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Preliminary Review of the Environmental Impact Statement and Methodologies Used for Woodland Caribou and Waterfowl Studies Prepared by Nalcor Energy in the Context of the Lower Churchill Hydroelectric Generation Project in Labrador

Preliminary report submitted to:

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1.0 CONTEXT

In order to obtain the necessary authorization for the construction and subsequent operation of the hydroelectric generating facilities of the Lower Churchill Complex in Labrador, Nalcor Energy submitted an Environmental Impact Statement (EIS) (Nalcor Energy, 2009) to the Canadian Environmental Assessment Agency in February 2009. In view of the value and cultural importance of woodland caribou and waterfowl, the Ekuanitshit (Mingan) Innu hired consulting biologist Natalie D'Astous to conduct a review of the chapters dealing with these issues.

This review focuses on the chapters of the EIS submitted by Nalcor Energy dealing with woodland caribou and waterfowl and on the component studies used for the impact assessment. The primary objective is to verify the quality of these studies, to determine whether the conclusions of the impact assessment are realistic and objective, and suggest corrective methods if necessary; and to determine whether these studies comply with the EIS Guidelines issued by the Government of Canada and the Government of Newfoundland and Labrador.

Owing to budget and time constraints, this report is a preliminary analysis aimed at identifying the weaknesses of the component studies and EIS. Suggestions for subsequent analysis approaches and methods will be made where applicable.

2.0 GENERAL COMMENTS ON THE ENVIRONMENTAL IMPACT STATEMENT

2.1 Woodland caribou

The data used to produce the impact study on the woodland caribou (*Rangifer tarandus caribou*) were obtained from a report prepared by Minaskuat Inc. (Jacques Whitford) (Minaskuat Inc., 2009) on the Red Wine Mountains herd and the George River herd. The George River herd will not be dealt with in this report. The caribou belonging to the Lac Joseph herd are not considered to be users of the study area.

The impact study is essentially a review of the literature on all existing data for the Red Wine Mountains woodland caribou herd. More detailed analyses were conducted using existing telemetry data in order to determine caribou habitat selection, movement patterns and corridors used for crossing the Churchill River.

In the author's opinion, the study by Minaskuat Inc. (2009) was carried out in accordance with recognized methodologies. The literature review is exhaustive and appears to be complete. Considerable attention was given to the assessment of habitat use, the annual distribution of caribou and corridor use (to cross the Churchill River). The main conclusions drawn from these analyses are that the availability of habitats for caribou calving, travel routes and foraging is not a limiting factor in the study area either before or after Nalcor Energy's hydroelectric development project.

Generally speaking, the carrying capacity of the environment is seldom a limiting factor for woodland caribou, with gestation rates of approximately 100% among adult females (Courtois, 2003; Courtois et al., 2002). Calf mortality is high in the first few weeks of life, often due to predation (Crête et al., 1990). Caribou are quite sensitive to human disturbance (Dyer et al., 2001; 2002) and highly vulnerable to predation and hunting mortality (Seip, 1991,1992; Cumming and Beange, 1993; Dyer et al., 2001). Disturbance is therefore more a more significant limiting factor on the growth of a population than habitat availability. **The issue in the case of this Project is not habitat loss but rather the disturbance caused by the type of land use.**

In my opinion, it would therefore have been advisable to conduct a complete inventory of the watershed in the winter or spring (provided that the George River herd is not in the area), as Hydro-Québec did for the Romaine Complex in the winter of 2008 (at the request of Ekuanitshit). An inventory would have made it possible to determine whether caribou from the Lac Joseph herd (LJH) use the study area. According to Schmelzer et al., 2004 (page 14), the range of this herd extends to a large degree into the study site. Although the Lac Joseph herd is considered the only woodland caribou herd in Canada that may be growing in number (Thomas and Gray, 2002), given its federal status as a threatened species (COSEWIC), it would have been appropriate to conduct at least one inventory to determine this herd's use of the study area.

The precarious status of the Red Wine Mountains herd (RWMH) is obvious. The most recent estimate for this herd was 87 individuals in 2003 (Schmelzer et al., 2004). However, the last inventory was cut short due to the presence of the George River herd in the RWMH's range. Furthermore, in 2003, the government was not yet using the more accurate woodland caribou inventory method developed by Courtois et al., 2001. It is known that woodland caribou live in small groups, distributed contiguously (Crête, 1991; Courtois et al., 2001; Courtois, 2003). Caribou trail systems are not extensive. Caribou groups vary considerably in size and have a highly heterogeneous distribution. In order to obtain a more accurate population estimate, all caribou groups must be counted. To this end, an inventory using flight lines spaced 2 km apart (combining fixed wing aircraft and helicopters) must be carried out (Courtois et al., 2001).

According to Rebecca Jefferey (pers. comm., wildlife biologist, Government of Newfoundland and Labrador, Goose Bay, November 2008), the animals tagged with ARGOS collars are not very representative of those herd members that live in the western part of the range. Additional tagging appears to be necessary in order to improve the representativeness of the locations for this herd. Given the precarious status of the RWMH and the obvious project pressures on the herd, and in order to improve the representativeness of the herd's locations, an inventory, with captures, of the Churchill River watershed should have been carried out.

In the Environmental Impact Study (Nalcor Energy, 2009), habitat loss caused by implementation of the Project is considered negligible. Given that habitat is not a limiting factor for woodland caribou, but that the issue rather is the opening up of the area and increased disturbance, we essentially agree with the study's projections. However, significant cumulative effects are anticipated by Nalcor Energy *(*page 5-112), owing to the construction of additional transmission lines, the opening up of the

area by the construction of additional roads, the return of low-level military overflights from Goose Bay, and logging, which is normally accompanied by the construction of new roads. For a population whose viability is far from assured, the cumulative effects might prove fatal for this herd.

Nalcor Energy is already participating in the work of the RWMH recovery committee (Labrador Woodland Caribou Recovery Team). Although this participation is laudable, it seems clearly inadequate. For a project of this magnitude, it is surprising that the Labrador government did not require an additional inventory, as it did in the case of mining companies (New Millennium Capital Corp. and Labrador Iron Mines) that had a mining project in the Schefferville area for a herd considered extinct. To ensure the survival of the RWMH, the proposed mitigation measures, such as non-harassment policies, road speed limits, awareness sessions for personnel, and hunting bans, are all worthwhile measures, but incomplete. It would be particularly important to exhaustively monitor this herd during the work (which requires conducting inventories regularly and adding telemetry collars).

Unlike the EIS prepared by Hydro-Québec in 2008 for the Romaine Complex, the Nalcor Energy EIS examines the impact of building a transmission line, which is a very positive initiative. However, last April, the author of this review was contacted by a firm from St. John's, Newfoundland, to participate in an impact study with a view to the construction of an additional transmission line. The route of this transmission line would be along the Quebec border in the direction of the Blanc-Sablon area. If this Project is being seriously considered, it should have been included in the impact assessment. This Project could further contribute to the opening up of the territory in the woodland caribou habitat and affect other herds, such as the Joir River herd.

