



PROJECT NEWS

Summer 2019

Construction of 315/25-kV Patriotes substation, 315-kV supply line and 25-kV underground distribution lines

To support urban development and meet the growing needs of the municipalities of Saint-Eustache, Deux-Montagnes and Sainte-Marthe-sur-le-Lac, Hydro-Québec is building a 315/25-kilovolt (kV) substation in Saint-Eustache's industrial area, on Boulevard Albert-Mondou south of the right-of-way for the Exo commuter train.

The project is particularly important for the region because it aims to improve service and system quality in an area with high electricity demand.

The new Patriotes substation will be connected to the existing 315-kV supply line, which is situated north of Boulevard Arthur-Sauvé, by a new transmission line. The new 5-km-long line will be located entirely within the boundaries of Saint-Eustache's agricultural zone, and will also run along the west side of the Saint-Eustache speedway.

To connect customers to the new substation, new 25-kV underground distribution lines will be constructed in the three municipalities to be served: Saint-Eustache, Deux-Montagnes and Sainte-Marthe-sur-le-Lac.



Construction of substation

In anticipation of construction, geotechnical studies and other preliminary work—including excavation, compacting and earthwork—were carried out at the substation site. The next phase will consist of the construction of the civil engineering structures, including the substation building and the concrete plinths supporting the substation equipment, in addition to the transformers, which lower the voltage for distribution to customers.

Construction of supply line

The construction of the supply line will begin with laying the tower foundations. The towers will be assembled on the ground and then erected, followed by conductor unwinding. The line will be inspected before it is commissioned. Finally, site restoration work will be carried out, which includes cleaning up the work areas, levelling the ground, filling ruts, dismantling temporary access roads and reseeding the site if needed.

The line runs through an air traffic corridor, so to make it more visible, aerial warning spheres will be installed on the uppermost cable of the line along the railway until the substation.

Underground distribution lines

The civil engineering work on the underground distribution lines will be undertaken in a number of sections in Saint-Eustache, Deux-Montagnes and Sainte-Marthe-sur-le-Lac. For the most part, each of these sections will have its own timetable.

The planned work includes excavation, backfilling, and pouring concrete in the public right-of-way so that duct banks and cable vaults can be put in. It also includes drilling to install the concrete-encased ducts and site restoration.

Once the civil engineering work has been completed, Hydro-Québec will lay the cables.

Impact of work

The work on the distribution network will partially disrupt traffic, as part of the shoulder in one direction of the roads affected will be obstructed. Residences and businesses will remain accessible at all times.

A temporary increase in traffic is expected around jobsites owing to heavy vehicles hauling materials back and forth and other things, particularly on Boulevard Albert-Mondou, Boulevard Arthur-Sauvé, Chemin de la Rivière Nord and Chemin de la Rivière Sud, in Saint-Eustache. In addition, parking will be prohibited on Boulevard Albert-Mondou during the work.



