

# NORTHERN VALLEY WIND

## PROJECT INFORMATION UPDATE NOVEMBER 2023



### ABOUT THE PROJECT

The Northern Valley Wind Project (the “Project”) is a 17-turbine wind energy project sited on private lands within the counties of Two Hills, St Paul, Vermilion River and located approximately 10 kilometers southeast of the Town of Elk Point. 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 this Project update to summarize the changes that have been made to the Project and answer common questions that we have received.

The Project information we are sharing in this mailout is representative of the Project we plan to file with the Alberta Utilities Commission (“AUC”), although Project details are subject to change based upon feedback we receive through our remaining pre-application consultation and engagement activities.

### WHAT’S INCLUDED:

- What’s New?
- Your questions answered
- Updated Project details and timeline
- Completed and on-going Project studies
- Project benefits
- Proposed updated 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.

# WHAT'S NEW?

## RENEWABLE ENERGY PAUSE

On August 3rd, 2023 the Alberta Government directed the AUC to pause approvals of new renewable electricity projects until February 29th, 2024. After consultation with stakeholders, the AUC announced that they would continue to accept and review applications during the pause period, and provided guidance on how new applications should address the areas of interest in the AUC inquiry.

For more information on AUC inquiry and topics of interest covered through the inquiry please visit the following link: [www.auc.ab.ca](http://www.auc.ab.ca)

## REVISED LAYOUT

During the initial consultation phase, we heard many concerns regarding potential noise and environmental impacts associated with the proposed Project. In response, Elemental has optimized the Project layout to minimize the noise levels at several residences near the Project. The layout changes have also reduced the potential environmental impact by removing a portion of Project infrastructure from wetland setbacks. The revised Project layout is enclosed in this package.

## SHADOW FLICKER MITIGATION PLAN

Elemental is committed to designing a Project that limits or avoids any negative adverse impacts on people who live and use the area around the proposed Project. In response to feedback and concerns about impacts to residences, Elemental has developed a shadow flicker mitigation plan. This plan will decrease the overall impact of the Project by reducing the potential for shadow flicker at the most impacted residence.

In addition, Elemental is committed to addressing future concerns related to shadow flicker during Project operations.

## WIND TURBINE HEIGHT

Elemental is considering turbines up to a maximum hub height of 125m (from 120m). The blade length of the turbine will be approximately 82m. As a result, the turbines will have a maximum total height of 207m, 5m taller than previously considered. Project environmental reports, noise and shadow flicker impact assessments as well as the visual simulations reflect this change.



# YOUR QUESTIONS ANSWERED

Elemental has received many questions regarding the Project and its potential impacts. In response, we have developed a Frequently Asked Questions (“FAQ”) sheet that answers the most heard questions. We’ve provided answers to the two most common questions below. Other questions were related to Project design, environmental and geotechnical studies as well as community benefits among other topics. The full FAQ sheet, as well as other information, can be found on the Project website ([northernvalleywind.ca](http://northernvalleywind.ca)).

## WILL THE PROJECT IMPACT HUMAN HEALTH?

Attributes from operating wind turbines with the potential to affect human health include effects from noise (audible sound and low frequency sound) and effects from shadow flicker. It is common across the industry to employ residential dwelling turbine setbacks to minimize potential human health risks. Generally, turbine setbacks are determined through a combination of government regulations (compliance with AUC Rule 012), modeling (sound or shadow flicker), and industry best practices for minimizing health effects from operating turbines. Studies have shown that when constructed in compliance with regulatory requirements, wind turbines do not pose a risk to people's health.

The Project layout has been designed to minimize noise and shadow flicker impacts. Elemental has completed noise impact and shadow flicker assessments to confirm the Project is compliant with the Alberta regulations as well as other guidelines and best practices for turbine siting to minimize adverse health effects from the Project. These reports are available on the Project website or via mail upon request.

Health Canada along with Statistics Canada and other external experts conducted a Wind Turbine Noise and Health Study. The results released in 2014 indicated that wind turbine noise was not linked to self-reported medical illnesses and health conditions. A fact sheet summarizing peer-reviewed studies that focus on the relationship between wind turbines and human health is provided on the Project's website.

