APPENDIX C AESO PIP

1.0 Participant Involvement Program (PIP)

1.1 PIP Design

The AESO's Participant Involvement Program (PIP) is designed to notify the parties notified in the transmission facility owner's (TFO's) PIP and any other parties that the AESO determines may have an interest in the needs identification document, including, but not limited to:

i. occupants, landowners or residents;
ii. local authorities, agencies and government which have responsibilities related to electric transmission line development;
iii. First Nations and Métis; and
iv. market participants

(collectively, Stakeholders).

The AESO's PIP has been conducted in accordance with the requirements of Section 6.2.1, NID19 and Appendix A2 of the current Alberta Utilities Commission Rule 007 (AUC Rule 007), effective July 4, 2017.

From December 2016 to January 2018, the AESO conducted a PIP to assist in preparing its *Transmission Enhancements in the Municipal Districts of Provost and Wainwright Needs Identification Document* (NID). The AESO directed the TFO, in this case AltaLink Management Ltd., in its capacity as general partner of AltaLink, L.P., to assist the AESO in providing notification as part of the AESO's PIP.

1.2 Stakeholder Notification

The AESO developed a one-page AESO Need Overview document that notified Stakeholders of the following items:

- a description of the need for development;
- a description of the AESO's preferred option to respond to the system access service request;
- identification of the general area where facilities could be installed to implement the AESO's preferred option to respond to the system access service request;
- the AESO's contact information, including telephone, email and website, for further information; and
- the AESO's next steps, including the AESO's intention to apply to the Alberta Utilities Commission (Commission) for approval of the need.

A copy of the Need Overview was posted to the AESO website at https://www.aeso.ca/grid/projects/transmission-enhancements-in-the-municipal-districts-of-provost-and-wainwright/ on December 5, 2016 and a notice was published in the AESO Stakeholder Newsletter on December 6, 2016. Copies of the Need Overview posting and the AESO Stakeholder Newsletter notice have been included as Attachments 1 and 2, respectively. The Need Overview was also included with the TFO's project-specific information packages that were distributed to Stakeholders, as further described below.

Stakeholders Notified in the TFO's PIP

The TFO has advised the AESO that its PIP included notification within 800 m of the proposed transmission line right-of-way and substation boundaries, in accordance with AUC Rule 007.

The TFO notified a total of approximately 127 Stakeholders, of which 99 were classified as private or individual landowners, occupants, and residents. The TFO was unable to notify 1 of the stakeholders classified as an occupant. The other 28 Stakeholders and the TFO's rationale for their inclusion in the PIP are listed in Table 1.

Table 1: Summary of Notified Agency, Industry and Special Interest Group Stakeholders

Stakeholder	TFO's Rationale for Inclusion in the PIP
Alberta Culture and Community Spirit	Provincial requirements
Alberta Environment and Parks - Fish and Wildlife	Provincial requirements
Alberta Environment and Parks - Rangeland Management	Provincial requirements
Alberta Environment and Parks - Regional Approvals	Provincial requirements
Alberta Infrastructure	Provincial requirements
Alberta Transportation	Provincial requirements
ATCO Gas & Pipelines Ltd.	Facility owner in area
Battle River Power Co-op	Facility owner in area
Bow River Energy Ltd.	Facility owner in area
Cochin Pipelines Ltd.	Facility owner in area
CP Rail	Facility owner in area
Ducks Unlimited Canada	Special interest group in area
Enerplus Corporation	Facility owner in area
Gibson Energy ULC	Facility owner in area
Husky Oil Operations Limited	Facility owner in area
Innovation, Science and Economic Development Canada	Federal requirements
MD of Provost No. 52	Municipal requirements
MD of Wainright No. 61	Municipal requirements
Natural Gas Co-op 52 Ltd.	Facility owner in area

Stakeholder	TFO's Rationale for Inclusion in the PIP
Nature Conservancy of Canada	Special interest group in area
NAV CANADA	Federal requirements
Newalta Corporation	Facility owner in area
Provost Airport	Facility owner in area
Surge Energy Inc.	Facility owner in area
Telus Communications Company	Facility owner in area
Town of Provost	Municipal requirements
Transport Canada - Aerodrome Safety	Federal requirements
Twin Butte Energy Limited	Facility owner in area

Attachments 3 and 4 include the TFO's project newsletters, which were included in the two TFO project-specific information packages that were distributed to the Stakeholders described above between December 2, 2016 and September 26, 2017. The TFO's project newsletter included the AESO's contact information, a description of the AESO's role, a reference to the AESO Need Overview, and an invitation to contact the TFO or the AESO for additional information.

The TFO's project newsletter and the AESO Need Overview were also posted on the TFO's project-specific webpage at http://www.altalink.ca/projects/view/256/fortis-provost-reliability-upgrade

The TFO held a public event on January 19, 2016 in Provost, Alberta which was attended by 18 Stakeholders. The TFO's December 2016 project specific information package, which included the AESO Need Overview, was available at the open house. In addition, AltaLink had on display information relating to the roles of "Key Players", which included the following information on the role of the AESO:

> **THE ALBERTA ELECTRIC SYSTEM OPERATOR (AESO)**
> The AESO is an independent, not-for-profit entity responsible for the safe, reliable and economic planning and operation of the Alberta Interconnected Electric System. The AESO determines the need for transmission reinforcement and directs Transmission Facility Owners, such as AltaLink, to submit a Facility Application for permitting and licensing to construct and operate transmission facilities. Find out more at http://www.aeso.ca

1.3 Filing Notification

Most recently, the AESO notified Stakeholders of its intention to submit the NID to the Commission by posting a Notification of NID Filing to the AESO website at https://www.aeso.ca/grid/projects/transmission-enhancements-in-the-municipal-districts-of-provost-and-wainwright/ on January 15, 2018 and a notice in the AESO Stakeholder Newsletter on January 16, 2018. Copies of the Notification of NID Filing posting and the AESO Stakeholder Newsletter notice have been included as Attachments 5 and 6, respectively.

1.4 Responding to Questions and Concerns

To ensure that Stakeholders had the opportunity to provide feedback, the AESO provided Stakeholders with AESO contact information, including a dedicated, toll-free telephone line (1-888-866-2959) and a dedicated email address (stakeholder.relations@aeso.ca). The AESO Need Overview included this contact information, along with the AESO's mailing address (2500, 330 5th Ave. SW, Calgary) and website address (www.aeso.ca), and a privacy statement that described how the AESO is committed to protecting Stakeholders' privacy.

As directed by the AESO, the TFO was prepared to direct any Stakeholder questions addressed to the AESO, or questions regarding the AESO Need Overview, to the AESO.

