

# NORTHERN VALLEY WIND

## PROJECT INFORMATION UPDATE JULY 2023



### ABOUT THE PROJECT

The Northern Valley Wind Project (the “Project”) is a 17-turbine wind energy project sited on private lands within the municipal counties of Two Hills, St Paul, Vermillion River and located ~10 kilometers southeast of Elk Point, AB. The Project is being developed by Northern Valley Wind GP Inc., a project entity owned by Elemental Energy Renewables Inc. (“Elemental”).

With a proposed nameplate capacity of 75 MW, the Project will generate enough clean renewable electricity to power approximately 30,000 homes.

The Project is anticipated to start construction in late 2024 and become operational in 2026. The Project is planned to operate for 35 years, after which time the Project will be retrofitted with new equipment or decommissioned.

### PURPOSE OF THIS PROJECT INFORMATION UPDATE

Elemental is sharing information on the Northern Valley Wind Project to seek input and provide an opportunity landowners, stakeholders and local governments to ask questions or share concerns about the proposed Project.

Information provided in this update is representative of the Project we plan to file with the Alberta Utility Commission (AUC), although Project details are subject to change based upon feedback we receive through our pre-application consultation and engagement activities.

### WHAT’S INCLUDED:

- Why Northern Valley Wind?
- Community engagement to date
- Project details and timeline
- On-going Project studies
- Project benefits
- Proposed Project layout
- Shadow Flicker results
- Who is the AUC?



## HARNESSING THE ELEMENTS IS THE NATURE OF OUR BUSINESS

Elemental Energy began with a belief in the power of the elements to provide renewable energy for all, and a sense of urgency to make it happen.

We develop, own and operate industry leading wind and solar projects in Alberta and across Canada, bringing renewable energy to the grid where it matters the most.

We look to build partnerships, where alignment, transparency and accountability create relationships that launch projects for mutual benefit.

## WHY NORTHERN VALLEY WIND

### Alberta, Energy Capital of Canada

Increasingly renewables are playing a larger role in Alberta's energy landscape, which is driven by market demand. Capturing the economic opportunity associated with developing renewable energy projects is additive to Alberta's energy economy, further strengthens Alberta's position as a global leader in responsible energy production and contributes valuable tax revenues to local governments.

### Shared Energy Infrastructure, Services and Benefits

Development of renewables depends on a demand for energy, the availability of infrastructure to deliver energy to industry and communities as well as a skilled workforce to build and maintain the energy infrastructure. Wind energy brings electricity to the grid at a lower cost than traditional forms of generation, making it more affordable for residents and local businesses, in addition to delivering local and regional economic benefits.

### Diversified Local Economy

Development of wind energy projects is compatible with existing agriculture, oil and gas sector uses. We work with local energy companies and landowners to avoid interactions with their existing operations. Farmers can continue to plant crops and graze livestock on their lands, while supplementing their farming incomes, especially in times of low agricultural production.

## COMMUNITY ENGAGEMENT

We recognize that the support of the community, landowners, local businesses and governments are key to successful projects. This is why we work diligently to provide a variety of engagement opportunities to ensure feedback is captured into the Project's design.

### Engagement to Date:

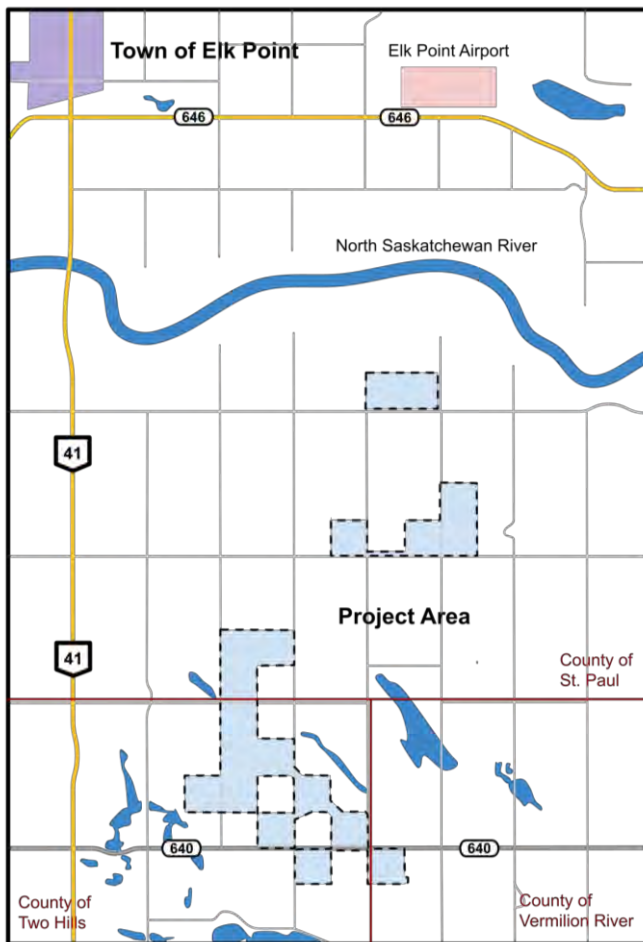
- Project Introduction Letter to residents and landowners within 1.5 km of the Project Area.
- Presentations to Mayor, Council and staff at Two Hills County, St Paul County, Vermillion River County and the Town of Elk Point.
- Direct engagement with local First Nations, landowners, and business groups.