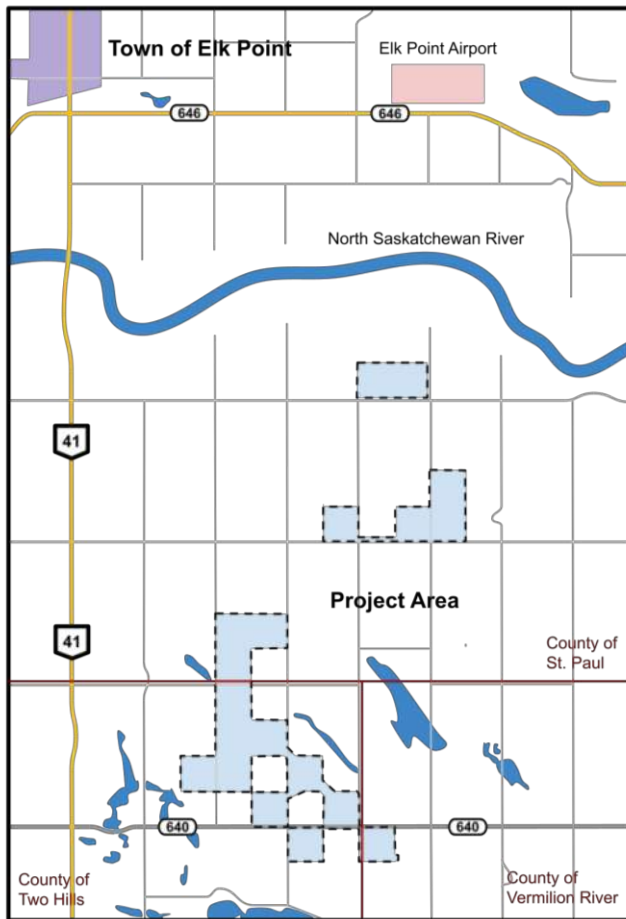
## DO WIND PROJECTS IMPACT NEARBY LIVESTOCK?

Many wind projects have been built and are currently operating across Alberta and North America where the turbines are co-located in fenced pastures and fenced grazing fields with livestock. Livestock often graze right up to the base of turbines. Despite the significant number of wind turbines installed in livestock grazing lands there is limited published literature on the potential health risks and/or other behavioural effect to livestock from operating wind farms. Experts have suggested this is a result of the fact that there has not been evidence or documented concerns about livestock health once projects are operating.

We are unaware of any regulations in Alberta, Canada or North America pertaining to minimum or required wind turbine setbacks from fenced pasture lands, livestock corrals or barns that regularly contain livestock including cows, horses, or other domesticated animals.



## PROJECT LOCATION



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

## UPDATED PROJECT STUDIES

**Environment:** Project environmental surveys and studies have been submitted to Alberta Environment and Protected Areas ("APEA"). APEA is reviewing the submission, and we expect them to issue a referral report shortly.

All environmental reporting, including the Referral Report as well as the Project Environmental Protection Plan, will be available in the Project's submission to the AUC.

**Noise and Shadow Flicker:** Elemental has developed noise and shadow flicker reports for the Project. These reports model the potential noise and shadow flicker impacts of the proposed Project. As previously noted, Elemental has created a shadow flicker mitigation plan and made layout changes in response to feedback received during the consultation process.

The Shadow Flicker and Noise Impact Assessments are available on the Project website.

**Visual Impacts:** Visual simulations have been updated to reflect the maximum expected hub height. These visual simulations are accessible through the Project's website.

**Additional information, figures and supporting reports can be mailed to you if requested or are available our website ([www.northernvalleywind.ca](http://www.northernvalleywind.ca)).**

## PROJECT BENEFITS

### **\$150 MILLION** CAPITAL INVESTMENT

Construction will result in contracting opportunities for local business in various fields including land surveying, civil construction, mechanical and electrical work.

We will maximize the local procurement of construction materials when possible.

### **100,000 TCO<sub>2</sub>/YR** AVOIDED EMISSIONS

The project will generate electricity with no associated emissions and will offset other high emitting sources of electricity on Alberta's grid.

The project will produce enough clean energy to power 30,000 houses per year.

### **\$35 MILLION** TAX REVENUE

Counties and their constituents will benefit from significant tax revenues over the life of the project.

