



1. Introduction

From August 2019 to September 2020, the AESO conducted a Participant Involvement Program (PIP) regarding the *Suncor Base Plant Cogeneration Facility Connection Needs Identification Document* (NID). 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 the parties notified in the TFO's PIP and any other parties that the AESO determines may have an interest in the needs identification document, including, but not limited to:

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

(collectively, Stakeholders).

The AESO's PIP has been conducted in accordance with the requirements of Section 6.2.2, NID27 and Appendix A2 of the current Alberta Utilities Commission (Commission) Rule 007 (AUC Rule 007), effective August 1, 2019, as well as AUC Bulletin 2020-13, effective April 7, 2020.

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;
- 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 https://www.aeso.ca/grid/projects/suncor-base-plant-cogeneration-facility-connection/ and a notice was published in the AESO Stakeholder Newsletter on August 20, 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 the TFO's project-specific information package that was distributed to Stakeholders, as further described in Section 2.1.

After the August 2019 Need Overview was distributed, the AESO developed an updated one-page AESO Need Overview Update that notified Stakeholders of a change in the project scope and the date the AESO intends to apply to the Commission for approval of the need. The AESO Need Overview Update was posted on the AESO website at https://www.aeso.ca/grid/projects/suncor-base-plant-cogeneration-facility-connection/ and a notice was published in the AESO Stakeholder Newsletter on March 10, 2020. Copies of the Need Overview Update posting and the AESO Stakeholder Newsletter notice have been

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included as Attachments 3 and 4 respectively. The Need Overview Update was also included with the TFO's updated project-specific information packages that were distributed to Stakeholders, as further described in Section 2.1.

2.1 Stakeholders Notified in the TFO's PIP

The TFO has advised the AESO that its PIP included notification within 800 metres of the transmission line as recommended by the Commission in Appendix A1 of AUC Rule 007.1

The TFO notified a total of approximately 66 Stakeholders, none of which were classified as private or individual landowners. The notified Stakeholders and the TFO's rationale for their inclusion in the PIP are listed in Table 2.

Table 2: Summary of Notified Agency, Industry, and First Nations and Metis Community Stakeholders Notified by the TFO

Stakeholder	TFO's Rationale for Inclusion in the PIP	
Local Authorities		
Regional Municipality of Wood Buffalo	IndustryRelations/Community	
	Development Planning	
Government Agencies		
Alberta Culture & Tourism	Provincial Requirement	
Alberta Environment & Parks – Fish and Wildlife	Provincial Requirement	
Alberta Environment & Parks – Lands Division (Forest Officer)	Provincial Requirement	
Alberta Environment & Parks – Water Act	Provincial Requirement	
Alberta Transportation	Provincial Requirement	
Industry		
Albersun Oil and Gas Ltd	Land rights	
Athabasca Oil Corporation	Land rights	
Alberta Department of Energy Coal and Mineral Development	Land rights	
Alberta Environment and Parks – Land Disposition Services Section -	Land rights	
Edmonton		
Alberta Energy Regulator	Land rights	
Alberta Agriculture and Forestry – Forestry and Emergency Response	Land rights	
Division		
Alberta Environment and Parks – Lower Athabasca Region	Land rights	
Alberta Environment and Parks Land Use - Fort McMurray	Land rights	
Alberta Environment and Parks – Regional Approvals - Lower	Land rights	
Athabasca Region		
Alberta Transportation - Barrhead	Land rights	
Alberta Transportation - Fort McMurray	Land rights	
Alberta Transportation - Peace River District	Land rights	
Alberta Transportation & Civil Engineering	Land rights	
Alberta-Pacific Forest Industries Inc	Land rights	
ATCO Gas and Pipelines Ltd (South)	Land rights	
ATCO Gas and Pipelines Ltd	Land rights	
Civeo Canada Limited Partnership	Land rights	
Consun Contracting Ltd	Land rights	
Clean Harbors Lodging Services, ULC	Land rights	
Deer Creek Energy Limited	Land rights	
Enbridge Pipelines (Athabasca) Inc	Land rights	
E-T Energy Ltd	Land rights	
Fort Hills Energy Corporation c/o Suncor Energy Inc	Land rights	

¹ ATCO 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	TFO's Rationale for Inclusion in the PIP
Fragbor Ltd	Land rights
Inter Pipeline Offgas Ltd	Land rights
Laprairie Crane (Alberta) Ltd	Land rights
Lewyk Park Holdings	Land rights
Northern Courier Pipeline GP Ltd	Land rights
Northland Forest Products Ltd	Land rights
Nova Gas Transmission Ltd	Land rights
NCS Properties Ltd	Land rights
NCSG Crane & Heavy Haul Services Ltd	Land rights
Ocw Holdings General Partnership	Land rights
Pelican Pipelines Ltd	Land rights
Pembina Pipeline Corporation	Land rights
Petrochina Canada Ltd	Land rights
Shaw Cablesystems Company	Land rights
Shaw Cablesystems Limited	Land rights
Sterling Crane a Division of Procrane Inc	Land rights
Streamline Holdings Ltd	Land rights
Streamline Mechanical GP Inc	Land rights
Suncor Energy Inc	Land rights
Stony Valley Contracting Ltd	Land rights
SMS Equipment Inc/Equipment SMS Inc	Land rights
Suncor Energy Inc	Land rights
Suncor Energy Logistics Corporation	Land rights
Syncrude Canada Ltd	Land rights
Tele-Mobile Company	Land rights
Telus Communications Inc	Provincial Requirement
Thebacha Limited Partnership	Land rights
Total E&P Canada Ltd	Land rights
Transcanada Pipeline Ventures Ltd	Land rights
Voyageur Upgrader Corporation	Land rights
Williams Scotsman of Canada, Inc	Land rights
Indigenous Groups	
Athabasca Chipewyan First Nation	Federal Requirement
Fort McKay First Nation	Federal Requirement
Fort McMurray First Nation #468	Federal Requirement
Mikisew Cree First Nation	Federal Requirement
McMurray Metis Local 1935	Federal Requirement
Fort McKay Metis Nation	Federal Requirement

Attachment 5 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 15, 2019 and March 22, 2020. The TFO's project newsletter included the AESO's contact information, a description of the AESO's role, a reference to the AESO Need Overview, and an invitation to contact the TFO or the AESO for additional information.

Attachment 6 includes the TFO's project update letter, which was included with the AESO Need Overview Update in the updated TFO project-specific information package that was distributed to the Stakeholders described above between March 23, 2020 and May 14, 2020.



3. Stakeholders Notified by the AESO

The AESO also notified 9 market participants that the AESO determined may have an interest in the NID. The AESO identified that, under certain potential system conditions, these market participants may be affected following the connection of the Suncor Base Plant Cogeneration Facility. A Market Participant Notification Letter, which included the Need Overview Update, was sent to the notified market participants on August 28, 2020.

The nine notified market participants are as follows:

- Canadian Natural Resources Ltd.
- Canadian Natural Upgrading Limited
- Cenovus Energy
- CNOOC Petroleum North America ULC
- Fort Hills Energy Corporation
- Imperial Oil
- MEG Energy
- Syncrude Canada Ltd.
- TransCanada Energy Ltd.

A generic version of the Market Participant Notification Letter was posted to the AESO website on August 28, 2020 at https://www.aeso.ca/grid/projects/suncor-base-plant-cogeneration-facility-connection/ A copy has been included as Attachment 7.

4. Filing Notification

Most recently, the AESO notified Stakeholders of its intention to submit the NID to the Commission by posting a Notification of NID Filing to the AESO website at https://www.aeso.ca/grid/projects/suncor-base-plant-cogeneration-facility-connection/ and a publishing notice in the AESO Stakeholder Newsletter on September 29, 2020. Copies of the Notification of NID Filing posting and the AESO Stakeholder Newsletter notice have been included as Attachments 8 and 9, respectively.

5. 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 (<u>stakeholder.relations@aeso.ca</u>). The AESO Need Overview included this contact information, along with the AESO's mailing address (2500, 330 5th Ave. SW, Calgary) and website address (<u>www.aeso.ca</u>), 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.

6. Concerns and Objections Raised

One Stakeholder who received the AESO Need Overview raised a question relating to routing. The AESO responded to the Stakeholder by providing a contact to ATCO Electric for further information.

Another Stakeholder that received the AESO's Market Participant Notification Letter raised questions and concerns related to how its operations may be affected following the connection of the Suncor Base Plant Cogeneration Facility Connection. The AESO responded to the Stakeholder by providing information about the following:

- how the Remedial Action Schemes (RAS's) and the Real Time Transmission Constraint
 Management (TCM) Rule apply to the Suncor Base Plant Cogeneration Facility Connection and
 other generation facilities; and
- how and when the TCM Rule is applied.

The AESO also encouraged the Stakeholder to contact the AESO directly with any outstanding questions or concerns.

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.

Apart from the inquires identified 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.

