

## Information Note Natural Resources

**Title:** Joint Review Panel (JRP) Response

**Issue:** To summarize Government's response to the JRP Report recommendations that were the responsibility of the Department of Natural Resources (Mines and Energy)

### Background and Current Status:

- On August 25, 2011, Canada's Environment Minister Peter Kent, along with Newfoundland and Labrador's Minister of Environment and Conservation Ross Wiseman, released the environmental assessment report of the JRP for the proposed Lower Churchill Hydroelectric Generation Project.
- The JRP was mandated by the federal and provincial ministers to assess the environmental effects of the proposed project which includes two hydroelectric generating stations (Gull Island and Muskrat Falls) on the lower Churchill River, along with transmission lines to connect the two generation sites to the existing Churchill Falls generation facility.
- Both governments are required to publicly respond to the JRP report after reviewing its findings and consulting with Aboriginal groups. Each government will make a determination on the project at that time.
- The Department of Environment and Conservation (ENVC) is the provincial lead on the response to the JRP report. Following the release of the JRP report, ENVC assigned each of the 83 recommendations to the appropriate government department(s)/agency to develop a response. NR (Mines and Energy) was assigned a total of nine recommendations. ENVC also established a DM-level interdepartmental committee to review all of the department's submissions and reach consensus on Government's final response.
- There are three response options to the recommendations (note that some of the JRP recommendations are directed at the proponent):
  - Accept – Government accepts the recommendation in its entirety;
  - Does Not Accept – Government does not agree with the Panel's recommendation and will not implement the recommendation;
  - Accept the Intent – Government understands and agrees with the spirit and underlying rationale of the recommendation, but does not necessarily agree fully and literally with the specific recommended approach to implementation and instead has identified what it believes is a more efficient, effective, and pragmatic means of achieving the same ends.
- The following is a summary of the nine recommendations that NR (Mines and Energy) were responsible for:
  - Accept – two (Integrated Resource Planning and Project sequencing and applying lessons learned);

- Does Not Accept – two (Independent analysis of alternatives to meet domestic demand and Modifications to the Benefits Strategy);
- Accept the Intent – three (Government confirmation of projected long-term returns, Backing up intermittent renewable energy, and Long-term funding for environmental management from Nalcor).
- The remaining two recommendations were directed at the proponent (Nalcor); however, Government accepted one (Local hiring for environmental management work) and accepted the intent of the other (Seismic testing).
- NR's (Mines and Energy) final responses, along with the rationale for those responses, are attached as Annex A.

**Action Being Taken:**

- ENVC has finalized its Cabinet submission which is scheduled to go before Cabinet in early January.

**Prepared / Approved by:** Rob McGrath / Charles Bown

**Approval:** Charles Bown, Associate Deputy Minister

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**Annex A****NR's Responses****Recommendation 4.1 – Government confirmation of projected long-term returns**

The Panel recommends that, if the Project is approved, before making the sanction decision for each of Muskrat Falls and Gull Island, the Government of Newfoundland and Labrador undertake a separate and formal review of the projected cash flow of the Project component being considered for sanctioning (either Muskrat Falls or Gull Island) to confirm whether that component would in fact provide significant long-term financial returns to Government for the benefit of the people of the Province. Such financial returns must be over and above revenues required to cover operating costs, expenditures for monitoring, mitigation and adaptive management, and financial obligations to Innu Nation. The Panel further recommends that the Government of Newfoundland and Labrador base these reviews on information on energy sales, costs and market returns that have been updated at the time of sanction decision, and make the results of the reviews public at that time. The financial reviews should also take into account the results of the independent alternatives assessment recommended in Recommendation 4.2.

***Response:***

The Government of Newfoundland and Labrador accepts the principle that a review of the Project's financial viability is required prior to sanction, but does not support the Panel's assumption that the information provided by the proponent was inadequate. Based on information that Nalcor has already provided, the Government is satisfied that the development of each component of the Project will result in significant financial benefits to the Government for the people of the Province.

***Rationale:***

- The Government will undertake a full financial review of each component of the Project (Muskrat Falls and Gull Island) before sanction to ensure that it is financially viable. However, based on information that Nalcor has already provided, the Government is satisfied that the development of each component of the Project will result in significant financial benefits to the Government for the people of the Province.
- Navigant has completed an independent review which confirmed Nalcor's assessment of Muskrat Falls' economics. This has reinforced the Government's confidence in the financial viability of the Project.
- Muskrat Falls is the least cost option for meeting the demand growth projected for the Island and will therefore be developed first.
- Government has also commissioned an independent review by the Public Utilities Board for a review of this issue.
- Gull Island will proceed once appropriate transmission arrangements and long-term Power Purchase Agreements can be obtained. Public release of any portion of the review will be subject to the Government's ongoing commitment to protect commercially – sensitive information.