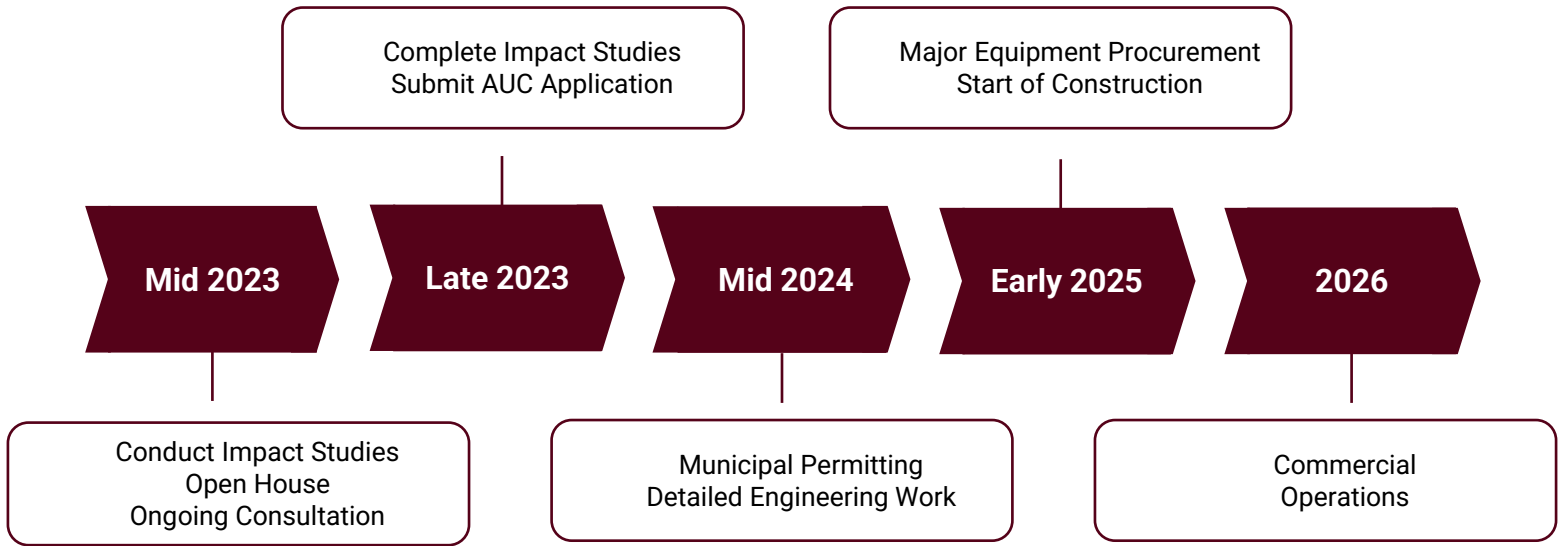
This will result in increased county services or a reduction in taxes paid by the taxpayer.

### **100 JOBS** EMPLOYMENT

Approximately 100 jobs are anticipated to be created during construction.

There will be 4 to 10 FTE jobs throughout the 35 years of operations.

## ESTIMATED PROJECT TIMELINE



## NEXT STEPS

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

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

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

## 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**

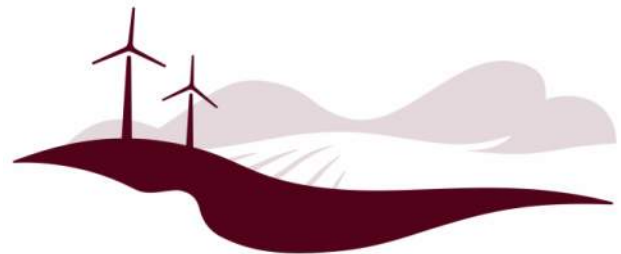
**Phone** - 1.604.648.6621

**Email** - [development@elementalenergy.ca](mailto:development@elementalenergy.ca)

## 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.



### 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**

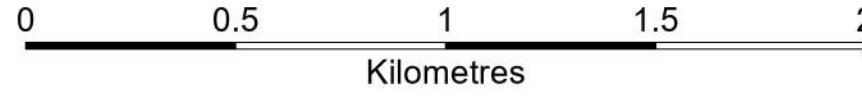
- Road
- ▭ Project Area
- ▭ Municipal District and County
- ▭ Section
- Project Components**
- ▬ Collector Line
- ▭ Laydown
- ▭ Access Road
- ▭ Turbine Pad
- ▭ Operations Building
- ▭ Switchgear