2.2 Waterfowl

The data used to prepare the impact study on waterfowl, including the Canada goose, were obtained from a study conducted by LGL Ltd. (LGL Ltd., 2008). This technical study is generally complete, and the effort made to inventory clutches and early and late breeders is more than adequate. However, backdating (determination of egg-laying dates) lacks precision, particularly for the American black duck and the mallard. This backdating was determined on the basis of stage 2A to 3 clutches. The variability in staging can easily cause errors of one to two weeks in the backdating estimate. The same applies for the surf scoter. In concrete terms, however, this has little significance for estimating

impacts due to the interannual variability in the egg-laying phenology of waterfowl based on the advancement of spring.

One negative point that should be mentioned is that the estimate of waterfowl use of the study area during the spring migration period was clearly underestimated. This estimate is based on a single inventory. At least three inventories would be required to obtain a more accurate idea of peak abundance (François Morneau, pers. comm., June 2008). In fact, migration occurs in waves; in order to characterize this migration, an inventory must be conducted every two days for approximately eight days. It is therefore likely that the population of Canada goose that uses the study area during the spring migration is underestimated. This is consistent with the Aboriginal traditional knowledge reported in the EIS.

The estimation of impacts and the mitigation measures are supported by a large quantity of data on habitat, breeding pairs and clutches. However, the Project's impact on migrating waterfowl populations is probably underestimated.

3.0 CONCLUSION

Owing to time constraints, this is a preliminary assessment only. The sections of the EIS submitted by Nalcor Energy dealing with woodland caribou and waterfowl, and the component studies were reviewed. Compared to the EIS prepared by Hydro-Québec for the Romaine Complex Project, the EIS prepared by Nalcor Energy for the Lower Churchill Project is clearly superior and more complete. The inclusion of Aboriginal traditional knowledge in the various sections is an excellent example for future EISs.

To raise another point, use of the study area by woodland caribou from the Lac Joseph herd was not determined, even though the range of this herd partially overlaps the project study area. This would require conducting inventories, with an additional marking program to identify their use of this area. According to the EIS Guidelines issued by the Government of Canada and the Government of Newfoundland and Labrador, all "valued environmental components" or VECs must be studied and the woodland caribou is recognized as a VEC (Anonymous, 2008). Failure to consider this herd contravenes these guidelines.

The most recent estimate of the Red Wine Mountains caribou herd dates to 2003 and the inventory had to be cut short due to the presence of migratory caribou in the area. At the time, the population was estimated at only 87 individuals. In light of the precarious status of the RWMH, the obvious project pressures on the herd, the opening up of the area (facilitating logging and mining) and the return of low-level military flights, and in order to improve the representativeness of herd locations, an inventory, with captures, of the Churchill River watershed should be carried out using the method developed by Courtois et al., 2001 before construction commences. The very survival of this herd is at stake.

Although the data used in drafting the impact study on waterfowl are generally of high quality, in my judgement waterfowl populations during spring migration were clearly underestimated due to the methodology used.

Finally, the monitoring and mitigation program for woodland caribou is not very detailed. According to the EIS Guidelines issued by the Government of Canada and the Government of Newfoundland and Labrador (pages 39 and 40), monitoring and follow-up programs must be described in greater

detail (see the requirements reproduced in the appendix). The current description of the monitoring and follow-up program for the woodland caribou in the EIS is clearly inadequate.

Based on this initial analysis of Nalcor Energy's EIS, it is clear that the sections dealing with woodland caribou are not in compliance with the EIS Guidelines. Given the importance of the Lac Joseph herd for the Ekuanitshit Innu and the precarious status of the Red Wine Mountains herd, the author believes that there is a strong case to be made in calling on the Newfoundland and Labrador Hydro authorities to correct these deficiencies.

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5.0 APPENDIX 1 (from Anonymous, 2008, pages 39-40)

The proposed approach for monitoring shall be described and shall include:

(a) The objectives of the monitoring program and a schedule for collection of the monitoring data required to meet these objectives;

(b) The sampling design, methodology, selection of the subjects and indicators to be monitored, and their selection criteria;

(c) The frequency, duration and geographic extent of monitoring, and justification for the extent;

(d) The application of the principles of Adaptive Environmental Management;

(e) The reporting and response mechanisms, including criteria for initiating a response and procedures;

(f) The approaches and methods for monitoring the cumulative effects of the Project with existing and future developments in the Project area;

(g) The integration of monitoring results with other aspects of the Project including adjustments to operating procedures and refinement of mitigation measures;

(h) The experience gained from previous and existing monitoring programs;

(i) The advisory roles of independent experts, government agencies, communities, holders of Aboriginal traditional and community knowledge and renewable resource users;

(j) The procedures to assess the effectiveness of monitoring and follow-up programs, mitigation measures and recovery programs for areas disturbed by the Project; and

(k) A communications plan to describe the results of monitoring to interested parties.

Lower Churchill Hydroelectric Generation Project
Public Consultation on the Environmental Impact Statement

SCIENTIFIC COMMENTS ON THE ADEQUACY OF THE ENVIRONMENTAL IMPACT STATEMENT ON THE LOWER CHURCHILL HYDROELECTRIC GENERATION PROJECT

CEAR 07-05-26178

Corporation Nishipiminan
for the Ekuanitshit Innu

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1. INTRODUCTION

1.1 Context

The Lower Churchill Development Project, which includes two hydroelectric generating stations, was announced to the responsible authorities in November 2006. This Project is subject to the environmental assessment process of the Province of Newfoundland and Labrador and of the Government of Canada, which issued joint guidelines in July 2008. In January 2009, they also announced that the Project would be assessed by a joint review panel.

The proponent, Nalcor Energy, filed its environmental impact study in February 2009 and the Review Panel asked stakeholders to submit their comments and opinions on the adequacy of this EIS, as measured against the guidelines that the proponent is required to follow.

This EIS, which includes an executive summary and three volumes (in six documents), as well as the 69 component studies supporting the EIS and the guidelines, are available on the Web at: http://www.ceaa.gc.ca/050/05/documents-eng.cfm?CEAR_ID=26178&categoryID=9.

1.2 Concerns of the Ekuanitshit Innu

The traditional territory of the Innu of the Lower North Shore includes the land located between the Churchill River and the St. Lawrence River, as well as the large plateaus at the head of these watersheds. The major rivers of the Lower North Shore and the Churchill River are the main transportation and communication routes.

The Ekuanitshit Innu are particularly concerned about the aspects of the Project that may have significant adverse impacts on the components that they use and value in this vast territory, namely:

- fish species;
- large ungulates, waterfowl and other wildlife species that they trap and hunt;
- quality and diversity of natural environments;
- transportation and navigation routes and corridors; and
- conservation of and respect for their cultural heritage.

1.3 Consultants

In view of the cultural and other importance of these components, the Ekuanitshit (Mingan) Innu hired consulting biologist Natalie D'Astous and the environmental consulting firm Biofilia Inc. (Pierre Dumas and Vincent Clément) to conduct a review of the Environmental Impact Statement (EIS) and the documents relating to these subjects, and to submit their comments.

The objective at this stage is to verify whether the EIS and the supporting documents adequately meet the EIS Guidelines, and whether should be judged acceptable and thus allowed to proceed to the next stage, namely public consultations on their content.

