


## Upgrading of the Transmission System in the Northeast Montréal Metropolitan Region

# 315/120/25-kV **Bélanger** Substation and 315-kV Tap Line

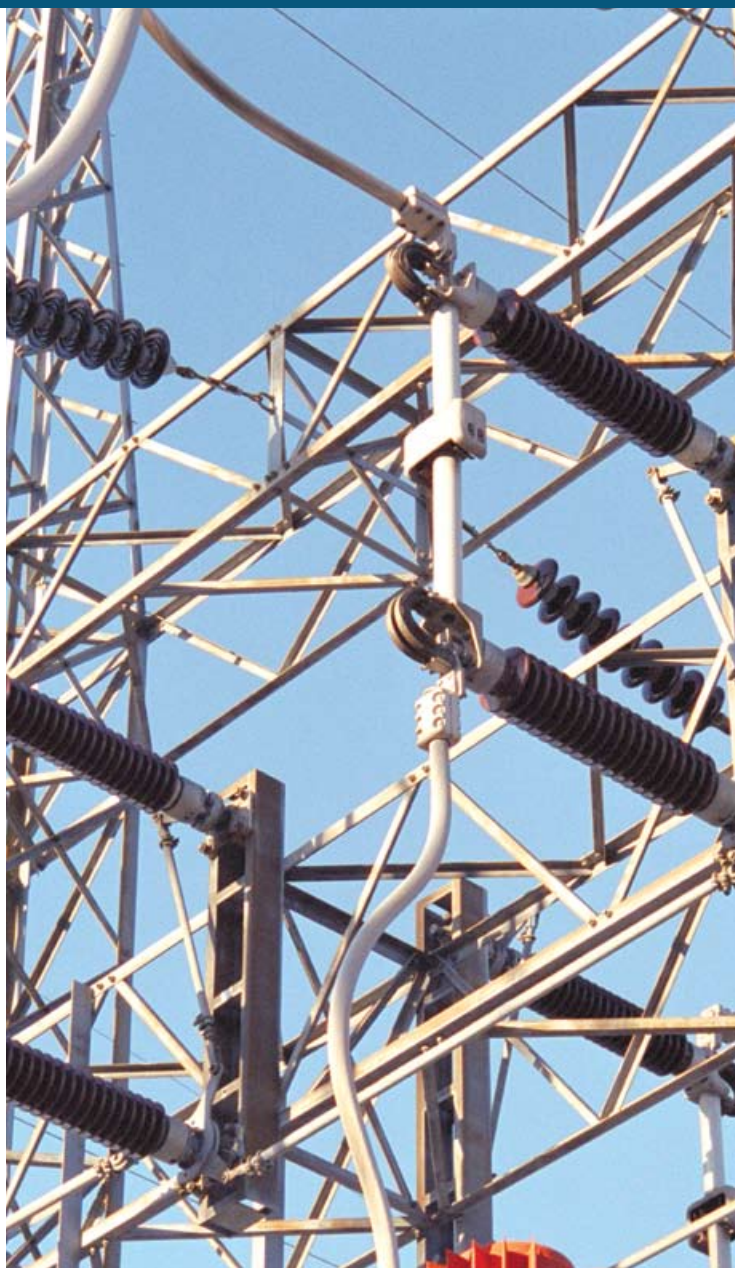
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To meet increasing demand and ensure the long-term operability of facilities, Hydro-Québec must carry out extensive work on its power system in the east end of Montréal.

The company has prepared a plan that groups together several projects, including the Bélanger substation project. Work planned includes rebuilding the substation, converting it to 315/120/25-kV and building a 315-kV line to connect it to the grid.

Hydro-Québec TransÉnergie has asked Hydro-Québec Équipement to conduct draft-design studies for all of the projects in its plan for upgrading the transmission system in the northeastern part of the Montréal metropolitan region.



# 315/120/25-kV **Bélanger** Substation and 315-kV Tap Line

## Present situation

Commissioned in 1955, Bélanger substation now supplies power to more than 43,500 customers. It is located in the east end of Montréal, at the southern edge of the borough of Saint-Léonard.

At present, Bélanger substation no longer has the capacity to meet the growth in demand. Part of its load has been transferred to neighboring substations so as to achieve an adequate redistribution of load among the various satellite substations that serve the area. However, this system is now approaching its capacity.

Furthermore, since Bélanger substation is over 50 years old, most of its major equipment must be replaced.

The 120-kV lines that supply Bélanger substation are also aging and will be unable to meet the growing demand. Therefore, Hydro-Québec must plan investments both to increase the capacity of these transmission lines and to ensure long-term operability of the system.

## Preferred solution

Hydro-Québec favors rebuilding the transformer substation and converting it to 315/120/25-kV. The substation might be kept in its current location, but other possibilities are being studied as well. Hydro-Québec will also have to construct a 315-kV line to connect the new substation to the existing 315-kV line (circuits 3017-3050) farther north. The new line will be built in the right-of-way of a 120-kV line that will be dismantled.

Rebuilding Bélanger substation is a long-term solution to the capacity and long-term operability problems associated with the existing substation. As well, it will provide additional capacity in this area, relieving neighboring substations and allowing them to meet the growing demand in their respective areas.

This project will eventually allow other 120-kV lines in the east end of Montréal to be dismantled.

## Study area

The study area for the planned 315/120/25-kV Bélanger substation and tap line covers the southwest portion of the borough of Saint-Léonard and a small part of the borough of Rosemont–La Petite-Patrie.

With the exception of the industrial zone at the northwest end, the study area is almost entirely residential.

## Environmental issues

The main environmental issues for the project are as follows:

- Noise levels around the substation
- Visual integration of the substation and the 315-kV line
- Construction of facilities in a residential neighborhood



## Project schedule

DRAFT DESIGN	
General information	Summer to fall 2009
Information and consultation	Fall 2009 to winter 2009–2010
Information on the substation site and line route selected	Spring 2010
PROJECT	
Filing of impact statement	Fall 2010
Permitting	Winter 2011–2012
Construction	Spring 2012 to fall 2014
Commissioning	Fall 2013 to fall 2014

## Environmental approach

In the coming months, Hydro-Québec Équipement will carry out engineering studies and detailed environmental inventories to identify the project's characteristics and develop a thorough understanding of its host environment.

Once these studies are completed, the project team will be able to draw up variants, which will be subjected to a comparative analysis based on environmental, technical and economic criteria, as well as community concerns. This comparison will be used to determine the variant with the least impact.

## Stakeholder participation

Hydro-Québec will set up a community relations program to maintain a dialogue throughout the studies. The company will thus be able to take the concerns and expectations expressed by the public and by key stakeholders into account so as to best adapt the project to local realities.

## For more information

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