

**Government of Canada Response to the Report of the Joint Federal-Provincial
Review Panel for Nalcor's Lower Churchill Generation Project in Newfoundland
and Labrador**

The Project

Nalcor Energy proposes to develop two hydroelectric generation facilities on the lower Churchill River in central Labrador with a combined capacity of 3,074 megawatts (MW). The Project consists of two dams located at Muskrat Falls and Gull Island, two reservoirs, and transmission lines connecting Muskrat Falls, Gull Island and the existing Churchill Falls hydroelectric facility. Additional project components include access roads, temporary bridges and construction camps, borrow pits and quarry sites, diversion facilities and spoil areas.

The smaller Muskrat Falls facility will have a capacity of 824 MW and will consist of a powerhouse with four turbines and a concrete dam with two sections on the north and south abutments of the river. The created reservoir will inundate an area of 41 km² at full supply level. The Gull Island facility will be constructed second and will have a capacity of 2,250 MW. The main components will consist of a powerhouse with five turbines and a rock-filled dam 99 m high and 1,315 m long. The created reservoir will inundate an area of 85 km² at full supply level.

Other associated structures will include access roads, approach channels, tailraces, spillways, transformers, switchyards and construction accommodation complexes built for 1,000 to 2,000 workers. Access to the Muskrat Falls facility will be via Black Rock Bridge on the south side of the river, 8 km west of Happy Valley-Goose Bay and the Gull Island facility will be connected to the Trans Labrador Highway.

The construction period is scheduled to begin at Muskrat Falls in Year 3. Construction of the Gull Island facility will be initiated in Year 6 and both facilities are expected to be fully operational by the end of Year 9. Construction of transmission lines to carry the power to market will be undertaken between Years 3 to 7. For the purposes of this environmental assessment, the transmission lines that will carry the power to market (i.e. the Labrador-Island Transmission Link and the Maritime Link) were not included in the scope of the Project, and are undergoing separate federal environmental assessments.

The provincial and federal governments agreed to a joint review panel to ensure that the environmental assessment satisfied their respective legislation – the Newfoundland and Labrador *Environmental Protection Act* and the *Canadian Environmental Assessment Act* – in an effective and efficient manner. The provincial and federal governments will make the final decisions regarding the Project's approval. The joint review panel (JRP) has provided advice to the governments by means of the Panel Report.

Federal Regulatory Approvals and Involvement

- (i) Natural Resources Canada may provide financial assistance in the form of a loan guarantee for a portion of the Project (i.e. the Muskrat Falls Generating Station and interconnecting transmission lines to Churchill Falls).

- (ii) Authorizations from Fisheries and Oceans Canada under subsection 35(2) of the *Fisheries Act* to harmfully alter, disrupt or destroy fish habitat and under section 32 and to destroy fish by means other than fishing;
- (iii) Approvals from Transport Canada Part 1, Section 5 of the *Navigable Waters Protection Act*.

The possibility that Fisheries and Oceans Canada would be asked to issue an authorization under the *Fisheries Act*, that Transport Canada issue approval(s) under the *Navigable Waters Protection Act* and that Natural Resources Canada may provide financial assistance in the form of a loan guarantee requires that an environmental assessment be conducted on the proposed Project pursuant to the *Canadian Environmental Assessment Act*.

The Environmental Assessment Process

In November 2006, Newfoundland and Labrador Hydro, now Nalcor Energy, submitted a project registration/project description document for the Project to the Government of Newfoundland and Labrador and to the Government of Canada.

In February 2007, Transport Canada and Fisheries and Oceans Canada determined that an environmental assessment was required under the *Canadian Environmental Assessment Act*. The Project was subject to approval under Part 1, Section 5 of the *Navigable Waters Protection Act* and required an authorization under Section 32 and Subsection 35(2) of the *Fisheries Act* to enable it to proceed. The Project was also subject to Part X of the *Newfoundland and Labrador Environmental Protection Act*, under subsections 34(1)(a) and 34(1)(d) of the *Environmental Assessment Regulations*.

Fisheries and Oceans Canada and Transport Canada advised that they would be Responsible Authorities for the environmental assessment of the Project. Environment Canada, Health Canada, Natural Resources Canada, and Aboriginal Affairs and Northern Development Canada indicated that they had relevant expertise. The Responsible Authorities determined that the Project had the potential to cause significant adverse environmental effects even with the implementation of mitigation measures, and that there were public and Aboriginal concerns that warranted referral to a federal review panel.

As a result, in June 2007, Fisheries and Oceans Canada with the support of Transport Canada, as the Responsible Authorities for the Project under the *Canadian Environmental Assessment Act*, recommended to the Minister of Environment to refer the Project to a Joint Review Panel (“the Panel”). Similarly, the Province of Newfoundland and Labrador recommended to the Lieutenant-Governor in Council that a public hearing be held for the Project. In January 2008, the Agreement for the Establishment of a Panel for the Environmental Assessment of the Lower Churchill Hydroelectric Generation Project (Panel Agreement) was concluded between the federal and provincial governments. The Panel process was explicitly intended to satisfy both the federal and the provincial environmental assessment process and legislative requirements.

The Panel was appointed by the Newfoundland and Labrador Minister of Environment and Conservation and the Minister for Intergovernmental Affairs, and the federal Minister of the Environment. The terms of reference issued by the Ministers required the Panel to assess the environmental effects of the Project, including:

- consideration of the need for and purpose of the Project;
- consideration of alternatives to the Project and alternative means of carrying out the Project;
- the environmental effects of the Project, including accidents and malfunctions and cumulative effects and the significance of these effects;
- measures to reduce adverse effects and enhance beneficial effects; and
- monitoring and follow-up.

In July 2008, the federal and provincial governments jointly issued Final Guidelines for the preparation of the Environmental Impact Statement (EIS). These Guidelines provided a framework for the gathering of information necessary for both the provincial and federal environmental assessment processes and were subject to public consultation between December 2007 and February 2008. In March 2009, Nalcor Energy released the EIS for review by the Panel and other stakeholders.

Various opportunities for participation by interested parties were provided during the Panel process. Public comment periods were held on the draft Panel Agreement, the Panel's terms of reference, the guidelines for the preparation of the EIS and the EIS itself. In January 2011 the Panel deemed that the EIS, including additional information provided by Nalcor Energy, contained sufficient information to proceed to public hearings.

The Panel held 30 days of public hearings in nine different locations across Newfoundland and Labrador and Quebec from March 3 to April 15, 2011. The public hearings provided the Panel with an opportunity to gather information relating to their outlined terms of reference and to hear from Aboriginal persons and groups, the public, governments and other interested parties about their ideas, interests, positions and concerns associated with the Project. Nalcor Energy presented information on the Project and provided clarification as required. Federal Government agencies also presented their views on the Project, its potential effects and mitigation measures.

The Panel reviewed the information and views provided by Nalcor and other participants and then applied criteria, according to guidance published by the Canadian Environmental Assessment Agency, to determine the significance of adverse environmental effects after all reasonable mitigation measures, including those recommended by the Panel, had been applied. The Panel also identified likely Project benefits.

In August 2011, Natural Resources Canada became a Responsible Authority for the Project when Canada announced a Memorandum of Agreement with the Government of Newfoundland and Labrador and the Government of Nova Scotia to provide or purchase a loan guarantee for four projects. Two of these are included as part of the Project, the Muskrat Falls Generating Station and the transmission lines that connect Muskrat Falls

Generating Station with the Churchill Falls Generating Station. The other two projects under the Memorandum of Agreement, the Labrador-Island Transmission Link and the Maritime Transmission Link, are subject to separate environmental assessments.

Through the Major Project Management Office (MPMO) Initiative, a whole of government approach is being taken to the review of the Project. A project agreement was signed in May 2009 by the Deputy Heads of Natural Resources Canada, the Canadian Environmental Assessment Agency, Fisheries and Oceans Canada, Transport Canada, Environment Canada and Indian and Northern Affairs (now Aboriginal Affairs and Northern Development). The agreement sets out roles and responsibilities and guidelines for the length of each stage of the federal review process, including the environmental assessment, Aboriginal consultations, and regulatory decisions.

The Joint Federal-Provincial Review Panel Report

The Panel Report for the Project was made public on August 25, 2011. The Panel Report addresses the factors identified in the Panel's terms of reference and sets out the rationale, conclusions and recommendations of the Panel relating to the environmental assessment of the Project. The Panel assessed the environmental effects of the Project and their significance, including effects on the atmospheric, aquatic and terrestrial environments, wildlife, land and resource use in general and for aboriginal purposes, culture and heritage, economy, employment and business, family, community life and public services, and effects caused by accidents and malfunctions. The Panel also considered environmental management strategies, cumulative effects, the purpose and need for the Project, feasible alternatives and the capacity of renewable resources to meet the needs of current and future generations.

