

MARCH 2017

Grande Prairie Area Transmission Reinforcement

> Electricity system reinforcement near you

The existing transmission system in your area is reaching its capacity to reliably transmit electricity under certain operating conditions. New transmission system development is required to maintain the reliability of electricity supply to homes, businesses and industry in the area as demand for electricity increases.

The Alberta Electric System Operator (AESO) is proposing to reinforce the existing 144 kV transmission system by adding a new 144 kV transmission line between the existing Clairmont Lake 811S and Poplar Hill 790S substations.

This also requires the relocation of existing equipment from the Poplar Hill

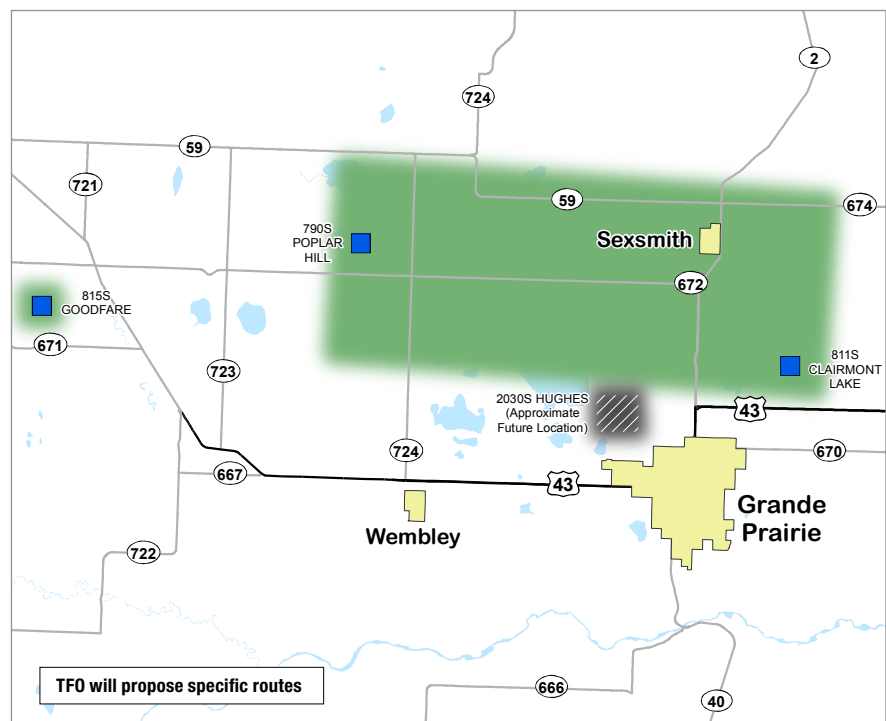
790S substation to either the existing Goodfare 815S or proposed Hughes 2030S substations. As the Hughes 2030S substation is not an existing substation, it is shown using hash marks in the figure below. The final location for the relocated equipment will depend on whether the Hughes substation receives necessary approvals for construction.

THE PROPOSED TRANSMISSION DEVELOPMENT INCLUDES:

- A new 144 kV transmission circuit, between the existing Clairmont Lake 811S and Poplar Hill 790S substations.
- The existing capacitor bank at the Poplar Hill 790S substation needs to be relocated to either the proposed Hughes substation or the Goodfare 815S substation.

The AESO must seek approval for this development, as described in the following pages, and will file its application in spring 2017.

ATCO Electric Ltd. (ATCO) is the transmission facilities owner (TFO) in the area. At a later date, ATCO will propose specific routes and siting details for the proposed developments in a separate facility application to the Alberta Utilities Commission (AUC). For more information on AESO and TFO roles, see page 2. The specific transmission line routes applied for by ATCO may extend beyond the area shown.



Map legend

- Approximate area where proposed transmission facilities could be located
- Existing substation
- ▨ Proposed Hughes substation (construction pending approval by AUC)

At the AESO, we plan the province's electric transmission system. We study the transmission system to determine what future upgrades and expansions will be needed to continue to serve Alberta's growing power demands.



This image is not representative of the exact transmission structure that will be in the area.

> HOW DOES THE AESO DETERMINE THE NEED FOR TRANSMISSION DEVELOPMENT?

The transmission system must have enough capacity to transmit power from where it is generated to where it will be used.

The AESO forecasts both demand from consumers and supply from generators. We study the location and amount of new generation and growing demand, and develop plans to ensure Albertans continue receiving reliable power.



> AESO AND TFO ROLES

The AESO operates the provincial transmission system so that all Albertans can count on safe and reliable electricity to power our homes and businesses every day. The AESO also carefully plans upgrades and reinforcements to the system to ensure the transmission system keeps pace with Alberta's growing demand for power and provides for future growth.

ATCO is the transmission facility owner (TFO) in the 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.

> TFOS IN ALBERTA

There are four major TFOs in Alberta:

ATCO Electric Ltd.

AltaLink Management Ltd.

EPCOR Utilities Inc.
(owned by the City of Edmonton)

ENMAX Power Corporation
(owned by the City of Calgary)

> ALBERTA UTILITIES COMMISSION (AUC) ROLE

The Alberta Utilities Commission (AUC) regulates investor-owned electric and natural gas utilities. It is responsible for approving the need, transmission siting and construction, including all associated costs of construction and operation of Alberta's electricity system.



