

Participant Involvement Program Summary

Pakenham 2103S Substation

Date: September 16, 2026

Version: V1

Classification: Public

1. Introduction

From December 2023 to June 2025, the AESO conducted a Participant Involvement Program (PIP) for the *Pakenham 2103S Substation Needs Identification Document*. The AESO directed the legal owner of transmission facilities (TFO), in this case ATCO Electric Ltd., to assist the AESO in providing notification as part of the AESO's PIP.

The AESO's PIP is designed to notify Stakeholders and Indigenous groups in the area where the AESO has reasonably determined that facilities could be installed to implement the AESO's preferred option to respond to the request for system access service.

The AESO's PIP has been conducted in accordance with the requirements of Section 7.1.2, NID12 and Appendix A2 of the current Alberta Utilities Commission (Commission) Rule 007 (AUC Rule 007), effective November 6, 2025.

2. Stakeholder and Indigenous Group 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.

A copy of the Need Overview was posted to the AESO website at <https://www.aeso.ca/grid/transmission-projects/need-for-pakenham-2103s-substation/> and a notice was published in the AESO Stakeholder Newsletter on June 18, 2025. 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 package that was distributed to Stakeholders, as further described in Section 2.1.

2.1 Stakeholders and Indigenous Groups Notified in the TFO's PIP

The TFO has advised the AESO that its PIP included notification within 800 m of the transmission lines and 100 m of the proposed fibre optic facility as recommended by the Commission in Appendix A1 in AUC Rule 007.¹

The TFO notified a total of 27 Stakeholders, of which 2 were classified as private or individual landowners. The other 19 notified Stakeholders and the 6 notified Indigenous groups are listed below:

- | | |
|---|--------------------------------------|
| • Alberta Environment and Protected Areas – Fish & Wildlife | • ARC Resources Ltd |
| • Alberta Forestry and Parks – Lands | • Aseniwuche Winewak Nation |
| • Alberta Transportation and Economic Corridors | • Canadian Natural Resources Limited |
| | • Cenovus Energy Inc |
| | • Foothills First Nation |

¹ The TFO has identified its facility application to be of the type: *Overhead transmission line and new substation development – rural or industrial setting project*, as categorized in Table A1-1, Appendix A13 of AUC Rule 007 and on the Commission's expectations for fibre optic facilities found in Appendix A1 of AUC Rule 007.

- Gift Lake Metis Settlement
- Horse Lake First Nation
- Keyera Energy Ltd
- Metis Nation of Alberta
- Municipal District of Greenview No. 16
- Nav Canada
- New Times Energy Canada GP 3 Ltd
- Norbord Inc
- NTE Energy Canada Ltd
- Nuvista Energy Ltd
- Oviniv Canada ULC
- Paramount Resources Ltd
- Secure Waste Infrastructure Corp
- Shell Canada Limited
- Sucker Creek First Nation
- TELUS Communications Inc
- Weyerhaeuser Company Limited c/o International Paper Company

Attachment 3 includes the TFO's project newsletter, which included the AESO Need Overview that was distributed to the Stakeholders described above on June 11, 2025. The TFO's project newsletter was posted on the TFO's project-specific webpage <https://electric.atco.com/en-ca/about-us/projects/pakenham-substation-transmission.html> on June 11, 2025. The TFO's project information package 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.

3. Early Rate-Payer Group Engagement

The AESO published terms of participation for rate-payer group involvement in DFO projects on its website in 2022: <https://www.aeso.ca/assets/Terms-of-Participation-Industry-and-Rate-Payer-Groups.pdf>

The AESO sought feedback from eligible rate-payer groups during Stages 1 and 2 of the AESO Connection Process. The AESO notified the following eligible rate-payer groups:

- Alberta Direct Connect
- Consumer Coalition of Alberta
- Utilities Consumer Advocate
- Industrial Power Consumers Association of Alberta

3.1 Stage 1

On December 11, 2023, the AESO provided a summary of the connection alternatives identified. A generic version of the letter, which included the a description of the connection alternatives is included as Attachment 4.

No feedback on the connection alternatives was provided by the notified rate-payer groups.

3.2 Stage 2

On September 11, 2024, the AESO provided a summary of the preferred alternative decision, including rationale for ruling out each considered alternative. A generic version of the letter, which included the summary of the alternative selection decision is included as Attachment 5.

No feedback on the preferred alternative was provided by the notified rate-payer groups.

4. Responding to Questions and Concerns

To ensure that Stakeholders had the opportunity to provide feedback, the AESO provided Stakeholders with the AESO's 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 (3000, 240 4th 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.

5. Questions and Concerns Raised

The TFO has advised the AESO that none of the Stakeholders notified by the TFO identified any concerns or objections regarding the AESO's preferred option to respond to the system access service request or the need for development.

The AESO has not received any indication of concerns or objections 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 (June 2025)
- Attachment 2 – AESO Stakeholder Newsletter Need Overview Notice (June 18, 2025)
- Attachment 3 – TFO Project Newsletter – Pakenham Substation Transmission Project (June 2025)
- Attachment 4 – Stage 1 Early Rate Payer Engagement Letter and Summary (December 2023)
- Attachment 5 – Stage 2 Early Rate Payer Engagement Letter and Summary (September 2024)

Attachment 1 – AESO Need Overview (June 2025)



Need for the Pakenham 2103S Substation

ATCO Electric Ltd. (ATCO) has applied to the AESO for transmission system access to reliably serve new and growing demand for electricity in the Grande Prairie area. ATCO's request can be met by the following solution:

PROPOSED SOLUTION

- Add a substation to be designated as Pakenham 2103S substation, including one 144/25 kilovolt (kV) transformer and one 144 kV circuit breaker.
- Add one 144 kV transmission line to connect the proposed Pakenham 2103S substation to the existing 144 kV transmission line 7L228 in a T-tap configuration.
- Add or modify associated equipment as required for the above transmission developments.

NEXT STEPS

- In late 2025, the AESO may consider the need for this project for approval under section 501.3 of the ISO rules, *Abbreviated Needs Approval Process* (ANAP Rule), or apply to the Alberta Utilities Commission (AUC) for approval of the need.
- The AESO will notify stakeholders via the AESO's website at www.aeso.ca/grid/transmission-projects prior to the project being considered under the ANAP Rule or when filing a needs identification document (NID) application with 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.
- Can approve eligible projects through the ANAP Rule and for non-eligible projects, the AESO will prepare and submit a NID to the AUC for approval.

ATCO

- Is the transmission facility owner in the Grande Prairie area.
- Is responsible for detailed siting and routing, constructing, operating, and maintaining the transmission facilities.
- 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

3000, 240-4th Avenue SW
 Calgary, AB T2P 4H4
 Phone: 403-539-2450

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

Attachment 2 – AESO Stakeholder Newsletter Need Overview Notice (June 18, 2025)

GRID

Need Overview | Pakenham 2103S Substation

ATCO Electric Ltd. (ATCO) has applied to the AESO for transmission system access to reliably serve new and growing demand for electricity in the Grande Prairie area.

[Click here](#) to view details and access the document or visit aeso.ca: Grid > Transmission Projects > Pakenham 2103S Substation (2716).

