Review of North American Electric Utility Organizational Structures & Implications for Proposals in The Liberty Consulting Group Final Report





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Prepared for Nalcor Energy

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Relevant Experience: John Dalton, President

- Over thirty-year's experience in the electricity sector, extensive experience in both restructured electricity markets and with regulated utilities across North America
- Career split between the US and Canada, moved to Toronto in 1999 to open office for Navigant Consulting
 - Advised Governments in New Brunswick, Nova Scotia and Ontario on the structure of their electricity markets
 - Started Power Advisory in 2007. With offices in Boston, Toronto and Calgary, we specialize in electricity market analysis and strategy, power procurement, policy development, regulatory and litigation support, market design, and project feasibility assessment. Firm regularly works across North America for all electricity sector market participants including system operators, governments, public advocates, utilities and regulators
- In 2015 engaged by Department of Natural Resources to conduct an independent review of the Newfoundland and Labrador electricity sector and each of the other Canadian provinces to identify best practices with respect to oversight, governance, planning and regulatory review for the electricity sector



Relevant Experience: Michael Killeavy, Executive Advisor

- Experienced electricity sector executive. Former Director, Contract Management at Ontario's Independent Electricity System Operator ("IESO") and Ontario Power Authority ("OPA")
- Lead the IESO/OPA Contract Management group through rapid growth during the implementation of the Feed-in Tariff program from 2009 (~400 contracts) to 2018 (~34,000 contracts) and merger between the OPA and IESO in 2015, including two major reorganization efforts
- Prior to the OPA, from 2000 to 2009 was Vice President, Knowles Consultancy Services Inc., the Canadian subsidiary of the Knowles plc management consultancy. Established the company in Canada and led its growth. Provided organizational design advice to large private and public sector organizations such as Tarmac America, Ontario Ministry of Transportation, Granville Construction, Ontario Management Board Secretariat, Plan Group Inc., Guarantee Company of North America. Led two M&A efforts, one in Canada and one in the US, to grow the Knowles plc North American arm
- Executive Advisor, Power Advisory LLC, since 2018. B.A.Sc., M.Eng., MBA, LL.B., P. Eng. (Ontario)



Nalcor Organizational Structure Review

Scope of the Project

- Power Advisory engaged by Nalcor to provide strategic advice on potential organizational structures appropriate for it with the completion of Muskrat Falls Project
- Asked to review electric utility organizational structures and corresponding electricity market structures and regulatory frameworks that influence these organizational structures
- Utilizing this research, asked to respond to Liberty's Final Report



Nalcor Organizational Structure Review Fundamental differences in perspective between Power Advisory & Liberty

- "Mission defines strategy, and strategy defines structure."
- Power Advisory engaged by Nalcor to provide strategic advice on potential organizational structures that will allow it to achieve its strategic objectives with the competition of Muskrat Falls
 - Top down review, recognizing Nalcor's strategic focus and role in value creation for the Province
- Liberty engaged by the Board to assist it with examining options to mitigate electricity rates in the province

o Bottom up review, focused on cost minimization



Nalcor Organizational Structure Review

Scope of Our Review

- Elected to review electric utilities that could offer insights on some of the fundamental organizational design questions that Nalcor is considering:
 - 1) The structure and relationship between regulated and non-regulated utility operations; and
 - 2) The degree of regulatory oversight of energy trading operations and where they reside within the organization
- Given the prevalence of similar ownership structures and mandates that often include broad policy objectives, we reviewed the major utilities in Canadian jurisdictions
- In the US, we focused on utilities that have restructured their electricity markets and have both regulated and unregulated operations
- Three primary findings of Power Advisory review (presented next):



Nalcor Organizational Structure Review (1) Regulated and non-regulated operations typically separated

- Simplifies the oversight of regulated operations and avoids risks of cross-subsidization of competitive operations by the regulated operations
- Distinct capabilities required for regulated and non-regulated operations where these businesses are disaggregated
- Liberty asserts that it found significant potential cost savings from combining Power Supply and NLH
- Power Advisory believes that Liberty hasn't appropriately valued the importance of maintaining the organizational capability to deliver on Nalcor's resource development mandate and the essential role of an unregulated development organization to do so



(2) Energy trading operations largely unregulated

- Government review of BC Hydro outlined the rationale for this as: "falling under BCUC oversight would hamper Powerex's ability to compete and earn income in fast-moving and rapidly evolving competitive markets."
- Power Advisory believes that this rationale applies universally and limits the regulatory oversight over energy trading operations, particularly where they are a critical contributor to financial performance
 - Across Canada there is relatively limited regulatory oversight over energy trading operations



Nalcor Organizational Structure Review Liberty asserts that Board oversight of the trading organization has proven valuable...

