

From: [David Steele](#)
To: [Martin, Craig](#)
Cc: [Richard Noble](#)
Subject: updated report
Date: Saturday, July 26, 2014 11:50:00 AM
Attachments: [image001.gif](#)
[EY Report - Gov NL LCP Oversight Protocol - 25 July 2014 - Final Draft.pdf](#)
[Final Document Request Recommendation Materiality Criteria vCWB - DS highlights.docx](#)

Hello Craig,

Attached is a final draft report. I have address all the items you and I discussed. Please have a thorough read through, I would appreciate that. Also see the other document, as I accepted all your changes with minor adjustments noted with yellow highlights (don't worry, nothing major). As a note, I am going to send through our word processing team on Monday one last time as I've tinkered with it in spots and they will ensure formatting, spelling, grammar, etc are correct. A final report will be issued on Monday pending this WP review and your final thumbs up.

As for the revised list you provided along, appears you made major progress. The majority of items are intact, this can be deemed a success! However, there are few key changes:

- The detailed level 3 and 4 schedules have been removed
- Removal of pending changes, DAN's only summarized

EY's position is that the information as 'generally' stated in the revised list is sufficient and required in order to do effective and proactive (which is key) analysis to meet the mandate of the OC. This is based on our comfort, given that you are comfortable, with the OC's ability to exercise the stated clauses "...with further details available as requested", it will be a key factor in the ability of the OC to fulfill its mandate. I am absolutely certain that certain points of the project will bring a need to go to additional levels of detail.

In addition, it will be effective to develop the specific formats of this detailed information (e.g. gantt chart, columns, annotation and content) working directly with Nalcor. We confirmed in the meetings with them (Jim, Ed) that this could be done in a couple of hours working on site with Ed, and then it would be a push button generated report going forward. This item will be a foundational item to all analysis, and the OC will be significantly disadvantaged without it.

Please keep me informed in the coming days and we will continue to be on call as required to get this over the line with you. Thanks Craig.

Regards,

Dave

David Steele | Partner | Advisory Services

Ernst & Young LLP



The Fortis Building, 139 Water Street, 7th Floor, St. John's, Newfoundland and Labrador A1C 1B2,
Canada

Office: +1 709 570 8264 | Cell: +1 709 769 2080 | David.Steele@ca.ey.com

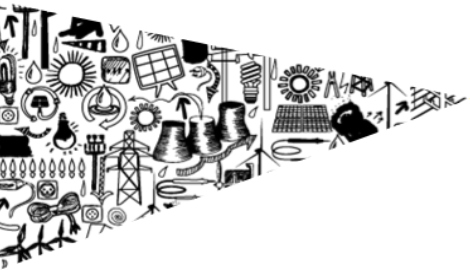
Website: <http://www.ey.com>

Julie Mullooney | Phone: +1 709 570 8271 | Julie.Mullooney@ca.ey.com

Government of Newfoundland and Labrador

Review of Government protocols to
oversee the Lower Churchill Project
FINAL DRAFT - CONFIDENTIAL

25 July 2014





Ernst & Young Inc.
Atlantic Canada
ey.com

Dieppe
11 Englehart Street
Dieppe, NB E1A 7Y7
Tel: +1 506 853 3097
Fax: +1 506 859 7190

Halifax
1959 Upper Water
Street
Suite 1301
Halifax, NS B3J 3N2
Tel: +1 902 420 1080
Fax: +1 902 420 0503

Saint John
Red Rose Tea Building
5th floor
12 Smythe Street
Saint John, NB E2L 5G5
Tel: +1 506 634 7000
Fax: +1 506 634 2129

St. John's
The Fortis Building
139 Water Street
7th floor
St. John's, NL A1C 1B2
Tel: +1 709 726 2840
Fax: +1 709 726 0345

Charles Bown
Deputy Minister, Department of Natural Resources
50 Elizabeth Avenue
P.O. Box 8700
St. John's, NL A1B 4J6

25 July 2014

Dear Mr. Bown,

Please find enclosed our final report regarding a proposed oversight protocol related to the Lower Churchill Project.

The work was conducted in accordance with our Agreement. Our scope and procedures were limited to those described in that Agreement. This report is intended solely for the use of the Government of Newfoundland and Labrador. It is not intended to be and should not be used by any other party.

We greatly appreciated the opportunity to be of service to you and the Government of Newfoundland and Labrador.