7. List of Attachments

- Attachment 1 AESO Need Overview (August 2019)
- Attachment 2 AESO Stakeholder Newsletter Need Overview Notice (August 20, 2019)
- Attachment 3 AESO Need Overview Update (March 2020)
- Attachment 4 AESO Stakeholder Newsletter Need Overview Update Notice (March 10, 2020)
- Attachment 5 TFO Project Newsletters Thickwood to Voyageur Transmission Project and Ruth Lake Transmission Project (August 2019)
- Attachment 6 TFO's Project Letter Update Project Update: Ruth Lake Transmission Project (March 23, 2020 & April 14, 2020)
- Attachment 7 AESO Market Participant Notification Letter (August 28, 2020)
- Attachment 8 AESO Public Notification of NID Filing Website Posting (September 2020)
- Attachment 9 AESO Stakeholder Newsletter NID Filing Notice (September 29, 2020)



Attachment 1 – AESO Need Overview (August 2019)



Need for the Suncor Base Plant Cogeneration Facility Connection in the Fort McMurray area

Suncor Energy Inc. (Suncor) has applied to the Alberta Electric System Operator (AESO) for transmission system access to connect its approved Suncor Base Plant Cogeneration Facility (Facility) in the Fort McMurray area. Suncor's request can be met by the following solution:

PROPOSED SOLUTION

- Add two 240 kilovolt (kV) circuits to connect the existing Voyageur 29EDD-94 substation to the existing Thickwood Hills 951S substation.
- Add one 240 kV circuit to connect the existing Millennium 29EDD-1 substation and Ruth Lake 848S substation.
- Modify the existing Ruth Lake 848S substation, including adding one 240 kV circuit breaker.
- Modify the existing Thickwood Hills 951S substation, including adding three 240 kV circuit breakers.
- 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.

ATCO

- Is the transmission facility owner in the Fort McMurray 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.

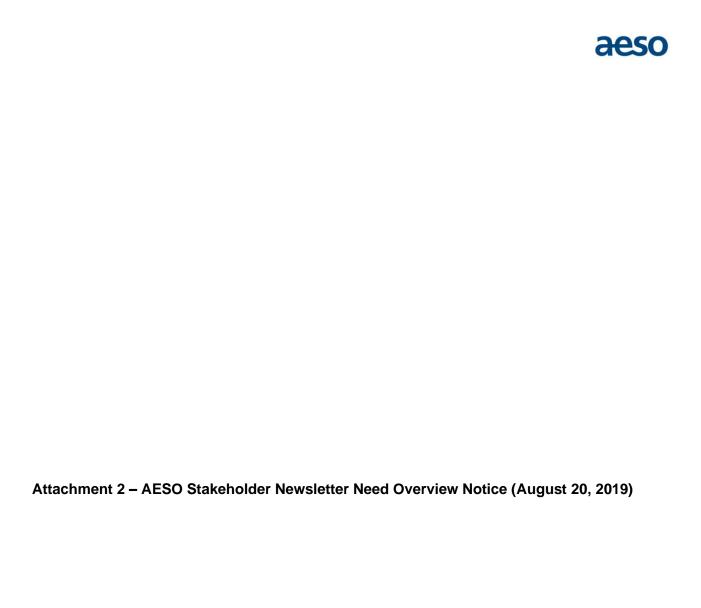
CONTACT US

Alberta Electric System Operator

AESO Stakeholder Relations stakeholder.relations@aeso.ca 1-888-866-2959

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

www.aeso.ca | 💆 @theaeso



AESO Stakeholder Newsletter

GRID

Suncor Base Plant Cogeneration Facility Connection – Need for Transmission Development in the Fort McMurray area

Suncor Energy Inc. (Suncor) has applied to the AESO for transmission system access to connect its approved Suncor Base Plant Cogeneration Facility (Facility) in the Fort McMurray area. Suncor's request can be met by the following solution:

- Add two 240 kilovolt (kV) circuits to connect the existing Voyageur 29EDD-94 substation to the existing Thickwood Hills 951S substation.
- Add one 240 kV circuit to connect the existing Millennium 29EDD-1 substation and Ruth Lake 848S substation.
- Modify the existing Ruth Lake 848S substation, including adding one 240 kV circuit breaker.
- Modify the existing Thickwood Hills 951S substation, including adding three 240 kV circuit breakers.
- 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 <u>click here</u> to view the document or visit the AESO website at <u>www.aeso.ca</u> and follow the path: Grid > Projects > Suncor Base Plant Cogeneration Facility Connection.



Attachment 3 - AESO Need Overview Update (March 2020)



Need for the Suncor Base Plant Cogeneration Facility Connection in the Fort McMurray area

Suncor Energy Inc. (Suncor) has applied to the Alberta Electric System Operator (AESO) for transmission system access to connect its approved Suncor Base Plant Cogeneration Facility (Facility) in the Fort McMurray area. Distribution of the original AESO Need Overview began in August 2019. The AESO has since revised its proposed solution and schedule to respond to Suncor's request, as described below. Suncor's request can be met by the following solution:

REVISED PROPOSED SOLUTION

- Add two 240 kilovolt (kV) circuits to connect the existing Voyageur 29EDD-94 substation to the existing Thickwood Hills 951S substation.
- Modify the Thickwood Hills 951S substation, including adding three 240 kV circuit breakers.
- Add or modify associated equipment as required for the above transmission developments.

REVISED NEXT STEPS

- The AESO has revised its schedule. The AESO now intends to apply to the Alberta Utilities Commission (AUC) for approval of the need in early 2020.
- The AESO's needs identification document (NID) application will be available on the AESO's website at www.aeso.ca/stakeholder-engagement/transmission-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.

ATCO

- Is the transmission facility owner in the Fort McMurray 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

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

www.aeso.ca | 💆 @theaeso



Attachment 4 - AESO Stakeholder Newsletter Need Overview Update Notice (March 10, 2020)



AESO Stakeholder Newsletter

GRID

Information Update for the Suncor Base Plant Cogeneration Facility Connection – Need for Transmission Development in the Fort McMurray area

Suncor Energy Inc. (Suncor) has applied to the AESO for transmission system access to connect its approved Suncor Base Plant Cogeneration Facility (Facility) in the Fort McMurray area. Distribution of the original AESO Need Overview began in August 2019. The AESO has since revised its proposed solution to respond to Suncor's request, as described below. Suncor's request can be met by the following solution:

- Add two 240 kilovolt (kV) circuits to connect the existing Voyageur 29EDD-94 substation to the existing Thickwood Hills 951S substation.
- Modify the Thickwood Hills 951S substation, including adding three 240 kV circuit breakers.
- Add or modify associated equipment as required for the above transmission developments.

The AESO has posted a Need Overview Update for this project on its website. Please <u>click here</u> to view the document or visit the AESO website at <u>www.aeso.ca</u> and follow the path Stakeholder Engagement > Transmission Projects > Suncor Base Plant Cogeneration Facility Connection.



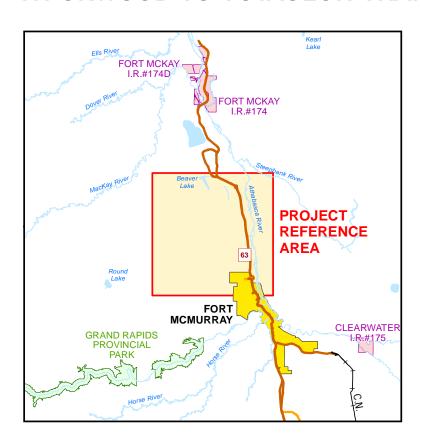
Attachment 5 – TFO Project Newsletters – Thickwood to Voyageur Project Notification Package and Ruth Lake Transmission Project Notification Package (August 2019)

ATCO SHAPE the Conversation



August 2019

THICKWOOD TO VOYAGEUR TRANSMISSION PROJECT



This newsletter provides you with information about electric transmission facilities being planned 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 Thickwood to Voyageur Transmission Project will be located immediately north of Fort McMurray's municipal boundary. The project is planned to support local industrial developments and expansion to the electrical infrastructure. If approved, the project will include upgrades to the existing Thickwood Hills 951S substation and the construction of approximately 37 kilometres (km) of new transmission lines. The new lines (to be called 9L162 and 9L193) will connect Thickwood Hills 951S substation to the

Voyageur 29EDD-94 substation. Please refer to the technical details, planned site layout diagram and planned route mosaic map for further details.

The proposed project will also include works at the existing Ruth Lake 848S substation located on N½ of 16-92-10 W4M. For information regarding proposed works at the Ruth Lake substation, please refer to the Ruth Lake Transmission Project Newsletter.

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 electric 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 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 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.

LOCAL BENEFITS

Upgrading the transmission system in your area will:

- Improve access to safe, secure and reliable power
- Allow future businesses to connect to Alberta's electric system
- Encourage investment in our province

If you are a local business, and would like to be considered for the ATCO approved vendors list, please contact us toll free at 1-800-668-2248.

The Process

Our research indicates that you are in the vicinity of the proposed facilities for the Thickwood to Voyageur Transmission Project.

Consultation with landholders routinely leads to improvements on our projects. We have adjusted routes, developed new route options, and rejected other routes because of conversations with landholders. Your feedback and input will help determine the best possible route.

We would like to meet with you to gather information about the area and answer any questions you may have. These conversations help us determine the best route option for new transmission line developments.

In developing route options, ATCO must consider a range of route constraints



and barriers including proximity to residences. We undertake extensive studies to understand the potential impacts on wildlife, wetlands and other sensitive areas.

In addition to the in-person and telephone consultations ATCO will continue to undertake, we invite anyone who is interested in this project to:

- provide feedback and share other information using the enclosed reply form and postage-paid envelope, and
- be a part of the conversation. If you have any questions, concerns or other information regarding this project, we want to hear from you.

If you have an interest in lands located on or beside the planned route or existing substation site, you will be contacted by an ATCO representative to further discuss the project and address any questions or concerns you may have. When consultations have been completed, ATCO will submit a facility application to the Alberta Utilities Commission (AUC) to obtain approval for the construction and operation of the planned facilities.

