



talk about major transmission projects

August 2010

Edmonton to Calgary

The existing transmission system to deliver power from the Edmonton to Calgary areas relies on six 240 kV transmission lines in the Edmonton to Red Deer area and seven 240 kV lines between Red Deer and Calgary.

Load growth in southern and central Alberta is stressing the existing system such that capacity will fall short of reliability requirements if not reinforced.

Two 500 kV high voltage direct current (HVDC) lines from the Edmonton area to the Calgary, and south regions are planned.

HVDC technology was chosen based on input from Albertans to think long term and avoid having to come back to people about multiple smaller capacity lines.

HVDC lines require smaller transmission towers to be built, minimize land-use impacts, maximize efficiencies of rights-of-way and meet the long-term capacity required.

Western Alberta Transmission Line

A number of potential routes are being considered for this project, which would run between the Genesee and Langdon areas, by AltaLink, the transmission facility owner.

AltaLink is currently conducting open houses, information centres and one-on-one consultation. After considering all the input received through the consultation process, AltaLink will identify a preferred and alternate route and apply to the Alberta Utilities Commission (AUC) for approval.

An application to the AUC is expected by the end of 2010 or early 2011.

Eastern Alberta HVDC Transmission Project
ATCO Electric, the transmission facility owner for this project is considering a number of potential routes for this line.

Consultations with landowners, communities and other parties that could be impacted by the project are currently being undertaken.

After considering all the input received through the consultation process, ATCO Electric will identify a preferred and alternate route and apply to the AUC for approval. An application to the AUC is expected by the end of 2010.

Heartland and Fort McMurray

The oils and industry is expected to continue its growth and is the primary driver of the need for new electricity infrastructure development in the northeastern part of Alberta.

Although recent forecasts show slightly lower growth in oil sands and upgrading in the short term, expectations of long term growth remain robust and underline the continued need for critical infrastructure projects in the Heartland and Fort McMurray area.

One 500 kV double circuit AC line from the Edmonton area into the Industrial Heartland area is planned, and two 500 kV AC lines from the Wabamun Lake/Edmonton and Heartland areas to the Fort McMurray area are planned.



talk about major transmission projects

Heartland Transmission Project

The two transmission facility owners involved in the Heartland Transmission Project are AltaLink and EPCOR.

On January 6, 2010, the Heartland project team announced that the east Transportation Utilities Corridor had been selected as the preferred option for this line.

An alternate route, the west route that passes east of Spruce Grove, to the west and north of Morinville, has also been selected. An application to the AUC is expected in fall 2010.

Fort McMurray

The oil sands industry is expected to continue its growth and is the primary driver of the need for new critical transmission infrastructure in the northeastern part of Alberta.

The specific facilities being recommended to meet needs in this area are a 500 kV AC line from the Genesee generating station west of Edmonton to a new 500 kV substation in the Fort McMurray area, and a 500 kV AC line from the new Heartland substation

to the new Fort McMurray 500 kV substation. This project will be the first to be opened to a competitive procurement process currently being designed by the Alberta Electric System Operator.

The project will be constructed in 3 stages. The first stage will be completed by 2017 and the subsequent stages will follow.

Southern Alberta Transmission Reinforcement

The south region is currently Alberta's primary wind power generation area. There is insufficient capability in the region's transmission system to meet the needs of new wind generation projects.

Substantial improvements are required, including multiple new 240 kV and/or 500 kV transmission system loops and substations and upgrading of existing transmission infrastructure.

The need for the Southern Alberta Transmission Reinforcement was approved by the AUC on September 8, 2009. It will consist of thirteen separate projects to be built between 2011 and 2015.