Owing to budget and time constraints, only the potentially major impacts on the above-mentioned resources were analyzed. This does not mean that there might not have been any concerns and reservations had the analysis been conducted concerning other aspects, including the impacts associated with construction activities and the filling of the reservoirs.

1.4 Project

The main project components are:

Gull Island generating station

- Located 225 km downstream of Churchill Falls;
- Powerhouse containing five Francis turbines, for a total capacity of 2250 MW;
- Closing of the river by a concrete-faced, rock-filled dam, 99 m high and 1315 m long; and
- Construction of a reservoir 125 m above sea level, 232 km long with an area of 200 km², inundating an area of 85 km².

Muskrat Falls generating station

- Located 60 km downstream of Gull Island;
- Powerhouse containing four Kaplan turbines, for a total capacity of 824 MW;
- Closing of the river by two concrete dams;
  - Southern section: 29 m high and 325 m long;
  - Northern section: 32 m high and 432 m long; and
- Construction of a reservoir 39 m above sea level, 59 km long with an area of 107 km², inundating an area of 41 km².

Transmission lines

- A 735-kV line, 203 km long, between Gull Island and Churchill Falls
- A double-circuit 230 kV line, 60 km long, between Muskrat Falls and Gull Island.

Tree clearing for construction of the reservoirs

Where feasible, it is planned to clear all trees from elevations of 3 m below the low supply level (as well as all the tree tops above this elevation) to 3 m above the full supply level.

Virtually all the trees would therefore be cleared from the Muskrat Falls reservoir and from the upstream section of the Gull Island reservoir; only a ring of trees would be cleared in the downstream section of the Gull Island reservoir.

In total, approximately 70% of the inundated forest area would be cleared.

2. GENERAL COMMENTS

2.1 Operating regimes

2.1.1 Guidelines

The Guidelines require (4.3.5a) a description of the following elements:

- Turbine flows, ecological flows, operating levels for different hydrological conditions (low and high flows including flows lower than the ecological flows);

- The time of year, frequency and amplitude of water level fluctuation ranges in all the reservoirs; and

- Flow rates (maximum, minimum and average) and velocities in all the sections of the river affected, as well as seasonal and daily variations in water levels.

2.1.2 EIS

The only data provided in the EIS on this subject (Volume 1A, 4.5.1.1: *Operating Regime*) are:

	Gull Island	***Muskrat Falls***
Elevation	125 m	39 m
Type of operation	base/intermediate	base
Daily fluctuations	a few centimetres	a few centimetres
Weekly fluctuations	could be up to 1 m	maximum 0.5 m
Annual variation	variations possible at certain times of the year	
Possible drawdown before the spring flood	3 m	
Possible rise during the spring flood	2 m	5 m

2.1.3 Comments

This terse description clearly does not comply with the requirements of the EIS Guidelines and does not permit a detailed analysis of the Project's environmental impacts, particularly on the aquatic environment. This is a very serious deficiency in the EIS which, in this respect, clearly does not comply with universally accepted and respected standards.

2.1.4 Conclusion

It is imperative that the EIS be corrected by adding a very detailed section providing the elements required by the Guidelines. The standard in this regard is to present all the results based on a simulation of the daily flow rate, water level and velocity conditions in all the affected areas over a minimum period of 25 years.

Before conducting this simulation, the proponent will have to very clearly define, as required, the rule it plans to apply for managing flows and levels during project operations, based on technical, economic and environmental constraints.

Following the detailed analysis of the environmental impacts, particularly on the aquatic environment as discussed below, it may be necessary for the proponent to identify and test other management rules capable of mitigating the impacts on the environment and maximizing the development of aquatic resources.

2.2 Impacts on the Churchill Falls regime

2.2.1 Guidelines

The EIS Guidelines (4.3.5a vii) require that the proponent provide a detailed description of the changes in management of lakes or reservoirs upstream and downstream of the project area.

2.2.2 EIS

The EIS does not provide any data on changes in the operating rules of the Churchill Falls facility, following the commissioning of the two generating stations downstream.

Consequently, there is no analysis of the environmental impacts of these changes in the management of the components comprising the Churchill Falls Complex.

2.2.3 Comments

The Complex generates 65% of the energy potential of the Churchill River basin. Once commissioned, the two new generating stations will generate the other 35%.

There is every reason to believe that this change in the plant and equipment with the addition of two large generating stations primarily operating as run-of-river plants will cause changes to these rules. In fact, with this new configuration, a different and more efficient approach can be taken to manage exceptional flows, long-term management of energy reserves and medium-term management of the three generating stations in order to meet weekly (higher during weekdays) and daily (higher during daytime) demand patterns.

Indeed, the proponent implicitly acknowledges, for instance (Volume 1A, 4.5.1.1), that there will be daily and weekly fluctuations in levels in the two impoundments, which would necessarily result in contrary effects in the Churchill Falls reservoirs, in order to meet the same demand pattern.

2.2.4 Conclusion

The proponent must therefore:

- Clearly state and define the current and future management rules for the Churchill Falls generating station;
- Indicate, on the basis of simulations, the impacts of these regime changes in the Project's components: reservoir levels, flow downstream of the facilities, etc.; and
- Discuss the environmental impacts of these changes, particularly on the aquatic environment.

2.3 Consultation

2.3.1 Guidelines

The Guidelines clearly state (2.2) that the proponent must inform and consult Aboriginal populations. Section 4.8 indicates that the consultation must make it possible to gain an understanding of the interests, values, concerns, contemporary and historic activities, Aboriginal traditional knowledge, and important issues facing these communities. The proponent must also explain how these aspects will be considered in planning and carrying out the Project. The communities to be considered included the Innu communities whose reserves are located on Quebec's Lower North Shore.

This consultation must include:

- **Informing** the community of the Project and its potential environmental effects;
- Identifying any **issues of concern** regarding potential environmental effects of the Project; and
- Identifying what **actions** the proponent is proposing to take to address each issue identified, as appropriate.

2.3.2 EIS

In the Executive Summary (4.1), the proponent states that it informed and consulted the local communities, in keeping with its consultation commitment set out in its internal policy. Concerning the Innu of the Lower North Shore (4.2.4), the proponent notes that it offered to meet with the communities to provide them with information and an opportunity to express their concerns and interests: "A number of these meetings have been held and the information shared is intended to enable the Quebec Innu to participate more effectively in the environmental assessment process."

In Volume 1A, the proponent lists the numerous consultation sessions held in various Labrador communities and notes the concerns and interests expressed. With respect to the Innu of the Lower North Shore (8.3.4 and 8.3.5.2), the proponent states that:

- They provided comments on the draft EIS Guidelines;
- Discussions were initiated in May 2008 with six communities; and
- Nalcor Energy will continue its efforts to fulfill consultation requirements for these communities in compliance with the Guidelines and its internal policy on this matter.

Appendix I of Volume 1 provides details concerning the information and consultation sessions with all the stakeholders, as well as conferences and presentations on the Project. There is no mention of any meetings with the Quebec Innu, let alone any comments, concerns and interests expressed by these communities.