Transmission Facilities

Prior to consultation with landholders, ATCO develops early route concepts. In identifying early route concepts, ATCO considers numerous constraints and barriers including:

- · Proximity to residences
- Environmentally sensitive areas
- Wetlands
- Existing infrastructure (i.e. other transmission lines, roads, highways, pipelines, telecommunication towers)
- · Planned developments
- · Visual factors
- Construction and land acquisition costs
- · Quarter and section lines
- Other special considerations (i.e. access roads)

THE SCHEDULE

We begin sharing information about the project to determine the best options.

We gather your input. Based on this input and other factors, route option(s) are selected. ATCO submits an application to the AUC to build the proposed facilities

The AUC reviews the application by way of a public process. If approved, construction of the new facilities begins.

Proposed Route Option

ATCO completed early landholder engagement with parties who would likely be affected by all the early route concepts. As a result of the early engagement program, one route option has been identified as the proposed route option for the project (see enclosed maps). Parties on or beside the proposed route will be contacted by an ATCO representative for additional consultation in the weeks ahead.

The Right-of-Way

The term right-of-way refers to the area a transmission line uses including areas on either side of the line. Rights-of-way must have a minimum width to ensure safety and ongoing access for maintenance.

For safety reasons, some general restrictions on the use of the land in the direct vicinity of the transmission line may apply. These include setbacks for development.

Details including width and position of the right-ofway will depend on the type and size of the required structure, existing land use, surrounding features and other factors.

The right-of-way will follow property boundaries, if feasible, and in some situations, will follow existing features like a road, pipeline or another power line.

The typical width of the right-of-way for this project is 62 m. Additional land may be required on each side of the primary right-of-way for vegetation control.

Once a proposed route has been submitted to the AUC, ATCO begins coordinating agreements with landholders to acquire rights-of-way. Once a right-ofway is constructed, landholders may continue to use the right-of-way subject to the terms of agreements made between the landholder and ATCO.



Typical H-frame structure (final design may vary). Most of the line will be built with two H-frame structures side by side. Non-typical structures including mono poles and lattice towers may be used.

Access Trails and Temporary Workspace

Access trails may be required in areas where terrain conditions or the presence of wetlands make driving along the right-of-way impractical.

The exact location of temporary work spaces has yet to be determined.

Temporary workspace may be required along the edge of the right-of-way and in other selected locations. Arrangements for temporary workspace will be discussed and negotiated with landholders individually.

right-of-way acquisition **AUC** process facilities completed consultation project notification process begins continues and operating begins **JULY 2021** AUGUST 2019 AUGUST 2019 **JULY 2020**

> application filed with the Alberta Utilities Commission (AUC) (proposed route)

DECEMBER 2019

if approval is granted by the AUC, construction begins

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 project planner directly:

Lina Sierra

Planner **ATCO** 10035-105 Street Edmonton, AB T5J 2V6

Phone: 587 785 2829

Email: consultation@atcoelectric.com

Website: www.atcoelectric.com

Fax: 780 420 5030

Alberta Electric System Operator (AESO)

Phone: 1 888 866 2959

Email: stakeholder.relations@aeso.ca

Alberta Utilities Commission (AUC)

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



Approval Process

Alberta's electrical system is regulated by the AUC, an independent agency of the province that ensures the fair and responsible delivery of utility services. Before ATCO can begin construction on a project, the AUC must approve the facilities application, which includes details such as location of electric transmission facilities and routes. For more information about how you can participate in the AUC approval process, please refer to the enclosed AUC brochure, Public Involvement in a Proposed Utility Development.

If you are affected by the location of facilities in our application, information you shared with us will be summarized in our facility application to the AUC. The AUC will consider this input in its review of the application.

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 using the enclosed reply form and postage paid envelope, by contacting us (toll free) at 1-855-420-5775, or by emailing us at consultation@atcoelectric.com.

Included in this package:

- · Technical details of project
- · Planned site layout diagram
- Planned route mosaic map
- AUC brochure: Public Involvement in a Proposed Utility Development
- · AESO Need Overview
- · Reply form and postage-paid envelope



ATCO

The Technical Details

August 2019

THICKWOOD TO VOYAGEUR TRANSMISSION PROJECT

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



Existing Thickwood Hills Substation

The project plans to alter the existing Thickwood Hills substation, located approximately 20 kilometres (km) northwest of Fort McMurray, AB in SE 5-90-11 W4M and NE 32-89-11 W4M.

New 240-kV Transmission Lines

Construction of approximately 37 km of new transmission lines. If approved, the new lines will be called 9L162 and 9L193 and will connect Thickwood Hills substation to Voyageur substation.

Existing Voyageur Substation

Voyageur substation (called 29EDD-94) is located in an industrial facility on NW 11-92-10 W4M and SE 5-90-11 W4M.

THE DETAILS

The upgrades to the Thickwood Hills substation will include an expansion of the existing fence on the south east side of the substation by approximately 25 m by 111 m and the installation/alterations of the following equipment (please refer to the back of this fact sheet for equipment definitions):

- Modifications to the 240-kV bus to accommodate two new line terminations
- Three new 240-kV circuit breakers
- Associated switches and equipment

THE DETAILS

If approved, the new transmission lines will be 240-kV and approximately 37 km long. The new lines will consist of paired sets of 'H-Frame' structures. Each structure will have:

- Two conductors per phase
- Fibre optic connection (OPGW)
- · Overhead shield wire

The typical structure is described in more detail on the back of this fact sheet.

THE DETAILS

ATCO Electric's new 240-kV transmission lines will connect to the existing Voyageur substation. This substation is not part of the Thickwood to Voyageur transmission project. It is being planned as part of a separate project.

Consultation for the works within Voyageur substation will be completed by the owner of the new facilities.

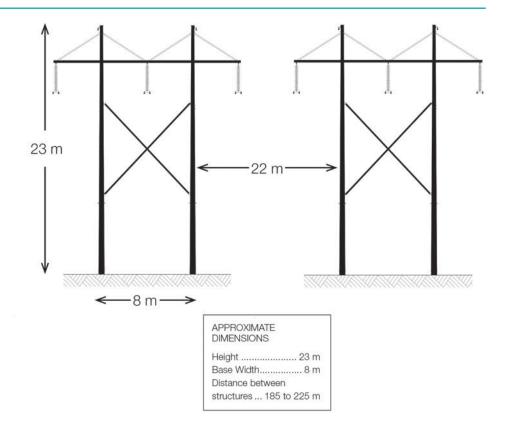
WHAT IT WILL LOOK LIKE

If approved by the Alberta Utilities Commission, the 240-kV transmission lines will be supported by paired sets of "H-frame" structures set approximately 22 metres (m) apart, similar to the ones shown on the right.

Structures will be single-circuit. This means that they will each have two conductors per phase strung across them. Fiber optic connection and overhead shield wires to protect the line from lightning will be strung from the tops of the structures. The distance between structures along the line will range from 185 to 225 m.

Non-typical structures may be required exiting and entering the substations, and where the line ends or bends, at corners and to go over and around obstacles. These towers will be approximately 27 m tall and have a base width of 8 m. In all cases minimum clearance will meet or exceed the requirements of provincial safety regulations.

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



The typical width of the right-of-way* for this project is approximately 62 m

* Right-of-ways are cleared of trees, bush and debris to allow access for construction and ongoing maintenance. Additional vegetation clearing may be required outside of the typical right-of-way.

DEFINITIONS

Capacitor bank: Acts like a temporary battery to store electrical energy created between conductors and maintain power supply. It also regulates the flow of electricity.

Circuit: A circuit is a group of wires electricity flows through. ATCO Electric'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: An automatic switch that is designed to protect an electrical circuit from overloading by shutting off the flow of electricity.

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

Double circuit: Two isolated transmission lines that share the same pole. They have one set of three wires on each side.

Easement: A right to use private or crown land for the placement of transmission lines and structures.

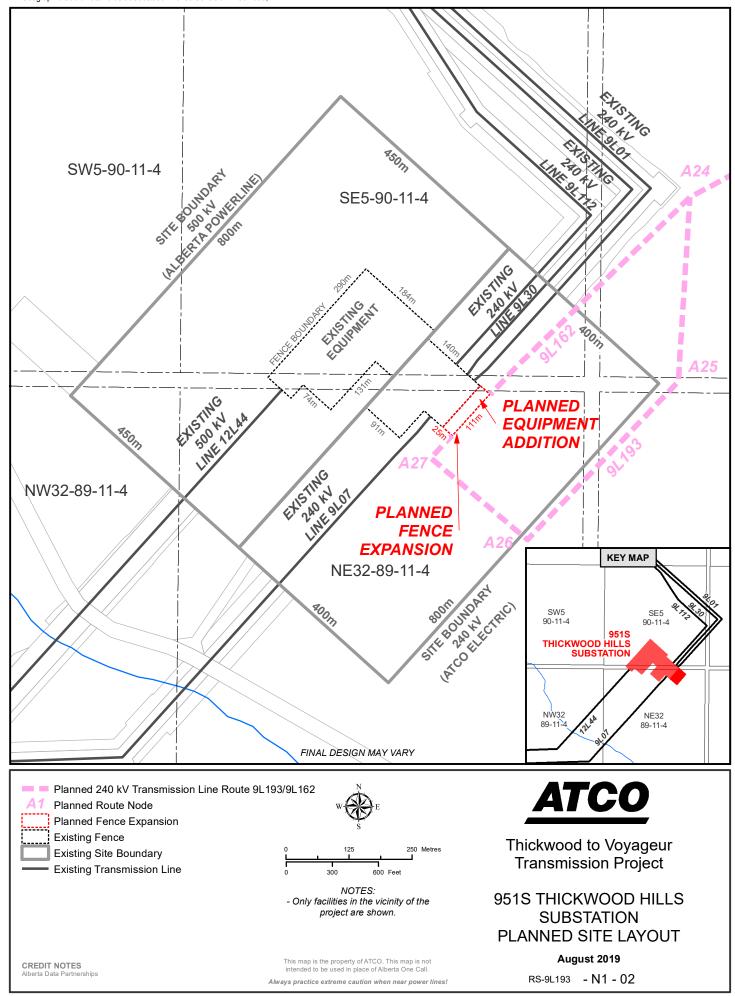
Kilovolt (kV): A kilovolt is equal to one thousand volts. This unit of measurement is most commonly used when describing transmission and distribution lines. Distribution and transmission lines in Alberta carry between 4-kV (4,000 volts) and 500-kV (500,000 volts).

