

# 315/25-kV **Saint-Patrick** Substation

PUBLIC CONSULTATION • Winter 2013-2014

## The project

Hydro-Québec will build a new 315/25-kV transformer substation to meet increasing demand and ensure the long-term operability of its facilities, in particular Atwater substation.

The new Saint-Patrick substation will be built in the Cabot sector, an industrial zone close to Atwater substation and existing transmission lines. The project also includes reorganizing the lines to supply the new facility.

Commissioned in 1929, the 315/120/25/12-kV Atwater substation is among the oldest in Montréal. The substation has reached its peak capacity and some of its equipment must be replaced. The substation

lot is used completely and the density of the surrounding area is such that Hydro-Québec cannot carry out the necessary work on the current site.

Atwater substation is located between Avenue Atwater and Boulevard LaSalle in the borough of Verdun, east of highways 15 and 20. It supplies some 34,000 customers in the area bordered by Rue Notre-Dame, the Fleuve Saint-Laurent (St. Lawrence River), Rue de l'Église and Rue Bridge, as well as on Île des Sœurs.

Saint-Patrick substation will be able to handle the short- and long-term electricity needs of the area, in tandem with Atwater substation.







Planned substation building (preliminary simulation)

## Environmental and technical studies

During spring and summer 2013, Hydro-Québec carried out environmental inventories in the study area to better understand the host environment of the planned substation and tap line. This area covers roughly 3.65 km<sup>2</sup> and affects the Verdun and Le Sud-Ouest boroughs.

In addition, noise and visual integration studies are being undertaken to ensure that the new substation will fit into the surrounding urban environment while meeting the company's technical requirements. Landscaping and architectural fencing designs are being studied and will be adapted based on consultation results.

## Substation characteristics

The new 315/25-kV substation will be built on a vacant lot on Rue Saint-Patrick, a property close to the CN railway which Hydro-Québec will have to acquire. The main selection criteria used to select the location of Saint-Patrick substation are the following:

- Respecting current and planned land use
- Close to the existing 315-kV lines to which the substation must be connected
- Away from residential areas
- A vacant lot large enough to host the substation

Saint-Patrick substation will include a building with a footprint of 2,600 m<sup>2</sup> that will house the control room and an operations room for the 25-kV network.

In the first phase, the substation will include two high-to-medium-voltage transformers (315/25 kV), which can supply 32 25-kV distribution feeder bays from the two 315-kV circuits. Once electricity demand increases, two more transformers can be added, serving up to 64 distribution feeder bays.

## 315-kV tie line

Saint-Patrick substation will be supplied by a short line connected to two existing 315-kV lines located nearby. One bypasses Atwater substation and the other is connected to it.

Two following variants are under study:

### Variant A

A new completely overhead line, about 400-m long would be connected to both existing lines from a tower located in Parc D'Argenson. It would run along the southern part of the park and cross the CN railway, Avenue Atwater and the access ramp to highways 15 and 20 before reaching Saint-Patrick substation.

