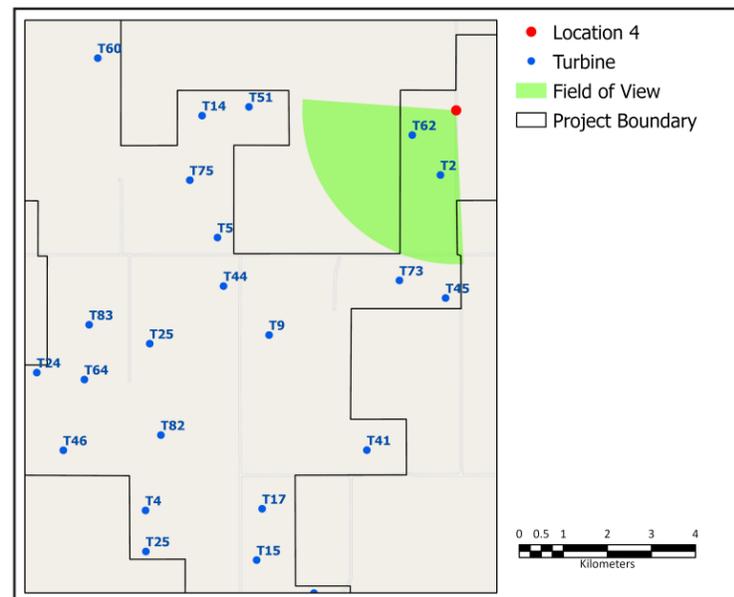
### Visual Simulation: Location 4

49.892295, -110.164132

Southwest view

Notes: Photo and turbine locations and perspective are approximate and based on photos and turbine information provided. Sky above the "before" image was created artificially due to the height of the turbines in the image.

The simulation employs a turbine with 160 meter rotor diameter and 120 meter hub height.



Prepared by: ArcVera Renewables  
 Author: Matthew Gagne  
 Date: 9/21/2021  
 Review: Bill Colgrove

Bull Trail Visual Simulation - Location 4  
 v2.pdf Version: 2



## BULL TRAIL WIND FARM

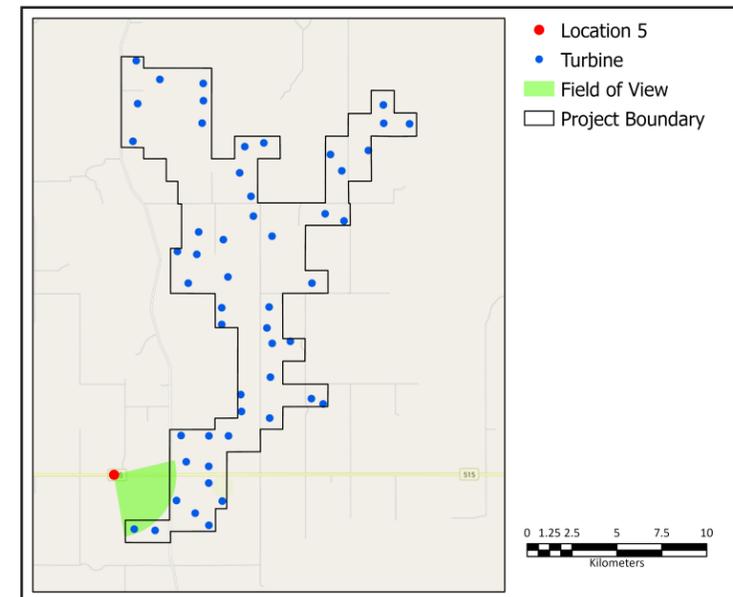
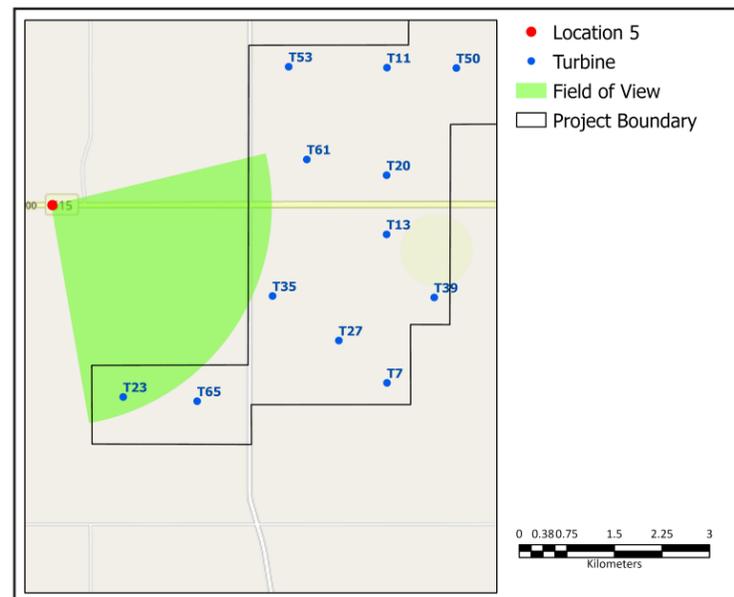
### Visual Simulation: Location 5

49.785974, -110.281265

East-southeast view

Notes: Photo and turbine locations and perspective are approximate and based on photos and turbine information provided.

The simulation employs a turbine with 160 meter rotor diameter and 120 meter hub height.



Prepared by: ArcVera Renewables  
 Author: Matthew Gagne  
 Date: 9/19/2021  
 Review: Bill Colgrove

Bull Trail Visual Simulation - Location 5  
 v1.pdf Version: 1

# FREQUENTLY ASKED QUESTIONS



## How long will construction take?

We anticipate construction will start in Q3 2022 and will end by Q3 2023. Construction typically includes civil works, access road preparation, foundation installation, turbine delivery and erection, collector system installation, and electrical and mechanical completions.



