

Transition to Operations Ready for Commercial Integration

November 2015

Boundless Energy



Confidential and Commercially
Sensitive Information



Objectives

- Achieve Interconnection Requirements
 - Facilitate the interconnection of provincial transmission system with the North American grid.
 - Implement changes to the provincial bulk electric system to ensure compliance with regulatory requirements that arise from interconnection and participation in external electricity markets.
- Value Creation / Maximize Long-term Benefits
 - Optimize the dispatch of generation facilities to maximize sustainable long-term economic benefits from participation in external electricity markets.
- Protect and Enhance Benefits for NL Customers
 - Ensure NL customers continue to receive a safe, reliable and least cost supply of electricity and appropriate benefits from interconnection.

Achieve Interconnection Requirements – Actions

- Establishment of an independent system operator as a division within NLH for the provincial transmission system to provide coordinated open access and non-discriminatory transmission service for NL and ensure compliance with applicable regulatory requirements.
 - Open access transmission service is a framework adopted within the US and Canadian energy markets to ensure transmission owners provide access to the use of transmission facilities by third parties on a basis comparable to its own use of those facilities.
- Implementation
 - Commercial agreements and protocols
 - Legislative instruments (legislation, OICs)

Value Creation and Benefits for NL Customers – Actions

- Establishment of a generation division of NLH to consolidate generation operations.
- Establishment of a heritage pool of energy/capacity from existing NLH generation assets which will guarantee the benefits of low cost energy for NL customers while maintaining a reliable and secure energy supply.
- Centralization of the dispatch of all generation assets (NLH, Muskrat Falls, Churchill Falls) to ensure the assets are optimized, that the value of external market activities is maximized, that spilled water is minimized or eliminated to create further benefits for NL customers, and that NL customers are protected from incremental costs and risks related to external market activities.

Value Creation and Benefits for NL Customers – Actions (cont'd)

- Implement a mandatory formalized reliability framework consistent with North American Electric Reliability Corporation (NERC) standards to comply with industry best practice.
- Implementation
 - Commercial agreements and protocols
 - Legislative Instruments (legislation, OICs)