The Panel Report presented 83 recommendations. The federal government was implicated directly or indirectly in twenty of the recommendations, whereas the remaining recommendations were directed to the Province and/or Nalcor. The Government of Canada's response to these recommendations is included at the end of this document.

With regard to its responsibilities under the *Canadian Environmental Assessment Act* and its terms of reference, the Panel determined that the Project would have significant adverse effects in the following areas:

- fish habitat and fish assemblage in reservoirs;
- terrestrial, wetland and riparian habitat;
- the Red Wine Mountain caribou herd;
- fishing and seal hunting in Lake Melville, should consumption advisories be required; and
- culture and heritage (the "loss of the river").

The Panel also identified a range of potential benefits of the Project as well as crucial additional information they felt was required before the Project could proceed. They recommended that further analysis be undertaken in the areas of long-term financial

returns, energy alternatives to serve domestic needs and reducing uncertainty about downstream environmental effects.

The Panel Report contains a number of recommended conditions and commitments that the Panel believes Nalcor Energy should implement in order to ensure that any potential significant adverse environmental effects are mitigated to the extent possible. A number of these conditions and commitments address recommendations made by federal departments in the written submissions to the Panel and at the Panel hearings.

Government of Canada Conclusions

The response to the Panel Report and its recommendations to the Government of Canada are addressed through this federal response pursuant to subsection 37(1.1) of the *Canadian Environmental Assessment Act*, in consultation with other federal agencies, and as approved by the Governor in Council

In preparation of this Government of Canada Response, Fisheries and Oceans Canada, Transport Canada and Natural Resources Canada, as the Responsible Authorities under the *Canadian Environmental Assessment Act*, reviewed the Panel Report, a subsequent independent supply report commissioned by Nalcor Energy, an economic analysis of the Project that was conducted by the Government of Canada, and comments submitted by Aboriginal groups and other stakeholders during and following the joint review panel process.

In considering whether the significant adverse environmental effects of the Project could be justified in the circumstances, the Government of Canada accounted for:

- The potential adverse effects of the Project and the commitments that have been made by the federal government related to the recommendations provided in the Panel Report, and those made by Nalcor in their Environmental Impact Statement and during the panel hearings. The Government of Canada will require certain mitigation measures, environmental effects monitoring and adaptive management be undertaken by Nalcor, as well as require additional studies on downstream effects. This will be done through inclusion of the requirements in federal authorizations and approvals. The commitments that Nalcor and the provincial Government have made will also be included in a provincial authorizing regulation. Ensuring these commitments are carried out minimizes the negative effects of the Project and reduces the risks associated with the uncertainty about the success of mitigation measures.
- The potential social (e.g. local employment and community development for Aboriginal and Labrador communities), economic (e.g. nearly 16,000 person years of direct employment) and environmental (e.g. displacement of greenhouse gas and air pollutant emissions) benefits for the Province, communities and Aboriginal groups as well as benefits beyond the Province that are associated with the Project. This included information provided by the Panel in its consideration of whether the Project would likely result in overall net benefits or not.

- An economic analysis of the Project that was conducted by the Government of Canada, while identifying risks and uncertainties, concluded by supporting Nalcor's assertions that the Project represents the least cost option for meeting anticipated provincial electricity demand. This finding has been corroborated by an independent report, undertaken by Manitoba Hydro International (MHI) for the Newfoundland and Labrador Public Utilities Board (PUB). The analysis also confirmed that while there are economic costs associated with the local environmental effects, the Project could also generate environmental and associated economic benefits through the displacement of greenhouse gas and air pollutant emissions from fossil-fuel based electricity sources. The benefits related to the displacement of emissions are either global in nature or accrue far from the Project site, but are important in meeting the Government's climate change and clean air commitments.

The Government of Canada has determined that the expected significant energy, economic, socio-economic and environmental benefits outweigh the 'significant adverse environmental effects' of the Project that have been identified in the Panel Report.

The Panel made 83 recommendations encompassing a range of environmental, as well as, broad socio-economic issues. The Government of Canada has provided clear responses to those Panel recommendations that are directed at the federal government.

The Lower Churchill Hydroelectric Generation Project will result in significant provincial, regional, and national benefits, including the replacement of non-renewable generation plants that produce significant greenhouse gases, and air pollutants such as, NO₂ and SO₂ emissions. The realization of this Project will ultimately assist Canada in reaching our Copenhagen targets and lead to better air quality for Canadians. We believe that any adverse environmental effects are more than outweighed by the significant environmental and economic benefits represented by this Project.

The Project is anticipated to yield extensive direct and indirect economic benefits for the entire region and involves \$6.4 billion dollars in investment, the majority of which will be made in Newfoundland and Labrador. The Project will facilitate greater linking of the regional electricity grid, including enhanced inter-provincial cooperation and economic integration.

Due to the increased Aboriginal and non-Aboriginal employment, and resultant higher standards of living and opportunities for affected communities, this Project will have significant socio-economic benefits for the affected communities and the entire region through the life of the Project.

Therefore the Government of Canada concludes that the significant adverse environmental effects of the Lower Churchill Hydroelectric Generation Project are justified by the benefits of the Lower Churchill Hydroelectric Generation Project.

Course of Action Decision

Paragraph 37(1.1)(c) of the *Canadian Environmental Assessment Act* indicates that the Responsible Authorities' course of action shall be in conformity with the approval of the

Governor in Council. Pursuant to subsection 37(1), if the Project is likely to cause significant adverse environmental effects that can be justified in the circumstances, the Responsible Authorities may exercise any power or duty that would permit the Project to be carried out, in whole or in part.

Subsequently, Fisheries and Oceans Canada and Transport Canada may issue any subsection 35(2) and s. 32 *Fisheries Act* authorizations and any Part 1, Section 5 of the *Navigable Waters Protection Act* approvals associated with the Project, respectively. Natural Resources Canada may provide financial assistance in the form of a loan guarantee for the Muskrat Falls Generating Station and the transmission line that will connect Muskrat Falls Generating Station to Churchill Falls Generating Station.

Under, subsection 37(2.2) of the *Canadian Environmental Assessment Act*, a Responsible Authority is required to ensure the implementation of mitigation measures for an approved Project. Similarly, under subsection 38(2) of the *Canadian Environmental Assessment Act*, the Responsible Authorities will ensure the implementation of follow-up programs that determine the accuracy of the conclusions of the environmental assessment and the effectiveness of the mitigation measures.

Response to Recommendations

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 Canada notes that this recommendation is directed to the Government of Newfoundland and Labrador.

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 Canada does not accept this recommendation. There was sufficient information given to the Panel in order to inform decision-making under the *Canadian Environmental Assessment Act*.

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 Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador and to the Government of Newfoundland and Labrador.

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 Canada notes this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 4.5 – Full clearing of the Muskrat Falls reservoir

The Panel recommends that, if the Project is approved, Nalcor be required to apply its ‘full clearing’ reservoir preparation option to the Muskrat Falls reservoir.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 4.6 – Preparation approach for Gull Island reservoir

The Panel recommends that, if the Project is approved, the reservoir preparation approach for the Gull Island reservoir be finalized and approved by the provincial Department of Natural Resources at the time of the sanction decision for Gull Island. The approach should take into account lessons learned from the preparation of the Muskrat Falls reservoir and should make all reasonable effort to increase harvested volumes above those currently projected by Nalcor under its ‘partial clearing’ option for the Gull Island reservoir.

Response:

The Government of Canada notes that this recommendation is directed to the Province of

Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 4.7 – Utilization of Merchantable Timber

The Panel recommends that, if the Project is approved, Nalcor be required to ensure utilization of both the harvested timber from reservoir preparation and the merchantable wood taken from the reservoir as part of its ‘trash and debris’ removal program after impoundment. Nalcor would retain the right to determine how this would be achieved, but should work with relevant Provincial Government departments and third party commercial interests to identify options.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador and to the Government of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 5.1 – Use of best available technology

The Panel recommends that, if the Project is approved, Nalcor be required to implement its mitigation commitments to minimize air pollution, noise and greenhouse gas emissions resulting from the Project. In addition, Nalcor should be required to use best available technology for any new construction and harvesting equipment purchased for the Project. This means that any new equipment purchased after Project approval should be required to meet the highest current emissions standards for such equipment, even if such standards are above current regulatory requirements.