## WHAT WE'VE HEARD

- Concerns about potential impacts to property values and existing land uses within and around the Project area, including the Elk Point Airport.
- Concerns about potential impacts to the environment, including use of the project areas by birds, potential impacts to sensitive environmental habitat features such as wetlands, watercourses and wildlife corridors.
- Concerns about potential health effects to residents associated with turbine noise and impacts from shadow flicker in residences.
- Interest in project decommissioning and land reclamation commitments at end of Project life.
- Interest in economic opportunities including employment, contracting opportunities and increased spending on goods and services in local communities.
- Interest in community benefits including local tax revenues and funding for community initiatives.



## PROJECT LOCATION



\* Northern Valley Wind Project Layout is provided as an attachment

## PROJECT INFRASTRUCTURE

**Wind Turbines:** The Project includes seventeen 4.5 MW wind turbine generators. The selected turbines have a hub height of 120m and blades that are 82m long. The turbines will be anchored to a below-ground concrete foundation, designed for the ground conditions at each turbine location.

**Access Roads and Laydown Areas:** Access roads, turbine pads and laydown areas are required to construct, operate and maintain wind turbines. Where possible, the Project will use existing roads to access turbine locations and construction areas. All temporary roads required to access turbine locations and construction areas will be reclaimed after construction is complete.

**Collector System and Interconnection:** The turbines are connected to underground collection lines, which carry the lower voltage electricity from the wind turbines to the three project switching stations. The project connects directly into the local electricity distribution grid. No new transmission lines or substations are required to support the Project.

**Operations and Maintenance Building:** The operation and maintenance building serves as central hub for personnel responsible for operating and maintaining the wind turbines. It also functions as a safety muster point as well as storage for spare parts and tools.

## ONGOING ENVIRONMENTAL AND TECHNICAL STUDIES

**Environment:** The Project has undertaken environmental desktop and field studies following established study methods detailed in the Alberta Environment and Projected Areas (AEPA) Wildlife Directive for Wind Energy Projects (2018). Information collected through surveys included bird and bat presence, the location of watercourses and wetlands, vegetation cover types, land uses, important habitats and wildlife use in and around the Project areas. Field study information has been used to site wind turbines and other infrastructure components to avoid and minimize impacts on the environment .

**Noise:** In Alberta, energy facilities must comply with AUC Rule 012: Noise Control, which requires the cumulative assessment of noise emissions, including existing and proposed power projects, oil and gas facilities, and other energy-related facilities.

The Project is designed so that noise levels do not exceed a nighttime permissible sound level of 40 dBA at residences located within 1.5 kilometers (km) of the proposed facility boundary, based on the dwelling density and distance from heavily travelled roads.

