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Subject: Cabinet Presentation for Tomorrow
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Attachments: [.png](#)
[Cabinet Update June 24, 2015.pptx](#)



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Cabinet Update

Lower Churchill Project Phase 1

June 25, 2015

Boundless Energy



Corporate Structure



Functional Support: Finance, Strategic Planning & Business Development, Engineering, HR, EHS, Communications, Legal, Audit

NL Hydro



Churchill Falls



Oil & Gas



Lower Churchill



Bull Arm Fabrication



Energy Marketing



Our Vision

“To build a strong economic future for successive generations of Newfoundlanders and Labradorians”

Nalcor – Newfoundland and Labrador's Energy Company

- Wholly owned by the people of the province, commercially focused to meet shareholders' expectations
- Tasked to take a lead role in the development of our energy resources
- Maintain large base of energy assets
- A tool for maximizing benefits to Newfoundland and Labrador
- Structured to compete and partner with other large national and international businesses
- Long-term value generator – Profit-focused with social and economic objectives

Muskrat Falls Project



Muskrat Falls Generation

- 824 MW hydroelectric facility; 4.9 TWh/yr

Labrador-Island Transmission Link

- 900 MW capacity
- Muskrat Falls to Soldiers Pond near Holyrood
- 1,100 km, including 35 km across the Strait of Belle Isle

Maritime Transmission Link

- 500 MW capacity
- Includes 180 km undersea link from Cape Ray, NL to Cape Breton, NS

PROJECT BACKGROUND AND RATIONALE

Project Background and Rationale

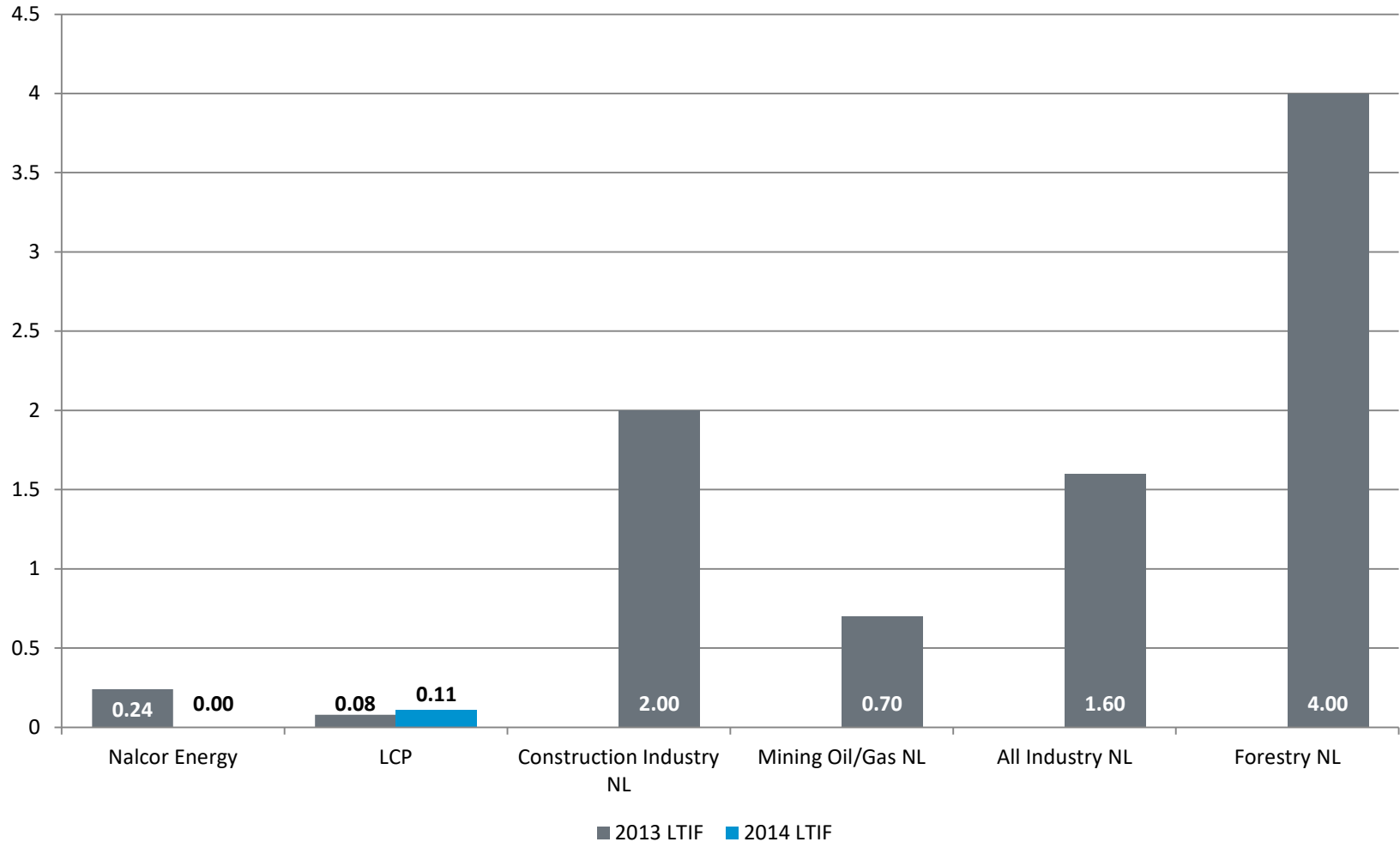
- NL needs more power overall
- MF/LIL determined to be lowest cost option following extensive alternatives review
- Replaces Holyrood Thermal Generating Station > 40 years old
- Investment in an asset we own, returning value and cash flow in excess of \$30 billion to the people of the province
- Paying ourselves, as opposed to paying for oil to outside companies – we are “buying”, not “renting”
- Benefits are inter-generational – 100+ year benefits – benefits future generations
- Clean power; power generation in our Province will be 98% GHG free, and avoid emerging future risk of costs of carbon
- Significant construction benefits; jobs for NL’s, and economic benefits for NL businesses

