

230-kV **New Richmond** Wind Farm Line

PROJECT NEWS • Fall 2011

To bring the output from the future New Richmond wind farm onto its transmission grid, Hydro-Québec TransÉnergie must build a 230-kV single-circuit line, 10.2 km long. This new line will connect the wind farm substation, owned by developer TransAlta, to Hydro-Québec TransÉnergie's system at Cascapédia substation.

Hydro-Québec received the necessary government approvals for line construction in summer 2011.





Construction Stages

- ▶ **Land clearing**
Clearing the right-of-way will take place from **October 2011 to January 2012**. Merchantable timber will be recovered, and branches and other plant debris burned or shredded.
- ▶ **Foundations**
The necessary excavating will use bulldozers and hydraulic shovels. Foundations will be laid once the structural steel arrives, and then excavated areas will be backfilled and surplus earth hauled to authorized sites. This stage will last from **February to May 2012**, during which time trucks and tracked vehicles carrying concrete and earth will travel about the site.
- ▶ **Assembling and erecting towers**
Tower components will be assembled on the ground. A telescopic crane will then be used to erect the towers between **March and April 2012**.
- ▶ **Conductor stringing**
Conductors and an overhead ground wire will be located atop the towers, protecting them from lightning. They will be unrolled using mechanical traction to avoid having them slide on the ground. A counterpoise made of galvanized steel wire will be buried to ensure grounding. Stringing will last from **March to May 2012**.
- ▶ **Inspection**
During the work, Hydro-Québec inspectors will verify that technical standards and environmental clauses are followed. At the end of the work, before the crews are authorized to leave the site, Hydro-Québec will conduct a final inspection to ensure that all aspects of the project meet the current standards. Inspections will be carried out continuously throughout construction, from **February to May 2012**.
- ▶ **Restoring the land**
Once the work is completed, Hydro-Québec will restore the land by recycling surplus material, levelling the ground, restoring surface drainage and, if required, decompacting the soil. Temporary installations like project bridges will be removed during this final stage. On private lands, a company representative will inspect the site with the owner to ensure that the restoration work meets expectations. This activity will take place in **May 2012**.

The line is scheduled for commissioning in **August 2012**.

Impacts and mitigation measures

Building new facilities inevitably leads to environmental impacts. To minimize such impacts, Hydro-Québec implements a range of mitigation measures. It sites towers carefully to minimize the visual impact of lines, and to avoid interfering with present and planned activities in the area crossed. Hydro-Québec grants affected landowners compensation under the *Agreement on the Siting of Power Transmission Lines on Farms and in Woodlands*. The company also applies the mitigation measures specified in the Agreement, particularly regarding stream crossings, noise and the movement of construction machinery, as well as the protection and restoration of land and roadways.

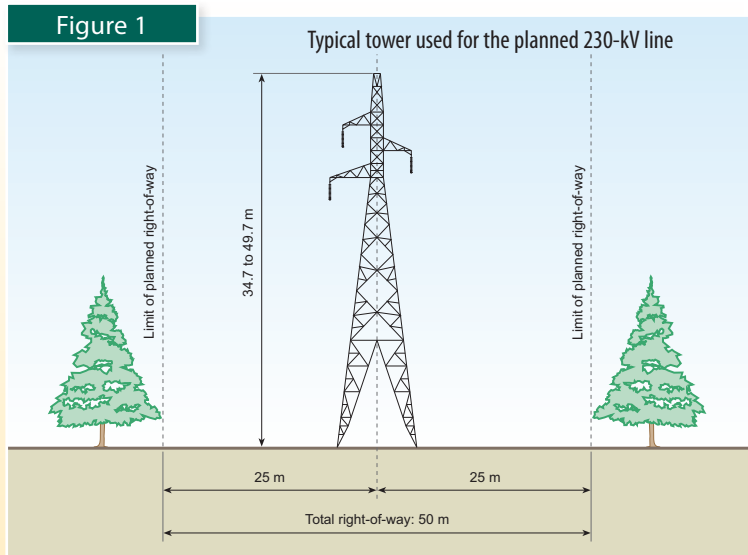
Environmental monitoring

Hydro-Québec will monitor environmental compliance during construction operations. The company has also ensured that the tender documents, plans and specifications include the following:

- All environmental standards, directives and measures indicated in its environmental assessment
- All requirements specified in the government authorization certificate
- All requirements set forth by the parties consulted and accepted by Hydro-Québec.

An environmental compliance officer is present on the jobsite to ensure that Hydro-Québec's mitigation measures are implemented. When the work is completed, the company will review all the measures deployed and ensure that the site is restored.





Technical characteristics

The 230-kV New Richmond wind farm line, a single-circuit line, crosses densely wooded areas. Hydro-Québec will use lattice towers and the right-of-way will be 50 m wide (see Figure 1). For sections of the planned line that run alongside existing lines, Hydro-Québec must acquire a 15-m servitude to expand the right-of-way (see Figure 2).

Clearing, however, will have to be done on 23 m, as an 8-m wide portion of the Hydro-Québec servitude (on the north side) was never cleared.

For more information

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You may also write to:

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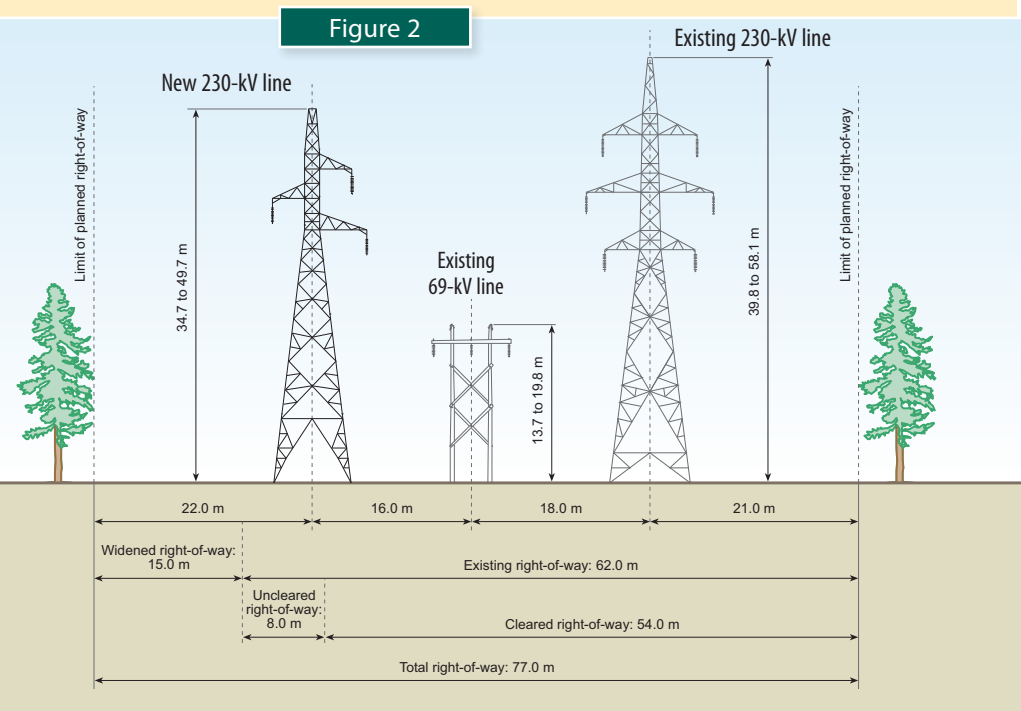
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Logistics

This project should cause neither automobile traffic disruption, nor interruption of service.