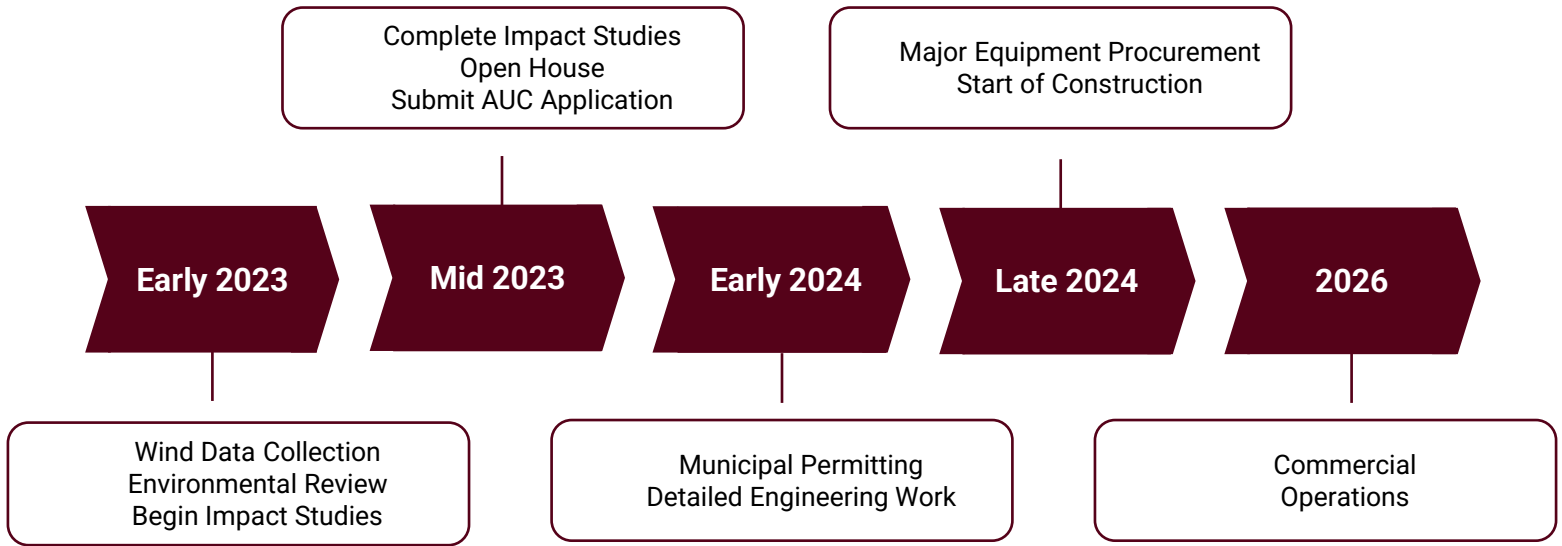
**Shadow Flicker:** Shadow flicker can occur when the sun passes behind the rotor of a wind turbine and casts a moving shadow over a residence, where this shadow passes over a narrow opening such as a window, causing the light levels to 'flicker' inside a room or building. The potential for shadow flicker to occur at residences was modelled and considered through siting of individual turbines. The results of the shadow flicker analysis are summarized in the enclosed Shadow Flicker Map.

Elemental is committed to working with individual landowners to determine the potential for shadow flicker to occur within their residences.

**Visual Impacts:** Visual simulations have been prepared to illustrate how the Project will appear in the landscape from a range of locations adjacent to the Project area. Visual simulations are accessible through the Project's website.

**Additional information, figures and supporting reports are available our website ([www.northernvalleywind.ca](http://www.northernvalleywind.ca))**

## ESTIMATED PROJECT TIMELINE



## NEXT STEPS

Elemental plans to file an AUC application for the Project in September of 2023.

Elemental is available to meet with landowners, residents, and stakeholders to answer questions, listen to concerns and where possible resolve your concerns.

Please do not hesitate to contact us to request additional Project information, schedule a phone call or a visit to your property.

## PROJECT BENEFITS

**Local Employment** – More than 100 new jobs during the construction phase and 4-10 long term jobs are required to support the Project through operations.

**Local Government Tax Revenues** – More than \$35 million in new tax revenues to be shared across participating local governments.

**Community Benefit Fund** – Elemental will work with landowners, local governments and community groups to design a Project specific community benefit fund that will be in place for the life of the Project.

## WHO IS THE AUC?

The Alberta Utilities Commission (AUC) is a quasi-judicial independent agency established by the Government of Alberta, 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 visit [www.auc.ab.ca](http://www.auc.ab.ca) or refer to the enclosed brochure.

