June 2020

NEWSLETTER TO THE COMMUNITY

Provost to Edgerton and Nilrem to Vermilion (PENV) Transmission Development

Provost to Edgerton
UPDATE: Transmission line routes and structure types

PROJECT UPDATES IN YOUR AREA

You are receiving this newsletter because you are near the Provost to Edgerton and Nilrem to Vermilion Transmission Development and we want to provide you with a project update.

IMPORTANT

If you have any questions regarding the need for this project, please contact the AESO directly at **stakeholder.relations@aeso.ca** or **1.888.866.2959**

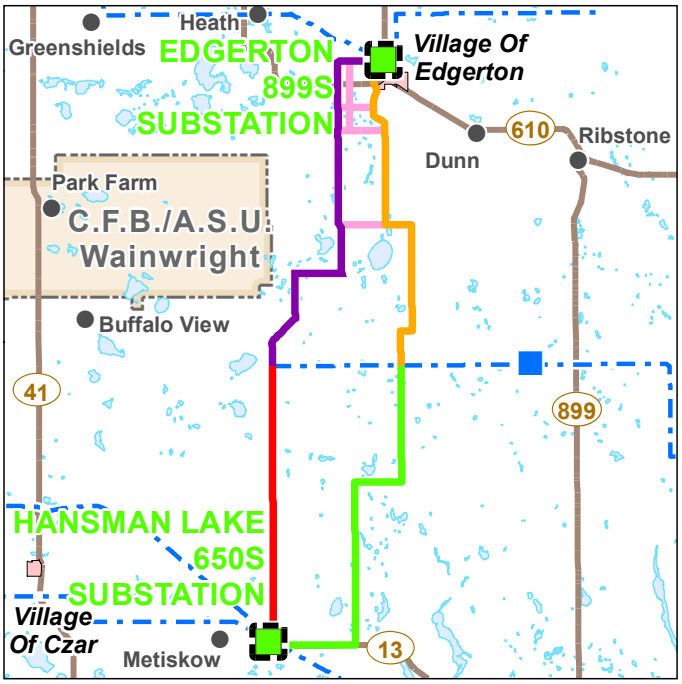
Provost to Edgerton and Nilrem to Vermilion (PENV) Transmission Development

Thank you for your participation in this project, your input is important to us. We began consulting with stakeholders on this proposed project in October 2019. Throughout our consultation process we've received valuable feedback that has helped us in our project planning.

With the input we've received from stakeholders, along with information gathered through ongoing field studies and engineering, we have identified preferred and alternate **transmission** line routes and the proposed structure types that we will include in the application that we file for this project.

If you are near a route no longer under consideration, you will no longer receive information from us about this project. Please contact us if you have any questions or wish to stay informed. You can also continue to receive updates by subscribing on our website at **www.altalink.ca/projects**.

Please refer to the maps included with this newsletter to help you identify routes near your property.



LEGEND

- Potential Substation Upgrade
- Existing Substation
- Preferred 240kV Transmission Line Alignment - Stage 1
- Preferred 240kV Transmission Line Alignment - Stage 2
- Alternate 240kV Transmission Line Alignment - Stage 1
- Alternate 240kV Transmission Line Alignment - Stage 2
- Potential Route Variant
- Existing Transmission Line
- Hamlet or Locality
- Road
- Military Base
- Urban Area
- Water Body

Project details

The Alberta Electric System Operator (AESO) manages the Alberta electric system and has identified the need for this project to enhance the reliability of the transmission system in the area.

On April 10, 2019, the Alberta Utilities Commission (AUC) approved the AESO's **Needs Identification Document (NID)** for the Provost to Edgerton and Nilrem to Vermilion (PENV) project.

The AESO's approved transmission development expands and enhances the transmission system in the Provost to Edgerton and Nilrem to Vermilion areas to maintain reliable electricity supply, accommodate load growth and provide reasonable options for future generation access in the area.

AltaLink has been directed by the AESO to identify potential locations for new electricity facilities and prepare a **Facilities Application** for this project.

