

APPENDIX C AESO PIP

1. Introduction

From August 2019 to October 2019, the AESO conducted a Participant Involvement Program (PIP) to assist in preparing its *Windrise Wind Power Project Connection Needs Identification Document* (NID). The AESO required the Market Participant, in this case Windrise Wind L.P. by its general partner Windrise Wind Energy Inc. (Windrise), a wholly owned subsidiary of TransAlta Corporation, to assist the AESO in providing notification as part of the AESO's PIP. The AESO also directed the legal owner of transmission facilities (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.

The AESO's PIP is designed to notify the parties notified in Windrise's PIP for the Proposed Windrise Development, the TFO's PIP for the Proposed AltaLink Development, 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 6.2.2, NID27 and Appendix A2 of the current Alberta Utilities Commission (Commission) Rule 007 (AUC Rule 007), effective August 1, 2019.

2. Stakeholder Notification

The AESO developed a one-page AESO Need Overview document with the purpose of notifying 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 Commission for approval of the need.

A copy of the Need Overview was posted to the AESO website at <https://www.aeso.ca/stakeholder-engagement/transmission-projects/windrise-wind-power-project-connection/> and a notice was published in the AESO Stakeholder Newsletter on September 3, 2019. 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 Windrise's and the TFO's project-specific information packages that were distributed to Stakeholders, as further described in Section 2.1.

2.1 Stakeholders Notified in Windrise's PIP

Windrise has advised the AESO that its PIP for the Proposed Windrise Development included notification within a Study Area.¹ Windrise advised the AESO that its PIP notification was in accordance with the Commission's recommendation for notification for the type of facility application identified by Windrise.²

Windrise held information sessions in the town of Ardenville on September 16, 17, 18 and 19, 2019. The information sessions were attended by approximately 49 Stakeholders. Copies of the AESO Need Overview were available at the information sessions.

Windrise notified a total of approximately 184 Stakeholders, of which 160 were classified as private or individual landowners. The other 24 notified Stakeholders and Windrise's rationale for their inclusion in the PIP are listed in Table 1.

Table 1: Summary of Notified First Nations, Agency and Industry Stakeholders Notified by Windrise

Stakeholder	Windrise's Rationale for Inclusion in the PIP
Alberta Culture, Multiculturalism and Status of Women	Provincial requirements
Alberta Environment and Parks – Regional Approvals	Provincial requirements
Alberta Transportation	Provincial requirements
Alcock Farm Airport	Airport within study area
ATCO Gas and Pipelines Ltd.	Infrastructure in study area
Town of Fort Macleod, 7 Town Councillors	Municipality requirements
Ducks Unlimited	Special Interest Group in study area
Equs	Infrastructure in study area
FortisAlberta Inc.	Infrastructure in study area
Industry Canada	Federal requirements
Kainai First Nation	Relationship maintenance
Long Term Asset Management Inc.	Infrastructure in study area
Municipal District of Willow Creek, 10 Councillors	Municipality requirements
Member of Parliament – John Barlow, Foothills	Federal requirements
Member of Legislative Assembly – Pat Stier, Livingstone-Macleod	Provincial requirements
NAV CANADA – AIS Data Collection	Federal requirements
Piikani First Nation	Relationship maintenance
Rogers Communications Inc.	Infrastructure in study area
Siksika First Nation	Relationship maintenance
Shaw Communications	Infrastructure in study area
TC Energy	Infrastructure in study area

¹ Windrise defined the notification Study Area as the area encompassed by: the quarter line 800 m north of Windy Flats 138S substation, Range Road 262; the quarter line 800 m south of the proposed location of the Windrise 1063S substation; and the boundary of the Piikani Reserve.

² Windrise has identified its facility application to be of the type: *Overhead transmission line and new substation development – rural or industrial setting*, as categorized in AUC Rule 007, Appendix A1, Section 5.

Stakeholder	Windrise's Rationale for Inclusion in the PIP
Telus Communications	Infrastructure in study area
TransAlta Renewables	Infrastructure in study area
Transport Canada	Federal requirements

Attachment 3 includes Windrise's project newsletter, which was included with the AESO Need Overview in Windrise's project-specific information package that was distributed to the Stakeholders described above between August 26, 2019 and October 22, 2019. Windrise's project newsletter and the AESO Need Overview were also posted on Windrise's project-specific webpage at <https://www.transalta.com/facilities/plants-operation/windrise-transmissionproject/> on August 27, 2019. Windrise'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 Windrise, the TFO or the AESO for additional information.

2.2 Stakeholders Notified in the TFO's PIP

The TFO has advised the AESO that its PIP included notification within 800 metres of the existing substation site boundary as recommended by the Commission in Appendix A1 of AUC Rule 007.³ The TFO has advised the AESO that its PIP also included notification within 100 metres of the proposed fibre optic installation location for the proposed fibre optic facilities, as recommended by the Commission in Appendix A1 of AUC Rule 007.⁴

The TFO notified a total of approximately 19 Stakeholders, of which 4 were classified as private or individual landowners. The other 15 notified Stakeholders and the TFO's rationale for their inclusion in the PIP are listed in Table 2.

Table 2: Summary of Notified Agency and Industry Stakeholders Notified by the TFO

Stakeholder	TFO's Rationale for Inclusion in the PIP
Alberta Environment and Parks – Regional Approvals	Provincial requirements
Alberta Environment and Parks – Resource Management Program	Provincial requirements
Alberta Transportation	Provincial requirements
ATCO Gas and Pipelines Ltd.	Pipeline Company in the project notification area
Equs	Distribution Facility Owner in the project notification area
FortisAlberta Inc.	Distribution Facility Owner in the project notification area
McNally Contractors (2011) Ltd.	Contractor in the project notification area
Ministry of Culture, Multiculturalism and Status of Women	Provincial requirements
Municipal District of Willow Creek No. 26	Municipal requirements
NAV CANADA	Air Navigation System requirements
Rogers Communications Inc.	Communication Facility Owner in notification area
Shaw Communications	Communication Facility Owner in notification area

³ AltaLink has identified its facility application to be of the type: *For substation developments within existing facilities, where there is a change in the substation fence line or which create visual or noise impact – rural and industrial*, as categorized in AUC Rule 007, Appendix A1, Section 5.

⁴ Ibid.

Stakeholder	TFO's Rationale for Inclusion in the PIP
Telus Communications Company	Communication Facility Owner in notification area
TransAlta Corporation	Wind Farm Owner in the project notification area
Transport Canada	Federal requirements

Attachment 4 includes the TFO's project newsletter, which was included with the AESO Need Overview in the TFO project-specific information package that was distributed to the Stakeholders described above between August 30, 2019 and October 9, 2019. 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/327/transalta-windy-flats-138s-substation-upgrade> on August 30, 2019. 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, Windrise or the AESO for additional information.

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/stakeholder-engagement/transmission-projects/windrise-wind-power-project-connection/> and a publishing notice in the AESO Stakeholder Newsletter on November 12, 2019. Copies of the Notification of NID Filing posting and the AESO Stakeholder Newsletter notice have been included as Attachments 5 and 6, respectively.

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, Windrise and the TFO were prepared to direct any Stakeholder questions addressed to the AESO, or questions regarding the AESO Need Overview, to the AESO.

5. Concerns and Objections Raised

During Windrise's PIP activities, two Stakeholders raised questions or concerns to a representative of Windrise regarding the need for the Project. Windrise obtained consent to share their personal information with the AESO for the purpose of referring their questions or concerns to the AESO. The AESO contacted both Stakeholders directly. The AESO responded to the Stakeholders with information about the regulatory process, the AESO's and Windrise's roles and responsibilities, a description of the need for the Project, a description of the proposed transmission development and a description of other connection alternatives considered to respond to the request for system access service.

One Stakeholder raised a question to the AESO directly regarding which organization is responsible for the project costs. The AESO responded to the Stakeholder, indicating that Windrise would be responsible for the costs of the transmission facilities required to connect the Windrise Wind Power Project.

Apart from the inquiries identified above, Windrise 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. The TFO has also advised that Stakeholders have not identified any 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 described above, 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.

6. List of Attachments

- Attachment 1 – AESO Need Overview (August 2019)
- Attachment 2 – AESO Stakeholder Newsletter Need Overview Notice (September 3, 2019)
- Attachment 3 – Windrise's Project Newsletter – *Windrise Transmission Project* (August 2019)
- Attachment 4 – TFO Project Newsletter – *TransAlta Windy Flats 138S Substation Upgrade* (August 2019)
- Attachment 5 – AESO Public Notification of NID Filing Website Posting (November 2019)
- Attachment 6 – AESO Stakeholder Newsletter NID Filing Notice (November 12, 2019)

Attachment 1 – AESO Need Overview (August 2019)

Need for the Windrise Wind Power Project Connection in the Town of Fort Macleod area

Windrise Wind LP, a wholly owned subsidiary of TransAlta Corporation (TransAlta), has applied to the AESO for transmission system access to connect its proposed Windrise Wind Power Project (Facility) in the Fort Macleod area. TransAlta's request can be met by the following solution:

PROPOSED SOLUTION

- Upgrade the existing Windy Flats 138S substation, including adding one 240/138 kilovolt (kV) transformer and one 138 kV circuit breaker.
- Add one 138 kV transmission line to connect the Facility to the Windy Flats 138S substation in a radial configuration.
- 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 late 2019.
- The AESO's needs identification document (NID) application will be available on the AESO's website at 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.

TRANSALTA

- Has requested transmission system access to connect the Facility.
- Is responsible for detailed siting and routing, and constructing the 138 kV transmission line to connect the Facility to the Windy Flats 138S substation.
- Must apply to the AUC for approval of its transmission facilities applications.

ALTALINK

- Is the transmission facility owner in the Fort Macleod area.
- Is responsible for operating and maintaining the new 138 kV transmission line, and constructing, operating and maintaining the transmission facilities associated with the Windy Flats 138S substation upgrade.
- Is regulated by the AUC and must apply to the AUC for approval of its transmission facilities applications.

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.

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.