Attachment 3 – TFO Project Newsletter – Pakenham Substation Transmission Project (June 2025)

ATCO SHAPE the conversation



June 2025

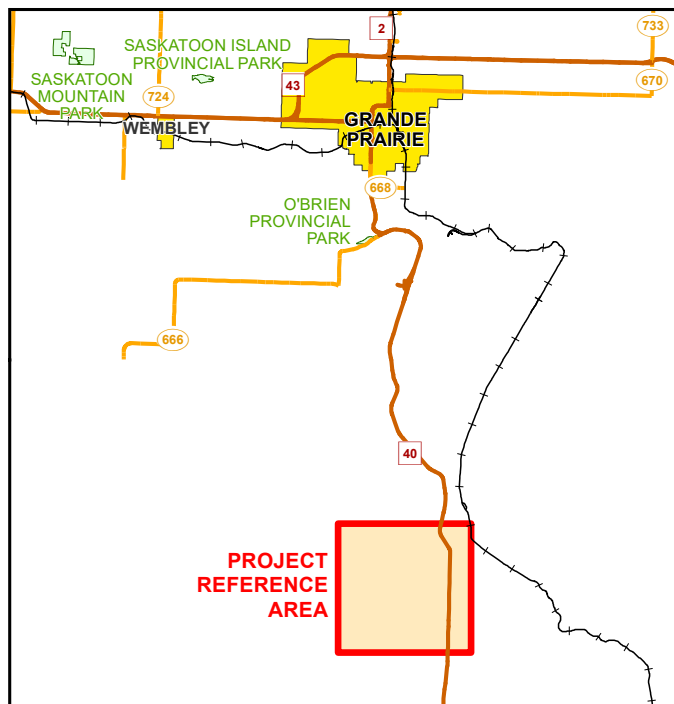
PAKENHAM SUBSTATION TRANSMISSION PROJECT

This newsletter provides you with information about electric transmission facilities being proposed in your area. This package provides important project information and outlines our public consultation process. We invite any comments, questions, or concerns you may have.

The proposed ATCO Electric Ltd. (ATCO) Pakenham Substation Transmission Project (the Project) will be located approximately 38 kilometres (km) south of Grande Prairie, Alberta and is needed to serve growing demand for electricity in the area.

If approved, the Project will include the construction of the Pakenham substation (to be designated as 2103S) and approximately 14.6 km of single-circuit 144 kilovolt (kV) transmission line (to be designated as 7LA228) to connect the new substation to the electrical grid. The Project also requires modifications to existing transmission line 7L228 to accommodate the T-tap connection of the proposed transmission line 7LA228. Please refer to the enclosed materials for further details.

ATCO is seeking your input on how this project may affect you. If you are in direct vicinity of the proposed facility, ATCO will contact you in the coming weeks.



Project Need

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 or the proposed transmission development to meet the need, you may contact the AESO directly. You can also make your questions or concerns known to an ATCO 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.

Included in this package:

- Technical Details
- Proposed Route Mosaic map
- Proposed Site Layout
- AUC Brochure: *Participating in the AUC's independent review process to consider facility applications*
- AESO Need Overview
- Reply form and postage paid envelope

CONTACT INFORMATION

Your comments and concerns are important to us. Please contact us if you would like to learn more about this project or if you would like to share information with us.

- Call us toll free at: **1-855-420-5775** or
- Contact the planner directly:

John Naughton

Land Planning
ATCO Electric Ltd.
10035 - 105 Street
Edmonton, AB T5J 1C8

Email: consultation@atcoelectric.com
Website: www.electric.atco.com

Alberta Electric System Operator (AESO)

Phone: 1-888-866-2959
Email: stakeholder.relations@aeso.ca
Website: www.aeso.ca

Alberta Utilities Commission (AUC)

Phone: 780-427-4903
(For toll-free, dial 310-0000 first)
Email: consumer-relations@auc.ab.ca
Website: www.auc.ab.ca

ATCO

Proposed Timeline

June 2025

Notification to landholders, agencies and other interested parties.

July 2025

Consultation with landholders, agencies and other interested parties will commence.

November 2025

Submission of application to the Alberta Utilities Commission (AUC).

August 2026

If approved, construction will commence.

April 2027

Facilities completed and operating.

Regulatory Process

Alberta's electrical system is regulated by the Alberta Utilities Commission (AUC). The AUC is an agency of the province that ensures the services provided by ATCO and other Alberta utilities take place in a fair and responsible manner and are in the public's interest. Before ATCO can begin construction on a project, the AUC must approve our facility application.

For more information about how you can participate in the approval process required by the AUC, please refer to the enclosed brochure entitled *Participating in the AUC's independent review process to consider facility applications*.

Next Steps

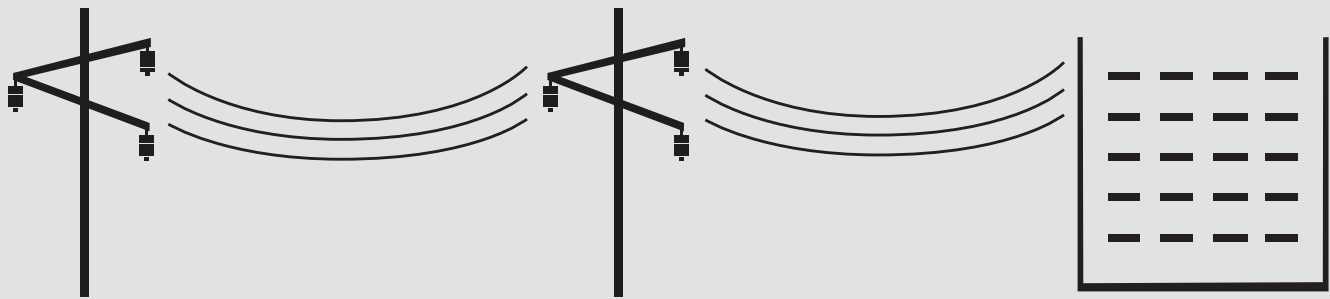
The consultation process for this project is ongoing. Please let us know if you have any questions, concerns or suggestions regarding this Project. You can provide feedback and share other information by contacting us (toll free) at **1-855-420-5775** or by email at consultation@atcoelectric.com.

To learn more about the Pakenham Substation Transmission Project, you can visit the project website at <https://electric.atco.com/en-ca/community/projects/pakenham-substation-transmission-project.html>.

June 2025

PAKENHAM SUBSTATION TRANSMISSION PROJECT

The technical details of facilities associated with the Pakenham Substation Transmission Project are described in this fact sheet. Designs may vary as plans are finalized.



Existing 144 kV Transmission Line 7L228

The Project will require alterations to the existing single-circuit 144 kV transmission line 7L228.

New 144 kV Transmission Line 7LA228

Approximately 14.6 km of new single-circuit 144 kV transmission line (to be called 7LA228) will connect to the proposed Pakenham 2103S substation.

New Pakenham 2103S Substation

The Project will require a new substation, located south of Grande Prairie, Alberta in NE 10-67-6 W6M.

THE DETAILS

If approved, alterations will occur at existing transmission line 7L228 to accommodate the T-tap configuration to connect proposed transmission line 7LA228.

ATCO will also install approximately 1.3 km of underground fibre optic cable between existing transmission line 7L228 to a splice box on the proposed transmission line 7LA228.

Fibre optic cables transmit valuable data to ATCO control centers, which is used to maintain and improve the reliability of Alberta's electric system.

THE DETAILS

If approved, the new 7LA228 transmission line will consist of:

- Three (3) conductor wires
- One (1) overhead shield wire
- Wood pole wishbone structures

Transmission line 7LA228 will connect the proposed Pakenham 2103S substation to the electrical grid.

A Temporary bypass is required to minimize service interruptions to connected customers while construction activities are underway.

The bypass will consist of temporary structures, spanning the 7LA228 proposed tap location.