Response:

The Government of Canada notes that this recommendation is directed to Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

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 Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 5.3 – Displacement of high greenhouse gas energy sources

The Panel recommends that, if the Project is approved, Nalcor be required to take all reasonable steps to ensure that power from the Project is used to displace energy from high greenhouse gas emission sources and does not displace demand management, conservation, efficiency, and the generation of power from renewable, low greenhouse gas emission energy sources. The results of Nalcor's efforts should be reported to the public through its annual report.

Response:

The Government of Canada notes that this recommendation is directed to Nalcor but also includes issues within the jurisdiction of the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 5.4 – Atmospheric monitoring

The Panel recommends that, if the Project is approved and in addition to its monitoring commitments, Nalcor should carry out the following monitoring programs using methodologies approved by federal and provincial regulators:

- monitor greenhouse gas emissions related to construction;
- monitor greenhouse gas emissions related to operation;
- track the displacement of greenhouse gas emissions in the various markets for Project power and report annually based on transparent methodologies approved by federal and provincial regulators, taking into account relevant issues identified by the Panel; and
- work with appropriate government agencies to ensure that there are active climate change monitoring programs on appropriate rivers in Labrador not affected by the Project, so that there is a better chance to separate Project impacts from climate change impacts based on local weather data collected within the Project area.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 6.1 – Timing of Reservoir Impoundment

The Panel recommends that, if the Project is approved, Fisheries and Oceans Canada require Nalcor to carry out impoundment of both the Muskrat Falls and Gull Island reservoirs during the period of mid-July to the end of September, and to prepare a detailed mitigation plan for approval by Fisheries and Oceans Canada. The mitigation plan should include information on how the effects of dewatering would be monitored, thresholds to trigger further mitigation, and identification of specific adaptive management measures and how they would be applied.

Response:

The Government of Canada accepts this recommendation and notes that it is directed to Fisheries and Oceans Canada. Nalcor will be required, pursuant to its Section 35(2) authorization under the *Fisheries Act* to carry out impoundment within the timeframe recommended by the Panel. The authorization will include requirements for monitoring the effects of de-watering, thresholds to trigger further mitigation, and identification of appropriate adaptive management measures.

Recommendation 6.2 – Environmental Flow Standards

The Panel recommends that, if the Project is approved, the provincial Department of Environment and Conservation, in consultation with Fisheries and Oceans Canada, Nalcor, Churchill Falls (Labrador) Corporation Limited, and Aboriginal groups and stakeholders, develop environmental flow standards for the lower Churchill River with respect to flows (magnitude, frequency, duration, timing, and rate of change) designed to promote the maintenance of ecological functions and the conservation of riparian and fish habitat. The environmental flow standards should be incorporated by regulation under appropriate provincial legislation and acknowledged in the Water Management Agreement. The Panel further suggests that the Department of Environment and Conservation consider developing environmental flow standards for the upper Churchill River, recognizing the importance of addressing the entire watershed as an integrated system.

Response:

The Government of Canada notes that this recommendation is directed to the provincial Department of Environment and Conservation with support from Fisheries and Oceans Canada, Nalcor, Churchill Falls (Labrador) Corporation and Aboriginal Groups. The Government of Canada will work with the appropriate parties, as required.

Recommendation 6.3 – Erosion and Sedimentation Prevention

The Panel recommends that, if the Project is approved, Nalcor be required to prepare an erosion and sedimentation prevention strategy including the use of 15-metre vegetated buffer areas during reservoir preparation, best practices at all construction and cleared areas, and specified adaptive management measures to be applied should these mitigation measures fail.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 6.4 – Mitigating Entrainment Effects

The Panel recommends that, if the Project is approved, Fisheries and Oceans Canada

require Nalcor to take the following steps before receiving a Section 35(2) authorization with respect to potential entrainment losses: (a) carry out further baseline sampling at Gull Island to verify both juvenile and adult fish movements in this area; and (b) prepare a mitigation and adaptive management strategy that establishes thresholds for further action, and identifies what adaptive measures would be taken when, and for what species. The strategy should also address compensation measures should it become apparent that high losses of a specific species are inevitable.

Response:

The Government of Canada accepts this recommendation and notes that it is directed to Fisheries and Oceans Canada. The Government of Canada would like to note that an authorization for entrainment would be issued under Section 32 of the *Fisheries Act* and not under Subsection 35(2). Before receiving an authorization, Nalcor will be required by Fisheries and Oceans Canada to carry out further baseline sampling at Gull Island to verify both juvenile and adult fish movements in this area. This information will be augmented by a review of current data from other sites with similar species assemblages to investigate the effects of fragmentation of river systems from dam construction on movement and migration of fish species. Based on this, Nalcor will be asked to prepare a mitigation and adaptive management strategy that establishes thresholds for further action, and identifies what adaptive measures would be taken when and for what species. The strategy will also address compensation measures should it become apparent that high losses of a specific species are inevitable. After construction of each facility, Nalcor, as a condition of the authorization issued by Fisheries and Oceans Canada pursuant to section 32 of the *Fisheries Act*, will be required to undertake multi-year monitoring to determine actual injury and mortality rates from entrainment of fish under normal operating conditions. If losses above those predicted are apparent, adaptive measures, including additional compensation, will be required.

Recommendation 6.5 – Pilot study for methyl mercury mitigation through soil removal

The Panel recommends that Natural Resources Canada, in consultation with Nalcor and, if possible, other hydroelectricity developers in Canada, carry out a pilot study to determine (a) the technical, economic and environmental feasibility of mitigating the production of methyl mercury in reservoirs by removing vegetation and soils in the drawdown zone, and (b) the effectiveness of this mitigation measure. The pilot study should take place in a location where the relevant parameters can be effectively controlled (i.e. not in the Lower Churchill watershed) and every effort should be made to complete the pilot before sanction decisions are made for Gull Island. If the results of the pilot study are positive, Nalcor should undertake to employ this mitigation measure in Gull Island to the extent possible and monitor the results.

Response:

The Government of Canada agrees with the intent of this recommendation and notes that it is directed to Natural Resources Canada, Nalcor and, if possible, other hydroelectric developers in Canada. However, the Government of Canada cannot commit to carrying

out the suggested pilot study, and believes that the Panel's recommended pilot project would be more appropriately led by a University-based research group with which Natural Resources Canada could collaborate.

Recommendation 6.6 – Fish habitat compensation

The Panel recommends that, if the Project is approved, Fisheries and Oceans Canada require Nalcor to:

- prepare a detailed fish habitat compensation plan in consultation with stakeholders and Aboriginal groups that addresses to the extent possible the likely interactions between species and life stages, including predator-prey relationships and also the potential to replace tributary-type habitats;
- prepare a habitat monitoring plan including thresholds for further action and identified adaptive management measures;
- implement the proposed plan, documenting the process;
- evaluate the extent to which new, stable habitat has been created, its use and productivity; and
- apply any lessons learned from implementing the Muskrat Falls compensation plan to the proposed Gull Island compensation works.

If, after all feasible adaptive management measures have been applied, Fisheries and Oceans Canada determines that there has been a significant shortfall in the amount of habitat successfully created and maintained, compared to the original proposal, Nalcor should be required to compensate by carrying out habitat compensation works in other watersheds in Labrador. Preference should be given to remediation and enhancement in areas adversely affected by the Churchill Falls project.

Response:

The Government of Canada accepts this recommendation. Consistent with Fisheries and Oceans Canada's policy, and as a condition of the authorization pursuant to Subsection 35(2) of the *Fisheries Act*, Nalcor will be required to prepare a detailed fish habitat compensation plan and consult with stakeholders and Aboriginal groups on the plan. The plan will include a multi-year habitat monitoring strategy with thresholds identified for further action and, if required, reporting processes and adaptive management measures. The information collected from Muskrat Falls will be used to finalize a fish habitat compensation plan for the Gull Island reservoir. Should monitoring indicate that the fish habitat is not achieving desired results, adjustments to the fish habitat compensation measures would be made, including fish habitat compensation in other areas.

Recommendation 6.7 – Assessment of downstream effects

The Panel recommends that, if the Project is approved and before Nalcor is permitted to begin impoundment, Fisheries and Oceans Canada require Nalcor to carry out a comprehensive assessment of downstream effects including:

- identifying all possible pathways for mercury throughout the food web, and

- incorporating lessons learned from the Churchill Falls project;
- baseline mercury data collection in water, sediments and biota, (revised modeling taking into account additional pathways, and particularly mercury accumulation in the benthos) to predict the fate of mercury in the downstream environment;
- quantification of the likely changes to the estuarine environment associated with reduction of sediment and nutrient inputs and temperature changes; and
- identification of any additional mitigation or adaptive management measures.