**Northern Valley Wind Power Project  
Project Layout**

**Northern Valley Wind Limited Partnership**

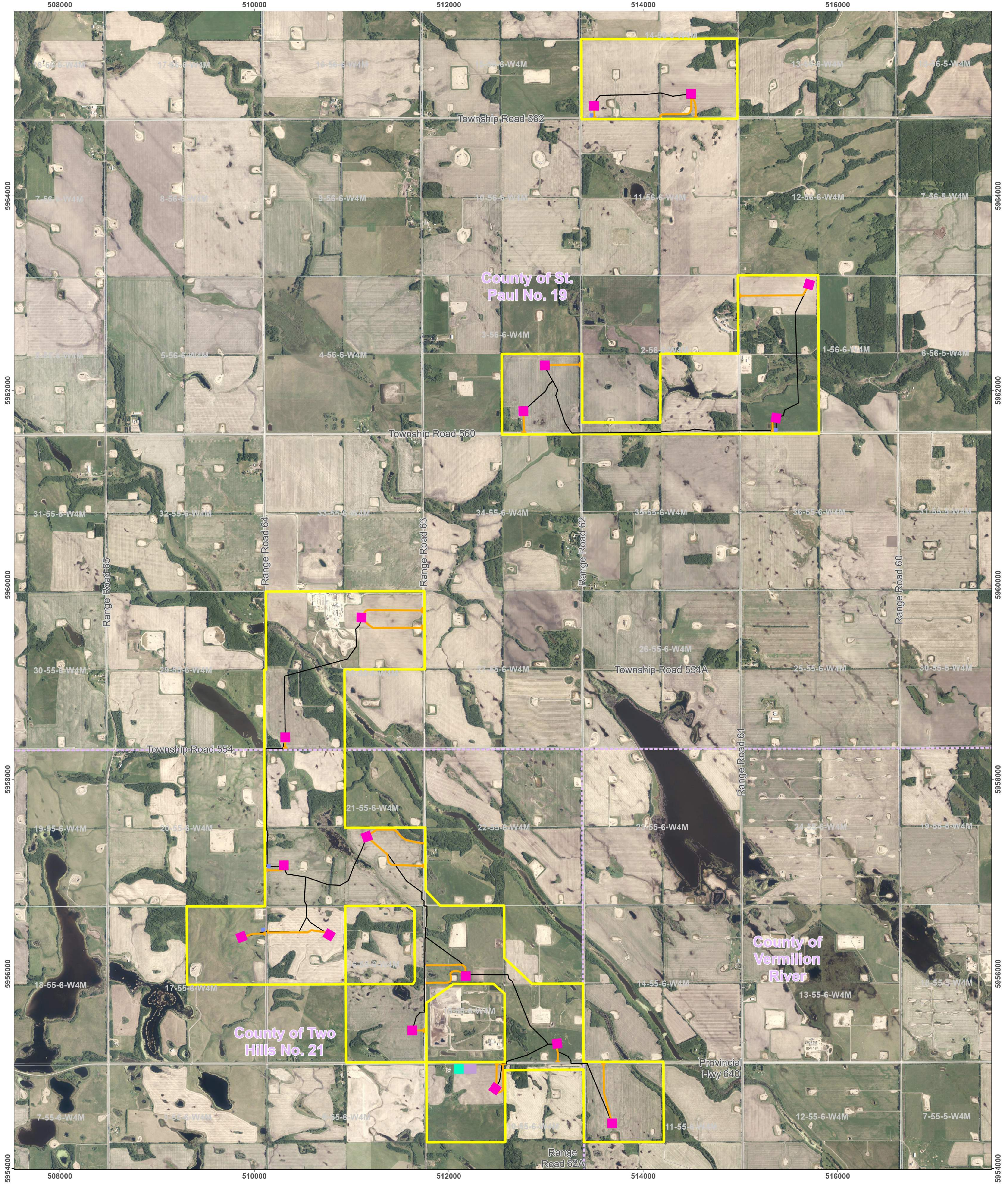
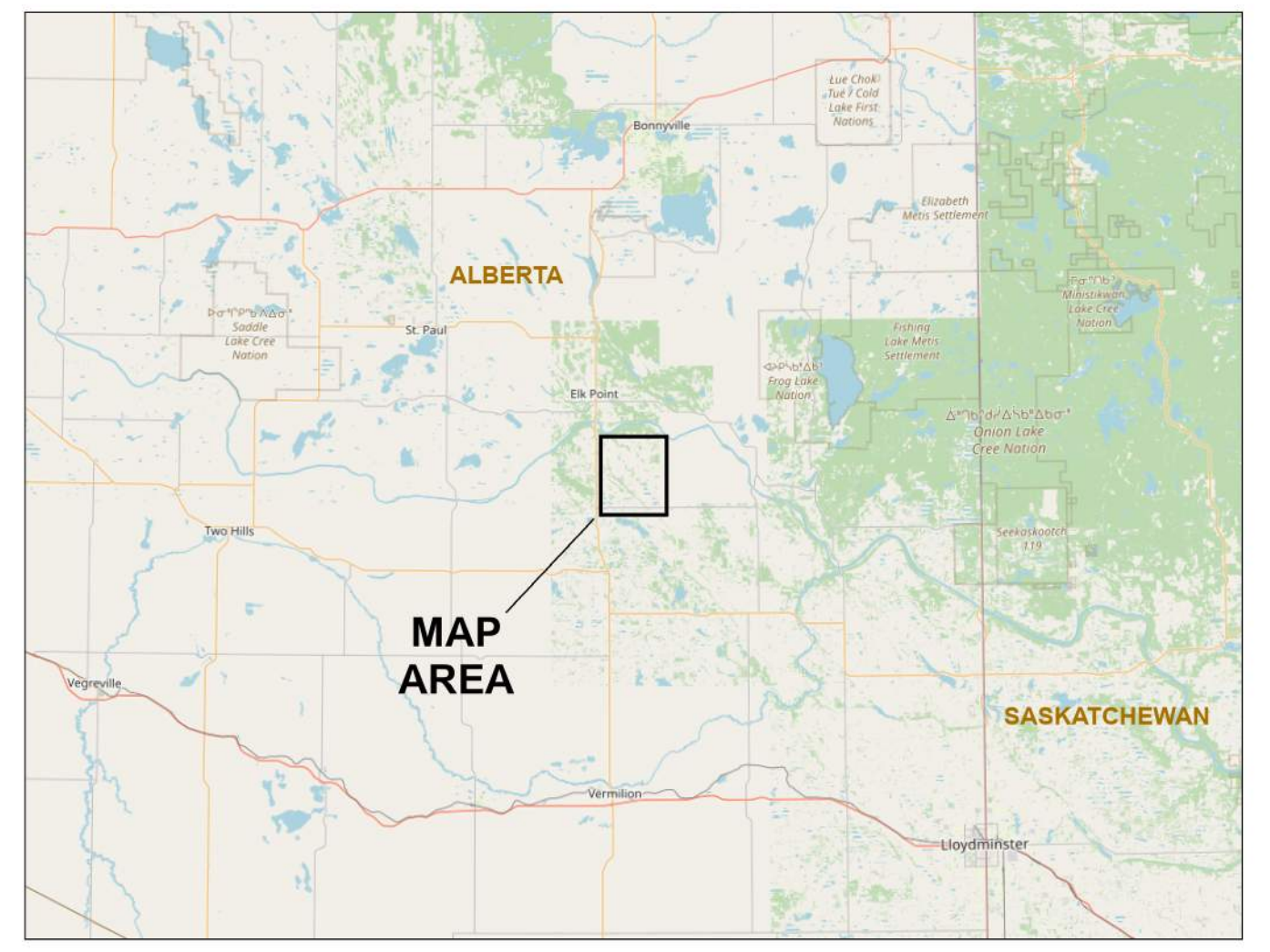
Data Sources  
 • Project Layout. Elemental Energy and EDI. November 2, 2023.  
 • ATS grid. AltaLIS 20K Base Features  
 • Inset Basemap. World Imagery: Vermilion River County, Maxar  
 • Main Basemap. OpenStreetMap: © OpenStreetMap (and) contributors, CC-BY-SA