THE DETAILS

If approved, the work will include the installation of the following equipment (please refer to the back of this fact sheet for definitions):

- One (1) 144 kV transformer
- One (1) 144 kV circuit breaker with associated disconnect switches
- Control building

The equipment described above will be installed within the proposed Pakenham 2103S substation site (please see enclosed site layout diagram).

What It Will Look Like

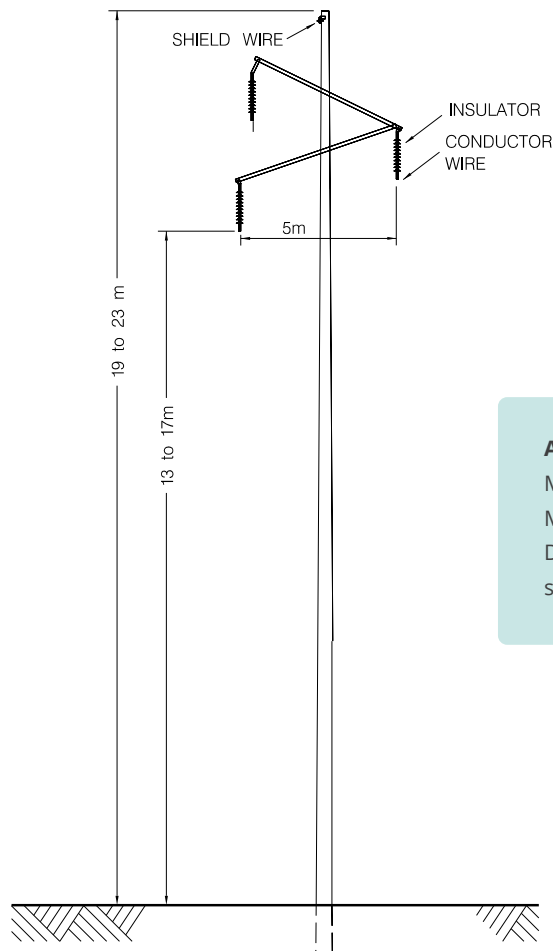
If approved by the AUC, the new 144 kV transmission line (to be called 7LA228) will be built with wood wishbone structures similar to the one shown here.

Structures will be single-circuit. This means they will have three conductor wires strung across them, plus one overhead shield wire at the top of the structure. The typical distance between structures will be approximately 110 to 150 metres (m).

Non-typical structures may be taller in height or have wider bases.

Guy wires and anchors may be required where the line ends, bends, goes around corners or avoids obstacles. In all cases, minimum clearance will meet or exceed provincial safety regulations.

Note: Details may change as the project develops and designs are finalized.



APPROXIMATE DIMENSIONS

Max Height 19 to 23 m
 Max. Width 5 m
 Distance between structures 110 to 150 m

Typical right-of-way for this project – 18 metres

Rights-of-way are cleared of trees, bush and debris to allow access for construction and ongoing maintenance.

Definitions

Capacitor: A device that stores electrical energy by accumulating electrical charges on two closely spaced surfaces that are insulated from each other.

Circuit: A circuit is a group of wires electricity flows through. ATCO's transmission lines can be single or double circuit. A single-circuit line has three wires and a double-circuit line has six. A transmission line may also have one or two shield wires on the top of the structures to protect the line from lightning.

Circuit Breaker: A circuit breaker is an automatic switch that is designed to protect an electrical circuit from overloading by shutting off the flow of electricity.

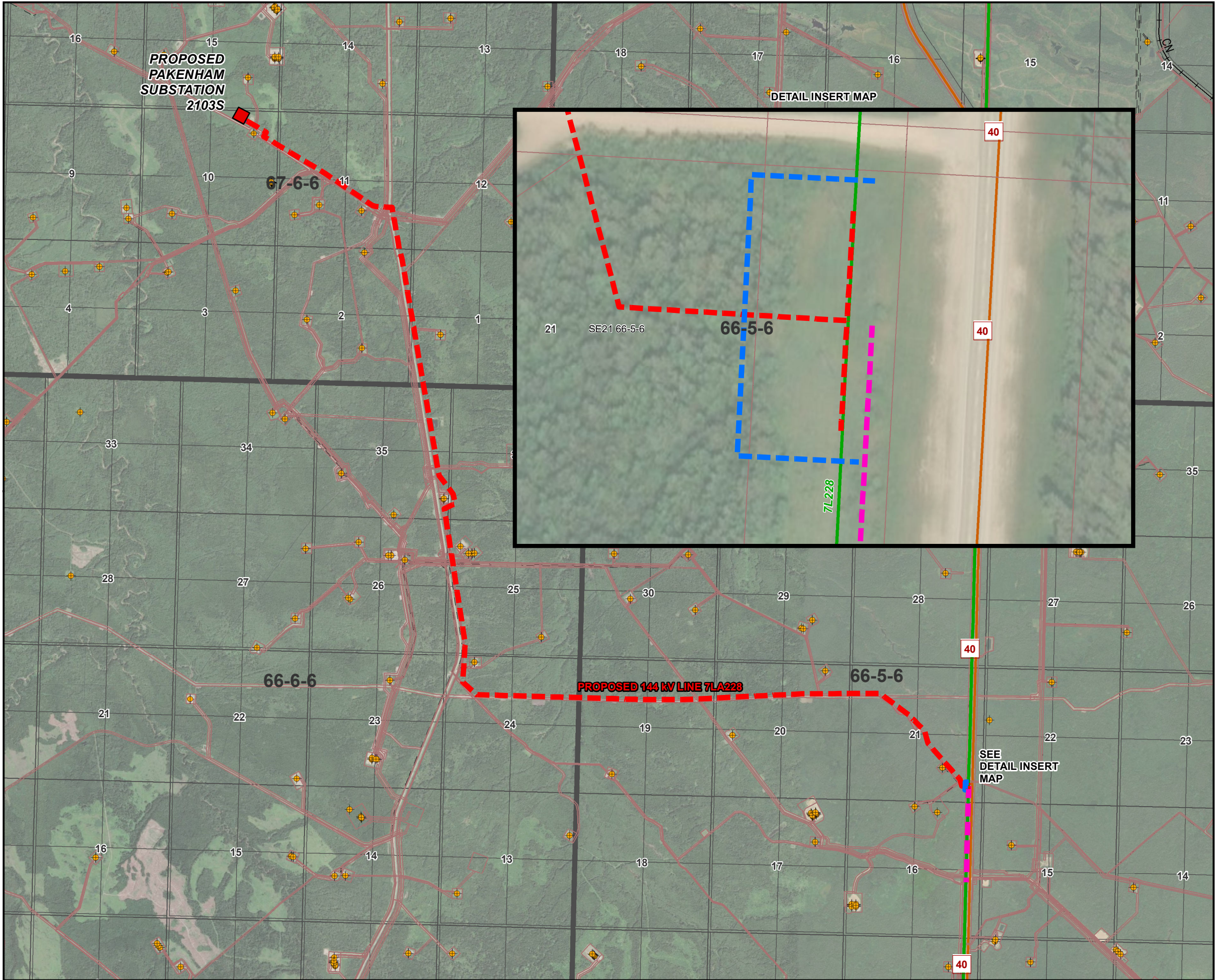
Consultation: A consultation is a meeting where advice, information and views are exchanged.

Kilovolt (kV): A kilovolt is equal to one thousand volts. This unit of measurement is most commonly used when describing transmission and distribution lines.

Distribution and transmission lines in Alberta carry between 4-kV (4,000 volts) and 500-kV (500,000 volts).

