

APPENDIX C AESO PIP

Thornton 2091S Substation Needs Identification Document

1.0 Participant Involvement Program (PIP)

From July 2015 to October 2015, the AESO conducted a Participant Involvement Program (PIP) to assist in preparing its Thornton 2091S Substation Needs Identification Document (NID). The AESO directed transmission facility owner (TFO), ATCO Electric Ltd. (ATCO), to assist the AESO in providing notification in accordance with NID14 and Appendix A2 of Alberta Utilities Commission Rule 007.

1.1 Stakeholder Notification

The AESO's PIP was designed to notify and provide information to all occupants, residents and landowners within the notification area of the proposed development, as well as to other interested parties, including the following government bodies, agencies and other stakeholder groups (Stakeholders):

- Horse Lake First Nation
- Aseniwuche Winewak Nation
- Alberta Culture and Tourism
- Alberta Environment and Parks
- Alberta Utilities Commission
- Industry Canada
- Municipal District of Greenview No. 16
- Transport Canada – Civil Aviation/Aerodrome Safety
- TELUS Communications Company

The AESO used a variety of methods to notify Stakeholders on the need for the Thornton 2091S substation. The AESO developed a one-page Need Overview document that described the need for the proposed transmission development. A copy of this document was posted to the AESO website at <http://www.aeso.ca/transmission/32317.html> and a notice was published in the AESO Stakeholder Newsletter on July 30, 2015. Copies of the Need Overview and the AESO Stakeholder Newsletter posting have been included as Attachments 1 and 2, respectively.

The Need Overview was also included with ATCO's project-specific information package mailed on July 28, 2015 to the Stakeholders noted above. Attachment 3 includes a copy of ATCO's information brochure.

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

As directed by the AESO, the TFO was prepared to direct any inquiries or concerns about the project need to the AESO. The TFO has indicated that Stakeholders have not identified any concerns or objections with the need for the proposed transmission development.

1.2 Public Notification

Most recently, the AESO published a Public Notification of NID Filing to the AESO website at <http://www.aeso.ca/transmission/32317.html> on September 14, 2015 and a notice in the AESO Stakeholder Newsletter on September 15, 2015. Copies of the Public Notification of NID Filing and the AESO Stakeholder Newsletter notice have been included as Attachments 4 and 5, respectively.

1.3 Concerns and Objections Raised

The AESO has not received any indication of concern or objections from any party about the need for the proposed transmission development.

1.4 List of Attachments

- Attachment 1 – AESO Need Overview
- Attachment 2 – AESO Stakeholder Newsletter Need Overview Notice
- Attachment 3 – ATCO's Information Brochure – *Thornton Substation Project* (July 2015)
- Attachment 4 – AESO Public Notification of NID Filing (AESO Website Posting)
- Attachment 5 – AESO Stakeholder Newsletter NID Filing Notice

Attachment 1 – AESO Need Overview

Need for the Thornton 2091S Substation in the Grande Prairie area

Transmission Development Information for Stakeholders



ATCO Electric Ltd. (ATCO) has applied to the Alberta Electric System Operator (AESO) for transmission system access to supply new demand for electricity in the Grande Prairie area. ATCO's request can be met by adding a new substation, to be called Thornton 2091S, which includes a 144 kV transformer, two 144 kV breakers, and associated equipment, and by adding two new 144 kV transmission lines, each approximately 2 km, to connect the new substation to the existing 144 kV transmission line 7L20.

The AESO is processing ATCO's request, including providing information to landowners, occupants, residents and agencies that may be near the proposed transmission development. Later this year, the AESO intends to apply to the Alberta Utilities Commission (AUC) for approval of this need. The AESO's needs identification document (NID) application will be available on the AESO's website at www.aeso.ca/nid at the time of its application to the AUC.

Who is the AESO?

Alberta's transmission system, sometimes referred to as the Alberta Interconnected Electric System (AIES), is planned and operated by the AESO. The transmission system comprises the high-voltage lines, towers and equipment (generally 69 kV and above) that transmit electricity from generators to lower voltage systems that distribute electricity to cities, towns, rural areas and large industrial customers.

The AESO's role is to maintain safe, reliable and economic operation of the AIES. The AESO's planning responsibility includes determining the need for transmission system development and the manner in which that need is met. The AESO is also mandated to facilitate the interconnection of qualified market participants to the AIES. The AESO is regulated by the AUC and must apply to the AUC for approval of its NID.

How is ATCO involved?

ATCO is the transmission facilities owner (TFO) in the Grande Prairie area. While the AESO is responsible for identifying that transmission system development is needed, ATCO is responsible for detailed siting and routing, constructing, operating and maintaining the associated transmission facilities. The AESO has directed ATCO to provide information to stakeholders on this need and to file a facility proposal application with the AUC which will include a detailed description and location of the proposed transmission development.