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: PH / OL / CT	Checked: J. Shalagan	Figure 1	Date: 2023-11-03
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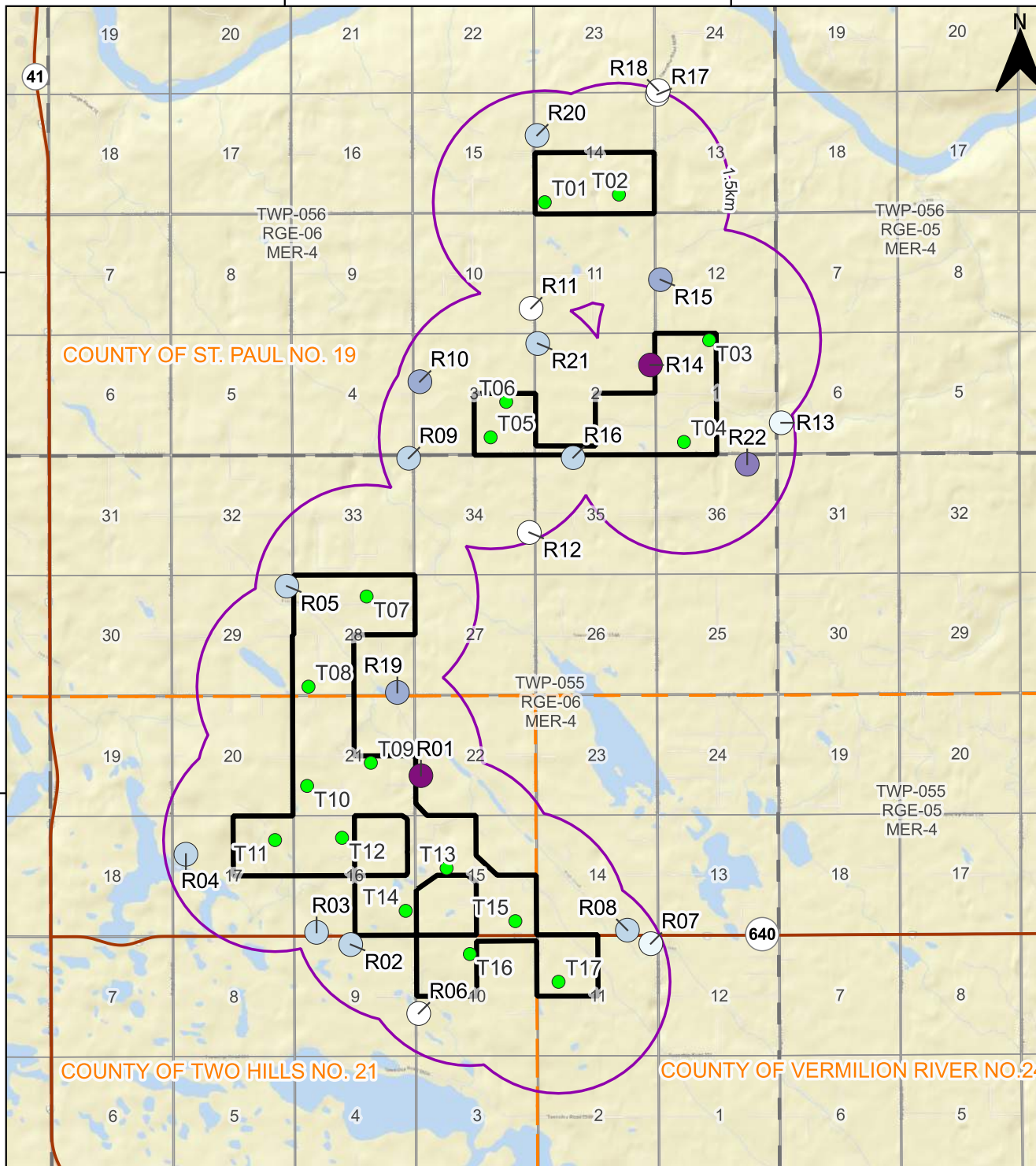
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Project Name: Northern Valley Wind Project

Document Title: Adjusted-Case Shadow Flicker Impact Map (with Mitigation)

Legend

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

Shadow Flicker Receptor (hours/year)

- 0
- 0 - 5
- 5 - 10
- 10 - 15
- 15 - 20
- 20 - 25
- 25 - 30

Note: In this adjusted-case scenario, mitigation has been applied to reduce potential shadow flicker impacts. Under these conditions, annual shadow flicker does not exceed 30 hours/year at any of the evaluated receptors.

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.

Document ID: NorthernValley\_AC\_SFImpact\_Mit  
 Version: 1.1  
 Author: JM  
 Checked by: SW  
 Approved by: SW  
 Date: 2023-11-3



## 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                      106 Street Building  
1400, 600 Third Avenue S.W.      10th Floor, 10055 106 Street  
Calgary, Alberta T2P 0G5            Edmonton, Alberta T5J 2Y2

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**