1.5 Concerns and Objections Raised

During the TFO's PIP activities, two Stakeholders raised questions or concerns to a representative of the TFO. The TFO obtained the Stakeholders' consent to share their personal information with the AESO for the purpose of referring their questions and concerns to the AESO. The AESO contacted the two Stakeholders directly.

One Stakeholder inquired about routing and siting. The second Stakeholder inquired about routing and siting, the regulatory process, and requested clarification regarding the need for the Project, economic impacts, and the historic and predicted reliability of the electric system in the area.

The AESO has addressed these questions and concerns and is not aware of any outstanding concerns or objections about the AESO's preferred option to respond to the system access service request or the need for development.

Apart from the inquiries identified above, the TFO has advised that Stakeholders have not identified any further concerns or objections regarding the AESO's preferred option to respond to the system access service request or the need for development. Further, apart from the inquiries referred to the AESO by the TFO, the AESO has not received any indication of concerns or objections from any party about the AESO's preferred option to respond to the system access service request or the need for development.

1.6 List of Attachments

- Attachment 1 – AESO Need Overview (December 2016)
- Attachment 2 – AESO Stakeholder Newsletter Need Overview Notice (December 6, 2016)
- Attachment 3 – TFO's Project Newsletter – *Fortis Provost Reliability Upgrade* (December 2016)
- Attachment 4 – TFO's Project Newsletter – *Fortis Provost Reliability Upgrade* (May 2017)

- Attachment 5 – AESO Public Notification of NID Filing Website Posting (January 15, 2018)
- Attachment 6 – AESO Stakeholder Newsletter NID Filing Notice (January 15, 2018)

Attachment 1 – AESO Need Overview (December 2016)

Need for Transmission Developments in the Municipal Districts of Provost and Wainwright

FortisAlberta Inc. (FortisAlberta) has applied to the Alberta Electric System Operator (AESO) for transmission system access to improve the reliability of the electricity services in the Municipal Districts of Provost and Wainwright. FortisAlberta's request can be met by the following solution:

PROPOSED SOLUTION

- Add a 138 kilovolt (kV) transmission line to connect the existing Hayter 277S substation and the existing Provost 545S substation.
- Modify the existing Provost 545S substation, including adding two 138 kV circuit breakers.
- Modify the existing Hayter 277SS substation, including adding two 138 kV circuit breakers.
- Modify the existing Killarney Lake 267S substation, including adding one 138 kV circuit breaker.
- Add or modify associated equipment as required for the above transmission developments.

NEXT STEPS

- The AESO intends to apply to the Alberta Utilities Commission (AUC) for approval of the need in mid-2017.
- The AESO's needs identification document (NID) application will be available on the AESO's website at **https://www.aeso.ca/grid/projects/** at the time of its application to the AUC.

The following organizations have key roles and responsibilities in providing access to the transmission system:

THE AESO:

- Must plan the transmission system and enable access to it for generators and other qualified customers
- Is regulated by the AUC and must apply to the AUC for approval of its NID

ALTALINK MANAGEMENT LTD.:

- Is the transmission facility owner in the Provost and Wainwright areas
- Is responsible for detailed siting and routing, constructing, operating and maintaining the associated transmission facilities
- Is regulated by the AUC and must apply to the AUC for approval of its transmission facilities applications

FAST FACT

Alberta's electric transmission system comprises the towers, wires and related equipment that are a part of moving electricity from where it is generated to where it is used.

CONTACT US

We appreciate your views, both on the need for transmission system development and proposed transmission plans. If you have any questions or comments, please contact us directly.

Alberta Electric System Operator
Jennifer Vollmer
AESO Stakeholder Relations
stakeholder.relations@aeso.ca
1-888-866-2959
2500, 330-5th Avenue SW
Calgary, AB T2P 0L4
Phone: 403-539-2450
Fax: 403-539-2949
www.aeso.ca | **@theaeso**

WHO IS THE AESO?

The Alberta Electric System Operator (AESO) plans and operates Alberta's electricity grid and wholesale electricity market safely, reliably and in the public interest of all Albertans. We are a not-for-profit organization with no financial interest or investment of any kind in the power industry.

Attachment 2 – AESO Stakeholder Newsletter Need Overview Notice (December 6, 2016)

December 6, 2016

AESO Stakeholder Newsletter

Need for Transmission Enhancements in the Municipal Districts of Provost and Wainwright

FortisAlberta Inc. has applied to the AESO for transmission system access to improve the reliability of the electricity services in the municipal districts of Provost and Wainwright. FortisAlberta's request can be met by the following solution:

- Add a 138-kilovolt (kV) transmission line to connect the existing Hayter 277S substation and the existing Provost 545S substation.
- Modify the Provost 545S substation, including adding two 138-kV circuit breakers.
- Modify the Hayter 277SS substation, including adding two 138-kV circuit breakers.
- Modify the existing Killarney Lake 267S substation, including adding one 138-kV circuit breaker.
- Add or modify associated equipment as required for the above transmission developments.

The AESO has posted a Need Overview for this project on its website. Please click here to view the document or visit the AESO website at www.aeso.ca and follow the path Grid > Projects > Transmission Enhancements in the Municipal Districts of Provost and Wainwright.

Attachment 3 – TFO's Project Newsletter – *Fortis Provost Reliability Upgrade* (December 2016)

ALTALINK
A BERKSHIRE HATHAWAY ENERGY COMPANY

Volume 1
December 2016

Electric system improvements near you

Fortis Provost Reliability Upgrade

You are receiving this newsletter because you are near the Provost Reliability Upgrade project and we want your input.

You may have recently received a letter from the Alberta Electric System Operator (AESO) in October regarding the Provost to Edgerton to Nilrem to Vermillion Transmission Development (project information and contact information are available at www.aeso.ca). Please note that the Fortis Provost Reliability Upgrade described in this newsletter is not related to that project.

FortisAlberta has requested upgrades to the **transmission** system in the municipal districts of Provost and Wainwright to improve the reliability of the electric system in your area.

We want to provide you with:

- project details
- maps of the project area
- information about how you can provide your input
- the project schedule

You are invited to our open house:

January 19 from 4 p.m. - 7 p.m.

Recreation & Culture Centre, Alberta Room B

5113 43 Street, Provost, AB

Who is AltaLink?

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.

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.

CONTACT US

1-877-269-5903

stakeholderrelations@altalink.ca

www.altalink.ca/projects

DEFINITION

Substation

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.

