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[MSD-PM-014 LCP - Gate 2 IPR Charter - Rev B1 - updated 5 april 2010.doc](#)

Pls find attached a draft of an IPR charter which is pretty much industry standard for a Gate 2 IPR. The gate 2 IPR charter covers the following:

- IPR Purpose
- IPR Objectives
- Gate 2 scope and focus areas
- IPR Panel - suggested team members with expertise areas identified
- Time line/duration for the IPR
- IPR reporting

The IPR team itself will be a subject that should be discussed. In order to make it a credible report the IPR team should be made up of professionals with the necessary experience and background.

Selecting the right IPR team lead is critical for success and someone with mega project experience (possibly Derek Owen who is ex Project Director for Hibernia, Sable offshore and has a lot of IPR experience).

The Government - Treasury Dept could supply the Economics specialist and perhaps bring a economics expert in as well

For the other areas of expertise, EA, Aboriginal, Risk, Marine, Construction I would be inclined to go to and independent engineering company such as IPA to conduct the assessment and do some benchmarking of LCP against other projects in their database.

The IPR team may be 8 to 10 people in total who are all independent from the project.

Regards Paul



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1.0 BACKGROUND

This Charter defines the agreed purpose and scope for the Lower Churchill Project's Gate 2 Independent Project Review (which encompasses both Gates 2a and 2b). The review will be performed in accordance with the intentions of Nalcor's Gateway process. Gate 2 refers to the end of the Phase 2 – Generate and Select Alternatives and the beginning of Phase 3 which culminates in Gate 3, Project Sanction. The term 'Gate 2' is a milestone defined in Nalcor's Project Gateway Process.

Gate 2 is of strategic importance to the NE-LCP due to the advanced level of project design and contracting activities that will commence at the onset of Phase 3. During Phase 3 engineering will progress to 70 – 80% complete thereby allowing for the award of various construction and supply contracts required to provide the level of confidence prerequisite to achieve the cost, schedule, and risk certainty required for Financial Close. Following Gate 2 will be the commencement of Financial Market Sounding.

This IPR is sanctioned by the Gatekeeper, who is the individual responsible for making the decision at the Decision Gate of the Gateway Process, while the organization and structure of the IPR shall be the responsibility of the NE-LCP Vice-President (VP).

Independent Project Reviews (IPR) at a Decision Gate provides the degree of quality assurance required by the Gatekeeper for major decisions. The reviews are regarded as an opportunity to introduce external, constructive and holistic challenge to the project team, and provide assurance that the project will deliver the required business results.

The general objectives of an IPR are:

- To provide external challenge to the project team at each Decision Gate, to help assess the validity and robustness of the work done, the key areas requiring focused attention and to assist in maximizing the value of the business opportunity.
- To assess the suitability of the project plans and strategies.
- To appraise the readiness and justification of the project to proceed into the next phase.

2.0 PURPOSE

The purpose of the Gate 2 IPR is to assess completion of the project deliverables produced during the Generate and Select Alternatives phase leading to Phase 3. This review shall assess the readiness of the NE-LCP to enter the next phase of the project by reviewing the processes and the deliverables from the feasibility phase and assessing the status of other factors which will influence the decision to proceed with Phase 3 expenditures and activities.

3.0 OBJECTIVES

The stated objectives of the Gate 2 IPR are to:

- Provide an independent assessment of the work performed by the collective NE-LCP Team and the deliverables from the Phase 2, with special emphasis on the processes and outcomes of these processes that have been used to arrive at the NE-LCP Team's conclusions and recommendations.

- Provide an independent assessment of the level of readiness to commence and execute Phase 3.
- Evaluate the processes used by the NE-LCP Team and identify any gaps that may exist leading up to the Project team’s conclusions and recommendations.
- Identify findings and provide recommendations relative to the findings that require VP disposition to responsible managers, action and closeout, prior to proceeding through Gate 2.
- Identify observations and provide recommendations relative to the observations that require NE-LCP VP disposition to responsible managers, action and closeout at an appropriate time during Phase 3.
- Provide an independent recommendation to Nalcor’s leadership regarding the Project Readiness of People, Processes and Tools to proceed through Gate 2 based on the evidence provided during the IPR and the deliverables defined as being necessary to pass through Gate 2.
- Demonstrate due diligence and an audit trail relative to the Gate 2 IPR and approval, in accordance with the gateway process.

