

## Nalcor Energy – Lower Churchill Project



## Decision Gate 3 Independent Project Review Charter

LCP-PT-MD-0000-PM-CH-0003-01

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**Inter-Departmental / Discipline Approval (where required)**

Department	Department Manager Approval	Date

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## 1.0 Purpose

This *Decision Gate 3 Independent Project Review Charter* defines the purpose, scope, approach, participants and timing for the completion of an Independent Project Review (IPR) for Project Sanction readiness of Phase I of Nalcor Energy's Lower Churchill Project (hereafter referred to as LCP or the Project).

This document should be read in conjunction with documents [Gateway Process LCP-PT-MD-0000-PM-PR-0001-01](#) and [LCP-PT-MD-0000-PM-LS-0002-01 Decision Gate 3 Key Deliverables List](#).

## 2.0 Scope

This *Decision Gate 3 Independent Project Review Charter* is applicable to the following sub-Projects:

- Muskrat Falls Generation
- Labrador Transmission Assets
- Labrador – Island Transmission Link

This IPR explicitly excludes the Maritime Link Project.

## 3.0 Roles and Responsibilities

<b>Gatekeeper</b>	Sanctions the IPR, approves the IPR terms of reference, and is the individual responsible for making the decision at the Decision Gate of the Gateway Process.
<b>NE-LCP Vice President</b>	Responsible for organization and structure of the IPR to satisfy the requirements set forth in the <i>Project Governance Plan</i> .
<b>NE-LCP Project Director</b>	Responsible for ensuring communication of the IPR terms of reference within the Project Team and to ensure the required level of participation within the team.

**Nalcor Energy Leadership Team, LCP Project Management Team, and EPCM Consultant**

Responsible to participate in the IPR process, including interviews as requested by the IPR Team. Also responsible to produce the required key deliverables and documentation to support the IPR.

## 4.0 Definitions

[LCP-PT-MD-0000-PM-LS-0001-01 Project Dictionary, Acronyms & Abbreviations List](#) is the approved dictionary of definitions for the NE-LCP.

<b>Decision Gate</b>	A Decision Gate is a predefined moment in time where the Gatekeeper has to make appropriate decisions whether to move to the next stage, make a temporary hold or to terminate the project. The option to recycle to the current stage is considered an undesirable option unless caused by changes in business conditions.
<b>Decision Support Package</b>	Comprehensive package recommending a preferred way forward for a business decision; including justification, rationale, and supporting documentation for recommended way forward.
<b>Gatekeeper</b>	Individual responsible for making the decision at the Decision Gate of the Gateway Process.
<b>Key Deliverable</b>	High-level listing of key outputs/documents which collectively demonstrate that objectives of the relevant Gateway Phase of the Gateway Process have been attained.
<b>Project Management Team</b>	The Project Management Team (PMT) is led by the Project Director and is made up of project leaders and key functional representatives. The PMT meets periodically, to identify issues that may affect cost and schedule and to determine how such issues should be resolved.
<b>Shareholder</b>	For Nalcor Energy, the Shareholder is the Province of Newfoundland and Labrador.

## 5.0 Reference Documents and/or Associated Forms

<a href="#">LCP-PT-MD-0000-PM-LS-0001-01</a>	<a href="#">Project Dictionary</a>
<a href="#">LCP-PT-MD-0000-PM-PR-0001-01</a>	<a href="#">Gateway Process</a>

[LCP-PT-MD-0000-PM-PL-0005-01](#)[Project Governance Plan](#)[LCP-PT-MD-0000-PM-PR-0001-01](#)[Decision Gate 3 Key Deliverables](#)

## 6.0 Abbreviations and Acronyms

AFE	Authorization for Expenditure
DG3	Decision Gate 3
DGSP	Decision Gate Support Package
EA	Environmental Assessment
EPCM	Engineer, Procurement and Construction Management
HSE	Health, Safety and Environment
IPR	Independent Project Review
LCP	Lower Churchill Project
LITL	Labrador – Island Transmission Link
LTA	Labrador Transmission Assets
NE	Nalcor Energy
PMT	Project Management Team
SOBI	Strait of Belle Isle

## 7.0 Purpose of the IPR

Decision Gate 3 is of strategic importance to the LCP as it represents a firm commitment by the Province of Newfoundland and Labrador through Nalcor Energy to Sanction the Project, thereby authorizing the expenditures required to facilitate financial commitments via major contracts and procurement.

