Alstom in Canada

Over 70 years of contribution to Canada’s electricity and rail infrastructure needs

Alstom’s Presence

- Close to 2,000 employees
- Power: Global Technology Centre in Sustainable Hydro, as well as manufacturing facilities in Sorel-Tracy, QC
- Transport: Centre of Excellence for multi-modal passenger information and security solutions for Transport in Ville Saint-Laurent, QC
- Grid: Manufacturing production sites in La Prairie and Saint-Jean-sur-Richelieu, QC
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Corporate Social Responsibility

Our commitment to the health and safety of our employees and people working on our sites or under our management is a keystone of our sustainability goals. In addition, achieving high levels of pro-active health and safety standards contributes to customer satisfaction, business results and employee motivation. Anywhere Alstom operates, this policy seeks to:

- Prevent workplace injuries and illnesses
- Improve the working conditions and well-being at work

All managers are responsible for ensuring that Alstom’s health and safety policy is communicated, understood, implemented and maintained throughout the company. We take our commitment to people so seriously that we’ve set up an health and safety roadmap which assesses a wide range of areas to improve our operations:

- Leadership site security
- Training
- Contractor management
- Management of highly hazardous activities

Designed to control risk management and reduce injuries throughout its operations, Alstom launched a Zero Deviation programme to focus on high-risk activities and to protect all our employees and contractors worldwide from the risks they may face when working for Alstom in a factory, a project and/or a construction site.

Alstom maintains and develops a pro-active environment, health and safety culture throughout the Group. Each Alstom business is responsible for implementing programmes and training to achieve best EHS practices. To limit the environmental impacts of Alstom’s activities, the Group has adopted a set of four main targets for reductions by 2015: energy and water consumption, waste management and airborne emissions. Using the services of an organization called Tree Canada Foundation, which provides education, technical assistance, resources and financial support to encourage the planting and care of trees, Alstom Power Thermal Services Canada tracks how much paper it uses in a given year to convert that amount to how many trees were consumed and thus raise funds. Each tree can generate approximately 8,333.3 pieces of 8 x 11” paper. Using a 7x consumption factor, Thermal Services sponsors Tree Canada Foundation the equivalent value to enable them to plant young trees in reforestation projects across Canada.

Other initiatives include contributions to the Slave Lake Regional Library Board, United Way Fundraising campaign, Veteran’s Food Bank, Interfaith Food Bank, Ottawa Regional Cancer Society, Make-A-Wish Foundation Canada, Canadian Breast Cancer Foundation and the Christmas Exchange.

Power

In Canada, 27% of the power generation installed base (129 GW) and 28% of hydro installed base is Alstom supplied (71 GW). Alstom Power is leading Canada’s clean energy future by providing technologies and equipment for all major fuel sources. Key customers include BC Hydro, EPCOR, SaskPower, TransAlta, Manitoba Hydro, Ontario Power Generation, and Hydro-Québec.

Hydro

2012, Hydro-Québec, Beauharnois generating facility

- Design, produce and deliver one new 47 MW Francis turbine runner for unit C-1, and 6 upgraded propeller runners for unit C-3 (5 runners awarded in 2012 and 1 awarded in 2010).

2012, Manitoba Hydro, Pointe du Bois Spillway replacement project

- Design and supply of new gates and hoists for the new spillway facilities.

2012, Hydro-Québec, Robert-Bourassa generating facility

- Design, manufacture and delivery of 4 x 333 MW Francis turbine runners, as well as supply of new components (ring gate, distributor, servomotors and turbine shaft) for unit 1, refurbishment of existing components for units 2 and 3 and replacement of 16 electronic governor systems.

2010, Hydro-Québec, La Romaine 2

- 2 x 320 MW turbine/generator units for one of the four powerhouses of the La Romaine 1,550 MW hydroelectric complex.