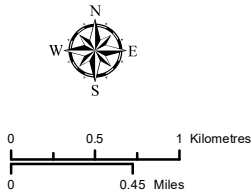
Right-of-way: A right-of-way is the use of a strip of land acquired for the construction and operation of a transmission line. The term right-of-way is also used to refer to the physical space a transmission line encompasses including areas on either side of the line.

Transformer: An electrical device that increases or decreases the voltage of electricity in an electrical substation.



- Proposed Substation
- Proposed 144 kV Transmission Line Route
- Proposed 144 kV Transmission Line Temporary Bypass
- Proposed Fibre Optic Route
- Existing 144 kV Transmission Line
- Surface Well Site
- Existing Disposition
- Existing Easement Right of Way
- Parcel Boundary
- Railway
- Primary Highway

CREDIT NOTES
Alberta Data Partnerships, IHS Markit
Esri World Imagery (2024)



NOTES:
- Only facilities in the vicinity of the project are shown.

This map is the property of ATCO. This map is not intended to be used in place of Alberta One Call.
Always practice extreme caution when near power lines!

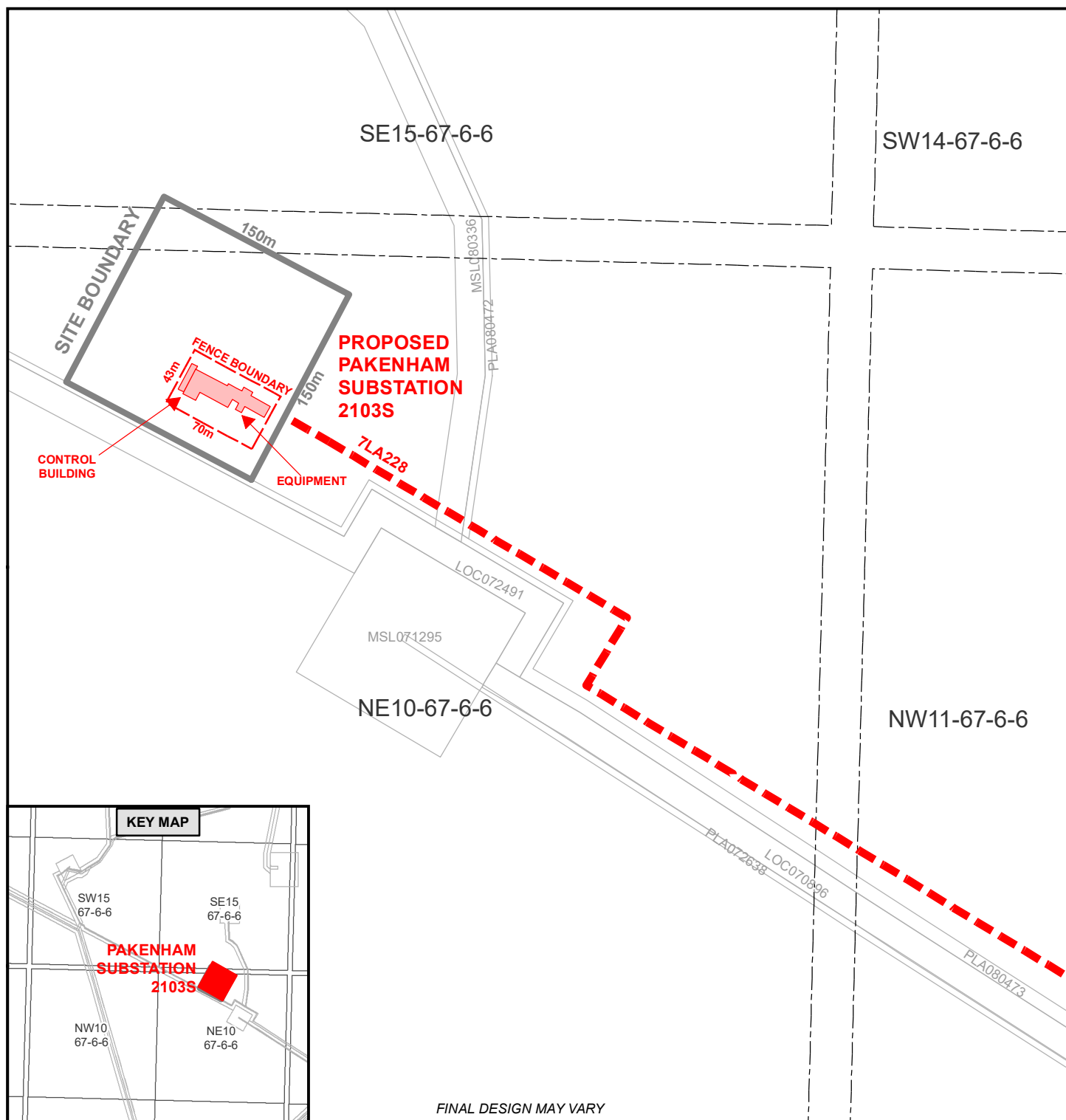
ATCO Energy Systems

Pakenham Substation
Transmission Project

PROPOSED ROUTE
MOSAIC MAP

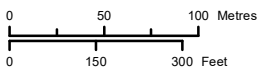
June 2025

RS-7LA228 - N1 - 01



FINAL DESIGN MAY VARY

- Proposed 144kV Transmission Line
- Proposed Fence
- Proposed Equipment/Control Building
- Proposed Site Boundary



NOTES:
- Only facilities in the vicinity of the project are shown.

ATCO Energy Systems

Pakenham Substation
Transmission Project

PROPOSED SITE LAYOUT

June 2025

CREDIT NOTES
Alberta Data Partnership, IHS Markit

This map is the property of ATCO. This map is not intended to be used in place of Alberta One Call.
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RS-2103S-N1-02



Participating in the AUC's independent review process to consider facility applications

www.auc.ab.ca

The AUC regulatory review process to consider facility applications for utility projects



The AUC uses an established process to review social, economic and environmental impacts of facility projects to decide if approval of a project is in the public interest.

The AUC considers applications requesting approval of the need for transmission development and facilities applications seeking approval to construct, operate, alter and decommission electric and natural gas facilities. Applications, as specified in AUC Rule 007, are required for:

- The need for transmission upgrades.
- The route and location of transmission facilities.
- The siting of power plants.
- The construction of a battery storage system.
- The designation of an industrial system.
- The need for and siting of natural gas utility pipelines.

Sometimes the Alberta Electric System Operator's needs identification document application is considered together with a facility application in a single proceeding; sometimes separate proceedings are held to consider each application.

Application review process



- Step 1: Public consultation prior to applying to the AUC
- Step 2: Application filed to the AUC
- Step 3: Public notice
- Step 4: Public submissions to the AUC
- Step 5: Consultation and negotiation
- Step 6: The public hearing process
- Step 7: The decision
- Step 8: Opportunity to appeal
- Step 9: Construction, operation and compliance

Application review process

Step 1: Public consultation prior to applying to the AUC



An applicant seeking approval of a proposed utility development project is required to engage in a participant involvement program prior to filing an application with the AUC. The public involvement program involves consultation with persons whose rights may be directly and adversely affected by the proposed project so that concerns may be raised, addressed and, if possible, resolved.

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

Potentially affected parties are strongly encouraged to participate in the public consultation, also called a participant involvement program. Early, active and ongoing discussions with an applicant may lead to greater influence on project planning and what is submitted to the AUC for approval.

Step 2: Application filed to the AUC



When the applicant has concluded its consultation with potentially affected parties and the participant involvement requirements have been completed, the applicant files its application through the AUC online public filing system, called the eFiling System.

