COPY

IN THE MATTER OF the *Electrical Power Control Act*, 1994, SNL 1994, Chapter E-5.1, as amended ("EPCA"); and

IN THE MATTER OF an application by Nalcor Energy to establish the terms of a water management agreement between Nalcor Energy and Churchill Falls (Labrador) Corporation Limited for the Churchill River, Labrador

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TO : The Board of Commissioners of Public Utilities

THE INNU OF UASHAT MAK MANI-UTENAM, THE INNU TAKUAIKAN UASHAT MAK MANI-UTENAM BAND COUNCIL AND CERTAIN TRADITIONAL FAMILIES OF THE UASHAT MAK MANI-UTENAM INNU NATION SUBMIT ("Intervenors"):

(i) The Intervenors' interest in the matter

1. The Innu Takuaikan Uashat mak Mani-Utenam Band Council is the elected representative of the Innu of Uashat mak Mani-Utenam pursuant to the *Indian Act*, R.C.S. 1985, c. I-5. It is seeking to intervene in the present proceedings in its own name and on behalf of the Innu of Uashat mak Mani-Utenam.

2. The traditional families of the Uashat mak Mani-Utenam Innu Nation who are plaintiffs in the Federal Court proceedings *Edouard Vollant et. al.* c. *Sa Majesté la Reine* (file no. T-568-07) are also seeking to intervene in the present proceedings.

3. The Intervenors claim aboriginal title, aboriginal rights and treaty rights in the portion of Nitassinan often referred to as Labrador.

4. Since time immemorial, or, at least since several centuries prior to contact with Europeans, the Intervenors have continuously occupied, possessed, controlled and managed their traditional lands. The traditional lands of the Intervenors include all of Labrador, namely the lands and natural resources located approximately between Parallels 52 and 56 of latitude north and Meridians 61 and 69 of longitude west. Some parts of the traditional lands are shared with other Innu or Aboriginal groups.

5. More particularly, the Intervenors currently live, occupy, possess and use the western, central and northern portions of Labrador located approximately between Parallels 52 and 55 of latitude north and Meridians 62 and 68 of longitude west.

6. The Intervenors possess, occupy and use the territory and natural resources which will be affected by the water management agreement.

7. In 1979, the Government of Canada accepted to negotiate with the Innu in regard to their land claims. The Government of Québec followed suit in 1980.

8. In January 2005, the Government of Newfoundland-and-Labrador in partnership with Newfoundland and Labrador Hydro issued a *Request for Expressions of Interest and Proposals* ("Request") for participation in the development of the Lower Churchill hydroelectric project. The Request acknowledges that the Innu of Uashat mak Mani-Utenam claim aboriginal rights in Labrador and that they may need to be consulted.

9. On April 5, 2007, certain traditional families of the Uashat mak Mani-Utenam Innu Nation filed proceedings in the Federal Court (*Edouard Vollant et. al.* c. *Sa Majesté la Reine* – file no. T-568-07) seeking a declaration of aboriginal title, aboriginal rights and treaty rights in respect to their family territories and traditional territory located in Labrador.

10. In July 2008, the Government of Canada and the Government of Newfoundland-and-Labrador issued the *Environmental Impact Statement Guidelines* ("Guidelines") for the Lower Churchill hydroelectric project. The guidelines direct Nalcor Energy to consult with the Innu of Uashat mak Mani-Utenam.

11. On July 17, 2009 and December 18, 2009, the Intervenors provided - without prejudice to their rights and without prejudice to any legal proceedings - comments to the joint panel reviewing the proposed Lower Churchill hydroelectric project, particularly in regard to the deficiencies and inadequacy of the environmental assessment conducted by the proponent Nalcor Energy.

(ii) The disposition of the proceedings which the Intervenors advocate

12. AN ORDER refusing to establish the terms of a water management agreement, or in the alternative, AN ORDER staying the proceedings in regard to the establishment of the terms of a water management agreement pending meaningful consultation and accommodation of the Intervenors.

13. AN ORDER in any event of the cause that Nalcor Energy pay all the expenses incurred by the Intervenors in connection with these proceedings.

14. If the Board of Commissioners of Public Utilities orders that all expenses of the Board of Commissioners of Public Utilities in connection with these proceedings

be paid by the parties, AN ORDER that these expenses be paid by Nalcor Energy and Churchill Falls (Labrador) Corporation Limited.

(iii) The facts the Intervenors propose to show in evidence

15. The Intervenors possess, occupy and use the territory and natural resources which will be affected by the water management agreement.

16. The Government of Newfoundland-and-Labrador and Nalcor Energy have knowledge, real or constructive, of this possession, occupation and use by the Intervenors as well as their claims to aboriginal title, aboriginal rights and treaty rights in the territory which will be affected by the water management agreement.

17. The Intervenors have not been consulted by the Government of Newfoundland-and-Labrador, Nalcor Energy, and Churchill Falls (Labrador) Corporation Limited with respect to the water management agreement.

(iv) The reasons why the Intervenors believe the board should decide in the manner advocated

18. There is a strong *prima facie* case in support of the claim to aboriginal title, aboriginal rights and treaty rights of the Intervenors.

19. The establishment of the water management agreement will adversely affect the rights and title of the Intervenors.

20. The Board of Commissioners of Public Utilities must exercise its decision-making function in accordance with the dictates of the Constitution, including s. 35 of the *Constitution Act, 1982*.

21. The Board of Commissioners of Public Utilities must determine whether the Crown's duty to consult and accommodate has been triggered and whether this duty has been fulfilled with respect to the establishment of the water management agreement.

(v) The qualification of expert witnesses, if any, whose opinions are to be relied upon

(vi) List of information and support documents that may be useful in explaining the Intervenors' representation

22. Government of Newfoundland and Labrador, *Request for Expressions of Interest and Proposals*, January 2005.

23. Amended Statement of Claim at the Federal Court of Canada, no. T-568-07, *Edouard Vollant et. al.* c. *Sa Majesté la Reine* – June 20, 2007.

24. Government of Canada and Government of Newfoundland and Labrador, *Environmental Impact Statement Guidelines, Lower Churchill Generation Project*, July 2008.

25. Comments provided by the Intervenors on July 17, 2009 and December 18, 2009 to the joint panel reviewing the proposed Lower Churchill hydroelectric project.

26. Such other information and documents as counsel may advise and the Board Board of Commissioners of Public Utilities shall permit.

Communications may be sent to the undersigned acting as agent for the Intervenors.

Montreal, this 21th day of December 2009

O'Reilly & Associés

O'REILLY & ASSOCIÉS
1155 University, suite 1007
Montreal, Québec
H3B 3A7
Tel: 514-871-8117
Fax: 514-871-9177

Agent for the Intervenors

COMMENTS ON ADDITIONAL INFORMATION FOR ENVIRONMENTAL REVIEW OF PROPOSED LOWER CHURCHILL HYDROELECTRIC GENERATION PROJECT

on behalf of the Uashaunnuat, the Innu Takuaikan Uashat mak Mani-Utenam Band Council and certain Innu families

December 18, 2009

The following comments are made in response to the additional information provided by the Proponent, Nalcor Energy. This information was provided in response to questions sent to the Proponent by the Panel on May 1, June 22 and July 24, 2009. These comments are filed without prejudice to the rights of the Uashaunnuat, Innu families and members of ITUM, and without prejudice to any legal proceedings.

These comments are filed on behalf of the Uashaunnuat, the Innu Takuaikan Uashat mak Mani-Utenam (ITUM) Band Council and certain traditional families of the Uashat mak Mani-Utenam Innu Nation which are plaintiffs in *Philomène McKenzie et al. v. AGQ et al.* (QSC: 500-05-027983-962) and *Édouard Vollant et al. v. AGC et al.* (FC: T-568-07). Innu families are also members of the Uashaunnuat. ITUM includes all members of the Uashat mak Mani-Utenam community. (When the pronoun "we" is used without further qualification, it must be understood as referring simultaneously to the Uashaunnuat, Innu families and members of ITUM).

We reiterate all our comments made to the Panel on July 17, 2009 in regard to the conformity of the Environmental Impact Statement ("EIS").

We are opposed to any development project on our territory without our consent. More particularly, our consent must be sought by the Proponent and the Governments of Canada and Newfoundland and Labrador in regard to the Project. We currently refuse to consent to the Project due to, among other reasons, its negative impacts on our traditional lands and our traditional way of life and because we have not been consulted in regard to the Project.

As mentioned in our previous comments, there has only been one information meeting with the Proponent on January 12, 2009. The additional information provided by the Proponent to the Panel is based on the discussions and the information exchanged on January 12, 2009. There have been no other meetings.

The Proponent has since suggested that the consultation process be governed by a "Community Consultation Agreement". This proposed agreement was prepared by the Proponent without our participation or input. We refuse to be bound by this unilateral agreement which was submitted on a "take it or leave it" basis.

We have informed the Proponent that we are prepared to discuss the modalities of the consultation process. We are still awaiting the Proponent's response to our invitation to discuss this process.

In addition, the proposed agreement is deficient in that it does not take into account the wide scope of the Project and the extensive negative impacts of the Project on our traditional lands and our traditional way of life. The agreement is also silent with respect to the obligations and participation of the Governments of Canada and Newfoundland and Labrador in the consultation process.

In any event, the content of the agreement and the manner in which was submitted do not respect at the very least the obligations to consult the Uashaunnuat.

The Proponent's has a duty to consult that is specific to the Uashaunnuat. The Proponent has not as of yet fulfilled its obligations to the Uashaunnuat. In these circumstances, the Proponent's EIS remains incomplete, insufficient and inadequate.

Gull Island: N52° 58' W61° 26'
Muskrat Falls: N53° 15' W60° 46'

Request for Expressions of Interest and Proposals
Lower Churchill Hydro Resource

January 2005

Visit our website at:
www.gov.nl.ca/lowerchurchill/

HYDRO
THE POWER OF COMMITMENT

GOVERNMENT OF
NEWFOUNDLAND
AND LABRADOR

REQUEST FOR
EXPRESSIONS OF INTEREST AND PROPOSALS
LOWER CHURCHILL HYDRO RESOURCE

January 2005

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1. INTRODUCTION

The Government of Newfoundland and Labrador (the Government) and Newfoundland and Labrador Hydro (NLH) invite written expressions of interest for participation in the development and operation of hydroelectric generation facilities at Gull Island and/or Muskrat Falls and associated transmission. The Government is interested in all possible forms of participation by third parties in the development. The Government encourages innovative and broadly-based proposals. However, the range of participation proposed will be considered, and if appropriate, successful proponents who are offering to participate in discrete aspects of the development may be asked to consider joining with other successful proponents to develop a more comprehensive proposal with which to proceed to the next phase of discussions with the Government and NLH.

2. PURPOSE OF REQUEST FOR EXPRESSIONS OF INTEREST AND PROPOSALS

The purpose of this Request for Expressions of Interest and Proposals is to allow all interested parties to submit written development concept proposals leading to a competitive assessment process. The proposals will be assessed in relation to Government's objectives for development of the resource. The proposal submission will be the first of a potential multi-phase process intended to lead to the successful commercial negotiation of a development agreement for one, or both, of the proposed hydroelectric projects and associated transmission.

The Government's and NLH's evaluation and planning for the development of the Lower Churchill Hydro resource will be based upon proposals received pursuant to this Request for Expressions of Interest and Proposals. Any parties who wish to participate should submit a proposal pursuant to this process.

This document is not a tender, nor does it constitute a tender process. It is not an invitation for an offer for contract. Any use of, or reliance upon, this Request for Expressions of Interest and Proposals, or any of the statements or information contained herein, by any person, for any purpose, is subject to the terms and conditions contained in Section 6 of this document.

3. PROCESS

The Government recognizes that development concepts brought forward may be at varying stages of study regarding feasibility, and therefore flexibility will be required in the process to allow for a fair assessment and investigation of all the proposals. Proponents will be expected to demonstrate support for viability of project concepts in Phase 1. This may be demonstrated in this initial phase using comparable projects in other jurisdictions or other relevant technical reports. Phase 2 will be customized to reflect the study requirements of the selected proposals.

Phase 1

Proposals received in response to this invitation will be assessed by a committee composed of representatives from the Government and NLH (the Assessment Committee). The proposals will be assessed in accordance with established criteria, relative to Government's stated objectives for development of the resource. After an initial assessment of the proposals, a shortlist of proponents will be prepared. Clarification and further exchange of information may take place with the short-listed proponents. Proponents, whose proposals satisfactorily meet Government's criteria, may be invited to enter into an agreement with Government and NLH to undertake a feasibility study of the proposed concept. If appropriate, successful proponents may be asked to consider joining with other compatible, successful proponents to combine proposals that address discrete elements of the project and create a more comprehensive development proposal

before proceeding to Phase 2. Phase 1 will be conducted as expeditiously as possible. The schedule will be determined by the nature and extent of responses received.

Phase 2

Successful proponent(s) will enter into agreement(s) to undertake a feasibility review of the proposal concept(s) (Feasibility Study Agreement, refer Section 6(vi)) with the Government and NLH. The terms of this arrangement(s) will be negotiated with the respective proponents and may vary depending on the degree of study required for the proposed development concept. The agreement will address the terms of reference for the feasibility assessment, funding of the work, completion date, milestones, sharing of information, commercial confidentiality and other issues. During this Phase, principles for sharing risk, costs and revenue, and investment responsibility will also be developed for the proposal concept. It is anticipated that after entering into the Feasibility Study Agreement, the studies will take up to six months, or other such period as the parties may agree. The Government and NLH will be provided with a copy of all studies. At the end of Phase 2, there will be a conclusion on the feasibility of the proposed development concept(s).

Phase 3

Proponents of the most viable and attractive development concepts may be selected to enter into a Letter of Intent for negotiation of commercial principles. Successful negotiations will lead to the execution of a Memorandum of Understanding (MOU), or similar document, outlining the fundamental terms that will provide the framework for negotiation of detailed commercial agreements. Concurrent with the negotiations, there may be ongoing technical studies during this phase. It is anticipated that this process will take up to six months, or other such period as the parties may agree.

Phase 4

Upon the successful negotiation of an MOU, or similar document, negotiation of detailed commercial agreements will be undertaken in accordance with the terms agreed upon in the MOU, or similar document.

4. OVERVIEW OF GOVERNMENT'S OBJECTIVES FOR DEVELOPMENT OF THE RESOURCE

The Government is committed to securing maximum benefits for the Province of Newfoundland and Labrador (the Province) from the development of the Province's hydroelectric resources. Development of the untapped hydroelectric potential on the Churchill River must bring real and long-term benefits to the people of the Province and make a strong contribution to the Province's economy. Development of the resource should also provide for meaningful participation in the projects by aboriginal parties with land claims in the development area(s) that have been accepted by the Government for negotiation.

The Government's objectives for development of the resource must be achieved on the basis of a technically and financially viable development concept(s), that minimizes exposure of the Province to undue financial risk. The Government will consider all proposals (including use of the power in Labrador, on the island of Newfoundland, or for export), in terms of achieving maximum economic and employment benefits for the Province.

Management of project risks is a key consideration in achieving the Government's objectives for development of the resource. The Government is seeking to develop the resource in a manner whereby project risks are mitigated and borne by parties best suited to assume them. The Government recognizes that participants will expect to share in the project returns commensurate with the risks they are willing to assume.

The Government has a long-term perspective on the achievement of all its objectives. Development of the resource and the subsequent sale of the power must provide positive impacts to the Provincial economy, and Government revenues, over the life of the project. These benefits may be realized in different forms during different phases of the project life.

5. PROPOSAL REQUIREMENTS

Proposals must be signed by a duly authorized signing officer of the proponent organization. All interested proponents are requested to address certain mandatory issues in their proposals; other issues outlined below should be addressed if applicable to a proponent's proposed concept. Additional information supporting the proposal shall be included as deemed appropriate and at the proponent's discretion.

Mandatory Information from All Proponents

(i) Summary of Proponent's Proposal

The proponent shall provide a concise summary of their proposed plan for participation in the Lower Churchill development. The proposal summary shall identify the nature of the proposed participation, the proponent's concept, key participants, details of the type of arrangement(s) being contemplated (including duration), and a summary of the proponent's qualifications and experience.

(ii) Statement of Objectives

The proponent shall provide a description of their objectives for participating in the development of the Lower Churchill hydroelectric resource, and a demonstration that these objectives are compatible, to the extent possible, with the Government's objectives for development of the resource.

(iii) Statement of Proponent's Business Operations, Experience, Financial Viability and Proposed Financing Sources

The proponent shall provide a description of their business operations, and details of experience and credentials. This description shall include the proponent's (and key proposed participants'): financial position; details of ownership; proposed financing sources; current business activities; applicable ratings; and other relevant information. A clear demonstration of financial capacity to participate in the development and assume project risks applicable to the role proposed by the proponent is necessary.

Areas which the proponent recognizes as important, but for which they require external expertise, should be identified.

(iv) Statement of Key Assumptions

The proponent shall provide a statement of all key assumptions underlying their proposal and project concept.

Issues to be Addressed as Applicable

(i) Project Development Concept, Market Strategy and Support for Viability

The proponent shall provide a summary description of the proposed technical project configuration including generation and transmission infrastructure. The proponent shall provide a description of the proposed nature of commercial arrangements for project construction, project financing, operation, sale of power, and other key elements. In particular, the description should cover arrangements between the proponent and the Government, and arrangements between the proponent, other participants and other government entities. The commercial arrangements must address ownership of the facilities, types of power sale arrangements, potential risk allocation, potential financial incentives/ support requested, proponent's perspective on royalty arrangements, ownership of potential greenhouse gas credits and other relevant terms.

The proponent shall provide a description of the intended market for the hydroelectric power and energy, the potential power purchaser(s) and a plan for accessing the intended market(s) which addresses infrastructure requirements, technical considerations/challenges, legal and regulatory considerations, and economic viability. If relevant to the proposal concept, the proponent should identify an approach for accessing and booking transmission infrastructure (existing and potential new infrastructure required) through other jurisdictions.

The proponent will be expected to demonstrate support for the technical, economic and financial viability of the proposed concept.

(ii) Provincial Benefits Summary

It is Government's objective to maximize provincial short-term and long-term benefits to be realized from development of the resource in terms of employment and procurement opportunities, and realizing economic rent. The proponent shall provide a plan to achieve this objective. In addressing employment and procurement benefit issues, consideration must also be given to aboriginal participation and the principle of adjacency (Labrador preference).

The proponent shall provide a summary of intended short-term and long-term Provincial benefits during the design, construction and operational phases of the project as applicable to the proponent's proposal. The proponent shall provide a plan to work with Government to maximize Provincial benefits and mechanisms to achieve this objective.

In relation to maximizing Provincial benefits, the proponent shall identify any plans that would either include, or allow for, future industrial development in relation to the use of the power in the Province of Newfoundland and Labrador. Such provisions could include Provincial rights to recall power, that would otherwise be exported, for use in the Province.

(iii) Plan for Feasibility Study

The proponent shall provide a plan outlining a schedule for a feasibility study of the proposed development concept (both technical and economic), a budget for the assessment, proposed funding arrangement for the study, expertise to be engaged in the study, a proposed terms of reference for the study, and key milestones. The plan must provide for Government and NLH to be provided with a copy of the feasibility study.