- ...in establishing best operating practices
- Our jurisdictional review found one example of regulatory oversight of energy trading operations
- Energy trading is fast-paced and requires detailed knowledge of energy markets and risk management practices. It is highly analytical and requires specialized capabilities



Nalcor Organizational Structure Review (3) Most energy trading operations in stand-alone entities

- The rationale for this separation in Canada is the same as outlined by Nalcor:
 - to shield the parent from the risk of becoming a taxable entity in the US and to remove affiliates from exposure to risks from energy marketing activities
 - This risk can affect the underlying cost of capital of these entities and shielding them from it is prudent



Nalcor Organizational Structure Review Liberty proposes that Nalcor consider contracting out energy trading operation

- Liberty has underestimated NEM's position as an exporter
- Furthermore, Power Advisory believes that Liberty has inappropriately focused on energy volumes rather than margins and failed to recognize that highly flexible hydroelectric resources offer higher margins given their ability to arbitrage energy prices
- Power Advisory was unable to find a precedent in Canada for a utility with a portfolio the size of Nalcor's that contracts out this core capability



Nalcor Organizational Structure Review Liberty argues for expanded oversight of Nalcor's investment decisions

- Liberty uses the departure from industry practice of allocating export margins to the cost of the facilities that produce them to argue for expanded oversight over Nalcor's investment decisions. Elsewhere it argues for greater regulatory oversight of Nalcor Energy Marketing
- The net effect of these proposals would cause NLH to be among the most highly regulated utilities in Canada and this is for a crown-utility that is imbued with the public interest



Starting point for assessing organizational structure...

- ... is understanding the organization's mission and objectives
- Current organizational structure for Nalcor reflects the following identified priorities:
 - 1) To ensure the successful completion of the MFP;
 - 2) To prepare the provincial electricity system for the integration of MFP power;
 - 3) To have clear separation of, focus on and accountability for Hydro, distinct from the remaining Nalcor business operations; and
 - 4) To use corporate competitiveness and strategic flexibility of nonregulated assets and operations to leverage commercial opportunities within the electricity industry to maximize benefits for customers & province



Further insight provided by Premier's ...

- ... Mandate Letter to the Minister of Natural Resources, which requested the Minister to lead on the following
- "Maximizing the net benefits from in-province use of energy and energy export by:
 - Intensively marketing cost competitive electricity generated by wind and hydro to regional, national, and international markets;
 - Encouraging investment and innovation in electrical power generation projects, and
 - Seeking opportunities to develop the Gull Island Hydro Project, which will include identifying potential markets and access routes."



Nalcor Organizational Structure Review Nalcor's current organizational design focused on achieving these priorities

- Evident in split between regulated and unregulated operations
 - In full accord with findings that regulated and unregulated operations typically separated
 - NLH on a stand-alone basis provides dedicated focus on its regulated operations
- Establishing power development/supply as separate non-regulated business segment best positions Nalcor to pursue development of generation projects, consistent with Minister's guidance
 - Next generation projects likely to be export focused, not to supply customers
 - o Follows successful model employed by Hydro-Québec



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Nalcor Organizational Structure Review Liberty notes integration of NLH and Power Supply would reduce costs

- Liberty charged with cost minimization to mitigate rates
- While integrating NLH and Power Supply offers opportunities to streamline operations, what are the foregone opportunities from the lost capabilities?
- How does the value of these foregone opportunities compare to these savings?
- Given the significant number of future investment opportunities, losing these capabilities could have a meaningful cost to the Province



Nalcor Organizational Structure Review NEM as a separate corporation also consistent with our findings

- Emera, NB Power, SaskPower, Ontario Power Generation and BC Hydro all have wholly-owned energy trading subsidiaries similar to NEM
- NEM's effectiveness as a trader critical to the returns realized from Muskrat Falls Project as well as Churchill Falls



Extended Review of The Liberty Executive Organization Analysis



Executive Organization Analysis

Executive Organization Analysis & Benchmarking

- Liberty provides no transparent definition of what constitutes an executive and inconsistent terminology is used
- Power Advisory maintains that an executive as a person that is responsible for the strategic direction and performance of an organization or business unit
- Number of executives is a function of the size of a company in terms of employees, products and services, customers, revenues and expenses
- Number of executives is properly going to reflect the organizational mandate of the company whether Crown or investor-owned
- Benchmarking exercise without deeper consideration of executive organizational effectiveness or the underlying differences between utilities
- We have not observed the use of such benchmarking in reorganizations or specifically in regulatory proceedings concerning utility rate structures and mitigation



Executive Organization Analysis

Executive Organization Analysis Results

- Number of executives is a function of the Nalcor organizational mandate
- Selecting an executive team based on a benchmarking analysis ignores Nalcor's mandate and could create overall organizational inefficiency resulting in a fundamental flaw in the design of the new organization
- Final Report does not support the conclusion that Nalcor can shed nine executive positions
- Design of an organization's executive matters. It is what those inside and outside the organization pay attention to
- Various factors (mandate, span of control, etc.) need to be considered in designing any organization and determining the number of executives
- Benchmarking cannot elicit these nuances in an organization. It is typically done verify the design once it is completed



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