#### LABRADOR-ISLAND TRANSMISSION LINK

Environmental Impact Statement
Innu Nation Comments
June 12, 2012

#### **GENERAL COMMENTS**

#### Assessment of Effects on Innu Aboriginal and Future Treaty Rights

The EIS has not addressed the effects of the proposed Project on Innu rights to harvest. These rights will continue forever under the terms of the Final Agreement. The rights are recognized in the Innu Rights Agreement in Principle, which describes the various categories of Innu lands, and the Innu rights within those lands. The Innu negotiated those rights in the Labrador Innu Settlement Area, which rights are exclusive in Labrador Innu Lands, in order that they could harvest in perpetuity.

In other words, the EIS has not answered the more fundamental questions:

- What is the Proponent's understanding of the asserted or established Aboriginal rights and treaty rights held by the Innu of Labrador?
- What are the potential adverse effects of the Project on the exercise of asserted or established Aboriginal rights and treaty rights of the Innu of Labrador?
- What measures are proposed to avoid, reduce or otherwise mitigate potential adverse impacts on the exercise of asserted or established Aboriginal rights and treaty rights of the Innu of Labrador?

The Innu Nation recognizes that the duty to consult and, where appropriate, accommodate may or may not be met through the environmental assessment, and other actions are often required. This leads to a fourth question:

• What is the nature and scope of the accommodation of Innu Nation rights required in order that the proposed Project may be approved by the Provincial and Federal Governments, and has that accommodation been made?

Innu Nation has attempted to address how these questions might be answered in the context of the Innu right to hunt caribou in our response to Sections 10.3.3.2 and 12.3. Though the Innu are currently not hunting caribou south of Lake Melville and the Churchill River due to the moratorium, the Innu right to hunt caribou in that area remains.

#### **Cumulative Environmental Effects**

Innu Nation believes that the appropriate temporal period for cumulative effects assessment in Labrador needs to begin prior to industrial development in the territory, and at a minimum prior to the development of the TLH 2, TLH 3, commercial forestry and military flight training. These activities constitute "major actions" in Labrador for which there is also considerable information concerning environmental conditions both prior to development and since that time.

With respect to future developments to be included in the cumulative effects assessment, Innu Nation has suggested several other projects and activities that appear to be "reasonably foreseeable" and evidence to support their inclusion in the cumulative environmental effects assessment.

#### Caribou and the Innu right to hunt caribou

The focus of the assessment of the effects of the Project on caribou appears to be limited to physical habitat loss and direct and indirect mortality within the arbitrary 15 km buffer. The selected measurable parameters do not include any related to effective habitat loss (avoidance zone) and resultant effects on caribou movement and migration, particularly the ability to cross the TLH 3 / LITL corridor. Likewise, calculation of physical removal of habitat provides a limited perspective on likely effects on caribou, and ignores the considerable evidence elsewhere as to effective habitat disturbance and zones of avoidance (which extend up to 15 km where such scales have been analyzed).

In order to assess the impacts of the Project on the ability of the Innu to exercise their right to hunt caribou, the ELC information needs to provide a foundation for establishing the risk to caribou from various alternative future scenarios. These scenarios should consider a range of industrial development paths, resource use rates and other factors known to contribute to the risk to caribou. The outcome of these scenarios should be integrated into the ELC information in the form of land use changes, which would assist determination as to whether, in light of the cumulative effects across the territory for hunting caribou, the caribou and the Innu right to hunt caribou are affected by the proposed Project under the various future scenarios.

The ELC information would also include particularly sensitive habitats within the ranges (e.g. calving areas), information that was requested by Innu Nation in our review of the Caribou and Their Predators Component Study. With respect to Innu harvesting of caribou, the ELC would identify Innu lands of all categories within the ranges of the various herds, Innu rights within those lands, and the role that the lands could play in Innu caribou hunting.

With these future scenarios, sensitive habitats and Innu lands identified, only then can the proposed Project be assessed in terms of its cumulative effects on woodland caribou and on the Innu right to hunt those caribou.

#### **Conclusion**

Based on the information provided in the EIS, Innu Nation is unable to make a determination concerning the cumulative effects of the Project on the Innu exercise of asserted or established Aboriginal rights and treaty rights now and in the future, and particularly on the Innu right to hunt caribou.

### **SPECIFIC COMMENTS**

No.	EIS Section and Context	Specific Comment
	1 INTRODUCTION	Any issues or concerns are addressed in response to other sections.
	2 PROJECT RATIONALE AND PLANNING	
1.	Table 2.8.2-1 Projected Impact on Average Consumer Rate for the Island Grid  Section 2.8.2 Retail Rates  By 2040, the cumulative rate increase for Island domestic consumers attributable to the Interconnected Island alternative is projected at 68%, in contrast to a cumulative rate increase of 125% for the Isolated Island.  2.3.1.4 Key Forecast Assumptions and Drivers  Nalcor has not directly considered a sensitivity case to gauge the impact of CDM on the Cumulative Present Worth (CPW) for the Interconnected Island alternative because, in such an instance, NLH would have opportunities to monetize any conserved energy through short term sales into regional export markets.  Figure 2.5.14-1 Annual Average Electricity Prices and Natural Gas Prices in New York State  2.3.1.5 2010 Planning Load Forecast Load Growth  Due to the uncertainty of achieving dependable firm outcomes, NLH has not explicitly accounted for the energy efficiency savings targets associated with the takeCHARGE program. However, CDM will continue to be an important initiative for NLH and Newfoundland Power.	Section 4.3.2.1 of the EIS Guidelines reads as follows:  The analysis of alternatives to the Project is to provide clearly described methods and criteria for comparing alternatives, and sufficient information for the reader to understand the reasons for selecting the preferred alternative and for rejecting others.  The EIS appears to establish retail rates as one of the criteria for comparing the isolated island and interconnected island alternatives. However, the analysis ignores behavioural change in the face of rising rates, a situation that could play out very differently in the two scenarios presented in Table 2.8.2.1. Innu Nation is concerned that there is a particular aspect of the interconnected alternative that imposes a risk to ratepayers that is not discussed in the EIS, and that is not present for the isolated island alternative. This risk could be particularly onerous for low-income ratepayers, and therefore constitutes a potentially significant socio-economic effect of the Project.  Implied in section 2.3.1.5 is that takeCHARGE is the only avenue through which electricity conservation or changes in demand patterns will occur. This is unlikely. It is not difficult to imagine a different scenario where ratepayers take charge of their own consumption in response to rising rates. How such a scenario plays out differs considerably depending on how prices increase for ratepayers. Under the interconnected alternative, the future conservation scenario could play out as follows:  • Costs related to the MF Project (even if they are "least-cost") result in significant rate increases, as per Table 2.8.2  • A standard Cost of Service approach to electricity sales from the MF Project is avoided in order to lessen the immediate rate increase in favour of selling electricity to domestic

ratepayers at a price in constant 2010 dollars for the life of the Project, locking in increasing rates in actual dollars over time.

- The economic viability of the MF Project requires that domestic ratepayers not only take electricity at an increasing rate but that they take an increasing portion of electricity from the MF Project over time.
- The expected domestic future demand increase does not materialize, as rate increases (i.e. with or without takeCharge) lead to reductions in electricity consumption, particularly by those able to invest in measures to reduce consumption.
- As a result, either more electricity from MF must be exported or rates for domestic customers must further rise to adjust for decreased demand while still servicing debt.
- Rates increase, leading to further reductions in electricity demand due to conservation.
- Either more electricity must be exported or rates for domestic customers must again rise.
- Etc.

The above scenario, appears to be relatively likely, at least compared to other scenarios related to other VECs assessed in the EIS. In other words, domestic customers *must* take the power from Muskrat Falls, pay for water to be spilled at other generation facilities, or Nalcor must sell the electricity in export markets. It is important to note that this scenario does not occur under other scenarios where new generation (if and when it is required) is brought on incrementally. In the incremental scenario, when ratepayers adjust their demand in response to increasing prices, the utility simply avoids building the next generating station.

In 2.3.1.4, Nalcor proposes to address this situation by monetizing any conserved energy. For the proposed monetization to be effective, the electricity would need to be sold at a price equal to or higher than what Hydro would obtain by selling it domestically. Currently, market prices in the regional export markets are *far* below the projected costs of electricity from the Muskrat Falls Project. Nalcor suggests that it will be able to make "short-term" sales, but it is unclear how these sales could be timed to access the rare occasions when export market prices might be higher than the minimum price required for Nalcor to service MF Project debt.

In its recently released draft Integrated Resources Plan, BC Hydro conducted an extensive review of natural gas prices, and concluded the following:

BC Hydro expects that the recent innovations that have unlocked the economic extraction of North America's 'shale gas' reserves will serve to both keep the market price of natural gas below \$5 per million British Thermal Units (MMBtu) at the Henry Hub early into the next decade and will reduce the degree of gas price volatility that has been experienced over the past 10 years.<sup>1</sup>

Using the information provided in Figure 2.5.14-1 of the EIS, this translates into an electricity price of about \$50/Mwh. Under these conditions, future rates in export markets will not approach anything close to the costs of electricity from the MF project. To the extent that power is sold into export markets, it would be sold below prices necessary to cover costs related to the Project. In other words, it appears that domestic conservation in the context of preferred alternative (i.e. build Muskrat Falls) results in an economic loss for the utility. Yet, the utility must cover its costs and the only way to do that would be to raise rates.

In response to high rates, some ratepayers (i.e. middle- to high-income persons) will be better positioned to transfer away from utility-based electricity to various forms of conservation, efficiency and self-generation. Low-income ratepayers would not be able to afford this option and will bear an increasing portion of the rate burden as the wealthy reduce consumption. Innu Nation is concerned that some Innu and Innu organizations will be adversely affected.

The Proponent is requested to assess the potential socio-economic effect, particularly for low-income households, of high electricity rates that continue to increase as a result of the situation created by the selection of Muskrat Falls as the preferred alternative in the event that expected electricity demand increases do not materialize.

<sup>&</sup>lt;sup>1</sup> BC Hydro. May 2012. Draft Integrated Resource Plan2012: A plan to Meet B.C.'s Future Electricity Needs, at p.1-4

2.	2.12.6 Overland Transmission Corridor	Section 4.3.2.2 of the EIS Guidelines reads as follows:
	Project planning and design have identified a proposed 2 km wide corridor for the overland transmission line, extending from Muskrat Falls in Labrador to Soldiers Pond on the Island.	The EIS shall describe <u>design</u> and siting alternatives for the transmission line and ancillary facilities (such as roads, convertor stations, electrodes and temporary infrastructure). (our underlining)
		The Proponent shall also indicate under what circumstances a change in economic conditions may influence its selection of preferred alternative means.
		Section 4.5.3 of the EIS Guidelines states that:
		The Proponent shall:
		<ul> <li>describe and justify the choice of projects and selected activities for the cumulative effects assessment. These shall include past activities and projects, those being carried out and future projects or activities likely to be carried out. This shall include a discussion of cumulative environmental effects associated with any future increase in capacity of the Transmission Link to enable transportation of additional power from the Lower Churchill along all or part of the proposed transmission line;</li> </ul>
		Since the time of registration of the proposed Project for environmental assessment, the technology for underground placement of HVDC cables has evolved. Other than the portion of the LITL under the Strait of Belle Isle, no consideration appears to have been given to burying other sections of the LITL. There could be operational, environmental and planning benefits to placing the HVDC cables underground. These would need to be weighed against cost, environmental and other considerations. In addition, the potential remains that the Gull Island project, if it is developed, will export power through the Maritimes as opposed to through Quebec. This would require additional transmission infrastructure, and it may not be readily feasibly or environmentally acceptable to construct a second overhead ROW.
		Two examples of underground HVDC transmission design are:
		• the Champlain Hudson Power Express (CHPE), a 530 km,

3.	2.14.2.1 Environmental Protection Plan(s)  As a corporation with extensive experience in constructing and maintaining transmission infrastructure in NL, Nalcor has state-of-the-art and proven policies and procedures related to environmental protection and management which will be implemented during the construction and operation of this proposed Project.	1000-MW, 320 kV HVDC line proposed from south of Montreal to New York City, of which a 117 km (73 mile) portion is underground (adjacent to a rail line) and the remainder is under water, and scheduled to come into service in 2013; <sup>2</sup> and  • the France-Spain HVDC link, a 65-km, 2000 MW, 320 kV line proposed from southern France to northeast Spain, scheduled to come into service in 2014. <sup>3</sup> The Proponent is requested to present an analysis of the underground alternative, both along the entire route and for portions of the route where there would appear to be operational and environmental benefits, including adjacent to the TLH 3 in Labrador. The analysis should consider the potential need for additional transmission capacity related to the development of Gull Island and compare the twinning of underground lines and overhead lines.  The EIS would benefit from a more exhaustive indication of what has been learned from Nalcor's experience.  Throughout the EIS, the Project's EPP is put forward as the primary procedural document for ensuring that appropriate environmental protection and management are put in place during the construction and operation of the proposed Project. However, the EPP has not yet been prepared by the Proponent.  The Proponent is requested to provide an example of an environmental protection plan for a similar transmission project under its operational control. <sup>4</sup> In addition to the EPP, the proponent is requested to detail specific examples of policies and procedures that have been applied in the context of this example.
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<sup>&</sup>lt;sup>2</sup> http://www.chpexpress.com/route-maps.php (accessed May 25, 2012).