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.

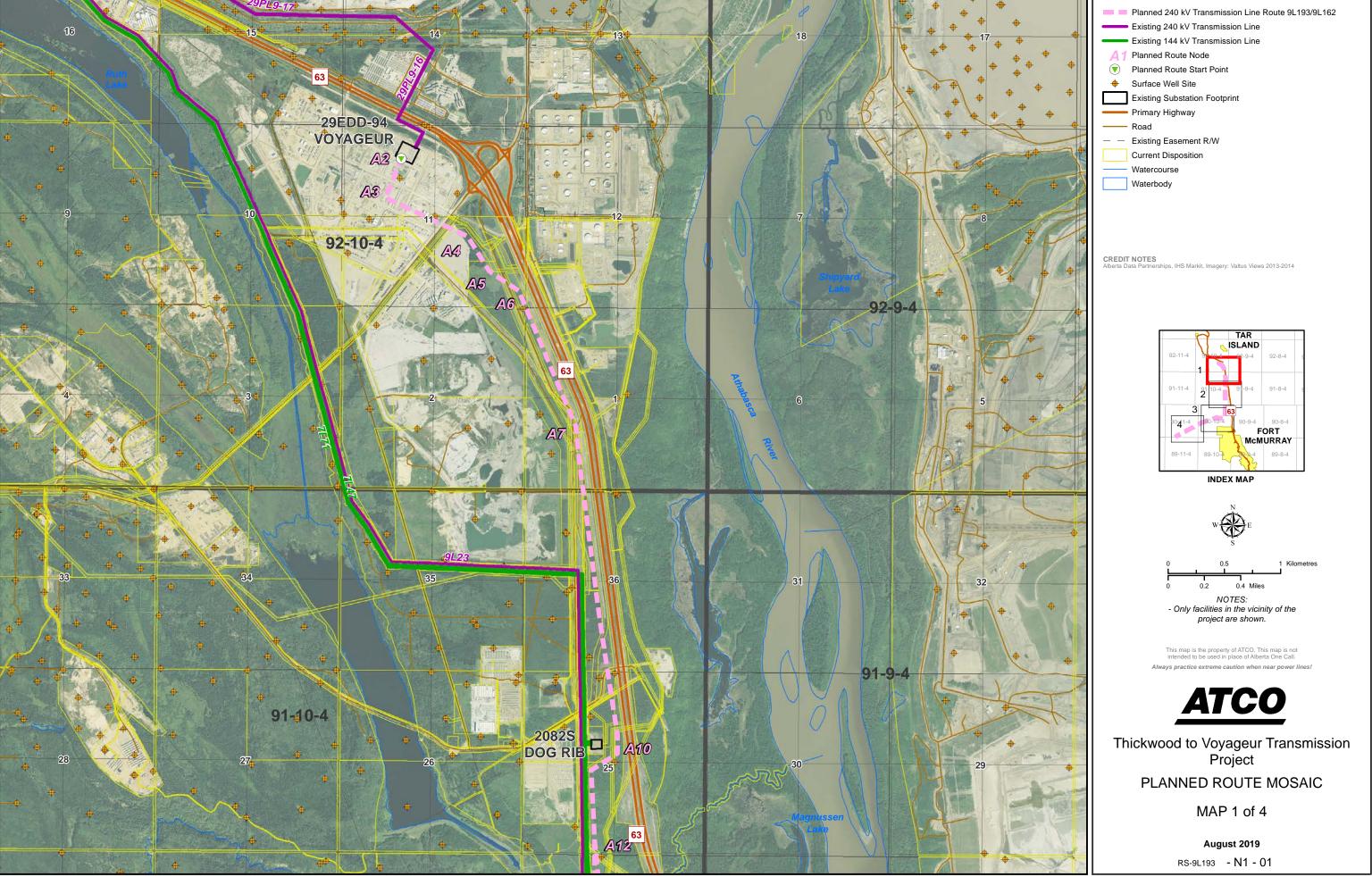
Termination: A termination is the point where a power line ends and connects to a substation.

Transformer: A transformer is the device in a substation that steps voltage up or down. It 'transforms' the electricity from higher transmission voltages to the lower distribution voltages that power your home.