(iv) Identification of Plan to Address Aboriginal Interests

When a development is proposed in an area to which an aboriginal group asserts aboriginal rights and titles, and a credible claim to such rights and titles has been made out, developers may be required to conduct consultations with that group concerning the proposed development. Generally, the Government of Newfoundland and Labrador views acceptance by both the federal government and the Government of Newfoundland and Labrador of such a claim for the purposes of comprehensive land claim negotiations as a necessary, but not a sufficient, condition of a "credible claim." The obligation to consult includes accommodating the aboriginal group, wherever possible, with a view to addressing their concerns and mitigating any negative impact of the proposed development on the rights being claimed. Where these impacts cannot be avoided or mitigated, compensation may be a requirement, namely through a sharing of the benefits of the development.

The Labrador Innu, as represented by the Innu Nation, are the only aboriginal party with a land claim that has been accepted by the Government of Newfoundland and Labrador, which claim overlaps the proposed development area. Since 1998, the Government of Newfoundland and Labrador and NLH have consulted with the Labrador Innu on matters relating to the development of the Lower Churchill hydro resource. The proponent shall outline a plan to conduct consultations with the Innu Nation, and potentially other aboriginal groups with a credible land claim in the proposed development area. The plan shall acknowledge the requirement to comply with any Settled Land Claim Agreement on the Lower Churchill river.

(v) Identification of Plan to Address Environmental Issues

Before proceeding, the proposed development will be subject to an appropriate environmental assessment process(es). The proponent shall identify a plan to address the environmental assessment process and management of environmental aspects related to the proposed development. Such a plan shall identify relevant experience and expertise in environmental impact assessment, as well as in the implementation of environmental management systems for the design, construction, and operation of the proposed developments. The proponent shall indicate how the Innu Nation, and potentially other aboriginal groups with credible land claims in the proposed development area, will meaningfully participate in the environmental assessment and the environmental management of the proposed development.

6. TERMS AND CONDITIONS

(i) Terms and Conditions

The following terms and conditions apply to any use of, or reliance upon, this Request for Expressions of Interest and Proposals or, any of the statements or information contained herein, by any person, for any purpose.

Submission of a proposal in response to this request indicates acceptance of all the terms that follow and that are included in any addenda issued by the Government and NLH. Provisions in proposals that contradict any of the terms in Section 6 of this Request for Expressions of Interest and Proposals will in no circumstances be binding upon the Government or NLH, or override the terms in Section 6.

(ii) Inquiries

The Government and NLH, at their discretion, will respond to questions posed by parties interested in responding to this Request for Expressions of Interest and Proposals, on matters relating to the request.

All inquiries relating to this Request for Expressions of Interest and Proposals shall be directed prior to the closing date and time to the Labrador Hydro Project Office at the following address:

Newfoundland and Labrador Hydro
Labrador Hydro Project
Hydro Place
500 Columbus Drive
PO Box 12400
St. John's, NL
Canada
A1B 4K7

Or by e-mail to: lowerchurchilleoi@nlh.nf.ca, or fax: (709) 737-1985, or phone: (709) 737-1273.

Copies of inquiries and responses considered relevant, in the sole discretion of the Government and NLH, to potential proponents may be posted on the following Web site: www.gov.nl.ca/lowerchurchill/, or may be requested in writing from the above address. The initiators of the questions posted will not be made public.

(iii) Closing Date and Time

All proposals must be received at the address noted in Section 6(ii), no later than 5 p.m. (Newfoundland standard time) on March 31, 2005. Proposals will not be accepted in the form of facsimile or e-mail. Proponents must submit 10 copies of their proposals.

(iv) Changes to Proposals

By submission of a clear and detailed written notice, the proponent may amend or withdraw their proposal prior to the closing date and time. The proponent will not change the wording of their proposal after closing and no words or comments will be added to the proposal unless requested by the Government and NLH for purposes of clarification.

(v) Evaluation

Evaluation of proposals will be by the Assessment Committee formed by the Government. The Government's and NLH's intent, in their sole and unfettered discretion, is to enter into Feasibility Study Agreements with any proponents recommended by the Assessment Committee.

(vi) Feasibility Study Agreement

By submission of a proposal, the proponent agrees that, should their proposal be successful, the proponent may enter into negotiations which are intended to lead to the execution of a Feasibility Study Agreement with the Government and NLH. The Government and NLH may enter into negotiations and execute a Feasibility Study Agreement with more than one proponent.

(vii) Negotiation Delay

If a written Feasibility Study Agreement cannot be negotiated within 30 days of notification of any successful proponent, the Government and NLH may, at their sole discretion at any time thereafter, terminate negotiations with that proponent and either negotiate or continue to negotiate a Feasibility Study Agreement with any other proponent or, if there is no other successful proponent, choose to terminate the Request for Expressions of Interest and Proposals process and not enter into a Feasibility Study Agreement with any proponent.

(viii) Proponent's Expenses

Proponents are solely responsible for their own expenses in preparing a proposal and for subsequent negotiations with the Government and NLH, including negotiation of the Feasibility Study Agreement and any subsequent agreements, if any. If the Government and NLH elect to reject any, or all, proposals, the Government and NLH will not be liable to any proponent for any claims, whether for costs or damages whether incurred by the proponent in preparing the proposal, including any loss of anticipated profit in connection with Feasibility Study Agreement and any subsequent agreements, or for any other matter whatsoever.

(ix) Process

This Request for Expressions of Interest and Proposals should not be construed as an agreement or an offer to make the same. The document is not a request for a tender, nor does it constitute a tender process. It is not an invitation for an offer for contract. It creates no legal rights or duties on the part of either the Government or NLH to any party, whether or not that party submits a proposal (herein a "submission"). The Government and NLH reserve themselves

the unfettered and absolute discretion to consider and analyse submissions, shortlist proponents or attempt to negotiate a Feasibility Study Agreement with any of the proponents they consider desirable. In particular, not withstanding any statement to the contrary in this Request for Expressions of Interest and Proposals, the Government and NLH reserve any, and all, rights to:

- reject, disqualify, or consider any submission, whether or not the submission is in compliance with this Request for Expressions of Interest and Proposals, on the basis of such criteria as the Government and NLH deem appropriate in each individual case, without any obligation or compensation to any proponent;

- contact individual parties making a submission without notice to other parties, and to negotiate with these parties the terms of a submission or require further information or modification of a submission;

- not be bound to either negotiate for, or enter into a Feasibility Study Agreement with any proponent.

The Government and NLH will be under no obligation to receive further information, whether written or oral, from any proponent, but may at their sole discretion do so.

Neither acceptance of a submission nor execution of a Feasibility Study Agreement will constitute approval of any activity or development contemplated in any submission that requires any approval, permit or licence pursuant to any federal, provincial, or municipal statute, regulation or by-law. The proponent is required to obtain any, or all, such approvals, permits or licences.

(x) Termination of Process

The Government and NLH reserve the right to terminate the process described in this Request for Expressions of Interest and Proposals at any stage of the proceeding, without notice to any person. Such termination will not give rise to any right, remedy, or claim for damages, by any person, whether they participate in this process or not.

(xi) Limitation of Damages

Neither Government nor NLH assumes any liability to a proponent, or to any person, for any costs, expenses, losses, damages or liability incurred or created by the proponent, or any other person, relating to their use or reliance upon this Request for Expressions of Interest and Proposals for any purpose, including (but not restricted to): the response by Government and NLH to any questions posed by a potential proponent; the preparation or submission of any proposal; the evaluation process; the rejection or acceptance of any proposal; or the negotiations for, or execution of, a Feasibility Study Agreement. Submission of a proposal constitutes waiver, by the proponent, of any cause of action, or claim for damages, against the Government or NLH respecting any of the above.

(xii) Notification

At the conclusion of the Request for Expressions of Interest and Proposals process, all proponents who have submitted proposals will be notified as to whether or not they have been selected to negotiate a Feasibility Study Agreement.

(xiii) No Liability for Errors

While the Government and NLH have used considerable efforts to ensure any statements or information in this Request for Expressions of Interest and Proposals is accurate, and will continue such efforts in the response to any questions related thereto, the information is supplied solely as a guideline for proponents. The information is not guaranteed or warranted to be accurate by the Government and NLH, nor is it necessarily comprehensive or exhaustive. Nothing in this Request for Expressions of Interest and Proposals, or responses to any questions related thereto, is intended to relieve proponents from forming their own opinions and conclusions with respect to the matters addressed in this Request for Expressions of Interest and Proposals. Any person making use of, or relying on, this information for any purpose, does so solely at their own risk, with no warranty of accuracy expressed or implied by either the Government or NLH.

(xiv) Modification of Terms

The Government and NLH reserve the right to modify the terms of this Request for Expressions of Interest and Proposals at any time in their sole discretion. Any such change will be posted on the Web site identified in Section 6 (ii). This includes the right to cancel this Request for Expressions of Interest and Proposals at any time prior to entering into a Feasibility Study Agreement with any successful proponent.

(xv) Ownership of Proposals

All proposals submitted to the Government and NLH become the property of the Government and NLH. As commercially-sensitive documents, they will be received and held in confidence by the Government and NLH, subject to

the provisions of the *Freedom of Information Act*, any subsequent applicable legislation, and this Request for Expressions of Interest and Proposals.

7. OVERVIEW OF RESOURCE

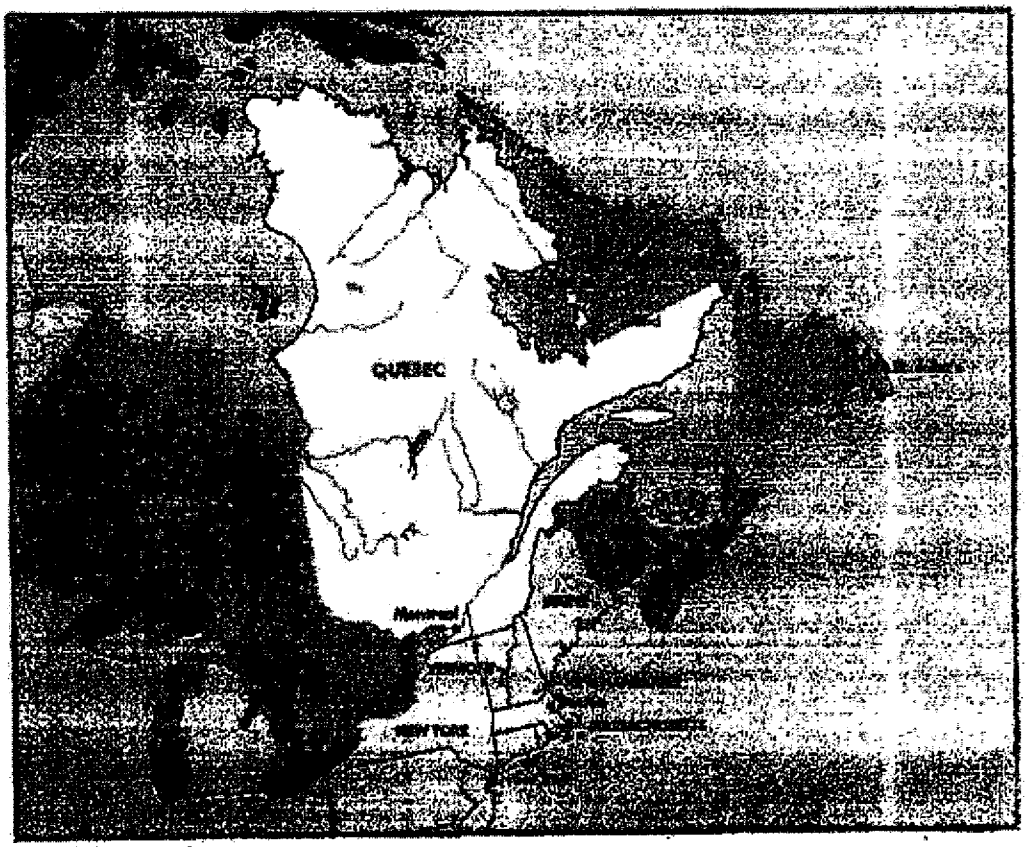
The Churchill River in Labrador is recognized as a significant source of renewable, low-cost, clean electrical energy. The resource potential of this river has yet to be fully developed. The existing Churchill Falls Power Development, completed in 1974, is located in the upper Churchill River basin and has a total installed capacity of 5,428 megawatts. It has a drainage area of approximately 70,000 km^2 located entirely in Labrador. All the water is discharged back into the Churchill River after passing through the turbines. The plant commenced operations in 1971 and generates approximately 34 TWh per year.

The Churchill Falls plant is owned by (CF(L)Co), a company held by NLH (65.8%) and Hydro-Québec (34.2%). NLH is a 100 per cent owned Crown utility. The majority of the energy generated from this facility is sold to Hydro-Québec under a long-term contract which expires in 2041. Under the terms of this contract, Hydro-Québec has scheduling rights to the Churchill Falls facility.

The Lower Churchill Hydro Project includes two potential sites. Gull Island is located 225 km (140 miles) downstream from the existing facility. A second, smaller site is located at Muskrat Falls, 60 km (40 miles) further downstream. Both facilities would operate on an essentially run-of-river basis downstream from Churchill Falls, with 75 per cent of water flows at Gull Island controlled from Churchill Falls. If a water management agreement could be negotiated with respect to water flows from the upstream facility, it would potentially enhance the production profile of the Lower Churchill facilities. The proposed Gull Island project does have some intra-day water storage (total storage capacity less than one week) that will allow for some degree of market price risk mitigation.

A 2,000 megawatt Gull Island project has the potential to produce an average 11.9 TWh of energy annually. An 824 megawatt Muskrat Falls development has the potential to produce an average 4.8 TWh annually.

The projects are also attractive because of the small flooding area relative to their potential output, with only 85 km^2 for Gull Island and 36 km^2 for Muskrat Falls. The reservoir lengths would be 225 km and 60 km, respectively. The projects are expected to have negligible CO_2 emissions because of the northern locations and relatively small reservoir sizes.

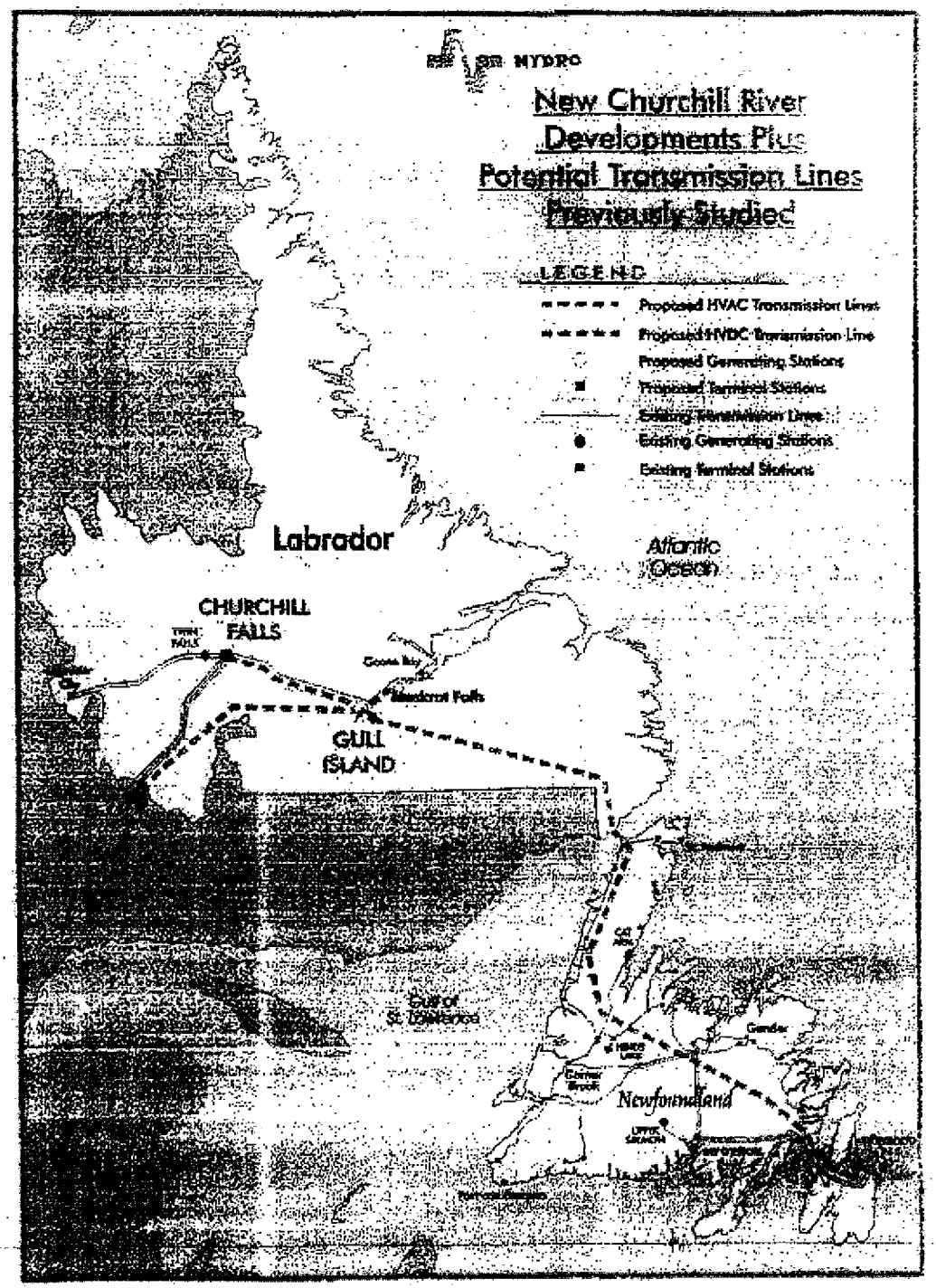


The geographic location of the Lower Churchill river basin, presents two main transmission routing options if the power is to be exported from Labrador. One option is through Québec, the second involves submarine transmission cables potentially across the Strait of Belle Isle and/or the Gulf of St. Lawrence. The projects are located approximately 320 km (Gull Island) and 380 km (Muskrat Falls) from Montagnais, Québec and roughly 400 km from the Strait of Bell Isle. Connection to the Québec transmission grid at Montagnais would provide for potential access to the following markets that are adjacent to Québec: Ontario, New Brunswick, New England, and New York. Submarine cable routing options could provide access to the island of Newfoundland, Nova Scotia, New Brunswick, Prince Edward Island, New England, and New York.

8. PREVIOUS ENGINEERING AND ENVIRONMENTAL STUDIES COMPLETED

Engineering

Engineering studies and work related to the Gull Island project, Muskrat Falls project and an HVDC transmission line from Labrador to Newfoundland date back to the 1970s. Most recent final feasibility studies on various components of the proposed developments were completed during the period 1998-2000. A successful proponent(s) who enters into a Feasibility Study Agreement(s) (Phase 2) with Government and NLH may be provided access to relevant engineering reports on terms to be agreed upon between NLH and the proponent(s).