This package includes details about the **Provost to Edgerton** development, located in the municipal districts of Provost and Wainwright. You may receive information about the Nilrem to Vermilion development if it is located near you. You can also learn more about it on our website at **www.altalink.ca/projects.**

A STAGED APPROACH

The construction of the Provost to Edgerton development will be staged to align with generation and need milestones in the area. Upon approval, Stage 1 construction will proceed. The AESO manages the Alberta electric system and will continue to monitor generation developments and the need for electricity in the area and will direct AltaLink when it is time to proceed with the construction of Stage 2.

If approved, the Provost to Edgerton development involves:

- Approximately 45-60 kilometres of new 240 **kilovolt (kV)** transmission line from an area west of the Town of Provost to an area north of the Village of Edgerton
    - **Stage 1:** Between the existing Hansman Lake **Substation** and the existing 749AL transmission line. The new line will connect to the existing 749AL using an **airbreak**.
    - **Stage 2:** Between the 749AL transmission line and the existing Edgerton Substation
- Modifications at the existing Hansman Lake Substation (Stage 1) and the existing Edgerton Substation (Stage 2)

Please note: The lines on the map represent the potential route options that are still under consideration. Please refer to the enclosed maps for a more detailed view of where lines may be located in your area.

DEFINITIONS

Transmission

Transmission lines make up Alberta's electric highway, linking the places where power is generated to where power is used. Transmission lines transport large amounts of power over long distances across the province. The transmission system connects diverse sources of power generation including wind, high-efficiency coal, natural gas and more.

Needs Identification Document (NID)

The AESO submits Needs Identification Documents (NID) to the AUC for review. A NID describes why a transmission project is required. The AUC must approve a NID before construction can begin.

Facilities Application

AltaLink submits Facilities Applications to the AUC for review. A Facilities Application describes how AltaLink proposes to meet the requirements for a transmission project. It includes routing details, results of the participant involvement program and technical details. Facilities Applications must be approved by the AUC before construction can begin.

Kilovolt (kV)

A kilovolt is equal to one thousand volts and is commonly used when describing transmission and distribution lines. AltaLink's transmission lines range from 69 kV (69,000 volts) to 500 kV (500,000 volts). Light bulbs typically range from 120 to 300 volts.

Substations

Substations are the connection points between power lines of varying voltages and contain equipment that controls and protects the flow of power. Substations include transformers that step down and step up the voltage so power can be transmitted through transmission lines or distributed to your community through distribution lines.

Airbreak

An airbreak is a piece of equipment that isolates portions of transmission line so that future maintenance can be performed without the need for outages.

A typical airbreak

Updated transmission line routes

AltaLink takes several factors into consideration in an effort to find routes with low overall environmental, social and economic effects. In addition to stakeholder input we also consider agricultural, residential, environmental and visual impacts, as well as cost.

We have identified a preferred route, alternate route and local route variants for the proposed new transmission line. These routes are shown on the maps included in this package.

PREFERRED ROUTE

AltaLink's preferred route:

- Parallels our existing transmission line (called 749L) for approximately 48 kilometres
- Parallels road allowances for approximately 44 kilometres, minimizing impacts to existing land uses and providing good access for construction, maintenance and operation of the transmission line
- Has low agricultural and environmental impacts

ALTERNATE ROUTE

AltaLink's alternate route:

- Follows a combination of road allowances and quarter lines
- Has low residential impacts
- Has longer line length and requires additional angle structures

LOCAL ROUTE VARIANTS

A number of route segments connect the preferred and alternate routes, allowing for different route combinations for Stage 2 of the project. These route variants are located on road allowances and quarter lines, and are indicated with a pink line on the maps included in this package.

ROUTE ADJUSTMENTS

Following further engineering, AltaLink has adjusted a portion of the alternate route, shown between designation points B55 and B75 on the maps. This adjustment minimizes the potential environmental impacts to Ribstone Creek and moves the proposed transmission line further away from nearby residences.

AltaLink also adjusted a portion of the route in the vicinity of the Hansman Lake Substation to minimize the number of transmission line crossings, reduce costs and provide adequate space between facilities.

AltaLink adjusted a portion of the route near A80 in order to avoid placing a structure in a low lying wet area and to minimize potential environmental impacts.