CONTACT US

Alberta Electric System Operator
AESO Stakeholder Relations
stakeholder.relations@aeso.ca
1-888-866-2959

2500, 330-5th Avenue SW
Calgary, AB T2P 0L4
Phone: 403-539-2450

www.aeso.ca | [@theaeso](https://twitter.com/theaeso)

Attachment 2 – AESO Stakeholder Newsletter Need Overview Notice (September 3, 2019)

AESO Stakeholder Newsletter

GRID

Windrise Wind Power Project Connection – Need for Transmission Development in the Town of Fort Macleod area

Windrise Wind LP, a wholly owned subsidiary of TransAlta Corporation (TransAlta), has applied to the AESO for transmission system access to connect its proposed Windrise Wind Power Project (Facility) in the Fort Macleod area. TransAlta's request can be met by the following solution:

- Upgrade the existing Windy Flats 138S substation, including adding one 240/138 kilovolt (kV) transformer and one 138 kV circuit breaker
- Add one 138 kV transmission line to connect the Facility to the Windy Flats 138S substation in a radial configuration
- 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 > Project > Windrise Wind Power Project Connection

Attachment 3 – Windrise’s Project Newsletter – Windrise Transmission Project (August 2019)

Windrise Transmission Project

Stage 1 Preliminary Routing



What is it and why is it needed?

In December 2018, the Government of Alberta announced that TransAlta's Windrise Wind Project was selected as a successful proponent as part of the Alberta Electric System Operator's (AESO) Renewable Electricity Program (REP) Round 3 process. The proposed 207-megawatt (MW) Windrise Wind Project will contribute to the Government of Alberta's target of 30 percent renewable electricity by 2030.

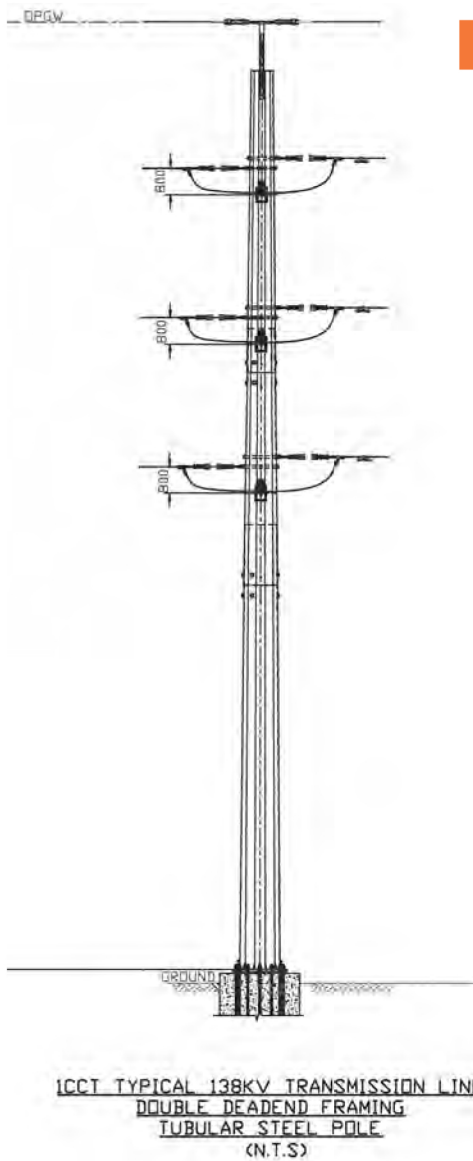
In order to connect the Windrise Wind Project to Alberta's electricity grid, TransAlta is proposing to construct the Windrise Transmission Project (the "Project"). The Project will connect the proposed Windrise Wind Substation to the existing Windy Flats 138S Substation through a 138,000 volt transmission line.

Where is it located?

The transmission line will be in the Municipal District of Willow Creek, approximately 20 km south of Fort Macleod, near the community of Ardenville.

What will it look like?

Tower structure design is still ongoing and further details will be provided to the public as the Project moves forward. Many factors, such as cost, soil types, crossing of roads or other infrastructure, land conditions and availability of material are being considered to determine the type of structures that will be used for the Project. At this time, the structures provided are preliminary and will be subject to change prior to finalization.



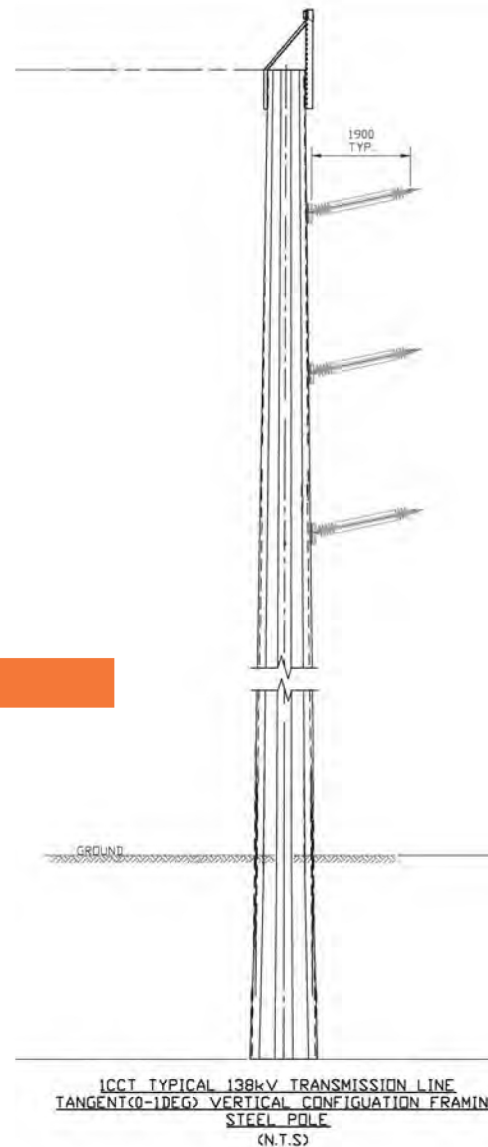
Self supporting steel deadend structure

Height: 21-29 m (70-95 ft)

Base width: 0.6-1.2 m (2-4 ft)

Arm length: 1.2-1.6 m (4-6 ft)

Use: For 90° turns



Self supporting steel structure

Height: 21-29 m (70-95 ft)

Arm length from pole: 1.9-2.2 m (6-7.5 ft)

Base width: 0.4-0.6 m (1-2 ft)

Average span between similar structures:
150-200 m (490-650 ft)

Use: Longer spans between structures and
allows slight changes in direction but higher
costs per pole when compared to wood

Self supporting wood structure

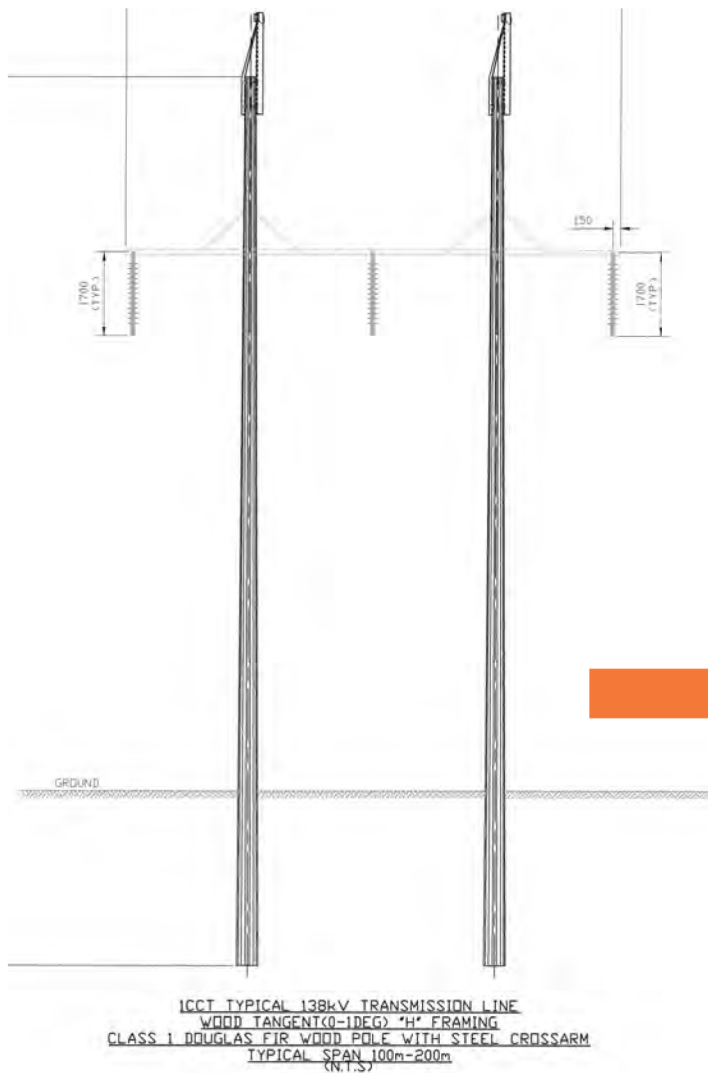
Height: 21-29 m (70-95 ft)

Arm length from pole: 1.9-2.2 m (6-7.5 ft)

Base width: 0.4-0.6 m (1-2 ft)

Average span between similar structures:
65-150 m (200-500 ft)

Use: Lower costs per pole yet shorter spans
when compared to steel and does not allow
for changes in direction



H-Frame structure

Height: 21-35 m (70-110 ft)

Arm length from pole: 2.5 m (8 ft)

Poles separation: 5 m (16.5 ft)

Average span: 150-220 m (490-725 ft)

Use: Likely used on quarter line alignments
that are not on developed road allowance



How do we pick a route?

Routing is a process that incorporates the best available information with the goal of finding a route that has the lowest overall impact. This includes understanding potential impacts or features that may be unique to the Project area. Starting with many options, these are then narrowed down to allow for a more detailed review of the route(s) identified.