NL HYDRO
New Churchill River
Developments Plus
Potential Transmission Lines
Previously Studied
LEGEND
Proposed HVAC Transmission Lines
Proposed HVDC Transmission Line
Proposed Generating Stations
Proposed Terminal Stations
Existing Transmission Lines
Existing Generating Stations
Existing Terminal Stations
Labrador
Atlantic
Ocean
CHURCHILL
FALLS
GULL
ISLAND
Gander
Newfoundland

Direct capital cost estimates (Note 1) based on the most recent engineering reports are as follows:

	Gull Island $ Billion Cdn ($2004)	Muskrat Falls $ Billion Cdn ($2004)	HVDC line $ Billion Cdn ($2004)
Generation	$1.7	$1.0	-
Transmission	$0.5 (Note 2)	$0.1 (Note 2)	$1.5 (Note 3)
Total	$2.2	$1.1	$1.5

Note 1- Cost estimates are direct costs only including management and engineering, but excluding contingencies, EPC costs, guarantees, insurance, owners' costs, escalation, interest during construction, and potential Impact and Benefits Agreement.

Note 2 - Capital cost estimates for possible transmission in Labrador. For Gull Island this involves two 735 kV lines, one to Churchill Falls (approximately 200 kilometres) and one to Montagnais (approximately 320 kilometres). For Muskrat Falls this involves two 230 kV lines to Gull Island (approximately 60 kilometres). Includes transformers, switchyards, switchyard upgrades at CF(L)Co and communications equipment.

Note 3 - HVDC line from Gull Island, Labrador to Soldiers Pond, Newfoundland (approximately 1,200 kilometres) includes converter stations, submarine cables, and communications equipment.

Environmental

A number of environmental studies were completed in the late 1970s and early 1980s in support of an Environmental Impact Statement which was prepared and submitted to a Federal Review Panel in April 1980. Formal panel hearings were held and the project received approval from the federal Minister of Environment in December 1980. The most recent environmental studies conducted for the Lower Churchill Development were initiated in 1998.

In addition to having access to environmental reports already in the public domain as a result of previous environmental hearings, a successful proponent(s) who enters into a Feasibility Study Agreement(s) (Phase 2) with Government and NLH may be provided access to relevant previous environmental reports on terms to be agreed upon between Government and NLH, and the proponent.

9. BACKGROUND ON ABORIGINAL LAND CLAIM TO PROJECT DEVELOPMENT AREA

(i) Legal Obligations

Section 35 of the *Constitution Act, 1982* recognizes and affirms existing aboriginal and treaty rights. Similarly, there have been significant judicial decisions which have profoundly changed the relationship of Aboriginal peoples with government. Government activities cannot infringe upon aboriginal rights unless there is proper justification. Since 1992, the Government of Newfoundland and Labrador has had a policy of consulting with the Innu Nation and the Labrador Inuit Association on developments within their respective land claim areas. It is also common practice for developers to consult with such groups.

Where a development may infringe upon aboriginal rights or titles, the developer may be required to conduct consultations with aboriginal groups affected by the project. Consultations can vary depending on the nature of the aboriginal right affected and the degree of impact. The results of the consultations may conclude that the interests of the aboriginal group be accommodated wherever appropriate. Obligations can range from information sharing to provisions for the participation of the aboriginal group in the development, and compensation for impacts. At the very least, consultation must be meaningful with the view to accommodating the interests of the aboriginal group affected.

(ii) Status of Land Claims in Labrador

a. Labrador Innu

The Innu of Labrador claim aboriginal rights and title to land and resources in the region. The Labrador Innu claim area includes the proposed Lower Churchill development area. The claim has been accepted by the Governments of Canada and Newfoundland and Labrador and the parties have made significant progress towards entering a detailed Agreement in Principle (AIP) which upon ratification will trigger final agreement negotiations. It is anticipated the AIP and final agreements will include a chapter on the Churchill River Development, which will address a proponent's obligations to address the interests of the Labrador Innu. If selected to proceed to MOU negotiations, the proponent will be given more details regarding a Churchill River chapter of the Land Claims Agreement.

b. Labrador Inuit

The Labrador Inuit have reached a Final Land Claims Agreement with the Governments of Canada and Newfoundland and Labrador that has been initialled by all parties and ratified by the Inuit and the Province, but is not yet in effect. The Labrador Inuit land claim area does not include the proposed Lower Churchill development area.

c. Labrador Métis

The Labrador Métis Nation has asserted a land claim in the region, overlapping with the Lower Churchill development area. However, it has not been accepted for negotiation by the Governments of Canada or Newfoundland and Labrador.

d. Overlapping Land Claims by Innu Peoples from Québec

There are other Innu groups from Québec (e.g. Sept-Iles, Schefferville, Natashquan, Mingan) who claim aboriginal rights in Labrador. Their claims have not been accepted for negotiation by the Government of Newfoundland and Labrador. However, their claims in Québec have been accepted for negotiation by the

Governments of Canada and Québec. Depending on the location of the proposed project infrastructure or components, the Québec Innu may need to be consulted.

e. Overlapping Claims by Québec Inuit

The Nunavik Inuit have asserted a claim to lands in northern Labrador, which does not include the Lower Churchill development area. Their claim has not been accepted for negotiation by the Government of Newfoundland and Labrador.

The Government of Newfoundland and Labrador, throughout past attempts to develop the Lower Churchill, has been mindful of the interests of aboriginal peoples and has approached the development of the resource in Labrador within a spirit of cooperation and mutual respect with the aboriginal peoples of Labrador. Consultation with groups with land claims accepted for negotiation has been key to developing and maintaining a trusting and effective working relationship.

(iii) Preferred Approach

The proponent shall outline its philosophy in dealing with aboriginal communities to ensure that the legal and regulatory requirements are met and any relevant experience in dealing with aboriginal communities. As part of this, the proponent shall identify the aboriginal communities potentially affected by its proposed development and its plan to address aboriginal interests and concerns; including, but not limited to:

(i) information sharing and community consultation;

(ii) aboriginal participation in associated feasibility studies and associated engineering, environmental and socio-economic studies;

(iii) aboriginal participation with the proponent in the environmental assessment;

(iv) in general terms, long-term participation in project development and operations including, employment and business opportunities, education and training, and social and cultural protection.

If selected to proceed to the second phase of the process, the proponent will be required to outline the foregoing in more detail.

APPENDIX 1

PROJECT DESCRIPTIONS

The following project descriptions are summaries of the most recent feasibility studies completed.

Gull Island Generating Station

The Gull Island generating station will be located 225 km downstream from the existing Churchill Falls generating station and 100 km west of the Town of Happy Valley-Goose Bay.

The operating head of the new station will be developed by constructing an earth and rockfill dam (12 million m^3 of fill) across the Churchill River to impound the Gull Reservoir to the tailwater elevation of the Churchill Falls generating station. Power flows for the Gull Island generating station are the discharge from the Churchill Falls stations, augmented by local inflow from the Gull Island drainage area.

The Gull Island reservoir will cover an area of about 200 km^2 and extend upstream to Churchill Falls. The water will be routed from the reservoir through an approach channel on the south bank of the river to the intake and spillway structures. The intake structure will feed a surface powerhouse through underground penstocks. The powerhouse will contain four 500 MW generating units for a total installed capacity of 2,000 MW. The switchyard will be on the south bank above the approach channel.

The probable maximum flood of approximately 19,700 m^3/s will be handled by a seven-bay conventional spillway with fixed wheel gates and a flip bucket and stilling basin energy dissipater.

The temporary diversion of the river during construction will be achieved by constructing cofferdams across the river and diverting the flow through two tunnels excavated on the north bank of the river. The main dam will be built in the dry behind these cofferdams.

The Gull Island site can be accessed from Happy Valley-Goose Bay via the Trans Labrador Highway. A 2,200-person construction camp will be located at an existing site approximately five km from the project site. Construction power requirements will be obtained from a local substation connected to the existing 138 kV transmission line on the north side of the Churchill River. Diesel backup generators will also be provided.

The Gull Island construction has the longest schedule of the generating facilities and two near critical sequences of activities. One critical sequence is through the powerhouse. Construction starts with building an access bridge to the south bank, followed by stage 1 powerhouse excavation to the level of the lower penstock. Upon completion of the penstock work, the stage 2 powerhouse rock excavation can be resumed. Following resumption of powerhouse rock excavation, the schedule follows the critical path associated with hydroelectric construction, of substructure concrete, embedded parts installation, second stage concrete and equipment installation. A second near critical sequence of activities is the diversion of the river and construction of the earth fill embankment dam. The overall duration for construction of the Gull Island project is 68 months. The schedule for the Gull Island project is reasonable and attainable.

Muskrat Falls Generating Station

The Muskrat Falls generating station is located approximately 30 km west of Happy Valley-Goose Bay and 60 km downstream of Gull Island. Muskrat Falls generating station uses the remaining 36 m of head between Gull Island and Lake Melville which is 2.5 m above sea level.

Construction diversion will be achieved by building a cofferdam across the river upstream of the dam site and diverting the Churchill River through twin tunnels in the north abutment. A downstream cofferdam is required to dewater the riverbed for the construction of the powerhouse on the right side of the river, the spillway adjacent to the powerhouse and two overflow roller compacted concrete (RCC) dams, one adjacent to the powerhouse, the other adjacent to the spillway. The inflow design flood is the Probable Maximum Flood (PMF) estimated 22,100 m^3/s. Flood events up to the one in 1,000 Annual Exceedance Probability (AEP) can be passed by the gated spillway and by deflating the pneumatic crest gate on the south overflow dam. During larger flood events, water is also discharged over the south overflow dam.

The close coupled intake/powerhouse will house three fixed-blade propeller and one Kaplan variable pitch blade propeller units with a capacity of 206 MW each for a total plant capacity of 824 MW. The spiral cases will be formed concrete. Power will be transmitted at 230 kV by a double circuit transmission line to Gull Island.

A construction camp will be located approximately two km from the site. Construction power will be obtained from a local substation connected to the existing 138 kV transmission line along the north side of the Churchill River. Diesel backup generators will also be provided.

The Muskrat Falls critical path is river diversion followed by construction of the powerhouse. The program is relatively straightforward and is scheduled to be completed in 59 months assuming a summer start. As diversion work is seasonally driven, the work needs to be started to ensure appropriate timing of river closure. The start year for Muskrat has been selected to commence concrete work in the powerhouse in the summer after concrete work is essentially complete at Gull Island. This allows the related manpower to move from the Gull site to the Muskrat site. Further study may show that an additional year's delay in starting Muskrat may be more advantageous.

Transmission

Delivery of power from the new generating facilities to power markets will require the construction of additional transmission infrastructure. To date, the following transmission configurations have been studied:

1. AC Transmission

AC transmission: (1) a new 203 km long, 735 kV line along the north shore of the river creating an inter-tie between the Gull Island generating facilities and the Churchill Falls generating facilities; (2) a new 306 km long, 735 kV line from Gull Island to Montagnais to deliver power to the Hydro-Québec grid; (3) a 60 km, 230 kV double circuit line connecting the Muskrat Falls generating station to Gull Island.

The construction of the transmission lines can be accomplished within the overall time frame for the various generation projects.

2. HVDC Interconnection

An HVDC transmission system could connect the Gull Island generating station in Labrador to the island portion of the Province, at Soldiers Pond, near St. John's. The transmission line previously studied would transmit up to 800 MW over 1,088 km of overhead transmission lines in Labrador and the island and 38 km of submarine cable and 3.7 km of land cable between L'Anse au Clair and Yankee Point. This configuration will also require a highly reliable and secure communications system.

The HVDC transmission system will have a continuous rating at the Gull Island Converter Station of ± 400 kV, 800 MW during the summer, and 920 MW at low ambient temperatures during the winter and will deliver 744 MW and 845 MW respectively at the Soldiers Pond Converter Station. The AC switchyards at both converter stations will be at 230 kV. The submarine cable crossing of the Strait of Belle Isle will consist of three cables, one cable for each pole plus a spare cable

which can be switched into either pole, and normally connected to one of the poles to reduce cable losses.

The DC system will have a short-time monopole overload rating which will allow one pole to transmit up to 800 MW in the event of an outage of the other pole, and will have a continuous overload rating of 1,500 A. This will permit one pole to continuously transmit up to 528 MW to Soldiers Pond following an outage.

The transmission line will have an overhead ground wire over its entire length for protection against outages due to lightning. The line will be subject to light to heavy wind and ice loading conditions. Converter stations, located near Gull Island, Labrador, and Soldiers Pond, near St. John's, will each include an AC switchyard, DC converter equipment, converter building, DC switchyard, AC reactive compensation, other associated equipment, and other buildings. The converter stations will have an AC busbar voltage of 230 kV.

Direct construction is expected to take four and a half years to complete. Total project duration is expected to be five years, three months.

Engineering studies concluded that, with current proven technology, the transmission of 800 MW from Gull Island to Soldiers Pond is feasible.

APPENDIX 2

OVERVIEW OF NEWFOUNDLAND AND LABRADOR ELECTRICITY INDUSTRY

In Newfoundland and Labrador, the generation and distribution of electricity is provided by two utilities, Newfoundland and Labrador Hydro (NLH) and Newfoundland Power Inc. (NP). Together, NLH and NP serve about 280,000 customers. The majority of customers are served by the system serving the island portion of the Province, which has almost 2,000 MW of installed generation. The island electrical system is not currently connected to the North American grid. In Labrador, most customers are served by NLH with power from the 5,428 MW Churchill Falls Hydroelectric facility. In addition NLH provides customers in 23 isolated communities with power from diesel generators.

NLH is a provincial Crown corporation, with the mandate to generate and transmit electricity in the Province, and to provide distribution and retail services to customers in Labrador and in areas of the island not serviced by NP. In addition NLH directly serves the Province's major industrial loads in mining, pulp and paper and oil refining.

In September 2004 the Government announced its intention to restructure NLH with a new mandate to support the development of the Province's energy sector. Some of the key priorities under this new mandate will include development of the lower Churchill, exploration of partnerships with the private sector concerning natural gas, wind energy, geothermal heat pump technology, and the possible acquisition of ownership interests in the Province's offshore oil and gas resources.

NLH owns and operates approximately 80 per cent of the generating capacity on the island. Base load is supplied primarily from 900 MW of hydroelectric power. The oil-fired thermal plant at Holyrood (500 MW) is used for base load and intermediate purposes. Peaking load is supplied primarily from combustion turbine units fired with distillate oil, as there is no natural gas available in the Province at present.

NLH is the parent company of a group that includes Churchill Falls (Labrador) Corporation (CF(L)Co.). NLH owns 65.8 per cent of this corporation, and Hydro-Québec owns the remaining 34.2 per cent. CF(L)Co. owns and operates the 5,428 MW Churchill Falls plant. Almost all power from this facility is sold to Hydro-Québec under a long-term, fixed-price contract which expires fully in 2041. The remainder is used to supply power to a number of interconnected communities in Labrador, and the iron ore mines in Labrador City and Wabush.

On the island, NLH owns and maintains 3,456 km of high voltage transmission lines at 230, 138 and 69 kV. On the Labrador electrical system, NLH owns 269 km of 138 kV transmission. To supply its customers in Labrador west, NLH has an arrangement

with Twin Falls Power Corporation Limited, owner of the 230 kV transmission facilities connecting Churchill Falls to Labrador west, for the wheeling of electrical energy from Churchill Falls.

Since 1989, Government policy has been that NLH should avail of private sector interest in power generation when the cost would be less than that for NLH to install additional plants. NLH has long-term contracts with four Independent Power Producers totaling 66 MW.

NP, an investor-owned utility, is the primary retailer of electricity on the island portion of the Province. It distributes power to approximately 85 per cent of the population. NP purchases 90 per cent of its supply from NLH and generates the balance from its own smaller hydro generating facilities. NP has approximately 10,000 km of primarily distribution lines on the island portion of the Province.

The industry in Newfoundland and Labrador is regulated by the Board of Commissioners of Public Utilities (Board). The *Electrical Power Control Act 1994* (EPCA) directs the Board to enforce government policy, in relation to the electricity industry, and describes the policy.

Electricity Statistics

	Hydro MW	Thermal MW	Total MW	Firm Annual	Avg Annual GW
Island Interconnected	**Net Capacity**				
Newfoundland and Labrador Hydro	927	598	1,525	6,849	7,454
Newfoundland Power	93	54	147	323	424
Deer Lake Power Company	122	-	122	736	865
Abitibi Consolidated Inc.	59	-	59	442	470
Non-Utility Generators	51	15	66	317	394
Total Island Interconnected	1,253	667	1,920	8,713	9,607
Labrador Interconnected	**Installed Capacity MW**			Not expressed as above	
Churchill Falls (Labrador) Corp.	5,428	-	5,428	-	-
Newfoundland & Labrador Hydro	-	38	38	-	-
Iron Ore Company & CFB 5 Wing	-	10	10	-	-
Total Labrador Interconnected	5,428	48	5,428	-	-
Labrador Isolated					
Newfoundland & Labrador Hydro	-	23	23	-	-
Nanaashish (Gov't of Canada)	-	3	3		
Mary's Harbour Hydro	0.2	-	0.2	-	-
Island Isolated					
Newfoundland & Labrador Hydro	-	7	7	-	-
Total Provincial Capacity	6,681	748	7,429	-	-
Provincial Capacity Less Exports	1,777	748	2,525	-	-

Excludes Iron Ore Company of Canada's 18 MW hydroelectric plant at Menihek dedicated to Schefferville Québec load.
Provincial capacity less exports includes 225 MW for Twinco & 300 MW recall at Churchill Falls.
NLH average hydroelectric energy is based on the long-term hydrology assessment.