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2010, Kiewit Alarie Partnership, Smoky Falls
- Design and supply three new turbine/generator units, including propeller turbines, vertical generators, static excitation systems, speed governor systems, and protection and control systems. Alstom will provide a complete turnkey package, including installation and commissioning of the units at the new Smoky Falls Generating Station that will replace the existing station.

2009, SaskPower, Island Falls
- 3 x 20 MW turbine/generator upgrade project for the Island Falls hydroelectric station.

2008, Rio Tinto Alcan, Shipshaw
- Design, supply, supervision, erection and commissioning of one new unit, a Francis turbine/generator unit of 257 MVA and speed governor.

Services

2012, Ontario Power Generation, Darlington Nuclear power plant
- €265 million Refurbishment of four (4) steam turbines and generators units, and associated auxiliary equipment.

2009, Ontario Power Generation, Nanticoke plant
- A 4-month turnaround - rather than the average 8-12 months - enabled Unit 6 to come back on-line before peak energy season.

Steam turbines

2010, Northland Power, North Battleford
- Heat recovery steam generator, steam turbine, generator and controls; to increase the plant output another 89.6 MW in the unfired condition and 99.6 MW in the fired condition.

Wind

2013, NaturEner, Wild Rose projects
- Agreement for the supply of 138 ECO 110 3.0 MW wind turbines, and 10 years of maintenance services.

Transport

Alstom has had a long history in the Canadian rail industry, whether remanufacturing and rebuilding subway, commuter cars, locomotives and other rolling stock, or offering a complete range of systems, equipment and services, addressing customer needs and growth for local freight and passenger rail transportation market. Customers, past and present, both local and international, include Canadian National Railway, GE Railcar, the US Army, VIA Rail Canada Inc., Dallas Area Rapid Transit Authority, Trenitalia and SNCF.

Turnkey systems: Alstom is the only builder to master all the activities of a rail system both for tramway projects and metros, and for main lines or very high-speed lines. It therefore possesses all the expertise and resources needed to implement a turnkey solution.

2013, Rideau Transit Group Consortium, Ottawa Light Rapid Transit
- Contract to provide 34 light rail vehicles and 30 years of maintenance services to the Rideau Transit Group (RTG) consortium that was selected to design, build, finance, and maintain the first line of the Ottawa Light Rapid Transit system worth over €1.5 billion (CAD$2.1 billion Canadian)(Alstom’s portion of the contract is worth approximately €400 million). With this contract, Alstom launches the new Citadis Spirit, a light rail vehicle for the North American market.

2011, Toronto Transit Commission (TTC)
- In a consortium with Rail Cantech, Alstom will supply the track work for the Ashbridges Bay Storage and Maintenance Facility, which will accommodate 204 new light rail vehicles.

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Rolling Stock: Alstom plays a significant role in the manufacture and overhaul of rolling stock for all North American railroads and commuter authorities. In 1996, Alstom purchased the main shop of Canadian National Railways in Montreal and manufactured 750 new special purpose flat cars for the US Army.

2012, City of Ottawa
  
  - Alstom will provide 34 light rail vehicles and 30 years of maintenance services to the Rideau Transit Group consortium that was selected to design, build, finance, and maintain the first line of the Ottawa Light Rapid Transit system, worth approximately €400 million. The light vehicle, the new Citadis Spirit will feature: high capacity, able to operate in extreme winter conditions; able to operate at a top speed of 100 km/hour; full low-floor accessibility, and on-board bicycle storage.

2011, OC Transpo
  
  - Supply of six new diesel multi-unit (DMU) train sets, called Coradia Lint. The new DMUs will be delivered in May 2013.

2010, Société de transport de Montréal (STM)
  
  - CAD$1.2 billion contract with STM for 52 nine-car train sets (468 cars) for the Montreal metro system. Bombardier Transportation is consortium partner.
  - New features for passengers ensuring maximum space & safety; new design will increase reliability.
  - Proven propulsion and traction system technologies, as well as environmentally friendly technologies such as the well-known wooden shoe braking system.