2.3.3 Comments

In May 2008, the proponent initiated the **information** component of the consultations with the Innu of the Lower North Shore. The proponent does not provide any information on the dates, nature, participants or outcomes of the meetings.

The **concerns** and **actions** components of the consultations are never addressed and there is no indication as to why they were not conducted.

2.3.4 Conclusion

These deficiencies constitute an obvious failure on the part of the proponent to comply with the EIS Guidelines, and the EIS should not be considered adequate unless:

- The program of consultation with the Innu of the Lower North Shore is properly carried out, in accordance with the Guideline indications;
- The proponent clearly reports on the Innu's concerns about the Project; and
- The proponent clearly states its commitments to the concrete measures that it is proposing in order to consider these concerns, particularly regarding the anticipated impacts on the area's wildlife resources, communication and transportation routes, and Innu cultural heritage.

2.4 Mitigation measures

2.4.1 Guidelines

The Guidelines (4.6.1) require that the EIS describe the mitigation measures proposed to mitigate the significant adverse effects of the Project and the proposed compensation measures concerning aquatic wildlife.

2.4.2 EIS

Section 4.8 (Environmental Management) of the EIS states that:

- The environmental protection measures and mitigations will be managed and controlled through the proponent's Environmental Management System (EMS), which monitors environmental performance and integrates environmental management into a company's daily operations, long-term planning and other quality management systems;

- An Environmental Protection Plan (EPP) will be developed for the Project to help achieve a high level of environmental protection throughout the work areas and activities associated with the Project. The EPP is a working document for use in the field for project personnel and contractors;

- The EPP will be updated and modified as required according to the project phase and as determined by site-specific conditions and monitoring results;

- A table of contents of the EPP is provided in Appendix G;

- Site-specific environmental protection plans will be developed for key project components; they will address, for example, access roads, reservoir preparation and transmission line construction;

- A thorough analysis of all planned activities will be conducted prior to the start of construction to identify the activities that will require a specific EPP. Each plan will identify potential effects, appropriate mitigation measures, adaptive management measures, contingency measures, and responsibilities for implementation and compliance monitoring.

2.4.3 Comments

At several points in its EIS, the proponent mentions various measures that may be considered in order to mitigate the Project's impacts. However, nowhere in the EIS does the proponent propose adopting specific measures, nor does it even make any formal commitment to apply these measures.

However, the Newfoundland and Labrador *Environmental Protection Act* (s. 57) clearly provides that an EIS must include:

> *(e) a description of:*
>
> > *(i) the effects that would be caused, or that might reasonably be expected to be caused, to the environment by the undertaking with respect to the descriptions provided under paragraph (d), and*
> > *(ii) the actions necessary, or that may reasonably be expected to be necessary, to prevent, change, mitigate or remedy the effects upon or the effects that might reasonably be expected upon the environment by the undertaking;*
>
> *(g) a proposed set of control or remedial measures designed to minimize any or all significant harmful effects identified under paragraph (e).*

The proponent's proposal to identify the appropriate mitigation measures later in EPPs is contrary to this Act and to universally recognized practice in this regard.

Notwithstanding the foregoing, there is some doubt as to whether the proponent will be able to subsequently identify the mitigation measures on the basis of a "thorough analysis" given that it does not appear to have been able to do so at this stage in the process.

2.4.4 Conclusion

In order for the proponent's EIS to be considered adequate, it is therefore absolutely essential that:

- The mitigation measures proposed by the proponent be clearly identified in its EIS;
- The proponent make a formal commitment to implement these measures;
- The mitigation measures be subject to public review; and
- The mitigation measures be included in the conditions attached to government authorizations to carry out the Project.

2.5 Monitoring program

Likewise, the proponent must include in its EIS details about the environmental monitoring program that it plans to conduct, which it has not done.

3. COMMENTS ON THE COMPONENT STUDIES

3.1 Fish and fish habitat

3.1.1 Guidelines

Concerning the description of the aquatic environment, the EIS Guidelines specify the following requirement:

(4.4.4.2): The proponent shall describe the relevant components of the aquatic environment within the study area, including biological diversity, composition, abundance, distribution, population dynamics and habitat utilization of aquatic species, including fish.

3.1.2 EIS

Section 2.3 of Volume 2A states that 17 fish species can be found between Muskrat Falls and Churchill Falls. The ecology of these species is amply described in reference to the available scientific literature. The component studies indicate that fish inventories were carried out in 1998 using gillnets and electrofishing (CS Fish #8), and in 2006 using gillnets, fyke nets and angling (CS Fish #4). No data were provided on spawning activities or on the location of spawning grounds.

The analysis of the impacts on fish and fish habitat is essentially based on a complex methodology that can be summarized as follows:

- For each fish species, an attempt is made to establish a Habitat Utilization Index (HUI), which is expressed in Habitat Equivalent Units (HEUs), under current conditions and with the Project;
- Future indexes are established based on the nature of future banks (which depends on substrate, slope and wave exposure), water depth and current velocity, as well as the requirements of each species at each life cycle stage;
- The pre- and post-project comparison is used for the determination, for a given species, of harmful alteration, disruption or destruction (HADD) of fish habitat, which is prohibited by the federal *Fisheries Act*, unless authorized by the Minister, contingent upon acceptable HADD compensation.

In its component studies, the proponent outlines several limitations and deficiencies concerning its method for analyzing the impacts on fish and fish habitat:

- The paucity of studies within the province on utilization of the various types of fish habitat, which has made it necessary to rely on information from other areas of Canada and the United States (CS Fish #5, 2.2);

- HUIs cannot be used to characterize the reproductive potential of fish, since few mature fish were captured during their spawning season and, in any case, were probably not captured on their spawning substrate;

- Since the ideal water depth and velocity conditions cited in the literature for the spawning of the various fish species are only very rarely encountered, for future conditions, substrate alone was used as the quality criteria to identify potentially usable spawning habitat (CS Fish #5, 3.2.4.2); the proponent acknowledges the fact that not considering water depth and velocity for characterizing spawning potential results in limitations to the method used;

- Due to the variable conditions of the study area and the requirement for additional study, the calculated values for bank erosion of the future reservoirs are subject to some degree of uncertainty and only graphical representations of the erosion potential classifications were produced (CS Hydrology #1, 6.2); and

- "The current assumption regarding post-project conditions is that the habitat classifications and utilization values used are valid for a future stable condition. … It is expected that the nearshore zone will establish a relatively stable shoreline over a 10 to15 year time scale after inundation although it is acknowledged that certain aspects of the reservoir evolution may take a longer period." (CS Fish #3, 5.0: *Predicted Future Reservoir Conditions*).

The proponent also mentions several sources of impacts that could not be analyzed in its studies (CS Fish #3, 4.3: *Potential Effects of Operation*):

- "The effects of the managed flow regimes (both within a reservoir and downstream) can be varied and widespread on the species inhabiting both the reservoir and downstream."