The DG3 Independent Project Review (IPR) objective is to verify for the Gatekeeper that the Nalcor's Project Management Team for the LCP, along with its EPCM Consultant SNC-Lavalin, have achieved a level of readiness in order to deliver the project in accordance to the cost and schedule basis used to support the Sanction decision.

The IPR is regarded as an opportunity to assess readiness, to challenge the project team, and provide assurance that the project will deliver the required business results. The findings, observations and recommendations from IPR, as well as a gap closure plan, will be included in the Decision Gate Support Package when submitted to the Gatekeeper.

## 8.0 Objectives of the IPR

The stated objectives of the Decision Gate 3 IPR are to:

- Provide an independent assessment of the work performed by the collective PMT and the deliverables from the Gateway Phase 3, with an objective of verifying the quality and completeness of these deliverables.
- Identify findings and provide recommendations relative to the findings that require Project Director disposition to responsible managers, action and closeout, prior to proceeding through DG3.
- 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 Gateway Phase 4.
- Provide an independent assessment and recommendation to Nalcor's leadership regarding the Project Readiness of People, Processes and Tools to proceed through Gate 3 based on the evidence provided during the IPR and the deliverables defined as being necessary to pass through DG3.
- Demonstrate due diligence and an audit trail relative to the DG3 IPR and approval, in accordance with the Gateway Process.

## 9.0 IPR Focus Areas

The IPR Team shall review and evaluate that the Key Deliverables required for project delivery are in place for specified LCP Sub-Projects to proceed to be Sanctioned for execution and delivered in accordance to the planned cost and schedule expectations.

The Key Deliverables required to be produced by the PMT and verified by the IPR Team for Project Execution are contained within Section 7.2 of the document [Decision Gate 3 Key Deliverables List, LCP-PT-MD-0000-PM-LS-0002-01.](#)

Particular areas of focus will include, but not limited to:

### Project Management

- That the preparation and planning of the project including those prerequisites identified by the Gatekeeper, which may not all be directly controlled by the Project team but are key enablers of the Project, have been cleared or are at an advanced or otherwise acceptable state of completion or readiness.
- That there are adequate processes, procedures, tools, and systems in place or planned to be developed to proceed to the next Gateway Phase and that there is an adequate general understanding by the project team of these processes, procedures, tools, systems and drivers of the project.

- 
- That the Project Charter and Project Execution Plan are in place.
  - 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 Gateway Phases.
  - That the project management system structure is developed and being implemented.
  - That an organization, mobilization and supporting office plan has been developed and the organization is adequate to enter into the next Gateway Phase.
  - That Construction Management and Execution Plans are in place.
  - That the 3<sup>rd</sup> party resources are available and that there is an interface management plan in place.
  - That Construction Performance Management Plans are in place.
  - That there are Project-wide Interface Management Plans in place.
  - That there is Health and Safety Management Plan and supporting policies and procedures are in- place.
  - That the Project Site Safety Plan is in place.
  - That there is an Environmental Management Plan and Regulatory Compliance Plan and supporting policies and procedures are in-place.
  - That there is Quality Assurance Plan in place.
  - That there is a strategy and plan in place to have Operations and Maintenance representation in the Project and that an Operations philosophy has been developed which includes responsibilities during handover and a “Ready for Operations” philosophy aligned with corporate operating philosophy.
  - That the project’s stakeholders are identified, an engagement plan is in-place and an appropriate level of engagement underway.
  - That the project risks are understood and a risk management plan is in-place and being actively pursued.
  - That Benefits obligations are understood and clearly communicated.
  - That collective negotiations are progressing and support the timeline for readiness for Mass Excavation in November 2012.
  - Labour Relations Plan is in-place and clearly communicated.
  - That an Information Management plan is in place and communicated.
  - That the Environmental Assessment Process for the Labrador-Island Transmission Link is well advanced 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 a process is in-place for implementation and monitoring commitments of release under the Generation EA.
  - That plans are in-place for acquisition of properties and easements as required for the construction of the transmission lines and switchyards.
  - That a process is in-place for acquisition of regulatory permits and licenses to facilitate the construction works, and to monitor / manage conditions of issue.