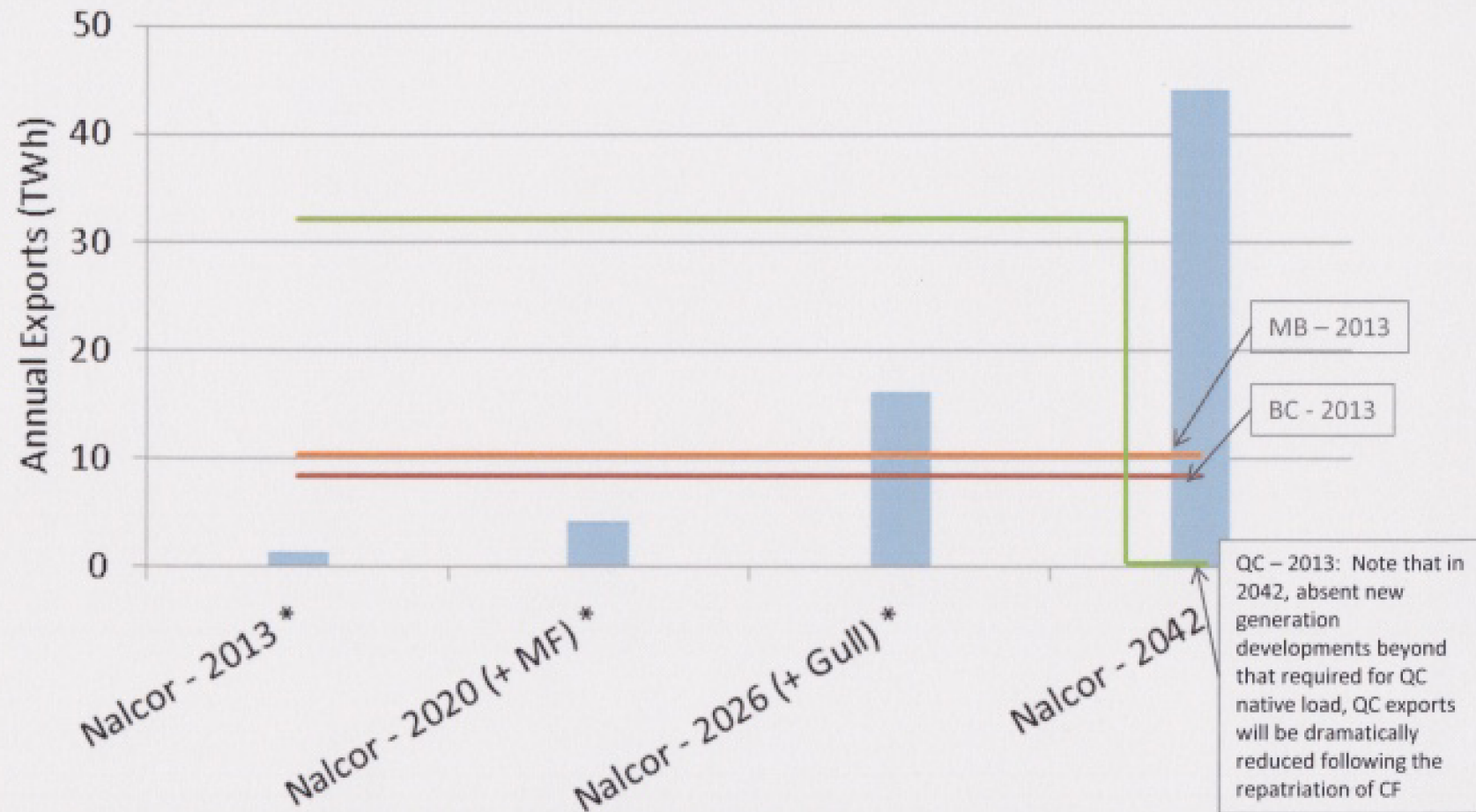
Appendix A

Value Creation

Context

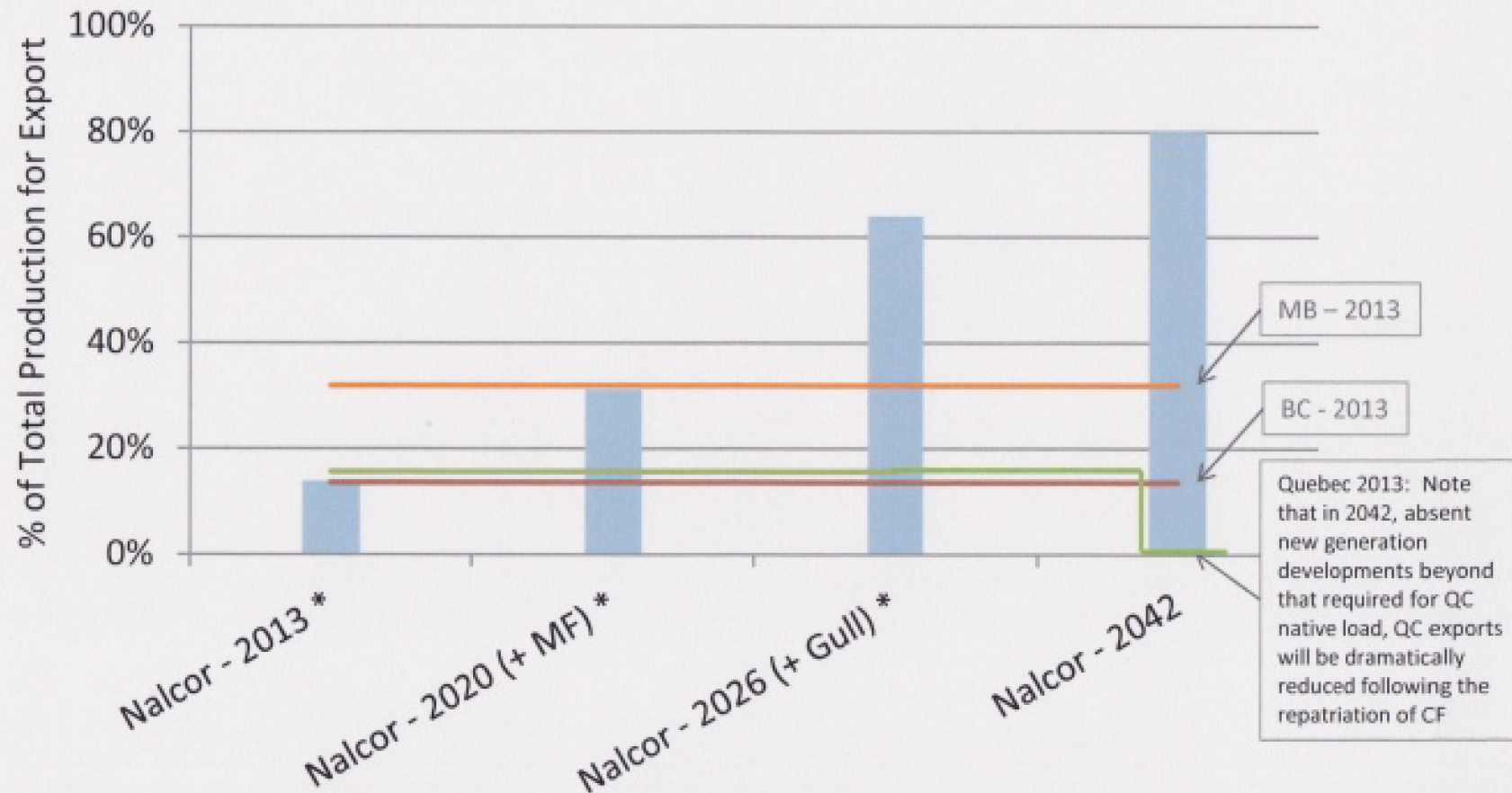
- With the sanction and construction of Muskrat Falls, the generating needs for meeting native load prior to 2041 have largely been met based on current load forecasts.
- Therefore, decisions relating to the provision of generation are behind us for a long time to come. From a NL customer perspective, the focus for decades to come will be on the provision of cost effective and reliable electricity service to serve NL native load.
- Following the in-service of Muskrat Falls, and as illustrated on the following slides, the quantities of energy available for export (in total and per capita) will grow exponentially between now and 2042, both in absolute terms and as compared to our competitors current export sales.

NL – Largest Electricity Exporter in North America...