Project Background and Rationale

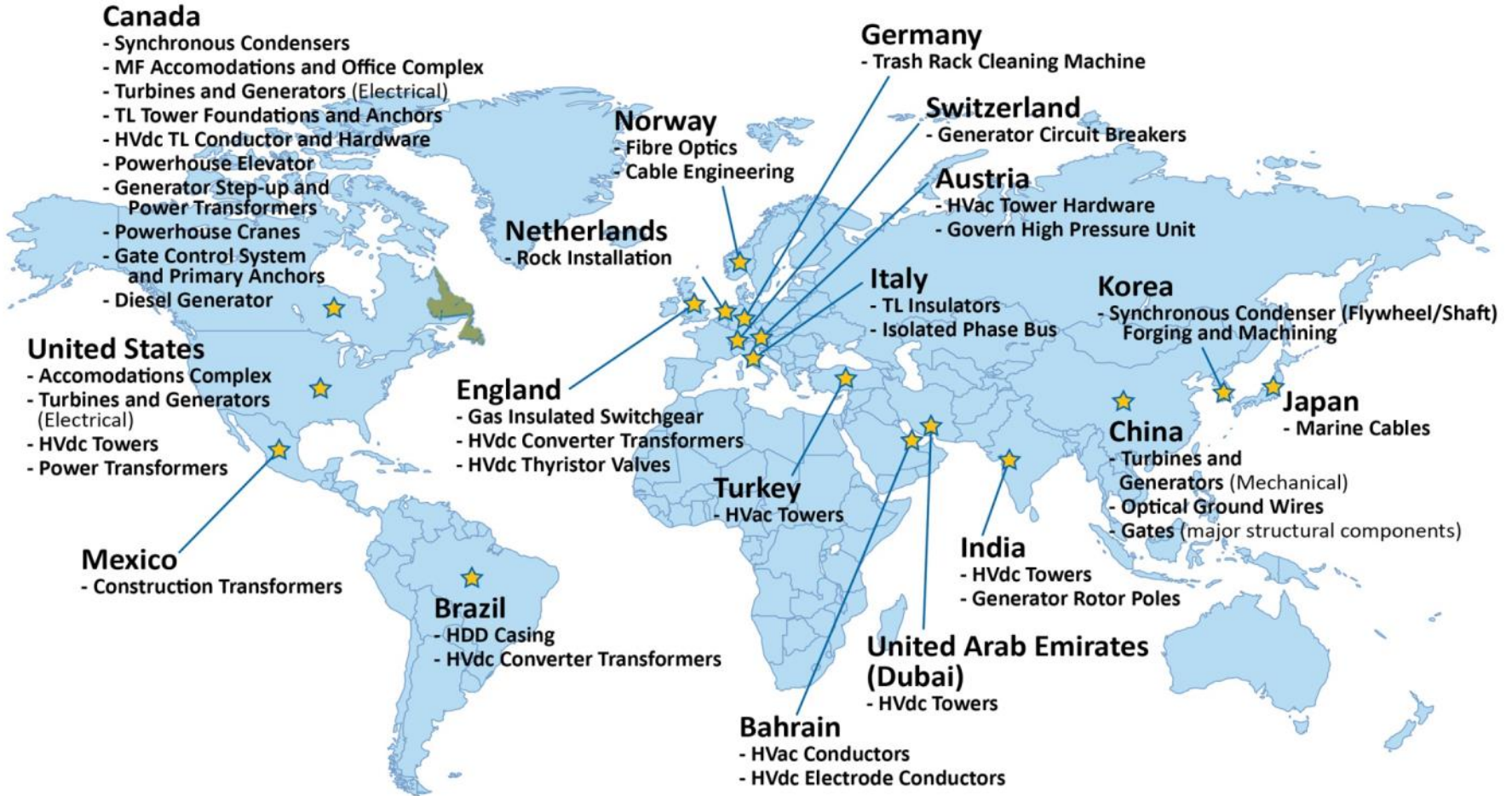
- Creates surplus power for NL needs and export – export revenue for people of province
- Both Labrador and the Island are connected 2 ways to North America markets for first time in history
- Significant improvement in system reliability as the island is now connected to neighbors
- Interest rates locked in at historic lows
- Federal Loan Guarantee acquired in recognition of regional GHG reduction benefits from the project
 - will save > \$6 Billion over life of project financing, 35 years for MF and 40 years for LIL
- Historic “New Dawn” agreement with Innu achieved
- Environmental approvals in place

