



Canadian main office in Pointe-Claire

# Canada

## A hydropower market with long tradition

**Due to its geography and climate, electricity production from hydropower has a long tradition in Canada.**

The first Canadian hydropower station was installed at Chaudière Falls in Ottawa in 1881. Since that time more than 74 GW of hydroelectric capacity has been installed. This ranks Canada globally fourth in installed hydroelectric capacity and third in terms of energy generation with some 370 TWh a year. Hydropower supplies 60% of Canada's electricity generation and the province of Québec leads by generating over 96% of its electricity from hydroelectric facilities (36 GW installed).

Still, considerable further potential exists and the opportunity to more than double the installed hydropower capacity remains. Some 163 GW of technically feasible potential exists, of which around 25 GW are in various stages of planning, approval, construc-

tion or have recently been completed. Major hydroelectric projects underway in Canada include: HPP Mica units #5 and #6 (1,040 MW), HPP Muskrat Falls (806 MW), HPP Lower Mattagami (440 MW), HPP La Romaine 3 and 4 (640 MW), HPP Keeyask (695 MW), and HPP Site C (1,100 MW).

In the market of small hydropower there are active developments from independent power producers of approximately 100 MW per year. Canada is, of course, also a vibrant market for the service and rehabilitation of older facilities.

Coil shop inauguration in Peterborough, Ontario



### ANDRITZ HYDRO in Canada

ANDRITZ HYDRO in Canada is a “full liner” with staff and experience for the complete life cycle of hydroelectric generating equipment. This expertise and know-how extends from research and development up to full engineering, sourcing, installation, commissioning, and servicing of both turbines and generators. This enables us to fully serve our market for large new units, smaller compact hydro units including automation as well as for the service and rehabilitation of existing plants.

ANDRITZ HYDRO is the original equipment manufacturer of over 40% of the installed turbines and generators in Canada and has been present in the country since 1980. Its major development occurred with the acquisition of the assets of GE Hydro in 2008.

Lower Mattagami hydropower plant



s Delivery of 520 MW runner for unit #5 at HPP Mica in British Columbia

Currently a team of 400 employees works at ANDRITZ HYDRO in Canada.

The Canadian head office and turbine technology center is situated in Montréal in southeastern Canada.

The hydraulic turbine test lab facility with two test rigs is central to the ongoing research and development (R&D) program for both new turbines and turbine upgrade applications. Generator engineering is centered in Peterborough, Ontario, about 110 km from Toronto, where a new generator coil winding manufacturing and insulation R&D facility was added in 2013.

Also located near Montréal, in Chambly, Québec, is an electrical power systems

engineering and manufacturing facility of ANDRITZ HYDRO Automation. This manufacturing facility specializes in the supply of excitation, governor and automation systems for hydroelectric developments.

Our Canadian footprint has recently grown this year with the establishment of ANDRITZ HYDRO AFI to serve the market for hydraulic gates and systems of all types. Located in Paris, Ontario, the company was established via the acquisition of the assets of an existing gate manufacturing company.

Our sales and project office in Vancouver in British Columbia in southwestern Canada, is supporting our western customers and is especially active in our

Compact Hydro and an expanding Automation business area.

ANDRITZ HYDRO Canada had been successful in all business units, increasing its market share and gaining visibility as the market leader.

#### Current projects

Currently, ANDRITZ HYDRO is supplying two 520 MW Francis turbines and generators for BC Hydro's Mica hydro-power plant in British Columbia as well as equipping Ontario Power Generation's Lower Mattagami River Project in Ontario with three 70 MW propeller units.

So far, our largest contract was signed with Nalcor Energy for HPP Muskrat Falls, Labrador, in December 2012, followed by a further contract for the powerhouse and spillway gates in December 2013 (Hydro News 25). ANDRITZ HYDRO will supply the hydro-power plant with four 209 MW Kaplan turbines and generators.

ANDRITZ HYDRO won all projects against strong competition with proven performance in our hydraulic test laboratory.

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