If the alternate route is selected, AltaLink may need to adjust a portion of the existing 749AL transmission line to accommodate the connection of the proposed transmission line being built as part of Stage 1 of this project.

All the proposed route adjustments are shown on the maps included in this package.

ROUTES REMOVED FROM CONSIDERATION

AltaLink has removed several route segments from further consideration, which are shown with the grey and white lines on the maps included in this package.

A10-B10, A15-C40 and A30-B30: These three route segments that connect the west and east routes were removed based on agricultural impacts, environmental impacts, cost considerations and stakeholder feedback. It was determined that these segments did not provide a route combination with lower overall impacts than the preferred and alternate routes.

A25-A35-A45: This route segment has been removed based on residential impacts, environmental impacts and additional line length compared to other route segments in the area.

A80-A85-A90-Edgerton Substation: This route segment has been removed based on agricultural impacts, additional line length required, potential impacts to other facilities, stakeholder feedback and cost considerations when compared to other route segments in the area.

Updated structure types

We consulted on two potential structures types for this project. Based on the information gathered, we have selected monopole structures for the majority of the proposed transmission line for the following reasons:

- Allows for the opportunity to locate the line within road allowance, where circumstances warrant
- Greater stakeholder preference than the H-frame structures
- Comparable in cost to the H-frame structures

In select locations, we may use an H-frame or other two pole structure if required from a technical perspective, for example when crossing rivers or other transmission lines, or at corner locations.

Please note: All dimensions are approximate and subject to change with detailed engineering.

**Structures that can be placed in road allowance may be completely within road allowance or straddling the road allowance boundary, depending on the specific location and circumstances. Structures in road allowance may also require some right-of-way on private land for maintenance purposes.*

BUILDING TO MEET DEMAND

This project involves building 240 kV transmission lines. To meet the existing electricity need in the area, the lines will initially be energized at 138 kV, although they will be built so that the voltage can be increased to 240 kV as electricity demand in the area increases.

Additional system upgrades, such as substation modifications, may be required to upgrade the lines to 240 KV. These upgrades are not included as part of this project. The AESO will determine when this is needed and will direct AltaLink to prepare a separate project application for any work that is required at that time.

SINGLE CIRCUIT MONOPOLE

Structure height	25-35 m
Right-of-way width	**When on private property:** 23 m **When in road allowance:** 11-12 m from the edge of the road allowance
Distance between structures	Approximately 200-270 m
Can be placed in road allowance*	Yes
Can be placed on private property	Yes

DEFINITIONS

Right-of-way

The right-of-way is a strip of land required for the construction and safe operation of a transmission line. A right-of-way refers to the physical space a transmission line encompasses including areas on either side of the line. The majority of the right-of-way can still be used by the landowner. Buildings cannot be placed on the right-of-way, but can be built up to the edge of the right-of-way.

Right-of-way, access trails and construction workspace

On the enclosed maps we have included right-of-way, access trails and construction workspace along the proposed routes.

RIGHT-OF-WAY FOR GUYED STRUCTURES

In some locations, guy wires will be required for corner and angle structures. In these instances, an area of approximately 15 x 50 metres will be needed to accommodate guy boxes. An illustration of the right-of-way requirements for guyed corner and angle structures is included below.

ACCESS TRAILS

Access trails are required in areas where access may be limited for a number of reasons, including steep terrain, wetlands or lack of access directly to the right-of-way. Typically, an access trail is approximately eight metres wide, but this width may vary depending on the terrain.