**Recommendation 4.2 – Independent analysis of alternatives to meet domestic demand**

The Panel recommends that, before governments make their decision on the Project, the Government of Newfoundland and Labrador and Nalcor commission an independent analysis to address the question “What would be the best way to meet domestic demand under the ‘No Project’ option, including the possibility of a Labrador-Island interconnection no later than 2041 to access Churchill Falls power at that time, or earlier, based on available recall?” The analysis should address the following considerations:

- why Nalcor’s least cost alternative to meet domestic demand to 2067 does not include Churchill Falls power which would be available in large quantities from 2041, or any recall power in excess of Labrador’s needs prior to that date, especially since both would be available at near zero generation cost (recognizing that there would be transmission costs involved);
- the use of Gull Island power when and if it becomes available since it has a lower per unit generation cost than Muskrat Falls; the extent to which Nalcor’s analysis looked only at current technology and systems versus factoring in developing technology;
- a review of Nalcor’s assumptions regarding the price of oil till 2067, since the analysis provided was particularly sensitive to this variable;
- a review of Nalcor’s estimates of domestic demand growth (including the various projections to 2027 in the EIS (2007, 2008, 2009 and the 0.8 percent annual growth to 2067 provided at the hearing);
- Nalcor’s assumptions and analysis with respect to demand management programs (compare Nalcor’s conservative targets to targets and objectives of similar programs in other jurisdictions and consider the specific recommendations, including the use of incentives to curtail electric base board heating, from Helios Corporation, among others);
- the suggestion made by the Helios Corporation that an 800 MW wind farm on the Avalon Peninsula would be equivalent to Muskrat Falls in terms of supplying domestic needs, could be constructed with a capital cost of \$2.5 billion, and would have an annual operating cost of \$50 million and a levelized cost of power of 7.5 cents per kilowatt-hour;
- whether natural gas could be a lower cost option for Holyrood than oil; and
- potential for renewable energy sources on the Island (wind, small scale hydro, tidal) to supply a portion of Island demand.

*Response:*

The Government of Newfoundland and Labrador does not accept this recommendation. The information provided by Nalcor to the JRP on the need, purpose and rationale for the Project provides an adequate basis to conclude that the interconnected Island alternative is the long – term, least cost option to meet domestic demand.

*Rationale:*

- The information provided by Nalcor to the JRP on the need, purpose and rationale for the Project provides an adequate basis to conclude that the interconnected Island alternative is the long – term, least cost option to meet domestic demand.
- In reaching this conclusion, the information provided to the JRP on the need, purpose and rationale was considered, namely: Nalcor's February, 2009 Environmental Impact Statement (Volume 1, Part A, Project Planning and Description); Evidence supplied by Nalcor to the JRP in respect of the Need, Purpose and Alternatives Hearing; Nalcor's final Written Submissions to the JRP; and various responses to the Information Requests of the JRP.
- The panel did not provide sufficient reasons for concluding that Nalcor's analysis of the project was inadequate. It is noteworthy that Navigant's independent review confirms all the information provided by Nalcor that the Interconnected Island alternative is the long – term least cost option for the Island of Newfoundland had been provided to the Panel.

**Recommendation 4.3 – Integrated Resource Planning**

The Panel recommends that the Government of Newfoundland and Labrador and Nalcor consider using Integrated Resource Planning, a concept successfully used in other jurisdictions. Such an approach would involve interested stakeholders and look simultaneously at demand and supply solutions and alternative uses of resources over the medium and long term.

*Response:*

The Government of Newfoundland and Labrador accepts this recommendation.

*Rationale:*

- Nalcor and NL Hydro's project planning for the Project followed the current system planning methodology.
- The PUB has considered IRP in the past, and has indicated that it will consider its merits in the future:
  - "The Board will convene a meeting of stakeholders including Hydro and the parties to this proceeding to discuss the scope of an IRP process with the timing of such an exercise to be determined by the Board." P.U.8(2007)
- If IRP is implemented, it would apply to future projects and not be retroactive to the Project.

**Recommendation 4.4 – Project sequencing and applying lessons learned**

The Panel recommends that, if the Project is approved, and if for any reason construction of the Gull Island portion of the Project occurs before Muskrat Falls, Nalcor should be expected to apply the lessons learned from the construction of Gull Island to the construction of Muskrat Falls.

*Response:*

The Government of Newfoundland and Labrador accepts this recommendation.

*Rationale:*

Government agrees that Nalcor should apply lessons learned during the construction of any major project to future projects.

**Recommendation 5.2 – Backing up intermittent renewable energy**

The Panel recommends that, if the Project is approved, Nalcor be required to make all reasonable efforts to maximize the potential to utilize power from the Project to back-up wind power and other intermittent renewable sources of electricity. The results of Nalcor's efforts should be reported to the public through its annual report.