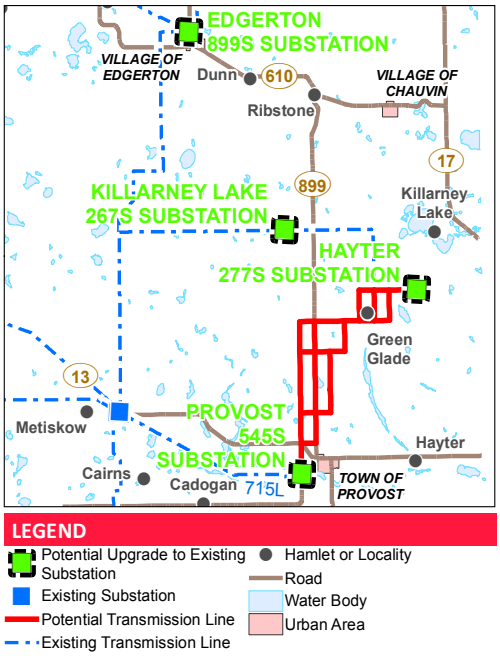
Above: the Provost Substation
Middle: the Edgerton Substation
Below: the Hayter Substation

Project overview

The proposed Fortis Provost Reliability Upgrade is located in the municipal districts of Provost and Wainwright. For details regarding the need for the project, please see the included AESO Need Overview document. If approved, the project involves:

- building a new 138 kV (kilovolt) transmission line, approximately 33 kilometres long between the Hayter and Provost substations
- adding new equipment and expanding the fenceline at the Provost **Substation**
- adding new equipment and replacing the wood pole telecommunications structure with a new steel lattice telecommunications tower at the Hayter Substation
- replacing the wood pole telecommunications structure with a new steel lattice telecommunications tower at the Edgerton Substation
- adding new equipment and replacing the wood pole telecommunications structure with a new steel lattice telecommunications tower at the Killarney Lake Substation

Please note that only maps showing project activities within 800 metres of your property have been included in this package.



New transmission line

AltaLink is proposing to construct approximately 33 kilometres of 138 kV single-circuit transmission line between the existing Hayter and Provost substations. This new transmission line will consist of both single-pole and three-pole structures.

THE NEW TRANSMISSION STRUCTURES:

- will be 138 kV wood or steel structures
- will be approximately 17 to 23 metres tall
- will have a distance of approximately 150 metres between structures

AltaLink will also be installing optical ground wiring (also known as OPGW) on top of the new transmission line for protection and telecommunications purposes

Above: typical three-pole configuration
Below: typical wood single-pole structure

Route selection

AltaLink takes several factors into consideration in an effort to find a route 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.

AltaLink has identified multiple potential route options that would be suitable to connect the Provost and Hayter Substations. If the project is approved, only one continuous transmission line route will be selected.

Right-of-way, access and construction workspace

The majority of the potential transmission line routes are within road allowance. However, AltaLink may require additional workspace on private property for construction activities.

The construction workspace is intended to be primarily used for access of equipment during construction and will be negotiated with landowners.

More specific information regarding access and construction workspace will be confirmed following the first round of consultation. Please refer to the project maps included in this package for specific details.

LAND ACQUISITION & COMPENSATION

At AltaLink, we believe landowners who have transmission facilities on their property should be compensated fairly.

We pay fair market value and the acquisition of land will be negotiated on an individual basis with landowners.

DEFINITION

Circuit breaker

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

Telecommunications tower

Telecommunications towers support equipment that transmits data to our system control centre. This allows us to monitor the operation of the electric system and ensure we provide safe and reliable power to our customers.

The proposed telecommunications towers will look similar to the above.

Substation upgrades

To support the new transmission line, upgrades will need to be made to the Provost, Hayter and Killarney Lake substations. These upgrades are necessary to maintain the reliability of the electric system in the area.

UPGRADES TO THE HAYTER SUBSTATION INCLUDE:

- adding two 138 kV **circuit breakers** and one 25 kV circuit breaker and associated equipment
- relocating an existing 138 kV circuit breaker within the substation

UPGRADES TO THE PROVOST SUBSTATION INCLUDE:

- adding two 138 kV circuit breakers and associated equipment
- expanding the site fenceline
- reconnecting the existing 715L transmission line at the Provost Substation
- adding a new control building
- a mobile substation may be required during construction

UPGRADES TO THE KILLARNEY LAKE SUBSTATION INCLUDE:

- adding one 138 kV circuit breaker and associated equipment
- a potential expansion of the control building within the existing fenceline

Telecommunications upgrades

New **telecommunications towers** and associated equipment are required at the Hayter, Killarney Lake and Edgerton substations to support the new transmission assets in the area.

THESE NEW TELECOMMUNICATIONS TOWERS:

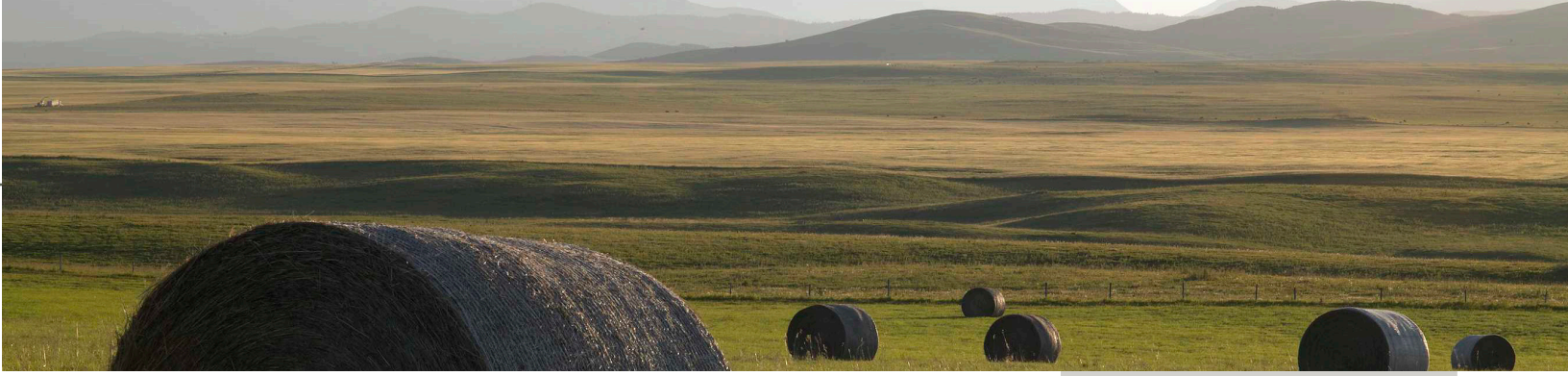
- will be self-supporting steel lattice structures
- will have a triangular bases
- may be painted and have lighting to comply with Transport Canada's requirements
- will be replacing an existing wood pole telecommunications structures

HEIGHTS OF THE NEW TOWERS:

- Hayter Substation: approximately 20 to 30 metres tall
- Killarney Lake Substation: approximately 25 to 35 metres tall
- Edgerton Substation: approximately 30 to 35 metres tall

The Killarney Lake Substation

A typical 138 kV circuit breaker



Electric and Magnetic Fields (EMF)

AltaLink recognizes that people have concerns about exposure to Electric and Magnetic Fields (EMF) and we take those concerns very seriously.