GWh	2001	2002	2003
Provincial Electricity Supply	10,644	10,947	11,232
Island Interconnected Supply	7,939	8,221	8,349
Labrador Interconnected Supply	2,644	2,662	2,827
Labrador Isolated Supply	50	53	55
Island Isolated Supply	11	11	10

MW	2001	2002	2003
Provincial Electricity Supply	1,871	2,041	2,052
Island Interconnected Supply	1,435	1,592	1,595
Labrador Interconnected Supply	419	432	439
Labrador Isolated Supply	13	13	14
Island Isolated Supply	4	4	4

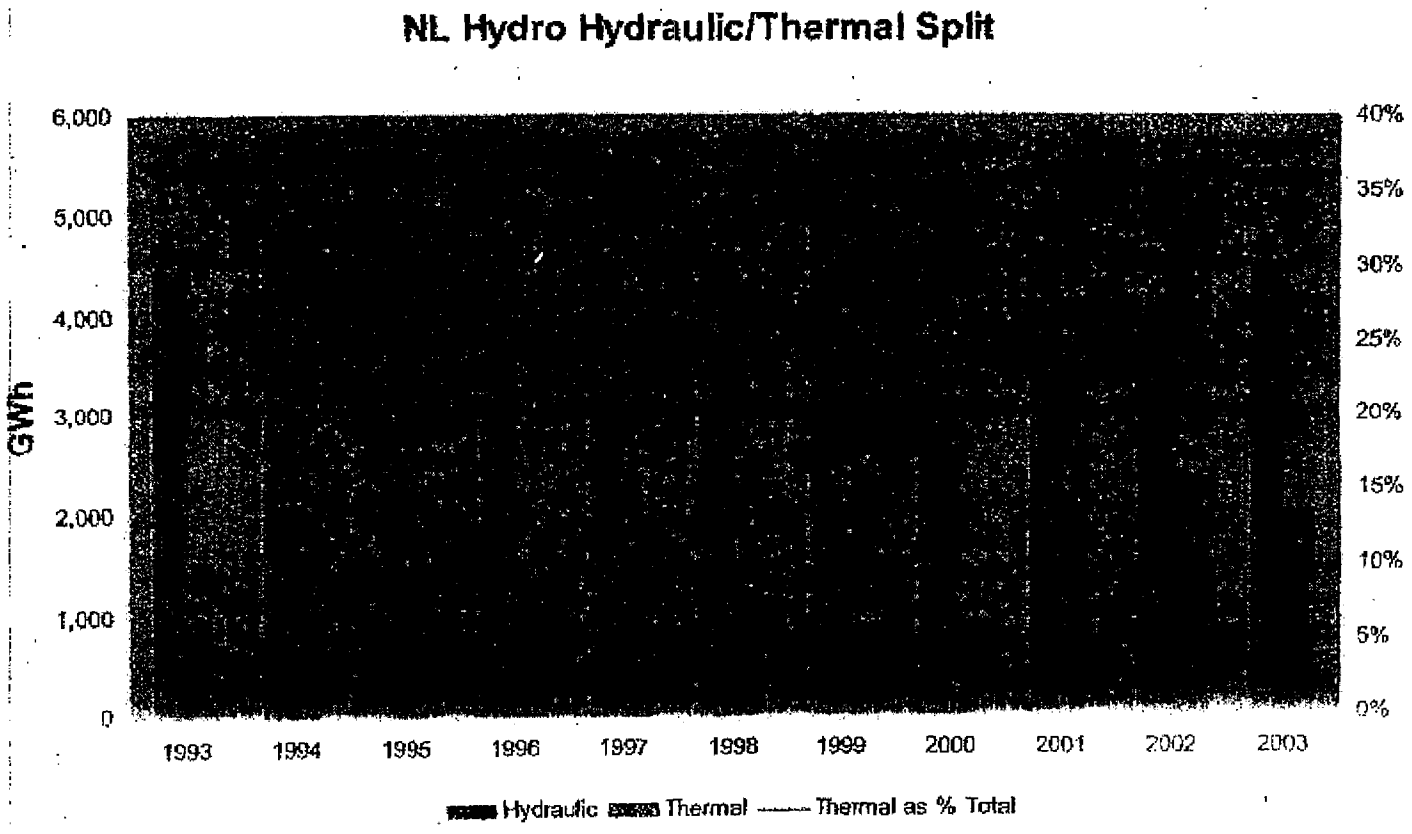
LOAD SUMMARY
(including island capability)

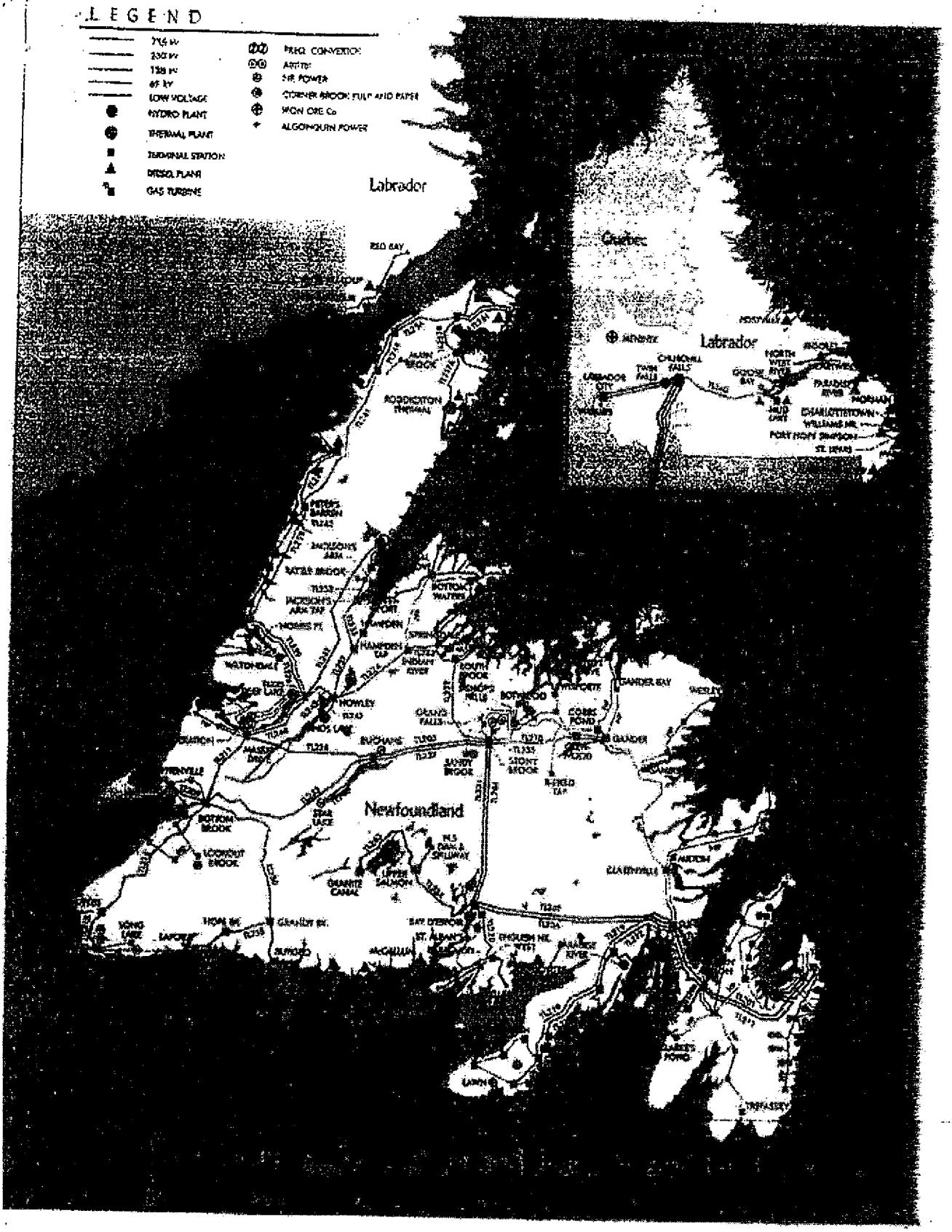
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
INTERCONNECTED ISLAND FORECAST								New Generation Requirement													
Total Requirements (GWh)	8,221	8,340	8,410	8,504	8,620	8,672	8,819	8,701		8,818	9,146	9,222	9,308	9,369	9,417	9,469	9,529	9,589	9,638	9,690	9,730
Growth Rate . . . (%)	3.6	1.4	0.8	1.1	0.2	0.6	0.5	0.9		0.5	3.7	0.8	0.9	0.7	0.5	0.6	0.6	0.6	0.5	0.4	0.4
Peak Demand (MW)1	1,582	1,596	1,590	1,596	1,620	1,627	1,639	1,652		1,681	1,740	1,744	1,754	1,766	1,780	1,793	1,806	1,820	1,834	1,848	1,860
Growth Rate . . . (%)	10.9	0.8	-0.3	0.3	1.5	0.5	0.7	0.8		1.7	3.5	0.2	0.5	0.7	0.8	0.8	0.7	0.8	0.8	0.7	0.7
Load Factor	59%	60%	60%	61%	60%	60%	60%	60%		60%	60%	60%	61%	61%	60%	60%	60%	60%	60%	60%	60%
Net Capacity (MW)			1,920	1,920	1,920	1,920	1,920	1,920		1,920	1,920	1,920									
Firm Capability (GWh)			8,715	8,715	8,715	8,715	8,715	8,715		8,715	8,715	8,715									
Average Capability (GWh)			9,597	9,597	9,597	9,597	9,597	9,597		9,597	9,597	9,597									
Energy Balance			300	211	195	147	96	14		(103)	(431)	(507)									
INTERCONNECTED LABRADOR FORECAST																					
Total Requirements (GWh)	2,862	2,825	2,853	2,862	2,865	2,868	2,871	2,873	2,876	2,879	2,882	2,885	2,888	2,891	2,893	2,896	2,899	2,902	2,905	2,908	2,911
Growth Rate . . . (%)	0.7	6.2	1.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Peak Demand (MW)1	432	439	436	437	438	439	440	441	442	443	444	445	446	447	448	449	449	450	451	452	453
Growth Rate . . . (%)	3.0	1.7	-0.7	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Load Factor	76%	73%	75%	75%	75%	75%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	73%	73%	73%
ISOLATED ISLAND FORECAST																					
Total Requirements (GWh)	11	10	10	10	10	10	10	10	10	10	9	9	9	9	9	9	9	9	9	9	9
Growth Rate . . . (%)	3.4	-2.8	-1.3	-0.8	-0.8	-0.9	-0.9	-0.9	-0.9	-0.9	-0.8	-0.9	-0.9	-0.9	-0.9	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Peak Demand (MW)2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Growth Rate . . . (%)	-5.7	-3.9	0.7	-0.7	-0.8	-0.8	-0.8	-0.8	-0.9	-0.8	-0.8	-0.8	-0.8	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9
ISOLATED LABRADOR FORECAST																					
Total Requirements (GWh)	53	52	55	60	61	62	63	64	65	67	68	69	70	72	73	74	75	76	78	79	80
Growth Rate . . . (%)	5.8	-1.8	11.7	3.3	2.1	1.8	1.7	1.7	1.7	2.1	1.8	1.8	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8
Peak Demand (MW)2	13	12	14	14	15	15	15	15	15	16	16	17	17	17	18	18	18	19	19	19	19
Growth Rate . . . (%)	0.1	-3.3	12.5	4.1	2.0	1.8	1.8	1.8	1.8	2.2	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.6	1.6	1.6
PROVINCIAL LOAD FORECAST																					
Total Requirements (GWh)	10,980	11,232	11,328	11,436	11,466	11,543	11,585	11,648	11,726	11,773	12,105	12,186	12,276	12,340	12,393	12,448	12,513	12,577	12,630	12,676	12,739
Growth Rate . . . (%)	2.9	2.3	0.9	0.9	0.2	0.5	0.4	0.7	0.7	0.4	2.9	0.7	0.7	0.5	0.4	0.4	0.5	0.5	0.4	0.4	0.5
Peak Demand (MW)2	2,040	1,968	2,043	2,050	2,076	2,085	2,097	2,111	2,125	2,143	2,204	2,208	2,219	2,233	2,248	2,262	2,277	2,292	2,307	2,320	2,335
Growth Rate . . . (%)	0.1	-2.6	2.8	0.3	1.2	0.4	0.6	0.7	0.6	0.8	2.8	0.2	0.5	0.6	0.6	0.7	0.6	0.7	0.7	0.6	0.6

Note: 1. System coincident peak demand.
2. Non-coincident demand.

1. System coincident peak demand.
2. Non-coincident demand.

Prepared by:
Newfoundland & Labrador Hydro
System Planning Department


NL Hydro Hydraulic/Thermal Split
GWh
6,000
5,000
4,000
3,000
2,000
1,000
0
40%
35%
30%
25%
20%
15%
10%
5%
0%
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
Hydraulic
Thermal
Thermal as % Total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138 kv
69 kv
LOW VOLTAGE
HYDRO PLANT
THERMAL PLANT
TERMINAL STATION
DIESEL PLANT
GAS TURBINE
FREQ. CONVERTER
ARTTU
NF POWER
CORNER BROOK PULP AND PAPER
IRON ORE Co
ALGONQUIN POWER
Labrador
Quebec
Labrador
Newfoundland

Government of Canada / Gouvernement du Canada

Newfoundland Labrador

ENVIRONMENTAL IMPACT STATEMENT GUIDELINES

Lower Churchill Hydroelectric Generation Project

Newfoundland and Labrador Hydro

Issued by the Government of Canada and the Government of Newfoundland and Labrador

July 2008

PREFACE

On November 30, 2006, Newfoundland and Labrador Hydro (the Proponent) submitted a Project Registration/Project Description for the Lower Churchill Hydroelectric Generation Project (the Project), in Labrador. The proposal is to develop hydroelectric generating facilities with interconnecting transmission lines on the lower section of the Churchill River. Generation facilities with a combined capacity of approximately 2,800 MW are proposed at Gull Island and Muskrat Falls, which are approximately 100 km and 30 km southwest of Happy Valley-Goose Bay, respectively. Interconnecting transmission lines are proposed between these generating sites and Churchill Falls.

On January 26, 2007, the Proponent was advised by the Minister of Environment and Conservation that an Environmental Impact Statement (EIS) is required for the Project under the Newfoundland and Labrador *Environmental Protection Act* (EPA). The Project is also subject to the *Canadian Environmental Assessment Act* (CEAA). On June 5, 2007 the Minister of the Environment announced that the Project will undergo a federal environmental assessment by an independent review panel.

Canada and Newfoundland and Labrador intend to conclude a Joint Review Panel Agreement to ensure that the respective requirements of the EPA and the CEAA that apply to the Project are met in an effective and timely manner. As a first step toward that objective, the two governments have agreed that a single set of EIS Guidelines is the most efficient and effective way to guide the Proponent in preparing an environmental assessment that will provide the type and quality of information and conclusions on environmental effects required to satisfy their respective legislative requirements.

These Guidelines are intended to assist the Proponent in its preparation of the EIS. The purpose of the EIS is to identify alternatives to the Project, alternatives methods for carrying it out, the environment that will be affected, the important environmental effects associated with the Project, measures that are required to mitigate against any adverse effects and the significance of residual environmental effects.

The EIS is expected to contain a review of all available pertinent information as well as such additional new information or data as provided by the Proponent or requested by Canada or Newfoundland and Labrador. Component Studies shall address baseline data requirements to support the evaluation of environmental effects and/or develop mitigation measures as well as monitoring and follow up programs. The Guidelines include the information required under Section 57 of the EPA, and the information necessary to address the factors set out in subsections 16(1) and 16(2) of the CEAA, both of which are included in **Appendix A**. As more specific information is provided and as additional baseline information is gathered, Canada and/or Newfoundland and Labrador and/or the Joint Review Panel may require other concerns and potential effects to be considered by the Proponent.

The EIS will be used by the Joint Review Panel in carrying out subsequent public hearings and making recommendations to the governments of Canada and Newfoundland and Labrador on the outcomes of the environmental assessment process.

The draft Guidelines were subject to a public consultation period from December 19, 2007 to February 27, 2008. After consideration of the comments received from Aboriginal

groups and the public during the consultation period, the Guidelines were finalized and submitted to the federal Minister of the Environment and to the Newfoundland and Labrador Minister of Environment and Conservation for approval. The Guidelines were subsequently issued to the Proponent by the two ministers.

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SECTION 1 – BACKGROUND

1.1 PURPOSE OF THE GUIDELINES

The purpose of this document is to identify for the Proponent and interested parties, the nature, scope and extent of the information and analysis required in the preparation of the EIS. The Proponent will prepare and submit an EIS that will identify alternatives to the Project, alternative methods for carrying it out, the environment that will be affected, the important environmental effects associated with the Project, measures that are required to mitigate against any adverse effects and the significance of residual environmental effects.

1.2 PROPOSED PROJECT

The Proponent proposes a project consisting of hydroelectric generating facilities at Gull Island and Muskrat Falls, and interconnecting transmission lines to the existing Labrador grid. The proposed Project includes the following components[1]:

The Gull Island facility would consist of a generating station with a capacity of approximately 2,000 MW that includes:

- A dam 99 m high and 1,315 m long; and
- A reservoir 215 km² in area at an assumed full supply level of 125 m above sea level (asl).

The dam is to be a concrete-faced rockfill dam. The reservoir is to be 230 km long, and the area of inundated land is to be 85 km² at full supply level. The powerhouse is to contain five Francis turbines.

The Muskrat Falls facility would consist of a generating station with a capacity of approximately 800 MW that includes:

- A concrete dam with two sections on the north and south banks of the river, and
- A 100 km² reservoir at an assumed full supply level of 39 m asl.

The north and south dams will be constructed of roller compacted concrete. The north section dam is to be 32 m high and 432 m long, while the south section is to be 29 m high and 125 m long. The reservoir is to be 60 km long and the area of inundated land is to be 41 km² at full supply level. The powerhouse is to contain four propeller or Kaplan turbines, or a combination of both.

Interconnecting transmission lines would consist of:

- A 735 kV transmission line between Gull Island and Churchill Falls; and
- Two 230 kV transmission lines between Muskrat Falls and Gull Island.

The 735 kV transmission line is to be 203 km long and the 230 kV transmission lines are to be 60 km long. Both lines will likely be lattice-type steel structures. The location of the transmission lines is to be north of the Churchill River; the final route is the subject of a route selection study that will be included in the EIS. The lines between Muskrat Falls and Gull Island will be combined on double-circuit structures.

[1] All measures are approximate

1.3 ENVIRONMENTAL ASSESSMENT PROCESS

Under section 5 of the CEAA, an environmental assessment is required for this Project because Fisheries and Oceans Canada may issue a permit or license under subsection 35(2) of the *Fisheries Act* and Transport Canada may issue an approval under paragraph 5(1)(a) of the *Navigable Waters Protection Act*. Because of these regulatory roles, Fisheries and Oceans Canada and Transport Canada are responsible authorities for the environmental assessment.

The responsible authorities recommended that the Minister of the Environment refer the Project for assessment by a review panel. They are of the opinion that the Project is likely to cause significant adverse environmental effects over a large area and to a number of Valued Environmental Components (VECs). The Minister of the Environment accepted this recommendation and has referred the Project to a review panel.

This Project is also being assessed by the Government of Newfoundland and Labrador under Part X of the EPA, pursuant to sections 34(1)(a) and 34(1)(d) of the *Environmental Assessment Regulations*.

Canada and Newfoundland and Labrador intend to conclude a Joint Review Panel Agreement to ensure that the respective requirements of the CEAA and EPA that apply to the Project are met in an effective and timely manner.

SECTION 2 – GUIDING PRINCIPLES

The EIS shall demonstrate adherence to the basic principles of environmental assessment as set out below.

2.1 ENVIRONMENTAL ASSESSMENT: A PLANNING TOOL

Environmental assessment is a planning tool that enables consideration of the potential effects of a project before actions are taken to allow that project to proceed. It is a process for identifying a project's potential interactions with the environment, predicting environmental effects, identifying mitigation measures and evaluating the significance of residual environmental effects. If the project proceeds, the environmental assessment process also provides the basis for setting out the requirements for monitoring and reporting to verify compliance with the terms and conditions of approval and the accuracy and effectiveness of predictions and mitigation measures.

2.2 ABORIGINAL AND PUBLIC PARTICIPATION

Aboriginal and public participation is a central objective of an environmental assessment process and a means to ensure that a proponent considers and responds to Aboriginal and public concerns. In preparing the EIS, the Proponent shall inform and consult with the affected Aboriginal and local communities, interested regional and national organizations and resource users.

Meaningful public involvement can only take place if Aboriginal groups and the public have a clear understanding of the nature of the proposed Project as early as possible in the environmental assessment process. Therefore, it is recommended that the Proponent:

- Continue to provide up-to-date information to Aboriginal groups and the public and especially to the communities likely to be most affected by the Project;
- Involve the main interested parties in determining how best to deliver that information, that is, the type of information required, format and presentation methods, as well as the need for community meetings; and
- Explain the results of the EIS in a clear and direct manner to make the issues comprehensible to the widest possible audience.

2.3 ABORIGINAL TRADITIONAL AND COMMUNITY KNOWLEDGE

Populations living in proximity to the Project may have substantial and distinct knowledge, which may be essential to the assessment of the effects of the Project, and their mitigation. Aboriginal traditional and community knowledge of the existing environment shall be an integral part of the EIS, to the extent that it is available to the Proponent.