*Response:*

The Government of Newfoundland and Labrador accepts the intent of this recommendation that Nalcor should make reasonable efforts to use power from the Project to back-up wind and other intermittent renewable sources of electricity.

*Rationale:*

- Government agrees that the Project provides Nalcor with the ability to integrate intermittent renewable energy resources, including the province's wind resources, which are among the best in North America.
- Government agrees Nalcor should report annually on its efforts to facilitate development of wind and other intermittent energy resources.
- The province's 2007 Energy Plan highlighted hydro development, such as Muskrat Falls, as a natural enabler of wind development.

**Recommendation 12.12 – Modifications to the Benefits Strategy**

The Panel recommends that, if the Project is approved, Nalcor and the provincial Department of Natural Resources modify two overall provisions of the Benefits Strategy. The first is to ensure that both the monthly reports on employment and goods and services and the quarterly reports on compliance are publicly available and not restricted by the confidentiality provisions of Nalcor's legislation. The second is to remove the provision that allows the Minister to modify the benefits targets and other commitments regarding this Project at the Minister's sole discretion.

*Response:*

The Government of Newfoundland and Labrador does not accept this recommendation. However, Government will require Nalcor to report on a range of benefits and targets which will be made available publicly.

*Rationale:*

- The Lower Churchill Construction Projects Benefits Strategy provides that Nalcor must report on a range of benefits targets and commitments to Government and that the Minister may provide updates to the public or House of Assembly.
- The ability of the Minister to consider the full range of implications of public release and modifying the benefits targets must not be fettered. There are other considerations important to the province that the Minister must weigh in determining any target modifications or public release of information.
- Government is committed to the principle of protecting commercially-sensitive information. Government will protect commercially-sensitive information relating to the Project in the same manner it protects commercially-sensitive information in all other sectors of the economy.
- Government will direct Nalcor to provide summarized quarterly public reports on employment, expenditure amounts to date and contract awards in the quarter. This approach when combined with the website information on procurement and contracting activity balances access to information with protecting commercially sensitive information.

**Recommendation 14.3 – Seismic testing**

The Panel recommends that, if the Project is approved, Nalcor carry out seismic testing during reservoir filling and apply appropriate mitigation measures in the event of a seismic event related to reservoir filling.

*Response:*

The Government of Newfoundland and Labrador notes this recommendation is directed to Nalcor.

*Rationale:*

Government notes that Nalcor should accept the intent of this recommendation and should complete seismic monitoring, but not seismic testing, during reservoir filling by using seismographs to record ground motion and monitor whether any seismic event occurs during reservoir filling. Seismic testing would require setting off controlled explosions or other vibrations to test for seismic events in the reservoir or dam.

The seismic monitoring in this case is a passive method, detecting seismic energy that is already occurring in the ground. When the dam is being filled, the dam structure and/or the surrounding rock will experience a change in stress distribution. When stress is redistributed, slip or shear occurs along pre-existing zones of weakness. The failure produces a seismic wave. Seismic monitoring

records the timing, location, and magnitude of the seismic wave events related to filling of the dam.

**Recommendation 15.3 – Long-term funding for environmental management from Nalcor**

The Panel recommends that, if the Project is approved, and to the extent that funds are not committed from other sources, Nalcor identify and allocate in its detailed Project budget, financial support for environmental management for the duration of Project construction. The Panel further recommends that Nalcor make a general commitment with a ten-year forecast, to be updated every five years, until such time as there is no longer evidence of ongoing environmental effects resulting from the Project.

*Response:*

The Government of Newfoundland and Labrador accepts the intent of this recommendation that Nalcor should budget funds to meet its environmental management obligations.

*Rationale:*

Government accepts that Nalcor should budget funds to meet its environmental management obligations, however, determining the method of doing so is the responsibility of the Proponent.

**Recommendation 15.10 – Local hiring for environmental management work**

The Panel recommends that, if the Project is approved, where possible, Nalcor hire local people to work on environmental monitoring and mitigation projects to benefit from their local knowledge and to develop local skills and experience in the field of environmental management.

*Response:*

The Government of Newfoundland and Labrador notes this recommendation is directed to Nalcor.

*Rationale:*

- This recommendation is consistent with the Lower Churchill Construction Projects Benefits Strategy that establishes the Project's hiring protocols. Sections 4.3 and 4.4 of the Strategy are specifically relevant to this recommendation, while remaining subject to the sections relating to gender equity and diversity provisions.
- Section 4.3 sets generating station hiring protocols consistent with the Canadian Charter of Human Rights. The protocol will implement commitments made in any executed Impacts and Benefits Agreement (IBA), followed by first consideration for employment for qualified residents of Labrador followed by qualified residents of the province.
- Section 4.4 sets HVdc transmission system hiring protocols consistent with the Canadian Charter of Human Rights. The protocol will implement commitments made



in any executed Impacts and Benefits Agreement (IBA), followed by first consideration for employment for qualified residents of the province.