AUC staff members review each application submitted to verify that all of the application requirements in Rule 007 have been met before an application is deemed complete. If all of the required information is not provided, the application may be closed or missing information will be requested of the applicant. Rule 007 specifies, among other requirements, that applicants must submit the results of a public involvement program in its application that includes information about how applicants consulted and notified stakeholders and Indigenous groups and identifies any unresolved objections and concerns about the project.

Step 3: Public notice



When the AUC receives an application it is assigned a proceeding number and the AUC generally mails a notice of application directly to those who live, operate a business or occupy land in the project area who may be directly and adversely affected if the AUC approves the application. The notice initiates the opportunity for formal intervention in the proceeding to consider an application or applications. The notice of application will also set out important dates and information about where to find the application and other items being considered. The five-digit eFiling System proceeding number in the notice is the most efficient way to find information about a proposed project through the AUC website.

Step 4: Public submissions to the AUC



Prior to the submission deadline provided in the notice, formal submissions of outstanding concerns and unresolved objections about a project may be submitted to the AUC. To submit a concern, participants will need to register to participate in the proceeding, which involves providing a brief written statement called a statement of intent to participate. Submissions are filed electronically through the eFiling System. The information filed becomes part of the public record and is an important part of the process to ensure that outstanding concerns are heard, understood and considered.

The AUC uses the information gathered through statement of intent to participate submissions to decide whether to hold a hearing on the application(s). The AUC must hold a hearing if a concerned person can demonstrate that they have rights that may be directly or adversely affected by the AUC's decision on the application. Such a person is said to have standing before the AUC. If the AUC decides to hold a hearing, the AUC will provide further opportunities for participants with standing to ask the applicant questions on the public record and present their position on the application either in writing or in person. Hearings may

be held in writing, in person or virtually through web-conference software.

AUC eFiling System

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

Step 5: Consultation and negotiation (if applicable)



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

Step 6: The public hearing process



The AUC will issue a notice of hearing if a person with standing continues to have legitimate unresolved concerns with the application. The notice of hearing will provide a hearing date and location, or specify if the hearing will be held in writing or virtually. When the AUC holds a public hearing, registered parties are given the opportunity to express their views directly to a panel of Commission members. Any member of the public can listen to an in-person or virtual oral hearing. An oral public hearing operates similar to a court proceeding.

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

Cost assistance



A person determined by the AUC to have standing or a local intervener can apply for reimbursement of reasonable costs. Those who hire a lawyer or technical experts must be aware that while reimbursement for the costs of legal and technical assistance is available under AUC Rule 009: *Rules on Local Intervener Costs*, recovery of costs is subject to the AUC's assessment of the value of the contribution provided by the lawyer and technical experts in assisting the AUC to understand the specifics of the case. It is also subject to the AUC's published scale of costs.

People with similar interests and positions are expected and encouraged to work together to ensure that expenditures for legal or technical assistance are minimized and costs are not duplicated.

Step 7: The decision



The AUC's goal is to issue its written decision no more than 90 days after the close of record. The AUC can approve, or deny an application and can also make its approval conditional upon terms or conditions. AUC decisions are publicly available through the AUC website at www.auc.ab.ca.

Step 8: Opportunity to appeal



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

An applicant or participant in a proceeding can also ask the AUC to review its decision. An application to review a decision must be filed within 30 days from the date the decision is issued and satisfy the limited grounds described in AUC Rule 016: *Review of Commission Decisions*.

Step 9: Construction, operation and compliance



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

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

We are committed to ensuring that Albertans whose rights may be directly and adversely affected by a utility development project are informed of the application and have the opportunity to have their concerns heard, understood and considered.



Contact us

Phone: 310-4AUC
1-833-511-4282 (outside Alberta)
info@auc.ab.ca
www.auc.ab.ca

Eau Claire Tower
1400, 600 Third Avenue S.W.
Calgary, Alberta T2P 0G5

Need for the Pakenham 2103S Substation

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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
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10035-105 Street, Edmonton, Alberta, T5J 1C8

SHAPE THE CONVERSATION

PAKENHAM SUBSTATION TRANSMISSION PROJECT

REPLY FORM

CONTACT INFORMATION

Date (DD/MM/YYYY): _____

First Name: _____

Last Name: _____

Company/Organization Name (if applicable):

Mailing Address: _____

Home Phone: _____

Cell Phone: _____

Business Phone: _____

Email: _____

Please help us identify new contacts

You were contacted about this project because ATCO identified you or your company/organization as having a land interest in the vicinity of the project. Is there anyone else associated with your property, such as other owners, renters or occupants, who we should also contact? If so, please provide the name(s), contact information and their land interest.

☐ I would like to receive all future correspondence about this project by Email (If this is your preference, please check the box)

AN IMPORTANT MESSAGE ABOUT PRIVACY: *The information on this form is being collected to identify concerns with proposed changes to and/or the siting of power transmission facilities, and to comply with the Alberta Utilities Commission (AUC) rules regarding the submission of transmission facilities applications. This information may be provided to electric facility owners, Alberta's Land & Property Rights Tribunal, and the Alberta Electric System Operator. Your comments and personal information may also be publicly accessible through the AUC website, should it be submitted to the AUC as part of a transmission facility application – subject to Alberta's Freedom of Information and Protection of Privacy Act. **If you wish to keep your information confidential, you must make a request to the AUC (403-592-4376).** If you have questions or concerns about your information or how it may be used or disclosed as part of this process, please contact us (see contact information below).*

Please let us know by checking a box below if either statement applies to you:

☐ I do not have concerns with the Project based on the information provided

☐ I have concerns with the Project based on the information provided

Please share any comments or concerns that you have about the Project:

Attachment 4 – Stage 1 Early Rate Payer Engagement Letter and Summary (December 2023)

Monday, December 11, 2023

[Rate-Payer Name]

[Rate Payer Email Address]

Attention: [Contact Name]:

Dear [Contact Name]:

Re: P2716 Wapiti 823S Load - Rate-Payer Involvement Summary and Comment Matrix

During 2020 and 2021, the AESO hosted a series of workshops around Distribution and Transmission project coordinated planning, involving TFOs, DFOs, and rate-payer interest groups. In response to this engagement, the AESO implemented the Earlier Rate-Payer Group Involvement initiative in our connection process. The goal of early rate-payer group involvement is to increase transparency, improve trust, optimize regulatory efficiency, and develop the most economical and cost-effective solution through timely and meaningful collaboration. To review the Rate-Payer Involvement Terms of Participation please visit DFO Connection Projects at [AESO.ca](https://www.aeso.ca)

Regarding the Wapiti 823S Load project (The Project), ATCO Electric Ltd. has applied to the AESO for transmission system access to reliably serve new load in the Grande Prairie area. Their request includes a Demand Transmission Service (DTS) contract capacity of 53.3 MW.

The project is currently in Stage 1 of the AESO Connection Process. Please find attached several connection Alternatives that the AESO has identified to respond to the System Access Service Request. As per the Terms of Participation, we are seeking your feedback. Feedback will be accepted over a two-week period as indicated in the attached Comment Matrix. Please provide your input by January 2, 2024. Note that cost information is not available at this time, however, costs will be provided in Stage 3 to support the needs approval application as required.

If you have any questions, please let me know.