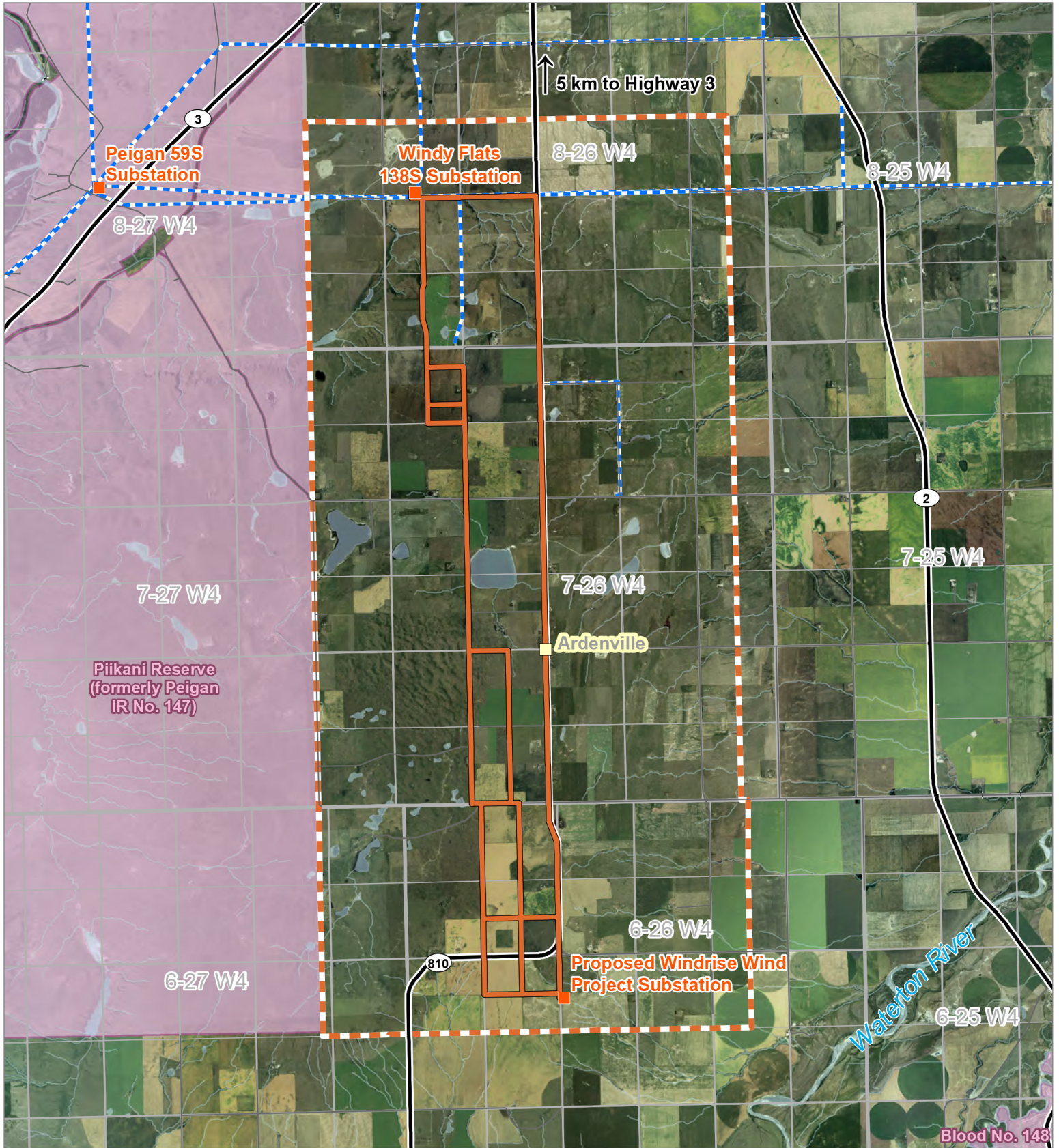
Preliminary route segments are being shown early in the process to gain a better understanding of potential impacts before presenting a preferred and alternate route this fall.



Different criteria will be reviewed and considered to determine a preferred and alternate route for the Project. This includes, but is not limited to:

- Location of residences;
- Existing infrastructure such as roads, transmission lines and wind turbines;
- Environmental considerations, such as wildlife and native grasslands;
- Technical design, such as turbine set back areas and clearances;
- Land types and terrain;
- Public and stakeholder feedback;
- Indigenous interests;
- Cost and length; and
- Private and public land use.

Has a preferred route been picked?

No, a preferred route has not been determined at this time. Engineering and environmental work is ongoing and this information along with feedback collected from landowners, stakeholders, the public, Indigenous Communities and other interested parties, will be reviewed and considered.



 <p>Windrise Transmission Project</p> <p>Project Area Overview</p>	<p>Legend</p> <ul style="list-style-type: none"> Substation Preliminary Route Segment Windrise Transmission Project Area Community Existing Transmisison Line Paved Road Unpaved Road Watercourse Water Body First Nation Reserve 	 <p>MASKWA ENVIRONMENTAL CONSULTING</p> <p>0 1 2 km</p> <p>1:110,000</p> <p>N</p> <p>Produced For: TransAlta Corporation Produced By: Maskwa Environmental Consulting Ltd. Map Date: June 26, 2019</p> <p>Revision #: 0 Map Creator: C. Jackson Map #: TAC19018-001</p> <p><small>This document is created solely for the use of TransAlta Corporation. Maskwa Environmental Consulting Ltd. assumes no liability to any other third party for any representations contained in this drawing. Although there is no reason to believe that there are any errors associated with the data used to create this map product, users of this data are advised that errors may be present. Scale of the map is 1:110,000, when printed at 11".</small></p>



Who approves the project?

The Project will be submitted to the Alberta Utilities Commission (AUC) for their review and approval. Information regarding the AUC review process and how you can participate is included in the enclosed brochure and can be found at www.auc.ab.ca.

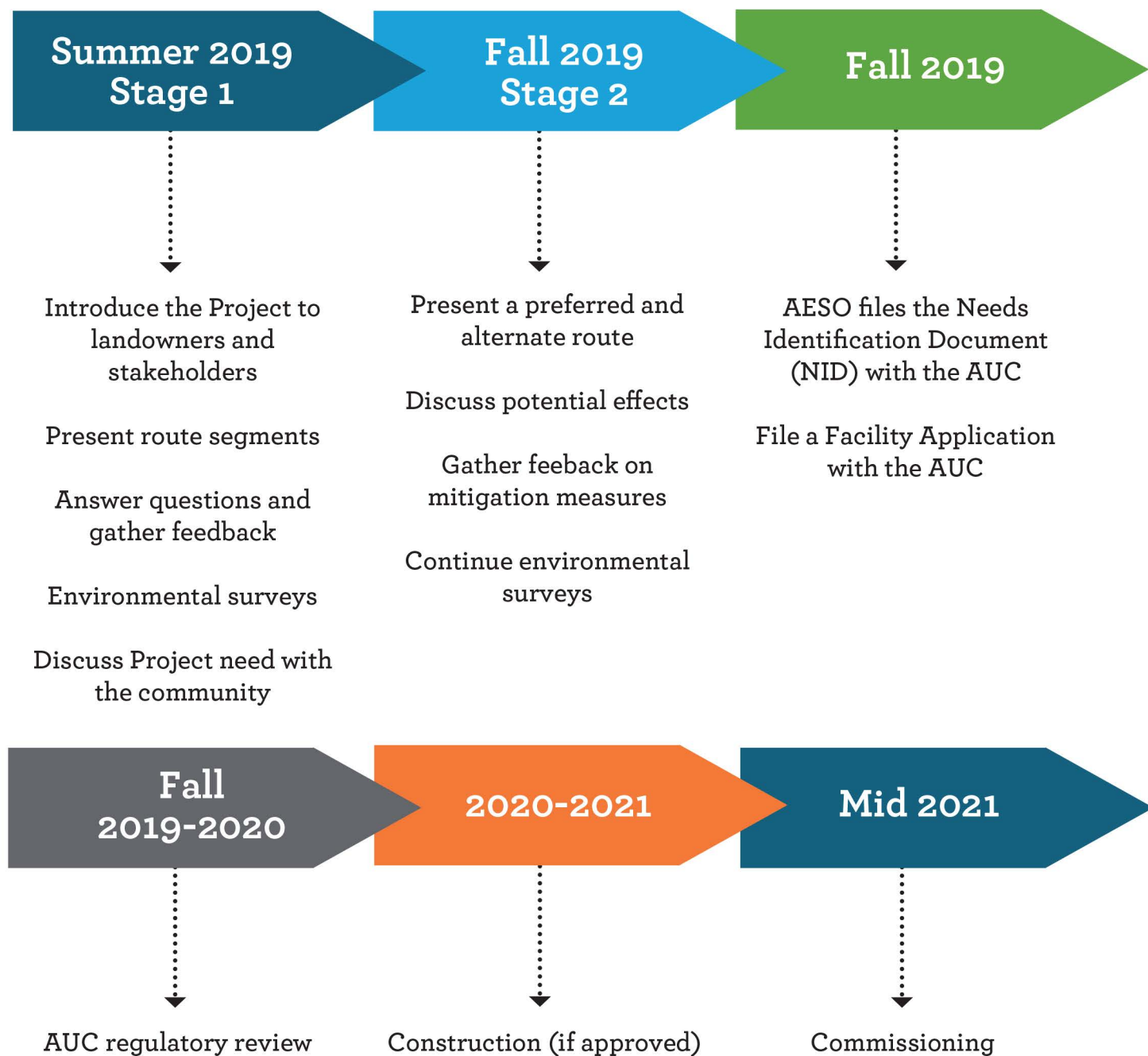
Are other groups involved in the project?

The AESO has deemed this project as eligible under its Market Participant Choice (MPC) option, which means the Project will be permitted and constructed by TransAlta. Once commissioned, TransAlta will transfer the Project to AltaLink (Alberta's largest regulated electricity transmission company), who will assume the role of Transmission Facility Owner (TFO) and operator of the transmission line. Information on the AESO can be found at www.aeso.ca.

Who is the AESO?

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 the Project or the proposed transmission development to meet the need you may contact the AESO directly. You can make your questions or concerns known to a TFO 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.

Timelines



How can the public participate?

Feedback from the community is important in order to present line routing options that aim to minimize impacts to people and the environment. The feedback we receive assists us in determining areas with potentially higher impacts and helps us determine ways to address those impacts. Sharing your knowledge of the area and your property will help TransAlta make informed decisions as the Project moves forward.

Questions about the Project? Contact us.

Email: windrisetransmission@maskwaenv.com • Phone: 1-844-391-2615 • www.transalta.com

Questions about the regulatory process?