## STAY IN TOUCH

To sign-up for Project updates, please visit our website: [www.northernvalleywind.ca](http://www.northernvalleywind.ca)

If you have any questions or concerns, please contact our Development Manager, Liam Wolfe, by phone or email, using the information provided below:

**Liam Wolfe**  
**Phone** - 1.604.648.6621  
**Email** - [development@elementalenergy.ca](mailto:development@elementalenergy.ca)

### Privacy Statement:

Elemental is committed to protecting your privacy. Collected personal information will be protected under the provincial Personal Information Protection Act. As part of the regulatory process for new generation projects, Elemental may be required to provide your personal information to the AUC. For more information about how Elemental protects your personal information, contact us at [development@elementalenergy.ca](mailto:development@elementalenergy.ca)

**Legend**

- Road
- ▭ Project Area
- ▭ Municipal District and County Section
- Project Components
- ▬ Collector lines
- ▬ Laydown
- ▬ Access Road
- ▬ Turbine Pad
- ▬ Operations Building
- ▬ Switchgear

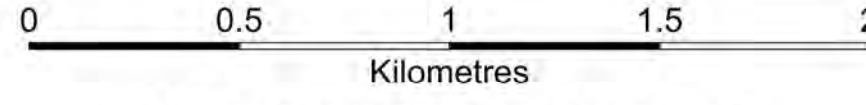


**Northern Valley Wind Power Project  
Project Layout**

**Northern Valley Wind Limited Partnership**

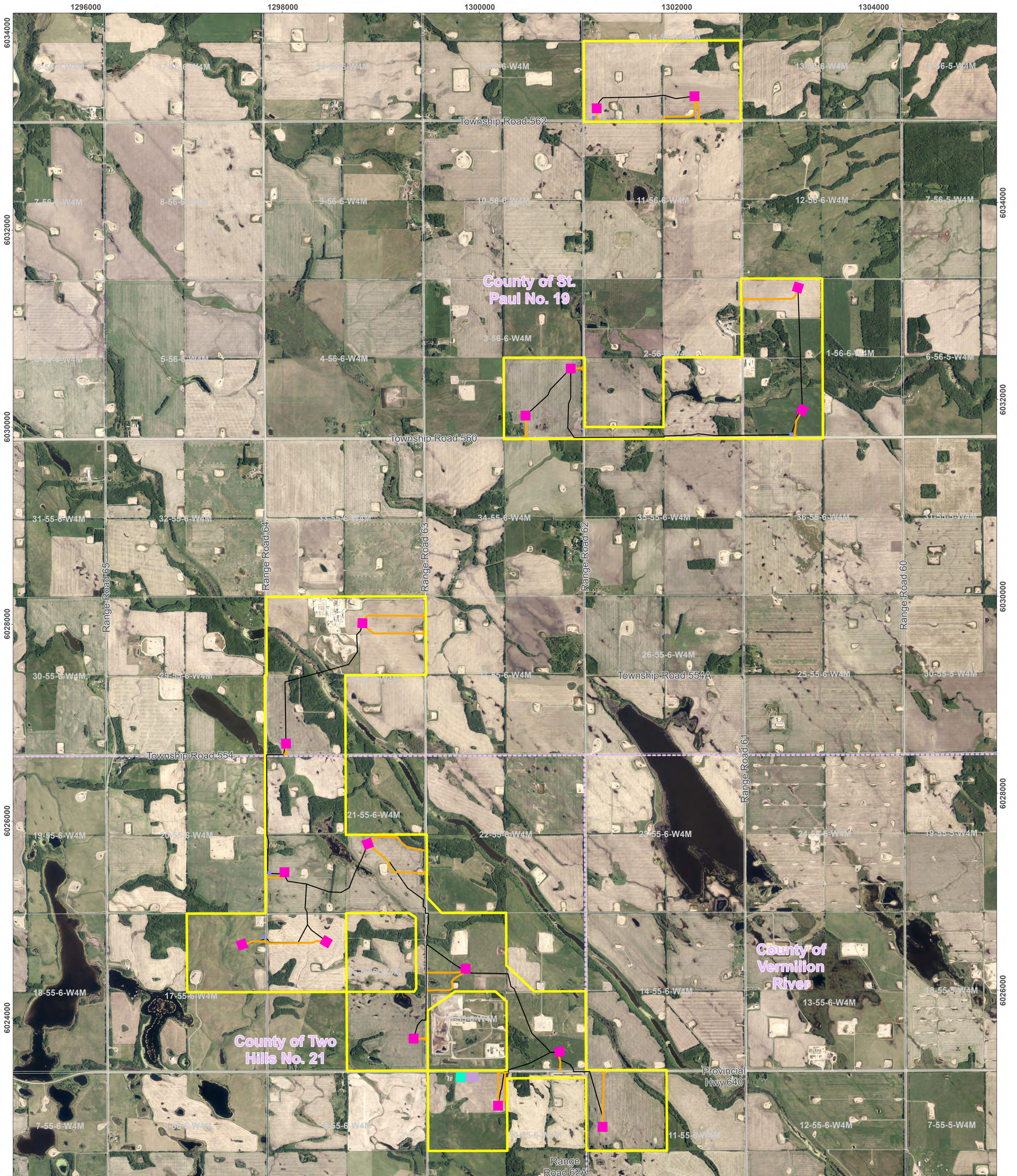
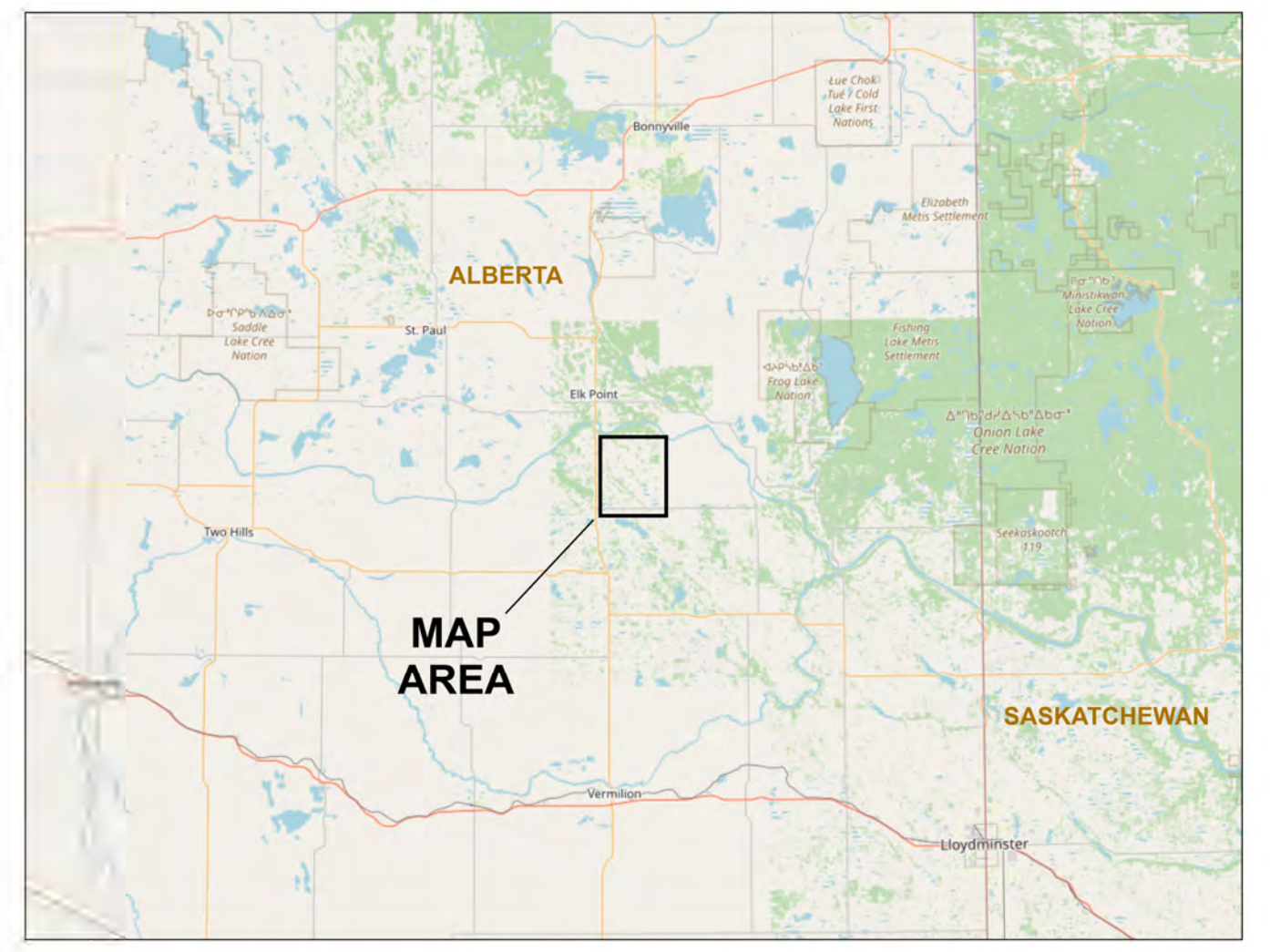
Data Sources  
 • ATS grid, AltaLIS 20K Base Features  
 • Inset Basemap, World Imagery: Vermilion River County, Earthstar Geographics  
 • Main Basemap, OpenStreetMap: © OpenStreetMap (and) contributors, CC-BY-SA

Disclaimer  
 EDI Environmental Dynamics Inc. has made every effort to verify this map is free of errors. Data has been derived from a variety of digital sources and, as such, EDI does not warrant the accuracy, completeness, or reliability of this map or its data.