- "One of the concerns related to hydroelectric development is the operation regime and the potential effect of reservoir drawdown on the biological productivity and stability of a new system. The extent, timing and duration of drawdowns can affect habitat quality and biological productivity by:
    - exposing incubating fish eggs in littoral spawning areas to desiccation and freezing, thereby reducing egg to fry survival;
    - exposing littoral zone benthos to desiccation and freezing thereby reducing production;
    - reducing biological production at lower trophic levels (bacteria, periphyton, phytoplankton); and
    - reducing availability (volume, surface area) of thermally optimal habitat for growth and feeding during the period of maximum growth for fish (summer-fall)."

3.1.3 Comments

The proponent based its environmental analysis of fish in the reservoirs solely on a pre- and post-project comparison of Habitat Utilization Indexes. The results generated by this method are clearly not very reliable:

- The potentials are not based on local requirements of species, but rather on data from outside the province;

- According to the proponent, failure to consider water depth or current velocity in characterizing spawning potential poses limitations on the interpretation of the study results. Indeed, these are essential factors for characterizing the suitability of these habitats;

- The future spawning substrates thus generated are found only on the banks of the reservoirs and never at depth; a number of species do not spawn on banks; and

- During the shoreline erosion process, a high percentage of fine material normally accompanies coarser material (gravel, pebbles); since the survival of the eggs of a number of lotic fish species is directly related to the absence of fine material in the spawning substrate, the reproductive success of these species is compromised for several years after filling of the reservoir.

Moreover, even if this method generated more reliable results, it is not suitable for analyzing the impacts of a hydroelectric project on the aquatic environment:

- This method provides an assessment of what conditions would be like 15 or 20 years after filling of the reservoirs, whereas it is imperative to know the conditions that will be immediately accessible to the various species upon filling of the reservoirs;

- Among other issues, the proponent acknowledges that erosion in the large Gull Island reservoir will be low because of the coarse and generally homogenous nature of the overburden soil and low wave energy; there will therefore be few available spawning grounds in this reservoir, even in the long term; and

- The species that do not immediately find the conditions that they require may have disappeared by the time these conditions become available.

Finally, the study completely fails to take into account the actual operating conditions of the facilities or fluctuations in water level and velocity regimes in the reservoirs. The proponent itself acknowledges that these factors cause significant impacts (see above). In addition, the variation in current velocities caused by a change in turbined flows during egg incubation periods can have significant impacts on egg survival.

3.1.4 Conclusion

In order for its EIS to be considered adequate, the proponent will have to:

- Determine the area of spawning grounds required for each fish species in each section of the reservoirs, at locations where substrate, depth and velocity conditions are suitable for the species;

- Clearly indicate the locations and surface areas of these spawning grounds after filling of the reservoirs;

- Identify the locations, in each section of the reservoirs, where spawning grounds could be developed in order to compensate for the deficits in area between the required spawning grounds and those that will be available;

- Determine the surface area of habitats essential to the other phases of the life cycle (nursery, feeding, and migration habitats) of the species present and ensure that these habitats are available;

- Conduct an analysis (which was not done in the proponent's EIS) of forage fish dynamics and habitats and ensure the abundance of these fish so as not to affect the entire fish food chain;

- Conduct a fine analysis of the impacts of water level and velocity regimes in the reservoirs for the various fish species, on the basis of a multi-year production simulation; and

- Clearly define the rules for managing reservoir levels that will help avoid significant impacts on fish populations and promote their development.

3.2 Caribou

3.2.1 Guidelines

The EIS Guidelines (4.4.4.3) require that the proponent describe the composition, distribution, abundance, and habitat utilization of terrestrial fauna. A description must also be provided of caribou population dynamics, migratory patterns and river crossings.

3.2.2 EIS

The component study on caribou (Large Mammals #4, by Minaskuat Inc.) deals with the sedentary woodland ecotype (Red Wine Mountains herds) and the migratory ecotype (George River herds) and provides an exhaustive review and synthesis of the available literature on these herds and their habitats. For the woodland ecotype, the study concludes that the availability of habitats for calving, travel routes and foraging is not considered a limiting factor in the study area either before or after the Project.

However, the EIS (Volume 2B, 5.15.4.2) concludes that the cumulative impacts on the Red Wine Mountains herd could reduce the numbers and viability of this herd. To mitigate these impacts, the proponent is considering conventional measures, such as a no-harassment policy, road speed limits, hunting bans and awareness sessions for personnel.

3.2.3 Comments

For the woodland ecotype, the Minaskuat impact study appears to have been carried out in accordance with accepted methods and the study conclusions seem to be plausible.

However, these woodland caribou are in fact known to be much more sensitive to human disturbance than to limitations associated with the environment's carrying capacity. As the proponent notes, in the case of this Project, the disturbance caused by the opening up, human occupation and use of the area is a much greater concern than habitat loss. The proponent will therefore have to propose much more effective measures to address this issue, such as real-time monitoring of the Red Wine Mountains herd and their demographics during the Project and pro-active steps in certain areas when caribou wearing collars approach the areas where workers are present.

In addition, in its EIS, the proponent did not deal with the Lac Joseph herd, which is also present in this watershed and which uses part of the study area. The proponent did not conduct any inventories or additional observations of this herd in the context of its Project, as Hydro-Québec did on the territory of the Romaine Complex, at the request of the Ekuanitshit Innu.

Interested readers may find it useful to read the more detailed analysis provided by Natalie D'Astous in her expert report (see references at the end).

3.2.4 Conclusion

The fact that the proponent did not conduct a recent winter or spring inventory of the Lac Joseph herd is a serious deficiency of the EIS. Because of the precarious situation of the Red Wine Mountains herd and the status of this species, more accurate and more recent information on its use of the area must also be obtained. Nalcor Energy's contribution to the Labrador Woodland Caribou Recovery Team is laudable, but clearly insufficient.

These inventories of the two herds must be carried out. The EIS should include formal commitments by the proponent concerning the control measures planned in order to minimize disturbance of the herds during construction.

Furthermore, as is true for the EIS as a whole, the mitigation measures and the monitoring program for woodland caribou are not sufficiently detailed and should, at a minimum, comply with federal and provincial guidelines in this regard.

3.3 Waterfowl

3.3.1 EIS

The data that were used to produce the impact study for waterfowl, including the Canada goose, were taken from the component study Avifauna #2 (LGL Ltd., 2008).

3.3.2 Comments

Generally, the LGL study appears to be complete and the effort made to conduct the inventory of clutches and early and late breeders is more than adequate. There are certain methodological deficiencies, but they do not have any significant consequences on the impact analysis.

However, the analysis of impacts during the spring migration period is based on a single inventory, when there should have been at least three, in order to more effectively determine peak abundance. As a result, the impacts during the spring migration were probably substantially underestimated.

3.3.3 Conclusion

The waterfowl study should be supplemented by more detailed inventories during the migratory periods.

3.4 Resource use

The EIS Guidelines (4.4.4.4) require that the proponent describe the current use of resources within the study area (including aquatic resources) by Aboriginal persons for traditional purposes, specifying the location of camps, harvested species and transportation routes used.

This obligation was clearly not met with respect to the Innu of the Lower North Shore, and the proponent must remedy this deficiency in order for its EIS to be considered adequate.

4. CONCLUSIONS

The analysis of the content of the EIS submitted by the proponent clearly shows that the treatment of several essential aspects required by the EIS Guidelines is totally inadequate. In many respects, the quality of this EIS is far below provincial, national and international environmental assessment and management standards.