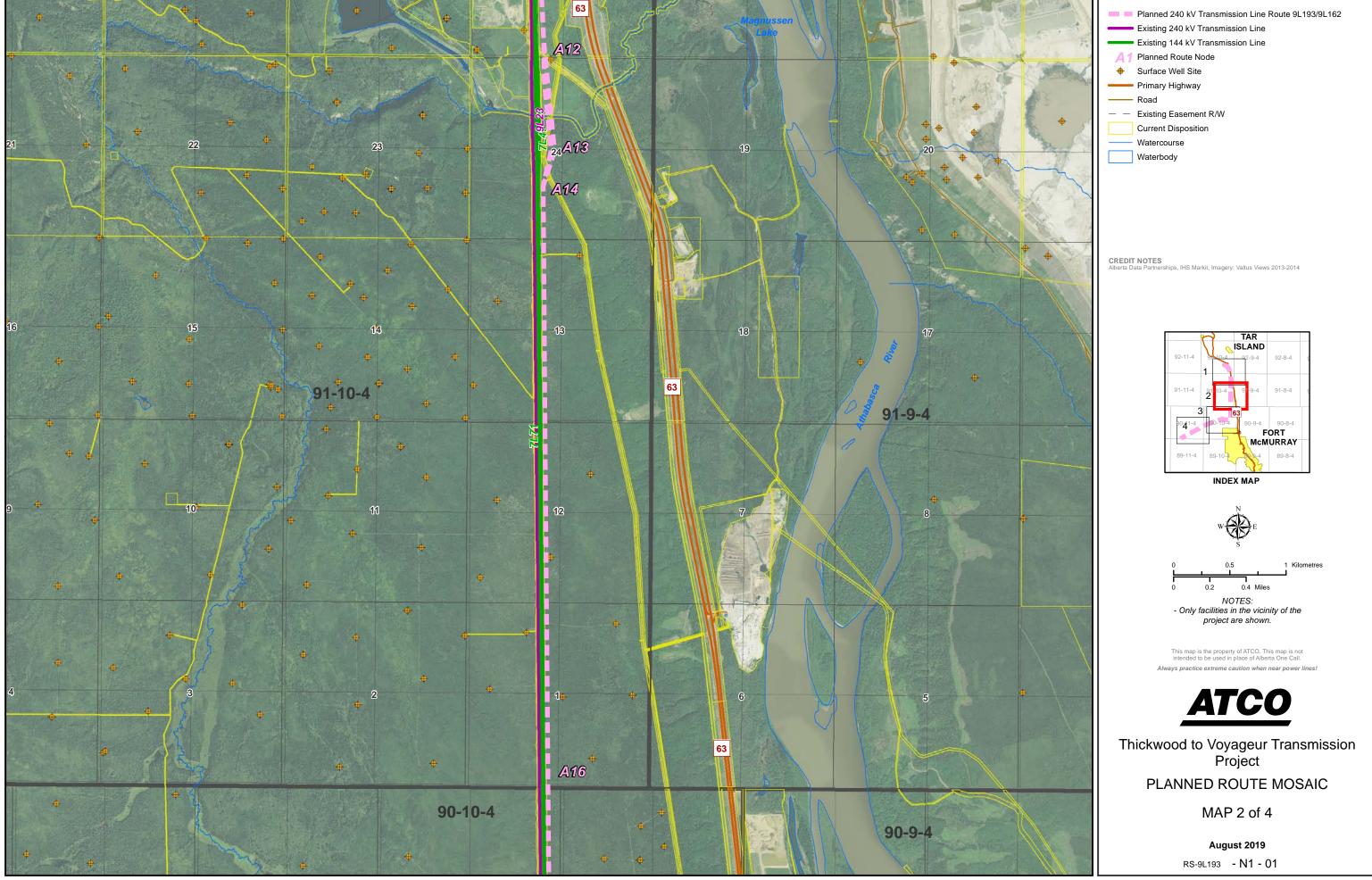


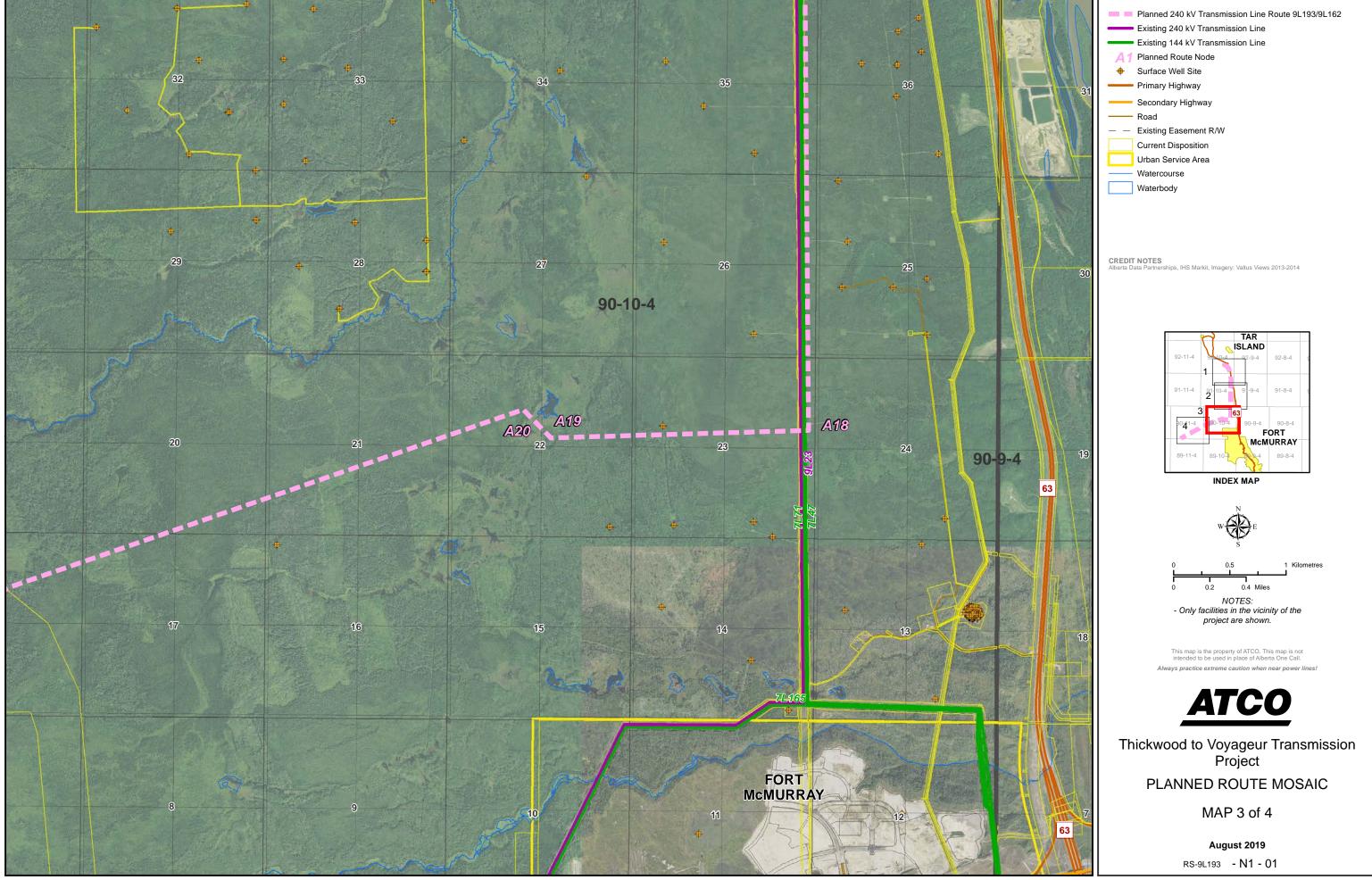


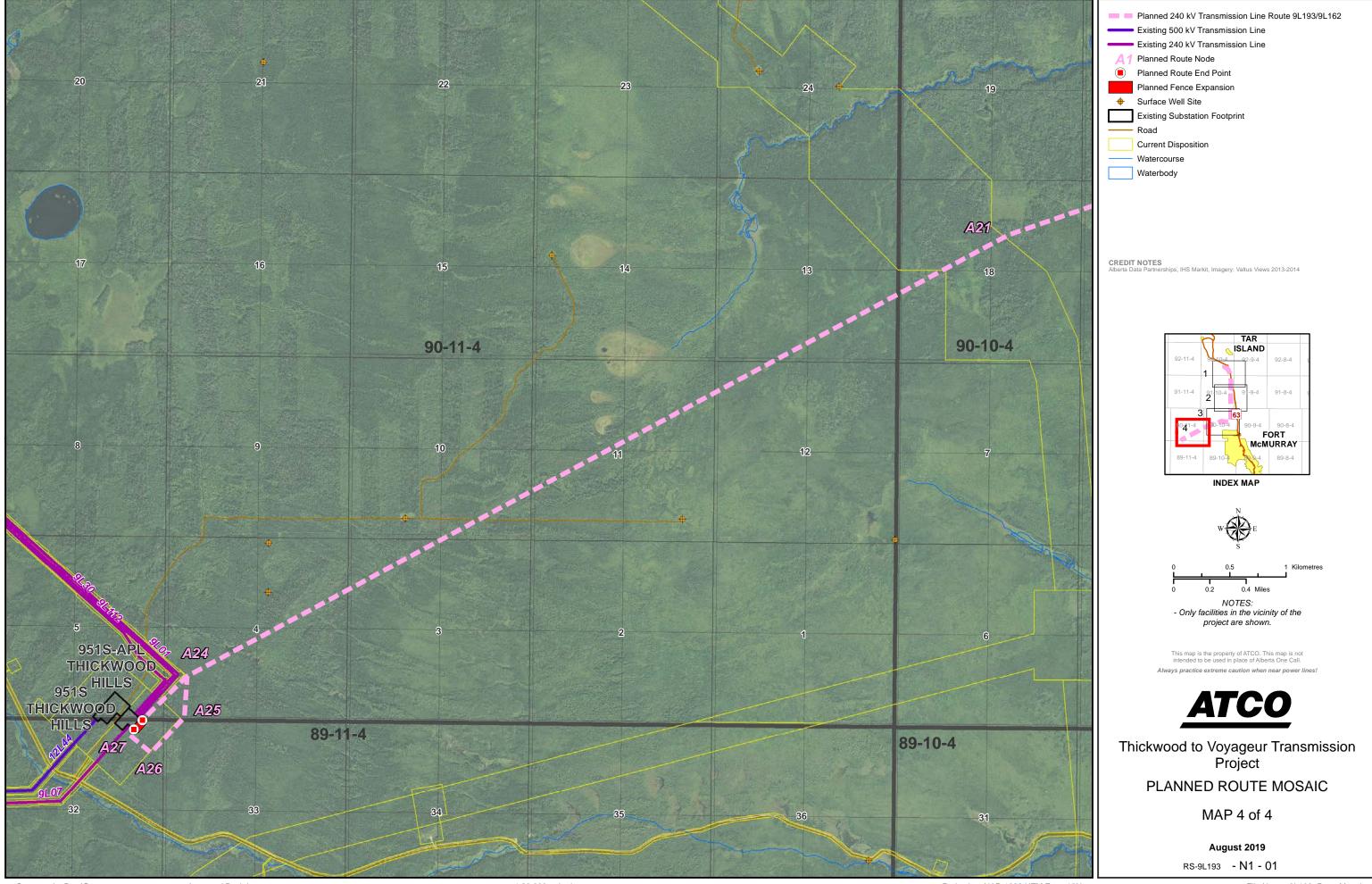
Cartography By: JG Approved By: LJ 1:7,500 at Letter Projection: NAD 1983 UTM Zone 12N File Name: 9L193_Site_Layout



Cartography By: JG Approved By: LJ 1:30,000 at Ledger File Name: 9L193_RouteMosaic







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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.

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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

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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

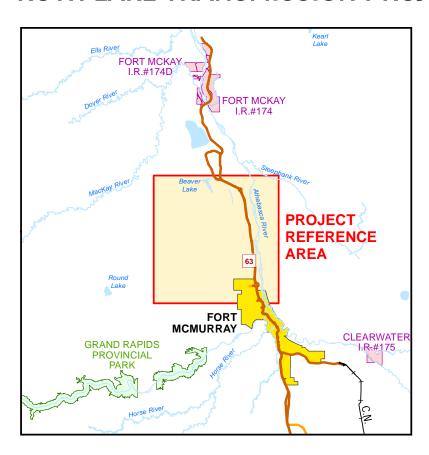
Updated March 2016 www.auc.ab.ca

ATCO SHAPE the Conversation



August 2019

RUTH LAKE TRANSMISSION PROJECT



This newsletter provides you with information about electric transmission facilities being planned 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 Ruth Lake Transmission Project will be located approximately 25 km north of Fort McMurray, AB. The project is planned to support local industrial developments and expansion to the electrical infrastructure. If approved, the project will include alterations to the existing Ruth Lake 848S substation and the construction of a segment of approximately 300 m of single – circuit 240 kilovolt (kV) transmission line. This segment of line will be part of a new transmission line (to be called 29PL9-26) that will connect Ruth Lake 848S substation to Millennium 29EDD-1 substation. Please refer to the technical details and planned site layout for further details.