Map Scale 1:18,000 (printed on 11 x 17)  
 Map Projection: NAD 1983 UTM Zone 12N

Drawn: P. Hesse / O. Leblanc	Checked: J. Shalagan	Figure 1	Date: 2023-07-11
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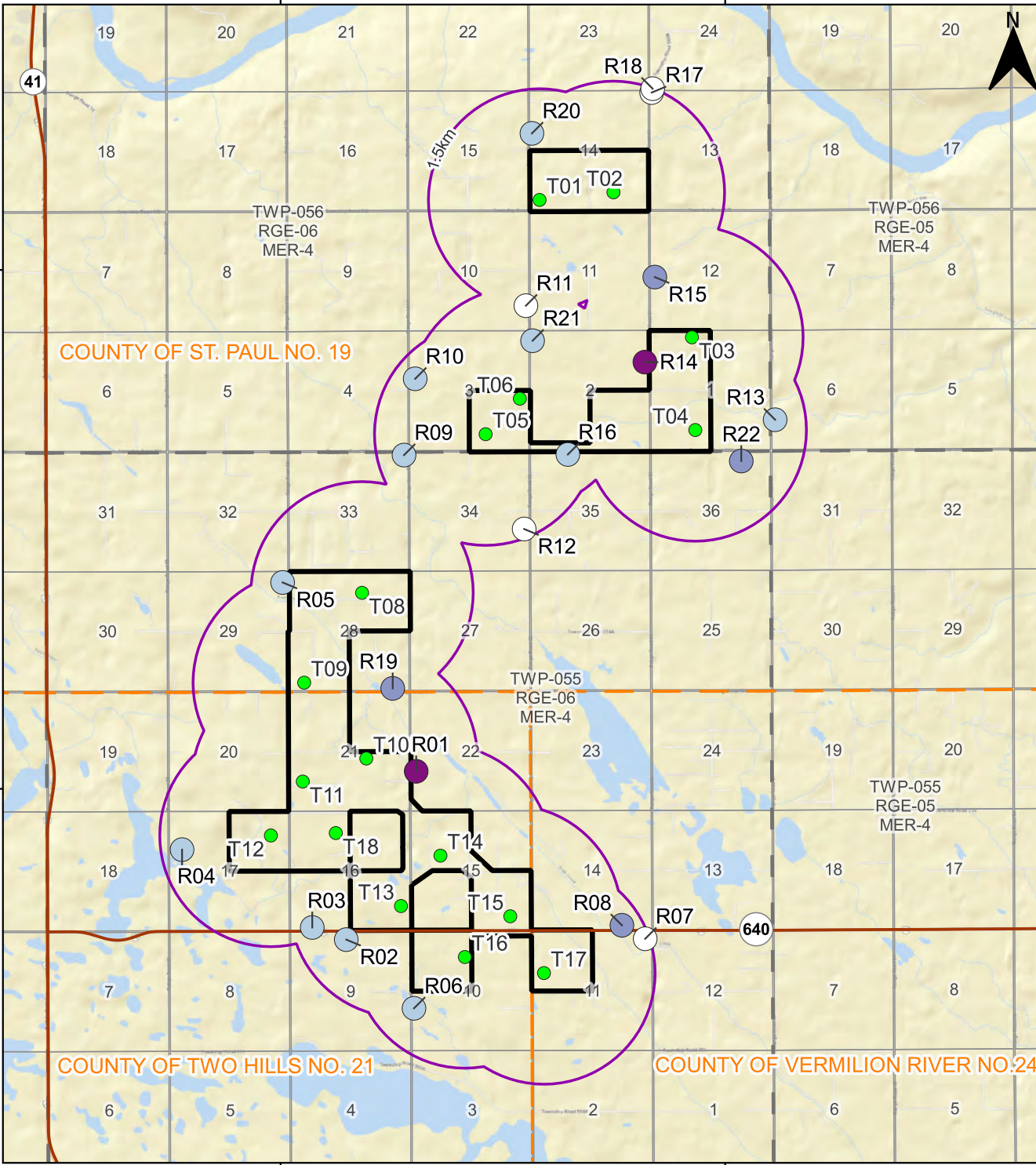
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Project Name: Northern Valley Wind Project