In environmental assessment, Aboriginal traditional and community knowledge may be regarded as the knowledge, understanding and values that residents of Aboriginal and local communities have in relation to the environment and the potential environmental effects of the Project and proposed mitigation measures. This knowledge is based on personal observation, collective experience and/or oral transmission.

Aboriginal traditional and community knowledge assists in understanding, including the inter-relationships, among such matters as:

- Ecosystem function;
- Resource abundance, distribution and quality;
- Social and economic well-being; and
- Use of the land and resources.

It also informs the development of adequate baseline information, identification of key issues, prediction of effects, and assessment of their significance, all of which are essential to the EIS and its review.

2.4 SUSTAINABLE DEVELOPMENT

Sustainable development seeks to meet the needs of present generations without compromising the ability of future generations to meet their own needs.

The objectives of sustainable development are:

- The preservation of ecosystem integrity, including the capability of natural systems to maintain their structures and functions and to support biological diversity;
- The respect for the right of future generations to the sustainable use of renewable and non-renewable resources; and
- The attainment of durable and equitable social and economic benefits.

Promotion of sustainable development is a fundamental purpose of environmental assessment, and the Proponent shall include in the EIS consideration of:

(a) The extent to which biological diversity is affected by the Project;
(b) The capacity of renewable resources that are likely to be significantly affected by the Project to meet the needs of present and future generations; and
(c) The extent, distribution and duration of social and economic benefits.

The Proponent shall strive to integrate these factors into the planning and decision-making process for the Project, including seeking the views of interested parties, and report on the results in the EIS.

2.5 PRECAUTIONARY PRINCIPLE

One of the purposes of environmental assessment is to ensure that projects are considered in a careful and precautionary manner before action is taken in connection with them in order to ensure that such projects do not cause significant adverse environmental effects.

Principle 15 of the 1992 Rio Declaration on Environment and Development states that "Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."

In applying the precautionary approach, the Proponent shall:

(a) Demonstrate that the proposed Project is examined in a careful and precautionary manner;

(b) Outline the assumptions made about the effects of the Project and the approaches to prevent and minimize these effects;
(c) Identify where scientific uncertainty exists in the predictions of the environmental effects of the Project; and
(d) Identify any follow-up and monitoring activities planned, particularly in areas where scientific uncertainty exists in the prediction of the effects of the Project.

SECTION 3 – PREPARATION AND PRESENTATION OF THE EIS

3.1 STUDY STRATEGY AND METHODOLOGY

The Proponent shall explain and justify all methods used in the preparation of the EIS. In describing its overall approach, the Proponent shall explain how it used scientific, engineering, Aboriginal traditional and community knowledge. All hypotheses and assumptions shall be clearly identified and justified. All data collection methods, models and studies shall be documented so that the analyses are transparent and reproducible. The degree of uncertainty, reliability and sensitivity of models used to reach conclusions shall be indicated.

All conclusions regarding the receiving environment and predictions as well as the assessment of environmental effects shall be substantiated. The Proponent shall support all analyses, interpretation of results and conclusions with a review of the appropriate literature, providing all references required and indicating the public availability of all works consulted. Any contribution based on Aboriginal traditional and community knowledge shall be specified and the sources identified.

The EIS shall identify all significant gaps in knowledge and explain their relevance to key conclusions drawn. The Proponent shall indicate the measures applied to address these gaps. Where the conclusions drawn from scientific and technical knowledge are inconsistent with the conclusions drawn from Aboriginal traditional or community knowledge, the Proponent shall present the various points of view as well as a statement of the Proponent's conclusions.

3.2 PRESENTATION OF THE EIS

The EIS and all associated reports and studies shall use System International (SI) units of measure and terminology. The Proponent shall present the EIS in the clearest language possible. However, where the complexity of the issues addressed requires the use of technical language, a glossary defining technical words and acronyms shall be included.

The EIS should be presented in the sequence outlined in these Guidelines or the Proponent may decide that the information is better presented following a different sequence. For clarity and ease of reference, the EIS shall include a Table of Concordance that cross-references the EIS Guidelines so that information requirements identified in the Guidelines are easily located in the EIS. The EIS shall refer to rather than repeat information already presented in other sections of the document. A key subject index is to be provided giving locations in the text by volume, section and sub-section. Lines in the EIS shall be numbered in the margin at appropriate intervals.

The Proponent shall provide charts, diagrams and maps wherever useful to clarify the text, including a depiction of what the developed Project sites would look like from an aerial perspective. Maps shall use a limited number of common scales to allow for comparison and overlay of mapped features. Maps shall indicate common and accepted local place names. The Proponent shall present information, where technically feasible, using a standard Geographic Information System (GIS) mapping (digital) format with maps geo-referenced.

Throughout the preparation of the EIS, the Proponent should freely cite experiences from other environmental assessments, with emphasis on Newfoundland and Labrador and other Canadian examples, to support the methodology and value of the information provided, or as reasons in support of the selection of a preferred alternative.

An initial requirement for seventy-five (75) paper copies of the EIS and sixty (60) electronic copies may be sufficient. They shall be written in English and printed or copied on two sides of recycled *Environmental Choice* and/or *Forest Stewardship Council*-certified paper. The paper choice shall be conspicuously stated. Where possible, maps and other attachments should be scaled to fit on standard size papers to facilitate copying. The electronic version of the EIS shall be submitted in a format so that it may be posted on the internet and in a manner which shall facilitate downloading and printing in part or in whole.

To facilitate the identification of the documents submitted and their coding in the Canadian Environmental Assessment Registry, the title page of the EIS and its related documents should contain the following information:

(a) Project name and location;
(b) Title of the document, including the term "environmental impact statement";
(c) Subtitle of the document;
(d) Name of the Proponent;
(e) Names of the consultants, as appropriate; and
(f) Date.

SECTION 4 – OUTLINE OF THE ENVIRONMENTAL IMPACT STATEMENT

4.1 EXECUTIVE SUMMARY

The Executive Summary shall include identification of the Proponent, a brief project description, predicted environmental and socio-economic effects, mitigation measures, residual effects, follow-up and monitoring programs, an outline of the component studies, and a summary of the fundamental conclusions of the EIS. The Executive Summary shall also include a review of Aboriginal concerns about the Project and the key findings of the Aboriginal consultation activities undertaken by the Proponent.

The Executive Summary should be written in terms understandable to the general public and in such a manner as to allow reviewers to focus on items of concern.

4.2 INTRODUCTION

4.2.1 Identification of the Proponent

This section shall introduce readers to the Proponent by providing pertinent corporate information, including the following:

(a) Name of corporate body and mailing address;
(b) Chief Executive Officer;
(c) Principal contact person for purposes of environmental assessment
(d) Ownership of rights and interests in the Project and associated natural resources;
(e) Corporate accountability for management of environmental and socio-economic effects and operational arrangements and corporate and management structures, including the linkage of these factors between the Proponent, its parent companies and any other organizations with operational or ownership rights;
(f) Environmental and community relations policies; and
(g) Key elements of the Proponent's environment, health and safety management system and how the system will be integrated into the Project.

In addition the Proponent shall describe its history in Canada's hydroelectricity industry, with specific reference to the existing hydroelectric generation project at Churchill Falls.

4.2.2 Overview of the Project

The intent of this section is to provide an overview of key components rather than a detailed description of the Project, which will follow under Section 4.3 – The Proposed Undertaking.

The Proponent shall briefly summarize the Project, by presenting the project components, associated activities, scheduling details, the timing of each phase of the Project and other key features. If the Project is part of a larger sequence of projects, the Proponent shall outline the larger context and present the relevant references, if available.

4.2.3 Purpose of the EIS

The purpose of the EIS shall be described.

4.2.4 Relationship to Legislation, Permitting, Regulatory Agencies and Policies

The EIS shall identify and discuss all relationships between the Project and relevant legislation, regulations and policies (municipal, provincial, and federal). Pertinent government policies, such as land and water resources development and use policies that may influence environmental management in the project area, and the Project's compliance with respect to these policies are to be addressed. The EIS shall describe how project siting, design and management have been influenced by compliance with legislation and policies.

The Proponent shall provide a comprehensive list of anticipated permits and regulatory approvals required for the undertaking. The list shall include the following details:

(a) Activity requiring regulatory approval;
(b) Name of permit or regulatory approval;
(c) Name of legislation applicable in each case; and
(d) Regulatory agency responsible for each permit of approval.

4.2.5 Land Claim Agreements and Interim Agreements

The EIS shall identify any publicly available agreements or arrangements, including the *Interim Forest Agreement (2003)* and the *Labrador Inuit Land Claims Agreement*, 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.

With respect to the *Labrador Inuit Land Claims Agreement* (the Agreement), the EIS should include a determination of whether the Project may be reasonably expected to have adverse environmental effects on the Labrador Inuit Settlement Area for the purpose of determining the applicability of the Agreement.

4.2.6 Previous Registration and Environmental Assessment

The Proponent shall describe their previous registrations of proposed hydro developments on the Lower Churchill River, environmental assessment(s), the outcome of the assessment(s), and the reasons the proposals presented in those previous registrations did not commence.

4.2.7 Other Registrations

The Proponent shall indicate whether any other registrations are to be submitted for environmental assessment in the future as a result of this Project.

4.3 THE PROPOSED UNDERTAKING

4.3.1 Need, Purpose and Rationale of the Project

The "need for" the Project is defined as the problem or opportunity the Project is intending to solve or satisfy. The "need for" will establish the fundamental rationale of the Project.

The "purpose of" the Project defines what the Proponent hopes to accomplish by carrying out the Project.

"Need for" and "Purpose of" the Project should be established from the perspective of the Proponent and provide a context for the consideration of alternatives to the Project.

This section of the EIS shall provide a comprehensive explanation of the need, purpose and rationale for the Project. The statement of the Project's justification shall be presented in both energy and economic terms, shall provide a clear description of methodologies, assumptions and conclusions used in the analysis, and shall include an evaluation of the following:

(a) Current and forecasted provincial electricity supply and demand;
(b) Current and forecasted provincial electricity conservation;
(c) Current and future provincial transmission line network;
(d) Current exports by the Proponent to markets outside the Province;
(e) Export market opportunities, forecasts and expected evolution;
(f) Current energy and water management regimes;
(g) Risks to the Project, in-stream flow variability, market prices and schedule delays, interest rates and other risk factors relevant to the decision to proceed with the Project;
(h) Projected financial benefits of the Project (including their distribution) as measured by standard financial indicators; and
(i) Relationship with the Newfoundland and Labrador's 2007 Energy Plan.

4.3.2 Alternatives

4.3.2.1 Alternatives to the Project

The alternatives to a project are defined as functionally different ways of addressing the need for the project. The EIS shall contain an analysis of alternatives to the Project, including the following:

(a) Management of electricity demand through utility-based energy efficiency and conservation initiatives;
(b) Alternative generation sources to the Project (e.g., hydrocarbons, wind, other hydro projects such as run-of-river projects);
(c) Combinations of alternative generation sources with hydroelectricity (e.g., hydro-wind);
(d) The addition by the Proponent of more capacity at existing generation facilities; and
(e) Status quo (no Project).

Among the alternatives to the Project to be considered, the Proponent shall pay close attention to how they would be integrated within Newfoundland and Labrador's 2007 Energy Plan.

The analysis of alternatives to the Project is to include 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. This shall include a description of the conditions or circumstances that could affect or alter these choices, such as market conditions, regulatory changes and other power developments, either prior to construction or during the life of the Project.

The EIS shall include a comparative analysis of the environmental effects and technical and economic feasibility of alternatives that led to the choice of the selected Project alternative. The comparative analysis shall indicate how the Proponent took into account the sustainable development objectives outlined previously in these Guidelines in determining criteria for selecting the preferred alternative. The Proponent shall include an evaluation of the thresholds for economic viability of the Project and considerations respecting the timing of phases and components of the Project. The Proponent shall also indicate under what circumstances a change in economic conditions may influence its selection of the preferred alternative.

4.3.2.2 Alternative Means of Carrying Out the Project

Alternative means of carrying out the Project, which are technically and economically feasible, and the environmental effects of any such alternative means shall be discussed.

The EIS shall describe design and siting alternatives for dams/reservoirs, generating stations, transmission facilities and ancillary facilities (such as roads and temporary infrastructure). The preferred alternatives shall be identified, with the selection based on clearly described methods and criteria. An explanation shall be included of how environmental factors affect the design and consideration of alternatives.

The Proponent shall provide the rationale for selecting Project components and shall discuss the state of the art of the various technologies being proposed. The Proponent shall indicate the known experience with, and the effectiveness and reliability of these techniques, procedures and policies, particularly under arctic or subarctic conditions, in Canada and elsewhere, and their relation to best practice in Canada. This discussion shall also show how design, engineering and proposed procedures are compatible with the environment and the local communities and shall minimize adverse environmental and social effects.

The EIS shall analyze and compare the design alternatives for the Project in relation to their environmental and social costs and benefits, including those alternatives which cost more to build and/or operate but which result in

reduced adverse environmental effects or more durable social and economic benefits.

Alternatives for the pace and scale of the project shall be discussed, and the chosen alternative justified. The Proponent shall also indicate under what circumstances a change in economic conditions may influence its selection of preferred alternative means.

Alternative means of carrying out the Project shall include the following as discussed below:

(a) Reservoir Preparation

Flooding shall remove access to the forest resources and other terrestrial vegetation within the newly formed reservoirs. Inundation of vegetation is of concern with respect to aesthetics, resource and recreational use of the waterway and valley, recovery of wood fibre, the sequestration and release of carbon dioxide, mercury uptake, and habitat loss. A selection of reservoir preparation strategies is necessary to address these concerns, including economic, technical and environmental considerations which are to be evaluated in order to select and justify the proposed mitigation measures.

(b) Transmission Line Route Selection

The Proponent is to undertake a Route Selection Study which identifies the alignment for transmission lines proposed between Gull Island and Muskrat Falls and from Gull Island to Churchill Falls. The study shall involve the selection of a study corridor, approximately 1.0 km in width, within which various engineering, social and environmental constraints are identified. A preferred alignment and one or two alternative alignments shall be selected for evaluation, as appropriate.

(c) Facility Layout and Siting

The Proponent shall evaluate facility layout and locations, including access roads, quarries, borrow pits and camps, based on a variety of engineering and environmental considerations. For access roads, the EIS shall consider alternative locations of stream crossings and types of crossing structures. Where such facilities are yet to be located, a site selection process and evaluation process shall be described to demonstrate how potential environmental effects will be avoided or mitigated.

(d) Generation Stations Optimization

The Proponent shall outline generation station optimization alternatives (e.g., number of turbines, type of turbines, head, capacity, intakes, spillway design and associated operating regimes). These optimization studies are to consider technical and economic feasibility, and environmental considerations.

(e) Construction Sequence

The EIS shall consider alternative construction sequence for all described facilities (e.g., Gull Island or Muskrat Falls first).

(f) Construction Labour Force Accommodation

The EIS shall describe alternative labour force accommodation strategies (e.g., number and location of camps, in-community housing). These evaluations are to consider economic, social and worker conditions (including health and hygiene) as well as any other relevant community, including Aboriginal community, considerations and environmental factors.

(g) Reservoir Management

The EIS shall consider a selection of reservoir management strategies, including consideration of scheduling/timing of filling, rate of flow release and proposed mitigative measures (e.g., identification of suitable fish refugia areas, provision of minimum flows).

4.3.3 Project Description

The Proponent shall describe the scope of the Project for which the EIS is being conducted.

To facilitate the understanding of the Project by the public, the Proponent shall produce a scale model and/or appropriate audiovisual materials describing the Project.

4.3.3.1 Spatial and Temporal Boundaries

A precise description of the spatial boundaries of the Project shall be presented accompanied by map(s) of appropriate scale showing the entire Project area with the proposed principal structures and related works. The Proponent shall provide aerial images that illustrate representative habitats within each study area (see Section 4.4.2 – Study Areas).

The proposed principal structures and related works to be described include but are not limited to the following:

(a) The Gull Island and Muskrat Falls generating stations, including intakes, intake canals, dams, dykes, tailrace channels and spillways associated with each of these sites;
(b) The transmission terminal facilities and transmission lines linking the two stations and interconnecting with Churchill Falls Station;
(c) The reservoirs and their management; and
(d) Related works and activities including all temporary facilities required for the construction and operation of the previously mentioned facilities, in particular:
    (i) Temporary control structures and diversion works;

(ii) Work camps;
(iii) Permanent and temporary access roads;
(iv) Bridges and watercourse crossings;
(v) Infrastructure for wastewater treatment & waste management;
(vi) Energy supply for camps and worksites;
(vii) Drinking water supply;
(viii) Borrow pits and quarries;
(ix) Management and disposal of excavated material; and
(x) Construction worksites and storage areas.

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. If the Proponent does not believe the full temporal boundaries should be used for a phase of the Project, the report shall identify the boundaries used and provide a rationale for the boundaries selected.

4.3.4 Construction

The EIS shall show the construction and commissioning schedules for Project elements, based on the most current information available. In addition, the approach, details, materials, methods, locations and security measures of all planned construction activities related to the physical features, including site preparation, permanent and temporary infrastructure and site rehabilitation shall be presented, including estimates of magnitude or scale where applicable. This shall include the following:

(a) Reservoir Preparation

Describe the work required and schedule for reservoir preparation, including volume of merchantable and non-merchantable wood within the flood zone, location of cleared areas, clearing/harvesting strategy and methods (e.g., labour requirements, transportation to processing facilities) and methods for eliminating wood debris.

(b) Dams, Reservoirs and Generating Stations

(i) Describe the methods for construction and creation of all permanent facilities, including the main dams, reservoirs and generating stations.
(ii) Provide the main specifications for all permanent facilities, including volume of the dams, water intake, spillways, diversion facilities and tailraces.
(iii) Provide the main parameters for the reservoirs, including total area, land area flooded, total volume, live storage, bathymetry, scheduling of initial flooding and duration of filling period.
(iv) Provide the main specifications of the generating stations.

(c) Access Infrastructures

(i) Describe the permanent and temporary access infrastructures (including road, air and water) to be constructed, as well as existing infrastructures to be utilized.
(ii) Describe new access roads and corridors (including locations, anticipated traffic, technical characteristics and general road construction standards such as maintenance, useful life, ditches, bridges and culverts and use of dust-control and de-icers) and any modifications and/or upgrades required to existing access infrastructures.
(iii) For the Goose Bay airport, specify the current traffic and the expected changes during construction and operation of the Project.
(iv) For the Goose Bay port, specify the current traffic and the expected changes during construction and operation of the Project.

(d) Borrow Pits, Quarries and Spoil Areas

(i) Identify the source, quantity and end use of all rock and aggregate materials to be used.
(ii) Identify the source, quantity and proposed disposal location of all excavated materials.
(iii) If quarrying/excavating/using rock with the potential for acid generation, provide an assessment of the potential for and the impacts of metal leaching and acid rock drainage (ML/ARD).

(e) Transmission Facilities

(i) Describe the construction methods for transmission facilities, including crossings of water bodies, access roads and modifications to existing facilities.
(ii) Describe the routing, type of line and interconnection points of the transmission lines.
(iii) Describe the volume of wood (e.g., merchantable and non-merchantable) within right-of-way and clearing/removal methods.