Sincerely,

Ernst & Young LLP

David Steele
Partner

Richard Noble
Associate Partner

Table of contents

1. Executive Summary	1
2. Scope and Approach.....	3
3. Guidelines Used in Developing Recommendations	4
4. EY Recommendations for Improving Oversight Protocols	5
5. Acknowledgements	10



1

Executive Summary

1.1 Background

The Government of Newfoundland and Labrador ("Government") has initiated oversight protocols for the Lower Churchill Project ("LCP"). This has included establishing an Oversight Committee and continuing efforts to define the Oversight Committee's terms of reference and related protocols.

EY has been engaged by the Government to conduct a third party assessment of the Oversight Committee's protocols under development. Program managers and other specialist resources from EY's Major Capital Projects practice were engaged to bring the necessary experience to deliver on this mandate. Over the course of the engagement, EY reviewed the documents provided by Government, interviewed Oversight Committee members and met with Nalcor representatives to understand the project environment and governance landscape. EY provided recommendations based on our experience with other projects of comparable scale and complexity. These recommendations were presented at a meeting with the Oversight Committee.

Additional work was performed which included further meetings with Nalcor representatives to review the information available at Nalcor and develop a more detailed understanding of the assurance available through the Project Controls group, the Independent Engineer and other entities involved in the project.

We understand that the Government's objective is to provide reliable and transparent oversight on the cost and schedule performance of the LCP and to establish an effective communication channel to Cabinet and the general public. We were informed that other components of effective project oversight related to health, safety and environment, quality, regulatory compliance and benefits tracking are specifically excluded from the mandate of the Oversight Committee. It is also clear that it is not the Government's intention to play a role in the day to day management of the project.

This report summarizes the work performed and the recommendations for the Oversight Committee.

1.2 Recommendations

The key conventional measure of project success is whether it delivers on its intended objectives on-time and within budget. The project oversight and assurance functions are intended to monitor progress to achieving those success criteria and also reduce or eliminate surprises. Our recommendations are geared towards the Government's role in achieving this mandate while avoiding unnecessary duplication of effort.

The roles of different stakeholders as well as the Government's objectives have been considered to make the following key recommendations:

1. The Oversight Committee should review cost and schedule performance, forecasts and risk management in addition to the validity of costs incurred

- ▶ In order to assess progress towards achieving the cost and schedule objectives, the Oversight Committee will need to be confident that the project is performing to the baseline plans and estimates, that it is being well managed with appropriate processes and controls and also that



1

Executive Summary

risks are being identified and proactively managed.

- ▶ These forward-looking assessment areas along with historical cost information will provide the Government with a full picture to perform its oversight mandate.

2. The Oversight Committee should be supported with specialized skills

- ▶ The Oversight Committee brings seasoned public sector executives with a clear understanding of the Government's needs and protocols. It has also appointed an Executive Director to coordinate its working efforts.
- ▶ However, LCP is particularly large and complex project with significant specialized areas. Analysis performed by an efficient working group comprised of the Executive Director and other major capital projects specialist resources would provide the Oversight Committee members with the insight necessary to robustly execute on their mandate.

3. The Oversight Committee should align its information request with conventional project controls and assurance practices as well as the reporting rhythm of Nalcor

- ▶ The level of detail required by the Government and the timing of information flow should align with the reporting structure and rhythm of the project. Meetings with Nalcor confirmed that the majority of the information detailed as required this report is already produced at Nalcor as part of its project management processes and systems.
- ▶ Deficiencies noted in the project assurance and reporting framework or information reporting to Government which limit visibility into project performance and forecasts should be addressed.

Details of these and other recommendations are included in subsequent sections of this report.

1.3 Next Steps

The LCP stakeholders are all at different stages of developing their oversight and assurance programs. Oversight and assurance mechanisms should be aligned to minimize unnecessary duplication of efforts and disruption to the project.

- ▶ The Government should work collaboratively with Nalcor and the other stakeholders to finalize the information provisioning and protocols for oversight and reporting.
- ▶ The Oversight Committee terms of reference should also be finalized.
- ▶ The Government should explore opportunities to establish appropriate mechanisms to leverage information provided by the Independent Engineer.
- ▶ The Working Group should be established to support the Oversight Committee.
- ▶ Immediate preparations should be made for the development of the Oversight Committee's first report.