Document Title: Adjusted-Case Shadow Flicker Impact Map

Legend

- Project Turbine
- Highway
- Project Area
- 1.5km Study Area
- County Boundary
- Section
- Township

Shadow Flicker Receptor (hours/year)

- 0
- 0 - 10
- 10 - 20
- 20 - 30
- 30 - 40

0 1 2 3 4 km



Coordinate System: EPSG:32612 - WGS 84 / UTM zone 12N  
Data Credits: Northern Valley Wind Limited Partnership, Green Cat Renewables Canada Corp., AltaLIS, ESRI

Client: Northern Valley Wind Limited Partnership  
Drawing by: Green Cat Renewables Canada Corp.

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 Version: 1.0  
 Author: JM  
 Checked by: SW  
 Approved by: SW  
 Date: 2023-6-30



## Step 5: Consultation and negotiation (if applicable)\*

The Commission supports ongoing efforts to reach an agreeable outcome for the applicant and all affected parties. The Commission encourages the applicant and those who have filed a statement to continue to attempt to resolve any outstanding issues. If all concerns can be satisfactorily resolved this may eliminate the need for a formal hearing. However, if there continues to be unresolved issues, those matters will typically be addressed at an AUC hearing.

## Step 6: The public hearing process\*

The AUC will issue a notice of hearing if there continues to be legitimate unresolved concerns with the application. The notice of hearing will provide a hearing date and location in addition to a process schedule. The AUC conducts public hearings in its Edmonton and Calgary hearing rooms and, where suitable venues exist, in communities closer to the proposed project area.

The public hearing process allows persons with standing that have unresolved concerns about the application, to express their views directly to a panel of Commission members.

An AUC hearing is a formal, evidence-based, court-like proceeding. The public can attend the hearing in person or listen to hearings online through the AUC's website.

Participants in a hearing can either represent themselves or be represented by a lawyer. In addition, participants may hire experts to assist in preparing and presenting evidence to support their position.

## Cost assistance

A person determined by the Commission to be a local intervener can apply for reimbursement of reasonable costs. Those who hire a lawyer or technical experts must be aware that while reimbursement for the costs of legal and technical assistance is available under AUC Rule 009: *Local Intervener Funding*, recovery of costs is subject to the Commission assessing the value of the

contribution provided by the lawyer and technical experts. People with similar interests and positions are expected to work together to ensure that expenditures for legal or technical assistance are minimized and costs are not duplicated.

## Step 7: The decision

The AUC's goal is to issue its written application decision no more than 90 days after the hearing is complete. The Commission can approve, or deny an application and can also make its approval conditional upon terms or conditions. All AUC decision reports are available to any member of the public on the AUC's website or by obtaining a printed copy from the AUC.

## Step 8: Opportunity to appeal

An applicant or dissatisfied participant may formally ask the Court of Appeal of Alberta for permission to appeal a Commission decision. An application for permission to appeal must be filed within 30 days from the date the decision is issued.

An applicant or dissatisfied participant can also ask the Commission to review its decision. An application to review a Commission decision must be filed within 60 days from the date the decision is issued and satisfy the limited grounds described in AUC Rule 016: *Review and Variance of Commission Decisions*.

## Step 9: Construction, operation and compliance

An applicant that receives approval to build and operate a facility from the Commission must adhere to any conditions that were set out in that approval. If concerns about compliance with approval conditions and post-construction operations cannot be resolved with the applicant, they can be brought to the AUC's attention for consideration. The AUC has significant compliance and enforcement powers for all approved applications. Additional information is available on the AUC website under "Compliance and enforcement."

## \*Opportunity for public involvement

The Alberta Utilities Commission is an independent, quasi-judicial agency of the Government of Alberta that ensures the delivery of Alberta's utility services take place in a manner that is fair, responsible and in the public interest.