The results of this assessment should be reviewed by Fisheries and Oceans Canada and by an independent third-party expert or experts, and the revised predictions and review comments discussed at a forum to include participation by Aboriginal groups and stakeholders, in order to provide advice to Fisheries and Oceans Canada on next steps.

Response:

The Government of Canada agrees with the intent of this recommendation and notes it is directed to Fisheries and Oceans Canada.

As a condition of a subsection 35(2) authorization under the *Fisheries Act*, and prior to impoundment, Fisheries and Oceans Canada will require Nalcor to collect additional baseline data on bioaccumulation of methyl mercury in fish and on fish habitat downstream of Muskrat Falls.

Fisheries and Oceans Canada will require Nalcor to conduct a comprehensive multi-year program to monitor and report on bioaccumulation of methyl mercury in fish (including seals) within the reservoirs and downstream, including the Goose Bay/Lake Melville area. Fisheries and Oceans Canada will also require that Nalcor carry out multi-year post-project monitoring and reporting downstream into Lake Melville on a variety of parameters including nutrients, primary production, fish habitat utilization and sediment transport in order to assess changes to downstream fish habitat.

Recommendation 6.8 – Published analysis of downstream effects over time

The Panel recommends that, if the Project is approved, Nalcor contribute to the overall knowledge about the effects of hydroelectric projects in northern regions by ensuring that a longitudinal analysis of the effects of the Project on the downstream environment (Goose Bay and Lake Melville) over an appropriate time period, including both mercury transport and bioaccumulation and other ecological parameters, is published in a peer-reviewed journal or the equivalent. The Panel suggests that Nalcor consider collaborating with an appropriate independent research organization to carry out this recommendation by providing knowledge, data and financial resources.

Response:

The Government of Canada notes this recommendation is directed to the operations of Nalcor.

Recommendation 6.9 – Development of the Aquatic monitoring program

The Panel recommends that, if the Project is approved, Fisheries and Oceans Canada require Nalcor to organize a workshop with third-party facilitation and invited participation by Aboriginal groups, stakeholder organizations, knowledgeable local people, and independent experts from academic or equivalent organizations to review and advise on a detailed draft monitoring plan.

Response:

The Government of Canada agrees with the intent of this recommendation and notes it is directed to Fisheries and Oceans Canada. The Government of Canada understands the intent of this recommendation is to ensure all interested parties have the opportunity to input information into an aquatic monitoring plan and would support measures taken to implement this recommendation.

As per Recommendation 6.6, Nalcor will be required, as a condition of the authorization issued by Fisheries and Oceans Canada pursuant to Subsection 35(2) of the *Fisheries Act* to prepare a detailed fish habitat compensation plan that includes consultation with stakeholders and Aboriginal groups. This consultation may take one or more of many formats, including a workshop. The Compensation Plan will require a multi-year habitat monitoring plan, including thresholds identified for further action, if required, reporting process and adaptive management measures. The information collected from Muskrat Falls will be used to finalize a fish habitat compensation plan and associated monitoring program for Gull Island Reservoir.

**Recommendation 7.1 – Wetland Compensation Plan
&
Recommendation 7.2 – Riparian Compensation Plan**

The Panel recommends that, if the Project is approved, Nalcor be required to develop a detailed wetland compensation plan in consultation with Environment Canada, the provincial Department of Environment and Conservation, Aboriginal groups and appropriate stakeholders. The plan should set appropriate goals for the re-establishment of wetlands taking into account the purpose served by each type of wetland in the context of the surrounding ecosystem.

AND

The Panel recommends that, if the Project is approved, Fisheries and Oceans Canada require Nalcor to develop a detailed riparian habitat compensation plan in consultation with Fisheries and Oceans Canada, the provincial Department of Environment and Conservation, Aboriginal groups and appropriate stakeholders, that looks closely at water levels and variations in the levels needed to ensure healthy and resilient riparian habitat and coordinates with the environmental flow standards referenced in Recommendation 6.2.

Response:

The Government of Canada accepts recommendation 7.1, and agrees with the intent of recommendation 7.2. The Government of Canada agrees that detailed riparian and wetland compensation plans should be developed by Nalcor to address the loss of riparian marsh habitat as well as other kinds of wetland habitat being lost. These should be developed in close accordance with the Federal Policy on Wetland Conservation. The Government of Canada does not have the legislative means to ensure that aspects of the compensation plans related to terrestrial species are undertaken. Therefore the Government of Canada will rely on the Provincial Government to include requirements in their Authorizing Regulation (see Recommendation 15.1) that ensure compensation plans are developed and implemented with respect to terrestrial species.

Recommendation 7.3 – Recovery strategies for endangered species

The Panel recommends that, if the Project is approved, federal and provincial governments make all reasonable efforts to ensure that recovery strategies are in place and critical habitat is identified for each listed species found in the assessment area before a final decision is made about the effects of the Project on those species. Compliance with federal and provincial species protection legislation should be seen as a minimum standard. In fairness to Nalcor, this work should be given the priority needed to ensure that the Project decision is not unduly delayed. A final Project decision should only be made once government decision makers are satisfied that the recovery of listed species would not be compromised by the Project. Where Environment Canada is relying on provincial efforts to fulfill its obligations under the safety net provisions of the federal *Species at Risk Act*, before a federal decision is made about the Project it should satisfy itself that the provincial efforts for any species at risk are sufficient for its recovery and will not be compromised by the Project.

Response:

The Government of Canada agrees with the intent of this recommendation and notes it is directed at the Government of Canada and the Government of Newfoundland and Labrador. The Government of Canada does not accept the proposed timelines. It is anticipated that recovery documents, containing full or partial identification of critical habitat, for all listed *Species at Risk* in the project area will be completed by or in 2013. This recognizes that Recovery document development is a complex process which requires participation of numerous other federal and provincial and land claim jurisdictions, in addition to fulfilling legislated consultation processes and timelines.

Provinces, territories and the federal government recognize their obligations to recover species at risk under the *Accord for the Protection of Species of Risk* and Environment Canada will work with Newfoundland and Labrador on recovery documents for the listed species at risk in the project area.

Habitat availability is not a limiting factor for the three migratory bird species at risk in the Project footprint. It is believed that the relatively small loss of habitat associated with

the Project activity will result in small scale displacement of these species, but it is not believed that this will have a population-level effect across their Canadian range.

Environment Canada is available to review project-related activities to facilitate Nalcor's understanding of restrictions and prohibitions under the *Species at Risk Act* and to the extent possible advise on mitigation measures.

Recommendation 7.4 – Compliance with species at risk legislation

The Panel recommends that, if the Project is approved, Nalcor should work with federal and provincial departments responsible for species at risk legislation to ensure all Project-related activities comply with restrictions and prohibitions against harassment, disturbance, injuring or killing of listed species or destroying and disturbing their residence.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor. The Government of Canada will work with the appropriate parties, as required.

Recommendations 7.5 – Road construction and decommissioning

The Panel recommends that, if the Project is approved, the provincial Department of Natural Resources require Nalcor to minimize road construction outside the reservoirs, by locating new roads inside the impoundment area as much as possible. Any new roads proposed by Nalcor to be located outside the impoundment areas should be carefully reviewed by the Forestry Branch of the Department of Natural Resources and only approved if there is no reasonable alternative. In order to ensure that conservation objectives are met, all temporary roads outside the reservoir should be decommissioned as soon as possible to the satisfaction of the provincial Department of Environment and Conservation.

Response:

The Government of Canada notes that this recommendation is directed to the Province of Newfoundland and Labrador. The Government of Canada will cooperate with the provincial Department of Natural Resources and Nalcor as required. The Government of Canada will work with the appropriate parties, as required.

Recommendation 7.6 – Recovery of the Red Wine Mountain caribou herd

The Panel recommends that, if the Project is approved, the provincial Department of Environment and Conservation ensure that adequate resources are available so that all reasonable efforts to ensure the recovery of the Red Wine Mountain caribou herd are taken. In addition, the Department should require Nalcor to play an enhanced role in the recovery process for the Red Wine Mountain caribou herd by putting resources into the process for research and recovery efforts and to participate actively in the overall effort to ensure the recovery of the caribou herd.

Response:

The Government of Canada notes that this recommendation is directed to the provincial Department of Environment and Conservation and to the operations of Nalcor. The Government of Canada will work with the appropriate parties, as required.

Recommendation 7.7 – Management of the George River caribou herd

The Panel recommends that, if the Project is approved, the Provinces of Quebec and Newfoundland and Labrador, Environment Canada and all interested Aboriginal communities initiate a dedicated range-wide joint management program for the George River caribou herd, and through this program cooperatively carry out a comprehensive cumulative effects assessment of the impact of human activities on the herd to be updated periodically as required.