Alberta Utilities Commission

Phone: 780-427-4903

Email: consumer-relations@auc.ab.ca

Questions about the Project need?

Alberta Electricity System Operator

Phone: 1-888-866-2959

Email: stakeholder.relations@aeso.ca



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Your health and
safety... our priority.

Votre santé et votre
sécurité... notre priorité.

Electric and Magnetic Fields

Updated: November 2012

Original: November 2001

IT'S YOUR HEALTH

Electric and Magnetic Fields from Power Lines and Electrical Appliances

THE ISSUE

Some people are concerned that daily exposure to electric and magnetic fields (EMFs) may cause health problems.



ELECTRICITY AND ELECTRIC AND MAGNETIC FIELDS (EMFS)

Electricity delivered through power lines is important in today's society. It is used to light homes, prepare food, run computers and operate other household appliances, such as TVs and radios. In Canada, appliances that plug into a wall socket use electric power that flows back and forth at a frequency of 60 cycles per second (60 hertz). The frequency used with the distribution of electricity from power lines and electrical appliances is different than the frequencies used for [Wi-Fi](#), [cell phones](#), and [smart meters](#).

Every time you use electricity and electrical appliances, you are exposed to electric and magnetic fields (EMFs) at extremely low frequencies (ELFs). The term "extremely low" is described as any frequency below 300 hertz. EMFs produced by the transmission and use of electricity belong to this category.

EMFs are invisible forces that surround electrical equipment, power cords, and wires that carry electricity, including outdoor power lines.

- *Electric Fields:* These are formed whenever a wire is plugged into an outlet, even when the appliance is not turned on. The higher the voltage, the stronger the electric field.
- *Magnetic Fields:* These are formed when electric current is flowing within a device or wire. The greater the current, the stronger the magnetic field.

EMFs can occur separately or together. For example, when you plug the power cord for a lamp into a wall socket, it creates an electric field along the cord. When you turn the lamp on, the flow of current through the cord creates a magnetic field. Meanwhile, the electric field is still present.

Canada

POWER LINES AND YOUR HOME

EMFs are strongest when close to their source. As you move away from the source, the strength of the fields fades rapidly. This means you are exposed to stronger EMFs when standing close to a source (e.g., right beside a transformer box or under a high voltage power line), and you are exposed to weaker fields as you move away.

When you are inside your home, the magnetic fields from high voltage power lines and transformer boxes are often weaker than those from household electrical appliances.

Electric fields can be shielded using materials such as metal. Things like buildings and trees—and even the ground when power lines are buried—can block electric fields.

CANADIANS EXPOSURE TO EMFS AT EXTREMELY LOW FREQUENCIES (ELFS)

On a daily basis, most Canadians are exposed to EMFs generated by household wiring, lighting, and any electrical appliance that plugs into the wall, including hair dryers, vacuum cleaners and toasters. In the workplace, common sources of EMFs include computers, air purifiers, photocopiers, fax machines, fluorescent lights, electric heaters, and electric tools in machine shops, such as drills, power saws, lathes and welding machines.

EXPOSURE IN CANADIAN HOMES, SCHOOLS AND OFFICES PRESENT NO KNOWN HEALTH RISKS

There have been many studies on the possible health effects from exposure to EMFs at ELFs. While it is known that EMFs can cause weak electric currents to flow through the human body, the



intensity of these currents is too low to cause any known health effects. Some studies have suggested a possible link between exposure to ELF magnetic fields and certain types of childhood cancer, but at present this association is not established.

The [International Agency for Research on Cancer \(IARC\)](#) has classified ELF magnetic fields as “possibly carcinogenic to humans”. The IARC classification of ELF magnetic fields reflects the fact that some limited evidence exists that ELF magnetic fields might be a risk factor for childhood leukemia. However, the vast majority of scientific research to date does not support a link between ELF magnetic field exposure and human cancers. At present, the evidence of a possible link between ELF magnetic field exposure and cancer risk is far from conclusive and more research is needed to clarify this “possible” link.

Health Canada is in agreement with both the World Health Organization and IARC that additional research in this area is warranted.

REDUCE YOUR RISK

Health Canada does not consider that any precautionary measures are needed regarding daily exposures to EMFs at ELFs. There is no conclusive evidence of any harm caused by exposures at levels found in Canadian homes and schools, including those

located just outside the boundaries of power line corridors.

THE GOVERNMENT OF CANADA'S ROLE

Health Canada, along with the World Health Organization, monitors scientific research on EMFs and human health as part of its mission to help Canadians maintain and improve their health.

International exposure guidelines for exposure to EMFs at ELFs have been established by the [International Commission on Non-Ionizing Radiation Protection \(ICNIRP\)](#). These guidelines are not based on a consideration of risks related to cancer. Rather, the point of the guidelines is to make sure that exposures to EMFs do not cause electric currents or fields in the body that are stronger than the ones produced naturally by the brain, nerves and heart. EMF exposures in Canadian homes, schools and offices are far below these guidelines.

FOR MORE INFORMATION

- Health Canada's [Electric and magnetic fields](#) at: www.hc-sc.gc.ca/ewh-semt/radiation/cons/electri-magnet/index-eng.php
- The World Health Organization – Electromagnetic fields and public health:
 - [Exposure to extremely low frequency fields](#) at: www.who.int/mediacentre/factsheets/fs322/en/index.html
 - [Extremely low frequency](#) at: www.who.int/docstore/peh-mf/publications/facts_press/efact/efs205.html
 - [Extremely low frequency fields and cancer](#) at: www.who.int/docstore/peh-emf/publications/facts_press/efact/efs263.html



Health
Canada

Santé
Canada

Your health and
safety... our priority.

Votre santé et votre
sécurité... notre priorité.

Electric and Magnetic Fields

Updated: November 2012

Original: November 2001

IT'S YOUR HEALTH



FOR INDUSTRY AND PROFESSIONALS

- The International Agency for Research on Cancer (IARC) *Volume 80 – Non-ionizing Radiation, Part 1: Static and Extremely Low-Frequency (ELF) Electric and Magnetic Fields* at: <http://monographs.iarc.fr/ENG/Monographs/vol80/volume80.pdf>
- IARC Carcinogen classifications at: <http://monographs.iarc.fr/ENG/Classification/index.php>

RELATED RESOURCES

- Health Canada, *It's Your Health*:
 - Safety of Wi-Fi Equipment at: www.hc-sc.gc.ca/hl-vs/iyh-vsv/prod/wifi-eng.php
 - Safety of Cell Phones and Cell Phone Towers at: www.hc-sc.gc.ca/hl-vs/iyh-vsv/prod/cell-eng.php
- For safety information about food, health and consumer products, visit the [Healthy Canadians](http://www.healthycanadians.gc.ca) website at: www.healthycanadians.gc.ca
- For more articles on health and safety issues go to the *It's Your Health* web section at: www.health.gc.ca/iyh

You can also call toll free at
1-866-225-0709 or TTY at
1-800-267-1245*

Updated: November 2012
Original: November 2001

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represented by the Minister of Health, 2012

Catalogue: H13-7/70-2012E-PDF
ISBN: 978-1-100-21395-8

Canada

Step 6: The public hearing process*

The public hearing process provides an opportunity for those who have been unable to resolve their concerns with the applicant and have made a filing with the AUC to express their views directly to a panel of Commission members. The panel reviews the initial filings and grants what is referred to as standing to those who may be directly and adversely affected by the proposed project. Standing is necessary to continue involvement as an intervener in the proceeding which may include the filing of evidence and participation in an oral or written hearing.

The AUC will issue a notice of hearing setting out the hearing date, location and additional process steps and deadlines. An AUC public hearing operates similarly to a court proceeding and is a quasi-judicial process. The general public is welcome to attend as an observer and the hearings are often broadcast online so that those interested can listen in.

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

Persons who hire legal counsel or technical experts must be aware that while reimbursement for the costs of legal and technical assistance may be available under AUC Rule 009, recovery of costs is subject to the Commission assessing the value of the contribution provided by counsel and technical experts. People with similar interests and positions are expected to work together to ensure that any expenditures for legal or technical assistance are minimized and costs are not duplicated.

Step 7: The decision

For electric transmission facilities, the need for transmission development filed by the Alberta Electric System Operator to the AUC must be considered to be correct unless someone satisfies the Commission that the needs application is technically deficient,

or that to approve it would be contrary to the public interest. For electric needs applications, the Commission can either approve, deny, or send the application back with suggestions for change.

Commission decisions made about applications filed for a specific utility development, including electric transmission lines, gas utility pipelines and power plants, may be approved, approved with conditions or denied. Decisions are typically released within 90 days from the close of the record as a written report. The decision, available on the AUC website, will summarize the Commission's findings and state its reasons for the decision with any conditions or approval time limits if applicable.

Sometimes needs and facility applications are considered together in a single proceeding.

Step 8: Right to appeal

A participant in a hearing who is dissatisfied with the decision of the Commission may request that the Commission review and vary its decision. Such a request must follow the procedure set out in AUC Rule 016: *Review of Commission Decisions*.

A dissatisfied participant may also file a leave to appeal motion in the Court of Appeal of Alberta within 30 days from the date the decision is issued.

Step 9: Construction and operation

Any applicant that receives a permit to construct and licence to operate a facility from the Commission must adhere to any conditions that were set out in the decision. If you notice something during the construction or operational phases of a project that concerns you, bring this to the applicant's attention. If you are not satisfied with the response you receive, please bring your concerns to the attention of the AUC.

***Denotes opportunity for public involvement**

The Alberta Utilities Commission is committed to ensuring that Albertans whose rights may be directly and adversely affected by utility development in Alberta have the opportunity to have their concerns heard, understood and considered. If you believe you may be directly and adversely affected you can become involved in the AUC application and review process.

Contact information

Phone: 780-427-4903
Email: consumer-relations@auc.ab.ca

Dial 310-0000 prior to the 10-digit number and then press 1 for toll-free access anywhere in Alberta.

Information session

It is our goal to ensure that you understand the process, and your opportunities for involvement in proceedings to consider utility development applications. For those interested in having an AUC staff member further explain the application and review process or answer questions you may have about your involvement in utility development proceedings, please contact us as we may schedule a information session with you. The virtual information session on our website, found under Involving Albertans, will also provide you with further details which could assist you in understanding the process and having your say in a utility development proceeding.