2

Scope and Approach

The Government requested EY to conduct an assessment of the Oversight Committee's protocols under development to:

- ▶ Provide recommendations to improve the governance structure and processes of the Oversight Committee
- ▶ Conduct a gap assessment of the Government's Information Request List, which is an initial list of items the Oversight Committee would periodically request from various stakeholders

Our approach included reviewing the documents related to initial thinking on the Government's protocols and certain agreements defining the relationships between different LCP stakeholders. Additionally, we also interviewed stakeholders from the Government and Nalcor to gain further understanding of the oversight objectives as well as the current assurance mechanisms in play.

The activities conducted as part of this engagement included:

- ▶ Data collection and scheduling of interviews
- ▶ Reviewing data and conducting interviews
- ▶ Drafting the preliminary report
- ▶ Meeting with Nalcor
- ▶ Presentation of preliminary report, collecting feedback
- ▶ Issuance of final report

EY conducted 2 subsequent meetings with Nalcor to review what information was available through management processes and systems at Nalcor as well as what additional assurance could be gained by the Oversight Committee through the Independent Engineer's and Internal Audit's activities and reporting.

EY would like to thank the members of the Government of Newfoundland and Labrador and Nalcor who participated openly and collaboratively in this assessment process. We have listed the individuals who were interviewed in Section 5.0 of the report.

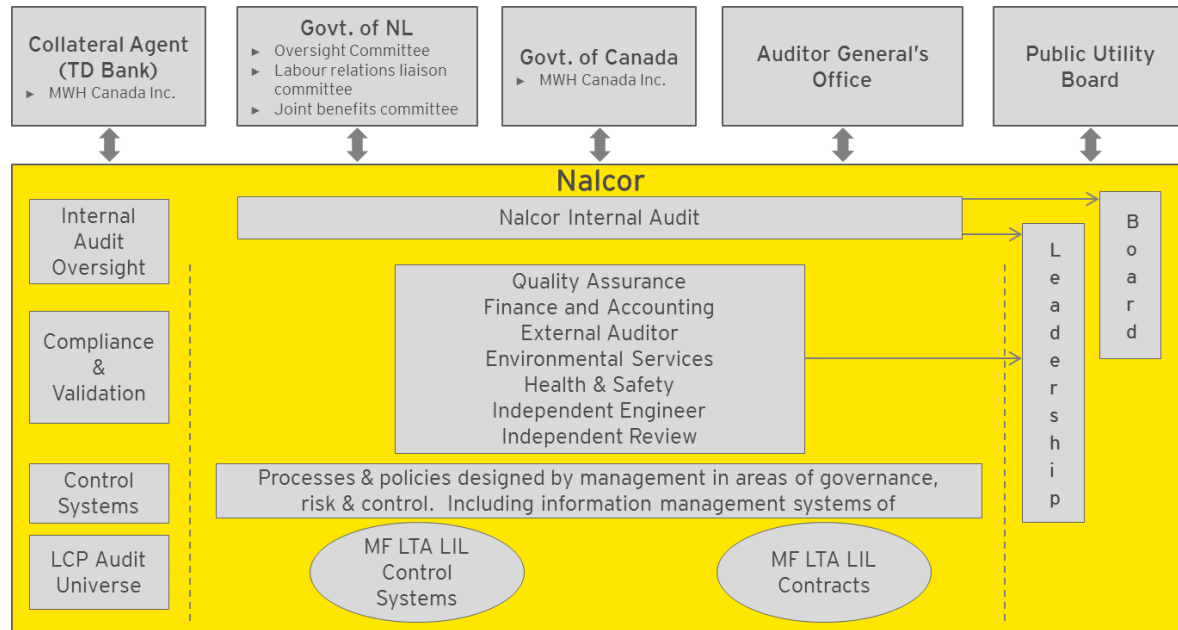


3 Guidelines Used in Developing Recommendations

The complex stakeholder landscape for LCP represented in the diagram below makes it imperative to clearly define and communicate the role of each stakeholder. Key considerations for effective oversight on the project include:

- ▶ Ensuring there are no gaps and consider overlaps in the extent of oversight
- ▶ Minimizing duplication of effort while ensuring independent oversight
- ▶ Leveraging appropriate skill sets for analysis required to support effective oversight
- ▶ Streamlining information sharing and communication protocols

Our recommendations have been developed with these considerations in mind.