Response:

The Government of Canada agrees with the intent of this recommendation and notes it is directed to the Provinces of Newfoundland and Labrador and Quebec, Environment Canada and interested Aboriginal communities. The George River Caribou herd is exclusively provincial jurisdiction under the purview of the Provinces of Newfoundland and Labrador and Quebec. Environment Canada would work with the parties, as requested, on a joint management program, to carry out a comprehensive cumulative effects assessment once it is established by the province.

Recommendation 7.8 – Effect of reservoir preparation activities on migratory birds

The Panel recommends that, if the Project is approved, Nalcor and Environment Canada negotiate an agreement prior to reservoir preparation regarding whether and how clearing could proceed between May and July without violating the *Migratory Birds Convention Act*. To initiate this process, Nalcor should be required to submit a plan describing how it would carry out clearing activities during this period in compliance with the *Migratory Birds Convention Act*.

Response:

The Government of Canada does not accept this recommendation. An agreement between Environment Canada and Nalcor cannot be negotiated because the prohibitions of the *Migratory Birds Convention Act* and its regulations are binding and cannot be held in abeyance by permit or fettered by agreement. However, Environment Canada will continue to participate in the approvals process, including the review of any specific environmental protection plans. Environment Canada will advise Nalcor of the prohibitions under the *Migratory Birds Convention Act* relating to Project activities, and will continue to recommend that avoidance of Project activity during the breeding season is the best and lowest risk strategy. Nalcor will remain subject to the prohibitions against taking of migratory birds, their nests or eggs and be subject to enforcement action if prohibitions are contravened.

Recommendation 7.9 –Vegetation control

The Panel recommends that, if the Project is approved, Nalcor be required to restrict the use of chemical herbicides to areas where alternative vegetation control is not reasonably possible. Approval of the use of herbicides should only be granted after Nalcor has submitted an overall vegetation control plan to the provincial Department of Environment and Conservation, demonstrating that all alternatives have been adequately explored and the use of non-chemical approaches maximized.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 7.10 – Monitoring, follow-up and adaptive management for the terrestrial environment

The Panel recommends that, if the Project is approved and in addition to its monitoring commitments listed in Chapter 7, Terrestrial Environment, Nalcor should carry out the following monitoring programs:

- monitor the effectiveness of riparian and wetland habitat compensation work, including the effect on wetland sparrows;
- monitor the response of the Red Wine Mountain caribou herd including any population changes through the construction phase and in the early part of the operation phase;
- monitor wolf predation of caribou, particularly the Red Wine Mountain herd;
- monitor interactions of the George River caribou herd with Project activities and facilities and identify any impacts;
- monitor ashkui formation in the Project area;
- monitor direct and indirect impacts on waterfowl, such as waterfowl adjustment to changes in riparian habitat, and changes in the location and formation of ashkui;
- confirm the presence of and monitor the impact of the Project on salamanders and spring peepers;
- develop a detailed mitigation and monitoring plan for all listed species for approval by the provincial Department of Environment and Conservation;
- confirm the presence outside the flood zone of the eight plant species identified by Nalcor as unique to the river valley plus the two additional species listed by the Department of Environment and Conservation (marsh horsetail and hidden fruit bladderwort) and develop a detailed mitigation plan for these plant species for approval by the Department;
- monitor the impact of the Project on furbearers, small game, small mammals, and black bears; and
- collaborate with the Department of Environment and Conservation to develop an appropriate approach to monitor pine marten in areas affected by the Project where there is no trapping activity.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as well as to the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 8.1 – Trapping compensation program

The Panel recommends that, if the Project is approved, Nalcor be required to establish a compensation program for all bona fide trappers along the lower Churchill River, without requiring proof of ten years' use as an entry point. Instead, compensation should be commensurate with the total extent of trapping activity during the previous ten years, as shown by the recorded income attributable to the Project area. Compensation should be awarded within six months after an individual trapper has established eligibility.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 8.2 – Mud Lake ice bridge mitigation

The Panel recommends that, if the Project is approved, Nalcor, the Government of Newfoundland and Labrador and the Mud Lake Improvement Committee negotiate an agreement to address how any future adverse changes to the ice bridge that would lengthen the existing period of time when residents are unable to cross the river by boat or snowmobile would be assessed and mitigated. Alternative transportation options should be provided if travel across the river is prevented during the freeze-up or break-up for periods in excess of two weeks. The selected solution should adequately meet the residents' needs for everyday and emergency travel and should respect the character of the community. Road access should not be imposed on the community as a solution to address ice bridge changes without its consent. The primary onus to cover the costs of this mitigation should be placed on Nalcor. The agreement should also address the role of the Province in mitigating any cumulative effects caused by climate change.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor, the Province of Newfoundland and Labrador and the Mud Lake Improvement Committee. The Government of Canada will work with the appropriate parties, as required.

Recommendation 8.3 – Navigation during impoundment

The Panel recommends that, if the Project is approved, Nalcor be required to develop a mitigation plan in consultation with the Mud Lake Improvement Committee to address temporary transportation difficulties during reservoir impoundment periods. If

transportation is impeded, Nalcor should provide and pay for alternative transportation that minimizes inconvenience to the residents.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador, in consultation with the Mud Lake Improvement committee. The Government of Canada will work with the appropriate parties, as required.

Recommendation 8.4 – Lower Churchill navigation mitigation and monitoring plan

The Panel recommends that, if the Project is approved, Transport Canada require Nalcor to develop a mitigation and monitoring plan for each reservoir, in consultation with river users, to address navigation issues on the river, including both reservoirs and the downstream portion of the main stem. The plan would address (a) navigation issues during the construction and impoundment periods, (b) provision of boat launches and portages, (c) identification of areas that need to be cleared before impoundment to create safe shoreline access areas for small boats, (d) management of the stick-up zones, including how and when Nalcor would manually remove trees left standing three years after impoundment, (e) management of trash and debris in the reservoirs, (f) charts to show navigational hazards, signage and information, and (g) monitoring and specific adaptive management measures to address any navigational problems downstream from Muskrat Falls.

Response:

The Government of Canada accepts this recommendation and notes it is directed to Transport Canada. Should the Project proceed, Transport Canada will include the provisions listed by the panel as conditions on the appropriate *Navigable Waters Protection Act* approvals to reduce the impacts to navigation for each reservoir. The proponent must legally adhere to all conditions listed on any issued *Navigable Waters Protection Act* approvals. Transport Canada will work with the proponent, Aboriginal groups and the boating public to ensure that the listed conditions are successfully implemented. Monitoring will be conducted and adaptive measures will be implemented as required, to ensure impacts downstream of Muskrat Falls are minimal.

Recommendation 8.5 – Allowing local forestry operators to clear additional areas

The Panel recommends that, if the Project is approved, the provincial Department of Natural Resources require Nalcor to allow local forestry operators to clear timber from areas not otherwise scheduled to be cleared, provided they can demonstrate a safe approach. Nalcor should be required to pay the stumpage fees for the forestry operators salvaging the extra timber.

Response:

The Government of Canada notes that this recommendation is directed to the Province of

Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 9.1 – Noise and dust management

The Panel recommends that, if the Project is approved, and to avoid disturbance of persons carrying out traditional land and resource use activities, Nalcor be required to monitor and manage construction traffic and borrow pit activities to minimize dust problems, noise and sleeping disturbance for occupants of cabins and camps along the roads.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 9.2 – Relocation of Canada yew

The Panel recommends that, if the Project is approved, Nalcor be required to collaborate with Innu Elders on where and how to relocate Canada yew plants, conduct regular field visits with Elders for assessment, and employ any adaptive management procedures required to maintain a stable population of the plant.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 9.3 – Community level land and resource use monitoring

The Panel recommends that, if the Project is approved, Nalcor involve all Aboriginal groups in the design and implementation of its proposed community land and resource use monitoring program for the duration of the construction period to ensure that parameters of importance to these groups and Traditional Knowledge are included.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 11.1 – Involvement of Aboriginal Groups in the management and protection of historic and archaeological resources.

The Panel recommends that, if the Project is approved, Nalcor, in collaboration with the Provincial Archaeology Office, establish and support a program to involve all three

Labrador Aboriginal groups in (a) the documentation and interpretation of known historic and archaeological sites and artifacts and (b) the process to be followed in the case of inadvertent discoveries of previously unknown sites and artifacts during construction, including notification of the three groups. Nalcor should also give consideration to inviting participation by interested Aboriginal communities in Quebec. Nalcor should share with Aboriginal groups the results of its work on the monitoring of historic and archeological resources to be compiled and provided annually to the Provincial Archaeology Office.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador and to the Provincial Archeology Office. The Government of Canada will work with the appropriate parties, as required.