Based on the analyses presented above, it may be concluded that the proponent has only a very theoretical, academic and speculative view of the ecological mechanisms that accompany the construction and operation of large hydroelectric facilities and does not have a clear, detailed and accurate understanding of the impact on the resources affected by its Project or the measures that will be required to mitigate the Project's adverse effects.

The Ekuanitshit Innu are very concerned about this situation, which creates great concern and uncertainty about the fate of their valued resources. They would be seriously concerned if the proponent's EIS were accepted without these serious deficiencies being corrected. The Ekuanitshit Innu want to know precisely how this Project may affect these resources and would like to evaluate the measures that the proponent formally undertakes to implement to address these issues.

These issues include the following, as detailed above:

- The project description must be completed by a detailed presentation of the water level, velocity and flow regimes during the operating period;
- A detailed presentation of the changes in the operating regime of the Churchill Falls facilities must be provided and a detailed analysis of its environmental impacts must be conducted;
- The program for consultation of the Innu of the Lower North Shore must be carried out in accordance with the EIS Guidelines and the results presented in the EIS;
- The proposed mitigation measures and monitoring program must be clearly described in the EIS, as required by legislation, so that it can be included in the public consultation and in the authorization to implement the Project;
- The analysis and treatment of all aspects concerning fish and fish habitat in the reservoirs must be supplemented by a fine analysis of water level, velocity and flow regimes and their ecological impacts upon filling and start of operation of the reservoirs;
- Woodland caribou inventories as well as a capture program must be carried out in the winter or spring. Appropriate and effective monitoring and mitigation measures must be proposed in order to ensure that woodland caribou are not affected during the construction period;
- The waterfowl study must be supplemented by additional inventories during the migratory periods; and
- The EIS must be completed by a description of use of the study area by the Innu of the Lower North Shore.

REFERENCES

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LEGAL COMMENTS ON THE ADEQUACY OF THE ENVIRONMENTAL IMPACT STATEMENT ON THE LOWER CHURCHILL HYDROELECTRIC GENERATION PROJECT

CEAR 07-05-26178

Corporation Nishipiminan
for the Ekuanitshit Innu

Based on comments submitted by
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June 22, 2009

I. Introduction

A. Ekuanitshit Innu

For thousands of years, the Ekuanitshit (Mingan) Innu have continuously occupied a vast territory extending from the Romaine River north to the Churchill River and west to the Manitou River.

The Government of Canada has recognized this fact by accepting the results of research on land use and occupation conducted in the early 1980s by the Atikamekw and Montagnais Council as the basis for negotiations aimed at signing a modern treaty.

The Newfoundland government and the proponent also recognize that the Mingan Innu claim Aboriginal rights in Labrador: *Lower Churchill Hydro Resource: Request for Expressions of Interest and Proposals* (January 2005), p. 23.

For the purposes of this environmental assessment, the Ekuanitshit Innu are represented by Corporation Nishipiminan, an organization recognized by the Funding Review Committee as eligible for funding under the Aboriginal Funding Envelope.

B. Scope of the present comments

The comments provided herein on the adequacy of the information contained in the Environmental Impact Statement (EIS) submitted by the proponent, Nalcor Energy, are made subject to the right of the Ekuanitshit Innu to make further comments on any issue they may consider relevant during the course of the environmental assessment.

On another note, the Ekuanitshit Innu have learned of the letter from the federal Environment Minister dated May 15, 2009, concerning the extension of the EIS consultation period to June 22 for the participants from the Nunatsiavut Government and the Innu Nation and Labrador Metis Nation organizations.

The Ekuanitshit Innu wrote to the Minister to inform him that they would not presume that it was his intention to discriminate among Aboriginal participants, and that since their rights and territory would be affected by this project in the same way as the other groups to whom his letter was addressed, the Ekuanitshit Innu would also take advantage of the extended deadline.

C. The Environmental Impact Statement is deficient

For the reasons set out below, the EIS does not meet the requirements of the guidelines issued for this environmental assessment and the proponent will have to provide additional information before the Review Panel holds public hearings.

Specifically, the proponent failed to conduct any consultations with the Ekuanitshit Innu, except for a single letter proposing a meeting, nothing more.

Furthermore, the scientific comments submitted concurrently with the comments contained herein demonstrate that the EIS also fails to meet the guideline requirements, specifically with respect to wildlife and hydrology.

II. Legal requirements of the environmental assessment

The *Canadian Environmental Assessment Act* expressly provides that a federal authority must consider, among other things, "any change that the project may cause in the environment … and any effect of any change … on the current use of lands and resources for traditional purposes by aboriginal persons": subsection 2(1).

The Act also states in section 16.1 that "community knowledge and aboriginal traditional knowledge may be considered in conducting an environmental assessment."

Finally, one of the purposes of the CEAA is "to promote communication and cooperation between responsible authorities and Aboriginal peoples with respect to environmental assessment": paragraph 4(1)(*b.3*).

III. Requirements imposed by the guidelines

The *Environmental Impact Statement Guidelines* issued by the Government of Canada and the Government of Newfoundland and Labrador in July 2008 attach some importance to Aboriginal issues.

The guidelines specify that the Innu community of Ekuanitshit is one of the Aboriginal groups to be considered: §4.8.

Concerning the Aboriginal groups to be considered, "The EIS shall demonstrate the proponent's understanding of the interests, values, concerns, contemporary and historic activities, Aboriginal traditional knowledge and important issues facing Aboriginal groups, and indicate how these will be considered in planning and carrying out the Project.": §4.8.

The guidelines stipulate in particular:

- Aboriginal participation in the environmental assessment process: §2.2;
- The consideration of Aboriginal traditional knowledge in the environmental assessment: §2.3, 3.1;
- In the section on the identification of issues and selection of valued environmental components (VECs), that Aboriginal concerns related to the component shall be considered: §4.4.1;
- Contemporary and historic Aboriginal land use shall be taken into consideration in the delineation of study areas specific to each VEC: §4.4.2;
- Aboriginal traditional knowledge shall be considered in the description of the existing environment of the study area: §4.4.4;
- In the description of relevant land and resource use within the study area of the VECs, the proponent shall include "current use of land and resources (including aquatic resources) by Aboriginal persons for traditional purposes, including location of camps, harvested species and transportation routes": §4.4.4.4;
- The assessment of the beneficial and adverse effects of the Project on the socio-economic environment shall consider how the Project may affect Aboriginal groups: §4.5.1;
- Mitigation measures to ensure continued access and passage on land by Aboriginals "for harvesting and travel … and the alternatives to be provided in the event of disruption": §4.6.1 (f);
- Mitigation measures "to maximize labour market opportunities" for Aboriginals: §4.6.1 (l).

Obviously, if the proponent does not consult the Ekuanitshit Innu, it will be unable to consider their interests, values and concerns or their contemporary and historic activities, as the guidelines require: §4.8.

Without specific and planned consultation, the EIS cannot adequately describe the Project's effects on this Aboriginal community or the planned mitigation measures.