<sup>&</sup>lt;sup>3</sup> Ready for the future: Siemens erects power converter stations for HVDC link between France and Spain as part of the Trans-European Network. <a href="http://www.siemens.com/press/en/press/e

<sup>&</sup>lt;sup>4</sup> An equivalent situation occurred during the environmental assessment for the Lower Churchill Hydroelectric Generation Project, where the Proponent had not prepared the Emergency Preparedness Plan for the project, but instead provided a similar document for the Bay D'Espoir Hydroelectric Development.

	3 PROJECT DESCRIPTION	
4.	3.4.2.1 Access  In Labrador, access for the construction of the Muskrat Falls converter station, the western sections of the transmission line and the shoreline electrode site will be via the existing transportation network to and within Central Labrador, including the TLH and the highway between Happy Valley-Goose Bay and North West River (Route 520), and existing resource roads in the area. (our underlining)	The Proponent is requested to clarify why the highway between Happy Valley – Goose Bay and Northwest River is being used for the Project (other than the portion leading to the Goose-Bay port facilities) since the electrodes are no longer being contemplated for Lake Melville.
5.	3.4.2.1 Access  Along the remainder of the transmission line, one or more additional access trails will be established from select points on the TLH3 and from the southern part of the TLH (Phase 2) (TLH2).	The location, length, number and projected use intensity of these access trail(s) is particularly important to understanding the potential impacts of the proposed Project on woodland caribou, including fragmentation, effects on movements, and implications of permanent human and predator access, and also for understanding the likelihood that these would facilitate use beyond that of the proposed Project and therefore to cumulative effects.  The Proponent is requested to provide the number, length, locations and intensity of use of access trails under consideration in Labrador.
6.	3.4.2.2 Water Crossings  Permanent Bridges  Permanent bridges may be constructed in areas where regular travel is required across a ford site or where bank stabilization may not adequately prevent watercourse sedimentation.	The location of these permanent bridge(s) is particularly important to understanding the potential impacts of the proposed Project on woodland caribou, including fragmentation, effects on movements, and implications of permanent access, and also for understanding the likelihood that these would facilitate use beyond that of the proposed Project and therefore to cumulative effects.  The Proponent is requested to provide the number, length, locations and intensity of use of permanent bridges under consideration in Labrador.
7.	3.4.2.4 Marshalling Yards and Laydown Areas  Assembly yards may also be required for the Labrador portion of the transmission line due to isolation.  Approximately 10 assembly yards will be required and the location of each is yet to be identified. These yards will contain approximately 20,000 litres of fuel storage. Handling and fuelling procedures will comply with the Storage and Handling of Gasoline and Associated	It is not clear whether these marshalling yards will include fuel for helicopters, or whether helicopter fuel would be stored temporarily elsewhere along the route. Innu Nation is concerned about this practice and that it may lead to fuel drums remaining indefinitely on the land.  The Proponent is requested to provide clarification as to how helicopter fuel will be stored during construction, and whether any fuel will be stored outside of the marshalling yards or construction

	Products regulations.	camps.
8.	3.5.2.1 Inspection  Each year the line will be 100% inspected through ground and / or aerial patrol. Ground-based inspections will be conducted on all-terrain vehicles (ATVs) during summer and snowmobiles in the winter, and aerial inspection will be conducted by helicopter.	The Proponent is requested to provide clarification as to how helicopter fuel will be stored during operations, and whether any fuel will be temporarily or indefinitely stored in the field.
9.	3.5.4 Decommissioning	Section 4.3.3.1 of the EIS Guidelines indicates the following:
	The Project will be operated for an indeterminate time period and decommissioning is not anticipated. Should decommissioning activities eventually be considered for some or all Project components, decommissioning will be planned and conducted in accordance with relevant	The temporal boundaries of the Project shall cover all phases of the project: construction, operation, maintenance, foreseeable modifications and abandonment and decommissioning of works and the rehabilitation of the sites affected by the Project.
	standards and regulatory requirements of the day.	Section 4.3.6 of the EIS Guidelines indicates that:
		The EIS will present an approach for the decommissioning phase of the Project, which sets out a commitment to address:
		a) environmental planning and mitigation measures;
		b) socio-economic mitigation measures; and
		c) public health and safety procedures.
		Innu Nation recognizes that the LITL has an expected life of 75–100 years. However, eventually the Project will outlive its useful life, perhaps much earlier than currently anticipated.
		The Proponent is requested to address the requirements of section 4.3.6 of the EIS Guidelines.
10.	Appendix 3-2 EXISTING ACCESS ROADS AND QUARRIES Map 1	The Proponent is requested to clarify:
		<ul> <li>whether the quarry directly to the west of the converter station on the south side of the Churchill River on Map 1 is correctly located;</li> </ul>
		<ul> <li>how this quarry is currently accessed or, if it is a proposed quarry, would be accessed in the future; and</li> </ul>
		<ul> <li>whether the maps contain only existing quarries or existing and potential future quarries.</li> </ul>
		Section 4.3.4 of the EIS Guidelines indicates the following:
		Borrow Pits, Quarries and Spoil Areas

	4 EFFECTS OF THE ENVIRONMENT PROJECT  5 ACCIDENTS AND MALFUNCTIONS	sections.
	6 ENVIRONMENTAL SETTING AND CONTEXT	Any issues or concerns are addressed in response to other sections.
	7 ABORIGINAL CONSULTATION AN ISSUES SCOPING	D
11.	The Innu of Labrador claim Aboriginal rights and title to much of Labrador. The Labrador Innu land claim area overlaps the proposed Project area, and is the only such claim in the region that has been accepted for negotiation by both the Government of Canada and the Government of Newfoundland and Labrador.  The EIS shall identify an arrangements, that may the Proponent and/or the Government of Newfoundland and Labrador.	area arrangements, that may be in effect, entered into between the Proponent and/or the Government of Canada and/or the Government of Newfoundland and Labrador and/or Aboriginal group(s) in the context of land claims, and address how they may affect or be affected by the Project.
	2.0 Innu of Labrador  In September 2008, Innu Nation, the Government Newfoundland and Labrador and Nalcor Energy initialed the New Dawn Agreement. The New Dawn Agreement is a bilateral agreement resolving key issues surrounding the Innu Rights Agreement (Fiz.1), the Lower Churchill Impacts and Benefits Agreement (IBA) and Innu redress for the Upper Churchill hydroelectric development, and served a basis for further negotiations on these Agreement (Labrador and Aboriginal Affairs 2010). These agreements were ratified by the Labrador Innu in 2011.	Provincial Government and the Innu Nation in the form of an Innu Rights Agreement in Principle. The EIS describes how this agreement follows from the Tshash Petapen (New Dawn)  Agreement, and provides in the Component Study the map showing the categories of Innu lands, including the Labrador Innu Settlement Area and Labrador Innu Lands, which will be owned by the Innu of Labrador and form part of the Labrador Innu Settlement Area.  This Innu Rights Agreement in Principle (AIP) is a temporary

neither the AIP nor the Final Agreement affect the environmental assessment of this Project.

However, the AIP and the Final Agreement are affected by the development of the Project, and this reality is not fully addressed in the EIS. Specifically, there are rights in the Labrador Innu Settlement area and the Labrador Innu Lands described in the AIP, including rights to harvest wildlife, forest resources and plants. In an attempt to understand how the proposed Project will affect Innu rights, the proponent has assessed the effects of the proposed Project on species harvested by Innu (e.g. woodland caribou, furbearers), as well as the effects on Innu current use of lands and resources. Innu Nation comments regarding this assessment are provided in response to the appropriate sections of the EIS.

The EIS has not, however, addressed the effects of the proposed Project on Innu rights to harvest. These rights will continue forever under the terms of the Final Agreement. The rights are recognized in the Innu Rights Agreement in Principle, which describes the various categories of Innu lands, and the Innu rights within those lands. The Innu negotiated those rights in the Labrador Innu Settlement Area, which rights are exclusive in Labrador Innu Lands, in order that they could harvest in perpetuity.

In other words, the EIS has not answered the more fundamental questions:

- What is the Proponent's understanding of the asserted or established Aboriginal rights and treaty rights held by the Innu of Labrador?
- What are the potential adverse effects of the Project on the exercise of asserted or established Aboriginal rights and treaty rights of the Innu of Labrador?
- What measures are proposed to avoid, reduce or otherwise mitigate potential adverse impacts on the exercise of asserted or established Aboriginal rights and treaty rights of the Innu of Labrador?

The Innu Nation recognizes that the duty to consult and, where appropriate, accommodate may or may not be met through the environmental assessment, and other actions are often required. This leads to a fourth question:

		<ul> <li>What is the nature and scope of the accommodation of Innu         Nation rights required in order that the proposed Project may         be approved by the Provincial and Federal Governments, and         has that accommodation been made?     </li> <li>Innu Nation has attempted to address how these questions might         be answered in the context of the Innu right to hunt caribou in our         response to Sections 10.3.3.2 and 12.3. Though the Innu are         currently not hunting caribou south of Lake Melville and the         Churchill River due to the moratorium, the Innu right to hunt caribou         in that area remains.</li> </ul>
12.	Table 7.2.2-1 Consultations with Innu Nation and Key Outcomes	Several issues raised by Innu during the course of the issues scoping study conducted in relation to both the Lower Churchill Hydroelectric Generation Project and the LITL, are not addressed in Table 7.2.2-1.
		The Proponent is requested to show how the EIS addresses the following Innu issues:
		The concern that an overall deterioration of the environment of the region is occurring as a result of a sequence of projects
		The likelihood that the Project will open the door to other big projects that would use the available power and use the improved access
		<ul> <li>The cumulative effects on social problems as a result of more industrial developments (alcohol, drugs use, increased disease)</li> </ul>
		The effects of the Project on the population of big game animals because of habitat disturbances
		The potential for the Project to cause animals to die or move away from the area
		The potential for the Project to affect migratory routes and divert birds from traditional hunting areas
		The potential for construction noise and activity to cause animals to leave usual habitats
		The potential for bears to be attracted to camps by garbage or workers feeding them
		The potential to lose wildlife habitat that is significant to animals and humans for subsistence and cultural sustainability

		<ul> <li>The loss of qualified personnel to Project jobs would mean fewer resources in the Innu communities</li> <li>The fear that outsiders will get jobs, not Innu</li> <li>The concern that women will not get any Project-related jobs and if they do, they might face harassment</li> <li>Regarding the consideration of an alternative route south of the Kenamu River, this concern was raised in the context of the LITL route from Gull Island to the Strait of Belle Isle. The concern was addressed by the Proponent, who indicated that the routing was required to accommodate future development of a reservoir on the Kenamu River that would form part of a hydroelectric development on the Minipi River.</li> </ul>
	8 REGULATORY AND PUBLIC CONSULTATION AND ISSUES SCOPING	Any issues or concerns are addressed in response to other sections.
	9 ENVIRONMENTAL ASSESSMENT APPROACH AND METHODOLOGY	
13.	9.3.2 Environmental Assessment Study Areas Temporal Boundaries:  In all cases, the temporal boundaries comprise the Construction, and Operations and Maintenance phases of the Project. All VEC assessment sections are based on these generic temporal boundaries, which, given that the Project is assumed to operate in perpetuity, fully encompasses the likely timing of all Project activities and the likely duration of any potential environmental effects.	With respect to the assessment of Project effects, the use of temporal boundaries that begin with the construction of the Project is appropriate where the effects of the planning phase of the proposed Project can be shown to be very limited, which is likely the case along much of the proposed corridor. However, with respect to cumulative environmental effects, the Canadian Environmental Assessment Agency guidance documents suggest a different approach:  The boundary in the past ideally begins before the effects associated with the action under review and possibly before the effects of most major actions were present. (our
		underlining) The boundaries for the cumulative effects assessments will generally be different for different effects considered. These