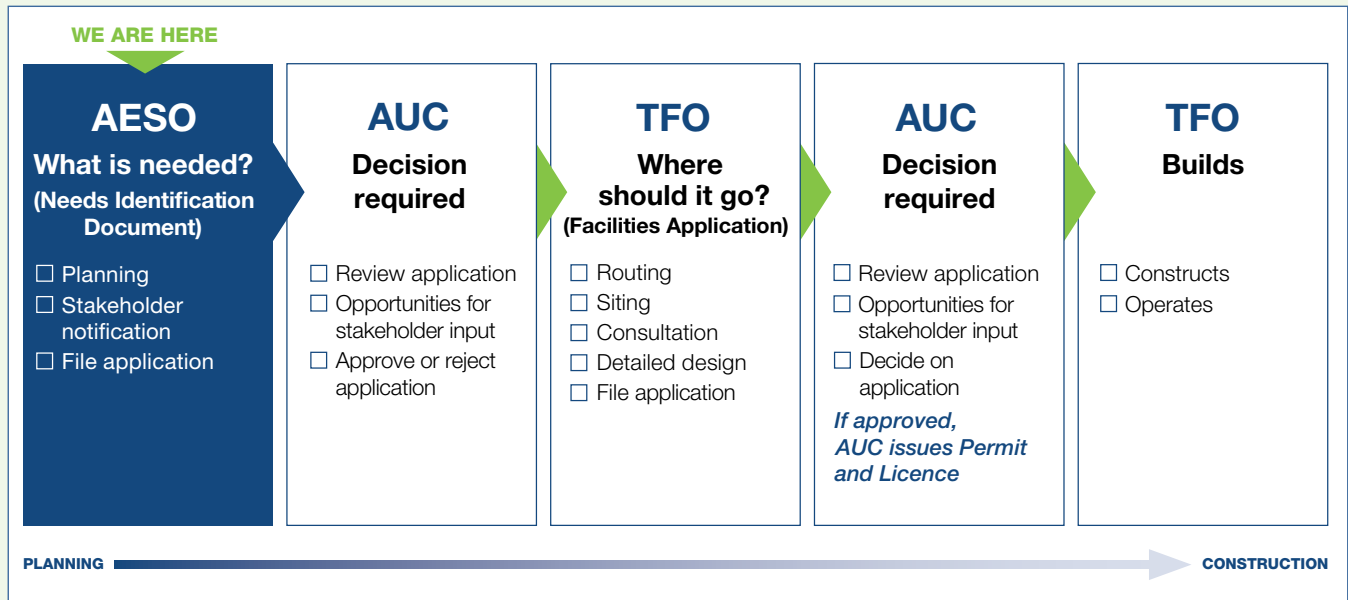
WHO IS THE ALBERTA ELECTRIC SYSTEM OPERATOR?

The AESO is an independent, not-for-profit organization acting in the public interest of all Albertans. The AESO plans Alberta's transmission system, which is made up of the transmission lines, substations and other related equipment that allow electricity to flow from where it is generated to where it is used.



Transmission development in Alberta

IN ALBERTA, SEVERAL STEPS MUST BE COMPLETED IN ORDER TO BUILD NEW TRANSMISSION LINES AND SUBSTATIONS



TRANSMISSION DEVELOPMENT APPROVALS: A TWO-PART PROCESS

1 PART ONE: APPROVAL OF NEED

The AESO studies the transmission system to identify needed upgrades or expansions, and applies to the AUC for approval of our plans. The AUC is the regulator for transmission development in Alberta. The AESO's application to the AUC is called a Needs Identification Document, or NID. The NID outlines the AESO's specific plans to upgrade or expand the transmission system. Stakeholders have opportunities to become involved during the development of a NID application and during the AUC's review of it.

2 PART TWO: APPROVAL TO BUILD

TFOs build what is in the AESO's plans. They consult with stakeholders to find locations for new transmission lines and substations and then file Facilities Applications with the AUC for approval. Stakeholders also have opportunities to become involved during the development of a Facilities Application and during the AUC's review of it.



A NEEDS IDENTIFICATION DOCUMENT is a formal application that the AESO files with the AUC when transmission development is needed. It explains what transmission development is needed and why it is needed.

A FACILITIES APPLICATION is a formal application that a TFO files with the AUC. TFOs use this document to propose specific locations for new transmission lines, substations and related equipment.



FAST FACT

> In Alberta's electricity industry, transmission lines, substations and other related equipment used to move power are called facilities.



> Information Centre

We will be hosting an Information Centre to speak with stakeholders about our plans.

Please join us. We would be happy to answer your questions.



Monday, April 10, 2017

Sexsmith Civic Centre

9917 – 99 Avenue, Sexsmith, Alberta

10:00 a.m. – 2:00 p.m. and

5:00 p.m. – 8:00 p.m.

> Next Steps

We will respond to any questions or comments you may have about the need for transmission development in your area. Before the proposed transmission developments can be built, the AUC must approve our NID application. Following this, ATCO must apply to the AUC for approval to build the transmission facilities.

We will apply to the AUC in spring 2017. When we submit our NID application to the AUC, it will be available on our website at:

www.aeso.ca/GrandePrairieArea

> Contact Us

We appreciate your views, both on the need for transmission system development and our proposed transmission plans. Your comments are encouraged. If you have any questions or comments regarding our proposed transmission system development in your area, or our application regarding this need, please contact:

Marina Lakhani

AESO Stakeholder Relations

Email: stakeholder.relations@aeso.ca

Phone: 1-888-866-2959

Address: 2500, 330 – 5th Avenue SW, Calgary, Alberta T2P 0L4

To learn more about the electricity industry please visit **www.aeso.ca**

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