Recommendation 11.2 – Commemoration initiatives

The Panel recommends that, if the Project is approved, Nalcor work in collaboration with local communities and Aboriginal groups to (a) identify sites, artifacts and intangible elements (including portages, traplines, trails and personal stories) to be documented and commemorated, (b) determine how commemoration should occur and (c) implement specific commemorative initiatives (such as plaques and story boards) at appropriate locations in communities and throughout the river valley. Local heritage organizations could benefit by receiving funding to undertake part of this work and to implement education and interpretation programs.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador and in consultation with local communities and Aboriginal groups. The Government of Canada will work with the appropriate parties, as required.

Recommendation 11.3 – Naming Project-Related Features

The Panel recommends that, if the Project is approved, the Government of Newfoundland and Labrador develop an approach to the naming of Project-related features in consultation with local communities and Aboriginal groups that recognizes the importance of place names in Aboriginal cultures.

Response:

The Government of Canada notes that this recommendation is directed to the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 12.1 – Early candidate selection and training

The Panel recommends that, if the Project is approved, Nalcor take a more proactive approach to providing early and specific training programs to certain Labrador candidates. This approach could include measures such as early candidate selection, conditional letters of intended employment, and, on-the-job training at other Nalcor operations or with other entities with which Nalcor has influence.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 12.2 – Workplace attachment for apprenticeship graduates

The Panel recommends that, if the Project is approved, Nalcor commit to providing workplace attachment for both first and second year graduates of apprenticeship programs to the maximum extent possible.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 12.3 – Training to ‘journeyperson’ level in community of residence

The Panel recommends that, if the Project is approved, relevant provincial departments commit to explore with Nalcor, other educational entities and agencies and relevant communities in Labrador, how to implement to the extent practical, training to ‘journeyperson’ level in the community of residence.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 12.4 – Address wage subsidy stigma

The Panel recommends that, if the Project is approved, to the extent that wage subsidies might be available and used for new job entrants, Nalcor implement an education and communications program to address and remove the stigma that some might feel is associated with such a practice.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 12.5 – Preparing for participation in wage economy

The Panel recommends that, if the Project is approved, Nalcor develop and implement, in consultation with Aboriginal groups, an appropriate orientation and information process to assist prospective employees who might have little or no experience of participation in a wage economy. Nalcor should also expand training programs to include, in addition to skills training, training to equip potential Aboriginal employees to deal with various financial, social and cultural challenges as a result of employment in the construction industry. In consultation with Aboriginal groups, Nalcor should also consider providing additional money management programs such as payroll saving schemes.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 12.6 – Continuation of Labrador Aboriginal Training Partnership

The Panel recommends that, if the Project is approved, Nalcor support the continuation of the Labrador Aboriginal Training Partnership beyond 2012, including making a financial contribution if required to both enable current participants to complete their training and to meet additional training requirements.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 12.7 – Employment Outreach to Quebec Aboriginal Communities

The Panel recommends that, if the Project is approved, Nalcor initiate an employment outreach program for interested Aboriginal groups in Quebec; such a program could include among other measures, a specific recruitment program, transportation assistance from Sept-Iles, and measures to address social and cultural issues including any associated language barriers.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government

of Canada will work with the appropriate parties, as required.

Recommendation 12.8 – Quantitative targets for goods and services

The Panel recommends that, if the Project is approved, the concept of quantitative objectives or targets be applied to the provision of goods and services, with targets established both for the province as a whole, and for Labrador.

Response:

The Government of Canada notes this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 12.9 – Enhanced supplier development program

The Panel recommends that, if the Project is approved, Nalcor enhance its supplier development program by implementing the following measures: (a) establish the Labrador Business Opportunities Committee and appoint the full time Coordinator in Happy Valley-Goose Bay as soon as possible, (b) ensure the Coordinator (a Nalcor employee) has sufficient seniority within the organization to influence relevant procurement decisions and has full access to all procurement information and related decision making, (c) release as soon as possible the list of goods and services required by the Project, with specific indications of time frame, approximate volumes and dollar values or ranges as appropriate, and (d) ensure immediately that all engineering management personnel involved in specifications, bidder prequalification, and procurement are fully aware of Nalcor's commitments towards maximizing benefits in this area and act accordingly.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 12.10 – Update quantitative targets at time of sanction

The Panel recommends that, if the Project is approved, Nalcor update at the time of Muskrat Falls sanction, the quantitative objectives or targets and the detailed list of goods and services required by the Project. Further, that this update be done in consultation with interested parties and the information be provided for Muskrat Falls construction and, to the extent possible, for the Project as a whole.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 12.11 – Transparent bidding process

The Panel recommends that, if the Project is approved, Nalcor implement a transparent bidding process that ensures that bidders are fully aware of the decision-making process, unsuccessful bidders can find out the reasons why and thereby improve, and Nalcor's commitments and programs apply and are enforced by all its contractors, sub-contractors and suppliers.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

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 publically 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 Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador and the provincial Department of Natural Resources. The Government of Canada will work with the appropriate parties, as required.

Recommendation 13.1 – Sheshatshiu social effects mitigation

The Panel recommends that, if the Project is approved, Innu Nation, Sheshatshiu Innu Band Council, Nalcor, the provincial Department of Health and Community Services, and relevant federal government departments develop a Memorandum of Understanding with regard to identifying and implementing (a) mechanisms to prevent the exacerbation of existing social problems and (b) mitigation measures such as mental health and addictions services and family support required to address any Project-related increases in social problems. Each party would bring to the table its relevant knowledge and resources. In the case of Innu Nation and Sheshatshiu Innu Band Council, this would include any provisions of the Impacts and Benefits Agreement component of the Tshash Petapen Agreement that directly address this issue. In the case of Nalcor, its role would be to adjust hiring, employment and employee assistance arrangements where possible and appropriate to assist or reinforce mitigation. The federal and provincial governments should provide resources to discharge their responsibilities in these areas.

Response:

The Government of Canada agrees with the intent of this recommendation and notes it is directed to Innu Nation, Sheshatshiu Innu Band Council, the operations of Nalcor as regulated by the Province of Newfoundland and Labrador, the provincial Department of Health and Community Services, and relevant federal government departments. The Government of Canada will work with the appropriate parties, as required.

Recommendation 13.2 – Social Effects Needs Assessment and Outreach

The Panel recommends that, if the Project is approved, the provincial Department of Health and Community Services, in consultation with Aboriginal groups, and appropriate government and community agencies from the Upper Lake Melville area, conduct a social effects needs assessment, including an appropriately resourced participatory research component, that would determine the parameters to monitor, collect baseline data, and provide recommendations for social effects mitigation measures and an approach to on-going monitoring. It is expected that Innu Nation would be a participant in the research and that the results would inform and enhance the social effects mitigation measures suggested in Recommendation 13.1. The results of the needs assessment would be documented in a public report and, subject to the agreement of participants, the results of the research would be published in a peer-reviewed journal.

Response:

The Government of Canada notes that this recommendation is directed to the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 13.3 – Worksite measures to address addictions issues

The Panel recommends that, if the Project is approved, Nalcor conduct careful monitoring of the effectiveness of the policy of controlled access to alcohol at the accommodation camps and provide professional addictions counseling to employees.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 13.4 – Variety of work schedules

The Panel recommends that, if the Project is approved, Nalcor offer a variety of work schedules, and require the same of its contractors, to accommodate different groups of workers and to assist in meeting its employment goals, particularly for Aboriginal employees and women.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 13.5 – Health and social services

The Panel recommends that, if the Project is approved, the provincial Department of Health and Community Services formally commit to provide the human resources required to address any Project-related increases in the demand for mental health, addictions and other health and social services at the Labrador Health Centre, as identified in the needs assessment. Nalcor's contribution to mitigation measures to address this should be clarified through a Memorandum of Understanding with the Labrador-Grenfell Regional Health Authority.