Further Information

The AESO appreciates your views on the need for transmission system development and your comments are encouraged. If you have any questions or comments regarding the need for the proposed transmission system development in the Grande Prairie area or the AESO's application regarding this need, please contact:

Susan Haider
AESO Stakeholder Relations
1-888-866-2959
stakeholder.relations@aeso.ca
2500, 330 – 5th Avenue SW
Calgary, Alberta T2P 0L4

The AESO is committed to protecting your privacy. Your feedback, comments and/or contact information collected by the AESO will be used to respond to your inquiries and/or to provide you with further information about the project. The AESO will not use your personal information for any other purpose and will not disclose your information without consent or a legal obligation. If you choose to communicate by email, please note, email is not a secure form of communication. Security of your communication while in transit cannot be guaranteed.

Attachment 2 – AESO Stakeholder Newsletter Need Overview Notice

Thornton 2091S Substation – Need for Transmission System Development in the Grande Prairie area

ATCO Electric Ltd. has applied to the AESO for transmission system access to supply new demand for electricity in the Grande Prairie area. ATCO's request can be met by adding a new substation, to be called Thornton 2091S, which includes a 144 kV transformer, two 144 kV breakers, and associated equipment, and by adding two new 144 kV transmission lines, each approximately 2 km, to connect the new substation to the existing 144 kV transmission line 7L20.

The AESO has posted a Need Overview for this project on its website. Please [click here](#) to view the document or visit the AESO website at www.aeso.ca and follow the path Transmission > Needs Identification Documents > Thornton 2091S Substation.

Attachment 3 – ATCO’s Information Brochure – *Thornton Substation Project* (July 2015)



July 28, 2015

Stakeholder

Address

Town, Alberta Postal Code

RE: Thornton Substation Project

Dear Stakeholder,

This letter provides you with information about new transmission facilities being planned in your area. The proposed Thornton Substation Project will be located approximately 90 kilometres (km) south of Grande Prairie and is needed to support industrial development in the area. If approved, the project will include construction of a new substation and approximately two km of new transmission line. A new telecommunication tower and control building will also be constructed at the substation site.

The new double circuit transmission line (to be called 7L228/ 7L20) will connect the new Thornton substation (to be called Thornton 2091S) to the existing 7L20 transmission line (see enclosed map).

ATCO Electric is seeking your input on how this project may affect you. If you are in the direct vicinity of the planned facilities, ATCO Electric will contact you in the coming weeks. Once feedback has been considered and the project details have been finalized, ATCO Electric will submit a facilities application to the Alberta Utilities Commission (AUC) to obtain approval for the construction and operation of the planned transmission facilities.

Thornton Substation

If approved, the new substation will be located on the southwest quarter section of 30-63-5-W6M (see enclosed map). The new substation will consist of the following equipment:

- One 30/40/50 Mega Volt Ampere, 144/25kilovolt (kV) transformer
- Two 144-kV circuit breakers
- Six 25-kV circuit breakers
- One 31 metre (m) telecommunication tower and control building
- Associated switches and equipment

The planned substation site was chosen to ensure suitable site conditions, good access and sufficient space for the incoming transmission lines. It was also selected to maximize the use of existing disturbed land areas and for its close proximity to industrial generating facilities.

144-kV Transmission Line

If approved, approximately two km of new 144-kV double circuit transmission line will be constructed using Davit Arm structures (see enclosed technical description) set approximately 120 m apart. The lines will connect the planned Thornton substation to the existing 7L20 transmission line. To accommodate the new line, alterations to 7L20 will be required.



Proposed Timeline (Timing may be adjusted to reflect final plans)

July - August, 2015	Notification and consultation with landowners, occupants, agencies and other interested parties.
September, 2015	Submission of the facilities application to the AUC.
January, 2016	Construction to commence, subject to regulatory approvals.
August, 2016	Facilities completed and operating.

Shape the Conversation

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 or by contacting us at the toll free line and email address listed below. For more information about how you can participate in the approval process required by the AUC, please refer to the enclosed brochure entitled *Public Involvement in a Proposed Utility Development*.

About the AESO

When upgrades to Alberta's electrical system are needed, they are identified by the Alberta Electric System Operator (AESO). The AESO is an independent, not-for-profit organization responsible for the safe, reliable and economic planning and operation of the provincial transmission grid. For more information about why this project is needed, please refer to the AESO's Need Overview included with this letter, or visit www.aeso.ca. If you have any questions or concerns about the need for this project you may contact the AESO directly or you can make your concerns known to an ATCO Electric representative who will communicate them to the AESO on your behalf.