This brochure provides general information only. Specific participation opportunities may differ depending on the type of application.



Public involvement in a proposed utility development

Understanding your rights and options for participating in a proceeding to consider applications for a proposed project in your area

Application process	
Step 1*	Public consultation by the applicant.
Step 2	Application filed with the AUC.
Step 3	The AUC issues a notice of application or notice of hearing.
Step 4*	Interested parties submit filings to the AUC with any outstanding issues or objections.
If the AUC does not receive any submissions, the application will be reviewed and a decision may be made without a hearing.	
Step 5*	The AUC issues a notice of hearing, if it was not already issued in Step 3. <ul style="list-style-type: none">Continued opportunity for consultation and negotiation with the applicant.
Step 6*	Public hearing.
Step 7	The AUC issues its decision. Below are the options the AUC may consider for: Needs applications from the Alberta Electric System Operator: <ul style="list-style-type: none">Approval of application.Return to the Alberta Electric System Operator with suggestions.Denial of application. Facilities applications: <ul style="list-style-type: none">Approval of application.Approval of application with conditions.Denial of application.
Step 8	Option to appeal decision or ask the AUC to review its decision.
Step 9	Approvals, construction and operation of facility, if approved.

Having your say

Early discussions with the applicant about proposed utility developments will often result in greater influence on what is filed in the application for approval. Utility developments include natural gas pipelines, electric transmission lines and substations (including Alberta Electric System Operator needs identification documents), and power plants. Should you have concerns related to a proposed utility development, it is best to have early and ongoing discussions with the applicant.

If your objections cannot be resolved, or you have outstanding concerns upon the filing of an application with the AUC, you have an opportunity to submit an initial filing with your objections in writing to the AUC containing the following information:

- How you may be affected by the proposed project and the location of your land or residence in relation to it or any alternative proposed in the application.
- The potential effect the proposed project may have on your property or interest in the property .
- A description of the extent to which you may be affected, and how you may be affected in a different way or to a greater degree than other members of the general public.

Following this initial filing, you may be able to fully participate in the proceeding. This could include having legal representation and participation in a public hearing. It is important to note that any applied for routes and segments (preferred and alternate) could be chosen as the approved route in the AUC decision.

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 is required to conduct public consultation in the area of the proposed project, so that concerns may be raised, addressed and if possible, resolved.

The requirements for consultation and notification, namely the participant involvement requirements, are set out in AUC Rule 007 for electric facilities and AUC Rule 020 for 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.

Step 2: Application to the AUC

When the participant involvement requirements have been completed, the proponent of the utility development files an application with the AUC. The application must indicate the issues which came up during the public consultation and any amendments considered or made to the project. Any unresolved objections or concerns which arose from the public consultation must be identified in the application.

*Denotes opportunity for public involvement

Step 3: Public notification

The Commission will issue a notice when it receives an application that, in the Commission's opinion, may directly and adversely affect the rights of one or more people. The notice is typically sent by mail to residents in the project area and may also be published in local newspapers. The notice will provide key dates, contacts and participation information for those interested in becoming involved in the process.

Step 4: Public filings to the AUC*

If you have unresolved objections or concerns about the proposed project filed with the AUC for approval and wish to participate in an AUC proceeding, you must make an initial written filing. Your filing must include your contact information, concern or interest in the application, an explanation of your position and what you feel the AUC should decide. Please be aware that any information or materials filed with the AUC, except information granted confidentiality, is available to the public.

Filing your concerns

The eFiling System is a web-based tool used to manage, search and upload documents reviewed by the Commission when considering applications filed with the AUC. Using the eFiling System is the most efficient way to provide your input to the AUC and monitor other filings and updates for the application of interest to you.

Those who do not have access to the Internet can send filings, evidence and other material by mail or fax and the AUC will upload the submission on your behalf.

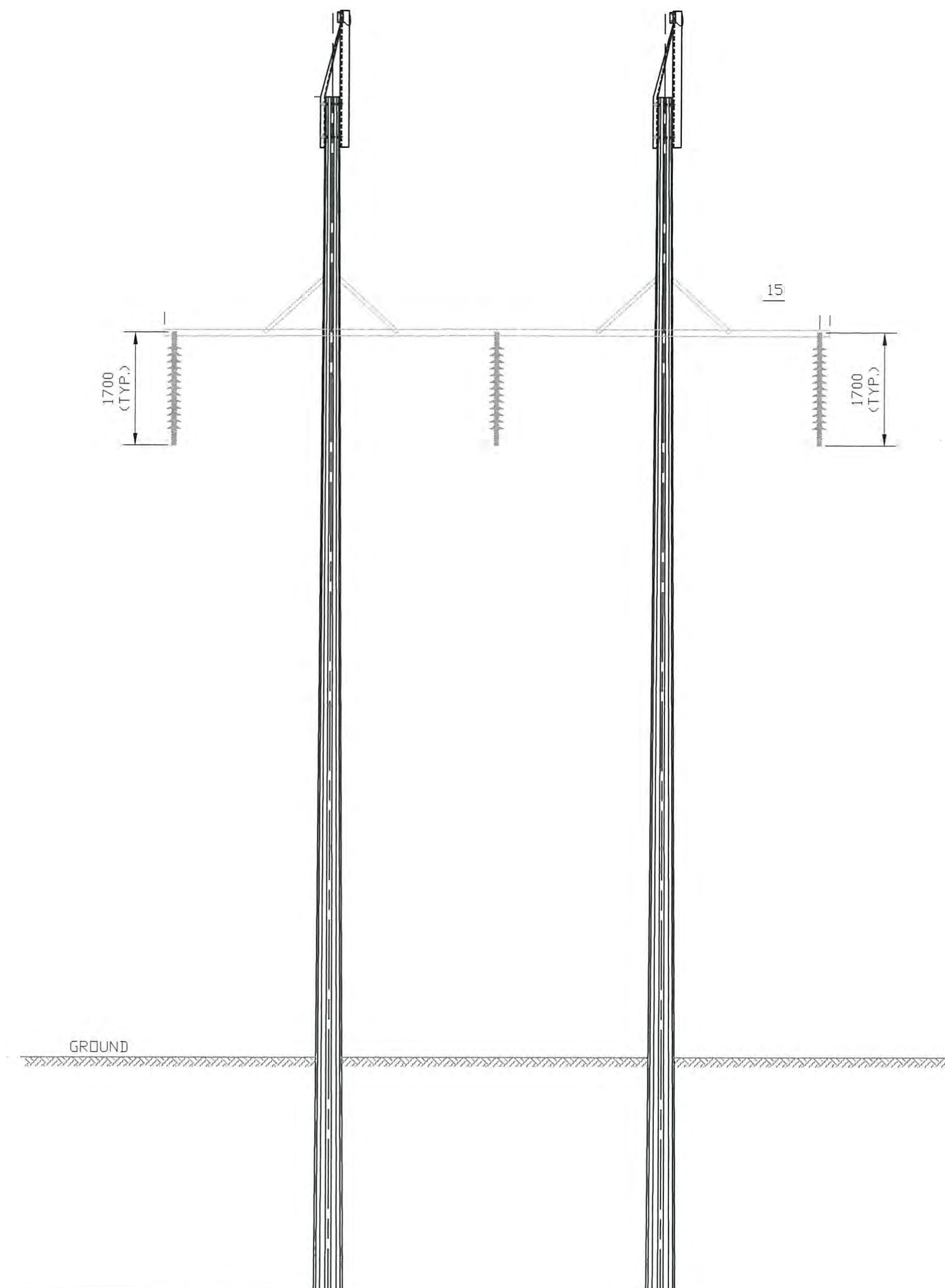
Participant cost reimbursement

A person determined by the Commission to be a local intervener can apply for reimbursement of reasonable costs incurred while participating in an AUC proceeding. Details regarding recovery of participants' costs are described in AUC Rule 009: *Rules on Local Intervener Costs*.

Step 5: Consultation and negotiation*

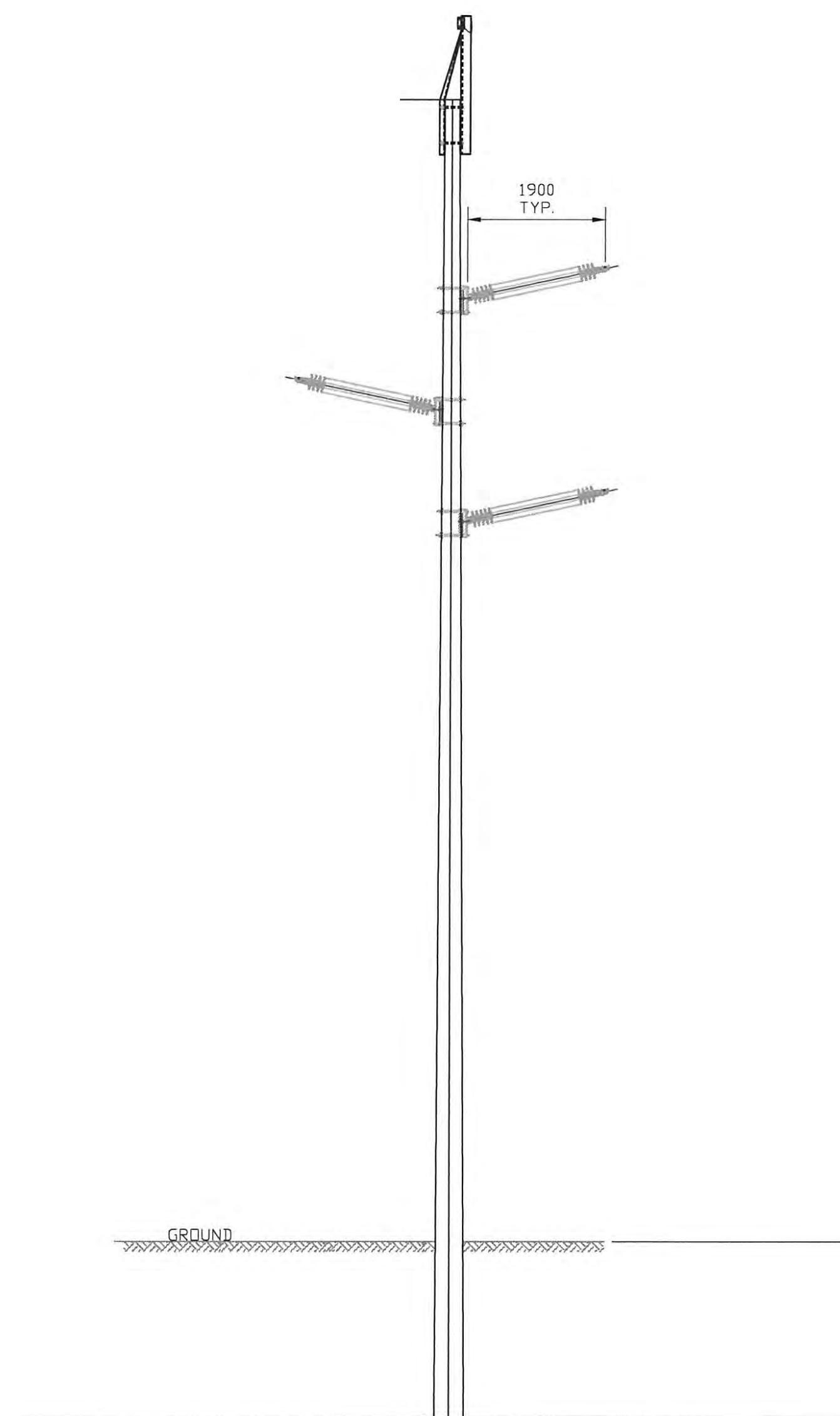
The Commission supports ongoing efforts to reach a positive outcome for the applicant and all affected parties. The Commission encourages the applicant and those who have made filings to continue to attempt to resolve any outstanding issues. If all concerns can be satisfactorily resolved this may eliminate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