Visual simulation of Patriotes substation

Construction of an underground duct



1. Excavation of the sidewalk



2. Construction of trench to hold duct bank



3. Installation of formwork for pouring concrete



4. Pouring concrete around duct bank



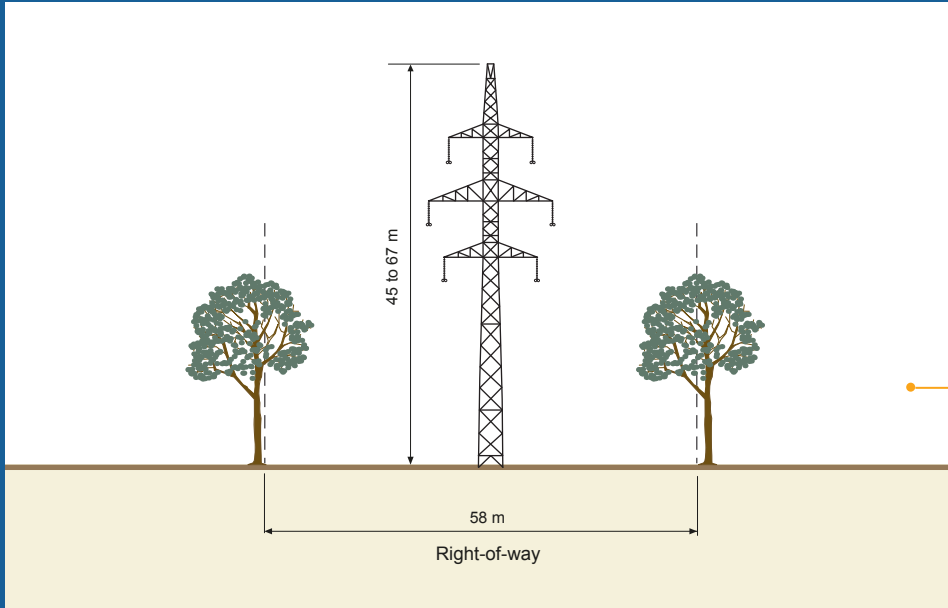
5. Backfilling and resurfacing



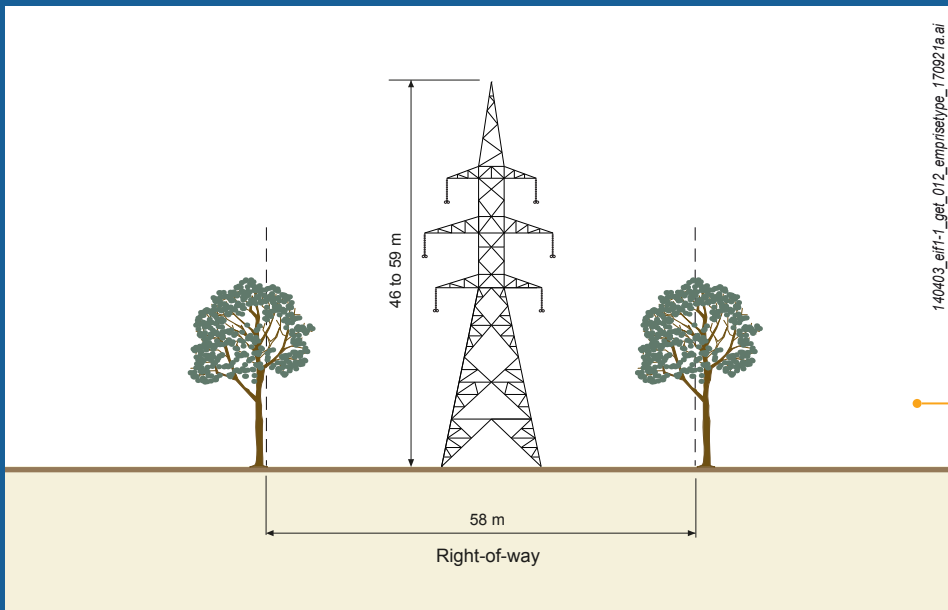
6. Installation of cable vault

Towers

Typical support structures and right-of-way for planned 315 kV line



Reduced-footprint tower



Angle tower

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Mitigation measures

Hydro-Québec is doing everything it can to minimize inconveniences for the region's residents and businesses, and is working with the municipalities concerned to find the solutions with the least impact.

- Customers directly affected by the work on the distribution network will be informed in advance.
- To ensure that the shared use of public roadways and access roads is safe, temporary road signs will be installed for all users, as well as for snowmobilers using the trail that crosses the new transmission line right-of-way next to the speedway.
- To minimize disruptions to residents, Hydro-Québec will do most of the work on the distribution network without cutting off power. If a long-term service interruption is necessary, all affected customers will be notified in advance.
- Most of the work will be carried out between 7 a.m. and 6 p.m. from Monday to Friday. Exceptionally, work may need to be done outside of these hours or on weekends to meet project deadlines or perform specific tasks.
- To reduce the impact on traffic for Autoroute 640 access roads, the work on the distribution system will be carried out at night.
- A supervisor will be present onsite to ensure that the work proceeds smoothly.
- Site restoration and clean-up will be done as the work on the distribution network reaches completion.

Preliminary project schedule

Construction of substation: earthwork and civil engineering and electrical work
Spring 2019 – Summer 2020

Construction of 315-kV supply line
Late summer 2019 – Summer 2020

Work for new 25-kV underground distribution lines

Civil engineering work

Summer 2019 – Fall 2019

- Excavation of sidewalk, street and bike path
- Construction of trench to hold duct bank
- Installation of formwork for pouring concrete
- Pouring concrete around duct bank
- Backfilling and resurfacing
- Installation of cable vault

Construction of underground power systems

Summer – Fall 2020

- Installation of 25 kV electric cables inside the ducts: cable pulling operation
- Creating joints in cable vaults

Commissioning of substation and transmission line

Summer 2020

For more information

Info-Project Line – Laurentides
1 800 465-1521, extension 6022

For detailed information about each section, see the website:
www.hydroquebec.com/projects/des-patriotes-substation/



Original text written in French.
Ce document est également publié en français.