Ruth Lake Transmission Project is a component of the Thickwood to Voyageur Transmission Project, which includes works in and about Thickwood Hills 951S substation (on SE 5-90-11 W4M and NE 32-89-11 W4M), Voyageur 29EDD-94 substation (on NW 11-92-10 W4M and SE 5-90-11 W4M) and Ruth Lake 848S substation. For information regarding proposed works related to the Thickwood Hills 951S substation, please refer to the Thickwood to Voyageur Transmission Project Newsletter.

ATCO is seeking your input on how this project may affect you. If you are in the direct vicinity of the planned facilities, 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 electric 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 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 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.

LOCAL BENEFITS

Upgrading the transmission system in your area will:

- Improve access to safe, secure and reliable power
- Allow future businesses to connect to Alberta's electric system
- Encourage investment in our province

If you are a local business, and would like to be considered for the ATCO approved vendors list, please contact us toll free at 1-800-668-2248.

The Process

Our research indicates that you are in the vicinity of the proposed facilities. In the coming weeks, ATCO Electric will be contacting you to discuss the project.

Consultation with landholders routinely leads to improvements on our projects. We have adjusted routes, developed new route options, and rejected other routes because of conversations with landholders. Your feedback and input will help determine the best possible route.

We would like to meet with you to gather information about the area and answer any questions you may have. These conversations help us determine the best route option for new transmission line developments.



In developing route options, ATCO must consider a range of route constraints and barriers including proximity to residences. We undertake extensive studies to understand the potential impacts on wildlife, wetlands and other sensitive areas.

In addition to the in-person and telephone consultations ATCO will continue to undertake, we invite anyone who is interested in this project to:

- provide feedback and share other information using the enclosed reply form and postage-paid envelope, and
- be a part of the conversation. If you have any questions, concerns or other information regarding this project, we want to hear from you.

If you have an interest in lands located on or beside the planned route or existing substation site, you will be contacted by an ATCO representative to further discuss the project and address any questions or concerns you may have. When consultations have been completed, ATCO will submit a facility application to the Alberta Utilities Commission (AUC) to obtain approval for the construction and operation of the planned facilities.

Transmission Facilities

Prior to consultation with landholders, ATCO develops early route concepts. In identifying early route concepts, ATCO considers numerous constraints and barriers including:

- · Proximity to residences
- Environmentally sensitive areas
- Wetlands
- Existing infrastructure (i.e. other transmission lines, roads, highways, pipelines, telecommunication towers)
- · Planned developments
- Visual factors
- · Construction and land acquisition costs
- Quarter and section lines
- Other special considerations (i.e. access roads)

THE SCHEDULE

We begin sharing information about the project to determine the best options.

We gather your input. Based on this input and other factors, route option(s) are selected. ATCO submits an application to the AUC to build the proposed facilities

The AUC reviews the application by way of a public process. If approved, construction of the new facilities begins.

Proposed Route Option

ATCO completed early landholder engagement with parties who would likely be affected by all the early route concepts. As a result of the early engagement program, one route option has been identified as the proposed route option for the project (see enclosed site layout). Parties on or beside the proposed route will be contacted by an ATCO representative for additional consultation in the weeks ahead.

The Right-of-Way

The term right-of-way refers to the area a transmission line uses including areas on either side of the line. Rights-of-way must have a minimum width to ensure safety and ongoing access for maintenance.

For safety reasons, some general restrictions on the use of the land in the direct vicinity of the transmission line may apply. These include setbacks for development.

Details including width and position of the right-ofway will depend on the type and size of the required structure, existing land use, surrounding features and other factors.

The right-of-way will follow property boundaries, if feasible, and in some situations, will follow existing features like a road, pipeline or another power line.

The typical width of the primary right-of-way for this project is 40 m. Additional land may be required on each side of the primary right-of-way for vegetation control.

Once a proposed route has been submitted to the AUC, ATCO begins coordinating agreements with landholders to acquire rights-of-way. Once a right-of-way is constructed, landholders may continue to use the right-of-way subject to the terms of agreements made between the landholder and ATCO.



Typical Double Circuit Steel Lattice Tower (final design may vary). This project will have a single-circuit steel lattice tower.

Access Trails and Temporary Workspace

Access trails may be required in areas where terrain conditions or the presence of wetlands make driving along the right-of-way impractical.

The exact location of temporary work spaces has yet to be determined.

Temporary workspace may be required along the edge of the right-of-way and in other selected locations.

Arrangements for temporary workspace will be discussed and negotiated with landholders individually.

project notification

consultation begins

right-of-way acquisition process begins

AUC process continues

facilities completed and operating

AUGUST 2019

AUGUST 2019

DECEMBER 2019

application filed with the Alberta Utilities Commission (AUC) (proposed route)

JULY 2020

JULY 2021

if approval is granted by the AUC, construction begins

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 project planner directly:

Lina Sierra

Planner **ATCO** 10035-105 Street Edmonton, AB T5J 2V6

Phone: 587 785 2829

Email: consultation@atcoelectric.com

Website: www.atcoelectric.com

Fax: 780 420 5030

Alberta Electric System Operator (AESO)

Phone: 1 888 866 2959

Email: stakeholder.relations@aeso.ca

Alberta Utilities Commission (AUC)

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



Approval Process

Alberta's electrical system is regulated by the AUC, an independent agency of the province that ensures the fair and responsible delivery of utility services. Before ATCO can begin construction on a project, the AUC must approve the facilities application, which includes details such as location of electric transmission facilities and routes. For more information about how you can participate in the AUC approval process, please refer to the enclosed AUC brochure, *Public* Involvement in a Proposed Utility Development.

If you are affected by the location of facilities in our application, information you shared with us will be summarized in our facility application to the AUC. The AUC will consider this input in its review of the application.

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 using the enclosed reply form and postage paid envelope, by contacting us (toll free) at 1-855-420-5775, or by emailing us at consultation@atcoelectric.com.

Included in this package:

- Technical details of project
- · Planned site layout diagram
- AUC brochure: Public Involvement in a Proposed Utility Development
- · AESO Need Overview
- Reply form and postage-paid envelope



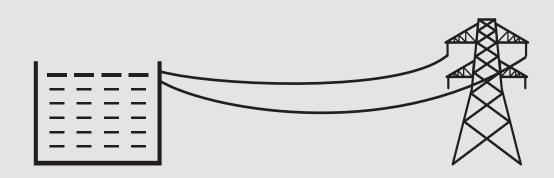
ATCO

The Technical Details

August 2019

RUTH LAKE TRANSMISSION PROJECT

The technical details of facilities associated with the Thickwood to Voyageur / Ruth Lake Transmission Project are described in this fact sheet. Designs may vary as plans are finalized.



Modifications to the existing Ruth Lake Substation

The project plans to alter the existing Ruth Lake substation, located approximately 25 km north of Fort McMurray, AB in N½ of 16-92-10 W4M.

New 240-kV Transmission Line

ATCO will construct approximately 300 m of single-circuit 240-kV transmission line. If approved, this segment of line will be part of the new transmission line (to be called 29PL9-26) that will connect Ruth Lake substation to Millennium substation.

RUTH LAKE SUBSTATION

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

- One 240-kV circuit breaker
- Associated switches and equipment

The equipment described above will be installed within the existing boundaries of the Ruth Lake substation site (please see the enclosed site layout)

THE DETAILS

If approved this segment of the new 29PL9-26 transmission line will consist of:

- Two lattice tower structures
- · One conductor per phase
- · One overhead shield wire
- One fibre optic connection (OPGW)

The remaining segment of the 29PL9-26 transmission line is being planned as pat of a separate project.

Consultation for the remaining segment of 29PL9-26 line will be completed by the owner of the new facilities.

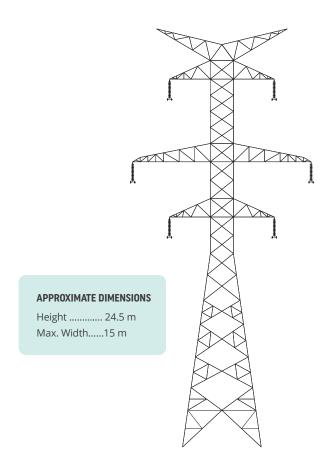
If approved by the Alberta Utilities Commission (AUC), the new 240 kV transmission line will be built on new single-circuit, steel lattice towers structures in a new right-of-way, similar to the one shown here.

The structures will have one conductor per phase strung across them, plus one additional fibre optic connection (OPGW) and one overhead shield wire at the top of the structure.

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.

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



The right-of-way* for this structure is approximately 40 m.

*Rights-of-way are cleared of trees, bush and debris to allow access for construction and ongoing maintenance. Additional vegetation clearing may be required outside of the typical right-of-way.