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

- power lines and other electrical facilities
- electrical appliances in your home
- building wiring

National and international organizations such as the Health Canada and World Health Organization have been conducting and reviewing research about EMF for more than 40 years. Based on this research, these organizations have not recommended the general public take steps to limit their everyday exposure to EMF from high voltage transmission lines.

Radio Frequency (RF)

Telecommunication towers use Radio Frequency (RF) signals to transmit and receive information. The point-to-point signals travel along a focused path at low power levels and are well within recommended safety limits. A licensed telecommunications tower will not impact any other licensed telecommunication frequencies such as cellular, over-the-air television, satellite, radio, or GPS.

The radio installation described in this notification will be installed and operated on an ongoing basis so as to comply with Health Canada's Safety Code 6, which defines safe levels of radio frequency (RF) exposure. To ensure the structural adequacy of the tower, the design and installation will follow industry standards and sound engineering practices.

If you have any questions about EMF or RF please contact us:

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

For general information relating to telecommunications systems, please contact:

SPECTRUM, INFORMATION TECHNOLOGIES AND TELECOMMUNICATIONS

1-800-267-9401 (toll-free in Canada)

Website: www.ic.gc.ca/towers

Alberta's natural landscapes are home to many diverse animals, including more than 400 different species of birds. As a component of AltaLink's Avian Protection Plan bird markers are installed in areas where the risk of birds colliding with transmission lines are high. Bird markers have been proven to be effective in increasing visibility for birds and reducing collisions.

Electrical bird related outages in substations reduce system reliability and increase operating cost for restoration and replacement of damaged equipment. To reduce outages and protect birds, AltaLink installs GreenJacket cover-ups – a first-of-its-kind product that reduces electrocutions of birds on substation equipment. For information on AltaLink's Environmental Respect approach, please visit: www.altalink.ca/environment.

DEFINITION

Alberta Utilities Commission

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.

DEFINITION

Alberta Electric System Operator

The Alberta Electric System Operator (AESO) is an independent, not-for-profit organization responsible for the safe, reliable and economic planning and operation of the provincial transmission grid. For more information about why this project is needed, please refer to the AESO's Need Overview included with this package, or visit www.aeso.ca. If you have any questions or concerns about the need for this project you may contact the AESO directly.

How to provide your input

Stakeholder input is important to us. You can provide your input in any of the following ways.

ATTEND OUR OPEN HOUSE

Please join us at our open house. Refer to the front page of this newsletter for time and location information. We will be available to share information, gather your input and respond to any questions or concerns you might have.

PARTICIPATE IN A ONE-ON-ONE CONSULTATION

We will contact all occupants, residents and landowners who are near the project areas to gather input through one-on-one consultations.

During the one-on-one process we will document the information you provide and respond to any questions or concerns you may have about the project.

AltaLink is committed to sharing information about its projects and working with the public to gather and respond to stakeholder input and concerns. A summary of stakeholder comments will be incorporated into the application we submit to the AUC.

CONTACT US DIRECTLY

You can contact us by telephone, email, mail or through our website. Our contact information is on the front and back pages of this newsletter.

Next steps

The AESO received a system access service request from FortisAlberta to improve the reliability of the electric system in the municipal districts of Provost and Wainright. The AESO will file a Needs Application with the AUC.

After our consultation process is complete, following two rounds of public consultation and notification, AltaLink will file a Facilities Application with the AUC. The AUC will review both the Needs Application and the Facilities Application at the same time through a process in which stakeholders can participate. We will inform you when we file with the AUC.

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	December 2016 - July 2017
File application with Alberta Utilities Commission (AUC)	September 2017
Start construction if project is approved	June 2018
Completed construction	June 2019

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.

Projects in the area

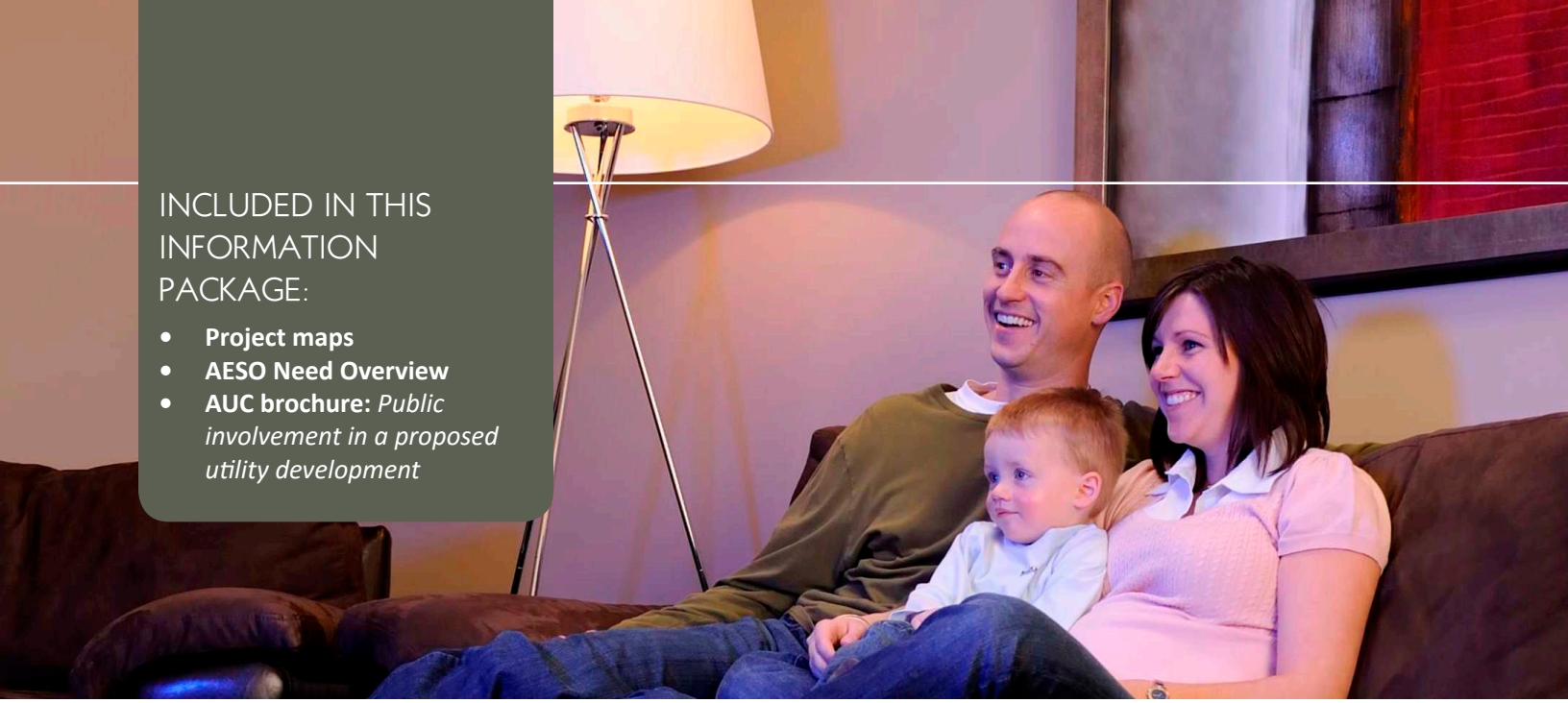
Project name	Description	Status
Provost to Edgerton and Nilrem to Vermilion Transmission Development (PENV)	AESO recently contacted stakeholders in Provost and surrounding areas regarding the need for a new transmission reinforcement. The AESO is proposing a 240 kV transmission development that will initially operate at a lower voltage, 138/144 kV, to reinforce the existing transmission system. The PENV project is not related to the project discussed in this newsletter.	Consultation underway (AESO)