CONSTRUCTION WORKSPACE

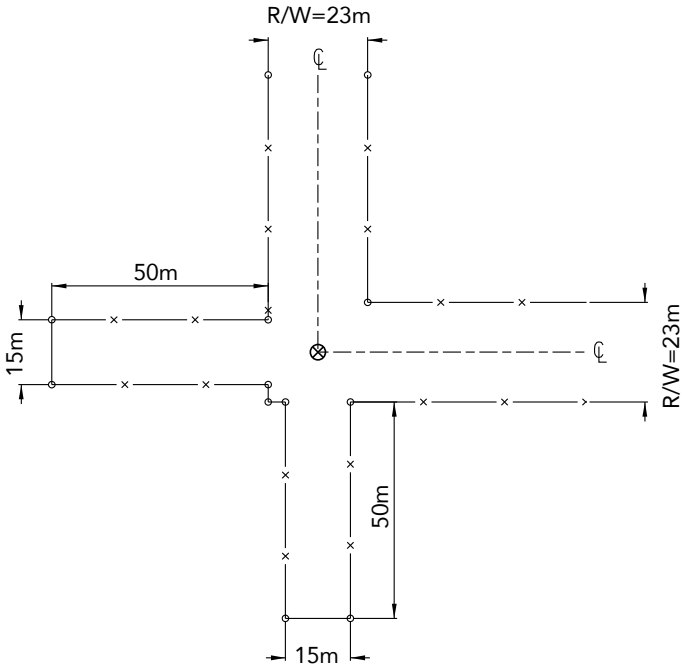
Workspace, in addition to the transmission line right-of-way, is required for the safe construction of the transmission line. The requirements for this workspace vary depending on the location:

- Where the transmission line is proposed on property, AltaLink may require 10 metres of construction workspace on either side of the right-of-way.
- Where the transmission line is proposed in road allowance, AltaLink may require an additional 10 metres of construction workspace beyond the right-of-way, on the property side.
- AltaLink may also need approximately 45x120 m of construction workspace for stringing activities at corner structures.

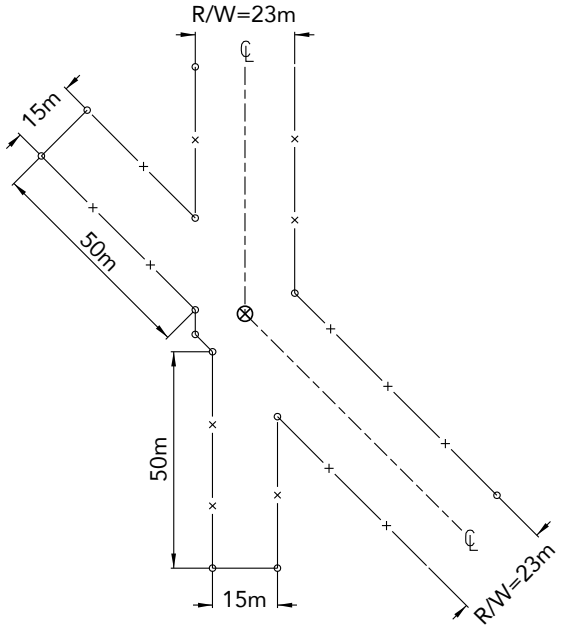
The construction workspace, including potential stringing areas, is shown on the strip mosaic maps.

AltaLink will consult with all affected landowners regarding potential construction workspace and access trails. Not all of this construction workspace and off right-of-way access shown on the strip mosaic maps will be required, and some of it may be subject to change. Access trails shown on the strip mosaic maps have been identified mainly through aerial imagery – AltaLink may request access to your property to further assess access requirements and suitability.

SINGLE CIRCUIT DEAD-END STRUCTURE



SINGLE CIRCUIT ANGLE STRUCTURE



- RIGHT-OF-WAY (R/W)
- TRANSMISSION LINE CENTRE LINE (℄)

Substation requirements

The following substation modifications are required to accommodate the new transmission line.

STAGE 1: BUILT IF PROJECT IS APPROVED

The existing Hansman Lake Substation is located in SE-1-40-5-W4, approximately 20 kilometres northwest of the Town of Provost. We need to install up to four new **circuit breakers.** No modifications to the existing fence line are required.

STAGE 2: BUILT WHEN GENERATION AND NEED MILESTONES ARE MET

The existing Edgerton Substation is located in NE-2-44-4-W4 and SE-11-44-4-W4, approximately one kilometer north of the Village of Edgerton. To accommodate the connection of line built as part of Stage 2, we need to add one new 138 kV circuit breaker. Initially we proposed a substation fence line expansion to accommodate the development, but it has been determined that this expansion no longer required. All work will occur within the existing fence line.

DEFINITIONS

Circuit breakers

Circuit breakers are electrical switches inside a substation that protect substation equipment. Circuit breakers help ensure the safety and reliability of the electric system.