**Technical**

- That the Engineering deliverables required to commence the next Gateway Phase are available and complete and support that the Project is technically well defined, the risks and uncertainties are understood.
- That the quality and completeness of the source data used by Project is suitable.
- Confirm that the design basis is frozen and that the Project Design Basis is well documented and that there is a rigorous Management of Change process in place.
- That there is process to monitor Engineering/Design quality and performance, including design audits.
- That there are plans in place for Engineering support to construction.
- That there has been constructability reviews of the design.
- That value-engineering initiative have been given consideration during the design process, including life-cycle cost assessment for equipment selection.
- That design and engineering resources are sufficient to meet the schedule requirements.
- That site geotechnical surveys are complete to support engineering and construction.
- That there is a process being used to verify design integrity, including the use of peer reviews.
- That a Master Document Register is in-place and used by the team to confirm the technical documents that must be reviewed.
- That there are processes in-place and being used to effectively manage interfaces between the Project and Newfoundland & Labrador Hydro, Churchill Falls, and Emera.

**Procurement/Contracting**

- 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 there is an approved Package Dictionary in-place that is supported by a detailed procurement and contracting schedule that supports the targeted First Power dates of June 2017.
- That the scope of work for Gateway Phase 4 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 individual procurement and contracts package plans are in place to ensure timely awards.
- That long lead and critical equipment and materials have been identified.
- That there is a clear understanding of Owner approvals requirements, including due diligence / third party reviews by lenders engineers, co-ventures, etc.
- That vendor document and data management plan is in place.

- That procurement/contracting resources are in place to meet the schedule requirements.
- That plans are in place to provide sub-contract administration support to construction.

### **Project Controls**

- That the Project Sanction 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 project estimate has been recast into the Project Control Budget.
- That the processes and methods used for Risk Analysis comply with appropriate standards, best practices or are equivalent.
- That adequate and realistic cost and schedule allowances have been determined and included in the Project Sanction costs and schedules and appropriate range of accuracy has been determined.
- That a project cost control process is in place.
- 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 Project Reporting Plan is in place, with accurate and timely stewardship reporting occurring.
- That the Project Benefits Reporting system is in-place or plans are in-place for full implementation.
- That the demand for labor is understood and consider in on-going collective agreement negotiations.

### **Finance and Accounting**

- That the approaches and strategies project financial management are in-place, including appropriate processes and controls to effective financial stewardship of the Project AFE.
- That the project finance and accounting activities have a clear linkage with the Project Controls, treasury and corporate accounting functions.
- That the processes and systems are in-place to facilitate accurate financial reporting for each Sub-Project or Special Purpose Vehicle.

## **10.0 IPR Methodology**

The DG 3 IPR will be undertaken by an independent review team at the Project's Torbay Road office in St. John's. This review will be formally structured with an agenda prepared in advance of the review by the IPR Team Lead and reviewed with the NE-LCP VP and PMT.

The IPR Team 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

confidentially concerns shall be addressed between the IPR Team Lead (with the Coordinator) and the NE-LCP VP (with the Project Director).

The IPR Team 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 6. An IPR Overview Schedule is provided as Attachment B.1.

## 11.0 IPR Timing

DG3 3 IPR will occur the week of August 26, 2012.

## 12.0 IPR Review Team Composition

The IPR Team shall be comprised of qualified and experienced personnel who are independent from the Project, except for the IPR Coordinator, who may be active in the Project.

The IPR Team 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 IPR Team shall consist of the following expertise areas, however note that some of the expertise areas may be combined and addressed by one person.

- **IPR Team Lead** – with experience in a senior capacity of major project execution
- **IPR Coordinator** – must be knowledgeable of the project with a technical background. Facilitates the organization and management of the IPR on behalf of the Project Director.
- **IPR Assistant** – person inside the team who assists the IPR Coordinator in planning and preparation, and also facilitates and follow-up on information request.

### Areas of Expertise

- Project Management – with experience as a Project Manager on major projects.
- Engineering and Construction Specialist(s) – with knowledge and experience in dam, transmission, HVdc design, construction and commissioning.
- Project Finance – with knowledge and experience in financing of major projects.
- Risk Management – with extensive risk identification and mitigation on major projects.
- Environmental – with knowledge and experience in the environmental assessment process on major projects.

**IPR Team Members**

- Derek Owen (Team lead)
- Richard Westney
- Bernie Osiowy
- John Mallam
- Tim Leopold
  
- **IPR Coordinator** – Mark Peddle
- **IPR Assistant** – Samantha Lundrigan

**13.0 Reporting IPR Findings****Early Findings and Observations**

Any Findings and Observations identified early by the IPR Team will be reported by the IPR Team Lead as follows:

- Immediately with the NE-LCP VP if any serious issue with implications for project safety or 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 PMT including the Project Director, the NE-LCP VP, VP's on the Project Steering Committee and the Gatekeeper.

