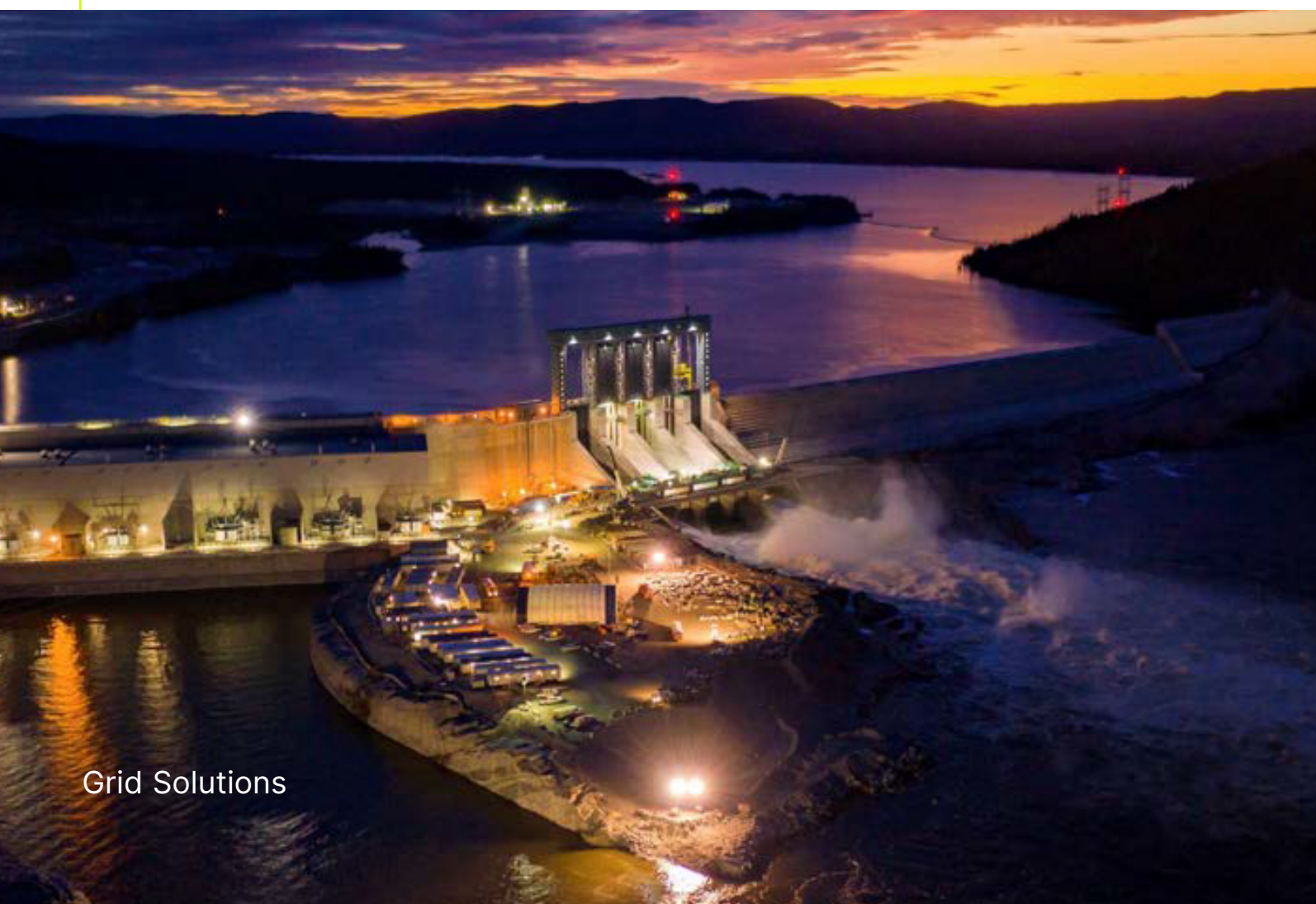


Energizing Atlantic Canada

LABRADOR ISLAND LINK

GE Vernova helps Nalcor Energy build an Energy Corridor moving more Power from Labrador to Newfoundland and Nova Scotia

Case Study



Grid Solutions

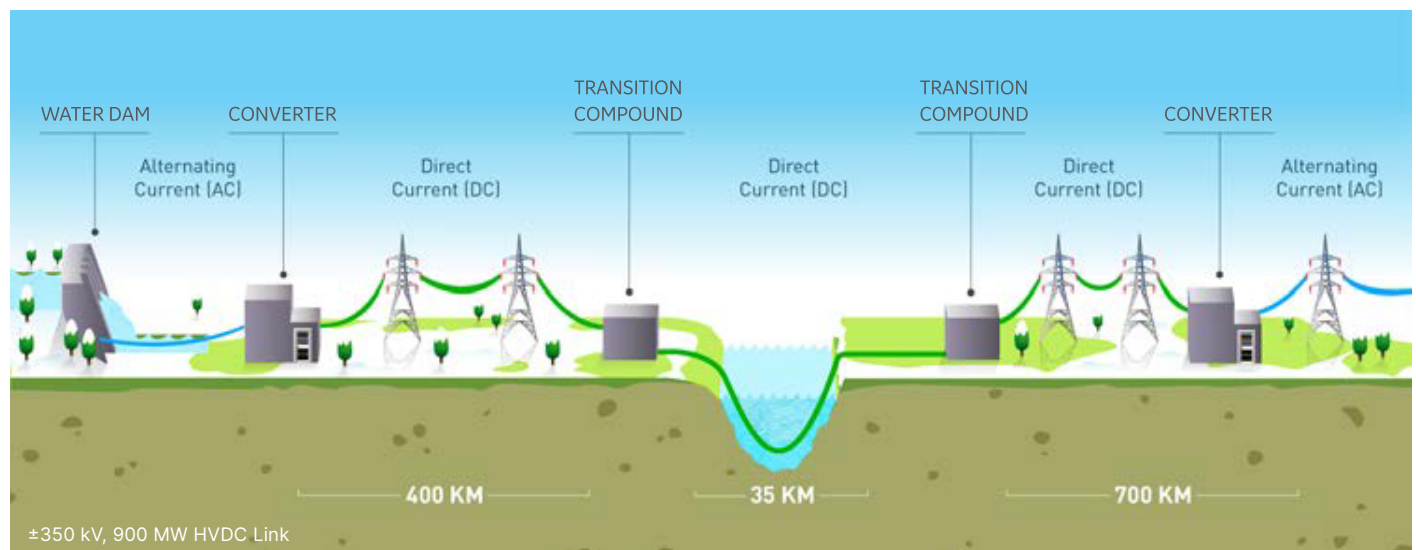
PROJECT OVERVIEW

Country	Canada
Project	Labrador Island Link (LIL)
Customer	Nalcor
Technology	High Voltage Direct Current (HVDC) Line Commutated Converter (LCC)
Scope	Design and supply of a turnkey LCC-Bipole: 2 converter stations including converter transformers, thyristor valves and control system. Design, supply and commissioning of 2 transition compounds to join subsea cable to overhead lines
Rating	900 MW, +/- 350kV



THE CUSTOMER CHALLENGE

Nalcor Energy is Newfoundland and Labrador's energy company, and they want to become leaders in clean energy. With hydro generation resources from the lower Churchill River, they can eliminate three to four megatonnes of carbon dioxide annually from thermal plants. To do this, they needed a cost effective way to transport nearly 900 MW from the Muskrat Falls generating plant to the the required load centers in Newfoundland.



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

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, 35 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 Vernova'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

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.



For more information, visit
gevernova.com/grid-solutions

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