4.0 ABBREVIATIONS AND ACRONYMS

AFE	Authorization for Expenditure
HSEQ	Health, Safety, Environment and Quality
HVac	High Voltage Alternating Current
HVdc	High Voltage Direct Current
NE-LCP	Nalcor Energy Lower Churchill Project
NE-LCPMT	Nalcor Energy Lower Churchill Project Management Team
IPR	Independent Project Review
VP	Vice-President

5.0 GATE 2 IPR SCOPE AND FOCUS AREAS

5.1 Scope

This Gate 2 IPR will address the following scope of the NE-LCP where applicable and as determined by the NE-LCP Gatekeeper:

- The review will consider a selected project development scheme, to be determined prior to initiating the IPR, which currently consists of the following project components:
 - Gull Island and/or Muskrat Falls (sequence to be decided) with interconnecting ac transmission.
 - HVdc to the Island and to the Maritimes, ensuring that proper consideration regarding upgrades to the island system to facilitate in-feed have taken place
 - AC Transmission from Gull island to Upper Churchill
 - AC transmission from Gull to the Quebec border (Romaine)

In agreement with the NE-LCP VP, the focus of the review will be directed towards the selected project development scheme and shall consider:

- The Readiness for the Project to proceed through Gate 2 and commence Phase 3 scope from a People, Process and Tools readiness perspective;
- The identification of potential gaps in the Project processes and Project Strategies;
- Feasibility deliverables and preparation work required to enter into Phase 3;
- Compliance with appropriate policies, procedures and processes; and
- Confirmation that deliverables required, in order to conduct a meaningful assessment of Project viability from a technical, bank ability, economic and risk based perspective are available and are adequate.

Project deliverables will be reviewed for the purpose of confirming the status and effectiveness of existing Project Management Processes and Management Systems and the Readiness of the Project team from a perspective of People, Processes and Tools.

In agreement with the NE-LCP VP, the Gate 2 IPR will be organized by the Focus Areas defined in Section 5.2.

5.2 Focus Areas

The Gate 2 IPR Panel shall review and evaluate the deliverables from Phase 2 which have been used by the Project to prepare recommendations, applications or have been the basis for analysis and selection of a particular project development option. Verification that the deliverables defined for Gate 2a and 2b (reference document GEN-PM-001 for listing) have been achieved or there is a workaround which is deemed acceptable by the Gatekeeper these include verification of the following:

- That there are adequate processes, procedures, tools, and systems in place or planned to be developed to proceed to the next phase
- That there is an adequate general understanding by the project team of the processes, procedures, tools, systems and drivers of the project.
- That the quality and completeness of the source data used by Project is suitable.
- That the processes and methods used for Risk Analysis, Estimating and Economic analysis comply with appropriate standards, best practices or are equivalent.
- That the development of the Project Charter and Project Execution Plan was carried out correctly.
- That the development of the Project Contracting Strategy was carried out in accordance with a defined process and that this complies with the appropriate standards, best practices or equivalent and the contracting plan.
- That the project contract strategy has incorporated sufficient market intelligence to make it feasible from a legal, insurance and execution perspective.
- That the Health, Safety, Environment and Quality processes and procedures used comply with the appropriate standards, best practices or equivalent.
- That the Project recommendation and AFE has been prepared in accordance with a defined process and that this process complies with the appropriate standards, best practices or equivalent.

