

Eastern Alberta DC Transmission Line



Heathfield 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 north end of the project include:

- The **Heathfield converter station**;
- A **500 kV AC double-circuit transmission line** from the Heathfield converter station to the proposed Heartland substation;
- The north terminus of the **500 kV DC transmission line** from the Newell converter station near Brooks.

What's Changed

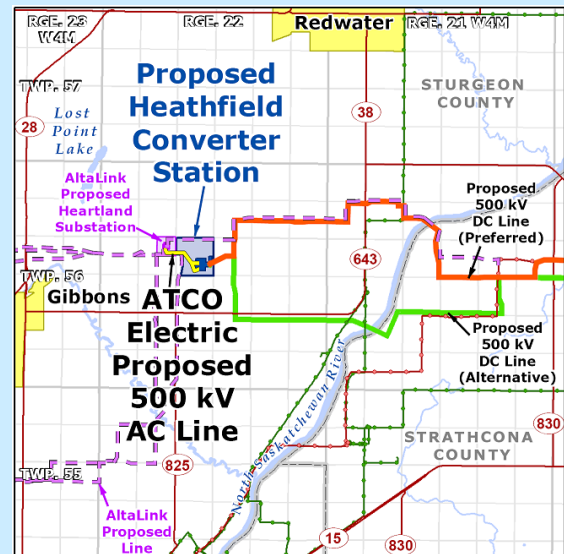
Since filing details of the project with the Alberta Utilities Commission (AUC) in March 2011, the converter station design has progressed, resulting in some minor changes, including:

- The converter station fenced area is shifted about 200 metres south, and is now about 5 hectares larger than before (about 29 hectares in total).
- The telecommunications tower is moved towards the southeast corner of the site.
- West and south of the station, the 500 kV AC transmission line routing is shifted to enter the station fenced area about 200 and 400 metres farther south.
- East of the station, the 500 kV DC transmission line enters the station fenced area about 150 metres farther south.

The proposed adjustments are located primarily within the converter station site property.

Why are you receiving this information?

Property that you own or have an interest in is located within two kilometres of the proposed Heathfield 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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Heathfield Converter Station 2029S

The proposed converter station site is located at Section 21, Township 56, Range 22-W4M, across the road from the Heartland substation property, in the Heartland industrial zone within Sturgeon County.



Typical 500 kV DC Converter Station

The converter station will consist of a fenced area about 430 to 630 metres wide (east-west) by 550 metres long (north-south) containing transformers, breakers, a converter valve hall, reactors, filters, an emergency/back-up generator, control buildings, and related support equipment and structures. The site will also include a 71-metre telecommunications tower, and a laydown/storage area.

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.

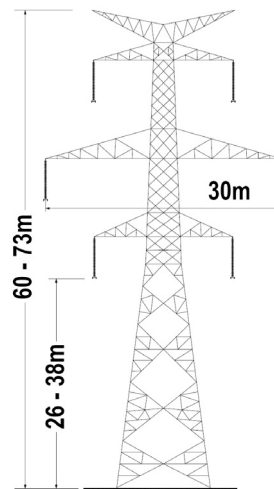
The generator will have a capacity of about 1250 to 1500 kilowatts, and will include associated cabling, controls, and fuel storage tanks with appropriate spill containment features.



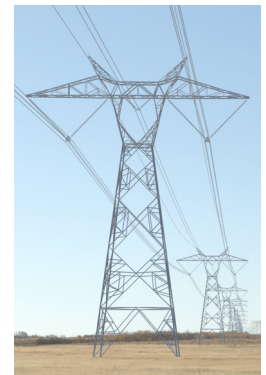
Typical Back-up Generator

500 kV AC Transmission Line 12L70/12L85

The converter station will be connected to AltaLink's proposed Heartland substation by a short 500 kV AC double-circuit transmission line (see enclosed maps). West of the converter station fence the line splits into two single-circuit lines to terminate at separate bays in the station. The line will be 1600 to 2000 metres in length, and constructed using steel lattice towers similar to those proposed for the Heartland 500 kV AC project. ATCO Electric will install between 6 and 9 structures in total. These structures will be located parallel to the Heartland structures where feasible, and located entirely on the proposed converter station site and the adjacent Heartland substation property.



Typical 500 kV AC Double Circuit 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 their website, www.auc.ab.ca.