(f) Personnel Requirements

(i) Present the estimated size of projected workforce by month over the construction phase, indicating occupations by National Occupation Classification (NOC) Codes, skills, entry requirements and duration of work.
(ii) Describe the anticipated working schedule for Project construction activities.

(g) Temporary Structures and Infrastructure

(i) Describe camp locations; drinking water supply sources; methods of managing wastewater and discharge areas; location, capacity and operating conditions of solid waste disposal sites; power

supply; and management of any other installations (including fuel storage depots) required for the camps to function properly and safely.

(ii) Provide the scope and location of any communication and telecommunications systems required by the Project (e.g., transmission towers, access roads, energy sources).

(iii) Identify and quantify the use, management and production of dangerous products and hazardous waste generated by the Project during the construction phase.

(iv) Describe the type, location and management of river diversion and control structures (e.g., cofferdams, diversion tunnels), including those intended for the management of minimum flows and frazil ice.

(v) Identify the location, capacity and access to material and fuel receiving, handling and storage areas.

(vi) Describe the location, capacity and access to disposal and recycling sites for domestic and construction waste, including those developed during construction and existing sites to be used for the Project.

(vii) Identify and describe potential landing areas for wood piles or wood storage sites.

(viii) Provide an inventory of equipment and materials required for the Project, including hazardous materials.

(ix) Describe any storage or use of explosives.

(h) Mitigation and Compensation Works

Describe any physical works proposed as mitigation or compensation measures (e.g., reservoir access, sedimentation control).

(i) Demobilization

(i) Describe the approach and conceptual plans for demobilizing all structures used or created during construction that are of a temporary nature.

(ii) Identify, within the limits of the Proponent's knowledge and control, how the operation, use, development, possible rebuilding and eventual dismantling and demobilization of certain installations shall be handled in consideration of other uses.

(iii) Specifically note, to the extent possible, whether some installations, including all of the access infrastructures, may be used as they are, or may be converted or salvaged for other purposes by other proponents or communities, or if they must be dismantled and demobilized at the end of their useful life. The proposed means of rehabilitation of any areas to be abandoned shall be described.

4.3.5 Operation and Maintenance

All aspects of the operation and maintenance of the undertaking shall be detailed in this section of the EIS. This shall include the following:

(a) Operating Regime

Describe the following elements of the Project operating regime:

(i) Water management (turbine flows, ecological flows[2], reservoir head, maximum and minimum operating levels, operation of structures) for different hydrological conditions (low and high flows including flows lower than the ecological flows);
(ii) The time of year, frequency and amplitude (maximum and minimum levels) of water level fluctuation ranges for all water bodies;
(iii) Flow rates (maximum, minimum and average) and velocities in the sections of the river affected with detailed maps showing the areas affected, and seasonal and daily variations in water levels;
(iv) The maximum and minimum surface areas, total volume, live storage, and bathymetry of reservoirs, with detailed maps and residence time of water masses;
(v) Changes in water temperature and oxygen regimes upstream and downstream of dams;
(vi) Velocity of water at intake structures and outlets of spillways and tailrace canals;
(vii) Changes in management of lakes or reservoirs upstream and downstream of the Project area;
(viii) Changes in flow rates, velocities, temperature and oxygen regimes at the mouths of major tributaries to the Lower Churchill River;
(ix) The control and management of sedimentation and erosion;
(x) Maintenance plan for structures (dams) and facilities; and
(xi) Management of ice, including frazil ice.

(b) Access Roads and Transmission Facilities

(i) Describe roads and transmission facilities maintenance (e.g., vegetation management, dust control, de-icing).
(ii) Indicate electromagnetic fields.

(c) Personnel Requirements

(i) Present the estimated size of projected workforce by month over the operation and maintenance phase, indicating occupations by National Occupation Classification (NOC) Codes, skills, entry requirements and duration of work.
(ii) Describe the anticipated working schedule for Project operation and maintenance activities.

[2] Ecological flow is defined as the minimum flow required to protect fish and fish habitat

(d) Fuel and Dangerous and Hazardous Products and Waste

(i) Identify and quantify the use, management and production of dangerous and hazardous products and waste generated by the Project during the operation and maintenance phase.
(ii) Describe material and fuel receiving, handling and storage areas and provision for management and disposal of waste and discarded equipment.

(e) Operating Requirements

Describe, in addition to permits and authorizations, all other requirements to operate the Project, including leases, water rentals and insurance.

4.3.6 Decommissioning

The EIS will present an approach for the decommissioning phase of the Project, which sets out a commitment to address:

- Environmental planning and mitigation measures;
- Socio-economic mitigation measures; and
- Public health and safety procedures.

4.4 ENVIRONMENT

4.4.1 Identification of Issues and Selection of Valued Environmental Components (VECs)

To help focus the environmental assessment, the Proponent shall identify and justify, based on a clearly defined set of criteria, those components of the biophysical and socioeconomic environment that are most valued and/or sensitive, and which have a meaningful potential to be affected by the Project (the "Valued Environmental Components" or VECs).

It is understood that the process for defining VECs is iterative and that the list of VECs can be modified during the environmental effects analysis phase. The VECs can be revised and adjusted in relation to the information acquired during the environmental assessment process.

For information purposes, the following are factors that could prove relevant in the choice of VECs:

- Aboriginal and public concerns related to the component;
- Economic significance;
- Protected status of the component;
- Regulatory requirements;
- Rarity or special status of the component;
- Preservation of biodiversity;
- Sensitivity of the component to disturbances or pollution;
- Human health;

- Importance of the component ecological role; and
- Cultural heritage[3] or social significance of the component.

In considering VECs, the Proponent shall recognize that:

- The value of a component not only relates to its role in the ecosystem, but also to the value placed on it by humans;
- Culture and way of life of those using the area affected by the Project may also be considered as VECs; and
- Functional relationships within the environment may also be considered as VECs.

4.4.2 Study Areas

For the purpose of describing the existing environment and assessing the Project's anticipated effects on the biophysical and socio-economic environments, the Proponent shall determine study areas specific to each VEC. Each study area should be inclusive of the landscape necessary to predict the environmental effects of the Project on each VEC. For the purposes of assessing the Project's effects on the socio-economic environment, the study areas shall take into consideration the landscape used to support contemporary and historic Aboriginal and non-Aboriginal land use.

The delineation of the study areas is crucial to scope the extent of the environmental assessment. The rationale used to delineate the boundaries of the study areas shall be provided.

The mapping and description of the study areas for each VEC may include the following information:

- The main ecological constraints of the environment;
- Land use;
- Local communities; and
- The environmental significance and value of the Lower Churchill River Area.

4.4.3 Previous Development

Hydroelectric generation projects have been occurring on the Churchill River, since the 1960's. As such, understanding how the effects of past hydroelectric generation projects have been mitigated and/or managed is of interest where those environmental effects have the potential to overlap with those of the Project or

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[3] For the purpose of this environmental assessment, "cultural heritage" includes but is not limited to a human work or a place that

(a) either

(i) gives evidence of human activity;

(ii) has spiritual and/or cultural meaning; or

(iii) gives evidence of human activity and has spiritual and/or cultural meaning;

and

(b) that has heritage value.

would provide lessons that could be applied to the environmental assessment of the Project. The EIS should include a concise discussion of past hydroelectric generation projects on the Churchill River, the environmental effects that have occurred as a result, where overlapping environmental effect 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.

4.4.4 Description of the Existing Environment

The EIS shall identify the study area for each VEC and include a description of the existing biophysical and socio-economic environment and the resources within it that will be affected or that might reasonably be expected to be affected, directly or indirectly, by the Project.

The EIS shall describe relevant aspects of the existing environment in the study area for each VEC prior to development of the Project, which constitutes the reference state of the environment. This description of the environment must reflect Aboriginal traditional and community knowledge, as well as social, cultural and economic activities and values related to the described components.

Where appropriate and possible to do so, the Proponent shall present a time series of data and sufficient information to establish the averages, trends and extremes of the data that are necessary for the evaluation of potential environmental and cumulative effects of the Project. For each VEC, the Proponent should consider and justify how far back in time and how far into the future the environmental assessment should be conducted. The Proponent will identify any deficiencies in information, and how these deficiencies will be addressed.

Using qualitative and quantitative surveys, the EIS shall describe the components of the biophysical and human environments likely to be affected by the Project. If the information available from government or other agencies is insufficient or no longer representative, the Proponent shall complete the description of the environment with current surveys.

Components of the environment must be described and shall include the necessary data and the required information to understand, interpret and address the confidence levels of these data (e.g., methods; survey dates and times; weather conditions; location of sampling stations) and shall employ appropriate methods to identify, understand, analyze and assess the environmental effects of the Project.

In addition, the EIS shall describe environmental interrelationships and sensitivity to disturbance. If the study results or data have been extrapolated or otherwise manipulated to depict environmental conditions in the study area modeling methods and equations shall be described with calculations of margins of error and/or confidence limits.

A description of the existing environment shall be developed for each alternative drawing specific reference to the VECs. References are attached at the end of these Guidelines to provide direction to the Proponent. Detailed discussions shall be developed and VECs described for the following environmental components.

4.4.4.1 Atmospheric Environment

The Proponent shall describe the relevant components of the atmospheric environment within the study area of the VECs, including the following:

(a) Climate and meteorology;
(b) Indication of recent climate change observations;
(c) Emissions of greenhouse gases (e.g., CO_2, CH_4) in the context of provincial and regional emissions and targets and federal objectives;
(d) Existing ambient air quality, including current substantive sources of emissions of conventional air contaminants (PM, SO_2, NO_x, VOCs); and
(e) Existing ambient noise level.

4.4.4.2 Aquatic Environment

The Proponent shall describe the relevant components of the aquatic environment within the study area of the VECs, including the following:

(a) Hydrological features such as lakes and streams/rivers, watershed boundaries, river hydrology and hydraulics, bathymetry, surface water flow, flood zones, lake and river ice formation, dynamics and melt patterns, salinity, tides, freshwater mixing zones and delta formation;
(b) Geomorphology, including erosion, sedimentation, channel dynamics and sediment supply;
(c) Water quality and quantity from both surface and groundwater sources, including any saltwater intrusion up the Churchill River or into aquifers;
(d) Sediment quality of watercourse;
(e) Important habitats found along the shoreline, banks, wetlands and floodplain;
(f) Aquatic and riparian vegetation;
(g) Biological diversity, composition, abundance, distribution, population dynamics and habitat utilization of aquatic species, including fish, semi-aquatic species and marine mammals such as ringed seals;
(h) Mercury concentrations, mobility and fate within the ecosystem to be affected by the Project, including in water, fish and fish-eating wildlife at representative levels of the food chain as determined in an ecological risk assessment that includes freshwater and marine fish and fish-eating wildlife;
(i) Species of special interest or conservation concern (including their habitat), with an emphasis on rare, vulnerable or threatened

species (e.g., species listed in the *Endangered Species Act* or the *Species at Risk Act*); and
(j) Human-environment interactions.

4.4.4.3 Terrestrial Environment

The Proponent shall describe the relevant components of the terrestrial environment within the study area of the VECs, including the following:

(a) Bedrock and surficial geology, terrain and soil conditions;
(b) Regional seismicity (natural and reservoir-induced) and relevant geological structures (lineaments, faults, joints);
(c) Reservoir-induced seismic activity of the neighbouring regions;
(d) Pertinent physical and chemical properties of sediment and rock, that might be affected by or have an effect on the Project;
(e) For areas that will be flooded, the levels of mercury and other potentially toxic metals in the soils, in particular for soils with high organic content and indurated soils (ortstein);
(f) Areas of potential reservoir shoreline erosion and potential ground instability such as slumping or landslides;
(g) Groundwater movement and aquifer recharge zones;
(h) Permafrost conditions including areas of discontinuous permafrost, high ice content soils, thaw sensitive slopes and stream banks;
(i) Composition, abundance, distribution, population dynamics and habitat utilization of terrestrial fauna, including mammals, avifauna (e.g., migratory birds, raptor, waterfowl and passerine/songbird surveys) and herpetiles;
(j) Composition, distribution and abundance of terrestrial flora, including forest inventories and ecological land classifications;
(k) Existing patterns of habitat and ecotype alteration, disruption and destruction;
(l) Composition, distribution and abundance of medicinal herbs and plants harvested by affected Aboriginal communities;
(m) Composition, distribution and abundance of wetlands as classified using the Canada Wetland Classification System, and further characterized in terms of a functional analysis (e.g., habitat, water flow regulation, groundwater recharge);
(n) Migratory patterns/river crossings;
(o) Mercury concentrations, mobility and fate within the riparian ecosystem, with an emphasis on representative species at various levels of the food chain as determined in an ecological risk assessment;
(p) Species of special interest or conservation concern (including their habitat), with an emphasis on rare, vulnerable or threatened species (e.g., species listed in the *Endangered Species Act* or the *Species at Risk Act*); and
(q) Human-wildlife interaction (e.g., bear management plans).

For the terrestrial environment, some key indicator species/species assemblages were selected to focus the environmental assessment. The

species selected are reflective of different phyla, orders, families or guilds of species that represent key components of the terrestrial environment. These species were selected as being representative of species groups, importance in the food web (e.g., top predator), and their importance from socio-cultural and economic perspectives. The following is the list of these key indicators:

(a) Beaver;
(b) Marten;
(c) Porcupine;
(d) Caribou;
(e) Moose;
(f) Black bear;
(g) Harlequin duck;
(h) Early breeding waterfowl (including Canada goose);
(i) Late breeding waterfowl (including Scoters);
(j) Upland game birds;
(k) Osprey; and
(l) Passerine/song birds (including Water thrush).

4.4.4.4 Land and Resource Use

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

(a) Present and potential timber resource logging and utilization (commercial and domestic);
(b) Current use of land and resources (including aquatic resources) by Aboriginal persons for traditional purposes, including location of camps, harvested species and transportation routes;
(c) Current use of land and resources (including aquatic resources) by other land users;
(d) Other rural land and resource use including existing and potential recreational and commercial fishing and hunting, gathering of country food and collection of plant propagules;
(e) Current navigation (e.g., vessel/boat traffic) and winter travel on the river;
(f) Location and description of unique sites or special features, including any candidate sites for ecological or cultural heritage preservation and conservation, Environmentally Sensitive Areas, reserves or protected areas, conservation agreement lands and habitat enhancement projects; and
(g) Landscapes, including aesthetic quality and effects on river aesthetics.

4.4.4.5 Cultural Heritage Resources

The Proponent shall describe relevant cultural heritage resources in the study areas of the VECs, including the following:

(a) Cultural heritage sites;
(b) Historic and archaeological resources;
(c) Paleontological resources; and

(d) Architectural resources.

4.4.4.6 Communities

The Proponent shall describe relevant community elements in the study areas of the VECs, including the following:

(a) Demographics;
(b) Community services and infrastructure
- Health services and social programs (e.g., drug addiction, delinquency);

(c) Human health
- Occurrence and trends in chronic diseases (e.g., diabetes, cardiovascular disease, chronic pulmonary disease and cancer), infectious disease, mental illness, addictions and quality of life
- Dietary changes that could lead to health risks from methylmercury (MeHg)
- Drinking water sources and quality;

(d) Community health;
(e) Family life;
(f) Safety;
(g) Culture;
(h) Education and Training;
(i) Housing and accommodation; and
(j) Property value and land use, including within and adjacent to planned future reservoirs.

As the Project is likely to result in an increase in mercury (Hg) concentrations in fish, the Proponent shall assess the human health risk associated with mercury exposure.

This assessment should consider the presence of contaminants in fish (for each species of interest for human consumption) in the study area, including the variations based on fish size and weight, as well as representative fish consumption data for the consumers affected by the Project. The Proponent shall identify the species of fish and specific portions of the fish that are consumed by humans and determine baseline mercury concentrations in the species and tissues expected to be consumed by humans. The Proponent shall also take into account the recommended consumption standards. It is recommended that the Proponent use recognized toxicological reference values. The calculation of mercury exposure should take into account the possible contribution of other local sources, in particular traditional food (e.g., predators of contaminated fish or waterfowl) and discuss the cumulative effect of the contribution of these other sources.

In addition, the Proponent shall:

(a) Characterize the current fishing patterns, including fishing location, frequency, and variability in consumption between communities and within a single community and determine

whether this pattern may change following the construction of the dams;

(b) Develop a baseline of MeHg exposure of the local human population in general and of groups at risk, in particular children and toddlers, and women of childbearing age, which can be accomplished through dietary surveys and human hair sampling;

(c) Present and justify the period deemed adequate to reduce the quantity of mercury ingested and consider the toxicological risk, on sensitive human populations, associated with the consumption of large quantities of fish (e.g., during a weekend of fishing);

(d) Discuss the views of local human populations regarding mercury and its influence on the changes observed in their diet and consequently on their health in general;

(e) Review the results of the research undertaken in the region as relevant. This review shall outline current knowledge and contribute to a better understanding of the evolution of mercury exposure among local human populations; and

(f) Present the health effects of very long-term exposure to mercury at concentrations that are generally below those producing noticeable effects and discuss existing consumption standards.

The collection of baseline data of MeHg exposure of the local human population should be completed, including a review by Aboriginal groups and appropriate government agencies, before the Proponent changes the conditions of the Churchill River in any way that could affect mercury concentrations.

4.4.4.7 Economy, Employment and Business

The Proponent shall describe relevant economy, employment and business elements in the study areas of the VECs, including the following:

(a) Economy of Upper Lake Melville, Labrador and the Province
- Taxes and royalties;
- Effects on gross domestic product;

(b) Employment in Upper Lake Melville, Labrador and the Province;

(c) Skilled and unskilled labour supply in Upper Lake Melville, Labrador and the Province;

(d) Expenditures in Upper Lake Melville, Labrador and the Province;

(e) Availability of skilled and unskilled labour;

(f) Employment equity and diversity including under-represented groups (e.g., women, persons with disabilities, Aboriginal groups);

(g) Business capacity;
- Goods and services;

(h) Agriculture;

(i) Outfitting;

(j) Eco-tourism;
(k) Trapping;
(l) Forest Resources Harvesting; and
(m) Mining and Mineral Exploration.

4.4.5 Component Studies

Component studies shall be prepared for at least the following VECs:

(a) Large mammals;
(b) Furbearers;
(c) Avifauna;
(d) Species at risk;
(e) Fish and fish habitat (plankton, benthos, marine mammals);
(f) Water (quality and quantity);
(g) Hydrology (including ice dynamics, sedimentation, salinity and salt water intrusion);
(h) Mercury (both in terms of increased concentrations in ecosystems and in humans);
(i) Cultural heritage resources;
(j) Timber resources;
(k) Socio-economics; and
(l) Air quality.

Where new information becomes available as a result of baseline studies, additional component studies may be required.

Component studies generally have the following format:

(a) Rationale/Objectives

In general terms, the rationale for a component study is based on the need to obtain additional data to determine the potential for significant effects on a VEC due to the proposed undertaking, and to provide the necessary baseline information for monitoring programs.

(b) Study Area

The boundaries of the study area shall be defined depending on the characteristics of the VEC being investigated.

(c) Methodology

Methodology shall be proposed by the Proponent, in consultation with resource agencies, as appropriate. The methodologies for each component study shall be summarized in the EIS.

(d) Study Outputs

Study outputs shall be proposed by the Proponent. Information and data generated shall be sufficient to adequately predict the effects on the VEC and determine monitoring and follow-up requirements.