Preliminary structure design



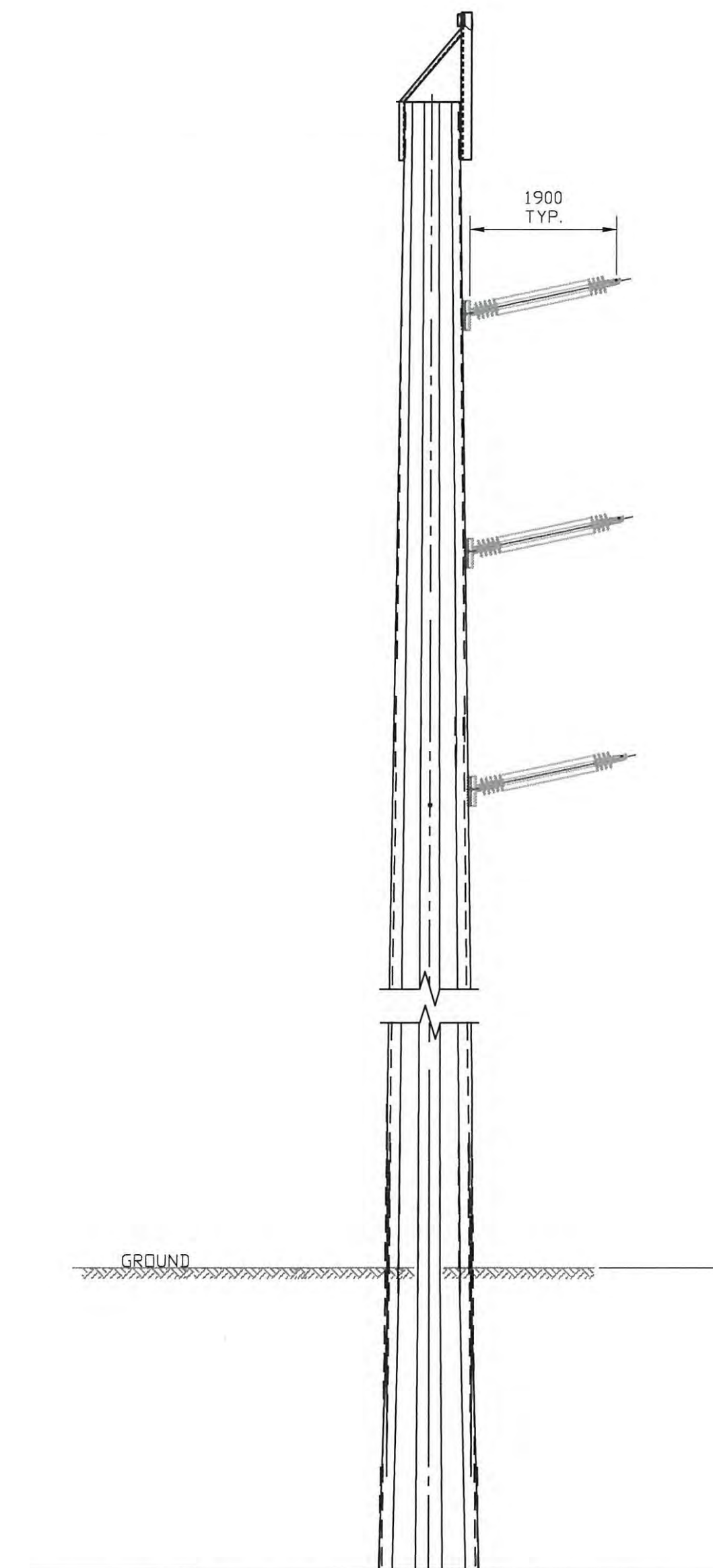
H-Frame

Height: 21-35 m (70-110 ft)
 Arm length from pole: 2.5 m (8 ft)
 Poles separation: 5 m (16.5 ft)
 Average span: 150-220 m (490-725 ft)



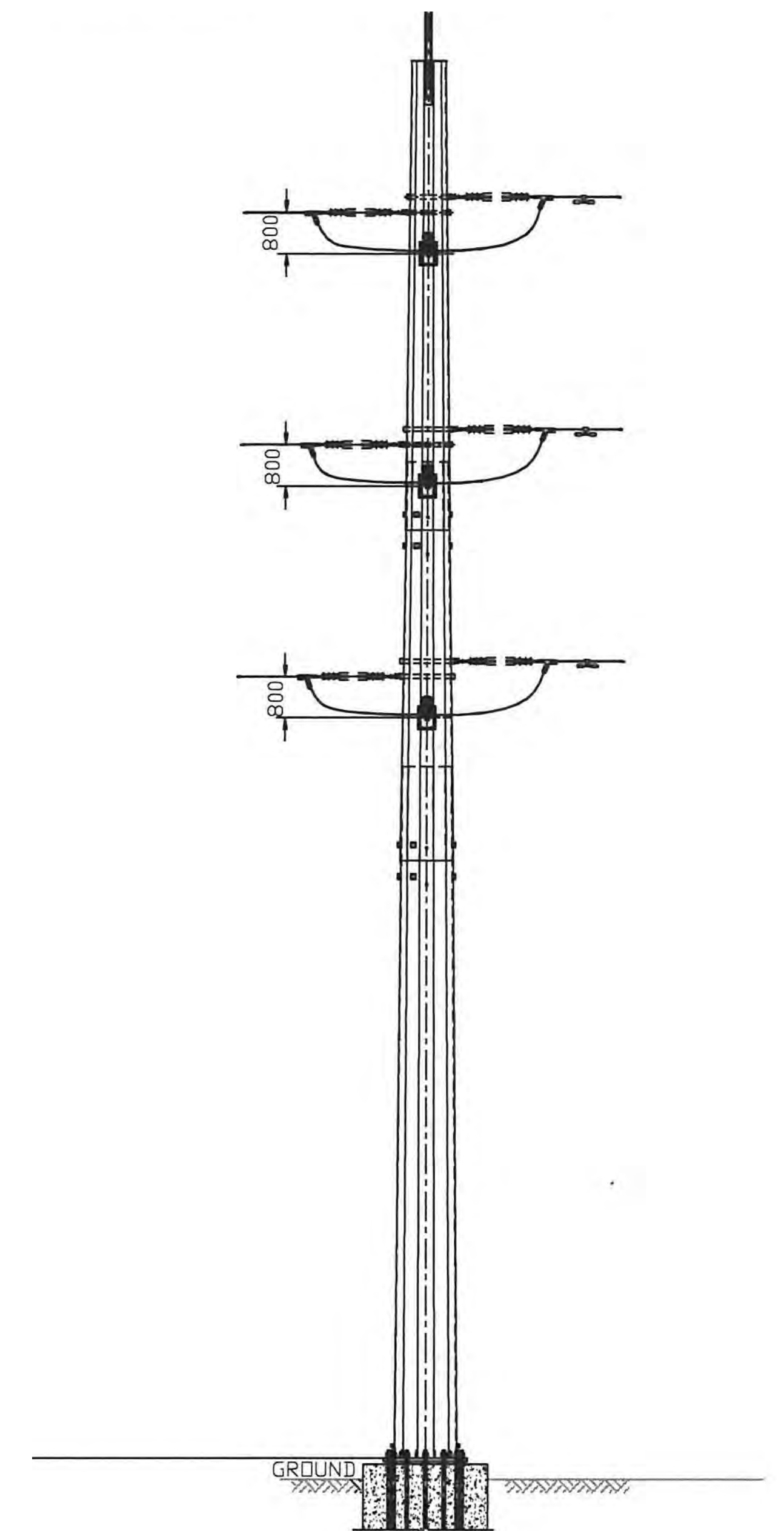
Self supporting wood

Height: 21-29 m (70-95 ft)
 Arm length from pole: 1.9-2.2 m (6-7.5 ft)
 Base width: 0.4-0.6 m (1-2 ft)
 Average span between similar structures:
 65-150 m (200-500 ft)



Self supporting steel

Height: 21-29 m (70-95 ft)
 Arm length from pole: 1.9-2.2 m (6-7.5 ft)
 Base width: 0.4-0.6 m (1-2 ft)
 Average span between similar structures:
 150-200 m (490-650 ft)



Self supporting steel deadend

Height: 21-29 m (70-95 ft)
 Base width: 0.6-1.2 m (2-4 ft)
 Arm length: 1.2-1.6 m (4-6 ft)

Windrise Transmission Project

August 27, 2019

RE: Windrise Transmission Project – Stage 1 Preliminary Routing Plan

TransAlta Corporation (TransAlta) through its wholly owned subsidiary, Windrise Wind LP, is proposing to construct the 207-megawatt Windrise Wind Project to be located 29 km southwest of Fort Macleod in the Municipal District of Willow Creek.