<sup>&</sup>lt;sup>5</sup> The Cumulative Effects Assessment Working Group and AXYS Environmental Consulting Ltd. 1999. *Cumulative Effects Assessment Practitioner's Guide*, at p.15.

		cumulative effects boundaries will also generally be larger than the boundaries for the corresponding project effects. 6 (our underlining)  Additional guidance is as follows:
		However, the further back or ahead in time, the greater the dependence will be on qualitative analysis and conclusions due to lack of descriptive information (e.g., what conditions were like years ago or which other actions may occur in the future) and increasing uncertainty in predictions. For these reasons, in practice the scenario in the past often defaults to the year in which the baseline information for the assessment is collected (i.e., current conditions) and the future extends no further than including known (i.e., certain) actions.
		Innu Nation believes that the appropriate temporal period for cumulative effects assessment in Labrador needs to begin prior to industrial development in the territory, and at a minimum prior to the development of the TLH 2, TLH 3, commercial forestry and military flight training. These activities constitute "major actions" in Labrador for which there is also considerable information concerning environmental conditions both prior to development and since that time.
		The Proponent is requested to undertake the cumulative effects assessment in Labrador using a time period that begins prior to the development of the TLH 2, TLH 3, commercial forestry and military flight training.
14.	9.3.7.2 Definition and Determination of Significance	Section 3.1 of the EIS Guidelines states that:
	Significance definitions are developed on a VEC specific basis, or on a KI-specific basis as applicable.	<ul> <li>The Proponent shall explain and justify all methods used in the preparation of the EIS.</li> </ul>
	This section provides an overall discussion of whether and how any of the likely residual environmental effects of the Project meet the significance criteria and definition established for the VEC / KIs, as well as an	The Proponent has explained its environmental assessment approach, but has provided no information to justify the selection of this approach. For example, there appear to be several limitations to the proposed approach to determination of significance, which

<sup>&</sup>lt;sup>6</sup> CEAA. 2011. Guidelines for the Preparation of an Environmental Impact Statement for the Comprehensive Study Process Pursuant to the Canadian Environmental Assessment Act, at p.24.

	overall determination of the significance of the resulting total effect on the VEC.	<ul> <li>key indicators are directed towards specific VECs and the approach does not attempt to address what the changes to these indicators might mean for other species or environmental components that are not the valued environmental component being assessed; and</li> <li>the combined, synergistic and interactive environmental effects of the Project on different VECs go unassessed despite the interconnected nature of human systems and of ecosystems.</li> <li>The Proponent is requested to: <ul> <li>discuss alternative approaches to the assessment of the environmental effects of the proposed Project;</li> <li>explain and justify why it selected the approach provided in the EIS;</li> <li>provide its perspective on the limitations of the proposed approach, providing specific examples; and</li> <li>indicate how the Proponent has (or will) address these limitations.</li> </ul> </li> </ul>
15.	9.3.9 Cumulative Environmental Effects  In summary, the cumulative effects assessment assesses and evaluates the overall (total) environmental effect on the VEC resulting from the likely residual effects of the Project in combination with those of other relevant past, present and reasonably foreseeable future projects and activities. In doing so the cumulative effects assessment:  • considers the effects of past and ongoing projects and activities as part of the pre-Project environment baseline, and integrally considers and incorporates this baseline — and the resulting current "condition" of the VEC — into the environmental effects assessment;	See comments in response to section 9.3.2 with respect to temporal boundaries for the cumulative environmental effects assessment.  See comments in response to Table 9.3.9-2 concerning the past, present, and reasonably foreseeable projects considered in the cumulative environmental effects assessment.
	Table 9.3.9-2 Other Projects and Activities in the Cumulative Effects Assessment	Section 4.5.3 of the EIS Guidelines reads as follows:  Cumulative effects are defined as changes to the environment due to the Project where those overlap, combine or interact with the environmental effects of other

existing, past or reasonably foreseeable projects or activities.

Agency policy documents give some indication as to what is meant by "reasonably foreseeable projects or activities":

**Growth-inducing potential**: Each new action can induce further actions to occur. The effects of these "spin-off" actions (e.g., increased vehicle access into a previously unroaded hinterland area) may add to the cumulative effects already occurring in the vicinity of the proposed action, creating a "feedback" effect. Such actions may be considered as "reasonably foreseeable actions" (Section 3.2.4).

**Reasonably Foreseeable**: The action may proceed, but there is some uncertainty about this conclusion.<sup>8</sup>

The Proponent is requested to include in its cumulative effects assessment hydroelectric development on the following rivers:

- Fig River (187 MW, 1.3 TWh); and
- Minipi River (including Dominion Lake, Joir River, Kenamu River; and Little Mecantina River) (592 MW, 3.9 TWh).

The above capacities and average annual energy values are taken from the 1978 SNC Study of Hydroelectric Potential in Southern Labrador, which study should form the basis for basic project information (e.g. reservoirs, operating regimes, etc.) concerning these potential developments.

Evidence that these two projects can be viewed as "reasonably foreseeable" includes the following:

- the Tshash Petapen Agreement contemplates the development of the hydroelectric potential of these rivers, and addresses essential and relevant matters between the Innu Nation, Nalcor and the Province;
- the initial corridor for the LITL from Gull Island was specifically routed around the future location of a reservoir created by the

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<sup>&</sup>lt;sup>7</sup> The Cumulative Effects Assessment Working Group and AXYS Environmental Consulting Ltd. 1999. *Cumulative Effects Assessment Practitioner's Guide*, at p.6.

<sup>&</sup>lt;sup>8</sup> *Ibid*., at p.19.

<sup>&</sup>lt;sup>9</sup> SNC and Nolan, White and Associates. 1978. *Study of Hydroelectric Potential in Southern Labrador*. Prepared for Newfoundland and Labrador Hydro.

		diversion of the upper reaches of the Kenamu River into the Minipi River in anticipation of development of the hydroelectric resources on this River;  • the Provincial energy plan indicates that more than 6000 MW of potential hydroelectric power remains undeveloped in the Province. Subtracting 3,074 MW for the Lower Churchill Hydroelectric Project and 77 MW of additional hydroelectric generation on the Island 10 means that this total must include at least an additional 2800 MW from Labrador, which by deduction would have to include development on the Fig River and Minipi River;  • the 500 MW capacity of the Maritime Link is currently designed for the 300 MW of firm export capacity by Nalcor, and the 1 TWh Nova Scotia Block, which suggests that once the electricity from the Muskrat Falls Project is absorbed by domestic ratepayers and the 35-year Nalcor-Emera contract expires, the Maritime Link will be available for additional exports, which could come from development of the hydroelectric resources of the Fig River and Minipi River; and
		<ul> <li>the LITL, at 900 MW, is in excess of the 824 MW nameplate capacity of the Muskrat Falls project, and even without reaching its thermal capacity is capable of transmitting nearly 8TWh of electricity per year, well in excess of the 4.9 TWh generated annually by the Muskrat Falls Project, and quite capable of transmitting a large portion of energy from hydroelectric developments on the Minipi River and Fig River.</li> </ul>
16.	Table 9.3.9-2 Other Projects and Activities in the Cumulative Effects Assessment	The Innu Nation requests clarification as to why the proposed KAMI Project is not included among the proposed Labrador west mining developments in Table 9.3.9-2.
		The Innu Nation requests clarification as to why several of the industrial load opportunities in Labrador used to substantiate the need for the Lower Churchill Hydroelectric Generation Project (and hence the LITL) are not included in the projects for consideration in the cumulative effects assessment, and which include the

 $<sup>^{10}</sup>$  See table 2.4.1-8 where Island Pond = 36 MW, Portland Creek = 23 MW, Round Pond = 18 MW

### following: • Labr

- Labrador aluminum smelter
- Silicon smelter
- Uranium mine
- Iron Ore Company of Canada expansion
- · Voisey's Bay underground mine

Finally, the EIS needs to acknowledge that with development of this proposed Project, which involves the opening up of considerable territory to new access, there will be secondary effects, including the fact that other development activities that are not currently practical or feasible will be made so by the development of the Project. As such, a precautionary approach is required to assessing the potential cumulative effects. This precautionary approach to cumulative effects assessment should be based on the evaluation of a of a number of alternative future scenarios representing differing future development conditions in Labrador.

See comments in response to section 10.3.3.2.

## 17. Table 9.3.9-2 Other Projects and Activities in the Cumulative Effects Assessment

#### 12.4.10 Monitoring and Follow-up

The second study would involve assessing the degree of public access afforded by the ROW and access roads in the first winter following the completion of construction. This program would be an aerial survey conducted during the winter months to document areas of the ROW that are being used by snowmobiles. The presence and abundance of snowmobiles and snowmobile tracks would serve as an indicator of the degree of increased trapping pressure and disturbance that may be associated with increased public access. The program would also document the portions of the ROW that are accessible by snowmobiles.

## 16.5.6.3 Operations and Maintenance Effects: Commercial / Municipal and Recreational Land and Resource Use

Although Nalcor does not condone or promote the use of its transmission line ROWs for this purpose, it is

Section 4.4.4.4 of the EIS Guidelines reads as follows:

The Proponent shall describe relevant land and resource use within the study area of the VECs, including the following:

- Present and <u>potential</u> timber resource logging/harvesting and utilization (commercial and domestic)
- ...
- Other rural land and resource use including existing and <u>potential</u> recreational and commercial fishing (freshwater and marine) and the fishing gear used, hunting, gathering of country food and collection of plant propagules (our underlining)

In other words, the cumulative effects assessment must include potential use, both that facilitated by the Project and otherwise, including increased access for land and resource use.

In Section 12.4.10, Nalcor commits to monitoring the degree of public access to the ROW and access roads. However, Section 4.4.4.4 requires the EIS to predict what that degree of access would be so that effects on land and resource use can be

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	aware that these activities occur elsewhere in the province and considers prevention of such activities difficult, if not impossible.	determined. In other words, the assessment is required now, not later.  The Proponent is requested to include in the cumulative environmental effects assessment the potential degree of public access to the ROW and access roads, and the effects to land and resource use as required by Section 4.4.4.4 of the EIS Guidelines. The analysis should be broken down in Labrador into two regions:  • the portion of the LITL from Muskrat Falls to the southernmost point of the TLH 3, where the LITL and TLH 3 separate;  • the portion of the LITL from the southernmost point of the TLH 3 to the Strait of Belle Isle.
18.	9.4 Environmental Monitoring and Follow-up  Monitoring programs will include, as appropriate:  • the approaches and methods for monitoring the cumulative effects of the Project with existing and future developments in the Project area;  •  • experience gained from previous and existing monitoring programs;	Innu Nation agrees that monitoring programs need to include methods and approaches related to other Projects. However, Section 4.4.3 of the EIS Guidelines already requires this information for Projects such as the TLH 3:  The EIS should include a concise discussion (where such information is available and relevant to the Projects potential environmental effects) of similar past large scale transmission line projects and any other large scale linear projects within and beyond the boundaries of the Province, as appropriate, and the environmental effects that have occurred as a result, where overlapping environmental effects are anticipated, and the measures that have been taken to mitigate or manage these overlapping environmental effects. Discussion of overlapping environmental effects should include consideration of the degree to which those mitigation measures have been successful. Any long-term monitoring or follow-up programs of relevance to these overlapping environmental effects and the key results should also be described. This information will help interested parties to understand the potential environmental effects of the Project and how they may be addressed. (our underlining)  In addition to the above, the Proponent is requested to discuss the effectiveness of "the measures that have been taken to mitigate or manage these overlapping environmental effects", including on the Mealy Mountain Caribou Herd (including the Joir River caribou),

		EIS with respect to the cumulative effects of the Project on woodland caribou.
	10 EXISTING BIOPHYSICAL ENVIRONMENT	
19.	10.3.3.2 Information Sources and Data Collection  Ecological Land Classification  The ELC describes the ecological mosaic of the Study Area, and is important in understanding other components of the existing environment, such as the identification and evaluation of wildlife habitat. The ELC is designed to be representative when considered in the context of land use planning applications at the site level, and to provide a complete spatial inventory of vegetation types / features to be used in broader environmental studies. The ELC was therefore developed for an environmental assessment and is at a scale deemed appropriate for that purpose, particularly when evaluating a project that includes a component that spans an area 60 m in width and 1,100 km in length.	Unfortunately, at 15 km wide, the Study Area is not sufficient to study the effects of the proposed Project on species that utilize a much larger region, such as woodland caribou in particular. The Study Area is also insufficient to study the effects of the proposed Project on the Innu right to hunt caribou, which rights exist over a much larger region. (see s.7.2.)  In order to assess the impacts of the Project on the ability of the Innu to exercise their right to hunt caribou, the ELC information needs to provide a foundation for establishing the risk to caribou from various alternative future scenarios. These scenarios should consider a range of industrial development paths, resource use rates and other factors known to contribute to the risk to caribou. The outcome of these scenarios should be integrated into the ELC information in the form of land use changes, which would assist determination as to whether, in light of the cumulative effects across the territory for hunting caribou, the caribou and the Innu right to hunt caribou are affected by the proposed Project under the various future scenarios.  The ELC information would also include particularly sensitive habitats within the ranges (e.g. calving areas), information that was requested by Innu Nation in our review of the Caribou and Their Predators Component Study.  With respect to Innu harvesting of caribou, the ELC would identify Innu lands of all categories within the ranges of the various herds, Innu rights within those lands, and the role that the lands could play in Innu caribou hunting.  With these future scenarios, sensitive habitats and Innu lands identified, only then can the proposed Project be assessed in terms of its cumulative effects on woodland caribou and on the Innu right to hunt those caribou.  The Proponent is requested to develop alternative scenarios reflecting the potential future of Labrador with respect to future development, resource use and other factors relevant to the risks posed to caribou recovery and viability for both

#### and RWMH caribou.

The proponent is requested to identify particularly sensitive habitats for each of the MMH caribou and RWMH caribou.