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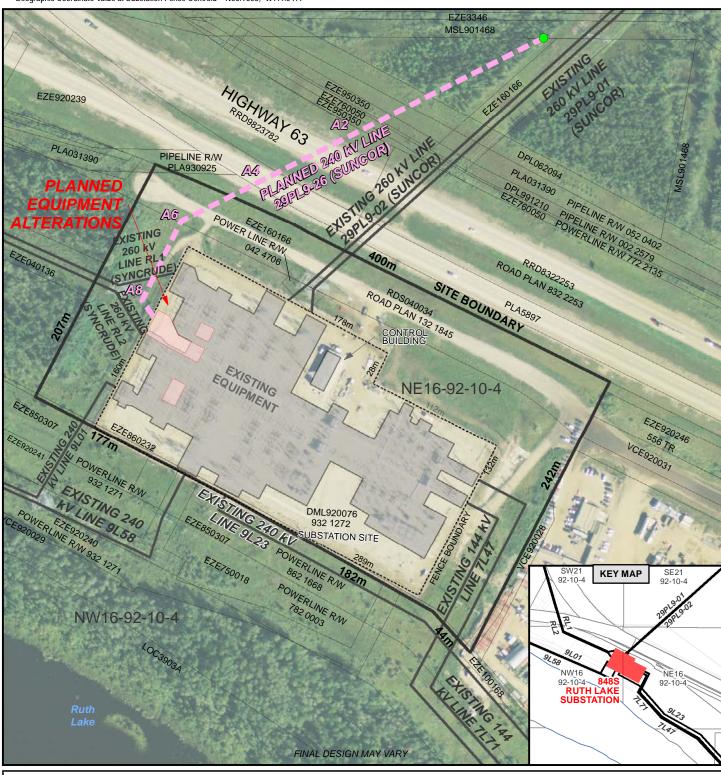
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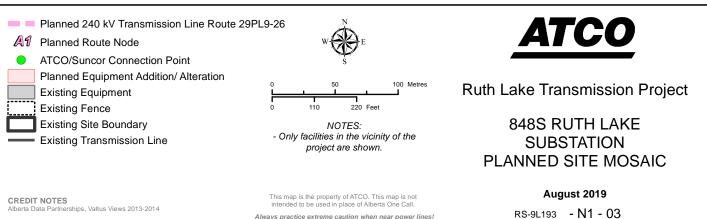
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Cartography By: JG

Approved By: LJ

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Projection: NAD 1983 UTM Zone 12N

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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

Updated March 2016 www.auc.ab.ca



Attachment 6 - TFO Project Letter Update - Project Update: Ruth Lake Transmission Project (March & April 2020)



March 19, 2020

Project Update: Ruth Lake Transmission Project

This letter provides you with updates on the Ruth Lake Transmission Project.

In August 2019, ATCO Electric Ltd. (ATCO) sent you information about plans for the Ruth Lake Transmission Project as part of the Thickwood to Voyageur Transmission Project. Since that notification, further engineering studies have been completed for the proposed Ruth Lake 848S substation alterations and transmission line 29PL9-26 that was planned to connect the existing Ruth Lake 848S substation to Millennium 29EDD-1 substation.

At this time, ATCO Electric would like to inform you that the Ruth Lake segment of the Thickwood to Voyageur Transmission Project has been cancelled. Therefore, alterations to the Ruth Lake 848S substation and construction of the new transmission line will no longer be proceeding. The Thickwood to Voyageur segment of the project will proceed as planned. For your reference to the project area, an Overview Map is enclosed. In addition to ATCO not proceeding with the Ruth Lake portion of the project, see the revised/ updated AESO Need Overview.

If you have any questions or comments regarding the Ruth Lake Transmission Project, please contact me at your earliest convenience.

Sincerely,

Lua Maria Lim

Lina Sierra

Project Planner

ATCO

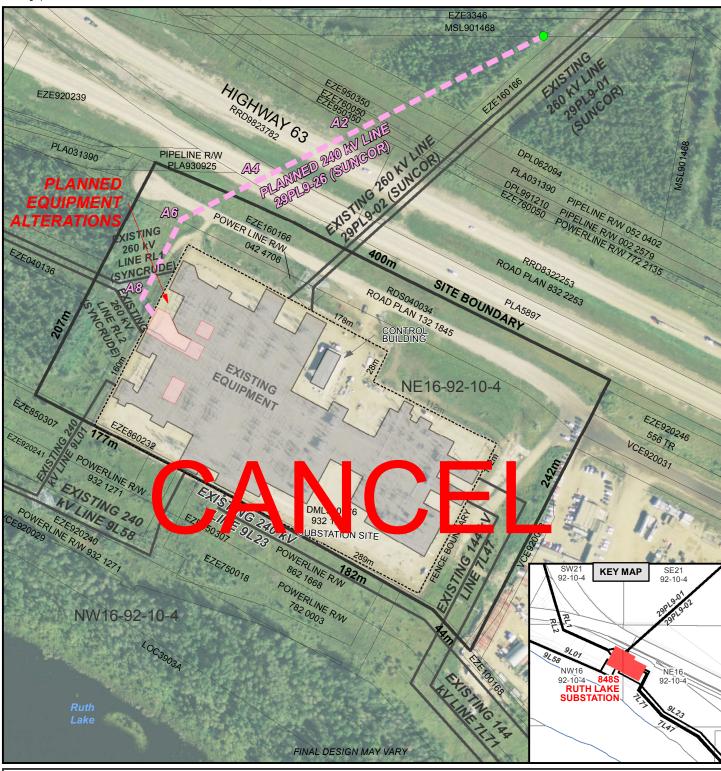
Toll Free: 1-855-420-5775 Phone: 1-587-785-28-29

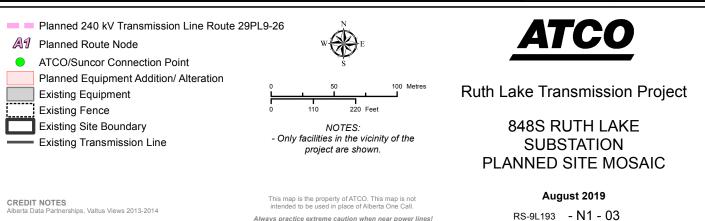
E-mail: consultation@atcoelectric.com

Enclosed:

Project Overview Map (RS-9L193-N1-03)

Revised AESO need overview







Need for the Suncor Base Plant Cogeneration Facility Connection in the Fort McMurray area

Suncor Energy Inc. (Suncor) has applied to the Alberta Electric System Operator (AESO) for transmission system access to connect its approved Suncor Base Plant Cogeneration Facility (Facility) in the Fort McMurray area. Distribution of the original AESO Need Overview began in August 2019. The AESO has since revised its proposed solution and schedule to respond to Suncor's request, as described below. Suncor's request can be met by the following solution:

REVISED PROPOSED SOLUTION

- Add two 240 kilovolt (kV) circuits to connect the existing Voyageur 29EDD-94 substation to the existing Thickwood Hills 951S substation.
- Modify the Thickwood Hills 951S substation, including adding three 240 kV circuit breakers.
- Add or modify associated equipment as required for the above transmission developments.

REVISED NEXT STEPS

- The AESO has revised its schedule. The AESO now intends to apply to the Alberta Utilities Commission (AUC) for approval of the need in early 2020.
- The AESO's needs identification document (NID) application will be available on the AESO's website at www.aeso.ca/stakeholder-engagement/transmission-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.

ATCO

- Is the transmission facility owner in the Fort McMurray 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

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

www.aeso.ca | > @theaeso



Attachment 7 – AESO Market Participant Notification Letter (August 28, 2020)



SENT VIA EMAIL

August 28, 2020

Notified Market Participant Corporate Legal Name Address Line 1. Address Line 2. City, Province, Postal Code.

Dear Notified Market Participant Primary Contact:

Re: Suncor Base Plant Cogeneration Facility Connection

The Alberta Electric System Operator (AESO) would like to advise you that Suncor Energy Inc. (Suncor) has applied for transmission system access to connect its approved Suncor Base Plant Cogeneration Facility (approved Facility) to the Alberta interconnected electric system (AIES) in the AESO Northeast Planning Region.

A copy of the AESO Need Overview Update document is attached for your information. The AESO Need Overview Update describes the AESO's proposed transmission development to connect the approved Facility to the AIES, and the AESO's next steps, which includes submitting a needs identification document (NID) application to the Alberta Utilities Commission (AUC) for approval.

The purpose of this letter is to advise you that the AESO has identified that, under certain abnormal system conditions (N-1), the operation of the **[Effective Generation Facility Name]** (**[Effective Generation Facility Asset ID]**) may be affected following the connection of the approved Facility.¹

Connection Assessment Findings

An engineering connection assessment was carried out by the AESO to assess the transmission system performance following the connection of the approved Facility. The connection assessment identified the potential for system performance issues, following the connection of the approved Facility. Specifically, following a contingency affecting any portion of the Fort McMurray 500 kV West path (i.e. transmission lines 12L41, 12L44, or the Thickwood Hills 951S substation 240/500 kV transformer), certain 240 kV system elements were observed to exceed their emergency thermal limits. A new remedial action scheme (RAS), which only curtails the approved Facility, has been designed to mitigate this potential system performance issue. The connection assessment confirmed there were no system performance issues under normal system conditions (N-0) and there was no need to pre-curtail generation in the region for the contingencies on the Fort McMurray 500 kV West path as long as the RAS was in place.

Transmission Constraint Management

To mitigate the potential system performance issues, the AESO may also make use of real-time operational measures, in accordance with <u>Section 302.1 of the ISO rules</u>, <u>Real Time Transmission Constraint Management</u> (TCM Rule), which is in effect today. When applied, the TCM Rule could result in the AESO issuing directives for curtailment to source assets that are effective in managing a constraint.

Page 1 Public

¹ The studies were performed assuming the Rate STS, Supply Transmission Service, contract capacity of 815 MW.



The connection assessment identified source assets, including the **[Effective Generation Facility Name]** (**[Effective Generation Facility Asset ID]**), which are effective in mitigating the potential transmission constraints. Due to the system performance issues being related to outflow from the Fort McMurray planning area, all generators in the area are similarly effective. This means that should a contingency occur that results in activating the proposed RAS for the approved Facility, the TCM Rule will apply in order to restore generation in the area while the 500 kV West path is out of service.