4.4.6 Data Gaps

Information gaps from a lack of previous research or practice shall be described indicating baseline/information which is not available or existing data which cannot accurately represent environmental conditions in the study area(s) over four seasons. If background data has been extrapolated or otherwise manipulated to depict environmental conditions in the study area(s), modeling methods and equations shall be described and shall include calculations of margins of error and/or confidence limits.

4.4.7 Future Environment without the Project

The EIS shall describe the predicted future condition of the environment within the expected life span of the Project, if the Project were not to proceed. The predicted future condition of the environment shall help to distinguish project related effects from environmental change due to natural processes and shall include a discussion of climate change.

The socio-economic environment to be described is undergoing substantial change regardless of the Project. The analysis shall consider the likely trends in the area in the absence of the Project given available information about other planned major projects or social, economic, or institutional changes in the zone of influence within the time frame of the Project.

4.5 Environmental Effects

4.5.1 General

The EIS shall contain a comprehensive analysis of the predicted environmental effects on the VECs of each project alternative. If the effects are attributable to a particular phase of the Project (construction, operation and/or maintenance) then they should be designated as such.

Predicted environmental effects (positive and negative, direct and indirect, short and long-term) shall be defined quantitatively and qualitatively for each project alternative and for each VEC. Environmental effects predictions shall be explicitly stated and the theory or rationale upon which they are based shall be presented in terms of the following parameters, as appropriate:

- Nature;
- Magnitude (qualitative and quantitative);
- Geographic (spatial) extent;
- Timing, duration and frequency;
- Degree to which effects are reversible or mitigable;

- Ecological context;
- Cultural heritage and social context;
- Level and degree of uncertainty of knowledge;
- The capacity of renewable resources that are likely to be significantly affected by the Project, to meet the needs of present and future generations;
- The extent to which biological diversity is affected by the Project; and
- Environmental protection goals and objectives as set out in applicable legislation, regulations, policies, plans and programs.

The Proponent shall prepare a table of the proposed Project's anticipated effects, which shall enable the reader to review and consider those effects.

Among the effects of the Project to be assessed on the biophysical environment, effects on fish and fish habitat (e.g., fish mortality from construction and operation though gas bubble disease or entrainment), greenhouse gases emissions and navigation and navigability should be considered. Effects from mercury and climate change implications should also be considered.

With respect to greenhouse gases, the Proponent shall describe and analyze greenhouse gas emissions from the Project (including methane). This shall include provision of a greenhouse gas budget for emissions from all phases of the Project, including reservoir impoundment and operation, a description of specific greenhouse gas emissions that the Project will or could offset, the necessary conditions for that offset occurring, and a quantitative net estimate of potential greenhouse gas reductions or increases.

With respect to effects of the Project on navigation and navigable waters, the Proponent shall describe effects on the navigability and the navigation patterns of all waters existing, altered or created by the Project. Impacts on traditional (e.g., hunting, fishing) and current recreational and commercial waterway use should be identified and assessed. Particular attention should be paid to traditionally-used patterns to and from Mud Lake and throughout the watercourse. Surface hydrological modelling (i.e. flow dynamics) of impacts resulting from the Project, including for the upstream footprint limit of the reservoir and downstream of Muskrat Falls to Goose Narrows, should also be included.

The assessment of the beneficial and adverse effects of the Project on the socio-economic environment shall consider how the Project may affect various segments of the local populations (e.g., youth, elders, men, women, Aboriginal groups, harvesters, existing workforce including professionals). The following should be taken into account when assessing effects of the Project on the socio-economic environment:

(a) Demographics;
(b) Human health;
(c) Social and cultural patterns (particular attention shall be given to the comparative adverse and beneficial effects of a major base of employment away from the communities, rotational work schedules,

and the presence of large, temporary work forces and contractors in the region);
(d) Services and infrastructure (including road transportation of workers and materials);
(e) Cultural heritage sites;
(f) Land and resource use;
(g) Local, regional and provincial economy;
(h) Employment, education and training;
(i) Governments;
(j) Aboriginal issues; and
(k) Experience gained from previous large developments in Labrador.

In considering the local social and economic effects of the Project, the Proponent shall have due regard for the attitudes, beliefs and perceptions of local residents, and how these are grounded in their culture, social organizations and historical experience.

4.5.2 Accidents and Malfunctions

The Proponent will identify and describe the potential accidents and malfunctions related to the Project, including an explanation of how those events were identified, potential consequences (including the potential environmental effects), the worst case scenarios and the effects of these scenarios. The Proponent will explain the potential quantity, mechanism, rate, form and characteristics of the contaminants and other materials likely to be released into the environment during the malfunction and accident events.

Potential accidents and malfunctions may include those associated with the following occurrences:

- Dam failure;
- Fires;
- Waste management and disposal;
- Use, handling or spills of chemicals and hazardous materials on-site; and
- Any other project components or systems that have the potential, through accident or malfunction, to adversely affect the natural environment.

The Proponents shall pay special attention to the sensitive elements of the environment (e.g., communities, homes, natural sites of interest, areas of major use) that may be affected in the event of an accident or a major malfunction.

The Proponent shall assess the likelihood of occurrence of the accidents and malfunctions.

Detailed plans, measures and systems to reduce the potential occurrence of an accident or malfunction shall be provided by the Proponent. They shall indicate how they will reduce the effects or consequences of an accident or malfunction, should it occur.

4.5.3 Cumulative Effects

The Proponent shall identify and assess the Project's cumulative environmental effects. 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.

In the cumulative effects assessment, the Proponent shall consider guidance provided by the Canadian Environmental Assessment Agency in its Cumulative Effects Assessment Practitioners Guide (1999) and other literature and experience with environmental assessment in Canada or elsewhere that it finds helpful in framing the cumulative environmental effects analysis.

The Proponent shall:

(a) Identify and justify the VECs that will constitute the focus of the cumulative effects assessment. The Proponent's assessment should examine the likelihood, nature and extent of the predicted cumulative effects of each Project alternative for each VEC. It may be appropriate, during the course of the environmental assessment, to refine the definition of the VECs selected for cumulative effects assessment;
(b) Present a justification of the spatial and temporal boundaries of the cumulative effects assessment. The boundaries for the cumulative effects assessment will again depend on the effects being considered (e.g., will generally be different for different effects). These cumulative effects boundaries will also generally be different from (larger than) the boundaries for the corresponding Project effects;
(c) 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;
(d) Describe the mitigation measures that are technically and economically feasible and determine the significance of the residual cumulative effects; and
(e) Assess the effectiveness of the measures applied to mitigate the cumulative effects. In cases where measures exist that are beyond the scope of the Proponent's responsibility that could be effectively applied to mitigate these effects, the Proponent shall identify these effects and the parties that have the authority to act. In such cases, the Proponent shall summarize the discussions that took place with the other parties in order to implement the necessary measures over the long term.

4.5.4 Renewable Resources

The Proponent shall determine, based on the results of their assessment, whether the Project is likely to cause significant environmental effects on renewable resources and therefore compromise their capacity to meet present and future needs.

Renewable resources are defined as resources that can be renewed on a regular basis, either naturally or by human action. While the emphasis is placed on living

renewable resources such as fish, wildlife and forest, the analysis of the effects on renewable resources should also consider non-living renewable resources such as water.

The Proponent shall briefly describe the renewable resources that may be affected by the Project. The Proponent shall clearly establish, taking into account the result of their impact assessment, whether these renewable resources are likely to be significantly affected following the implementation of proposed mitigation measures (residual significant environmental effects). Should this be the case, the following points shall be addressed:

(a) A brief description of the Project's environmental effects on the renewable resource;
(b) An indication as to the way in which the capacity of this resource was measured or evaluated;
(c) An indication of the temporal and geographic boundaries used to assess the capacity of the affected resource;
(d) A determination of the capacity of the resource to meet current needs;
(e) A determination of the capacity of the resource to meet future needs;
(f) A description of any other appropriate mitigation measures;
(g) A determination of the significance of the residual effects on the renewable resource and its capacity to meet the needs of current and future generations; and
(h) An identification of the risks and uncertainties that remain and the description of the next steps, if any, that will be required to address this effect.

4.5.5 Effects of the Environment on the Project

The environmental effects that may occur as a result of the environment acting on the Project shall be assessed.

Environmental changes and hazards that may occur and may affect the Project shall be described (e.g., wind, currents, waves, storm surges, severe precipitation events, flooding, extended dry periods, ice, earthquakes). The EIS shall take into account the potential influence of climate change scenarios (e.g., sea level rise, increased severity and frequency of storms and flooding). The influence that these environmental changes and hazards may have on the Project shall be predicted and described.

4.6 ENVIRONMENTAL PROTECTION

4.6.1 Mitigation

The EIS shall identify and discuss the proposed mitigation measures that are technically and economically feasible and that would mitigate the significant adverse effects of the Project and enhance beneficial effects, including the interaction of these measures with existing environmental management plans. Under the CEAA, mitigation is defined as the elimination, reduction or control of the adverse environmental effects of the Project, and includes restitution for any damage to the environment caused by such effects through replacement,

restoration, compensation or any other means. The rationale for and effectiveness of the proposed mitigation and enhancement measures should be discussed and evaluated. The Proponent, where possible, should refer to similar situations where the proposed mitigation has proven to be successful. Mitigation failure should be discussed with respect to risk and severity of consequence. The discussion should include failure of dam/control structures.

The Proponent shall identify who is responsible for the implementation of these measures and the system of accountability, including the obligations of all its contractors and subcontractors.

Mitigation measures shall be described for the construction, operation and maintenance phases and shall include:

(a) Procedures that would be used to avoid environmentally sensitive areas or periods of the year;
(b) Contingency plans and procedures to respond to accidents, malfunctions and emergencies;
(c) Fish habitat compensation strategies;
(d) A description of the approach to determine, develop and maintain minimum flow requirements when describing mitigation measures for the construction, reservoir filling and operation phases of the Project, including fish habitat maintenance and fish passage such as the fish passage facility in the causeway across the Churchill River associated with the Trans Labrador Highway Phase III;
(e) Methods to control and manage sediment action and shoreline stability;
(f) Measures to ensure continued unrestricted and safe access and passage on land and sea for harvesting and travel by Aboriginal and non-Aboriginal local residents, and the alternatives to be provided in the event of disruption;
(g) Methods of soil and vegetation preparation employed to mitigate the release of mercury and MeHg from flooded soils and vegetation;
(h) Measures which would be taken to reduce or offset adverse effects of increased mercury and MeHg concentrations in fish, fish-eating wildlife, and human consumers of fish and fish-eating wildlife;
(i) Mitigation measures which would be taken to reduce or offset adverse effects on communities affected by the Project;
(j) Mitigation measures which would be taken to reduce or offset adverse effects on local businesses most directly affected by the Project;
(k) Measures to enhance any beneficial environmental effects, such as economic benefits to businesses affected by the Project; and
(l) Measures to maximize labour market opportunities, including Aboriginal labour, and address labour challenges with an emphasis on strategies to enhance recruitment and retention and increase employment and participation. To this end, the Proponent must minimally describe a human resources plan that includes a description of objectives and strategies to address labour force availability, skilled trades recruitment, diversity in recruitment, training and employment equity. This plan should also minimally identify employment objectives and targets for women and other labour force groups if applicable.

Other mitigation measures, if any, which were considered shall be identified, and the rationale for rejecting these measures shall be explained. Trade-offs between costs and predicted effectiveness of the mitigation measures shall be justified.

The Proponent shall discuss the application of the Precautionary Principle in the identification of mitigation measures. The Precautionary Principle is defined in Section 2.5. The best available technology and best management practices shall be considered. Avoidance of environmental effects through implementation of scheduling and siting constraints and pollution prevention opportunities shall also be taken into account.

4.6.1.1 Compensation

The Proponent shall describe, in general terms, compensation programs and arrangements as follows:

(a) Any compensation programs for damage caused by the Proponent's activities to the environment, to property, business operations, or to the land and resources of others. The Proponent shall describe any existing or proposed compensation programs for losses relating to property, use, access, harvests, added harvesting effort and costs that may be incurred by users of the land and its resource (e.g., tourism operators, trappers, subsistence hunters). A comparison with compensation programs for other projects and other resource development activities shall be provided.

(b) Any compensation arrangements for local, public or private providers whose burdens and costs are increased or who incur losses as a result of the Project.

4.6.2 Emergency Response / Contingency Plans

The Proponent shall describe its Environmental Management System (EMS) and Safety, Health and Environmental Emergency Response Plans (SHERP) to provide an overall perspective on how potentially adverse environmental effects shall be managed over time. The EMS shall include various plans (e.g., emergency response plans, contingency plans, environmental protection plans, waste management plans, hazardous spill plans, monitoring plans) and developed in a manner consistent with the International Organization for Standardization (ISO) 14001 program. It shall show how the Project is consistent with sustainable development efforts in the region. Appropriate government agencies, Aboriginal groups and local communities shall be involved in the development of the plans.

4.6.3 Rehabilitation

A plan of proposed rehabilitation measures is required to address areas disturbed by temporary activities (e.g., access roads, off-loading facilities, construction camp(s), land clearing prior to inundation). The plan shall discuss the rationale, objectives and procedures for proposed rehabilitation measures. A schedule for carrying out the work (e.g., seasonal requirements) shall be included in the plan. Appropriate materials (e.g., plant species, soils) shall be indicated.

4.6.4 Monitoring and Follow-up Programs

The EIS shall describe the environmental and socio-economic monitoring and follow-up programs to be incorporated into construction, operation and maintenance activities.

Monitoring programs will ensure that the Project is implemented as proposed, that the mitigation or compensation measures proposed to minimize the Project's environmental effects are effectively implemented, and that the conditions set at the time of the Project's authorization and the requirements pertaining to the relevant laws and regulations are met. The monitoring program will also make it possible to check the proper operation of works, equipment and facilities. If necessary, the program will help reorient the work and possibly make improvements at the time of construction and implementation of the various elements of the Project.

The purpose of the follow-up program is to verify the accuracy of the predictions made in the assessment of the effects as well as the effectiveness of the mitigation measures. The duration of the follow-up program shall be as long as is needed to evaluate the effectiveness of the mitigation measures.

If either of these programs identifies unforeseen adverse environmental effects, the Proponent shall commit to adjust existing mitigation measures, or, if necessary, develop new mitigation or compensation measures. The Proponent shall describe how the results of monitoring and follow-up programs will be used to refine or modify the design and implementation of management plans, mitigation measures and Project operations. This section shall also discuss the ways in which holders of Aboriginal traditional and community knowledge, including elders, women and youth, shall be involved in any monitoring and follow-up programs. The Proponent shall distinguish as appropriate between monitoring (compliance) and effects follow-up programs.

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) 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) Integration of monitoring results with other aspects of the Project including adjustments to operating procedures and refinement of mitigation measures;
(h) 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) 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.

The Proponent shall explain how the public shall continue to be involved, including participation in the design and implementation of environmental management and monitoring and follow-up programs.

The Proponent shall describe plans to maintain communications and working relationships with the affected communities, Aboriginal organizations, municipalities and government agencies throughout the life of the Project. The intent of these plans is to involve those groups in monitoring and follow-up programs, including in the identification and work towards the reduction of adverse physical, biological or socio-economic effects, and the enhancement of beneficial effects.

To design complete and comprehensive program proposals, the Proponent shall prepare and submit these documents subsequent to the completion of the environmental assessment, but before the initiation of the Project itself.

4.7 Residual Effects and Determination of Significance

Residual effects are those adverse environmental effects which cannot or will not be avoided or mitigated through the application of environmental control technologies, best management practices or other acceptable means.

The EIS shall list and contain a detailed discussion and evaluation of residual effects, including residual cumulative effects, which shall be defined in terms of the parameters outlined in sections 4.5.1 and 4.5.3.

The EIS shall contain a concise statement and rationale for the overall conclusion relating to the significance of the residual adverse environmental effects. The EIS will, for ease of review, include a summary table of the environmental effects, proposed mitigation and residual adverse effects.

4.8 Consultation with Aboriginal Groups and Communities

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. The Aboriginal groups and communities to be considered include, in Newfoundland and Labrador, the Innu Nation, the Labrador Métis Nation and the Nunatsiavut Government and, in Quebec, the Innu communities of Uashat Mak Mani-Utenam, Ekuanitshit, Nutaskuan, Unamen Shipu, Pakua Shipi and Matimekush-Lake John.

To assist in ensuring that the EIS provides the necessary information to address issues of potential concern to these groups, the Proponent shall consult with each group for the purpose of:

(a) Familiarizing the group with the Project and its potential environmental effects;
(b) Identifying any issues of concern regarding potential environmental effects of the Project; and
(c) Identifying what actions the Proponent is proposing to take to address each issue identified, as appropriate.

If the Proponent is not able or should not address any particular issue(s), the EIS should include supporting reasons.

The results of those consultations are to be presented in a separate chapter of the EIS with individual section for each of the affected Aboriginal groups. The Proponent must refer readers to the relevant sections of the EIS, as appropriate.

4.9 PUBLIC PARTICIPATION

Public consultation meetings are required of the Proponent to present the proposal and to record interests and concerns, including those received in response to the Registration. These concerns shall be addressed in a separate chapter of the EIS.

The Proponent shall describe the activities and information sessions that it will hold or that have already been held within the context of the Project at the local, regional and national levels, where applicable. The Proponent shall indicate the methods used and their relevance, the locations where information sessions were held, the persons and organizations attending, the concerns voiced and the extent to which this information was incorporated in the design of the Project as well as in the EIS. Moreover, the Proponent shall describe how issues were recorded and addressed through the use of tables of concordance. Any outstanding issues shall be clearly identified.

Protocol for this meeting shall comply with the legislation and with the Newfoundland and Labrador's Department of Environment and Conservation's Environmental Assessment Division's policy (as amended) on advertisement requirements for public meetings/information sessions included in **Appendix B**.

As a minimum, public meetings must be held in the communities of Happy Valley-Goose Bay, Northwest River, Mud Lake, Rigolet, Churchill Falls, in the region of Labrador West and St-John's.

4.10 ENVIRONMENTAL PROTECTION PLAN

The Proponent shall prepare an Environmental Protection Plan (EPP) for each main construction site and have them approved by the regulatory authorities before starting construction. They shall be stand-alone documents that shall target the site foreperson, the Proponent's occupational health, safety and environmental compliance staff, as well as government environmental surveillance staff. The EPPs shall address construction, operation and modification phases of the Project. A proposed Table of Contents and an annotated outline for the EPPs is to be presented in the EIS which shall address the major

construction and operational activities, permit requirements, mitigation measures and contingency planning as follows:

(a) Proponent's environmental policies;
(b) Objectives and voluntary commitments;
(c) Relevant human resource management plans;
(d) Environmental compliance monitoring;
(e) Environmental protection measures;
(f) Mitigation measures;
(g) Permit application and approval planning;
(h) Contingency planning for accidental and unplanned events;
(i) Statutory requirements; and
(j) Revision procedures and contact lists.

4.11 REFERENCES CITED

All references used during the preparation of the EIS shall be cited in the text and listed in this section.

4.12 PERSONNEL

The names and qualifications of all key professionals responsible for preparing the EIS and supporting documentation shall be included.

4.13 COPIES OF REPORTS

The Proponent shall prepare a complete and detailed bibliography of all studies used to prepare the EIS. Supporting documentation shall be referenced in the EIS and submitted in separate volumes or attached as an Appendix to the EIS.