The Proponent is requested to present its understanding of the lands available for Innu to hunt RWMH caribou and MMH (including Joir River) caribou, including Innu rights (as they will be under the Innu Rights Final Agreement) within those various lands. The Proponent is also requested to present its understanding of the broader network of lands, outside of lands discussed in the Innu Rights Agreement in Principle available to the Innu of Labrador to hunt caribou. These descriptions shall include maps at appropriate scales.

# 10.3.3.2 Information Sources and Data Collection Ecological Land Classification

To examine the Study Area, the ELC was developed at a scale of 1:50,000 for an area of land 15 km wide and approximately 1,100 km long. The ELC identified. delineated and described 15 Vegetation / Habitat Types and several non-Habitat Types within the Study Area. The resultant maps were designed to provide a representation of the regional landscape. This information was subsequently used to quantify the type and area of ecological units or Habitat Types within the transmission corridor. This scaled approach to the classification of ecological units focused on the delineation of vegetation polygons within the transmission corridor where Project interactions will likely occur, while providing the regional context required for comparisons along the length of the Project. It also provides the requisite data to assess Project interactions and allow constraint mapping. avoidance and mitigation planning at the appropriate scales.

#### 10.3.4.2 Information Sources and Data Collection

An ELC was completed of the Study Area from Muskrat Falls in Central Labrador to Soldiers Pond on Newfoundland's Avalon Peninsula (Stantec 2011b, 2010a). The purpose of the ELC was to identify, The approach taken in the EIS regarding the ELC has several limitations for cumulative effects assessment that have been previously identified by Innu Nation in review of the component studies for the LITL and the Lower Churchill Hydroelectric Generation Project. These limitations include the following:

- In order to conduct a meaningful cumulative effects analysis, baseline information needs to be provided in relation to <u>past</u> activities within the project regional and adjacent landscapes; in the case of the LITL in Labrador, "past" includes the TLH 2, TLH 3, commercial forestry and military flight training for which high quality baseline information prior to the onset of these projects should be available;
- Equally, ELC information also needs to be available for other reasonably foreseeable activities in the project region and adjacent landscapes in order to have a complete analysis of the potential effects to ecological composition, structure, and function, and to Innu land use and other cultural activities; in the case of the LITL in Labrador, "reasonably foreseeable" includes the projects listed in Table 9.3.9-2 and the additional projects proposed by Innu Nation in our response to Table 9.3.9-2.

The Proponent is requested, in the development of alternative future development scenarios, resource use patterns, sensitive habitats and available Innu lands (as requested above), to include the projects and activities in Table 9.3.9-2 (as this list may be amended) and the spatial extent of the effects of these projects and

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	categorize and evaluate vegetation types and associated habitats on a regional scale. See section 10.3.3.2 for further information. The ELC habitat classifications formed the basis for the habitat mapping exercise for caribou herds and aggregations found within or overlapping the Study Area.  Figure 10.3.4-1 Caribou Study Area	activities on the use of the landscape by caribou, including habitat utilization, calving and movement, and the potential future use of the landscape by Innu for hunting caribou.  See also comments in response to s.12.3.
21.	10.3.3.3 Description of Vegetation  Wetlands  Nine marshes (riparian and basin form) were identified within the transmission corridor, comprising 0.4% (1 km²) of the total delineated wetland area. Swamp and shallow water wetlands were not identified in the transmission corridor.  Table 10.3.3-13  Marshes are more productive biologically than both bogs and fens. The increase in available nutrients, combined with the adjacent areas, is likely to provide habitat for a wider variety of wildlife species than fens and bogs	Most marshlands in both Labrador and Newfoundland are (or were) located along the shores of rivers. Many of the rivers in Labrador and the Island have been developed for hydroelectric power, inundating marshlands and altering the downstream flow regimes on which marshes depend. Further effects on marshlands should be avoided in selecting the route for this proposed Project.
22.	Table 10.3.3-18  Regionally Uncommon Plant Potential Habitat Percent Area by Region – Study Area and Transmission Corridor Table 10.3.3-5 Habitat Types and Non-Habitat Areas Crossed by the Transmission Corridor by Ecoregion in Central and Southeastern Labrador  Wetland  Percent of Central and Southeastern Labrador  (Transmission Corridor) – 19%  Table 10.3.3-11 Summary of Wetland Occurrence in the Study Area by Region  Central and Southeastern Labrador  Wetland Percentage of Landmass (%) – 21%	The numbers in Table 10.3.3-18 appear to indicate that the process for locating the corridor either was not or could not be based on avoiding potential regions of uncommon plants. If it were, one would expect that the percentage of regions with very high uncommon plant potential within the corridor would be much lower than the percentage generally occurring in the study area. However, the opposite is the case throughout the corridor.  The same situation exists with respect to wetlands. The EIS acknowledge the importance of protecting wetlands and avoiding them in the development of the proposed Project. The primary opportunity to avoid wetlands is during corridor selection with the relatively wide study area. If a preventive approach to avoiding wetlands were undertaken, one would expect that percentage of wetlands in the corridor in Labrador (in Table 10.3.3-5) would be substantially lower than that in the study area (in Table 10.3.3-11). However, at 19% and 21% respectively, there is almost no difference, suggesting that either no effort was made to avoid

		wetlands or the effort was not very successful.
		The Proponent is requested to clarify why it did not or could not select the corridor to avoid regions of the uncommon plant potential and wetlands.
23.	10.4.5.2 Description of Freshwater Fish and Fish Habitat In addition, the seasonality of the field program could have excluded some species (e.g., fall migrating species) from being captured during electrofishing.  Table 10.4.5-1 Fish Species Identified in the Literature, Captured During the Electrofishing Program, and Their Preferred Habitats	The lack of fish caught in Labrador rivers along the proposed transmission line corridor raises questions about the methods used and/or the amount of electrofishing conducted within the very limited period it was carried out.  Only two fish species were caught in Labrador, and Innu Nation is concerned that insufficient effort has been made to develop a proper baseline for environmental effects monitoring.
	Table 10.4.5-2 Summary of Fish Species Captured During the 2008 Field Sampling Program 13.3.10 Monitoring and Follow-up	Increased access poses a significant secondary effect of the proposed Project, especially in Labrador. The Proponent acknowledges in the EIS that access control measures are very difficult if not impossible to enforce, suggesting that exploitation and potential overexploitation of the fisheries is possible, particularly if relative abundance and species diversity are low.
		The Proponent is requested to identify the additional baseline fish surveys it intends to conduct in order to establish an environmental effects monitoring program in relation to probably and potential effects to fish populations along the proposed LITL in Labrador.
	11 ATMOSPHERIC ENVIRONMENT: ENVIRONMENTAL EFFECTS ASSESSMENT	
24.	As discussed in Section 11.2.2, likely environmental effects of the Project on the Atmospheric Environment were considered for the Project in its entirety instead of by region.  The future projects and activities considered for the cumulative effects assessment included those with likely overlapping environmental effects within the RSA. This included effects (e.g., noise and emissions to the atmosphere) resulting from the Lower Churchill Hydroelectric Generation Project, Trans-Labrador Highway Phase 3 operations, 5 Wing Goose Bay	The approach described in 11.2.2 is directed at atmospheric pollutants and does not apply to sound, which must be assessed locally. Despite the listing of appropriate projects, such as the Lower Churchill and TLH 3, no specific assessment of the cumulative effects of sound from the Project in combination with these other projects appears to have been undertaken.  The text in Table 11.2.9-1 is somewhat unclear. Are the Lower Churchill construction and the TLH-3 operations located outside the RSA? The LSA is the 2 km corridor, and the RSA extends one kilometre outside the LSA. Several maps in Volume 1 of the EIS show portions of the Lower Churchill construction, including the proposed MF Project, and the TLH 3 within the RSA.
	supersonic flight training, commercial forestry activity,	The Proponent is requested to undertake a cumulative effects

	and general economic and infrastructure development.  Table 11.2.9-1 Cumulative Environmental Effects Summary: Atmospheric Environment  The contribution of sound from the future projects will not add substantively to the sound pressure levels from the Project, since they will be located outside the RSA.  Sound pressure levels from the Project will disperse quickly from the LSA, and when combined with emissions from potential future projects, these are unlikely to cause the Health Canada (2009) criteria to be exceeded. (our underlining)	assessment of sound from the Project and sound from projects and activities, including the Lower Churchill and the TLH 3, that overlap spatially and temporally with the Project. The policy and guidance documents and methods used by the Proponent for this cumulative effects assessment should be clearly indicated along with any revisions or clarifications to 11.2.9, 11.2.10, 11.3 or other sections of the EIS. The assessment should identify potential stationary (e.g. cabins) and mobile (e.g. land users, construction workers) receptors used in the assessment, including projected intensity of use during construction of the LITL when cumulative effects of sound are likely to be highest.
	12 TERRESTRIAL ENVIRONMENT: ENVIRONMENTAL EFFECTS ASSESSMENT	
25.	<ul> <li>Table 12.2.4-1 Effects Descriptors for Vegetation Key Indicators         KI – Wetland         • Low – Effect could occur to &lt;5% of the total mapped area of wetland in the LSA by region         • Moderate - Effect could occur to 5% to 25% of the total mapped area of wetland in the LSA by region         • High – The effect could occur to &gt;25% of the total mapped length of riparian shoreline in the LSA by region</li> <li>12.2.5.1 Overview of Project Construction and Associated</li> </ul>	In its response to Innu Nation's comments on the Vegetation Component Study, Environment Canada indicated that:  During the siting of the power line infrastructure within the 2 km transmission corridor, EC-CWS would want more details on how proposed siting, construction techniques and maintenance activities would avoid and minimize impacts to wetlands within the corridor.  The nature of transmission line routing will substantially limit the extent to which wetlands or potential regions of uncommon plant species can be avoided.
	Mitigation Applicable to Wetlands  Project components and the final ROW alignment will be sited and routed to avoid, to the extent practical, vegetation communities that are identified as sensitive to disturbance (e.g., wetlands), and the minimum practical footprint will be used for construction activities.  10.3.3.2 Information Sources and Data Collection  Wetlands  During the ELC delineation process, wetlands were mapped by algorithm based on the spectral signature /	In addition, the challenge of avoiding wetlands during routing will be compounded by the fact that the wetlands that were identified in the EIS are acknowledged by the Proponent to be "estimates", for which less than 5% were field sampled.  The approach to assessing the effects of the Project on wetlands does not address the fundamental question of whether or not the Project would have unacceptable effects or unacceptable cumulative effects on wetlands. It attempts to determine a relatively less effect on wetlands, which presumes from the outset that the residual effects on wetlands would be acceptable regardless of the location of the proposed Project. However, it is not possible to determine to what standard the effects on wetlands are being

	reflectance pattern in satellite images, and therefore provide an estimate of the wetland cover. This scale of mapping is intended to be used as a comparison of wetland area between regions, and in support of Project design and final routing for the transmission line right-of-way.	compared. There does not appear to be any ecological justification for the percentage presented in Table 12.2.4-1, which rely on a single reference related to individual plant species or populations. The Proponent is requested to provide additional evidence to support the percentages of wetland loss presented in Table 12.2.4-1 to determine the significance of the magnitude of environmental effects on wetlands.  See comments in response to Table 10.3.3-5 and 10.3.3-11.
26.	12.2.5.1 Overview of Project Construction and Associated Effects Management  Mitigation for Riparian Shoreline  Nalcor will inspect equipment required for Construction before use to reduce the potential for the introduction of non-native and invasive plant species.  12.2.5.3 Construction Effects: Vegetation Abundance and Diversity  There is potential for the establishment of non-native and invasive species within all Habitat Types as a result of construction. Seeds and propagules may be transported on vehicles and equipment, and disturbance of adjacent areas creates changes in the local environmental conditions (e.g., light availability, temperature, air flow) that facilitate the establishment of new plants. The proposed mitigation measures will limit the potential for the introduction and establishment of non-native and invasive species in previously undisturbed areas. Due to the remote nature of the majority of the LSA, the local abundance of seeds and propagules for introduction to areas affected by the Project is expected to be low.	Preventing the introduction of non-native and invasive species to the transmission corridor in Labrador would be facilitated by an inventory of invasive species currently along the existing transmission lines, and along the TLH 2 and TLH 3 to determine the kinds of invasive species currently present and the locations from which the species are likely to be transported (by seed, spores, etc.).  The Proponent is requested to provide information concerning the presence of non-native and invasive species introduced to the existing transmission lines in Labrador and to the TLH, TLH 2 and TLH 3, and to incorporate this information into the effects assessment, mitigation measures, and design of effects monitoring.
27.	12.2.5.8 Construction Effects: Timber Resources  Effects are predicted to affect a small proportion (3%) of the total available productive forest within the LSA. Due to the remoteness of much of the Project, particularly in Central and Southeastern Labrador, the commercial value is low because the transportation costs would preclude the timber cut within the ROW from being	The Proponent is requested to clarify how it determined merchantability of Labrador timber, including how timber would be transported and how and where it would be processed.