With kind regards,

[Project Manager]

Stage 1 – Summary of Alternatives

P2716 Wapiti 823S Load

December 11, 2023

Alternatives Developed

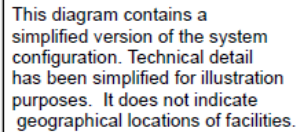
Criteria	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Alternative Name	New Point of Delivery (POD) with a T-tap connection to the 144 kV transmission line 7L228	New POD with an in-and-out connection to the 144 kV transmission line 7L228	New POD with a T-tap connection to the 144 kV transmission 7L46	New POD with an in-and-out connection to the 144 kV transmission line 7L46	New POD with a Radial Connection to the Existing Wapiti 823S Substation
Scope	• Add a new 144/25 kV POD substation, including one 144/25 kV transformer, one 144 kV circuit breaker and two 25 kV feeder breakers; • Add one 144 kV circuit, approximately 15 km in length, to connect the proposed substation to the existing 144 kV transmission line 7L228 (between Big Mountain 845S and Thornton 2091S) using T-tap configuration;	• Add a new 144/25 kV POD substation, including one 144/25kV transformer, three 144 kV circuit breakers and two 25kV feeder breakers; • Add one 144 kV circuit, approximately 15km in length, to connect the proposed substation to the existing 144 kV transmission line 7L228 (between Big Mountain 845S and Thornton 2091S) using an in-and-out configuration;	• Add a new 144/25 kV POD substation, including one 144/25 kV transformer, one 144 kV circuit breaker and two 25kV feeder breakers; • Add one 144 kV circuit, approximately 25 km in length, to connect the proposed substation to the existing 144 kV transmission line 7L46 (between Big Mountain 845S and Little Smoky 813S) using a T-tap configuration;	• Add a new 144/25 kV POD substation, including one 144/25 kV transformer, three 144 kV circuit breakers and two 25kV feeder breakers; • Add one 144 kV circuit, approximately 25 km in length, to connect the proposed substation to the existing 144 kV transmission line 7L46 (between Big Mountain 845S and Little Smoky 813S) using an in-and-out configuration;	• Add a new 144/25 kV POD substation, including one 144/25 kV transformer, one 144 kV circuit breakers and two 25kV feeder breakers; • Add one 144 kV circuit, approximately ~38 km in length, to connect the proposed substation to the existing Wapiti 823S substation;
To be Studied	Yes	No	No	No	No

*Each alternative includes adding or modifying associated equipment as required for the outlined transmission developments.

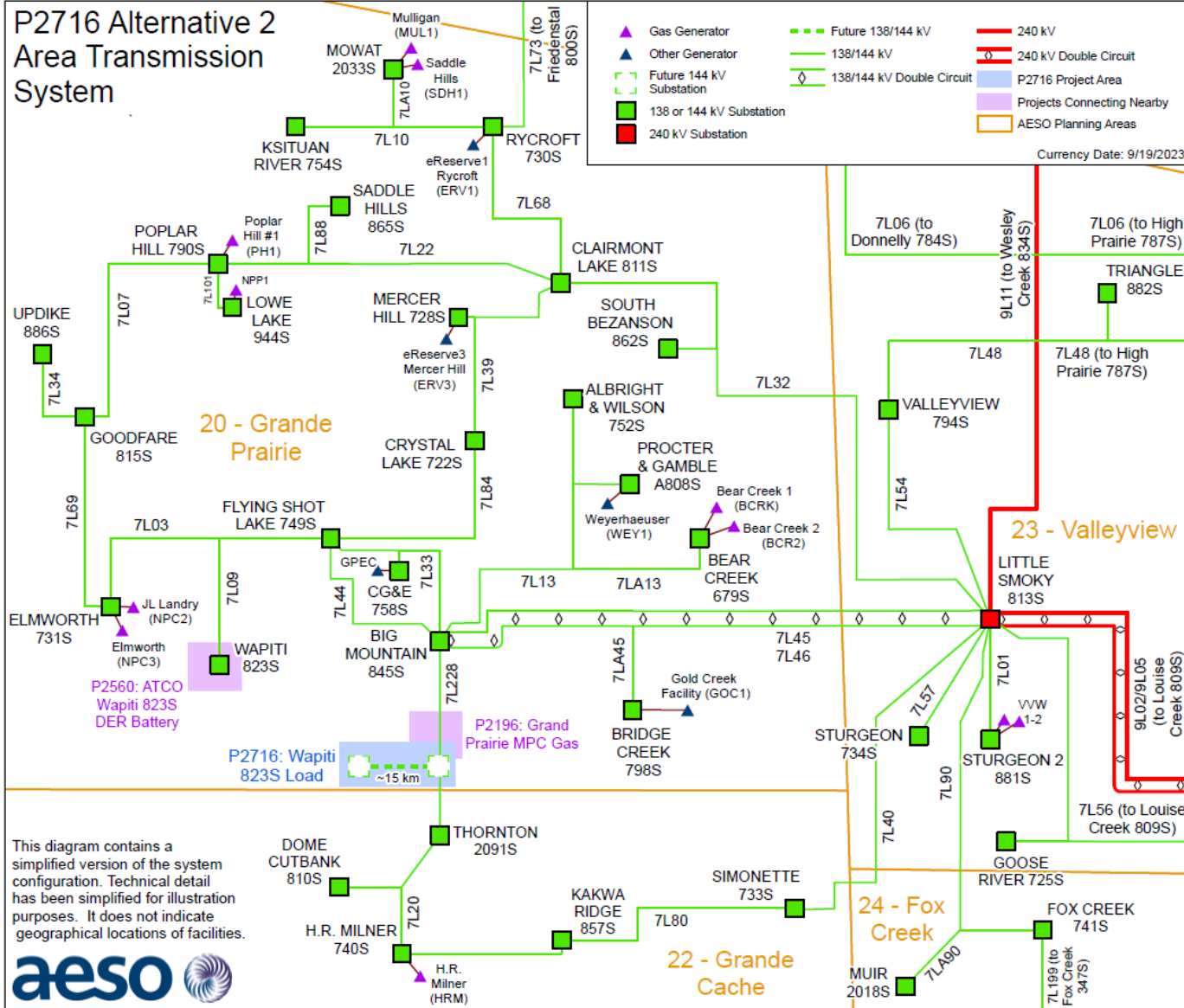
Alternatives Developed Continued

Criteria	Alternative 6	Alternative 7
Alternative Name	New POD with a Radial Connection to the Existing Big Mountain 845S substation	Upgrade Wapiti 823S substation
Scope	• Add a new 144/25 kV POD substation, including one 144/25 kV transformer, one 144 kV circuit breakers and two 25kV feeder breakers; • Add one 144 kV circuit, approximately ~38 km in length, to connect the proposed substation to the existing Big Mountain 845S substation;	• Upgrade the existing Wapiti 823S substation, including adding two 144/25 kV transformers and six 25 kV feeder breakers; .
To be Studied	No	No

*Each alternative includes adding or modifying associated equipment as required for the outlined transmission developments.