## Contact us

Phone: 310-4AUC (310-4282 in Alberta)  
1-833-511-4AUC (1-833-511-4282 outside Alberta)  
Email: [info@auc.ab.ca](mailto:info@auc.ab.ca)

Eau Claire Tower 1400, 600 Third Avenue S.W. Calgary, Alberta T2P 0G5	106 Street Building 10th Floor, 10055 106 Street Edmonton, Alberta T5J 2Y2
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The Alberta Utilities Commission is committed to ensuring that Albertans whose rights may be directly and adversely affected by a utility development project are informed of the application and have the opportunity to have their concerns heard, understood and considered.



**Participating  
in the AUC's  
independent  
review process**

# Application review process

**Step 1: Public consultation prior to application by proponent**

**Step 2: Application filed with the AUC**

**Step 3: Public notice issued by the AUC**

**Step 4: Public submissions to the AUC**

**Step 5: Consultation and negotiation**

**Step 6: The public hearing process**

**Step 7: The decision**

**Step 8: Opportunity to appeal**

**Step 9: Construction, operation and compliance**

[www.auc.ab.ca](http://www.auc.ab.ca)

## The AUC's regulatory role in needs and facility applications and its independent review and hearing process:

The AUC uses an established process, outlined in this brochure, to review social, economic and environmental impacts of facility projects to decide if approval is in the public interest. Approvals from the AUC are required for the construction, operation, alteration and decommissioning of transmission lines and electric substations.

Approvals are required for:

- The need for transmission upgrades.
- The route and location of transmission facilities.
- The siting of power plants, including renewables such as wind and solar more than five megawatts.

Sometimes a needs application is considered together with a facility application in a single hearing; sometimes separate hearings may be held to consider each application.

### Step 1: Public consultation prior to application\*

Prior to filing an application with the AUC for the approval of a proposed utility development, the applicant must engage in a public consultation program in the area of the proposed project, so that concerns may be raised, addressed and, if possible, resolved.

The application guidelines and requirements for facility applications can be found in AUC Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations and Hydro Developments*, and AUC Rule 020: *Rules Respecting Gas Utility Pipelines*.

Potentially affected parties are strongly encouraged to participate in the initial public consultation, as early involvement in discussions with an applicant may lead to greater influence on project planning and what is submitted to the AUC for approval.

The Alberta Electric System Operator, as the system planner, will notify potentially affected stakeholders of applications on the need for transmission development.

### Step 2: Application filed with the AUC

When the participant involvement requirements have been completed, the applicant files its application with the AUC through a public filing system, called the eFiling System, on the AUC website.

The application is then reviewed to ensure the information required by the Commission is included. If the required information is not provided, the AUC may close the application or request more

information from the applicant. In the application, any issues that were raised during the public consultation and any related amendments to the proposal should be identified. All unresolved objections or concerns identified during the public consultation must be described in the application.

### Step 3: Public notice

The AUC generally issues a notice by mail directly to those who live, operate a business or occupy land in the project area who may be affected by the Commission's decision on the proposed project. The notice for larger facility projects with potentially greater impacts may also be published in local newspapers.

The notice will specify a submission deadline. The information required by this deadline is general in nature as outlined in Step 4. Additional opportunities to provide evidence and additional information will arise after this deadline.

### Step 4: Public submissions to the AUC\*

The AUC review process is referred to as a proceeding. Anyone with unresolved objections or concerns about the application can file a brief written statement with the AUC on the proceeding. The easiest way to file a statement is to fill out the form through the eFiling System found on the AUC website. The statement must include your contact information, where you reside or own property in relation to the proposed facility, your concern or interest in the application, an explanation of your position and what you feel the AUC should decide.

The AUC uses the information it gathers through the forms to decide whether to hold a hearing on the application(s). The Commission must hold a hearing if a person can demonstrate that he or she has rights that may be directly or adversely affected by the Commission's decision on the application. Such a person is said to have standing before the Commission. If the AUC decides to hold a hearing, the AUC will provide further opportunities for participants with standing to understand the application and present their position on the application either in writing or in person.

Subject to some limited exceptions, all information and materials provided as part of an AUC proceeding will become part of the public record and will be available through the eFiling System. The AUC's treatment of some types of information as confidential is rare and only available under limited circumstances to ensure that the AUC's process is open and transparent.

### AUC eFiling System

The eFiling System is the tool that the AUC uses to manage applications and submissions in its proceeding-based review. The eFiling System gives access to all public documents associated with an application and is how to provide your input to the AUC and monitor the related proceeding filings. Those who do not have access to the internet can send submissions, evidence and other material by mail and the AUC will upload the submission on their behalf.

**\*Opportunity for public involvement**