

Eastern Alberta DC Transmission Line



Newell Converter Station Update: Minor Site and Route Adjustments

September 16, 2011

Project Overview

ATCO Electric is planning to build a 500 kilovolt (kV), direct current (DC) transmission line between the Gibbons-Redwater area northeast of Edmonton and the Brooks area southeast of Calgary. The project includes a converter station at each end to convert power from alternating current (AC) to DC, and AC transmission lines to connect the project to the rest of the transmission system.

The facilities at the south end of the project include:

- The **Newell converter station**;
- Two **240 kV AC double-circuit transmission lines** from the Newell converter station to existing and proposed 240 kV transmission lines southwest of Brooks;
- The south terminus of the **500 kV DC transmission line** from the Heathfield converter station near Gibbons.

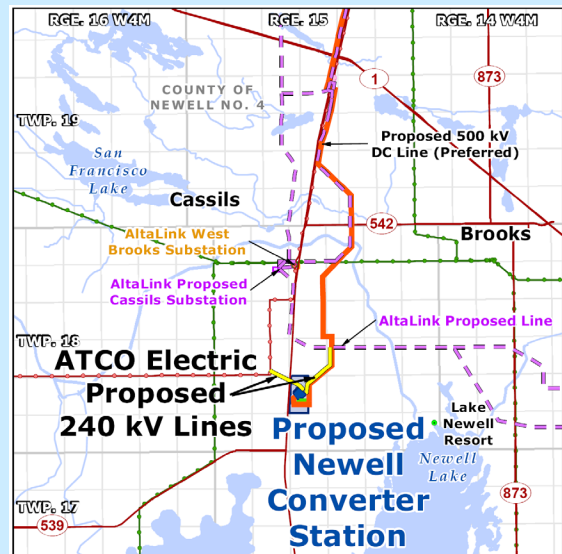
What's Changed

Since filing details of the project with the Alberta Utilities Commission (AUC) in March 2011, the converter station design has progressed, resulting in some minor changes, including the following:

- The converter station fenced area is shifted about 100 metres north, is rotated to better fit the site, and now includes an additional 4 hectares for a storage and laydown area.
- The proposed 240 kV AC transmission line northwest of the station is shifted up to 250 metres north, to align with the converter station adjustments.
- The proposed 500 kV DC transmission line route extends about 200 metres farther south and west, and is about 600 metres longer in total (mostly on the converter station property), in order to align with the converter station adjustments.

Why are you receiving this information?

Property that you own or have an interest in is located within two kilometres of the proposed Newell converter station site. ATCO Electric wishes to share information about some minor site and transmission line route adjustments, prior to filing these changes with the AUC by September 30, 2011. The enclosed maps show the proposed site and routes as adjusted.



Questions or concerns? Contact us.

Use the enclosed Reply Form to share your comments and questions, or contact us at:

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Newell Converter Station 2075S

The proposed converter station site is located at Section 9, Township 18, Range 15-W4M, situated in the vicinity of existing or approved transmission lines in the County of Newell, west of Brooks.



Typical 500 kV DC Converter Station

The converter station will consist of a fenced area about 370 to 520 metres long (northwest-southeast) and about 430 metres wide, containing transformers, breakers, a converter valve hall, reactors, filters, a 71-metre telecommunications tower, an emergency/back-up generator, control buildings, and related support equipment and structures.

Noise

The converter station will be designed to meet the noise limits set by the AUC.

Back-up Generator

The converter station will include a back-up diesel generator to supply emergency power for station lighting, heating and communications. The generator will operate on rare occasions during emergencies, and for about 30 minutes once a month for testing.

The generator will have a capacity of about 1250 to 1500 kilowatts, and will include associated cabling, controls, and fuel storage tanks with appropriate spill containment features.

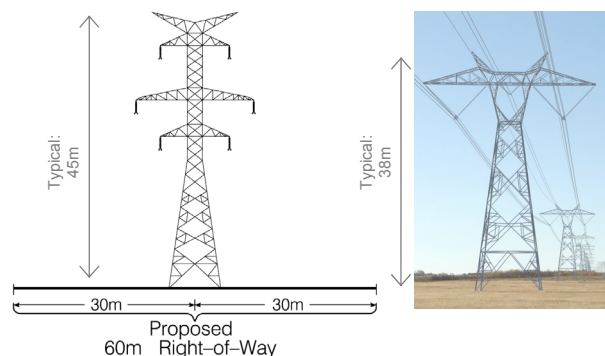


Typical Back-up Generator

240 kV AC Transmission Lines

ATCO Electric will be building two short 240 kV double-circuit transmission lines (see enclosed map) to connect the converter station with the electric grid. One new line, 923L/1087L, will extend about 1.4 kilometres to the northwest to connect with an existing AltaLink transmission line in SE 17-18-15-W4M. The other new line, 1035L/1088L, will go to the northeast for about 2.4 kilometres, to connect with AltaLink's recently-approved Cassils-Bowmanton 240 kV transmission line in NW 15-18-15-W4M.

Both of the new 240 kV lines will be strung on steel lattice towers. The routing of the line to the northwest will be as direct as possible to the connection point with the existing line. The line to the northeast will follow the routing of the proposed 500 kV DC transmission line 13L50.



Typical 240 kV AC Line

Typical 500 kV DC Line

Regulatory Process

ATCO Electric plans to file the minor adjustments with the AUC by September 30, 2011, as part of Application No. 1607153, Proceeding ID No. 1069. The AUC has scheduled a Public Hearing to commence on January 16, 2012.

For more information on how you can participate in the application process, please refer to the enclosed AUC brochure, or visit the AUC website, www.auc.ab.ca.