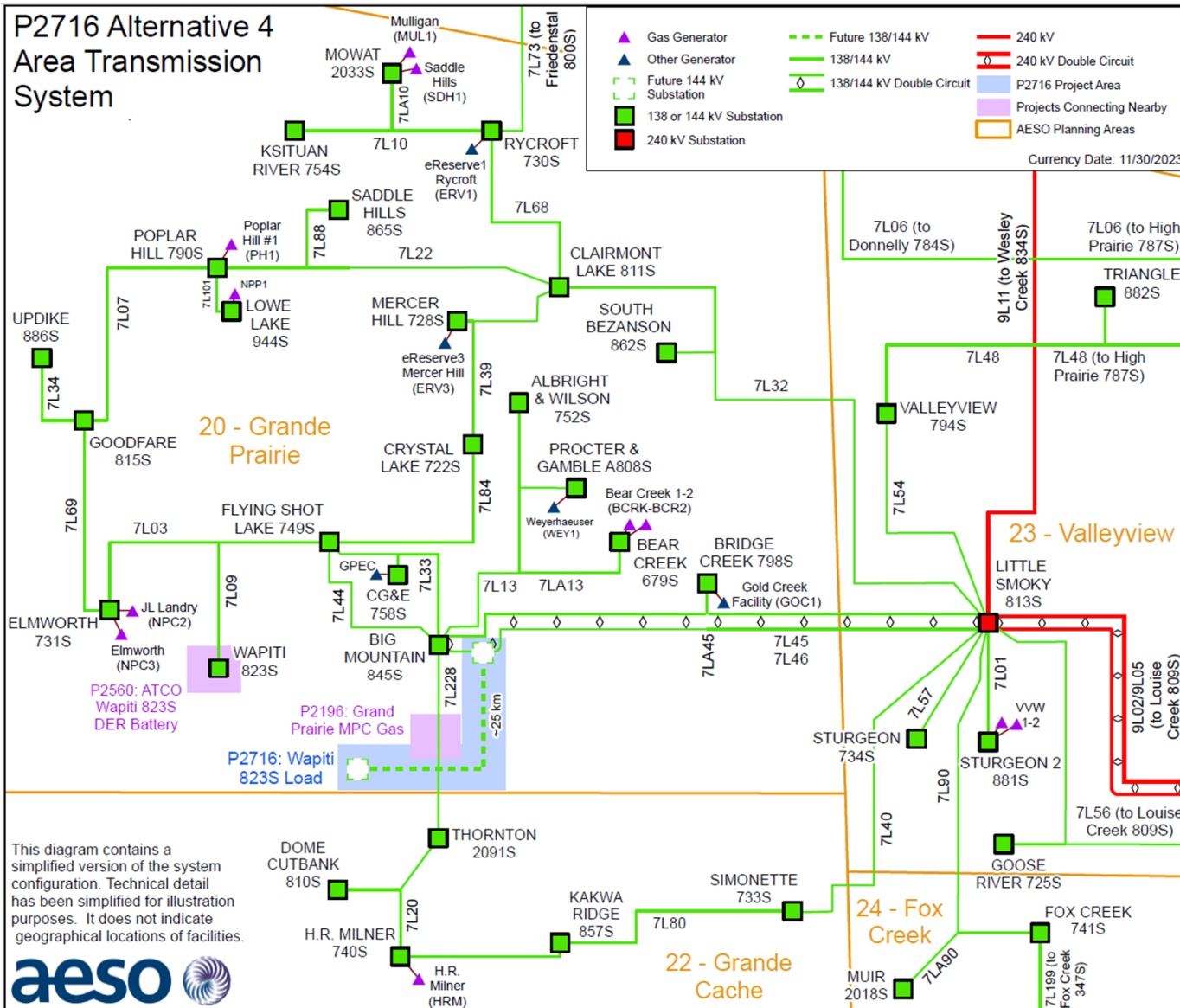


Alternative 2 - Single Line Diagram

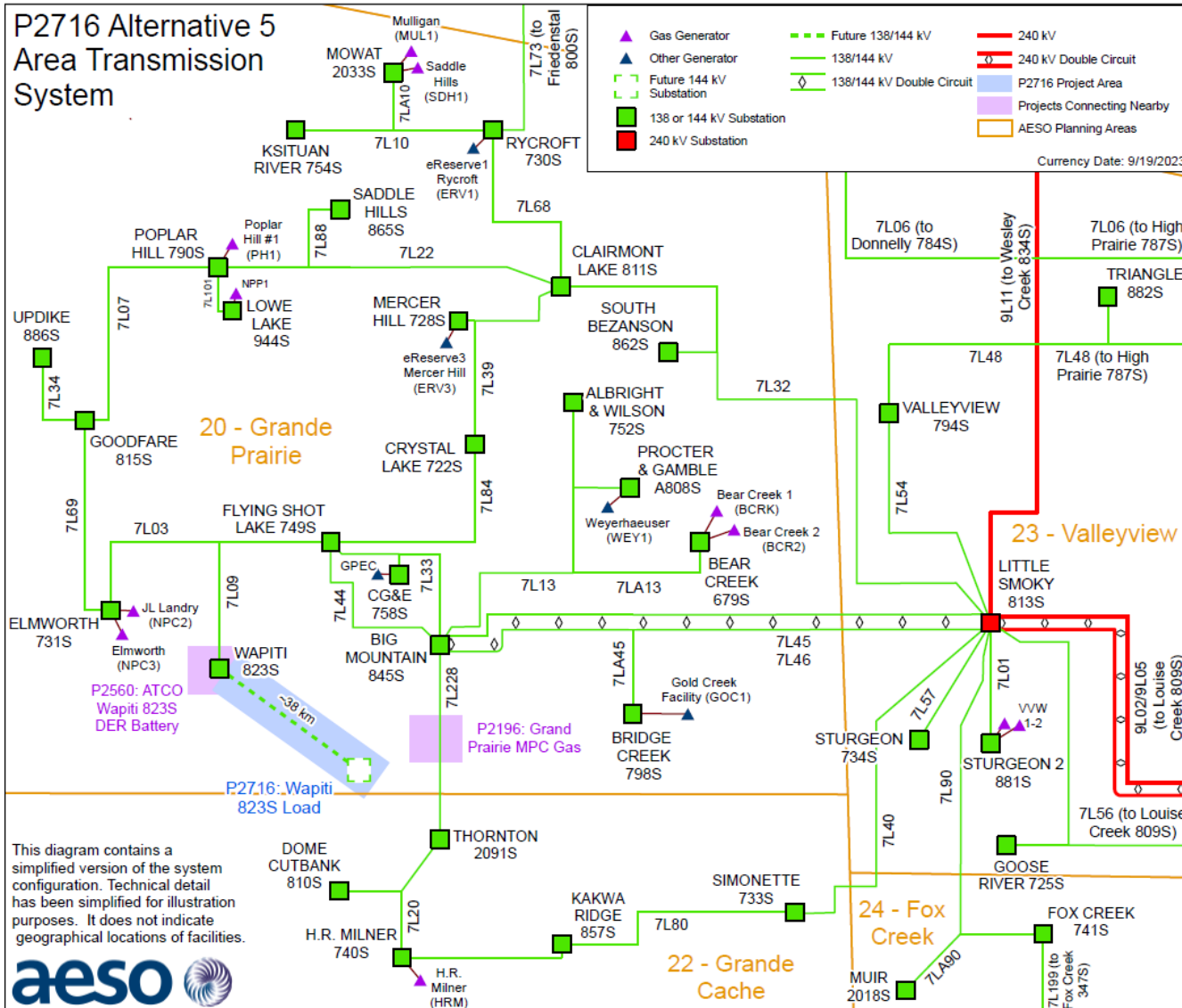




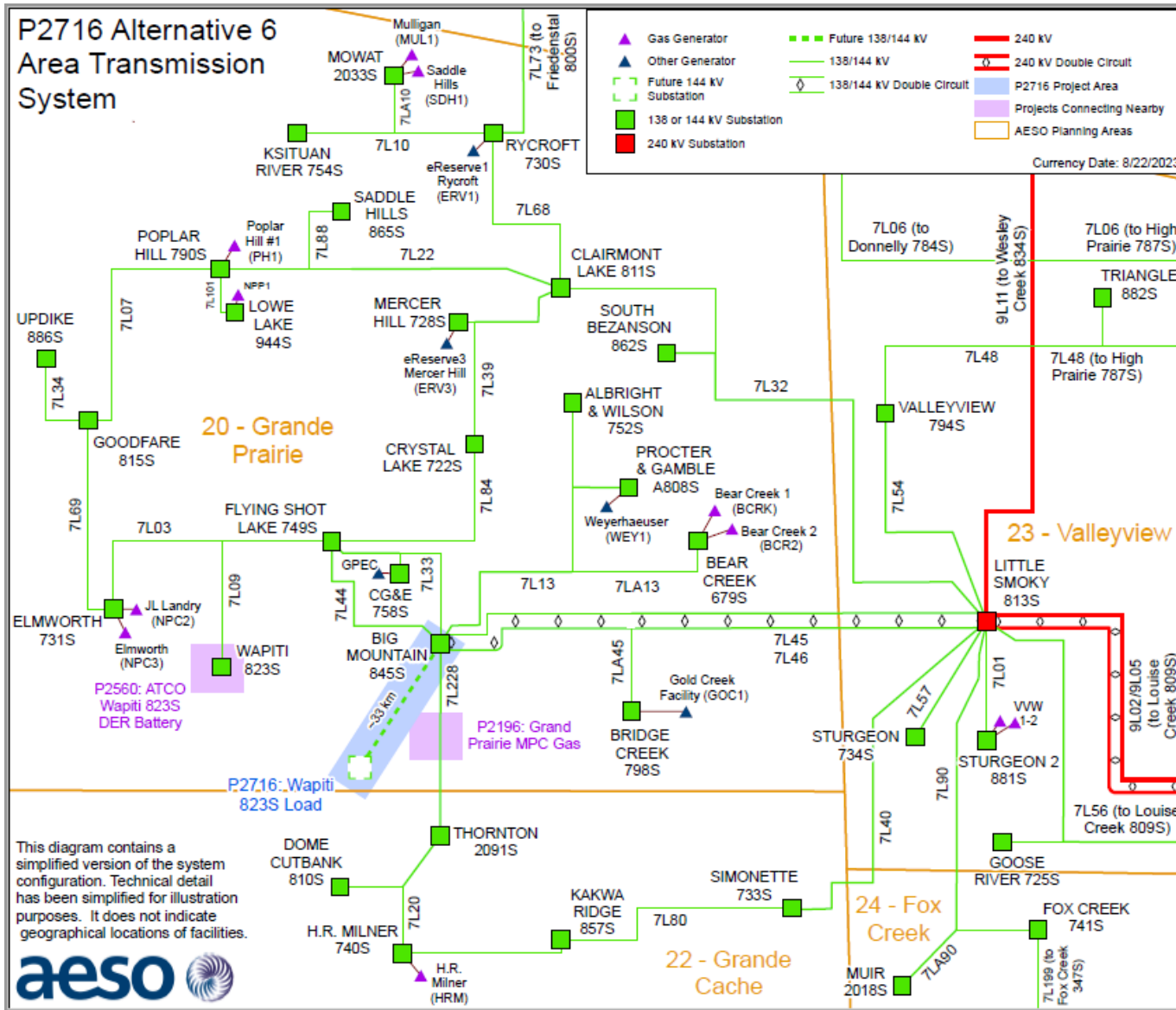
Alternative 4 - Single Line Diagram

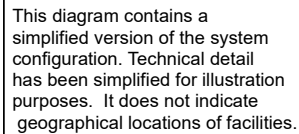


Alternative 5 - Single Line Diagram



Alternative 6 - Single Line Diagram





Attachment 5 – Stage 2 Early Rate Payer Engagement Letter and Summary (September 2024)

Wednesday, September 11, 2024

[Rate-Payer Name]

[Rate Payer Email Address]

Attention: [Contact Name]:

Dear [Contact Name]:

Re: P2716 Wapiti 823S Load - Rate-Payer Involvement Summary and Comment Matrix

During 2020 and 2021, the AESO hosted a series of workshops around Distribution and Transmission project coordinated planning, involving TFOs, DFOs, and rate-payer interest groups. In response to this engagement, the AESO implemented the Earlier Rate-Payer Group Involvement initiative in our connection process. The goal of early rate-payer group involvement is to increase transparency, improve trust, optimize regulatory efficiency, and develop the most economical and cost-effective solution through timely and meaningful collaboration. To review the Rate-Payer Involvement Terms of Participation please visit DFO Connection Projects at [AESO.ca](https://www.aeso.ca/aeso/en/connections/dfo-connection-projects)

Regarding the Wapiti 823S Load project (The Project), ATCO Electric Ltd. has applied to the AESO for transmission system access to reliably serve new load in the Grande Prairie area. Their request includes a Demand Transmission Service (DTS) contract capacity of 21.3 MW.

The project is currently in Stage 2 of the AESO Connection Process. Please find attached several connection Alternatives that the AESO has identified to respond to the System Access Service Request. As per the Terms of Participation, we are seeking your feedback. Feedback will be accepted over a two-week period as indicated in the attached Comment Matrix. Please provide your input by September 25, 2024. Note that cost information is not available at this time, however, costs will be provided in Stage 3 to support the needs approval application as required.

If you have any questions, please let me know.

With kind regards,

[Project Manager]

Stage 2 – Preferred Alternative P2716 Wapiti 823S Load

August 2024

Selection of the Preferred Alternative

- The selected preferred alternative is noted in the table below

Criteria	Alternative 1
Alternative Name	New Point of Delivery (POD) with a T-tap connection to the 144 kV transmission line 7L228