In order to connect the Windrise Wind Project to Alberta's electricity grid, TransAlta is proposing to construct the Windrise Transmission Project (Project). This Project will connect the proposed Windrise Wind Project Substation to the existing Windy Flats 138S Substation through a 138,000 volt transmission line. We have enclosed a map of the proposed route segments, a newsletter and information regarding the regulatory process and the involvement of the Alberta Electric System Operator.

During Stage 1 of Project planning, we will be meeting with landowners, Indigenous communities, and other interested parties to understand potential impacts of proposed routing prior to presenting a preferred route later this summer. Once a preferred route is determined, we will gather further feedback prior to TransAlta filing a Facility Application with the Alberta Utilities Commission to seek a license and permit to construct and operate the transmission line.

TransAlta will continue to work with those directly affected and other stakeholders to gather information, address concerns, share potential effects, discuss mitigation measures, and share Project updates as the Project moves forward.

If you wish to speak with our team or wish to set up a meeting to discuss your interests or concerns, please contact us at:

Email: windrisetransmission@maskwaenv.com

Tel: 1-844-391-2615

Web: www.transalta.com



1912 10 Avenue SW
Calgary, AB T3C 0J8
www.maskwaenv.com
P: (403) 215-4185
F: (587) 747-0139

We look forward to speaking with you as we progress with the Project.

Sincerely,

Chad Macy
Environmental and Permitting Lead
TransAlta Corporation

Trevor Joyal
Public Engagement Lead
Maskwa Environmental Consulting Ltd.

August 27, 2019

[Name]
[Address]
[City], [Province] [Country]
[Postal Code]

RE: Windrise Transmission Project – Stage 1 Preliminary Routing Plan

Dear [Name],

Further to our introduction letter of March 29, 2019, we're pleased to provide you with an update on the Windrise Transmission Project and our Stage 1 preliminary routing plan.

TransAlta Corporation (TransAlta) through its wholly owned subsidiary, Windrise Wind LP, is proposing to construct the 207-megawatt Windrise Wind Power Project to be located 29 km southwest of Fort Macleod in the MD of Willow Creek.

In order to connect the Windrise Wind Power Project to Alberta's electricity grid, TransAlta is proposing to construct the Windrise Transmission Project (Project). The Project will connect the proposed Windrise Wind Power Project Substation to the existing Windy Flats 138S Substation through a 138,000 volt transmission line.

As a result of our preliminary routing plan review, it was determined that placement of the proposed transmission will not have a direct impact on your property at this time. If this changes, we will notify you directly.

While you are not directly impacted by the Project, we recognize that you may have questions, comments or concerns regarding the transmission line and routing. We have enclosed a map of the proposed route segments, a newsletter, information regarding the regulatory process, and the Alberta Electric System Operator's Need Overview.

In addition, to facilitate any questions from community members, TransAlta has contracted Maskwa Environmental Consulting Ltd. to host a drop-in meeting at the Ardenville Community Hall over four (4) days in September where you can speak with a Project team member to discuss the Project and any questions you may have.

Details of the drop-in meetings are as follows:

Drop-in meeting centre

September 16, 17, 18 and 19

8:00 a.m. to 6:00 p.m.

Ardenville Community Hall

Highway 810 between Township Road 70 & 71

Refreshments will be served

If you are away, unable to attend, or if do not live in the area, please contact us by phone or email to discuss any questions, comments or concerns you may have about the Project.

Prior to TransAlta filing a Facility Application with the Alberta Utilities Commission to seek a license and permit to construct and operate the transmission line, TransAlta will continue to work with those directly affected and other stakeholders to gather information, address concerns, share potential effects, discuss mitigation measures, and share updates on potential Project placement.

Should you wish to speak with a member of the Project team, please contact us any time at:

Web: www.transalta.com

Email: windrisetransmission@maskwaenv.com

Tel: 1-844-391-2615

We look forward to speaking with you.

Sincerely,



Chad Macy
Environmental and Permitting Lead
TransAlta Corporation



Trevor Joyal
Public Engagement Lead
Maskwa Environmental Consulting Ltd.

August 27, 2019

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In order to connect the Windrise Wind Power Project to Alberta's electricity grid, TransAlta is proposing to construct the Windrise Transmission Project (Project). The Project will connect the proposed Windrise Wind Power Project Substation to the existing Windy Flats 138S Substation through a 138,000 volt transmission line.

As a result of our preliminary routing plan review, it was determined that placement of the proposed transmission line routing options to connect the Windrise Wind Power Project has the potential to cross, or is adjacent, to your property. We have enclosed a map of the proposed route segments in relation to your property, a newsletter, information regarding the regulatory process, and the Alberta Electric System Operator's Need Overview.

We recognize that you may have questions, comments or concerns regarding the transmission line, and in order to better understand your property and assess potential routing options, TransAlta has contracted Maskwa Environmental Consulting Ltd. to host a drop-in meeting at the Ardenville Community Hall over four (4) days in September where you can speak with a Project team member to discuss the Project and any questions you may have.

Details of the drop-in meetings are as follows:

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Should you wish to speak with a member of the Project team, please contact us anytime at:

Web: www.transalta.com

Email: windrisetransmission@maskwaenv.com

Tel: 1-844 391-2615

We look forward to speaking with you.

Sincerely,



Chad Macy
Environmental and Permitting Lead
TransAlta Corporation



Trevor Joyal
Public Engagement Lead
Maskwa Environmental Consulting Ltd.

August 27, 2019

[Name]

[Address]

[City], [Province] [Country]

[Postal Code]

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In order to connect the Windrise Wind Power Project to Alberta's electricity grid, TransAlta is proposing to construct the Windrise Transmission Project (Project). The Project will connect the proposed Windrise Wind Power Project Substation to the existing Windy Flats 138S Substation through a 138 kV transmission line.

As a result of our preliminary routing plan review, it was determined that placement of the proposed transmission line routing options to connect the Windrise Wind Power Project has the potential to cross, or is adjacent, to your property. We have enclosed a map of the proposed route segments, a newsletter, information regarding the regulatory process, and the Alberta Electric System Operator's Need Overview.

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Ardenville Community Hall

Highway 810 between Township Road 70 & 71

Refreshments will be served

If you are away, unable to attend, or if do not live in the area, please contact us by phone or email to discuss any questions, comments or concerns you may have about the Project.

In addition to TransAlta's engagement process, AltaLink L.P. will be in contact with you directly as they will be speaking with landowners near the Windy Flats 138S Substation to discuss the work anticipated at that site in relation to the Project.

Prior to TransAlta filing a Facility Application with the Alberta Utilities Commission to seek a license and permit to construct and operate the transmission line, TransAlta will continue to work with those directly affected and other stakeholders to gather information, address concerns, share potential effects, discuss mitigation measures, and share updates on potential Project placement.

Should you wish to speak with a member of the Project team, please contact us anytime at:

Web: www.transalta.com

Email: windrisetransmission@maskwaenv.com

Tel: 1-844-391-2615

We look forward to speaking with you.

Sincerely,



Chad Macy
Environmental and Permitting Lead
TransAlta Corporation



Trevor Joyal
Public Engagement Lead
Maskwa Environmental Consulting Ltd.

**Attachment 4 – TFO Project Newsletter – TransAlta Windy Flats 138S Substation Upgrade
(August 2019)**

Electric system improvements near you

TransAlta Windy Flats 138S Substation Upgrade

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.

You are receiving this newsletter because you are near the TransAlta Windy Flats 138S Substation Upgrade project and we want your input.

Windrise Wind LP, a wholly owned subsidiary of TransAlta Corporation (TransAlta) has requested a connection to the **transmission** system for their proposed Windrise Wind Power Project. To facilitate this connection, TransAlta is proposing to construct a new transmission line which will connect to AltaLink's existing Windy Flats 138S **Substation**.

Although AltaLink's project is separate from TransAlta's project, it is required to facilitate the connection of their proposed transmission line and wind power facility. TransAlta will consult separately on their proposed line and facility. For more information about TransAlta's project, see their contact information on the back of this newsletter.

In order to connect TransAlta's project to the transmission system, AltaLink is proposing equipment upgrades at the Windy Flats 138S Substation. We are providing you with:

- project details
- a map of the proposed project site
- information about how you can provide your input
- the project schedule

DEFINITIONS:

Transmission

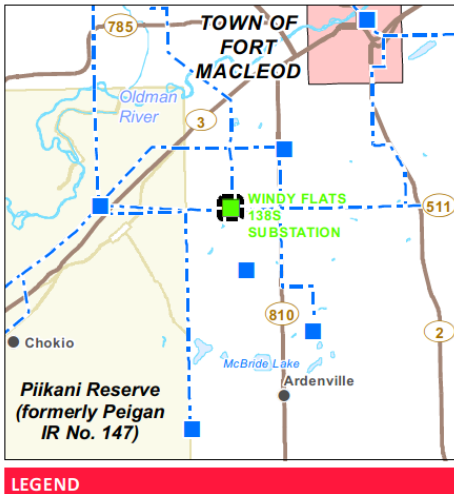
Transmission lines make up Alberta's electric highway, linking the places where power is generated to where power is used. Transmission lines transport large amounts of power over long distances across the province. The transmission system connects diverse sources of power generation including wind,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

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 up and step down the voltage so power can be transmitted through transmission lines or distributed to your community through distribution lines.

CONTACT US

1-877-269-5903
stakeholderrelations@altalink.ca
www.altalink.ca/projects



Project details

The proposed project involves adding equipment to the existing Windy Flats 138S Substation, located approximately 7.5 kilometres southwest of the Town of Fort MacLeod, east of Range Road 265 (SW-17-8-26-W4).