PRIVACY COMMITMENT

AltaLink is committed to protecting your privacy. Collected personal information will be protected under AltaLink's Privacy Policy and the Personal Information Protection Act. As part of the regulatory process for new transmission projects, AltaLink may provide your personal information to 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 e-mail privacy@altalink.ca or phone at 1-877-267-6760.

INCLUDED IN THIS INFORMATION PACKAGE:

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



Contact us

To learn more about the proposed project please contact:

ALTALINK
1-877-269-5903 (toll-free)
Email: stakeholderrelations@altalink.ca
Website: www.altalink.ca/regionalprojects

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)
Email: stakeholder.relations@aeso.ca

The AESO is an independent, not-for-profit organization responsible for the safe, reliable and economic planning and operation of the provincial transmission grid. For more information about why this project is needed, please refer to the AESO's Need Overview included with this package, or visit www.aeso.ca. If you have any questions or concerns about the need for this project you may contact the AESO directly. You can make your questions or concerns known to an AltaLink representative who will collect your personal information for the purpose of addressing your questions and/or concerns to the AESO. This process may include disclosure of your personal information to the AESO.

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

ALBERTA UTILITIES COMMISSION (AUC)
780-427-4903
(You can call toll-free by dialing 310-0000 before the number).
Email: utilitiesconcerns@auc.ab.ca

ALTALINK
A BERKSHIRE HATHAWAY ENERGY COMPANY

2611 - 3rd Avenue SE
Calgary, Alberta T2A 7W7

Let's talk transmission

www.facebook.com/altalinktransmission

www.twitter.com/altalink

Attachment 4 – TFO's Project Newsletter – *Fortis Provost Reliability Upgrade* (May 2017)

ALTALINK
A BERKSHIRE HATHAWAY ENERGY COMPANY

Volume 2
May 2017

Electric system improvements near you

Fortis Provost Reliability Upgrade

You are receiving this newsletter because we would like to provide you with an update about our progress on the Provost Reliability Upgrade project and we want your input.

FortisAlberta has requested upgrades to the **transmission** system in the municipal districts of Provost and Wainwright to improve the reliability of the electric system in your area.

What progress have we made?

After consulting with stakeholders in the area, AltaLink has identified three transmission route options - one preferred route and two alternate routes.

We want to provide you with:

- project details
- maps of the project area
- information about how you can provide your input
- the project schedule
- an update on the proposed routing

Route selection

AltaLink takes several factors into consideration in an effort to find a route or routes with low overall environmental, social and economic effects. In addition to stakeholder input some of the factors we consider include agricultural, residential, environmental, visual and cost factors. Stakeholder input is an important part of our planning process.

Who is AltaLink?

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.

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.

CONTACT US

1-877-269-5903

stakeholderrelations@altalink.ca

www.altalink.ca/projects

Structures on the new transmission line will look similar to the above

Preferred and alternate routes

THE PREFERRED ROUTE:

- follows Highway 899 (which has a 40 metre road allowance) for approximately half of its length, where adjacent residential development and other yard site features are generally set back further from the road
- provides better access for construction, operation and maintenance of the line compared to both alternate routes due its proximity to the highway
- has reduced potential visual impacts for nearby residences, due to the presence of existing tree screens

THE WEST ALTERNATE ROUTE:

- follows Range Road 30 (which has a 20 to 30 metre road allowance) for portions of its length
- provides better access for operation and maintenance of the line compared to the east alternate route

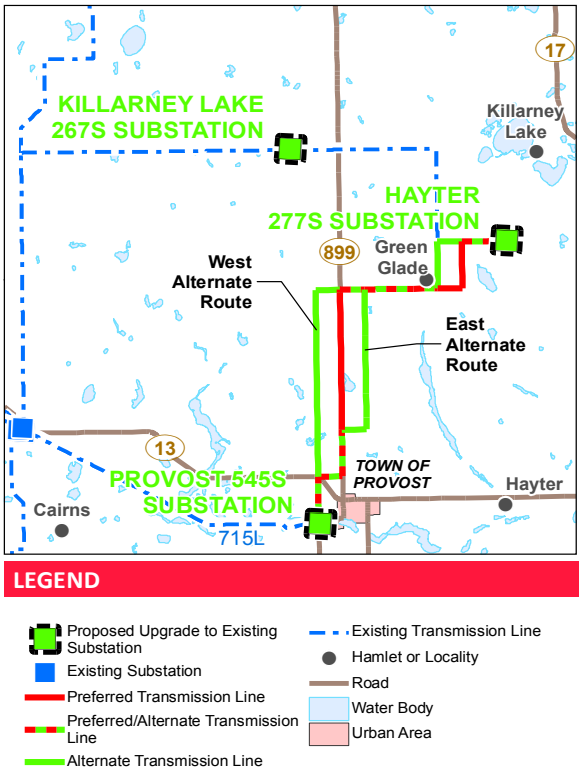
THE EAST ALTERNATE ROUTE:

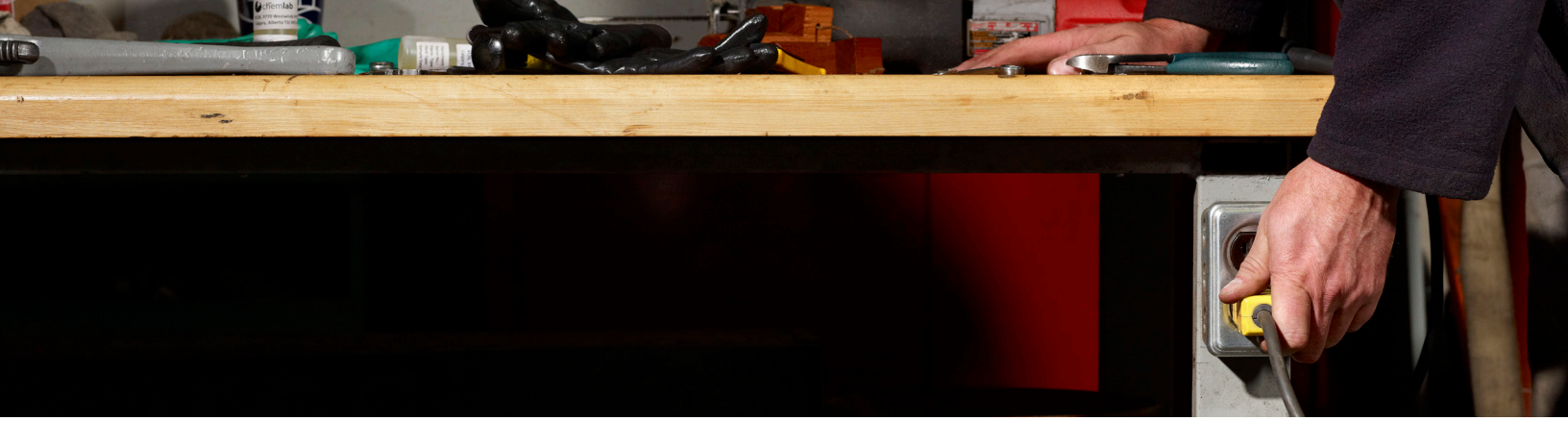
- follows Range Road 24 (which has a 20 metre road allowance) for a portion of its length
- has reduced visual impacts for nearby residences, due to the presence of existing tree screens

How did we determine preferred and alternate routes?

Of the potential routes considered in the project area, AltaLink believes the preferred route is the preferred solution as it has low overall environment, social and economic effects. The alternate routes also present viable alternatives. None of these options have been approved by the Alberta Utilities Commission (AUC) and all are under consideration. The AUC can approve any route or a combination of the preferred and alternate routes in their decision.

Based on our initial environmental review, the preferred route and east alternate route have similar potential environmental impacts, while the west alternate route has lower potential environmental impacts. Environmental surveys are currently underway on all route options to gather detailed information for further assessment of the potential environmental impacts of the project.





Previously considered route segments

Several route segments were removed from consideration based on their environmental effects, residential impacts, constructability factors and stakeholder feedback. In an effort to determine low overall environmental, social and economic effects, all route options were carefully analyzed. Removed route segments are shown in grey on the maps included in this package.

For stakeholders who are no longer on a proposed route, you will not receive any further correspondence from us about this project. If you wish to follow the progress of the project or if you have questions, please contact us using the information at the end of this newsletter or visit www.altalink.ca/projects/view/256/fortis-provost-reliability-upgrade.

Other updates

SHIFTED SEGMENT AND LINE REALIGNMENT

In the first round of consultation, a segment of AltaLink's preliminary route (between designation points F60 and G60 on the included map) was located on private property within a 20 metre wide right-of-way. The segment has now been shifted off the property so it will be within the south side of the road allowance. Please see the included map for details on this route change.

After additional engineering, the realignment of existing 715L line into the Provost Substation has been shifted south to accommodate for other lines near the substation and to meet height restrictions near the Provost airport, as shown on the included strip mosaic maps.

ADDITIONAL ROUTE SEGMENT

During consultation, stakeholders suggested a route option that continues north of designation point C40 along Range Road 24. After further investigation and consultation, AltaLink determined this to be a viable route option and has incorporated this segment (C40 to C50) into the east alternate route.

EDGERTON TELECOMMUNICATIONS TOWER

AltaLink has determined that the **telecommunications tower** proposed to be constructed at the Edgerton **Substation** will no longer be needed as part of this project.

NEW CONTROL BUILDING AND EXPANSION

To accommodate new equipment, AltaLink has determined that a new control building will need to be added at the Provost Substation and the existing control building at the Killarney Lake Substation will need to be expanded by an area of approximately one by eight metres. No fence expansion will be required for the Killarney Lake Substation control building expansion.

DEFINITION

Telecommunications tower

Telecommunications towers support equipment that transmits data to our system control centre. This allows us to monitor the operation of the electric system and ensure we provide safe and reliable power to our customers.

Substation

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.

LAND ACQUISITION & COMPENSATION

At AltaLink, we believe landowners who have transmission facilities on their property should be compensated fairly.

We pay fair market value and the acquisition of land will be negotiated on an individual basis with landowners.

THE NEW TRANSMISSION STRUCTURES:

- will be 138 kV wood or steel structures
- will be approximately 17 to 23 metres tall
- will have a distance of approximately 150 metres between structures
- may be guyed and exist in a single or three-pole configuration at certain points along the line
- AltaLink will also be installing optical ground wiring (also known as OPGW) on top of the new transmission line for protection and telecommunications purposes

Project overview

If approved, the project involves:

- building a new 138 kV (kilovolt) transmission line, approximately 33 kilometres long, between the Hayter and Provost substations
- adding two 138 kV **circuit breakers** and associated equipment, expanding the site fenceline and adding a control building at the Provost Substation
- adding two 138 kV circuit breakers and one 25 kV circuit breaker and associated equipment, and relocating an existing 138 kV circuit breaker, at the Hayter Substation
- replacing the wood pole telecommunications structure with a new 20 to 30 metre tall steel lattice telecommunications tower and its associated equipment at the Hayter Substation
- adding one 138 kV circuit breaker and associated equipment to the Killarney Lake Substation, as well as expanding the control building within the existing fenceline
- replacing the wood pole telecommunications structure with a new 20 to 30 metre tall steel lattice telecommunications tower and its associated equipment at the Killarney Lake Substation
- A mobile substation may be required at the Provost and Killarney Lake substations during construction

Right-of-way and construction workspace

Where the transmission line is located on private property, AltaLink will require a 20 metre right-of-way, to be acquired from landowners in the form of an easement agreement.

Where the transmission line is proposed to be in road allowance, AltaLink may require a 10 metre right-of-way on adjacent property for access and vegetation removal. In addition to this right-of-way, AltaLink may require an additional 10 metres of temporary workspace in order to construct the transmission line.