Existing Hansman Lake Substation

Existing Edgerton Substation

A typical 138 kV circuit breaker

Ongoing survey activity

ENVIRONMENTAL SURVEYS

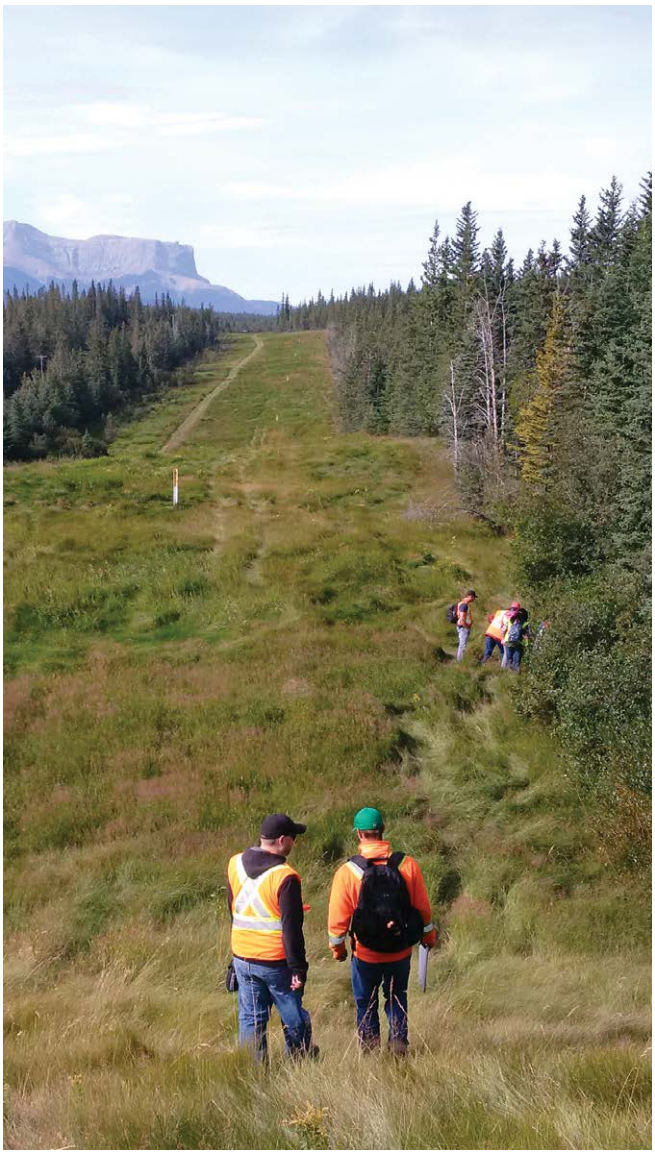
AltaLink will be conducting seasonal environmental surveys along the potential routes for the proposed Provost to Edgerton development. The surveys are conducted by helicopter or on the ground. Ground based surveys on private land will only occur after landowner permission is received. Survey vehicles will be clearly marked and surveyors will wear a high visible vest. When conducting all surveys we work to minimize disruption to residences, area users, livestock and wildlife.

GEOTECHNICAL SURVEYS

AltaLink will be conducting geotechnical drilling to perform soil investigation at various locations within the project area as required. Where these activities require access to private property, an AltaLink representative will be in contact with you.

WETLAND DISTURBANCE

Altalink will meet all requirements under the *Water Act* for disturbance to wetlands. Where required an in-lieu compensation payment will be paid in accordance with the Alberta Wetland Policy. Any person who is directly affected by a *Water Act* application may submit a statement of concern to Alberta Environment and Parks during the application process.



How to provide your input

AltaLink is closely monitoring the spread of COVID-19. Our priority is maintaining the health and safety of our employees, contractors, and the general public, while ensuring that we are able to continue to operate our system and keep the lights on for Albertans.

Stakeholder input is critical to identifying a low overall impact route for this project. You can provide your input in any of the following ways.

PUBLIC EVENTS

Based on recommendations from local and national health authorities, AltaLink has made the decision to not hold public stakeholder events for the project at this time.