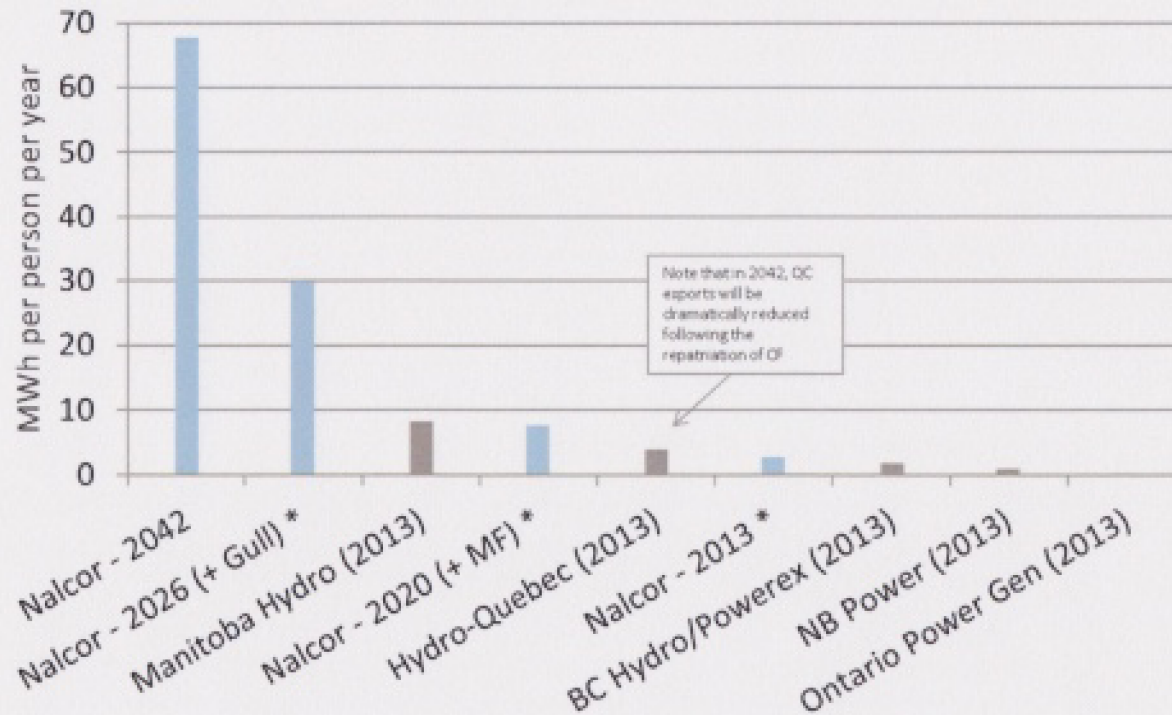
* Excludes 1969 contract sales to HQ and future wind or other hydro developments

Export Sales Increasingly Drives Value Creation...



* Excludes 1969 contract sales to HQ and future wind or other hydro developments

Unprecedented per Capita Wealth Creation...



* Excludes 1969 contract sales to HQ and future wind or other hydro developments

Projected electricity exports per capita rises to 68 MWh by 2042. At projected electricity rates, this approximates \$12,000 / person / year in 2042. The wealth potential earned per capita is unmatched and unprecedented in other jurisdictions.

Context (cont'd)

- In addition, the reservoir footprint to create ponding¹ opportunities increases with the LCP developments. Further, production optimization at the Churchill Falls plant will be greatly enhanced post-2041 when the HQ/CF(L)Co power contract obligations impacting the Smallwood reservoir terminate. The combination of these increasing quantities of energy available for export with the increased ability to pond as reservoir capacity grows provides further potential for value creation beyond that illustrated on the previous slides.

¹Ponding refers to import purchases made in off-peak hours to provide NL customer service, therefore saving water in the reservoir system, which saved water is then made available for export sales during peak hours. Value is created by the spread between peak and off-peak prices.

Context (cont'd)

- Maximizing these opportunities via optimal dispatch can only be met by uniting or “pooling” generating sources and reservoirs in a coordinated manner.
 - Nalcor conducted a review of structures used in all Canadian jurisdictions and select others in the United States.
 - Nalcor narrowed the focus on jurisdictions that presented the same opportunities for the creation of long-term benefits
 - British Columbia, Manitoba, Quebec
- While these jurisdictions differed from each other in terms of how matters of policy were addressed (regulation, allocation of long-term benefits arising from the opportunities), each jurisdiction centralized the generating fleet and reservoirs to ensure the benefits were achieved.

Required Actions

- Nalcor must be poised to compete aggressively and ensure all opportunities are seized to maximize the sustainable long-term economic benefits from exports for the people of the Province.
 - Centralize dispatch of the generation plants and reservoirs to ensure that the generation resources and reservoirs are centrally controlled with a mandate to maximize the benefits discussed above while providing clear heritage benefits to NL customers.
 - Centralization is the logical/right thing to do with a long-term view in mind that facilitates the seamless integration of new generation developments into the model.
- Distribute the benefits of optimal dispatch and new electricity developments from Nalcor as directed by the Shareholder as a matter of public policy.