**Final Report**

At the conclusion of the Gate 3 IPR, the IPR Team will produce a written report addressed to the Gatekeeper and NE-LCP VP that includes the following:

- Overall impression / conclusion/ recommendation
- Opportunities for Value Improvement that need to be managed effectively to proceed through DG3.
- 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 that can be actioned and monitored for follow up through to closure.
- Documentation of the DG3 IPR Team process.

Note: Once the Gate 3 IPR Team have submitted their final report it will be the responsibility of the Project Director 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.

## **14.0 Documents Available for Review**

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

The DG3 Key Deliverables List provides a listing of documents that are available for review. The IPR team will be provided access to these documents via a web site to be set up by the Project on or before 20 August 2012.

In addition the following will be provided:

- Latest Project Monthly Progress report including cost and schedule overview, latest project status report, and a listing of key issues and status.
- Manitoba Hydro Reports (or at least the terms of reference)
- Generation Project Environmental Impact Release
- Labrador – Island Link Transmission Project Environmental Impact Assessment submission
- Project Master Schedule
- Gate 3 Project Estimate
- Project Cost and Schedule Estimate and Estimate Confidence Package (latest risk analysis study)
- Detailed Construction Plans (upon request)
- Procurement/Contract Package Listing
- Documents/materials summarizing lessons learned capture and application
- EPCM Services Agreement
- Basis of Estimate Report
- Other items as identified and requested during the Review

The documents should be available in the IPR Team meeting room. At the conclusion of the review any hard copies will be returned to the IPR Coordinator for re-use or disposal.

**A.0 Activity Flowchart (Excel Format)****A.1 N/A****B.0 Attachments/Appendices****B.1 IPR Overview Schedule**

**Attachment B.1 – IPR Overview Schedule**

<b>Prior to Saturday August 25</b>	<b>Sunday August 26</b>	<b>Monday August 27</b>	<b>Tuesday August 28</b>	<b>Wednesday August 29</b>	<b>Thursday August 30</b>	<b>Friday August 31</b>
<ul style="list-style-type: none"> <li>• Pre Review Panel Meeting – Conference Call (TBD)</li> </ul>	<ul style="list-style-type: none"> <li>• Panel Arrive at Review Location</li> </ul> <p>1PM</p> <ul style="list-style-type: none"> <li>• IPR team Kick-Off Meeting</li> <li>• IPR Team review plans for the week.</li> <li>• Documentation Reviews</li> </ul>	<p>8AM - Noon</p> <ul style="list-style-type: none"> <li>• Kick-Off Meeting with Project Team</li> <li>• Project status update</li> <li>• Overviews by Functional Expertise</li> </ul> <p>1PM</p> <ul style="list-style-type: none"> <li>• Management &amp; Staff Interviews (3 time slots)</li> <li>• Documentation Reviews</li> </ul> <p>4:30PM</p> <ul style="list-style-type: none"> <li>• Team Meeting</li> </ul>	<p>8AM – 4PM</p> <ul style="list-style-type: none"> <li>• Management &amp; Staff Interviews (6 time slots)</li> <li>• Documentation Reviews</li> </ul> <p>4:30PM</p> <ul style="list-style-type: none"> <li>• Team Meeting</li> </ul>	<p>8AM – 4PM</p> <ul style="list-style-type: none"> <li>• Management &amp; Staff Interviews (6 time slots)</li> <li>• Documentation Reviews</li> </ul> <p>4:30PM</p> <ul style="list-style-type: none"> <li>• Team Meeting</li> </ul>	<p>8 - Noon</p> <ul style="list-style-type: none"> <li>• Management and Staff Interviews (3 time slots) (Contingency)</li> </ul> <p>1 – 5 PM</p> <ul style="list-style-type: none"> <li>• IPR team draft report preparation</li> </ul> <p>4:30PM</p> <ul style="list-style-type: none"> <li>• Team Meeting</li> </ul>	<p>8:30 – 10AM</p> <ul style="list-style-type: none"> <li>• Debrief Project Director and VP</li> </ul> <p>12:30 – 2PM</p> <ul style="list-style-type: none"> <li>• Present draft findings and observations to CEO, VP and selected members of Project Management team</li> </ul> <p>2 – 5PM</p> <ul style="list-style-type: none"> <li>• IPR Team Close-out and Next Steps Discussion</li> </ul>