- That the development of the Project cost estimates was carried out in accordance with a defined process and that this complies with the industry standard or is equivalent.
- That the Project Schedule has been developed in accordance to an agreed process and identifies the critical path and the correct sequence of key events.
- That the Engineering deliverables required to commence the next phase are available and complete. These include site investigation, model testing and study scope for Gull Island, Muskrat Falls, HVdc and associated HVac transmission.
- That financing options are advanced to an acceptable state, that no showstoppers are apparent and that there is a plan to finalize the financing required within an acceptable timeframe – using the Phase 2 report from Nalcor’s financial advisors as the basis for the evaluation.
- That Non-binding Letters of Intent, Term Sheets or equivalent for the long term loads have been signed by parties, that no showstoppers are apparent and that there is a plan to finalize the negotiations and enter into Power Purchase Agreement negotiations within an acceptable timeframe
- That for the transmission access agreements for export transmission that no showstoppers are apparent and that there is a plan to finalize the agreements.
- That the negotiations and consultations with aboriginal groups are well advanced and proceeding in accordance with a plan, which has been endorsed by the Gatekeeper, including negotiation of any Impact and Benefits Agreements.
- That the scope of work for Phase 3 is defined and that there is a process available for bidding, review and contract award and that this complies with best practice standards or equivalent.
- That a project cost and schedule estimate in the appropriate range of accuracy is available
- That an organization, mobilization and office plan has been developed and the organization is adequate to enter into the next phase.
- That the organization staffing and design is commensurate with the complexity of the project and is both well represented and functional.
- That there is a strategy and plan in place to have Operations and Maintenance representation in the Project and that a high level Operations philosophy has been developed which includes responsibilities during handover and a “Ready for Operations” philosophy.
- That the Environmental Assessment process is underway, on schedule, that no showstoppers are apparent and that there is a plan to finalize the environmental activities leading up to a final decision to meet the Project schedule.
- That the strategic and tactical project risks are understood and a risk management plan is in-place and being actively pursued.
- That the project execution approach is clearly defined, validated and endorsed by management.
- That the governance structures are established and clearly communicated for current and subsequent project phases.

- That the Regulatory framework is preceding accordance to plan and the requirements for Financing Market Sounding are substantially in-place.
- That the project’s stakeholders are identified, an engagement plan is in-place and an appropriate level of engagement underway.
- That the Management system structure is developed and implementation underway.
- That independent economic review is completed and commentary regarding the thoroughness, completeness and adequacy of the actual financial base case and associated results from the economic/financial stress analysis is documented.
- That Benefits obligations are understood and clearly communicated.
- That a Labour Relations is Plan in-place and clearly communicated.
- That Shareholder review and approval of requirements for equity and supporting debt exist.

6.0 REVIEW METHODOLOGY

The Gate 2 IPR will be undertaken by an independent review team at the NE-LCP offices in St. John’s. This review will be formally structured with an agenda prepared in advance of the review by the IPR Panel Lead and reviewed with the NE-LCP VP and PMT.

The IPR Panel will be granted access to the required information considered necessary to be examined in order to achieve the IPR objectives stated in this Charter. Accessibility and confidentiality concerns shall be addressed between the IPR Panel Lead (with the Coordinator) and the NE-LCP VP (with the Project Manager).

The Gate 2 Review Panel will hold a pre-review meeting and a kick-off meeting on Day 1, and will conclude with a closeout presentation on or before Day 7. An Overview Schedule is provided as Attachment 1.

7.0 TIMING

The target timing for the Gate 2 IPR is one (1) to two (2) months prior to Gate 2b.

8.0 IPR PANEL

At the discretion of the NE-LCP VP and based upon the degree of independent review required at Gate 2, the Gate 2 IPR Panel shall preferably be comprised of qualified and experienced personnel who are independent from the Project, except for the coordinator, who may be active in the project.

The Gate 2 IPR Panel may consist of Nalcor Energy employees, consultants and specialists who are knowledgeable and familiar with Nalcor’s policies, processes and procedures and/or major project management execution, power sales and access, and project financing.

The Panel shall consist of the following expertise areas:

- Panel Lead – with experience in a senior capacity of major project execution
 - Coordinator – must be knowledgeable of the project with a technical background
 - Risk Management– with extensive risk identification and mitigation on major projects
 - Project Management – with experience as a Project Manager on major projects
 - Market Specialist – with knowledge and experience in closing Power Purchase Agreements
 - Finance specialist – with knowledge and experience in financing of major projects
 - Environmental / Aboriginal Specialist –with knowledge and experience in negotiating Impact and Benefit Agreements and dealing with aboriginal issues on major projects and knowledge and experience in the environmental assessment process on major projects
 - Marine Specialist – with installation experience in a senior capacity, the submarine cable crossings have been identified as a project risk area
 - Engineering and Construction Specialist(s) – with knowledge and experience in dam, transmission, HVdc design, construction and commissioning
- Some of the expertise areas may be combined and addressed by one person.

9.0 REPORTING IPR FINDINGS

Findings and Observations

The findings and observations of the IPR Panel will be reported by the Panel Leader as follows:

- Immediately with the NE-LCP VP if any serious issue with implications for project integrity is raised in the course of the review.
- Informally with the Project team during the review.
- At the conclusion of the IPR, in a closeout presentation to selected members of the Project team, the NE-LCP VP, VP's on the Project Steering Committee and the Gatekeeper.