Response:

The Government of Canada notes that this recommendation is directed to the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 13.6 – Capacity agreement with Happy Valley-Goose Bay

The Panel recommends that, if the Project is approved, the Government of Newfoundland and Labrador and Nalcor negotiate a capacity agreement with the Town of Happy Valley-Goose Bay to provide financial resources to increase the Town's capacity to address additional administrative demands related to the Project. The time period for the agreement would be negotiated by the parties and should relate to the needs expected at different stages of the Project. The resources would be intended to enable the Town to:

- establish baseline data on infrastructure capacity and use prior to the start of construction;
- monitor Project-related infrastructure effects throughout the construction period of the Project and identify needed mitigation;
- prepare, publicize and update on a regular basis, emergency preparedness plans to
- address the possibility of a catastrophic flood event;
- prepare a low income housing strategy; and
- Address issues related to Project-related in-migration and the potential economic downturn at the end of the construction phase, and any other Project-related effects within the Town, not otherwise mitigated.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador, the Government of Newfoundland and Labrador and the Town of Happy-Valley Goose Bay. The Government of Canada will work with the appropriate parties, as required.

Recommendation 13.7 – Funding for infrastructure mitigation

The Panel recommends that, prior to Project sanction, a binding and firm commitment be given by Nalcor and the Government of Newfoundland and Labrador that sufficient funds and resources be made available to fully mitigate Project-related adverse impacts on infrastructure in Happy Valley-Goose Bay.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador and the Government of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 13.8 – Low-income housing strategy

The Panel recommends that, if the Project is approved, before construction begins, Nalcor support the efforts of the Town of Happy Valley-Goose Bay, relevant federal and provincial departments, and local low-income housing agencies, to develop and implement a strategy to set measurable targets, address the existing low-income housing needs and mitigate the adverse impacts of Project-related in-migration on low-income housing.

Response:

The Government of Canada agrees with the intent of this recommendation and notes it is directed to the operations of Nalcor as regulated by the province of Newfoundland and Labrador, the Town of Happy Valley-Goose Bay and relevant federal and provincial departments. The Government of Canada will work with the appropriate parties, as required.

Recommendation 13.9 – Possible requirement for consumption advisories in Goose Bay or Lake Melville.

The Panel recommends that, if the Project is approved and the outcome of the downstream mercury assessment (Recommendation 6.7) indicates that consumption advisories would be required for Goose Bay or Lake Melville, Nalcor enter into negotiations prior to impoundment with the parties representing – as appropriate – Goose Bay and Lake Melville resource users. Depending on where the consumption advisories would apply, these could include Aboriginal groups, the Town of Happy Valley-Goose Bay, Mud Lake Improvement Committee, the Town of North West River and the community of Rigolet. The purpose of the negotiations would be to reach agreement regarding further mitigation where possible and compensation measures, including financial redress if necessary. This recommendation would also apply later in the process if the downstream mercury assessment indicated that advisories were not likely, but monitoring subsequently required their application.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador, with participation from Aboriginal groups, the Town of Happy Valley-Goose Bay, Mud Lake Improvement Committee, the Town of North West River and the community of Rigolet. The Government of Canada will work with the appropriate parties, as required.

Recommendation 13.10 – Consumption advisory implementation

The Panel recommends that, if the Project is approved and fish and seal monitoring indicates that consumption advisories are required, Nalcor:

- follow Health Canada guidelines regarding the establishment of human mercury hazard quotient levels and fish consumption advisories;
- consult with Aboriginal Affairs and Northern Development Canada regarding best practices for the communication of advisories;
- consult with Aboriginal groups and affected communities regarding an effective approach to the communication and implementation of consumption advisories that ensures that affected communities have an understanding of the quantities and types of fish that can be consumed safely and the health benefits of including fish in one's diet;
- ensure that notifications of the consumption advisories are placed at regular intervals in easily visible locations along the shorelines of affected water bodies;
- ensure that consumption advisories are updated as necessary to reflect any changes detected in mercury levels in fish or seal; and
- provide publicly accessible, up-to-date and accurate information through the internet, radio, newspapers and other means regarding the health risks of mercury and the status of the advisories.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor. The Government of Canada will work with the appropriate parties, as required.

Recommendation 13.11 – Human health and mercury monitoring

The Panel recommends that, if the Project is approved, Nalcor, in collaboration with Health Canada and the provincial Department of Health and Community Services:

- consult with Aboriginal groups and affected communities regarding the approach to be taken to baseline and follow-up mercury testing and the communication of results for each group; and
- establish baseline human mercury levels in Churchill Falls, Upper Lake Melville communities and Rigolet, with consideration given to offering blood tests as well as hair samples for Innu participants, due to inconsistencies noted in the correlation between hair sample results and dietary consumption.

If consumption advisories are required, it is further recommended that Nalcor ensure that a human health mercury monitoring program is established concurrently with the issuing of consumption advisories. This monitoring would continue until five years after the lifting of consumption advisories, or until such time as determined by Health Canada, and would be overseen by the Monitoring and Community Liaison Committee described in Chapter 15.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 13.12 – Dietary Surveys

The Panel recommends that, if the Project is approved and consumption advisories are required as a result of mercury levels in fish or seal, Nalcor conduct ongoing dietary surveys as an integral part of the mercury monitoring program, including fish, seal, caribou and other country food. Dietary surveys should be conducted concurrently with regular mercury testing in affected communities to determine the effectiveness of the consumption advisories and the overall impact on fish and country food consumption.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 13.13 – Research on mercury in country food

The Panel recommends that, if the Project is approved, the provincial Department of Labrador and Aboriginal Affairs, in consultation with Health Canada and Aboriginal groups, initiate a study of (a) the extent of country food contamination by mercury and other contaminants and (b) human consumption levels of country food, particularly in areas where people are also exposed to mercury in fish, to identify the potential risks to human health in Labrador.

Response:

The Government of Canada notes that this recommendation is directed to the provincial Department of Labrador and Aboriginal Affairs. The Government of Canada will work with the appropriate parties, as required.

Recommendation 14.1 – Emergency preparation for the possibility of a dam failure

The Panel recommends that, if the Project is approved, Nalcor be required to:

- prepare and provide to affected communities updated maps that more clearly

- show areas that would be flooded following a dam failure;
- prepare, in consultation with the relevant communities and appropriate authorities, an Emergency Preparedness Plan, for response in the event of catastrophic dam failure, and emergency response procedures and community evacuation procedures related to a dam failure and subsequent flooding; the Plan should be reviewed every five years;
- work with each community that has been identified as being at risk of flooding in the event of a dam failure to develop evacuation plans, to be completed prior to filling of the reservoirs;
- work with emergency response providers and assist as appropriate in the event of an evacuation;
- implement a flood warning system for Mud Lake and Happy Valley-Goose Bay to be approved by the provincial Department of Environment and Conservation; and
- conduct seismographic monitoring in the Project area prior to construction.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador, in consultation with the provincial Department of Environment and Conservation. The Government of Canada will work with the appropriate parties, as required.

Recommendation 14.2 – Compensation for losses in the event of a dam failure

The Panel recommends that, if the Project is approved, the Government of Newfoundland and Labrador require Nalcor to assume liability on a ‘no fault’ basis for any loss of life and financial losses incurred because of the destruction of property and belongings and disruption of activities caused by flooding as a result of one or more dams failing on the lower Churchill River. Nalcor should provide guarantees in the form of insurance, bonds or other appropriate measures that individuals, businesses and institutions suffering damage would receive full compensation, the amount to be determined by a neutral third party, regardless of the cause of the dam failure.

Response:

The Government of Canada notes that this recommendation is directed to the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

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 Canada notes that this recommendation is directed to the operations

of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 15.1 – Authorizing Regulation

The Panel recommends that, if the Project is approved, the Government of Newfoundland and Labrador issue an authorizing regulation or equivalent mechanism that:

- lists and requires Nalcor to implement all its environmental management commitments in relation to the Project made during the course of the environmental assessment, plus the additional measures recommended by the Panel and accepted by the Government of Newfoundland and Labrador;
- lists and requires provincial departments to implement all their environmental management commitments in relation to the Project made during the course of the environmental assessment, plus the additional measures recommended by the Panel and accepted by the Government of Newfoundland and Labrador;
- includes a mechanism for updates as required to reflect any additions or changes, including adaptive management strategies that may be required and are not yet identified;
- ensures compliance with Environmental Protection Plans, Emergency Response Plans, Contingency Plans, Occupational Health and Safety Plans, and Environmental Effects Monitoring Plans including those that are implemented through another regulatory instrument and those that are unregulated;
- requires Nalcor to prepare and publish on the internet an annual report describing its environmental management activities and results, including mitigation, monitoring and adaptive management as appropriate, and related disbursements;
- establishes a monitoring and community liaison committee; and
- remains in effect for the duration of the construction period and a sufficient period of time thereafter to ensure there is no longer a risk of adverse effects as a result of the Project.