AltaLink may need temporary construction workspace areas of up to 100 metres for stringing behind some corner structures. The additional construction workspace, including the potential stringing areas are shown on the strip mosaic maps.

The construction workspace for the length of the line is shown on the included strip mosaic maps. AltaLink will consult with all affected landowners regarding potential construction workspace. Not all of this construction workspace and access space off the right-of-way is required. All workspace will be discussed with landowners prior to, and during, construction of the line.

DEFINITION

Circuit breaker

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

Electric and Magnetic Fields (EMF)

AltaLink recognizes that people have concerns about exposure to Electric and Magnetic Fields (EMF) and we take those concerns seriously.

Everyone in our society is exposed to 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 have been conducting and reviewing research about EMF for more than 40 years. Based on this research, these organizations have not recommended the general public take steps to limit their everyday exposure to EMF from high voltage transmission lines.

Radio Frequency (RF)

Telecommunication towers use Radio Frequency (RF) signals to transmit and receive information. The point-to-point signals travel along a focused path at low power levels and are well below recommended safety limits. A licensed telecommunications tower will not impact any other licensed telecommunication frequencies such as cellular, over-the-air television, satellite, radio, or GPS.

The radio installation described in this notification will be installed and operated on an ongoing basis so as to comply with Health Canada's Safety Code 6, which defines safe levels of radio frequency (RF) exposure. To ensure the structural adequacy of the tower, the design and installation will follow industry standards and sound engineering practices.

If you have any questions about EMF or RF please contact us:

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

For general information relating to telecommunications systems, please contact:

SPECTRUM, INFORMATION TECHNOLOGIES AND TELECOMMUNICATIONS

1-800-267-9401 (toll free in Canada)
Website: www.ic.gc.ca/towers

Alberta's natural landscapes are home to many diverse animals, including more than 400 different species of birds. As a component of AltaLink's Avian Protection Plan bird markers are installed in areas where the risk of birds colliding with transmission lines are high. Bird markers have been proven to be effective in increasing visibility for birds and reducing collisions.

Electrical bird related outages in substations reduce system reliability and increase operating cost for restoration and replacement of damaged equipment. To reduce outages and protect birds, AltaLink installs GreenJacket cover-ups – a first-of-its-kind product that reduces electrocutions of birds on substation equipment. For information on AltaLink's Environmental Respect approach, please visit: www.altalink.ca/environment.

DEFINITION

Alberta Utilities Commission (AUC)

The Alberta Utilities Commission 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.

DEFINITION

Alberta Electric System Operator (AESO)

The Alberta Electric System Operator is an independent, not-for-profit organization responsible for the safe, reliable and economic planning and operation of the provincial transmission grid. For more information about why this project is needed, please refer to the AESO's Need Overview included with this package, or visit www.aeso.ca. If you have any questions or concerns about the need for this project you may contact the AESO directly.

How to provide your input

Stakeholder input is important to us. You can provide your input in any of the following ways.

PARTICIPATE IN A ONE-ON-ONE CONSULTATION

We will contact all occupants, residents and landowners who are near the project areas to gather input through one-on-one consultations.

During the one-on-one process we will document the information you provide and respond to any questions or concerns you may have about the project.

AltaLink is committed to sharing information about its projects and working with the public to gather and respond to stakeholder input and concerns. A summary of stakeholder comments will be incorporated into the application we submit to the **AUC**.

CONTACT US DIRECTLY

You can contact us by telephone, email, mail or through our website. Our contact information is on the front and back pages of this newsletter.

Next steps

The **AESO** received a system access service request from FortisAlberta to improve the reliability of the electric system in the municipal districts of Provost and Wainwright. The AESO will file a Needs Application with the AUC.

After our consultation process is complete, following public consultation and notification, AltaLink will file a Facilities Application with the AUC. The AUC will review both the Needs Application and the Facilities Application at the same time through a process in which stakeholders can participate. We will inform you when we file with the AUC.

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	December 2016 - July 2017
File application with Alberta Utilities Commission (AUC)	September 2017
Start construction if project is approved	June 2018
Completed construction	June 2019

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.

Projects in the area

Project name	Description	Status
Provost to Edgerton and Nilrem to Vermilion Transmission Development (PENV)	AESO recently contacted stakeholders in Provost and surrounding areas regarding the need for a new transmission reinforcement. The AESO is proposing a 240 kV transmission development that will initially operate at a lower voltage, 138/144 kV, to reinforce the existing transmission system. The PENV project is not related to the project discussed in this newsletter.	Application filed (AESO)

PRIVACY COMMITMENT

AltaLink is committed to protecting your privacy. Collected personal information will be protected under AltaLink's Privacy Policy and the Personal Information Protection Act. As part of the regulatory process for new transmission projects, AltaLink may provide your personal information to 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 e-mail privacy@altalink.ca or phone at 1-877-267-6760.

INCLUDED IN THIS INFORMATION PACKAGE:

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

Contact us

To learn more about the proposed project please contact:

ALTALINK
1-877-269-5903 (toll-free)
Email: stakeholderrelations@altalink.ca
Website: www.altalink.ca/projects

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)
Email: stakeholder.relations@aeso.ca

The AESO is an independent, not-for-profit organization responsible for the safe, reliable and economic planning and operation of the provincial transmission grid. For more information about why this project is needed, please refer to the AESO's Need Overview included with this package, or visit www.aeso.ca. If you have any questions or concerns about the need for this project you may contact the AESO directly. You can make your questions or concerns known to an AltaLink representative who will collect your personal information for the purpose of addressing your questions and/or concerns to the AESO. This process may include disclosure of your personal information to the AESO.