## How do you plan to manage construction dust and increased traffic?

With any large infrastructure project there will be increased traffic during the construction phase. We will implement traffic control and dust mitigation measures during the Project's construction. We will determine these measures in consultation with Cypress County. We will also discuss haul routes for turbines and other infrastructure with Cypress County. We will limit the time for construction-associated traffic in consultation with local authorities and work with local residents to ensure a safe process with as few impacts as possible to local residents and their seasonal agricultural practices.



## Do wind turbines impact human health?

There have been some claims that noise from wind turbines can impact human health. EDF Renewables has completed a third-party noise impact assessment. The assessment considers Alberta Utilities Commission Rule 012: Noise Control, and it includes cumulative sound emissions from nearby facilities, including oil and gas facilities. Noise levels must not exceed 40 decibels at nighttime. Our Project must comply with this Rule otherwise the AUC will not approve the Project. The results of the assessment are demonstrated in the Project Layout.

Health Canada completed a \$1.4 million study from 2012 to 2015 assessing if wind turbines affected health. The study found that there is no scientific evidence to support negative effects on human health resulting from exposure to wind turbine noise. More information is available from the Health Canada study at [www.canada.ca](http://www.canada.ca)



## What is shadow flicker?

Shadow flicker can occur at certain times of the year. Blades can cast a moving shadow over windows, creating a flicker effect indoors which can cause annoyance. Shadow flicker can occur when turbines are sited close to homes. A shadow Flicker Analysis Summary Report is available upon request.

EDF Renewables has conducted an independent shadow flicker analysis to ensure turbines are properly located to mitigate potential shadow flicker impacts. This study considers the probability of cloud cover, but it does not consider the orientation of residences or the location of windows in residences. The results of this study are available in the Project Layout, Shadow Flicker and Noise Map. All residences fall within internationally accepted thresholds.



## What is the emergency response protocol in the event of a fire?

Safety is a core value of EDF Renewables Canada Inc. During construction, we will employ robust safety protocols, including restricting public access to the construction site. In addition, there will be security controls on site and we will employ traffic mitigation strategies. We will continue to consult with the community throughout the process.

During operations, the Project will have a supervisory, control, and data acquisition system that connects each turbine to a central operating system. This system monitors the turbines 24 hours a day, seven days a week. In the event of an emergency, the controller will send an automatic alarm notification to the operations staff and the remote operations centre. The on-site staff or the remote operating staff will initiate a shut down. If a fire is detected, staff will immediately call 911 to dispatch the local fire department, and staff will implement the protocols outlined in the emergency response procedures. EDF Renewables will be working closely with local emergency services to develop an emergency response plan.

## Will my property value be impacted?

There is no conclusive evidence in Alberta about whether property values are affected by neighbouring wind power projects. Three wind power project applications in Alberta received by the AUC considered the potential impact of wind power projects on property value. The AUC concluded the following:

“The Commission was not presented with sufficient evidence in this proceeding to suggest that the project will result in an adverse impact on property values of parcels adjacent to the project.” — Grizzly Bear Creek Wind Project (E.On Climate & Renewables Canada Ltd.)<sup>1</sup>

“The Commission has not been presented with sufficient cogent evidence in this proceeding to suggest that the project will result in an adverse impact on property values of parcels adjacent to the project and finds that any limitations on subdivision potential is too speculative.” — Bull Creek Wind Project (BluEarth Renewables Inc.)<sup>2</sup>

“The Commission finds that there was insufficient evidence presented to show that land use would be impacted by the project, particularly given that no components of the project will be sited on nonparticipating landowners’ property. With respect to the project’s potential impact on property values, the Commission was not presented with sufficient evidence in this proceeding to suggest that the project will result in an adverse impact on property values of parcels adjacent to the project.” — Halkirk 2 Wind Project (Capital Power)<sup>3</sup>

There have been numerous studies completed on this subject and the general consensus is that there is little evidence to support claims that property value is impacted by neighbouring wind power projects. To date, the most comprehensive study on wind power projects and property values was conducted by the Lawrence Berkeley National Laboratory. The study analyzed more than 50,000 home sales near 67 wind power projects across nine U.S. states over ten years and found no statistical evidence that operating wind power projects have had any measurable impacts on home sale prices.

Similarly, the Municipal Property Assessment Corporation (MPAC) evaluated these claims in a detailed study in 2008, 2012 and 2016 entitled *Impact of Industrial Wind Turbines on Residential Property Assessment* in Ontario. This report studies properties within five kilometres of a wind turbine, and whether their assessment is equitable to those situated more than five kilometres from a wind turbine. The assessed value of a property does not change due to nearby wind turbines. This finding is consistent with MPAC’s reports.



## What steps are you taking to protect the environment, specifically birds and bats?

EDF Renewables has completed environmental studies for the Project. The subjects of these studies included vegetation, wildlife, and wetlands. Based on the survey results, we have applied the appropriate setbacks for the Project infrastructure from sensitive environmental features. We submitted the results of our surveys and our environmental evaluation to Alberta Environment and Parks (AEP) for their review. AEP has provided a Renewable Energy Referral Report for the Project.

All wind power projects in Alberta must consider their potential impact on wildlife. Examples of precautionary measures include implementing setbacks from habitats, avoiding the extensive use of above-ground transmission lines, and ensuring an appropriate distance between each turbine. EDF Renewables will complete post-construction monitoring as required.



1-AUC Decision 3329-D01-2016, May 19, 2016.  
2-AUC Decision 2014-04, February 20, 2014.  
3-AUC Decision 22563-D01-2018, April 13, 2017.