Response:

The Government of Canada notes that this recommendation is directed to the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 15.2 – Federal – Provincial Joint Regulatory Plan

The Panel recommends that, if the Project is approved, the federal and provincial governments prepare a joint regulatory plan for the Project which outlines their respective regulatory requirements and includes a coordinated approach to areas where there is overlapping or related jurisdiction, and commit to it by signing a Memorandum of Agreement. The regulatory plan should address the regulations, guidelines, standards and criteria to be applied to activities. Each government would appoint a coordinating department or agency to prepare the plan and to produce a joint annual report regarding Nalcor's compliance, any issues or problems that were identified and how they were resolved. This report would be made available to the public through the internet.

Response:

The Government of Canada agrees with the intent of this recommendation and notes it is directed to federal and provincial governments. The Government of Canada understands that the intent of this recommendation is to ensure coordination between federal and provincial agencies to guarantee compliance with all relevant federal and provincial regulations. The Government of Canada is of the view that the Province's Environmental Protection Plan will afford the necessary coordination mechanisms and is an effective means of ensuring compliance. Nalcor will also be required through the Authorizing Regulation to create a yearly performance document that lists all authorizations and permits provided during the year and identifies Nalcor's compliance with them.

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 Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 15.4 – Long Term Funding for Environmental Management from government departments

The Panel recommends that, if the Project is approved, the governments of Newfoundland and Labrador and Canada make long-term commitments to support annual budget requests by the relevant departments with responsibilities for Project-related environmental management including socio-economic mitigation commitments. The Panel further recommends that the governments make general commitments 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 Canada agrees with the intent of this recommendation and notes it is directed to the governments of Newfoundland and Labrador and Canada. The Government of Canada will work with the appropriate parties, as required.

Recommendation 15.5 – Lower Churchill Project Monitoring and Community Liaison Committee

The Panel recommends that, if the Project is approved, prior to the start of construction, the provincial Department of Environment and Conservation appoints a Monitoring and Community Liaison Committee, using a community-based nomination process. Nalcor, through the Department, should provide the Committee with sufficient resources to allow for staff support, expenses and a modest honorarium for non-government participants, acquisition of independent expert advice, and adequate communication with community residents including occasional public forums. The mandate of the Committee would be set out in the Authorizing Regulation and the Federal-Provincial regulatory plan. The Committee would operate throughout the construction period and for the first ten years of the operating period, at which point the continuing need for the Committee should be reassessed by the Department in consultation with the Committee, the communities and Nalcor. The Committee would:

- provide community feedback and advice to the Department and to Nalcor on relevant issues including Project-specific mitigation, impact monitoring and adaptive management committed to by Nalcor and as recommended by the Panel;
- be empowered as required to establish subcommittees or working groups to address the key areas of biophysical monitoring and follow-up, enhancing employment and business benefits, and health and social issues;
- have representation from communities, community-based agencies and non-government organizations, Aboriginal organizations, relevant federal and provincial government departments and Nalcor (ex-officio); and
- liaise with the public to ensure a transparent approach to addressing public concerns and the communication of monitoring results.

Response:

The Government of Canada notes that this recommendation is directed to the provincial Department of Environment and Conservation and the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 15.6 – Project-specific effects monitoring programs

The Panel recommends that, if the Project is approved, all Project-specific effects monitoring programs, whether conducted by Nalcor, governments or in combination, include the following elements:

- identification of monitoring objectives and means of achieving verifiable results capable of guiding remedial action;
- formulation of clearly stated research questions capable of testing impact predictions;
- key measurable indicators linking Project activities to outcomes, and threshold or reference levels to identify Project effects;
- strategies and protocols for data collection and quality control;

- protocols for data compilation, storage, control and access;
- provision for data analysis and assessment; and
- reporting procedures and schedules.

Response:

The Government of Canada accepts this recommendation and notes it is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador and the federal and provincial governments. The Government of Canada understands the intent of this recommendation is to ensure that the results of the monitoring programs for the project have public credibility and scientific relevance.

The Government of Canada is committed to ensuring that monitoring and follow-up programs associated with federal regulatory approvals follow a scientific approach that includes the elements outlined above and will work with the appropriate parties, as required.

Recommendation 15.7 – Adaptive Management

The Panel recommends that, if the Project is approved, adaptive management for Project specific or cumulative effects, whether conducted by Nalcor, governments, or in combination, include the following components:

- commitment to a proactive approach to adaptive management;
- clearly defined impacts thresholds to clarify where and when adaptive responses would be necessary;
- implementation and contingency plans and resources to enable responsive action especially in areas where effect predictions are thought to be uncertain and where predictive errors may have serious consequences;
- transparent process for setting and adjusting monitoring and management priorities; and
- provision for regular review of adaptive management effectiveness, adjustment of related monitoring and responses to focus on significant continuing concerns.

Response:

The Government of Canada accepts this recommendation and notes it is directed at the operations of Nalcor as regulated by the Province of Newfoundland and Labrador and the federal and provincial governments. The Government of Canada agrees that adaptive management is an important tool for minimizing the future environmental effects of the Project. It will ensure that adaptive management is incorporated into federal approvals, permits and authorizations required for the Project. In such instances, to the extent possible, approvals may be amended to address the mitigation of future impacts.

Recommendation 15.8 – Complaints resolution

The Panel recommends that, if the Project is approved, before the start of construction, Nalcor develop a complaints resolution process, in consultation with the Monitoring and

Community Liaison Committee, to address concerns relating to possible adverse Project effects on individuals, and to be implemented during construction and operations. The process could include the following:

- easy access for individuals to bring concerns or complaints to Nalcor via a toll-free phone number, website and other appropriate means;
- dedicated Nalcor staff support to receive, process and respond to complaints;
- a tracking process with response time targets;
- third-party adjudication in the event that complaints cannot be otherwise resolved to the satisfaction of both Nalcor and the complainant; and
- a system to report on complaints received and how they were resolved.

Response:

The Government of Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 15.9 – Environmental Review in the event that construction of the second generation facility is delayed

The Panel recommends that, if the Project is approved and the construction of the second generating facility and reservoir does not start before the first is completed, the environmental release would expire and terms and conditions contained in the original release would be revisited. The extent of the review required for later release would be the decision of the relevant federal and provincial governments, depending on applicable laws and circumstances at the time.

Response:

The Government of Canada does not accept this recommendation that, in the federal context, the course of action would automatically expire. However, the Government of Canada would support an environmental management review (i.e. lessons learned) during the construction of the first facility to inform the construction of the second facility depending on applicable laws and circumstances at the time.

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 Canada notes that this recommendation is directed to the operations of Nalcor as regulated by the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 15.11 – Government Response to Panel Report

The Panel recommends that the federal and provincial governments provide written responses to the Panel report and that these responses be made available to the general public through the internet.

Response:

The Government of Canada accepts this recommendation and notes it is directed to the federal and provincial governments. The Government of Canada's response to the Panel's report will be made public through Canadian Environmental Assessment Registry once a Governor in Council decision is made.

Recommendation 15.12 – Decommissioning

The Panel recommends that Nalcor demonstrate, prior to Project approval and in a manner acceptable to both governments, how it will assume financial responsibility for the potential future decommissioning of the Project to ensure that decommissioning does not become a burden to future generations.

Response:

The Government of Canada does not accept this recommendation because decommissioning is not contemplated for this Project. Should the operator of the generation facility at any time require refurbishment or remediation of the facility, then it will be done in accordance with the laws of general application at that time.

Recommendation 16.1 – Regionally integrated cumulative effects assessment

The Panel recommends that, if the Project is approved, the provincial Department of Environment and Conservation, in collaboration with the provincial Department of Labrador and Aboriginal Affairs and other relevant departments, identify regional mechanisms to assess and mitigate the cumulative effects of current and future development in Labrador.

Response:

The Government of Canada notes that this recommendation is directed to the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.

Recommendation 16.2 – Establishment of Protected Areas

The Panel recommends that, if the Project is approved, the provincial Department of Environment and Conservation commit resources to advance the Protected Areas Strategy process by working towards the following goals and reporting annually on progress:

- identify priority candidate areas for provincial protection in Labrador in order to bring the total protected area (federal and provincial) up to the national average (approximately 8.5 percent) before any additional major development is approved in Labrador;
- identify additional candidate areas in Labrador needed to bring the total protected area up to the level identified in the Protected Areas Strategy as desirable for adequate conservation purposes (10 to 15 percent);
- through this process, address preservation of representative areas of all ecozones, mitigation of habitat fragmentation, especially for migratory wildlife, and protection of selected rivers; and
- establish a schedule to ensure that priority candidate areas are protected.

Response:

The Government of Canada notes this recommendation is directed to the Province of Newfoundland and Labrador. The Government of Canada will work with the appropriate parties, as required.