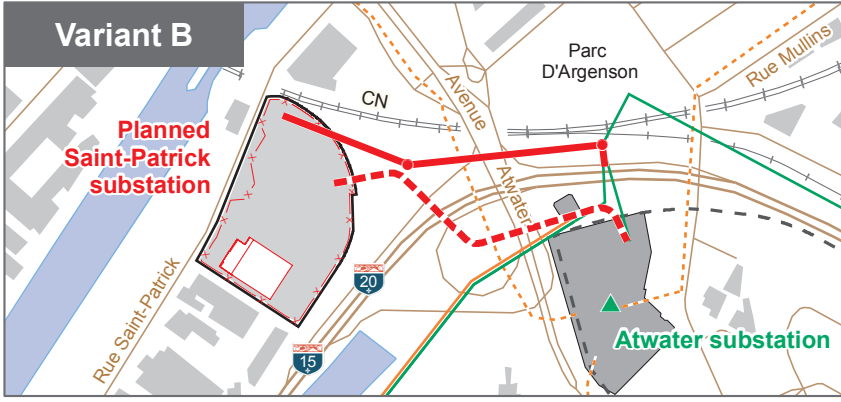
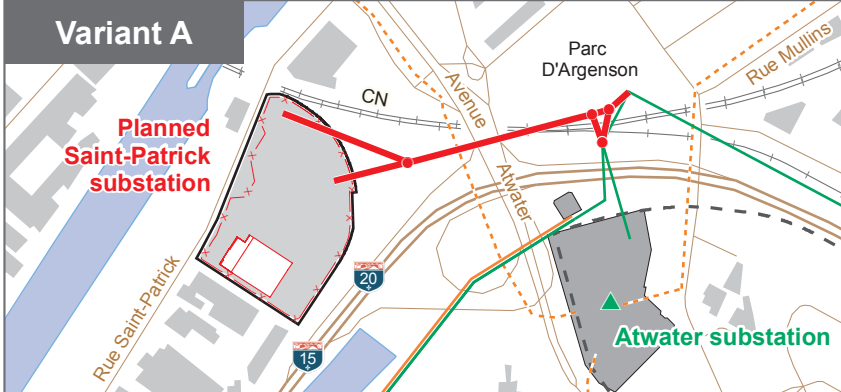
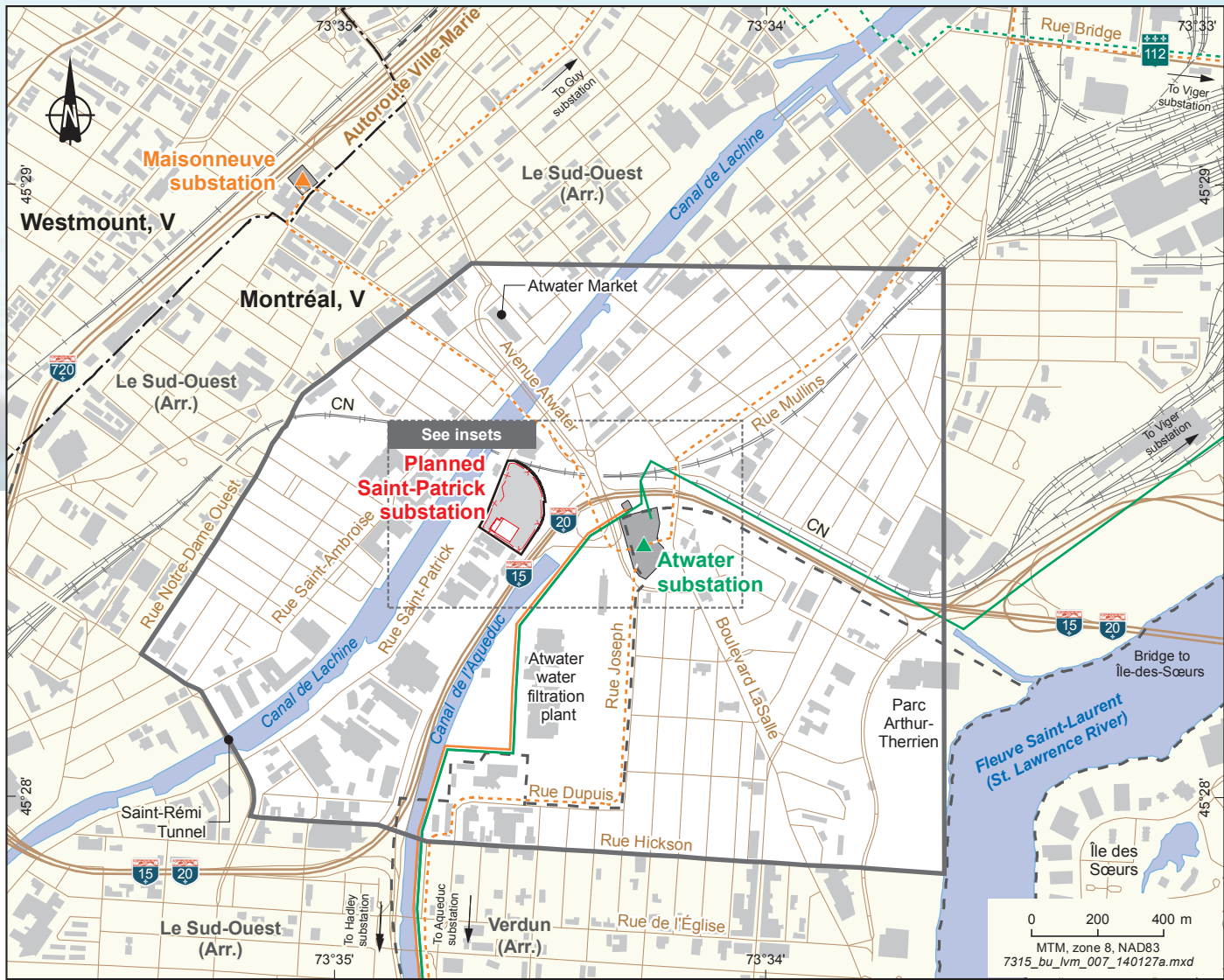
### Variant B

An overhead line segment would be built from an existing tower located between the CN railway and highways 15 and 20. This 350-m segment would run along the railway to connect the line that bypasses Atwater substation to Saint-Patrick substation.

A second line segment, less than 400-m long, would be built between Atwater and Saint-Patrick substations. It would run under Avenue Atwater and highways 15 and 20.

Hydro-Québec is proposing variant B to reduce the impact of the line, in particular in Parc D'Argenson, since this variant requires only one new tower, outside the park, instead of four. Partial undergrounding is possible because one segment can be supplied by the line connected to Atwater substation and because of the short distance between the two substations. The overhead line segment is required to connect to the second existing line.

For either variant, reduced-footprint towers, similar to those already existing, will be used.



**Project components**

- Study area
- Planned overhead tie line and tower
- Planned underground tie line
- Planned fence
- Planned building
- Location of planned substation

**Substations and power transmission lines**

- 120-kV overhead line
- 120-kV underground line
- 315-kV overhead line
- 315-kV underground line

**Boundaries**

- Municipality
- Borough



Planned substation building (preliminary simulation)

## Public participation

Hydro-Québec is implementing a communications program to open a dialogue with the community while the studies are being carried out. Citizens will be invited to make themselves heard during consultation sessions scheduled during winter 2013-2014.

Concerns and expectations expressed by the public and by key stakeholders will allow for mitigation measures to be implemented to adapt the project to local realities.

## For more information

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## Project schedule

### DRAFT DESIGN

General information	Spring 2013
Information and consultation	Fall 2013 – winter 2013-2014
Information on the solution selected	Winter 2013-2014

### PROJECT

Filing of environmental impact statement	Spring 2014
Permitting	Summer – fall 2015
Construction	2016-2019
Commissioning	2019

Ce document est également publié en français.  
This is a translation of the original French text.

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