	considered merchantable.	
28.	12.2.10 Monitoring and Follow-up  The ROW and other Project components (e.g., access) will be routinely inspected throughout the life of the Project. During these inspections, conducted either from the ground or the air, the inspectors will note any areas of environmental concern related to Vegetation within or adjacent to the Project components, including: bare soil or delayed regeneration (including reclamation success); erosion (including effectiveness of erosion control in relation to steep slopes, river crossings and wetlands); siltation of waterbodies, wetlands and / or rivers; introduction or spread of non-native and invasive species; and unauthorized access and resulting disturbance. Areas of disturbance will be noted and the appropriate reclamation strategy designed and implemented in a timely manner.	The primary purpose of these inspections is to determine the operational condition of the transmission line. In other words, the expertise of the inspectors relates to transmission line infrastructure and not ecology. The concern is that vegetation and other biophysical monitoring will not be a priority, will be improperly carried out, or both. The biophysical inspections need to be carried out by personnel with appropriate qualifications, experience and training.
29.	12.3 Caribou 12.3.1 Introduction The NLDEC have recently identified the range of an additional group of caribou, referred to as the Joir River caribou, described as a subpopulation of the MMH	Innu Nation is concerned that the Joir River caribou herd, if such a distinct herd actually exists, should be included for the purposes of the environmental assessment as part of the Mealy Mountains caribou herd.
30.	Table 12.3.3-1 Identified Issues and Questions: Caribou Table 12.3.3-2 Key Indicators and Associated Measurable Parameters: Caribou Table 12.3.3-3 Potential Project Interactions: Caribou	The list of identified issues appears to overlook the potential for the LITL to act in conjunction with the existing TLH 3 to form a partial or complete barrier to movement by caribou between the Mealy Mountains and regions west of the TLH 3 / LITL corridor. The Joir River caribou may become isolated from the larger MMH herd. Prior to the construction of the TLH 3, the lack of a geographic barrier between the other three sedentary herds resulted in an overlap of herd ranges, but this may have changed as a result of the opening of the TLH 3, and that effect could very likely be exacerbated by the development of the LITL.  The focus of the assessment appears to be limited to physical habitat loss and direct and indirect mortality within the arbitrary 15 km buffer. The selected measurable parameters do not include any measurable parameters of effective habitat loss (avoidance zone) and resultant effects on caribou movement and migration, particularly the ability to cross the TLH 3 / LITL corridor. Likewise,

calculation of physical removal of habitat provides a limited perspective on likely effects on caribou, and ignores the considerable evidence elsewhere as to effective habitat disturbance and zones of avoidance (which extend up to 15 km where such scales have been analyzed). There is some mention of temporary changes to movement or migration during construction, but no mention of similar (and indefinite) effects on movement or migration during operations, particularly in consideration of cumulative effects. This despite evidence presented later in the EIS (see Table 12.3.5.1 and Table 12.3.6-1) that the combined corridor could act as a partial or complete barrier to caribou movement.

The Proponent is requested to examine and report on caribou telemetry data before and after the development of the TLH 3 to see to what extent the highway acts as a barrier to caribou movement, as well as findings from other similar projects, to better anticipate likely effects from the proposed LITL corridor where it crosses intact caribou habitats.

#### 31. **12.3.4.1 Analytical Methods**

#### **Environmental Effects Descriptors**

Environmental effects of the Project on each KI were described using five attributes: direction; magnitude; geographic extent; duration; and frequency. While frequency is not defined in Table 12.3.4-2, it is used to further describe the likely Project effects on KIs. Values are consistent with other environmental assessments in the province (e.g., Nalcor 2009).

## Table 12.3.4-2 Effects Descriptors: Caribou Magnitude

No effect

No potential effect on KI

Low

- <5% of the range (Labrador) or Primary Core area (Newfoundland) will be exposed to the effect
- Predicted to have no measurable change to Caribou populations

Moderate

• 5% to 25% of the range (Labrador) or Primary Core area

There are limitations to the approach proposed in Table 12.3.4-2 that result in an underestimation of the potential adverse effects of the Project on caribou in Labrador.

First, the magnitude of the effect on habitat is inclusive only of the direct effect in terms of physical habitat loss, and does not include the additional effect of habitat "lost" as a result of it being only partially accessible or inaccessible due to the TLH 3 / LITL corridor acting as a barrier to movement or migration, and known avoidance.

Secondly, a more appropriate approach would acknowledge that the starting point for determining the sustainability of the herd is an impact far less than 100% habitat loss. For example, using the Proponent's approach, the MMH habitat could be crossed by at least 25 transmission lines in different corridors, each (according to the EIS) consuming <1% of the habitat and still alter or destroy less than 25% of the habitat to avoid causing a "significant" effect. We think it is completely incorrect to conclude, as one must if the Proponent's approach is followed, that 25 transmission line corridors crossing the MMH range would not have a significant adverse environmental effect on the MMH.

Third, particularly sensitive habitat (e.g. calving areas) for the MMH (and other sedentary herds) has not been identified. This despite

(Newfoundland) will be exposed to the effect the request from Innu Nation in our comments on the Component Study, and the Provincial Wildlife Division's support for our Predicted to have a measurable change in Caribou comments. populations relative to baseline conditions that does not cause management concern Fourth, the reference to prior use of this limited approach for assessing effects on caribou in other environmental assessments High does not, in and of itself, justify its use here. This issue has been • >25% of the range (Labrador) or Primary Core area raised by Innu Nation and government in the context of other (Newfoundland) will be exposed to the effect environmental assessments, including the Lower Churchill Predicted to have a measurable change in Caribou Hydroelectric Generation Project. populations relative to baseline conditions that does The Proponent is requested to clarify the reasons for the absence cause management concern of peer-reviewed literature in the EIS that showing that the percentages used in the table for different magnitudes of effect are not justifiable. 32. Table 12.3.5-1 Existing Knowledge (Construction): Effects The information presented in relation to caribou movement and of Similar Projects on Caribou migration in these two tables suggests the following: Table 12.3.6-1 Existing Knowledge (Operations and Caribou recruitment, and hence population health, is directly Maintenance): Effects of Similar Projects on Caribou related to the amount of cumulative disturbance within their population range – the more disturbance (particularly exceeding 30%), the higher likelihood the population will be in decline. This condition will be exacerbated for those herds that are already in decline or have low population numbers (e.g. RWMH) Woodland caribou avoid early successional forests, including recently harvested forests (such as those that would be present along the transmission corridor); Avoidance may be driven by increased human disturbance, increased predation risk to females and calves, as well as reduced availability of forage following clearing; Seismic lines were not barriers to caribou movements (seismic lines are typically a few metres in width compared to the 60 metres ROW for the LITL, do not provide trail access for humans or wolves, and would not be perceived the same way by caribou): Adverse effects to caribou from linear corridor s are higher with increased intensity of use (e.g. road traffic volume), increasing the likelihood they will act as semi-permeable or

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complete barriers to caribou movement, particularly in late

		winter;
		A high density of linear features or other disturbances is known to reduce the ability of caribou to move, disperse and avoid predators;
		<ul> <li>Movement is a key mechanism of predation risk and high quality habitat selection;</li> </ul>
		<ul> <li>Combined parallel linear features (e.g. a combination of pipelines, roads, transmission lines and snowmobile trails, etc.) significantly lowers caribou crossing activity due to synergistic effects that remain for many years following initial construction;</li> </ul>
		<ul> <li>Over time, use of areas adjacent to (i.e. 5 or more kilometres from) transmission lines decreases if there are additional disturbances; and</li> </ul>
		<ul> <li>Caribou habituation to transmission lines shortly after construction only occurs if additional human disturbance does not occur (which would not be the case here since the TLH 3 and the access trail would be in continual use)</li> </ul>
		In summary, Innu Nation is significantly concerned that the analysis in the EIS overlooks the potential effects of the proposed Project on caribou movement, migration, and effective habitat loss. In particular, the literature suggests that the juxtaposition of the LITL in the same corridor as the TLH 3 appears to have an additive effect.
33.	12.3.5.2 Existing Knowledge  Developments such as transmission lines and access roads can also affect Caribou movement, although the literature reflects a range of responses (Table 12.3.5-1). There may be notable differences in behaviour between migratory and sedentary caribou populations in terms of response to linear developments and the extent to which they act as a barrier to movement or migration.	The "range of responses" claimed by the Proponent fails to acknowledge that the "range" includes various degrees of adverse effects on movement, migration and effective habitat loss.
34.	12.3.5.3 Construction Effects: Central and Southeastern Labrador Caribou and Newfoundland Caribou	The determination of the loss or alteration of habitat does not give adequate consideration to the accumulated body of research
	Loss or Alteration of Habitat: Central and Southeastern Labrador Caribou	concerning caribou avoidance of combined linear feature corridors with ongoing human disturbance. As currently proposed, the

	The total area of the RWMH range is approximately 42,630 km². The estimated direct habitat loss from clearing during construction is approximately 3 km², which is less than 1% of the total range (Table 12.3.5-2).  For the MMH range (49,553 km²), less than 1% will be affected by the Project (Table 12.3.5-2). Both the approximate habitat loss from clearing (11 km²) and the approximate amount of range falling within the 3 km wide assessment area (398 km²) are less than 1% of the total range (Table 12.3.5-2).	combined 100-km TLH 3 / LITL corridor in Labrador would also consist of a permanent maintenance, snowmobile and off-road vehicle access trail. The literature presented in the EIS concerning combined linear feature corridors with ongoing human disturbance clearly indicates avoidance and lack of crossing by caribou species.  A more appropriate determination of loss or altered habitat would include a region reflective of the fact that this is a "triple-use" linear corridor (i.e. road, transmission line, OHV trail) and that lacking evidence to the contrary a precautionary approach would assume that <i>no</i> crossing will occur. This revised determination would use a 10 km avoidance area to either side of the corridor, consistent with the literature findings for multiple-use corridors, a 20% contingency, and a weighted loss of habitat utilization (i.e. no crossing of the combined corridor but partial crossing of single-use linear features) of areas no longer accessible due to reduced movement across the corridor. Based on the maps provided in the EIS, such a calculation would result in an effective loss of habitat of several thousand square kilometres, or 10% to 15% of the range.
35.	Overall Loss or Alteration of Habitat during Project Construction  Other research shows that Caribou may use transmission lines as movement corridors (Jacques Whitford 1997).  Thus, while Caribou tend to avoid landscape perturbations, this is not an exclusive situation. They will cross features such as roads, transmission lines and even occupy industrial sites, if they are not disturbed by humans.	The full reference for this research is:  Jacques Whitford. 1997. Distribution of Wintering Moose within the Low-Level Training Area of Labrador and Northeastern Quebec, 1997. Jacques Whitford Environment report prepared for PMO Goose Bay, National Defence Headquarters, Ottawa, ON.  The material does not appear to be publicly available, and was not published in a peer-reviewed journal. The apparent finding related to caribou use of transmission lines as movement corridors goes squarely against other research, and should either be further described and detailed in the EIS or disregarded.  The literature presented in the two tables in this section provides evidence that movement of caribou across linear corridors is reduced, and is substantially reduced in the instances of multiple corridors with ongoing human activity.
36.	12.3.6 Operations and Maintenance 12.3.6.1 Overview of Project Operations and Maintenance and Associated Effects Management Nalcor has standard mitigation measures used for	While the list of mitigation measures may contribute to some reduction in adverse effects on caribou during operations and maintenance, the contribution will be marginal at best and not necessarily make any difference at the population scale:

12.2.5) would also be effective in limiting effects on Caribou, particularly as related to managing increased OHV access.	use of the transmission corridor access trail by OHV or snowmobile users; and  • the mere presence of the transmission corridor and the access trail are the primary long-term effects of the Project on caribou, and these may likely only be adequately mitigated by burying the transmission line cable, an alternative that has not been assessed in the EIS
Significance  12.3.7.1 Summary of Environmental Effects  Table 12.3.7-1 Environmental Effects Analysis Summary: Caribou  Direction – Adverse  • Project Operations and Maintenance will cause habitat alteration and may cause increased mortality (direct or indirect), reduced forage availability / access and changes in migration / movement routes  Magnitude – Low  • <5% of Caribou herd ranges will be exposed to the effects of Operations and Maintenance activities  Geographic Extent – Regional	e conclusions drawn in the EIS in Table 12.3.7-1 are not noistent with the available evidence:  • the adverse nature of the effects downplays (or excludes entirely) the effects on movement and migration;  • the magnitude is more likely on the order of several thousand square kilometres (10-15% of total MMH range), once accounting for regions that will be avoided or will no longer be fully accessible;  • the potential for the Joir River sub-herd or for a portion of the MMH to be effectively "cut-off" from the main MMH has not been considered within the magnitude of the effects;  • the effects will extend beyond the RSA;  • the presence of the ROW, including the multi-use access trail, will ensure that effects continue indefinitely; and  • the presence of the multi-use access trail will mean that effects will be frequent; the traffic on the TLH 3 will also be frequent and additive to the LITL corridor.

	duration of the Project	
38.	12.3.7.2 Definition and Determination of Significance  The amount of undisturbed habitat is presently 98% of the MMH range, and 92% of the RWMH range (Environment Canada 2011b). In Central and Southeastern Labrador, the 3 km wide assessment area overlaps with less than 1% of both the MMH and RWMH ranges, and therefore will not affect critical habitat for Caribou in Labrador.	<ul> <li>The Proponent is requested to provide the following:</li> <li>the amount of disturbed habitat that the MMH and RWMH can actually tolerate (it is not 100% as implied here) before irreversible impacts on the herds occur, paying particular attention to critical habitats; and</li> <li>the additional habitat made unusable or inaccessible as a result of the existing disturbance to habitat (i.e. this is higher than 2% and 8% for the MMH and RWMH, respectively).</li> </ul>
39.	12.3.7.2 Definition and Determination of Significance  The effects of the Project relative to baseline are not likely to affect the viability or recovery of woodland Caribou populations in Central and Southeastern Labrador and Newfoundland. Therefore, the Project is not likely to result in significant adverse environmental effects on Caribou.	The Proponent is requested to address the concerns raised by Innu Nation in relation to the effects of the Project on caribou in this review.  Based on the evidence provided in the EIS, Innu Nation does not agree that the proposed Project is "not likely to result in significant adverse environmental effects on caribou."
40.	<ul> <li>12.3.9 Cumulative Environmental Effects         TLH 3     </li> <li>However, use of the TLH3 may affect the eastern portion of the RWMH range, with the route passing near known wintering and calving / post-calving areas. TLH3 also bisects the MMH range. This could result in both direct and indirect habitat loss (e.g., habitat fragmentation) for both herds. Increased traffic could deter Caribou from crossing the highway. Although individuals are commonly observed crossing roads and highways, there is evidence that highways may have a filter effect, restricting passage by some individuals or cohorts as traffic levels increase (Cameron et al. 1992; Curatolo and Murphy 1986).</li> <li>Fragmentation of Caribou habitat by highways and other linear corridors can increase predation rates by interfering with the ability of the animals to maintain optimal spatial dispersion from predators and other prey. Furthermore, if sedentary caribou in Labrador exist as part of a metapopulation or a group of localized populations (Boulet et al. 2007, 2005) disturbances that disrupt movements and reduce dispersal opportunities</li> </ul>	Innu Nation concurs with these observations in the EIS. In addition to the effects of the TLH 3 noted in earlier comments, changes to the TLH 3 that result in greater volumes of traffic, including large trucks, would likely contribute to both mortality and avoidance. Additional commercial forestry is also anticipated in District 19A and 21.  Further to our comments in relation to section 10.3.3.2, the Proponent is requested to describe the baseline conditions prior to the development of the TLH3 in Labrador, including a description of the effects of commercial logging activities since their onset in Labrador, making use of maps at appropriate scales.  This description and visual representation of the affected landscape in Labrador would allow the various parties to properly consider the cumulative effects of this proposed Project on caribou and on the right of Innu Nation to harvest caribou.

	could increase the risk of local extinction.	
	Commercial Forest Activity	
	• In Labrador, one of the threats identified by the Recovery Team for the MMH was further forestry activity near Cartwright (Schmelzer et al. 2004). An area representing the core habitat for the RWMH overlaps a portion of commercial forest in Labrador, yet was set aside to reduce potential disturbance effects. Given the threatened status of sedentary herds in Labrador, efforts are underway to define critical habitat that may have implications on future forest harvesting.	
	Other Land Uses  • Snowmobile trails pass through the centre of the RWMH range, generally following the highway and transmission line corridor, and across the north-western and eastern portions of the MMH range. Labrador Winter Trails Inc. established a network of winter snowmobile trails consisting of old roads, the existing transmission line ROW, and other trails cut to a 6 m width.	
41.	Table 12.3.9-1 Cumulative Environmental Effects Summary: Caribou	The conclusions of the EIS for caribou do not elaborate on the meaning of "viability". For Innu Nation, the question of viability of
	The cumulative effects of the Project and other foreseeable projects are not expected to affect the	the herd must extend to consideration of its use for sustainable harvesting.
	viability of the MMH, therefore the cumulative effects on the MMH are not significant.	The Proponent is requested to describe its understanding of "viability" of the RWMH and MMH in terms of population, available and accessible habitat, and the potential for harvesting by Innu.
42.	12.3.10 Monitoring and Follow-up	The Proponent is requested to provide a detailed summary of the
was established to help protect the sedentary Caribou herds in Labrador, and will continue to support research (such as telemetry work) that will lead to further understanding of the threatened herds.  MMH and Joir River caribo include information pertain caribou over time in responsible including the transmission.	findings of the LWCRT to date concerning monitoring of RWMH, MMH and Joir River caribou in Labrador. This summary should include information pertaining to the movement and migration of caribou over time in response to existing corridors in Labrador including the transmission line for the Upper Churchill Project, the	
	Follow-up programs will be developed through collaboration with the NLDEC Wildlife Division to determine the most effective and informative program, as appropriate.	TL 240 transmission line, TLH, TLH 2, and TLH 3.  In the event that the Project proceeds, Innu Nation supports the development of follow-up programs to better understand the effects of the triple-use corridor that would be created by the development of the LITL on the movement and migration of sedentary caribou in

		Labrador.
	13 FRESHWATER ENVIRONMENT: ENVIRONMENTAL EFFECTS ASSESSMENT	
43.	13.2.3.2 Key Indicators and Measurable Parameters  The Project is not likely to have an effect on water quantity based on the nature of the Project (i.e., crossing and spanning watercourses). Therefore, water quantity is not considered further in this assessment.  3.4.2 Construction Infrastructure  3.4.2.1 Access  Access Roads  Nalcor is not planning to build ice roads, including ice bridges and ice crossings, for the Project.	In its review of the Freshwater component study, Innu Nation raised concerns about the potential for ice road construction to require considerable volumes of water, which would likely be taken from small streams and ponds, potentially affecting aquatic species. Provided that Nalcor does not utilize ice roads for the Project, then an assessment of water quantity effects does not appear to be required.
44.	Table 13.2.3-3 Potential Project Interactions: Freshwater Resources Table 13.2.7-1 Environmental Effects Analysis Summary: Freshwater Resources	The table identifies the sources of project interactions with the freshwater environment. The table does not include indirect effects resulting from increased access for OHVs created by the development of the LITL. OHVs appear to have been omitted entirely from the assessment of the effects of the Project on water quality. For example, the findings in the summary in Table 13.2.7-1 have not considered the following:  • Suspended fine materials likely to be regularly released into streams crossed by the access trail along the entire length of the LITL as a result of OHV use;  • Depending on the frequency of use, the time that particulate is suspended in the water column could be much longer in areas directly downstream of crossings; and  • While the effects from transmission line maintenance are likely to be infrequent, the effects from OHVs are likely to be much more frequent during the non-winter months when the trail is accessible.  The Proponent is requested to revisit Sections 13.2 giving consideration to the reality, acknowledged elsewhere in the EIS, that development of the LITL will provide access to OHVs along its entire length, along access roads that remain in place, and potentially also along access roads that are unsuccessfully

		decommissioned.
45.	13.3.5.4 Construction Effects: Fish Abundance and Species Assemblage  Increased accessibility of watercourses due to the establishment of access roads and ROWs will result increased fishing pressure from the Project person and / or the general public. This may lead to reduce abundance of recreationally fished species in some locations, thereby also affecting species assemblated it is unlikely that fishing activity would be conducted more than 1,000 m from the watercourse crossing, could last the life of the Project (i.e., far-future dura depending on the type of access.	habitat, namely increased fishing pressure resulting from creation and maintenance of an access trail along the entire route of the LITL.  Innu Nation does not share the Proponent's confidence that gates and strategic boulder placements will be effective at preventing access along the maintenance trail. The EIS acknowledge that preventing access will be "difficult if not impossible". The extent of effects on fish and fish habitat are also potentially not limited to the RSA where the LITL crosses navigable waters (e.g. the Kenamu River, St. Paul River, etc.) as it would be quite easy to access
	13.3.7.2 Definition and Determination of Significan	ce
	Restricting access of anglers and poachers to previously inaccessible fishing areas within the RC will be accomplished by temporary decommissioning roads, gates and / or strategic boulder placements appropriate areas where important salmon and troupopulations will be vulnerable; if permanent access along the ROW will not be maintained, then increase angling pressure will not be a long term issue.	ng of for ut
	14 MARINE ENVIRONMENT: ENVIRONMENTAL EFFECTS ASSESSMENT	Any issues or concerns are addressed in response to other sections.
	15 EXISTING SOCIOECONOMIC ENVIRONMENT	
46.	15.2.3 Archaeological Resources Sites of Cultural and Spiritual Importance 15.5.7.4 Pakua Shipi Figure 15.5.7-4 Current Land and Resource Use - F Shipi (2010 Interviews)	In our review of the Historic and Heritage Resources Component Study, Innu Nation noted that the study of Pakua shipi land use suffers from a number of serious deficiencies, which were detailed in our comments, and which can be briefly summarized as follows:  • the methods and reporting do not conform to best practice for indigenous use and occupancy map surveys;  • data quality standards have not been met and, therefore, the data are not credible;