IV. Preferential treatment reserved for Innu Nation

A. Newfoundland and the proponent's refusal to consider the Quebec Innu

Nalcor is a Newfoundland Crown corporation and until the EIS Guidelines were issued in July 2008 requiring Nalcor to consult the Ekuanitshit Innu, the proponent blindly followed the exclusion policy of its owner, the Government of Newfoundland.

In 2006, the Newfoundland Minister of Natural Resources informed the province's legislative assembly that the Quebec government would deal with the Aboriginal peoples in Quebec for the transmission lines in that province. For the rest, he stated that Newfoundland was obligated only to deal with the Innu in Labrador.[1]

Indeed, the ongoing policy of the Newfoundland government has been to exclude the Innu whose reserves are located in Quebec. For decades, the position of the Newfoundland government concerning Aboriginal land claims has been that cross-boundary claims shall be addressed only after settlement of all claims to the same area by Aboriginals residing in Labrador.[2]

Since 1987, the province has sought to create divisions between the Labrador Innu and the Quebec Innu and has succeeded in doing so. First, it was only by agreeing to exclude the Quebec Innu that the Labrador Innu were able to come to the negotiating table with Newfoundland. Second, the Labrador Innu no longer have any interest in considering the Quebec Innu since they know that the Quebec Innu will never have access to negotiations until the Labrador Innu have settled all their claims.

B. Ten-year advance granted to Innu Nation

The proponent acknowledges that the Aboriginal consultations organized by it between 1998 and 2008 involved only Innu Nation, i.e. an organization of the two communities in Labrador, Sheshatshiu and Natuashish: §8.3.1., 9.1.2. These two communities have received funding from the proponent for consultation purposes since 2000, even before the Project was defined: §8.3.1.5.

According to the proponent, throughout its planning since 1998, Innu Nation was the only source consulted to obtain information as a basis for compiling a description of the existing environment: §9.4.

Innu Nation also benefited from direct participation in planning and conducting the environmental assessment through a joint Environmental and Engineering Task Force: §8.3.1.3. Innu Nation was also the only Aboriginal member of the Innu Traditional Knowledge Committee: §8.3.1.4.

In addition, the proponent negotiated process agreements with Innu Nation covering not only consultation, but also the negotiation of an Impacts and Benefits Agreement (IBA): §8.3.2.

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[1] Newfoundland and Labrador, House of Assembly, *Proceedings*, Vol. 45, No. 2 (May 18, 2006): "We have the responsibility, the obligation and the duty, to deal with the Aboriginal Innu, or the Innu people, in Labrador."

[2] Government of Newfoundland and Labrador, Intergovernmental Affairs Secretariat, "Policy Regarding Aboriginal Land Claims" (December 1987), p. 11: "Crossboundary claims by native groups that are not residents of Labrador may be addressed only after the settlement of all claims to that specific areas [sic] by the resident Labrador natives."

In fact, in September 2008, Innu Nation, the province and the proponent signed an agreement in principle for an IBA to be called Tshash Petapen (New Dawn Agreement) that provided for:

- Royalty payments and the participation of Labrador Innu in project development;
- Processes for ongoing project-related discussion and cooperation during its construction and operation phases;
- Mechanisms for job creation and business opportunities related to training, commercial participation and environmental protection.

The proponent describes the content of this IBA in terms of benefits stemming from the Project for the Innu: §8.3.1.6.

C. The proponent has preferred to consult a community that will not be affected

The proponent has preferred to consult an organization half of whose communities it represents will not even be affected by the Project.

The proponent's preferred partner for discussions and negotiations is Innu Nation, an organization that reflects the provincial boundaries and includes the two communities in Labrador, Sheshatshiu and Natuashish. However, the proponent admits in its EIS that the community of Natuashish will not even be affected by the project unless its residents are flying in to work on the Project: Vol. III, p. 4-25.

In fact, the word "Natuashish" appears only once in the volume describing the biophysical assessment (Volume II, Part A, "Biophysical Assessment"). It should be noted that the Innu Traditional Knowledge Committee was established in November 2006 and is composed of ten residents from Sheshatshiu but only one resident from Natuashish: Appendix IB H, Report of the Work of the Innu Traditional Knowledge Committee, p. 4.

The Innu community closest to the project site, Sheshatshiu, is a community whose members traditionally spend part of the year in Quebec, according to the proponent itself: Vol. III, p. 2-31. Sheshatshiu has established and continues to maintain ties with several Innu communities now established on reserves on Quebec's Lower North Shore: Appendix IB H, Report of the Work of the Innu Traditional Knowledge Committee, p. 18.

V. Situation of the Ekuanitshit Innu

A. Ties with the territory affected by the Project

As mentioned above, the traditional territory of the Ekuanitshit Innu extends from the Romaine River north as far as the Churchill River.

In another environmental assessment, Hydro-Québec had no problem recognizing that "[translation] essentially, the territory used by the Ekuanitshit Innu in the 20th century … extends as far as the Churchill River in Labrador": *Complexe de La Romaine; Étude d'impact sur l'environnement* (December 2006), Vol. 6, p. 38-8.

Moreover, this use is described in detail in the memoirs of Mathieu Mestokosho, an Ekuanitshit Innu born around 1887 who, for most of his life, headed to the Labrador interior in August, returning to Mingan only in late spring: Serge Bouchard, *Récits de Mathieu Mestokosho, chasseur innu [Caribou Hunter: A Song of a Vanished Life]* (Montreal, Boreal, 2004).

The interviews conducted for the proponent as part of the research on historic and archeological resources also showed recent use of Gull Lake by the Ekuanitshit Innu ("people from Mingan"): Cultural Heritage Resources, Report 5, Historic Resources (Labrador Study), p. 78. The same report mentions heavy use of the area by the Mingan Innu in the 19th century, associated with the Winokapau trading post: p. 33; Cultural Heritage Resources, Report 4, Historic Resources Overview Assessment 1998-2000, Volume 1, p. 27.

In a recent study on Innu traditional knowledge concerning the Romaine River, two Ekuanitshit Innu provided information about ice, but based on their experience in the Churchill River area and in the reservoir created by the first phase: Daniel Clément, *Le savoir innu relatif à la Unaman-shipu*, report submitted to Hydro-Québec Équipement (September 2007), p. 147-48.[3]

B. Late contact by Nalcor

In 2005, when the Government of Newfoundland and the proponent issued a Request for Expressions of Interest and Proposals for the development of this project, they openly stated that the Mingan Innu are claiming Aboriginal rights in Labrador and that it may be necessary for a third party to consult them: *Lower Churchill Hydro Resource: Request for Expressions of Interest and Proposals*, p. 23.

Unfortunately, the proponent was slow to follow its own advice: in the project registration/project description submitted in 2006, it recognized the traditional occupation of the affected area by the Labrador Innu, but made no mention of the Innu whose reserves are located in Quebec.

The first contacts with the Ekuanitshit Innu were made in the form of a letter to the Chief dated May 20, 2008, from the proponent's Vice-President. The letter was therefore sent two weeks after the Ekuanitshit Innu were recognized as eligible for funding by the Funding Review Committee and less than two months before the guidelines requiring the proponent to engage in these consultations with the Ekuanitshit Innu were issued.