While we aren't hosting public events at this time, if you'd like to provide input, you can do so through our online feedback portal, found here:
www.altalink.ca/projects/project-feedback.cfm

PARTICIPATE IN A ONE-ON-ONE CONSULTATION

At this time we are limiting in-person meetings and will be conducting the majority of meetings via telephone or electronic methods, however as the situation regarding COVID-19 changes we will re-assess this approach.

We will update you as the situation evolves. Our focus is ensuring the lights stay on, and that you have the electricity you need.

CONTACT US DIRECTLY

You can contact us by telephone, email, mail or through our website. Our contact information is on the last page of this newsletter.

PRIVACY COMMITMENT

AltaLink is committed to protecting your privacy. Your personal information is collected and will be protected under AltaLink's Privacy Policy and Alberta's Personal Information Protection Act. As part of the regulatory process for new transmission projects, AltaLink may provide your personal information to the Alberta Utilities Commission (AUC).

For more information about how AltaLink protects your personal information, visit our website at **www.altalink.ca/privacy** or contact us directly via email at **privacy@altalink.ca** or phone at **1-877-267-6760**.

Next steps

After our consultation process is complete we will file a Facilities Application with the Alberta Utilities Commission (AUC) and it will be reviewed through a process in which stakeholders can participate. To learn more about the AUC process and how you can become involved, please refer to the brochure included in this package titled *Public involvement in a proposed utility development.*

ANTICIPATED PROJECT SCHEDULE

Notify and consult with stakeholders
October 2019 to August 2020

File application with Alberta Utilities Commission (AUC)
September 2020

Start construction if project is approved
Stage 1: September 2021
Stage 2: based on generation and need milestones

Complete construction
Stage 1: Winter 2022
Stage 2: based on generation and need milestones

Although we attempt to follow the anticipated project schedule it is subject to change. We will continue to provide you with updated schedule information if required as the project progresses.

Electric and Magnetic Fields (EMF)

AltaLink recognizes that people may have concerns about exposure to EMF and we take those concerns seriously.

Everyone in our society is exposed to power frequency EMF from many sources, including:

- Power lines and other electrical facilities
- Electrical appliances in your home
- Building wiring

National and international organizations such as Health Canada and the World Health Organization (WHO) have been conducting and reviewing research on exposure to EMF for more than 40 years. Based on this research, these agencies have not recommended that the general public needs to take steps to limit their everyday exposure to EMF from high voltage transmission lines, including individuals that are located on the edge of a power line right-of-way.

If you have any questions about EMF please contact us:

Website: www.altalink.ca/emf
Email: emfdialogue@altalink.ca
Toll-free phone number: 1-866-451-7817

Contact us

To learn more about the proposed Provost to Edgerton and Nilrem to Vermilion Transmission Development, please contact:

ALTALINK
1-877-267-1453 (toll-free)
stakeholderrelations@altalink.ca

AltaLink's transmission system efficiently delivers electricity to 85 per cent of Albertans. Dedicated to meeting the growing need for electricity, AltaLink connects Albertans to renewable, reliable and low-cost power. With a commitment to community and environment, AltaLink is ensuring the transmission system will support Albertans' quality of life for years to come. Learn more at **www.altalink.ca**.

To learn more about the application and review process, please contact:

ALBERTA UTILITIES COMMISSION (AUC)
780-427-4903 (toll-free 310-0000 before the number)
utilitiesconcerns@auc.ab.ca

The Alberta Utilities Commission (AUC) ensures the fair and responsible delivery of Alberta's utility services. AltaLink submits applications for new transmission projects to the AUC and the AUC reviews them in a public process.

To learn more about Alberta's electric system and the need for the project, please contact:

ALBERTA ELECTRIC SYSTEM OPERATOR (AESO)
1-888-866-2959 (toll-free)
stakeholder.relations@aeso.ca

The AESO is an independent, not-for-profit organization acting in the public interest of all Albertans. They plan Alberta's transmission system, which is made up of the transmission lines, substations and other related equipment that allow electricity to flow from where it is generated to where it is used.

INCLUDED IN THIS INFORMATION PACKAGE:

- **Project maps**
- **AUC brochure:**
  Public involvement in a proposed utility development

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