Scope	- Add a new 144/25 kV POD substation, including one 144/25 kV transformer, one 144 kV circuit breaker and two 25 kV feeder breakers; - Add one 144 kV circuit, approximately 15 km in length, to connect the proposed substation to the existing 144 kV transmission line 7L228 (between Big Mountain 845S and Thornton 2091S) using T-tap configuration; and - Add or modify associated equipment as required for the above transmission developments.
Studied	Yes
Technical	Technically acceptable
Selection Decision and Rationale	Alternative 1 is considered technically feasible and was selected for further study. The preferred connection alternative does not adversely affect the performance of the AIES while accommodating the requested DTS contract capacity of 21.3 MW at the new POD. Alternatives 2, 3, 4, 5, and 6, examined in Stage 1, involve increased transmission development and hence, increased cost. The DFO has advised that Alternative 7 would involve increased distribution development, cost and limitations on future area load expansion compared to Alternative 1. In addition, Alternative 7 involves building two distribution feeders at 38 km each which has a larger environmental and land impact. Therefore, the AESO has selected Alternative 1 as the preferred connection alternative.

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Rate-Payer Group – Comment Matrix

Transmission Alternative(s) Considered or Preferred Alternative Selected for DFO Project P2716



Period of Comment: (To be completed by PM)	9/11/2024	through	9/25/2024		
Comments from: (To be completed by Rate-Payer)	Company Name:	Phone:		Contact:	
Date:	Click or tap to enter a date.			Email:	

Instructions:

1. Please complete the section above as indicated.
2. Please refer to the Summary provided with this Comment Matrix.
3. Please respond to the questions provided below and provide your specific comments.

Stage 2 - The AESO is seeking feedback from Rate-Payer Groups on the proposed Preferred Alternative with respect to the alternative listed in the Summary. The AESO has also considered Distribution Only Alternative in the DFO's DDR.

Feedback will be accepted over the two-week period as indicated above. Based on the complexity and feedback the AESO may facilitate a discussion on the transmission alternative(s) considered.

Questions		Stakeholder Comments
2.	Stage 2 – Do you have any comments on the rationale used to select the preferred alternative?	
3.	Do you have any other comments on the alternatives not addressed above?	
4.		