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

ALBERTA UTILITIES COMMISSION (AUC)
780-427-4903
(You can call toll-free by dialing 310-0000 before the number).
Email: utilitiesconcerns@auc.ab.ca

ALTALINK
A BERKSHIRE HATHAWAY ENERGY COMPANY

2611 - 3rd Avenue SE
Calgary, Alberta T2A 7W7

Let's talk transmission

www.facebook.com/altalinktransmission

www.twitter.com/altalink

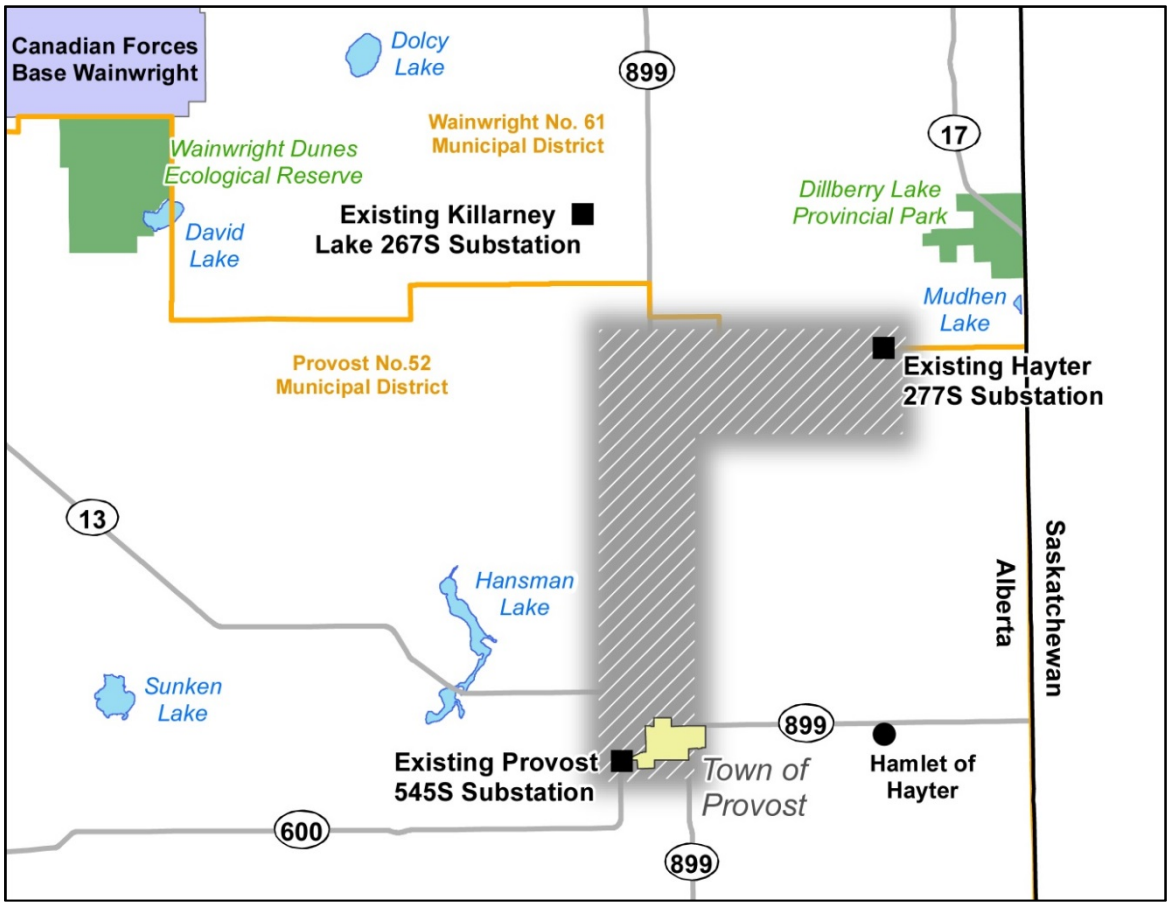
Attachment 5 – AESO Public Notification of NID Filing Website Posting (January 15, 2018)

Notification of Needs Identification Document Filing Addressing the Need for the Transmission Enhancements in the Municipal Districts of Provost and Wainwright

The Alberta Electric System Operator (AESO) advises you that it intends to file a Needs Identification Document (NID) for the Transmission Enhancements in the Municipal Districts of Provost and Wainwright with the Alberta Utilities Commission (AUC) on or after January 31, 2018.

FortisAlberta Inc. (FortisAlberta) has applied to the Alberta Electric System Operator (AESO) for transmission system access to improve the reliability of the electricity services in the Municipal Districts of Provost and Wainwright. FortisAlberta's request can be met by the following solution:

- Add a 138 kilovolt (kV) transmission line to connect the existing Hayter 277S substation and the existing Provost 545S substation.
- Modify the Provost 545S substation, including adding two 138 kV circuit breakers.
- Modify the Hayter 277S substation, including adding two 138 kV circuit breakers.
- Modify the existing Killarney Lake 267S substation, including adding one 138 kV circuit breaker.
- Add or modify associated equipment as required for the above transmission developments.



The shaded area on the map indicates the approximate location of the proposed 138 kV transmission line. The specific transmission facilities may extend beyond the shaded area shown. The black squares on the map indicate the approximate location of the existing substations, which are located at SE-1-42-3-W4 (Killarney Lake 267S), SE-17-41-1-W4 (Hayter 277S) and NW-7-39-2-W4 (Provost 545S).

AltaLink Management Ltd. is the transmission facility owner (TFO) in the Municipal Districts of Provost and Wainwright. In December 2016, the AESO and the TFO began presenting this need to stakeholders, including residents, occupants and landowners. The AESO will apply to the AUC for approval of the need for this transmission development. Once filed with the AUC, the NID will be posted on the AESO website at https://www.aeso.ca/grid/projects/transmission-enhancements-in-the-municipal-districts-of-provost-and-wainwright/

In a separate application, called a Facility Application, the TFO will provide more details about the specific facilities associated with the AESO's proposed transmission development, and will request AUC approval to construct and operate these facilities.

Please visit our website, www.aeso.ca for more information, or contact the AESO at 1-888-866-2959 or stakeholder.relations@aeso.ca

Attachment 6 – AESO Stakeholder Newsletter NID Filing Notice (January 16, 2018)

January 16, 2018

AESO Stakeholder Newsletter

GRID

Transmission Enhancements in the Municipal Districts of Provost and Wainwright – Notice of NID Filing

FortisAlberta Inc. (FortisAlberta) has applied to AESO for transmission system access to improve the reliability of the electricity services in the Municipal Districts of Provost and Wainwright. FortisAlberta's request can be met by the following solution:

- Add a 138 kilovolt (kV) transmission line to connect the existing Hayter 277S substation and the existing Provost 545S substation.
- Modify the Provost 545S substation, including adding two 138 kV circuit breakers.
- Modify the Hayter 277S substation, including adding two 138 kV circuit breakers.
- Modify the existing Killarney Lake 267S substation, including adding one 138 kV circuit breaker.
- Add or modify associated equipment as required for the above transmission developments.

The AESO intends to file the Transmission Enhancements in the Municipal Districts of Provost and Wainwright Needs Identification Document (NID) application with the Alberta Utilities Commission (AUC) on or after January 31, 2018, requesting that the AUC approve this NID.

The AESO has posted the Notification of NID filing on its website. Please click here to view the document or visit the AESO website at www.aeso.ca and follow the path Grid > Project > Transmission Enhancements in the Municipal Districts of Provost and Wainwright to see all the relevant documents, including the NID application once it is filed with the AUC.