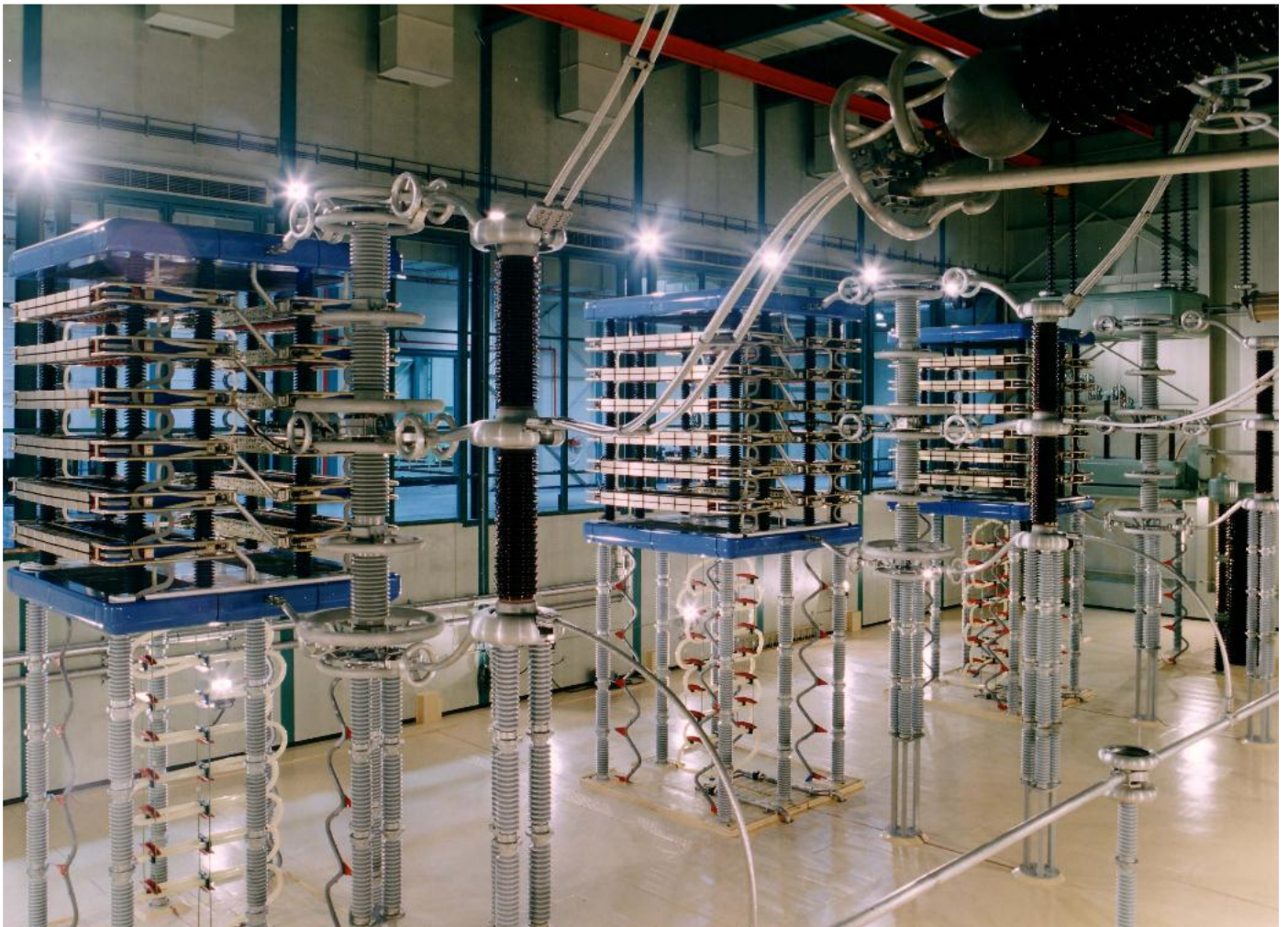


Nalcor Energy

Energizing Atlantic Canada

GE Helps Nalcor Energy Build An Energy Corridor Moving More Power From Labrador to Newfoundland and Nova Scotia





The HVDC Link From Muskrat Falls to Soldiers Pond

The Challenge

Nalcor Energy will build a High Voltage Direct Current (HVDC) transmission line engineered to both preserve the fragile ecosystem and withstand the harsh weather experienced in Canada to replace thermal power generation in the provinces of Newfoundland and Nova Scotia.

The Solution

Move More Power, More Efficiently

The 350 kV Line Commutated Converter (LCC) HVDC transmission link will provide 900 MW of bulk hydro power over 1100 km of forests and frozen grounds, 34 km of which will be underwater cables crossing the Strait of Belle Isle, avoiding frozen sea, high current, blizzards and icebergs.

