



SNC • LAVALIN

Muskrat Falls EPCM Project

Patrick Lamarre



Agenda

- **Project Background**
 - **Project Description**
 - **Project Key Milestones & Dates**
 - **Project Execution Strategy**
 - **Project Risks and Mitigation**
 - **Financials**
-

Project Background

- Located in Labrador, the Churchill river is one the most significant sources of clean energy in Canada
 - The Churchill Falls generating station was built in 1971 and produces ~5400MW which represents 65% of the generating capacity of the river
 - The Lower Churchill River has the remaining 35% generation potential ~3100Mw in two proposed locations; Muskrat Falls (824MW) and Gull Island (2250MW)
 - Lower Churchill Project (LCP) consists of the development of both Generating plants and the associated Transmission line, and is one of Nalcor Energy's five lines of Business
 - Phase 1 of the project is the development of the Muskrat Falls generating plant and the transmission line.
-

Project Description

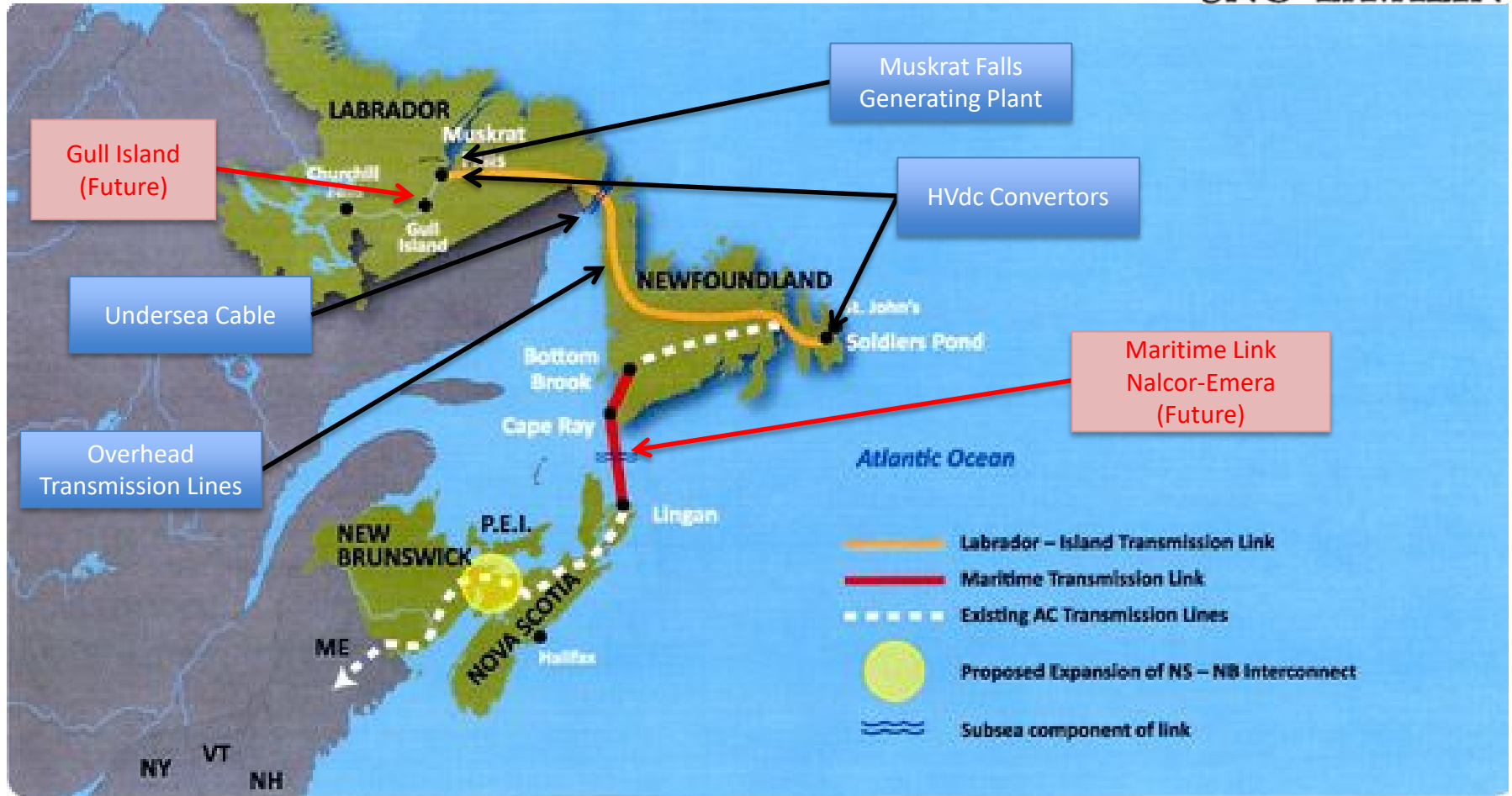
Phase 1 of The Lower Churchill project consists of:

1. The Muskrat Falls Hydro Generating plant
2. The Labrador-Island Transmission Link; 1,100 Km of overhead HVdc Transmission line
3. Two HVdc convertors (both ends of the transmission line)
4. 40Km Undersea cable crossing the straight of Belle Isle

The SLI Scope is the EPCM for the first 3 components above.

Muskrat Falls EPCM project

SNC • LAVALIN



- 824 MW Hydro plant
- 2 HVdc converter stations
- 1100 km HVdc Transmission line



Muskrat Falls EPCM project

SNC • LAVALIN



•35 m high, 700 m wide RCC Dam



Project Key Milestones & Dates

Planned Key Dates	Key Milestones
February 1, 2011	Award of EPCM Contract to SLI (was awarded on schedule)
December 15, 2011	Consultant's Gate 3 Key Deliverables Complete (on target)
July 1, 2012	Ready to start Bulk Excavation works
August 31, 2014	Muskrat-Churchill Falls Transmission interconnect ready
October 31, 2016	First power from Muskrat falls (through Churchill Falls)
January 30, 2017	Labrador-Island Transmission system ready for Power Transmission
May 31, 2017	Full Power

Project Execution Strategy

- Project design and management by Global Power, with BAE-Newplan providing local support
 - Project office and 85% of work done in St. John's
 - Project resources from Montreal, Calgary, Toronto, and Maritimes
 - Leverage local resources to reduce average rate and increase margin
 - No Major Subcontractors
 - Optimize design, and use Global sourcing to maintain CAPEX within budget
 - Review resource requirements regularly, and efficiently manage the contractors to avoid schedule slippage attributable to SLI
-

Project Risks and Mitigation

Risk	Mitigation
Hydro plant design & technology	Standard design and equipment.
HVdc convertor stations design	Standard design and equipment , similar equipment procured for similar projects.
Challenging terrain and environmental conditions for TL	Not vastly different from conditions in Northern Quebec and Alberta. Construction Managers experiences in similar conditions.
Schedule slippage due to SLI	Ensure adequate resources and expertise and succession and relief planning. Efficient contractor management.
Similar Project Management Experience	Permanent (Ex-HQ) Project Manager hired with experience in managing similar projects in Northern Quebec .
Capped rates for SLI services	Control overall project labour rates to below \$50 to maintain margin.
Risk of cancellation of project due to permitting, CAPEX overrun, etc..	SLI will get paid for expenses incurred, including any commitments such as Leases and de-mob. Use design optimization and SLI Global sourcing to maintain CAPEX within budget.

Financials

- **Project Value & Timelines**
Capex of \$5 Billion – February 1, 2011 to May 31, 2017
 - **EPCM Value & Timelines**
\$270 Million - February 1, 2011 to May 31, 2017
 - **EPCM Stage 1 & Timelines**
\$30 Million - February 1, 2011 to December 15, 2011
 - **EPCM Stage 2 & Timelines**
\$240 Million – December 16, 2011 to May 31, 2017
 - **Backlog booked in February 2011 was \$30M**
-



WE CARE NOUS VEILLONS

WE CARE embodies SNC-Lavalin's key corporate values and beliefs. It is the cornerstone of everything we do as a company. **Health and safety, employees, the environment, communities and quality:** these values all influence the decisions we make every day. And importantly, they guide us in how we serve our clients and therefore affect how we are perceived by our external partners. **WE CARE** is integral to the way we perform on a daily basis. It is both a responsibility and a source of satisfaction and pride by providing such important standards to all we do.



WE CARE about the health and safety of our employees, of those who work under our care, and of the people our projects serve.



WE CARE about our employees, their personal growth, career development and general well-being.



WE CARE about the communities where we live and work and their sustainable development, and we commit to fulfilling our responsibilities as a global citizen.



WE CARE about the environment and about conducting our business in an environmentally responsible manner.



WE CARE about the quality of our work.