1999, Agence métropolitaine de transport
  
  - Return to service of 36 steel single-level passenger cars; various mechanical and electrical repairs.

Transport Information Systems: Alstom’s Centre of Excellence is located in the Saint-Laurent borough of Montreal, Quebec. It provides Alstom locations globally with the world’s most advanced passenger information, safety, communication and entertainment systems for rolling stock, station and trackside applications.

2012, Société de transport de Montréal (STM)
  
  - Five-year maintenance contract awarded for the STM’s control centre.

2009, Toronto Transit Commission
  
  - CAD$56.2M contract to re-signal the Yonge-University-Spadina Line in lieu of building an entire new system, adding another 15-20 years of life.
  - Alstom’s Communication Based Train Control System (CBTC), Urbalis™, chosen to allow for operation that is more efficient and makes it possible to increase train frequency and transport capacity.

2003, Société de transport de Montréal (STM)
  
  - A new, innovative software program for operations & management was integrated with ATS and SCADA functions in an Alstom ICONIS control centre system to replace the STM’s control centre, integrating supervision of fixed equipment, traffic supervision and communications control. The system was commissioned in 2012.
Alstom provides leading industrial expertise in Canada for circuit breakers, disconnectors, and substation automation. It a leader in Canada for power transformers up to 100 MVA and a major Canadian supplier of Static Var Compensator (SVC) solutions, including the world’s first High Voltage, Direct Current (HVDC)-based de-icing voltage controller that can switch between SVC & de-icer as needed. Grid has a number of connector substation successes in Canadian wind integration projects, as well as electrical conversion substations for aluminium smelters.

In 2012, Alstom signed a memorandum of understanding for a Smart Grid Technology Innovation Partnership and Research Agreement with the research arm of Hydro-Québec, the Institut de recherche d’Hydro-Québec. The two companies will collaborate in three specific Smart Grid fields of collaboration: Wide Area Monitoring & Control Systems (WAMCS), the integration of Alstom Grid’s VSC control system with Hydro-Québec’s Hypersim platform, as well as Asset Condition Monitoring towards the Digital Substation.

In December 2013, Alstom closed the acquisition of ASAT Solutions Inc., a Calgary, Alberta based substation automation solutions provider specializing in managing, securing, and delivering substation information for utility operation, maintenance and asset management applications. The ASAT products will complement Alstom Grid’s MiCOM protection relays range and extend the offering of the DS Agile digital control systems, one of the most successful substation automation solutions on the market.

2013, Hydro-Québec, Figuery substation
- Contract for the design, supply and installation of a new 315 kV Static VAR Compensator (SVC).

2012, NALCOR, Churchill Falls equipment replacement
- Frame contract (10 years) for the replacement of equipment at the Churchill Falls power plant switchyard.

2011, ATCO Electric, McNeil
- Replacement of two control systems at the McNeil Converter station.

2011, Manitoba Hydro converter transformers
- Supply of 550 kV HVDC converter transformers

2010, ATCO Electric, Lainfine SVC station
- Design and supply of one SVC -100/+200 MVAR.

2009, Manitoba Hydro, Riel station
- Design and supply of 500 kV/230 kV transmission substation.

2009, Hydro-Québec
- Five-year partnership agreement in the field of power transformers of less than 100 MVA that covers the provision of new equipment, technical support and after-sales service, administrative processes and joint research and development projects, with option to extend the contract an additional five years at the end of the original five years.

2009, Hydro-Québec, Jacques-Cartier
- Design and supply of the series compensation platforms at 800 kV.

2008, HydroOne, Porcupine SVC project
- Design and supply of a 300 MVAR SVC System complete with civil works.

2007, Rio Tinto Alcan, Jonquière aluminium plant
- Supply of electrical substation including 161 kV AIS/GIS, cables, pot line and process loops conversion units, compensation and filtering bank.

2007, ATCO Electric, SVC projects
- Design and supply of SVC systems with civil works at four locations (Cranberry Lake, Little Smokey, High Level, Rainbow Lake).