The letter did not suggest any practical means for holding consultations, except a meeting "as soon as practicable," and did not offer any support for the capacity of the community to respond to this invitation.

In any event, during 2008, the Ekuanitshit Innu were busy participating in the environmental assessment of the Romaine Hydroelectric Complex Project (CEAR Reference No. 04-05-2613), a major project proposed in the heart of their territory.

In the absence of technical and financial capacity prior to the allocation of funding by the Funding Review Committee, the Ekuanitshit Innu were unable to respond simultaneously to two such major projects. In terms of action taken by the proponent, it was only in a letter to the Chief dated May, 13, 2009 that the proponent proposed an agreement which would include concrete support through the funding of a consultation officer position.

A discussion on consultation methods was initiated during an initial exploratory meeting between representatives of the proponent and members of the Ekuanitshit Innu Council, held in the community on June 1, 2009.

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[3] This information concerned "Uipitatshishikuau ['an expanse of flat ice']" when there is "a hole that forms under the ice" and "Kainipaishikuau ['an expanse of sloping ice']", i.e. "ice that gives way, that cracks."

In addition, in the EIS, the proponent undertakes to hire employees by means of "engagement and benefits strategies" that it plans to offer to Innu communities in Quebec: §3.6.5.2. If this is truly the proponent's intention, then it is strange, to say the least, that it never informed the Ekuanitshit Innu of its plans.

C. Place of the Ekuanitshit Innu in a study area delineated based on cultural and geographic realities

The proponent's decision to consult the Innu for a decade based on their settlement site – i.e. by consulting only the communities of Sheshatshiu and Natuashish because their reserves are located within the province's boundaries – fails to study the real "current use of land and resources for traditional purposes by aboriginal persons." which must be considered in an environmental assessment pursuant to subsection 2(1) of the *Canadian Environmental Assessment Act*.

The report on historic and archeological resources notes that even from the perspective of the Labrador Innu, the Project will be implemented in an area that can only be studied in the context of transboundary use and occupation involving the communities from Matimekosh-Lake John (Schefferville) to Pakua-Shipi (St. Augustin).

In fact, this is an area of overlap that is directly linked to the permanent community established at Ekuanitshit:

> Innu senior informants made reference to a number of other areas that were used not only for subsistence purposes but also to consolidate social ties with other Innu groups, including those from the St. Lawrence River north shore (e.g., Sept-Iles and St. Augustin) and the Quebec-Labrador deep interior (Schefferville and Kaniapiscau) where Innu and also Cree "territories" overlap.
>
> Significant statements regarding places, travel routes and portage trails include: …
>
> - from "Two Rivers" and Shoal River (OF) to Mathieu André's store near Mecatina River and Mingan, year after year;
>
> Cultural Heritage Resources, Report 5, Historic Resources (Labrador Study), §5.5.2.2.

In another environmental assessment, Hydro-Québec had no problem recognizing that the communities whose reserves are located on Quebec's Lower North Shore "[translation] each occupy and exploit the portion of the interior that is most easily accessible to them by water." For the Ekuanitshit Innu, among others, "[translation] their hunting territories are vast, contiguous from west to east and extend at least as far as the English-speaking village of St. Paul's River, on Quebec's Lower North Shore, and north as far as the Churchill River": Hydro-Québec, *Complexe de La Romaine; Étude d'impact sur l'environnement* (December 2006), Vol. 6, p. 38-7.

Aboriginal use necessarily reflects the occupation of the territory by wildlife, which does not follow provincial boundaries.

When developing a recovery strategy for woodland caribou in Labrador, for example, the recommendation of the Newfoundland Department of Environment was to coordinate efforts with both the Government of Quebec and the Innu of the Lower North Shore: Newfoundland and Labrador Department of Environment and Conservation, *Recovery strategy for three woodland caribou herds (Rangifer tarandus caribou; boreal population) in Labrador* (2004), Table 1.

The Environmental Impact Statement also acknowledges that the range of the George River Caribou Herd encompasses the territory of Quebec and Labrador, including the Lower Churchill area. This herd is therefore of great importance for many Aboriginal peoples: §2.4.3.

VI. Conclusion

In its EIS, the proponent included Table 8.1 entitled “Innu Concerns,” but this table reflects only the concerns of Innu Nation.

A comparison with the situation of the Ekuanitshit Innu has been inserted in the table and the results are provided below.

Innu Concerns	**Project Team Comment**	***Comparison with the Ekuanitshit Innu***
Consultation		
• There was no consultation with Innu regarding the construction of the Churchill Falls Project • Consultation should be meaningful • Project information must be available to all Innu	• A variety of means were used to consult with Innu in Sheshatshiu and Natuashish • ITK has been respected and used in the EIS • Special efforts were made to consult with Elders • Consultation with Innu has been ongoing since 2005	*• There was no attempt to consult prior to 2008 • The knowledge of the Ekuanitshit Innu was not taken into consideration • No financial support was offered prior to 2009 and this offer of support is limited to a consultation officer position*
Culture		
• Concerns that the Project will affect the Innu spiritual connection to the land • Wage employment will conflict with traditional values • Concern that country foods will not be available (e.g., loss of access, contamination)	• Project Team has attended community meetings in Sheshatshiu and Natuashish • There have been extensive discussions with Innu and advisors to Innu Nation • Cultural sensitivity training has been provided • Provisions for cultural leave and country food at the work site are being discussed with Innu Nation	*• The Ekuanitshit Innu have the same concerns, but there was no consultation*
Benefits		
• There should be long-term benefits for all Innu, including elders • Must include training and employment	• The Project environmental and engineering work to date has employed Innu and used Innu companies • There are ongoing efforts to assist Innu to build a training and employment database • Hiring policies will include specific efforts to train and hire Innu • Efforts will be made to create a comfortable and supportive workplace for Innu • Nalcor Energy and Innu Nation are negotiating a Lower Churchill Project IBA. Key elements of the commercial terms of the IBA include a structured royalty regime under which Innu will be entitled to receive an annual royalty payment based upon a percentage of net proceeds from the generation component of the Project	*• No royalty payments, no commercial involvement and no participation in the work were offered to the Ekuanitshit Innu*

If the proponent does not consult the Ekuanitshit Innu, it will be unable to consider their interests, values and concerns, or their contemporary and historic activities, as the guidelines require: §4.8. Without any specific and planned consultation, the EIS will not be able to effectively describe the Project's effects on the Ekuanitshit Innu, or the planned mitigation measures.

Before the EIS was filed in February 2009, the proponent failed to undertake any consultations with the Ekuanitshit Innu, except for a single letter in May 2008. This letter proposed only a meeting and did not offer, for example, any technical support, whereas Innu Nation has already benefited from funding and close involvement in the environmental assessment process for a decade now.

The Ekuanitshit Innu agreed to discuss the format for future consultations with the proponent. However, their systematic exclusion to date is not consistent with the guidelines, nor with the social, historic and scientific reality of the study area. This exclusion stems solely from the arbitrary and discriminatory policy to exclude Quebec Innu, adopted by the Government of Newfoundland, which owns the proponent.

The Environmental Impact Statement cannot be considered adequate until consultations with the Ekuanitshit Innu have been completed.