For Further Information

The engineering connection assessment will be included in the AESO's Suncor Base Plant Cogeneration Facility Connection NID application. Following submission of the NID application to the AUC, the NID application will be posted on the AESO website at: https://www.aeso.ca/grid/projects/

If you have any questions or concerns, please contact the AESO at 1-888-866-2959 or stakeholder.relations@aeso.ca

Attachments:

AESO Need Overview Update: Update - Need for the Suncor Base Plant Cogeneration Facility Connection in the Fort McMurray area

Page 2 Public



Need for the Suncor Base Plant Cogeneration Facility Connection in the Fort McMurray area

Suncor Energy Inc. (Suncor) has applied to the Alberta Electric System Operator (AESO) for transmission system access to connect its approved Suncor Base Plant Cogeneration Facility (Facility) in the Fort McMurray area. Distribution of the original AESO Need Overview began in August 2019. The AESO has since revised its proposed solution and schedule to respond to Suncor's request, as described below. Suncor's request can be met by the following solution:

REVISED PROPOSED SOLUTION

- Add two 240 kilovolt (kV) circuits to connect the existing Voyageur 29EDD-94 substation to the existing Thickwood Hills 951S substation.
- Modify the Thickwood Hills 951S substation, including adding three 240 kV circuit breakers.
- Add or modify associated equipment as required for the above transmission developments.

REVISED NEXT STEPS

- The AESO has revised its schedule. The AESO now intends to apply to the Alberta Utilities Commission (AUC) for approval of the need in early 2020.
- The AESO's needs identification document (NID) application will be available on the AESO's website at www.aeso.ca/stakeholder-engagement/transmission-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.

ATCO

- Is the transmission facility owner in the Fort McMurray 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?

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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.

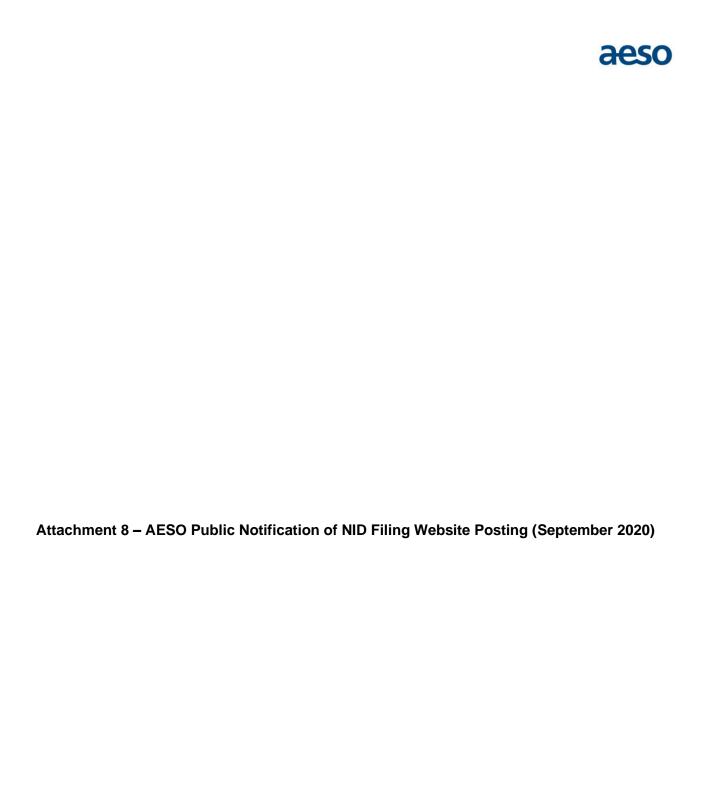
CONTACT US

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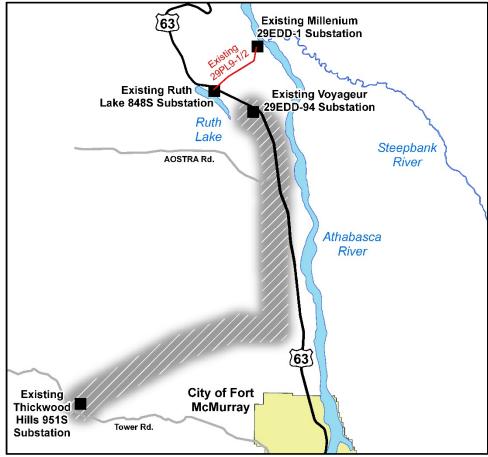
September 2020

Notification of Needs Identification Document Filing Addressing the Need for the Suncor Base Plant Cogeneration Facility Connection in the Fort McMurray Area

The Alberta Electric System Operator (AESO) advises you that it intends to file a Needs Identification Document (NID) for the Suncor Base Plant Cogeneration Facility Connection with the Alberta Utilities Commission (AUC) on or after October 30, 2020.

Suncor Energy Inc. (Suncor) has applied to the AESO for transmission system access to connect its approved Suncor Base Plant Cogeneration Facility (Facility) in the Fort McMurray area. Suncor's request can be met by the following solution:

- Add two 240 kilovolt (kV) circuits to connect the existing Voyageur 29EDD-94 substation to the existing Thickwood Hills 951S substation.
- Modify the Thickwood Hills 951S substation, including adding three 240 kV circuit breakers.
- Upgrade the existing 240 kV transmission lines 29PL9-1 and 29PL9-2, between the existing Ruth Lake 848S and Millennium 29EDD-1 substations, by replacing the existing 240 kV conductor with a 240 kV conductor of higher capacity; and
- Add or modify associated equipment as required for the above transmission developments.



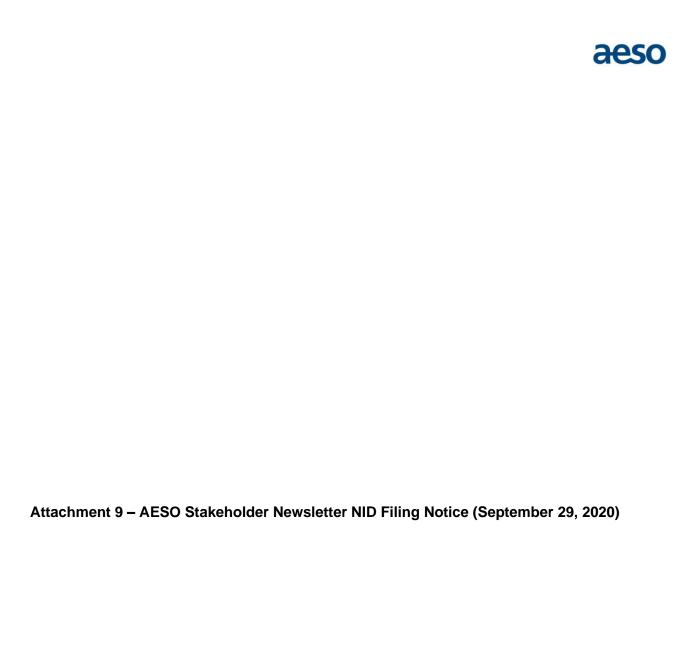
The black squares on the map indicates the approximate location of the existing Voyageur 29EDD-94 substation, which is at NW-11-92-10W4, the existing Thickwood Hills 951S substation, which is at NE-32-89-11W4, the existing Ruth Lake 848S substation, which is at NE-16-92-10W4, and the existing Millennium 29EDD-1 substation, which is at NE-26-92-10W4. The grey shaded area on the map indicates the approximate location of the proposed transmission developments, including the 240 kV transmission lines. The specific transmission facilities may extend beyond the grey shaded area shown.

ATCO Electric Ltd. is the transmission facility owner (TFO) in the Fort McMurray area. In August 2019, the AESO and the TFO began presenting this need to stakeholders, including residents, occupants, landowners and First Nations. The AESO will apply to the AUC for approval of the need for this transmission development. Once filed with the AUC, the NID will be posted on the AESO website at https://www.aeso.ca/grid/projects/suncor-base-plant-cogeneration-facility-connection/

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

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

Public Public



AESO Stakeholder Newsletter

GRID

Suncor Base Plant Cogeneration Facility Connection - Notice of NID Filing

Suncor Energy Ltd (Suncor) has applied to the AESO for transmission system access to connect its approved Suncor Base Plant Cogeneration Facility (Facility) in the Fort McMurray area. Suncor's request can be met by the following solution:

- Add two 240 kilovolt (kV) circuits to connect the existing Voyageur 29EDD-94 substation to the existing Thickwood Hills 951S substation.
- Modify the Thickwood Hills 951S substation, including adding three 240 kV circuit breakers.
- Upgrade the existing tansmission lines 29PL9-1 and 29PL-2 between the existing Ruth Lake 848S and Millennium 29EDD-1 substations, by replacing the existing 240 kV conductor with a 240 kV conductor of higher capacity; and
- Add or modify associated equipment as required for the above transmission developments.

The AESO intends to file the Suncor Base Plant Cogeneration Facility Connection Needs Identification Document (NID) application with the Alberta Utilities Commission (AUC) on or after Oct. 30, 2020, requesting that the AUC approve this NID.

The AESO has posted the Notification of NID filing on its website. Please <u>click here</u> to view the document or visit the AESO website at <u>www.aeso.ca</u> and follow the path Grid > Projects > Suncor Base Plant Cogeneration Facility Connection to see all the relevant documents, including the NID application once it is filed with the AUC.