Final Report

At the conclusion of the Gate 2 IPR the Panel will produce a written report addressed to the NE-LCP VP that includes the following:

- Overall impression / conclusion/ recommendation
- Vulnerabilities that need to be managed effectively to proceed through Gate 2 and commence Phase 3.
- Summary of the Review in each focus area, including areas of the Project that are performing well and areas for improvement

- Detailed observations and findings with accompanying suggested improvements, when appropriate for entry into a tracking system for follow up through to closure.
- Documentation of the Gate 2 IPR Panel process.

Note – once the Gate 2 IPR Panel have submitted their final report it will be the responsibility of the NE-LCP VP for the disposition of the findings and observations to the responsible managers for follow up action through to closeout, to the satisfaction of the responsible managers and ultimately the NE-LCP VP approval.

10.0 DOCUMENTS FOR REVIEW

It is envisioned that all documents to be provided to the Gate 2 IPR Panel are already in existence. It is not the intention that the Project will create new material for the IPR Panel, however relevant extracts may have to be prepared.

Documents to be provided prior to IPR

The availability of Project documentation prior to the Gate 2 review helps familiarize the IPR Panel with the Project, promotes efficient use of the Panel's time on-site, and reduces interference with the ongoing project activities. The IPR Coordinator will provide the rest of the IPR Panel with the following documentation at least two weeks prior to the start of the IPR.

- Project overview information (e.g. management presentations, concept selection, etc.)
- Project Charter
- Project Governance Approach
- Project Management Plan
- Organizational Plan
- Results and findings of Pacesetter reviews conducted by Independent Project Analysis.
- Financial Advisors Phase 2 Report
- Risk Management Plan
- Contracting & Procurement Strategy
- Reports from advisors and consultants regarding markets and financing
- Updated Levels 1 and 2 Project Schedules
- Latest Monthly report including cost and schedule overview, latest project status report, and a listing of key issues and status.
- Brief description or overview of Management Systems.
- Gate 2a Capital Cost Estimate
- Feasibility phase summary and conclusions.

Documents to be available during IPR

References provided to the Panel enable verification of information obtained in interviews or by observation of project activities. The IPR Coordinator will make available to the rest of the Panel the following documentation during the review:

NOTE THIS LIST IS NOT COMPLETE IT IS SHOWN HERE AS AN EXAMPLE AND WILL BE DEFINED IN DETAIL BY THE PANEL LEAD.

- Basis of Design Document

- Organization Plan
- Benefits Plan
- Quality philosophy and plans (Project phase)
- Integrated Project Schedule
- Project Execution Plan
- Contracts Plan
- Training Plan
- Project management strategy
- Risk analysis
- Documents/materials summarizing lessons learned capture and application
- Project Cost and Schedule Estimate and Estimate Confidence Package (latest risk analysis study)
- Operations Philosophy
- Quality Plans (Management Systems)
- Other items as identified and requested during the Review
- Relevant power sales market information
- Capital Cost Estimate and Basis of Estimate
- Project Economics
- Selected Technical Studies
- IPA Pacesetter Review for FEL 2 – Final Report

The documents should be available in the IPR Panel meeting room. At the conclusion of the review, documents will be left in the Panel meeting room for disposal or reuse by the project team.

Attachment 1 – Overview Schedule

Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
Date	Date	Date	Date	Date	Date	Date
<ul style="list-style-type: none"> Panel Arrive at Review Location 	<ul style="list-style-type: none"> Pre Review Panel Meeting Kick-Off Meeting Introduction Project status update Management Interviews Team Meeting 	<ul style="list-style-type: none"> Overviews by Functional Expertise Management & Staff Interviews Documentation Reviews Team Meeting 	<ul style="list-style-type: none"> Management & Staff Interviews Documentation Reviews Team Meeting 	<ul style="list-style-type: none"> Management & Staff Interviews Documentation Reviews Team Meeting 	<ul style="list-style-type: none"> Management and Staff Interviews Documentation Reviews Team Meeting 	<ul style="list-style-type: none"> Interviews Present draft findings and observations to CEO, VP and selected members of Project Management team Team Meeting

Saturday						
Date						
<ul style="list-style-type: none"> Team Travel day 						