PROJECT PROGRESSING ON ALL FRONTS

LTIF Comparison – Lower Churchill



Lower Churchill Project Global Reach



LTA - Recent Activities

- HVac construction continuing:
 - 478 towers erected
 - 769 towers assembled
 - 1118 foundations installed
 - 811 anchors installed
- Continued conductor stringing operations

LTA – Upcoming Activities

- Continue tower assembly and erection
- Continue stringing operations

Tower Assembly



Foundation Installation



LTA – Tower Erection



Stringing Operations



Stringing Operations



L-ITL Recent Activities

- Valard continuing temporary layoffs during spring melt
- HVdc construction:
 - 13 towers erected
 - 244 foundations installed
 - 368 towers assembled
 - 65 anchors installed
- Earthworks continuing at grounding stations in Dowdens Point (~40% complete) and L'Anse au Diable (work just beginning)
- Civil works continuing at Soldiers Pond Synch Condensers
- SOBI land cable completed and enroute to NL

L-ITL Upcoming Activities

- Valard to recall workforce and resume operations once ground conditions improve
- Continue ROW clearing
- Finalize contract for civil works to support installation of SP synch condensers
- Finalize contract for construction of AC substations; mobilize to MF/CF/SP June
- Commence installation of SOBI land cable in August

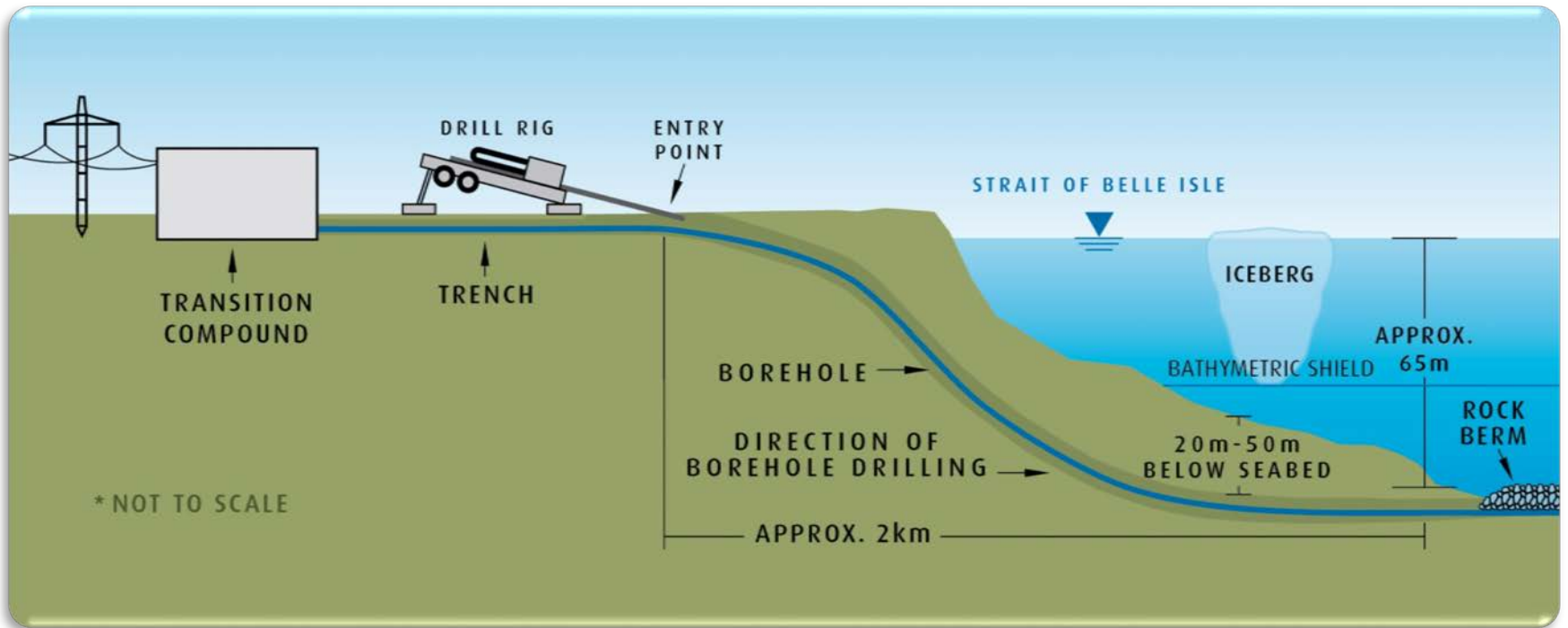
L-ITL tower construction



L-ITL ROW



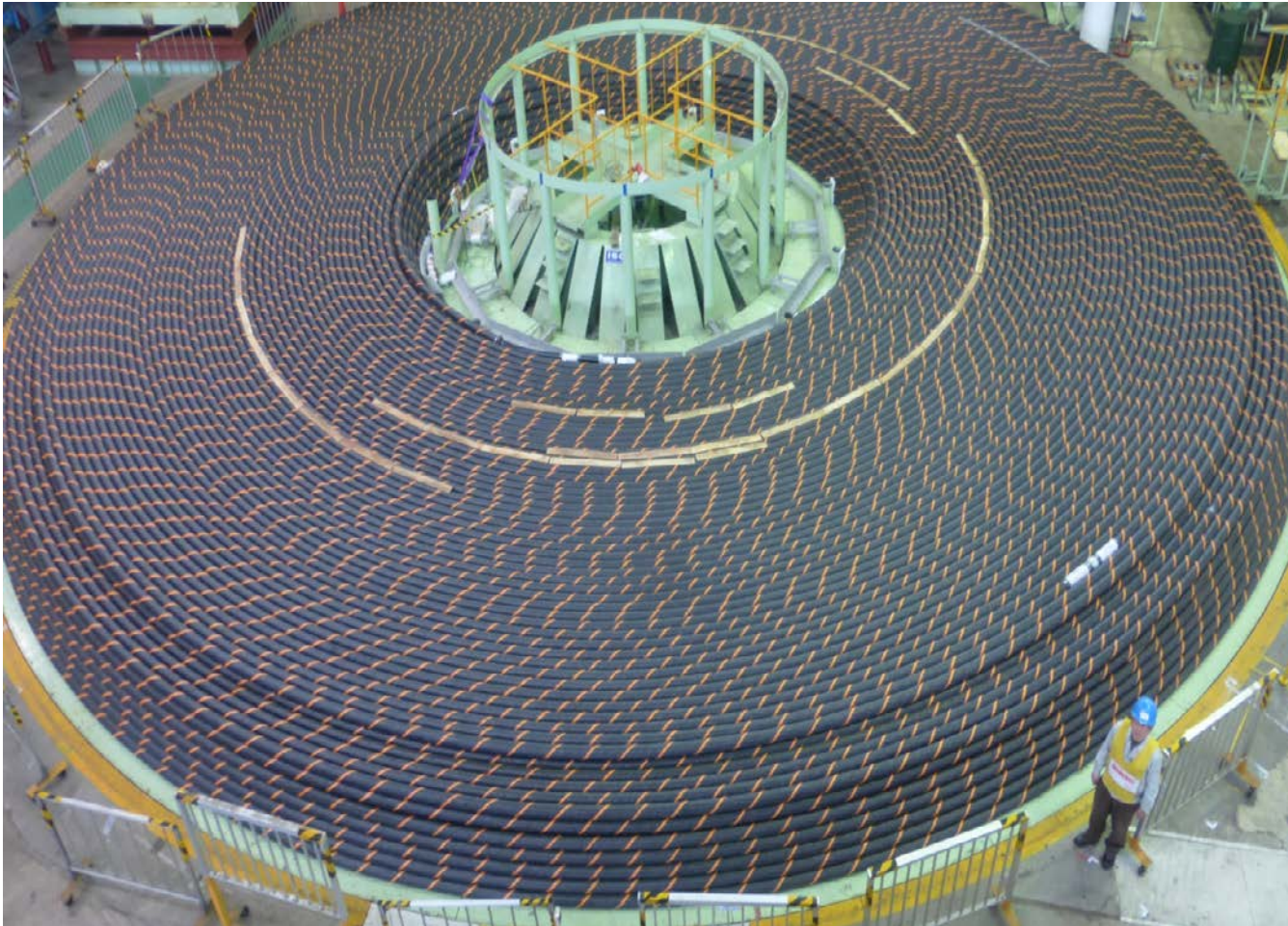
Horizontal Directional Drilling



Conduit Casing



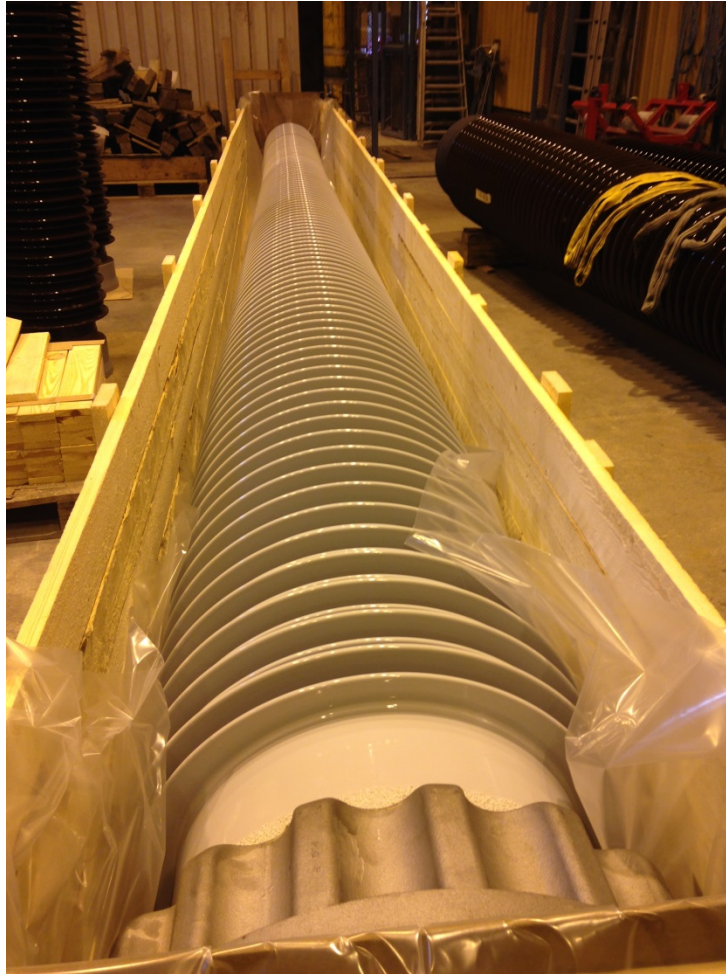
SOBI Submarine Cable



SOBI Land Cable



L-ITL – SOBI cable termination



Soldiers Pond



Dowden's Point