		<ul> <li>large polygons have been used, which do not provide the necessary accuracy, precision and reliability</li> </ul>
		<ul> <li>more detailed, credible information is required in order to support claims of "current" land use by Pakut-shipu in areas (e.g. Mealy Mountains) where they have had no land use since the 1960s;</li> </ul>
		<ul> <li>the temporal scope of the data is poorly defined; and</li> </ul>
		there is no discussion of data gaps or limitations
47.	Table 15.3.3-1 Region and Community Characteristics (2001 and 2006)	It is important to note that though the population of Central and Southwestern Labrador decreased between 2001 and 2006, the population of the Innu communities increased, and again between 2006 and 2011. It is also quite likely that the general population did not decrease between 2006 and 2011 due to increasing economic activity.
		The Proponent is requested to update the census information in the EIS to reflect the 2011 census, and to adjust the analysis in the EIS accordingly. The Proponent is also requested to provide information projecting different scenarios for the growth of the Labrador population.
48.	Table 15.3.5-1 Selected Crime Statistics, RCMP and RNC Newfoundland and Labrador, 2006 to 2009 Table 15.3.5-2 Provincial Court Offenders, Study Area	The increases in drug enforcement crimes in the Province are substantial, as are the increases in Labrador crimes (considering the stable population).
	Region / Policing Region, 2006 to 2009	The Proponent is requested to provide, to the extent available, a breakdown of crime statistics by category in Table 15.3.5-1 for Labrador or for regions within Labrador.
49.	15.5.10 Cabins and Cottage Development Areas	Innu Nation has been unable to review these maps as they do not appear in Appendix B of the Communities, Land and Resources Use, Tourism and Recreation Component Study.
	15.5.10.1 Central and Southeastern Labrador	
	Seven cabins (one cottage and six remote cottages) are located within the transmission corridor in this region. The locations of these cottages in relation to the transmission corridor are shown in greater detail in Appendix B of the Communities, Land and Resources Use, Tourism and Recreation Component Study (AMEC 25 2010b).	
50.	15.8 Visual Aesthetics	The Proponent appears to have misunderstood Innu Nation's
	15.8.4 Analysis and Interpretation of the Pre-Project	request for consideration of this location in the assessment of

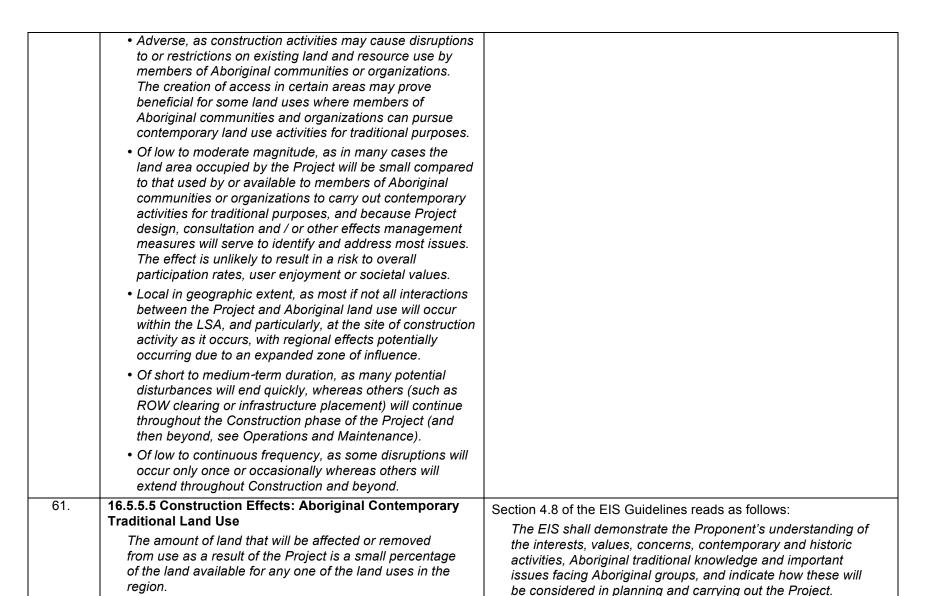
	Existing Environment	visual aesthetics. The land use, recreation and tourism values
	15.8.4.1 KOP 01, Kenamu River, Central and Southeastern Labrador	relate to the Kenamu River and not the TLH 3. In other words, the view of interest is not the view of the Kenamu River from the TLH 3 bridge, but the view from the Kenamu River of the TLH 3 bridge in combination with the proposed LITL.
		Those driving on a road already have the expectation of visual impact from the road itself; however, those coming across the LITL from the perspective of the Kenamu River have a different expectation.
		See comments in response to section 16.8.
	16 SOCIOECONOMIC ENVIRONMENT: ENVIRONMENTAL EFFECTS ASSESSMENT	
51.	16.2.5 Construction 16.2.5.1 Overview of Project Construction and Associated	In our review of the Historic and Heritage Resources Component Study, Innu Nation raised the following concern:
	Once the transmission line ROW is defined, Nalcor will conduct an historic resources field survey of those sections of the ROW that cross through areas identified as high potential for undiscovered Historic and Heritage Resources. The specific nature and locations of such surveys will be planned in consultation with the PAO.	Unfortunately, the Proponent has defined its study area in a limited way that results in the exclusion of some infrastructure from the study area and, therefore, from historic and heritage resource assessment (see Nalcor Energy, 2009:9-13; Stantec Consulting Ltd., 2010).
		In response, Nalcor indicated that this issue is addressed "in a general way" in section 16.2.5.1. Innu Nation has been unable to locate where this issue is addressed.
		Innu Nation requests that Nalcor also conduct historic resources field surveys in any areas of high potential that could be affected by the Project, including those within and outside of the ROW.
		The PAO and Nalcor are requested to consult with Innu Nation on the nature and location of these surveys in Labrador.
52.	16.2.5.1 Areas of High Potential for Archaeological Resources, Labrador	In our review of the Historic and Heritage Resources Component Study, Innu Nation raised the following concern:
	16.2.5.3 Construction Effects: Archaeological Resources	Three areas of possibly high archaeological potential were
	The results of the archaeological potential mapping indicate that the proposed LSA in Labrador has a total of 66 high potential areas, covering a total area of approximately 23.57 square kilometres (km²) (Figure 16.2.5-1).	rated low by Stantec. These include a cluster of lakes, ponds and brooks near the headwaters of the St. Paul River, a section of Chanion Brook, and a tributary in the headwaters of the Pinware River (see Maps 1-4).6 These areas should be given serious consideration for fieldwork evaluation

		because they were seasonal Innu land use areas (e.g. hunting and trapping areas) or historic travel routes.  It does not appear that these areas have been added to Figure 16.2.5.1.  The Proponent is requested to include the above areas within the regions of high potential.
53.	16.3 Communities 16.3.3.3 Potential Project-Communities Interactions Many of the types of interactions that may occur between large development projects and communities are avoided due to the nature and characteristics of the Project, and can be avoided or reduced through appropriate Project planning and design considerations.  Table 16.3.3-1 Identified Issues and Questions:	Innu Nation agrees that the remoteness of the Project will minimize some of the interactions with communities that are typical of large projects. However, it is important to keep in mind that in Labrador, this project will be constructed concurrently with the Lower Churchill Hydroelectric Generation Project, which will also make feasible other development activities.  See comments in response to section 16.3.9.
	Communities  Issue/Question  Possible social issues in communities due to Project activity  Specific Considerations  May occur due to worker participation in the wage economy, and / or possible interaction of the construction workforce with local communities	
54.	16.3.5 Construction 16.3.5.2 Existing Knowledge  More generally, the province has experienced a large number of major construction projects over the last 25 years. While there were concerns about community effects of the megaproject Hibernia, studies of its actual effects showed that they were small and in some cases positive effects, due largely to successful management initiatives. This also appears to have been the case with subsequent projects such as the Newfoundland Transhipment Terminal, the Terra Nova and White Rose floating oil production facilities, and the Voisey's Bay mine / mill.	Innu Nation is somewhat concerned by the characterization of the community effects of the Voisey's Bay Mine/Mill as "small". Innu experience suggests a somewhat different story. The recent inquiry into the lengthy strike at the mine illustrated the profound role that large industrial projects can play in relatively small and remote Aboriginal communities:  Another more disturbing disclosure was made by representatives of the native peoples of Labrador. There is a common feeling of lack of respect and understanding for the needs and hopes for their peoples arising not only out of the strike, but also apparently as an ongoing issue. This criticism, which was directed to both the Employer and the Union, is something on which both must make greater efforts. The Innu and the Inuit peoples of Labrador each believe that they are given only minimal employment

55.	With respect to community infrastructure and services and community health and well-being, these components, services and social characteristics are typically the responsibility of municipal, Aboriginal, provincial and / or federal authorities with the necessary mandate and expertise. Monitoring demand on infrastructure and services and increasing or decreasing capacity as required are activities that those authorities typically undertake as part of their normal business – for example, highway use statistics, waste volumes and remaining landfill capacities are regularly monitored by government and upgraded as necessary. Similarly, the monitoring of health and other social issues and phenomena is the responsibility of community and government organizations and agencies. Nalcor has neither the mandate nor the expertise to monitor activity in these areas. Nalcor has provided and will continue to provide Project	advantages and little respect for their culture and their employment aspirations, despite the commitments made to them in the IBAs. This perception is inconsistent with the positive relationship intended by these IBAs. (our underlining)  More needs to be done to ensure that Voisey's Bay is a success story for these aboriginal communities.   Innu Nation agrees that Nalcor does not have the mandate or expertise to undertake socio-economic monitoring. The potential for the Lower Churchill Hydroelectric Generation Project to have socio-economic effects was addressed in recommendation 13.1 of the Panel Report. In this recommendation, the intent of which was accepted by the Provincial and Federal governments, the Panel also suggested a role for Nalcor:  Recommendation 13.1 – Sheshatshiu social effects mitigation  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.  Innu Nation recommends that approaches for social effects mitigation for the Lower Churchill Hydroelectric Generation Project be developed and implemented collaboratively with mitigation in relation to the LITL since construction of the two projects will
	information to relevant authorities as input to their monitoring and decision-making processes, and will continue to consult with relevant stakeholders throughout the life of the Project.	overlap.
56.	16.4 Economy, Employment and Business 16.4.5.3 Construction Effects: Economy	The Proponent is requested to provide a breakdown of the major component of direct, indirect and induced income generated in

<sup>&</sup>lt;sup>11</sup> Province Of Newfoundland and Labrador Labour Relations Agency. May 2011. Report of the Industrial Inquiry Commission in a Matter Between Vale Newfoundland & Labrador Limited (Vale) and United Steel, Paper And Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union (United Steelworkers), Local 9508. Final Report.

	Approximately \$385 million of the Project-related income will be generated on the Island of Newfoundland and \$135 million will be generated in Labrador.	Labrador.  The Proponent is request to provide further information concerning the model or approach used to determine income generated from the Project.
57.	16.4.5.4 Construction Effects: Employment  Peak direct construction employment is expected in Year 3, with 540 person-years of work occurring on the Island and 340 person-years in Labrador.  3.7 Project Workforce  The estimated percentage of the workforce required from Newfoundland and / or Labrador is not known at this stage of Project Planning.	In registering the proposed Project for environmental assessment, Nalcor is requesting what amounts to a social licence to operate its facility across the Province. An important part of that social licence is demonstrating that the Proponent understands the need for local employment benefits and that such benefit will result.  The Proponent is requested to provide estimates of the number of person-years of employment from the proposed Project expected to be obtained by Labradorians, as well as by Innu of Labrador.
58.	16.5 Land and Resource use Table 16.5.3-1 Identified Issues and Questions: Land and Resource Use Aboriginal contemporary hunting, trapping, and gathering for traditional purposes  • Any new access created by the Project or other infrastructure may be generally beneficial to some resource users.	Agreed, some may benefit in the short-term. However, where resources are currently being used and accessed by existing resources users, Innu experience suggests that easier access tends to bring competition for resources and ultimately an overall decrease in the availability of those resources.
59.	Traditional Land Use  The majority of land use and resource harvesting by members of Innu Nation within the general Project area remains centred on a series of lakes situated at the headwaters of the Eagle River and on the Eagle River plateau outside the LSA and RSA. Some sources have identified harvesting locations distributed across Central and Southeastern Labrador; however, in the area of the Mealy Mountains, the majority of the group's activities occur outside the LSA and RSA and it is unlikely that there would be any decrease in harvesting by Innu Nation as a result of the Project.	The assessment of "current" use of lands and resources is somewhat irrelevant when in the current context Innu are prohibited from hunting caribou. However, Innu expect that the area will be suitable for the sustainable harvesting of caribou at some point in the relatively near future. For this reason, the assessment needs to consider the effects of the proposed Project not only on current use but also on the Innu right to hunt caribou.  See comments in response to sections 7, 9, 10 and 12 related to caribou, cumulative effects and the hunting of caribou by Innu.
60.	16.5.5.5 Construction Effects: Aboriginal Contemporary Traditional Land Use Summary of Likely Residual Environmental Effects	See comments in relation to Table 16.5.7-1.



These conclusions in the EIS demonstrate that the Proponent still

has much to understand about Aboriginal values and Aboriginal

rights, and that Aboriginal groups still have much more to do to

16.5.6 Operations and Maintenance

**Contemporary Traditional Land Use** 

16.5.6.4 Operations and Maintenance Effects: Aboriginal

Any member of an Aboriginal group or community that feels disturbed by the presence of the Project at a given location may use other areas. Therefore, an overall decrease in the level of Aboriginal activities for traditional purposes on the land is not anticipated.

improve that understanding.