Please let us know if you have any questions, concerns or suggestions regarding this project.

Sincerely,

Deb Castor, Project Planner

ATCO Electric Ltd.

Toll Free: 1-855-420-5775

Direct: 1-780-420-4151

E-mail: consultation@atcoelectric.com

Enclosed:

- Reference Map
- Technical Description – Davit Arm Structure
- Reply Form
- Brochure entitled *Public Involvement in a Proposed Utility Development*
- *AESO Need Overview*

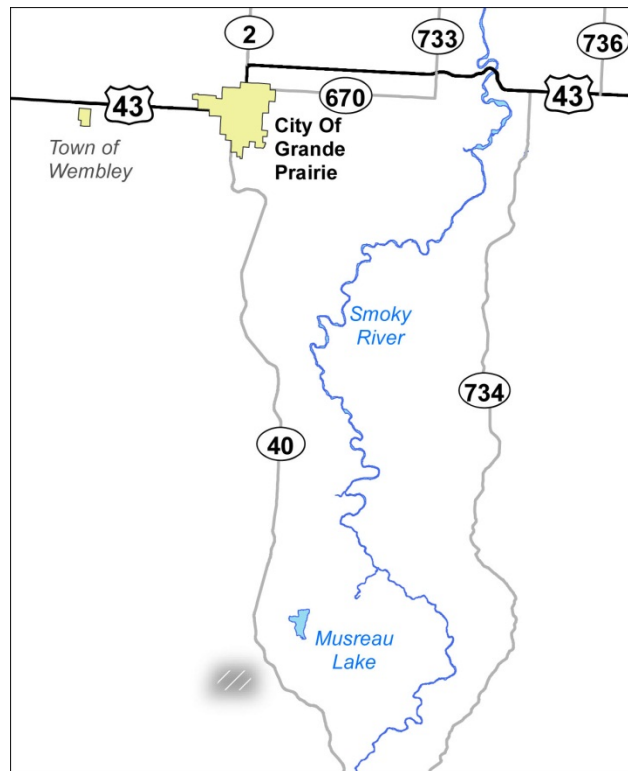
Attachment 4 – AESO Public Notification of NID Filing (AESO Website Posting)

AESO Public Notification of NID Filing

Addressing the Need for the Thornton 2091S Substation in the Grande Prairie Area

The Alberta Electric System Operator (AESO) advises you that it intends to file a Needs Identification Document (NID) for the Thornton 2091S Substation with the Alberta Utilities Commission (AUC) on or after September 30, 2015.

ATCO Electric Ltd. (ATCO) has applied to the AESO for transmission system access to supply new demand for electricity in the Grande Prairie area. ATCO's request can be met by adding a new substation, to be called Thornton 2091S, which includes a 144 kV transformer, two 144 kV breakers, and associated equipment, and by adding two new 144 kV transmission lines, each approximately 2 km, to connect the new substation to the existing 144 kV transmission line 7L20.



The shaded area on the map indicates the approximate location of the proposed transmission development, which is at 19-63-5-W6. In a separate application called a Facility Application, ATCO, the transmission facility owner (TFO) in the Grande Prairie area, will describe the specific upgrades to be performed and request AUC approval to construct and operate the specific transmission facility.

The AESO and ATCO presented this need to stakeholders, including residents, occupants and landowners, from July 2015 to September 2015. The AESO has considered feedback gathered from stakeholders, and technical and cost considerations, and will apply to the AUC for approval of the need for this transmission development. Once filed, the NID will be posted on the AESO website at <http://www.aeso.ca/transmission/32317.html>

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

**Attachment 5 – AESO Stakeholder Newsletter NID Filing
Notice**

Thornton 2091S Substation – Notice of NID Filing

ATCO Electric Ltd. has applied to the AESO for transmission system access to supply new demand for electricity in the Grande Prairie area. ATCO's request can be met by adding a new substation, to be called Thornton 2091S, which includes a 144 kV transformer, two 144 kV breakers, and associated equipment, and by adding two new 144 kV transmission lines, each approximately 2 km, to connect the new substation to the existing 144 kV transmission line 7L20.

The AESO will be filing the Thornton 2091S Substation Needs Identification Document (NID) application with the Alberta Utilities Commission (AUC) on or after September 30, 2015, requesting that they approve this NID.

The AESO has posted the public notification for its NID filing on its website for the Thornton 2091S Substation. Please [click here](#) to view the document or visit the AESO website at www.aeso.ca and follow the path Transmission > Needs Identification Documents > Thornton 2091S Substation to see all the relevant documents, including the NID application once it is filed with the AUC.