If approved, the substation upgrade includes adding the following new equipment to the substation:

- one new 240/138 kilovolt (kV) **transformer**
- one new 138 kV **circuit breaker** and associated equipment

Communications equipment upgrades are also required as part of this project to ensure the safe and reliable operation of the transmission system. Fiber optic cable will be required from the last structure outside of the Windy Flats 138S Substation to the Windy Flats 138S Substation, and may be located on the transmission line or underground.

No fence expansion will be required, and construction workspace will be located on AltaLink owned land. For a detailed overview, please refer to the detailed photo map (DP1) included in this package.

Definitions:

Transformers step up and step down the voltage in a substation so power can be distributed safely to your community through distribution lines. Transformers also step up the voltage so power can be transmitted through transmission lines.

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



Above: typical 240/138 kV transformer
Below: typical 138 kV circuit breaker



Above: Windy Flats 138S Substation

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 electrical facilities. 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

Providing your input

We will contact landowners, residents and occupants near the proposed substation project to gather input and address questions or concerns.

After the consultation process is complete we will file an application with the Alberta Utilities Commission (AUC). The AUC will review the application through a process in which stakeholders can participate.

We will notify stakeholders when we file the application and again once the AUC has reached a decision about the project. 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	July 2019 – August 2019
File application with Alberta Utilities Commission (AUC)	November 2019
Start construction if project is approved	September 2020
Construction completed	December 2020

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.

Contact us

To learn more about the proposed project please contact:

ALTALINK

1-877-269-5903 (toll free)

E-mail: stakeholderrelations@altalink.ca

Website: www.altalink.ca/projects

To learn more about TransAlta's project please contact:

TRANSALTA

1-844-391-2615

E-mail: windrisetransmission@maskwaenv.com

Website: www.transalta.com

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

E-mail: 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 or the proposed transmission development to meet the need, 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 (toll-free by dialing 310-0000 before the number.)

E-mail: consumer-relations@auc.ab.ca

PRIVACY COMMITMENT

Altalink is committed to protecting your privacy. Altalink will collect, use, and disclose personal information in accordance with Altalink's Privacy Policy and the *Personal Information Protection Act* (Alberta). 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 map
- AESO Need Overview
- AUC brochure: *Public involvement in a proposed utility development*

SUBSCRIBE TO THIS PROJECT

- 1) Visit: altalink.ca/projects
- 2) Search for the project title
- 3) Click **Subscribe to Updates**

LET'S TALK TRANSMISSION



www.twitter.com/altalink



[www.facebook.com/
altalinktransmission](https://www.facebook.com/altalinktransmission)

Need for the Windrise Wind Power Project Connection in the Town of Fort Macleod area

Windrise Wind LP, a wholly owned subsidiary of TransAlta Corporation (TransAlta), has applied to the AESO for transmission system access to connect its proposed Windrise Wind Power Project (Facility) in the Fort Macleod area. TransAlta's request can be met by the following solution:

PROPOSED SOLUTION

- Upgrade the existing Windy Flats 138S substation, including adding one 240/138 kilovolt (kV) transformer and one 138 kV circuit breaker.
- Add one 138 kV transmission line to connect the Facility to the Windy Flats 138S substation in a radial configuration.
- 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 late 2019.
- The AESO's needs identification document (NID) application will be available on the AESO's website at 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.

TRANSALTA

- Has requested transmission system access to connect the Facility.
- Is responsible for detailed siting and routing, and constructing the 138 kV transmission line to connect the Facility to the Windy Flats 138S substation.
- Must apply to the AUC for approval of its transmission facilities applications.

ALTALINK

- Is the transmission facility owner in the Fort Macleod area.
- Is responsible for operating and maintaining the new 138 kV transmission line, and constructing, operating and maintaining the transmission facilities associated with the Windy Flats 138S substation upgrade.
- Is regulated by the AUC and must apply to the AUC for approval of its transmission facilities applications.

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.

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.

CONTACT US

Alberta Electric System Operator
AESO Stakeholder Relations
stakeholder.relations@aeso.ca
1-888-866-2959

2500, 330-5th Avenue SW
Calgary, AB T2P 0L4
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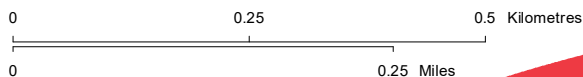


LEGEND

- Existing Transmission Line
- Proposed Upgrade to Existing Substation
- Residence
- Road
- Environmentally Significant Area
- Gravel Pit
- Water Body

NO: 35027052.6201
 DRAWN: MR - AL
 FILE NO.: XXXXXX
 REVISION: 0.00.00
 AL FOLDER: TransAlta Windrise
 MPC Wind

DATE: 2019-07-15



DETAIL PHOTO **DP1**



PROPOSED
 TransAlta Windy Flats 138S
 Substation Upgrade

Service Layer Credits:
 Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
 Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.

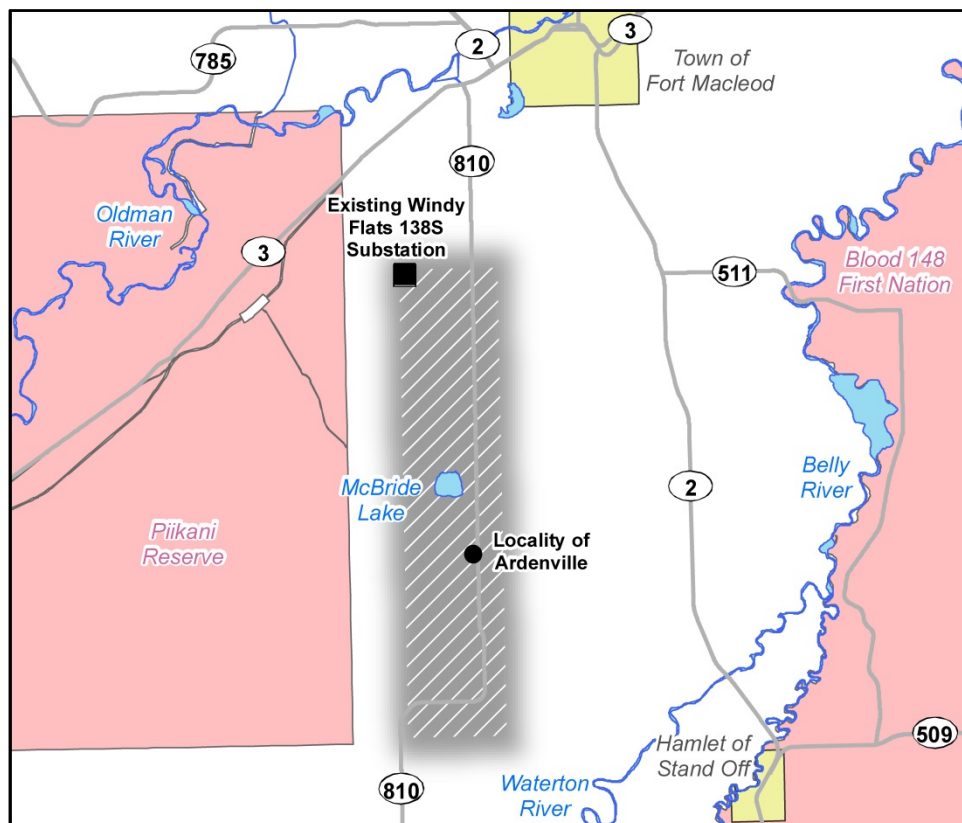
Attachment 5 – AESO Public Notification of NID Filing Website Posting (November 2019)

Notification of Needs Identification Document Filing Addressing the Need for the Windrise Wind Power Project Connection in the Town of Fort Macleod Area

The Alberta Electric System Operator (AESO) advises you that it intends to file a Needs Identification Document (NID) for the Windrise Wind Power Project Connection with the Alberta Utilities Commission (AUC) on or after November 27, 2019.

Windrise Wind L.P. by its general partner Windrise Wind Energy Inc. (Windrise), a wholly owned subsidiary of TransAlta Corporation, has applied to the AESO for transmission system access to connect its approved Windrise Wind Power Project (Facility) in the Fort Macleod area. Windrise's request can be met by the following solution:

- Upgrade the existing Windy Flats 138S substation, including adding one 240/138 kilovolt (kV) transformer and one 138 kV circuit breaker.
- Add one 138 kV transmission line to connect the Facility to the Windy Flats 138S substation in a radial configuration.
- Add or modify associated equipment as required for the above transmission developments.



The black square on the map indicates the approximate location of the existing Windy Flats 138S substation, which is at SW-17-8-26W4. The grey shaded area on the map indicates the approximate location of the proposed transmission developments, including the 138 kV transmission line. The specific transmission facilities may extend beyond the grey shaded area shown.

Windrise is responsible for siting, routing and constructing the new 138 kV circuit. AltaLink Management Ltd. is the transmission facility owner (TFO) in the Fort Macleod area and is responsible for operating and maintaining the new 138 kV circuit and the associated facilities.

In August 2019, the AESO, Windrise 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/stakeholder-engagement/transmission-projects/windrise-wind-power-project-connection/>

In separate applications, called Facility Applications, Windrise and 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.

For more information, please visit our website, www.aeso.ca or contact us at 1-888-866-2959 or stakeholder.relations@aes0.ca.

Attachment 6 – AESO Stakeholder Newsletter NID Filing Notice (November 12, 2019)

November 12, 2019

AESO Stakeholder Newsletter



Windrise Wind Power Project Connection – Notice of NID Filing

Windrise Wind L.P. by its general partner Windrise Wind Energy Inc. (Windrise), a wholly owned subsidiary of TransAlta Corporation, has applied to the AESO for transmission system access to connect its approved Windrise Wind Power Project (Facility) in the Fort Macleod area. Windrise's request can be met by the following solution:

- Upgrade the existing Windy Flats 138S substation, including adding one 240/138 kilovolt (kV) transformer and one 138 kV circuit breaker.
- Add one 138 kV transmission line to connect the Facility to the Windy Flats 138S substation in a radial configuration.
- Add or modify associated equipment as required for the above transmission developments.

The AESO intends to file the Windrise Wind Power Project Connection Needs Identification Document (NID) application with the Alberta Utilities Commission (AUC) on or after Nov. 27, 2019 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 Stakeholder Engagement > Transmission Projects > Windrise Wind Power Project Connection to see all the relevant documents, including the NID application once it is filed with the AUC.