The necessity to travel elsewhere on the landscape to practice one's culture and livelihood *is* an overall decrease in the level of Aboriginal activity on the land.

The Supreme Court of Canada observed the following in *Mikisew*:

The Minister seeks to extend the dictum of Rothstein J.A. by asserting, at para. 96 of her factum, that the test ought to be "whether, after the taking up, it still remains reasonably practicable, within the Province as a whole, for the Indians to hunt, fish and trap for food [to] the extent that they choose to do so" (emphasis added). This cannot be correct. It suggests that a prohibition on hunting at Peace Point would be acceptable so long as decent hunting was still available in the Treaty 8 area north of Jasper, about 800 kilometres distant across the province, equivalent to a commute between Toronto and Quebec City (809 kilometres) or Edmonton and Regina (785 kilometres). One might as plausibly invite the truffle diggers of southern France to try their luck in the Austrian Alps, about the same distance as the journey across Alberta deemed by the Minister to be an acceptable fulfilment of the promises of Treaty 8.

Apart from the Court's observation in Mikisew, applying the logic of "just go elsewhere" only works so long as there is somewhere else to go. There are numerous examples throughout the Province and country, including the cod fishery and woodland caribou, where this logic has been applied, and where there is now, in fact, nowhere else to go.

## 62. 16.5.6.4 Operations and Maintenance Effects: Aboriginal Contemporary Traditional Land Use

The ROW will therefore not be accessible to automobile traffic, although an access trail along the ROW to facilitate ongoing inspection and maintenance (similar to existing transmission lines throughout the province) will likely be used as an access route by Aboriginal users at various times of the year. Although Nalcor does not condone or promote the use of its transmission lines for this purpose, it is aware that this activity occurs elsewhere in the province and considers prevention of such activities difficult if not impossible.

This paragraph validates Innu Nation's concern with the Proponent's claim throughout the EIS that mitigation through access control will be effective. It will not. For this reason, Innu Nation is suggesting that the Proponent explore mitigation measures, including burying of the transmission cables through parts or all of the route. Such measures have potential to be effective at mitigating the significant adverse effects of the Project, particularly minimizing cumulative disturbance and predator/hunter access to woodland caribou, both of which are known risks to the viability of the herds in Labrador.

As indicated elsewhere in this review, access for Innu will mean

	Through Nalcor's ongoing engagement with Aboriginal communities and organizations, some members have indicated that such access may have an overall positive effect on some Aboriginal land and resource users, as it will provide better or new access to currently remote areas, both for general passage (such as snowmobile travel) and to access areas for activities such as hunting and fishing. Whether and to what degree, and for what purpose, Aboriginal persons will use portions of the ROW as a transportation corridor cannot be known with certainty and will likely vary by group. As noted previously, Nalcor will consult with Aboriginal communities and organizations to explore possible approaches to transmission line routing.	access for all. The short-term benefits that Innu might experience through increased access must be considered in the context of the overexploitation of resources that increased access will allow. A review of the Innu issues scoping study prepared for the proposed Project indicates the following concerns:  • the likelihood that the Project will open the door to other big projects that would use the available power and use the improved access  • easier access to the land may attract tourists and cause a decrease in harvest for Innu  Unfortunately, no amount of consultation regarding routing options within a narrow 2 km corridor is going to mitigate the effects or somehow address the concerns about effects on movement or
63.	16.5.6.4 Operations and Maintenance Effects: Aboriginal Contemporary Traditional Land Use  Nalcor has a continued commitment to undertake and	migration of caribou or for Innu land use.  The Proponent is requested to provide these documents to the environmental assessment registry as soon as they are available.
	finalize land and resource use studies under the current community engagement agreements with NunatuKavut Community Council, Pakua Shipu and Unamen Shipu.	
64.	Table 16.5.7-1 Environmental Effects Analysis Summary: Land and Resource Use	Innu Nation has drawn a different set of conclusions from the information provided in the EIS:
	Operations	Direction - Adverse
	Aboriginal Contemporary Traditional Land Use  Direction – Adverse  • May cause disruptions of land use	<ul> <li>The findings of Innu issues scoping do not suggest that Innu perceive any benefits to increased access afforded by the transmission line.</li> </ul>
	Increase in access will likely be beneficial for some land	Magnitude – Moderate to High
	users	The magnitude of the effect on Innu land use and on the right
	Magnitude – Low to Moderate	of Innu to hunt caribou depends on the direct and cumulative effects of the proposed Project on caribou. Additional
	<ul> <li>Land area occupied by the Project is very small compared to that available to Aboriginal land and resource users for traditional purposes Geographic</li> </ul>	information requested by Innu Nation concerning caribou and cumulative effects will help determine whether the effect is more moderate or high.
	Extent – Local to Regional	Geographic Extent – Beyond Regional
	Most disturbances will occur within the LSA, with visual issues potentially extending into the RSA	<ul> <li>The geographic extent also depends on the effects of the project on caribou movement and migration, as well as on the</li> </ul>
	Duration – Short-term to Medium	effectiveness of access mitigation, which the Proponent

	Many disturbances will occur quickly (e.g., clearing) while others will continue throughout the life of the Project Frequency – Low to Continuous     Some disruptions will occur only once or occasionally whereas others will occur throughout the life of the Project	acknowledges in the EIS will be almost impossible to enforce. However, considering the known effects of multi-use linear corridors on caribou avoidance, movement and migration the geographic extent of the effect on Innu land use appears to be beyond the RSA.  Duration – Long-term  • The creation of a long-term partial to total barrier to caribou movement across the multi-use corridor would be indefinite, with an indefinite effect on Innu land use.  Frequency – Low to Continuous  • Construction effects would be infrequent, as would those associated with periodic inspection and maintenance; however, those associated with the presence of the LITL and the permanent access trail would be continuous
65.	Aboriginal Contemporary Traditional Land Use: An effect causing an overall decrease in levels of contemporary land use for traditional purposes by those Aboriginal communities and organizations that currently undertake such activities within the RSA, resulting in a negative change in the nature and / or cultural value of such activities.	The Proponent is requested to provide its understanding of the term "contemporary" as used occasionally in the EIS, and whether this is meant to be interchangeable with the term "current", in reference to land and resource use by Aboriginal persons.
66.	16.5.7.2 Definition and Determination of Significance  Project components will occupy areas currently used by Aboriginal groups and organizations for land and resource use purposes but these areas will be a small proportion of the total land available. Creation of new access will be minimal, and the new access that is created will be a benefit to some users. Project activities will likely disrupt some types of users and affect their quality of experience but users will be able to use alternative areas in the RSA. Project design, consultation, permitting, communications and other effects management measures will identify and address issues by avoiding sensitive areas as much as possible and complying with development regulations and guidelines. Given the large and alternative areas available to Aboriginal users and the effects	Innu Nation does not concur with the conclusion that land and resource use will not be reduced in any area.  See comments in response to Table 16.5.7-1.

67.	16.5.9 Cumulative Effects	
	The Project will not overlap or interact directly with communities in the central Labrador area, and once leaving the Churchill River, will follow along a portion of the TLH3, which will avoid or minimize the adverse effects on existing land and resource activities (e.g., outfitting operations, cabin use) and on the existing and proposed protected areas in this area of Labrador. The southeastern half of the transmission line will pass through an area with no existing ground access and limited development activity, and may be used as a travel corridor for certain activities in that region.  Other potential future development activities, such as commercial forestry in Forest Management Districts 19 and 21, are subject to comprehensive planning and management processes, which will likely accommodate the presence of the Project. These and other commercial and municipal developments, the designation of new federal and provincial parks in the region, changes in land ownership and rights due to the	proposed LITL, see comments in response to sections 12.3.5.3, 12.3.7 and Table 16.5.7-1.  Regarding other potential future development activities and their potential cumulative effects, see comments in response to sections 9.3.2, 9.3.9, Table 9.3.9-1, 10.3.3.2, 12.3.5.3, 12.3.7, 12.3.9, Table 12.3.9-1, and Table 16.5.7-1.
68.	future finalization and implementation of the Labrador Innu Land Claims Agreement and other future developments in combination with the effects of this Project, are unlikely to significantly affect land use activities given population levels, the nature and intensity of land and resource use and the overall vastness of the region.  Table 16.5.9-1 Cumulative Environmental Effects Summary: Land and Resource Use	Based on the information provided in the EIS, Innu Nation is unable

## Central and Southeastern Labrador Project on the Innu exercise of asserted or established Aboriginal rights and treaty rights now and in the future, and particularly on Current Baseline the Innu right to hunt caribou. Primarily remote area; human presence and activity is focused in and near communities at each end of the LSA / RSA and along the recently constructed TLH Interior portion of LSA is not subject to substantial activity Likely Residual Environmental Effects Likely minor and short-term disruptions during Construction No significant and sustained adverse effects to overall land and resource use during Construction or Operations and Maintenance Likely Cumulative Effects of Other Future Projects Limited proposed development activity and / or potential for overlapping effects Cumulative Environmental Effects Summary **Not Significant** Project-related environmental effects management measures and appropriate management, regulation and enforcement of other ongoing and future developments and activities will minimize cumulative effects Significant adverse cumulative environmental effects on Land and Resource Use are not likely to occur as a result of the Project in combination with other projects and activities that have been or will be carried out 69. Table 16.5.6-1 Existing Knowledge (Operations and As mentioned in response to section 15.8, the EIS assesses the Maintenance): Effects of Similar Projects on Land and visual effect of the proposed Project from the perspective of a car Resource Use driver stopping to look from the bridge rather than from the perspective of a canoeist on the river passing the transmission line. Negative perceptions of transmission lines are particularly strong among people with positive As literature reported in the EIS points out, the concern is that Innu environmental attitudes and nature orientation in leisure land users and wilderness enthusiasts may be negatively affected activities. by the industrial viewscape of the road and transmission line. 16.8 Visual Aesthetics Where the Kenamu meets the corridor, the desire is to attract as little attention as possible to the combined road and transmission 16.8.7 Project Effects (Construction, and Operations and

infrastructure.

The Proponent is requested to provide further information for KOP

Innu Nation

Maintenance): Visual Aesthetics

KOP 01, Kenamu River, Central and Southeastern

	Labrador	01:
		<ul> <li>How far up and down the Kenamu River will the transmission towers be viewable?</li> </ul>
		<ul> <li>How much distance, as measured on the River, will there be between the transmission line and the TLH 3, and can this distance be minimized?</li> </ul>
		<ul> <li>What is the range of river speeds during the open water season?</li> </ul>
70.	Table 17.5-1 Summary: Significance of Effects on	See comments in response to sections 7.2, 10.3.3.2, Figure 10.3.4-
	Atmospheric, Terrestrial, Freshwater, Marine and	1, and 12.3 (including all sub-sections). Innu Nation has concluded
	Socioeconomic Valued Environmental Components	that the cumulative effects of the Project on the MMH are
	Terrestrial Environment	significant.
	VEC	
	• Caribou	
	Likely Significant Residual Effect	
	• No	
	Comment	
	<ul> <li>The effects of the Project on woodland caribou are not expected to cause a decline in population, such that the viability or recovery of woodland caribou populations in Central and Southeastern Labrador and Newfoundland are threatened. The likely residual effects of the Project on Caribou are not significant.</li> </ul>	
	• In recognition of the present status of RWMH, and that other activities and pressures such as poaching and predation may continue, the overall fate is likely one of continued decline with or without the Project. If these existing (pre-Project) factors remain unchecked, the cumulative environmental effects are predicted to be significant, and not a result of the Project effects. The cumulative effects on the remainder of the Caribou herds in the province are rated as not significant.	
	Likely Significant Cumulative Effect	
	• No – MMH	
	• Yes – RWMH	
	No - Newfoundland	

71. Table 17.5-1 Summary: Significance of Effects on Atmospheric, Terrestrial, Freshwater, Marine and Socioeconomic Valued Environmental Components Terrestrial Environment

VEC

• Land and Resource Use

Likely Significant Residual Effect

• No

Comment

• Considering the effects management measures in place and planned, the Project effects on Land and Resource Use are not expected to negatively affect the successful operation or overall economic viability of commercial enterprises, or the ongoing planned growth of communities, contemporary traditional land use by Aboriginal users or other recreational land and resource users, or the ecological integrity, cultural value and / or societal use and enjoyment of protected areas. The likely residual effects of the Project on Land and Resource Use are not significant.

Likely Significant Cumulative Effect

See comments in response to Table 16.5.9-1 and Table 17.5-1 for MMH caribou. Innu Nation has concluded that the cumulative effects of the Project on Innu land and resource use are significant.