L'Anse au Diable



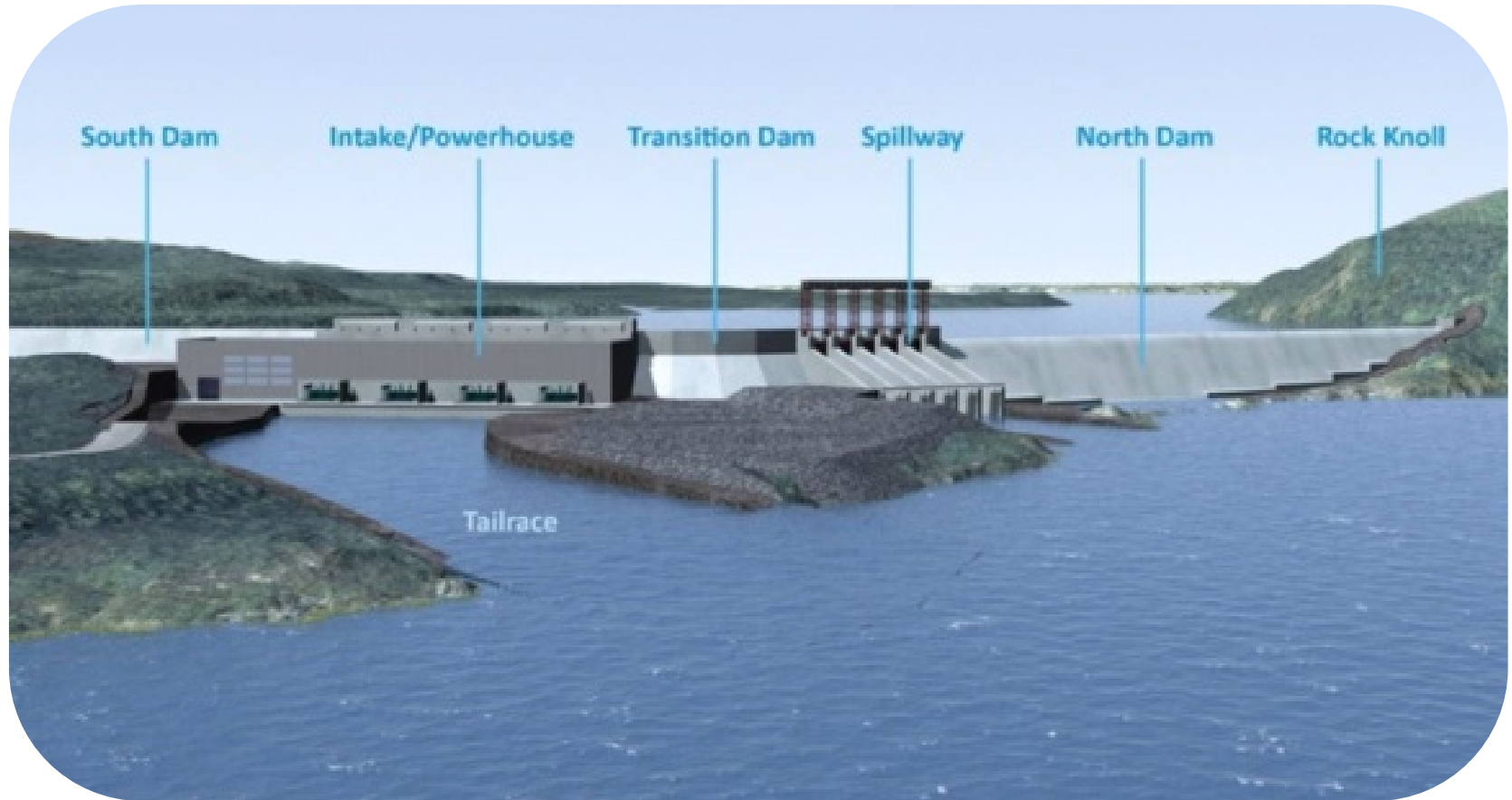
Muskrat Falls – Recent Activities

- Astaldi:
 - Concrete production for May ~ 14,000 m³
 - Significant increase in activity in powerhouse
 - Intake
 - Base Slab
 - South Side Elevator
 - Continuing concrete work on spillway piers
- Earth stabilization program continuing on North Spur; Geotechnical conditions proving to be favorable
- Manufacturing continuing on TGs, Gates
- Continuing stack up testing of Turbines and Generators

Muskrat Falls – Upcoming Activities

- Continue concrete work on spillway
- Continue concrete work in powerhouse area
- Continue North Spur stabilization activity
- Turbine and Generator manufacturing continuing
- Gates manufacturing continuing
- Andritz preparing to mobilize to MF site in August to commence installation of gates

Muskrat Falls Site



Turbine & Generator – Runner Blade



Turbine



Stay Ring



Spillway



Spillway and Centre Transition Dam



Spillway and Centre Transition Dam



Powerhouse Intake



Units 3 and 4



Units 1 and 2



North Spur



North Spur



Sharing our ideas in an open and supportive manner to achieve excellence.

Teamwork

Open Communication

Fostering an environment where information moves freely in a timely manner.

Honesty and Trust

Being sincere in everything we say and do.

Relentless commitment to protecting ourselves, our colleagues, and our community.

Safety

Respect and Dignity

Appreciating the individuality of others by our words and actions.

Leadership

Empowering individuals to help, guide and inspire others.

Holding ourselves responsible for our actions and performance.

Accountability