Electric system improvements near you





Dow Fort Saskatchewan Load

You are receiving this newsletter because you are near the Dow Fort Saskatchewan Load project, and we want your input.

To connect Dow Chemical Canada's (Dow) substation Main Site BLK 80 1199S to the grid, AltaLink is proposing changes to its **transmission** system within the City of Fort Saskatchewan and Sturgeon County.

Although AltaLink's project is required to connect Dow's project, it is a separate project. Dow will consult separately on their proposed project. For more information about Dow's project, see their contact information included in this newsletter.

Project details

To connect Dow's proposed project to the grid, AltaLink is proposing to:

- build two new 240 kilovolt (kV) single-circuit transmission lines between Dow's project and AltaLink's existing substation called Lamoureux 71S
- modify existing transmission lines to accommodate the construction of the two new lines
- remove the existing D782L transmission line that is no longer in use and is not connected to the grid
- add or modify associated structures and equipment as needed
- install underground fibre optic cable and optical ground wire



ANTICIPATED PROJECT SCHEDULE



Although we attempt to follow the anticipated project schedule it is subject to change. We will continue to provide you with updated schedule information if required as the project progresses.

DEFINITIONS:

Transmission | *Transmission lines* are Alberta's electric highway, linking the places where power is generated to where power is used. Transmission lines transport large amounts of power over long distances across the province. The transmission system connects diverse sources of generation.

Kilovolt (kV) | A kilovolt is equal to one thousand volts and is commonly used when describing transmission and distribution lines. AltaLink's transmission lines range from 69 kV (69,000 volts) to 500 kV (500,000 volts). Light bulbs typically range from 120 to 300 volts.

Circuit | *A circuit is three wires.* Transmission line structures can be single or double circuit, and this affects how much electricity the structure carries. Single circuit transmission lines have three wires strung along the structures. A double circuit transmission line has six wires and carries double the amount of electricity.

Substation | *Substations are the* connection points between power lines of varying voltages and contain *equipment that controls and protects* the flow of power. Substations include transformers that step down and step up the voltage so power can be transmitted through transmission lines or distributed to your community through distribution lines.

Fibre optic cable | Fibre optic cable allows us to communicate effectively between a customer connection point or substation and our control centre and provides valuable data that will be used to maintain the reliability of Alberta's electric system.

New transmission lines

The two new 240 kV single-circuit transmission lines will each be approximately 3.5 kilometres long depending on the final route selected. The maps within this package outline three preliminary proposed route options. Only one of the three proposed routes will be selected for construction based on additional engineering and stakeholder consultation.

All three route options may require a combination of the following structures:



Above: Self-supporting steel poles will be used to anchor the ends or corners of the new transmission lines. These poles will be between 28 to 40 metres tall.



Above: Steel single monopole structures will be used throughout the new transmission lines. These monopoles will be between 25 to 32 metres tall.



Above: Steel H-Frame structures on the new transmission lines will be between 26 to 32 metres tall.

A right-of-way of approximately 25-70 metres will be required. Where the transmission lines cross the North Saskatchewan River, a right-of-way of up to 90 metres will be required. Right-of-ways will be located on a combination of private and crown land. AltaLink will contact all affected right-of-way stakeholders to discuss access agreements.

Transmission line and equipment modifications

To accommodate the two new transmission lines, AltaLink is proposing to modify its existing 920L and 921L transmission lines by:

- replacing one steel double-circuit lattice structure that connects the 920L and 921L lines to the existing Lamoureux substation with two new single-circuit monopole structures made of steel
 - o replacement structures will be between 28 to 40 metres tall, which is similar to the height of the existing structures

AltaLink is also proposing to:

- remove the existing 782L transmission line in order to reuse the alignment for the construction of the new transmission lines
- add or modify associated structures and equipment within the existing Lamoureux substation as needed
 - o all substation modifications will take place inside the existing substation fenceline

Fibre optic cable and optical ground wire

AltaLink will install up to 30 metres of underground fibre optic cable between the Dow substation and the new transmission lines.

Optical ground wire will also be installed along the length of the two new transmission lines as required.

Providing your input

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

After our consultation and notification process is complete, we will file an application with the Alberta Utilities Commission (AUC).

We will notify stakeholders when we file the application and again once the AUC has reached a decision about the project. To learn more about the AUC process and how you can become involved, please refer to the brochure included in this package titled Participating in the AUC's independent review process to consider facility applications.



DID YOU KNOW? With more than 13,300 kilometres of transmission line and 311 substations, AltaLink is Alberta's largest regulated electricity transmission provider. Millions of Albertans count on us for the energy that powers their lives.



The steel double-circuit lattice structure on the 920/921L (above) will be replaced with two new single-circuit monopoles made of steel (below).



DEFINITIONS CONTINUED:

Optical ground wire | *This* equipment provides lightning protection and is part of a telecommunication network that allows AltaLink to monitor, control, protect, and restore the electric system.

Right-of-way | *The right-of-way* is a strip of land required for the construction and safe operation of a transmission line. A right-ofway refers to the physical space a transmission line encompasses including areas on either side of the *line. The majority of the right-of-way* can still be used by the landowner. Buildings cannot be placed on the right-of-way, but can be built up to the edge of the right-of-way.



Electric and Magnetic Fields (EMF)

AltaLink recognizes that people may have concerns about exposure to EMF and we take those concerns seriously.

Everyone in our society is exposed to power frequency EMF from many sources, including:

- power lines and other electrical facilities
- electrical appliances in your home
- building wiring

National and international organizations such as Health Canada and the World Health Organization (WHO) have been conducting and reviewing research on exposure to EMF for more than 40 years. Based on this research, these agencies have not recommended that the general public needs to take steps to limit their everyday exposure to EMF from high voltage transmission lines, including individuals that are located on the edge of a power line right-of-way.

If you have any questions about EMF, please contact us.

Website: www.altalink.ca/emf Email: emfdialogue@altalink.ca Toll-free phone number: 1-866-451-7817

INCLUDED IN THIS INFORMATION PACKAGE:

- Project maps
- AUC brochure: Participating in the AUC's independent review process to consider facility applications
- AESO need overview

Contact us

To learn more about the proposed project please contact:

ALTALINK 1-877-267-1453 (toll free) E-mail: stakeholderrelations@altalink.ca

To subscribe to this project:

visit www.altalink.ca/projects, search for the project title, and click 'subscribe to updates'

For more information about how AltaLink protects your personal information: visit our website at www.altalink.ca/privacy or contact us directly via e-mail privacy@altalink.ca or phone at 1-877-267-6760.

To learn more about the Dow Chemical Canada project, please contact:

Email: canada@dow.com Phone: 780-992-2894

To learn more about Alberta's electric system and the need for the project, please contact:

Alberta Electric System Operator 1-888-866-2959 (toll-free) Email: stakeholder.relations@aeso.ca Website: www.altalink.ca/projects

The AESO is an independent, notfor-profit organization responsible for the safe, reliable, and economic planning and operation of the provincial transmission grid. For more information about why this project is needed, please refer to the AESO's Need Overview included with this package or visit www. aeso.ca. If you have any questions or concerns about the need for this project or the proposed transmission development to meet the need you may contact the AESO directly. You can make your questions or concerns known to a transmission facility owner 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.

Let's talk transmission

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