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APPENDIX A

Requirements of an Environmental Impact Statement under the *Environmental Protection Act* (Section 57) and Assessment by a Review Panel under the *Canadian Environmental Assessment Act* (Section 16)

Environmental Protection Act

Section 57 - Environmental Impact Statement

57. An environmental impact statement shall be prepared in accordance with the guidelines, and shall include,

(a) a description of the undertaking;

(b) the rationale for the undertaking;

(c) the alternative methods of carrying out the undertaking, and the alternatives to the undertaking;

(d) a description of the

(i) present environment that shall be affected or that might reasonably be expected to be affected, directly or indirectly, by the undertaking, and

(ii) predicted future condition of the environment that might reasonably be expected to occur within the expected life span of the undertaking, if the undertaking was not approved;

(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;

(f) an evaluation of the advantages and disadvantages to the environment of the undertaking, the alternative methods of carrying out the undertaking and the alternatives to the undertaking;

(g) a proposed set of control or remedial measures designed to minimize any or all significant harmful effects identified under paragraph (e);

(h) a proposed program of study designed to monitor all substances and harmful effects that would be produced by the undertaking; and

(i) a proposed program of public information as required under section 58.

Canadian Environmental Assessment Act

Section 16 - Factors to be considered

16. (1) Every screening or comprehensive study of a project and every mediation or assessment by a review panel shall include a consideration of the following factors:

(*a*) the environmental effects of the project, including the environmental effects of malfunctions or accidents that may occur in connection with the project and any cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out;

(*b*) the significance of the effects referred to in paragraph (*a*);

(*c*) comments from the public that are received in accordance with this Act and the regulations;

(*d*) measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the project; and

(*e*) any other matter relevant to the screening, comprehensive study, mediation or assessment by a review panel, such as the need for the project and alternatives to the project, that the responsible authority or, except in the case of a screening, the Minister after consulting with the responsible authority, may require to be considered.

Additional factors

(2) In addition to the factors set out in subsection (1), every comprehensive study of a project and every mediation or assessment by a review panel shall include a consideration of the following factors:

(*a*) the purpose of the project;

(*b*) alternative means of carrying out the project that are technically and economically feasible and the environmental effects of any such alternative means;

(*c*) the need for, and the requirements of, any follow-up program in respect of the project; and

(*d*) the capacity of renewable resources that are likely to be significantly affected by the project to meet the needs of the present and those of the future.

(h) a proposed program of study designed to monitor all substances and harmful effects that would be produced by the undertaking; and

(i) a proposed program of public information as required under section 58.

Canadian Environmental Assessment Act

Section 16 - Factors to be considered

16. (1) Every screening or comprehensive study of a project and every mediation or assessment by a review panel shall include a consideration of the following factors:

(*a*) the environmental effects of the project, including the environmental effects of malfunctions or accidents that may occur in connection with the project and any cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out;

(*b*) the significance of the effects referred to in paragraph (*a*);

(*c*) comments from the public that are received in accordance with this Act and the regulations;

(*d*) measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the project; and

(*e*) any other matter relevant to the screening, comprehensive study, mediation or assessment by a review panel, such as the need for the project and alternatives to the project, that the responsible authority or, except in the case of a screening, the Minister after consulting with the responsible authority, may require to be considered.

Additional factors

(2) In addition to the factors set out in subsection (1), every comprehensive study of a project and every mediation or assessment by a review panel shall include a consideration of the following factors:

(*a*) the purpose of the project;

(*b*) alternative means of carrying out the project that are technically and economically feasible and the environmental effects of any such alternative means;

(*c*) the need for, and the requirements of, any follow-up program in respect of the project; and

(*d*) the capacity of renewable resources that are likely to be significantly affected by the project to meet the needs of the present and those of the future.

APPENDIX B

Department of Environment & Conservation
Environmental Assessment Division

ADVERTISEMENT REQUIREMENTS FOR PUBLIC MEETINGS / INFORMATION SESSIONS

Purpose: To clarify for staff, proponents, public interest groups, etc. the types, timing, number, notification requirements, etc. for public consultations in relation to undertakings required under the *Environmental Protection Act, SNL 2002 cE-14.2*, (Section 58) to prepare an Environmental Impact Statement (EIS) or required under the *Environmental Assessment Regulations, 2003* (Section 10) to prepare an Environmental Preview Report (EPR).

1. The Proponent is not required to conduct public meeting(s) (information sessions) under an EPR process unless specifically required to do so in the project Guidelines. This requirement shall be at the Minister's discretion, based upon advice from the Assessment Committee (AC) as provided by the Chairperson, taking into account the level of expressed public interest.

2. The Proponent is always required to conduct public meeting(s) (information sessions) under an EIS process as specified in the Legislation. This requirement shall be specified in the project Guidelines.

3. When required, a public meeting shall normally be held in the largest local population centre within the project area. This shall be the minimum requirement. In addition, when demonstrated public interest or concern warrants, additional meetings may be required. This may take the form of additional meetings to be held in major regional or provincial population centres, or possibly additional meetings within the original community. Such requirements are at the discretion of the Minister based on consensus advice from the AC Chairperson, and based upon public interest as evidenced by public submissions received.

4. The requirements for the location of public meetings may be modified for projects proposed within areas where there is an assertion of potential Aboriginal or treaty rights, excluding projects located entirely within municipal boundaries. In such cases, a public meeting may specifically be required in an appropriate Aboriginal community which has a direct interest in the land claim. Such a meeting may be required in addition to others required under #3 (above). The Proponent may be required to provide appropriate translation services for such meetings. This provision is subject to alternate direction relating to dealings with Aboriginal groups which may be imposed by government under special circumstances.

5. The format of the public meeting may be flexible, and the Proponent is free to propose a suitable format for approval by the AC. The format may

range from formal public meetings chaired by the Proponent or representative with presentations followed by questions and answers, to a less formal open house forum where the public may discuss the proposal with the Proponent or representatives. Other formats may be considered by the AC. The purpose of the public information session is to 1) provide information concerning the proposed undertaking to those who may be affected, and 2) to record the concerns of the local community regarding the undertaking. Any format must meet these objectives.

6. The Proponent must ensure that each public meeting is advertised in accordance with the following specified public notification requirements, which shall form part of the project Guidelines when appropriate:

- Minimum information content of public advertisement - (Proponent to substitute appropriate information for italicised items):

PUBLIC NOTICE

Public Information Session on the Proposed

Name of undertaking
Location of undertaking

shall be held at
Date and Time
Location

This session shall be conducted by the Proponent,
Proponent name and contact phone number,
as part of the environmental assessment for this Project.
The purpose of this session is to describe all aspects of the proposed Project, to describe the activities associated with it, and to provide an opportunity for all interested persons to request information or state their concerns.

ALL ARE WELCOME

- If translation services are to be provided as per #4 (above), then the ad should specify this fact and the languages to be used for the session.

- Minimum newspaper ad size: 2 columns wide.

- Minimum posted ad size: 10 cm x 12 cm.

- Minimum newspaper ad frequency (to be run in newspaper(s) locally distributed within each meeting area or newspaper(s) with the closest local distribution area):
  - For dailies, the weekend between 2 and 3 weeks prior to each session and the two consecutive days prior to each session, OR
  - For weeklies, in each of the two weeks prior to the week in which the

session is to be held.

- Minimum posted ad coverage: In the local Town or City Hall or office, and the local post office, within the Town or City where the meeting is to be held, to be posted continually for not less than 15 days prior to each session.

- Any deviation from these requirements for any reason must receive the prior written approval of the Minister.

- The Proponent must provide the Chairperson of the AC with copies of advertisements and public notices.

PRELIMINARY EXAMINATION OF THE ENVIRONMENTAL IMPACT SCREENING OF THE LOWER CHURCHILL (LABRADOR) HYDROELECTRIC GENERATION PROJECT PREPARED BY NALCOR ENERGY

on behalf of the Uashaunnuat, the Innu Takuaikan Uashat mak Mani-Utenam Band Council and certain Innu families

(July 17, 2009)

Introduction

These comments are filed on behalf of the Uashaunnuat, the Innu Takuaikan Uashat mak Mani-Utenam (ITUM) Band Council and certain traditional families of the Uashat mak Mani-Utenam Innu Nation which are plaintiffs in *Philomène McKenzie et al. v. AGQ et al.* (SCQ: 500-05-027983-962) and *Édouard Vollant et al. v. AGC et al.* (FC: T-568-07). Innu families are also members of the Uashaunnuat. ITUM includes all members of the Uashat mak Mani-Utenam community. (When the pronoun "we" is used without further qualification, it must be understood as referring simultaneously to the Uashaunnuat, Innu families and members of ITUM).

We claim aboriginal title, aboriginal rights and treaty rights to a substantial portion of Labrador. Several traditional Innu families have instituted legal proceedings in the Federal Court of Canada in a case known as *Édouard Vollant et al. v. Her Majesty the Queen in right of Canada*. The Attorney General of Newfoundland and Labrador and the Attorney General of Quebec are interveners in these proceedings. The plaintiffs in these proceedings specifically seek recognition of their aboriginal title, aboriginal rights and treaty rights in Labrador. These proceedings were suspended by the Federal Court of Appeal in a decision dated June 3, 2009. However, the plaintiffs, amongst others, plan to institute similar proceedings before the courts of the Province of Newfoundland and Labrador.

This part of Labrador is subject to the aboriginal title, aboriginal rights and treaty rights of the Uashaunnuat and Innu families, and to their consent. The traditional territory of the Uashaunnuat in Labrador, shared in part with the Innu of Matimekush-Lac-John, includes ─ from west to east ─ the entire region from the (contested) western border between Quebec and Labrador to beyond the 61st meridian. This traditional territory includes the entire area of the Upper Churchill project, a portion of the area of the Lower Churchill project, the transmission lines that are connected to these projects, and the site of several mining developments, including the Labrador West region (Labrador City and Wabush). Our traditional lands (with the Innu of Matimekush Lac John) include an area of about 250,000 km² in Quebec and Labrador.

These comments are filed without prejudice to the rights of the Uashaunnuat, Innu families and ITUM members, and without prejudice to any legal proceedings.

The Lower Churchill hydroelectric generation project, including the transmission lines (hereinafter referred to as "the Project"), is partly situated within the traditional territory of the Uashaunnuat, Innu families and ITUM members, which is located in Quebec and Labrador. The Project affects lands that lie at the heart of the traditional territory of the

Uashaunnuat, without consultation or any attempt of accommodation of the Uashaunnuat by the Government of Newfoundland and Labrador or by the Government of Canada. A substantial portion of the area affected by the Project is subject to the aboriginal title, aboriginal rights and treaty rights of the Uashaunnuat.

We all have an interest in this territory that is distinct from that of the Grand Innu Nation as well as individual rights and collective rights. We share Indian title to and in these territories and natural resources therein. We all enjoy aboriginal rights and treaty rights to our traditional lands and natural resources therein.

We are members of an organized society, an Indian nation, or a band that has continually occupied and possessed the territory of the Project proposed by Nalcor Energy (hereinafter referred to as “the Proponent”) since time immemorial, or at least prior to the 16th century, well before the arrival of the Europeans, the affirmation of European sovereignty over this territory, any European activity in this territory or any colonization of this territory.

We and our ancestors have continuously exercised the fundamental customs, practices and traditions of the distinctive culture of our Aboriginal society within this territory since before contact with the Europeans. The family territories are situated within this territory. While they are traditional territories, these family territories are commonly described by referring to plots in the “reserve à Castor”.

We have continually:

a) hunted, trapped and fished (exploited) in the traditional lands;
b) used and enjoyed the natural resources of the traditional lands, and used all of the fruits and products of these traditional lands;
c) obtained means of subsistence and subsisted thanks to these traditional lands and the natural resources found therein;
d) lived in the traditional lands in a specific way of life;
e) benefited economically from these traditional lands;
f) used rivers and other waterways for traditional activities, including for transportation and food;
g) possessed, controlled and managed the traditional lands, and identified and named various locations with this territory;
h) exercised spiritual and cultural traditions on the traditional lands;
i) developed a unique conception of and a special relationship with the land;
j) functioned as members of a nation and a distinct society with its own government, laws and institutions;
k) survived as members of a people on this land, and largely thanks to this land;
l) properly exercised our natural obligations as stewards and managers of the land and the environment.

The Uashaunnuat, Innu families and ITUM members have, among other things, used the following fruits and products of the traditional lands:

a) the forest, including wood, roots, trees, leaves, plants, sap, bark and medicinal plants;
b) wild fruits, including redberries, cranberries, cloudberries or bake-apples, raspberries, blueberries and gooseberries;
c) animals of subsistence, including caribou, moose, porcupine, and beaver;
d) fur-bearing animals, including beaver, marten, fox, mink, lynx and otter;

e) fish and marine mammals, including lake char, salmon, brook trout, pike, otter, and seal;
f) birds, including, Canada goose, partridge, American black duck;
g) soil;
h) rocks and minerals;
i) sand.

We currently live on, occupy, possess and use our traditional lands in both Quebec and Labrador. We hunt, fish, trap and carry out other activities on our traditional lands. We have a distinct way of life.

Not only do we hold aboriginal title, aboriginal rights and treaty rights to our traditional lands, but we also have traditional knowledge as well as an intimate knowledge of the territory affected by the Project.

The Innu Nation has never surrendered its collective or other rights. Neither have the other clans, related groups or families that comprise the Innu Nation.

We are opposed to any development project on our territory, and we refuse to consent to the Project, particularly in view of its negative impacts on our traditional lands and our traditional way of life. Moreover, the Proponent's environmental impact assessment is flawed and incomplete.

We have not consented to any hydroelectric, mining, forestry, railroad or transportation project in the portion of the traditional lands affected by the Project.

The completion of the Project will have major negative impacts on the way of life of the Uashaunnuat, Innu families and ITUM members ─ culturally, spiritually, socially and economically. The Project will irreparably and irremediably transform the natural environment of the traditional lands of the Uashaunnuat, Innu families and ITUM members.

Moreover, the negative impacts of the Project will be more far-reaching than what the Proponent claims.

We will provide more detailed comments on the Project in our brief that will be submitted during the public hearing phase. Nevertheless, after reading and analyzing the environmental impact assessment submitted by the Proponent, we hereby submit the following preliminary questions and comments.

Questions and Comments

1. Impacts on the Uashaunnuat
    a. There was only one information meeting with the Uashaunnuat, in the community of Uashat, on January 12, 2009. We were never properly, specifically and meaningfully consulted. Moreover, the Proponent's environmental impact assessment does not include the preliminary comments and concerns we raised at the meeting of January 12, 2009.
    b. The Environment Impact Statement Guidelines clearly indicate that the Uashat mak Mani-Utenam community must be considered and consulted. The

Proponent never carried out this consultation, and it is thus not reflected in the Proponent's environmental impact assessment.

c. The subchapter of the environmental impact assessment regarding consultation with the Innu communities of Quebec is far from satisfactory. Apart from the information meeting of January 12, 2009, there have been no other meetings between the Uashaunnuat and Nalcor's representatives. It would be unacceptable to regard the Proponent's environmental impact assessment as complete without consultation of the Uashaunnuat.
d. Moreover, we reiterate that the Project necessitates not only a specific and meaningful consultation of the Uashaunnuat, but also necessitates our consent, which has not been obtained.
e. Despite the fact that the Project's environmental impacts are mentioned, there is no mention as to how these impacts will affect the title, rights and interests of the Uashaunnuat and Innu families.

2. Involvement of the Uashaunnuat
    a. We would like to know why only the Labrador Innu (Innu Nation) were involved in the Project, since the territory affected by the Project is partly situated in the traditional territory of the Uashaunnuat. The Environmental Impact Statement Guidelines treats equally all the Innu communities to be consulted.
    b. The Proponent would be wrong to think that the questions and concerns of the Labrador Innu are identical to those of the Uashaunnuat, or that it is enough to involve the Labrador Innu to "settle" the Innu question.
    c. The claims of the Uashaunnuat are known to the Government of Newfoundland and Labrador. The Proponent at least seems to recognize the Uashaunnuat's use of the land affected by the Project. We therefore do not understand why we were the subject of such a small section in the environmental impact assessment, and why we were not properly consulted about the Project.
    d. We wish to remind the Proponent that the Government of Newfoundland and Labrador unjustly and illegally assigned our traditional land and its natural resources to the Proponent, and that we have never consented to this assignment.

3. Need for the Project
    a. The Proponent raises a number of points in Part 2 of Volume IA of the environmental impact assessment regarding the need and rationale for the Project. These points are not satisfactory, particularly because they are not sufficiently detailed.
    b. Among other things, we would like to know the following: Who are the future buyers and consumers of the energy generated by the Project? What long-term plan do the Government of Newfoundland and Labrador and the Proponent have for this Project, including linkages to other existing or future projects? The Proponent provides only a very general description of its intentions for the Project.

4. Divisibility of the Project (transmission lines)
    a. The Proponent's environmental impact assessment deals only with the transmission line between the Lower Churchill project (Gull Island and Muskrat Falls) and the Upper Churchill project. It does not deal with the lines used for power transmission to potential buyers and consumers.

b. We question the Proponent's approach and the logic of dividing the Project in light of the fact that its components cannot be dissociated. Our position on the divisibility of a hydroelectric project, such as the Project proposed by the Proponent, is clearly outlined in the proceedings with regard to the Romaine hydroelectric generation project (SCQ: 500-17-050868-093, FC: T-923-09, T-957-09). In these proceedings, we contest the fact that the transmission lines were assessed separately from the rest of the project. This position with regard to the Romaine project also applies to the Proponent's Project.
c. We still find it unacceptable that the Proponent's Project use the Upper Churchill project's transmission lines, since our consent was never obtained in regard to these transmission lines, and because they have an ongoing impact on our title and our rights.

5. Cumulative Impacts of the Project
   a. We want to know the links and the cumulative impacts of the Project with the Upper Churchill project – a project which ravaged and flooded the family territories of the Uashaunnuat; a project which we never consented to; a project for which we were never consulted and accommodated, and for which we received no compensation.
   b. We want to know the links and cumulative impacts of the Project with the Romaine project – a project which we have not consented to and for which we have not been adequately consulted and accommodated. We would also want to know the links and cumulative effects of the Project with all other hydroelectric projects in Quebec.
   c. We also want to know if the Proponent considered the Project's cumulative impact on the region, considering the many developments already located there, such as mining developments. The Project cannot be isolated from its environment. Its cumulative impacts will also affect our title, rights and interests in the region.
   d. We particularly wonder if the planned transmission line under the Strait of Belle-Isle will later be used to supply a vaster area of the Maritimes and the northeastern United States.

6. Use of the QNS&L Railway
   a. The Proponent is considering the possibility of using the QNS&L Railway to transport equipment. The QNS&L Railway is situated entirely within our traditional territory, and our consent must be obtained. Yet the environmental impact assessment does not mention us in this regard.

7. Impacts on the caribou, fish and waterfowl populations (see the comments of the Ekuanitshit community)
   a. We agree with the comments made by the Ekuanitshit community about caribou herds, fish and waterfowl. We also seek to obtain responses to our questions and concerns about caribou, fish and waterfowl.

Conclusion

We are of the view that the Proponent's environmental impact assessment is incomplete, insufficient and inadequate. Before proceeding further with any environmental assessment, we request that you and the Proponent consider and address the questions and comments that we have raised in this document.