HVDC solutions can:

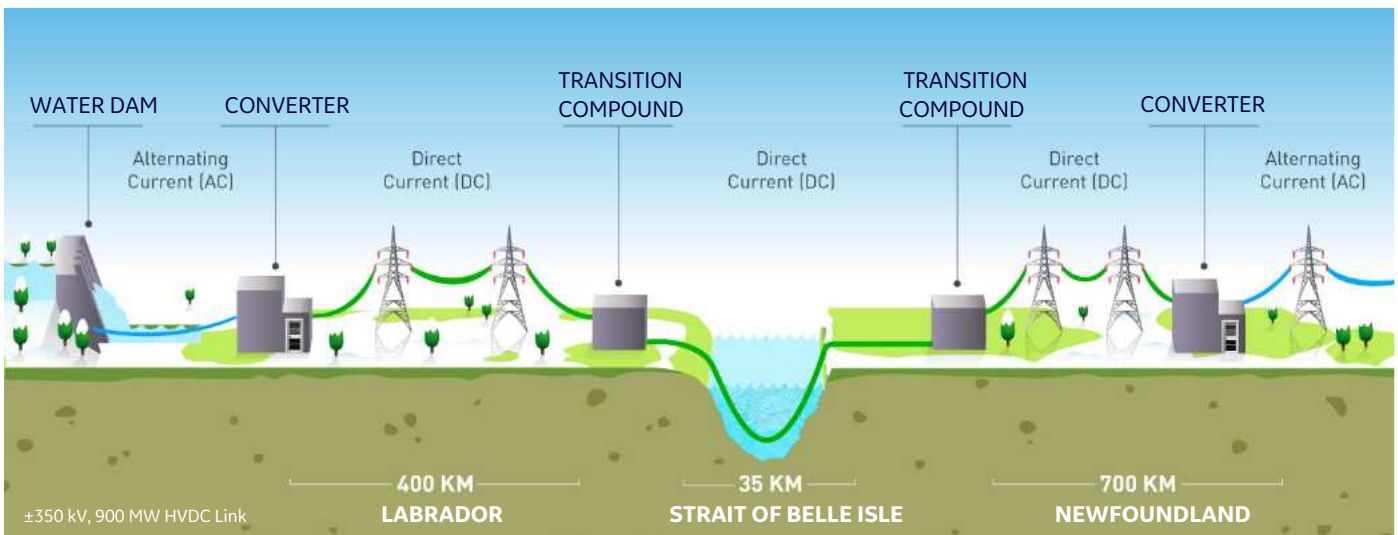
- transmit up to three times more power in the same transmission right of way as Alternating Current (AC)
- precisely control power transmission exchanges
- reduce overall transmission losses
- control the network efficiency

GE's full turnkey project scope includes converter stations at Muskrat Falls (Labrador) and at Soldiers Pond (Newfoundland) with the following main components:

- valves
- converter transformers
- control system
- 2 transition compounds at the strait to join maritime lines to overhead ones



Lower Churchill River, Labrador, North East of Canada



Nalcor Energy's ± 350 kV, 900 MW HVDC Power Line at Muskrat Falls, Labrador, Canada

The Benefits

Canadian transmission network operator Nalcor Energy will carry electricity from central Labrador to the **475,000** customers, residents and industries, on the Newfoundland island.

This electricity will be clean and renewable to:

- replace oil-fired generation with **98%** renewable energy from hydro, reducing greenhouse gas emissions and stabilizing prices.
- use **30%** less land space and lower right of way, an important decision to maintain the fragile ecosystem.
- build a **stable** and **resilient** power grid to sustain the Atlantic province economy with job creation in the far north and economic stimulation on the island for environmental and sustainable growth.
- enable the **carbon-free** reliable delivery of electricity to markets in the Maritime Provinces and the United States.



Source: Shutterstock

Nalcor Energy's ± 350 kV, 900 MW HVDC Power Line At Muskrat Falls, Labrador, Canada

For more information please contact
GE Power
Grid Solutions

Worldwide Contact Center

Web: www.GEGridSolutions.com/contact
Phone: +44 (0) 1785 250 070

GEGridSolutions.com

IEC is a registered trademark of Commission Electrotechnique Internationale. IEEE is a registered trademark of the Institute of Electrical Electronics Engineers, Inc.

GE and the GE monogram are trademarks of General Electric Company.

GE reserves the right to make changes to specifications of products described at any time without notice and without obligation to notify any person of such changes.

Muskrat-Falls-HVDC-LCC-CaseStudy-EN-2018-02-Grid-PEA-1642. © Copyright 2018, General Electric Company. All rights reserved.



Imagination at work