4

EY Recommendations for Improving Oversight Protocols

4.A - The Oversight Committee should review cost and schedule performance, forecasts and risk management in addition to the validity of costs incurred

Since the Oversight Committee's role is focused on the project's cost and schedule performance, we recommend that their mandate should address whether:

- ▶ The project cost and schedule is well managed:
 - ▶ Have the management process and controls been well designed?
 - ▶ Is there adequate adherence to the management processes and controls?
 - ▶ Are contracts being managed diligently?
 - ▶ Are the financial draws complying with established processes?
- ▶ The project is meeting the cost and schedule objectives:
 - ▶ How does schedule performance and forecast compare to the plan?
 - ▶ How do cost performance and forecast compare with the baseline?
 - ▶ Are the cost and schedule forecasts consistent with current performance?
 - ▶ Are the cashflow forecasts adequately reflecting the project's funding requirements?
- ▶ The cost and schedule risks are being reasonably anticipated and managed:
 - ▶ Are risks being sufficiently identified and addressed?
 - ▶ Is there adequate contingency in place to address the outstanding project risks?

Structuring the mandate to address the performance of existing controls as well as anticipation of future risks would result in more effective oversight. Such a proactive role by the Government will have a favorable impact on the overall project performance.

4.B - Oversight Committee should be supported with specialized skills

A meaningful cost and schedule oversight would require monitoring exposure across multiple indicators of project performance such as earned value, engineering and construction productivity, management of critical path, manpower histograms, forecasting techniques and risk identification, quantification and management. These indicators serve as early warning systems for identifying gaps in project performance and can be effectively used as inputs for meaningful oversight. However, specialized skills are required in different areas of engineering, construction and project management to connect the dots between different project performance indicators.

The graphic below illustrates a potential operating model, whereby the Oversight Committee is supported by a Working Group which is comprised of professionals with the required skill sets for detailed analysis of project information. The level of engagement of each skill set will vary from time to time based on the subject matter at hand and the communication and reporting protocols of the Oversight Committee and other ad hoc requirements.



4

EY Recommendations for Improving Oversight Protocols

Oversight Committee	
<p>Committee Members</p> <ul style="list-style-type: none"> ▶ Clerk of the Executive Council (Chair) ▶ Deputy Minister of Finance ▶ Assistant Deputy Minister of Finance ▶ Director of Debt Management ▶ Deputy Minister of Natural Resources ▶ Associate Deputy Minister of Natural Resources ▶ Assistant Deputy Minister of Natural Resources ▶ Deputy Minister of Justice (or designate) 	<p>Roles and Responsibilities</p> <ul style="list-style-type: none"> ▶ Review and approve periodic reports and communications ▶ Communication and escalation of high risks/issues as necessary ▶ Interact with Nalcor Senior Management <ul style="list-style-type: none"> ▶ Communication and resolution of issues ▶ Provide input to Nalcor on Government requirements ▶ Communications with Cabinet and other stakeholders
Working Group	
<p>Members</p> <p>Required skills to consider:</p> <ul style="list-style-type: none"> ▶ Project Management & Controls, Engineering Management, Procurement/Contracts Management, Contract Risk, Construction Management, Internal Audit/ Assurance, Project Governance/Risk Management, Finance/Transactions. <p>Required size:</p> <ul style="list-style-type: none"> ▶ TBD - will depend on the finalization of the mandate and terms of reference 	<p>Roles and Responsibilities</p> <ul style="list-style-type: none"> ▶ Perform the analysis required to develop reporting and recommendations for the Oversight Committee ▶ Solicit additional inputs from Government entities and assurance providers as required ▶ Review reconciliation of funds disbursed with project costs ▶ Liaise with Nalcor Internal Audit and other assurance providers to: <ul style="list-style-type: none"> ▶ Review outputs from project assurance activities ▶ Communicate oversight observations, input and recommendations ▶ Monitor critical corrective action ▶ Support the committee's communication to Cabinet and other stakeholders



4

EY Recommendations for Improving Oversight Protocols

4.C - Oversight Committee should align its information request with conventional project controls and assurance practices and the reporting rhythm of Nalcor

The original Information Request List provided to EY by the Oversight Committee contained most of the key cost and schedule information needs. EY has refined the Request List and identified additional cost, schedule and other information requirements and metrics for Government's consideration to meet the stated objective of providing oversight to cost and schedule performance. The data requirements listed below are typical metrics and documents which exist in mega-projects. Meetings with Nalcor confirmed the existence and availability of the items listed.

Review and analysis of this information will further improve visibility into project performance and mechanisms that are in place to achieve successful cost and schedule outcomes.

▶ Cost Information

- ▶ Baseline Budget with Basis of Estimate (DG3 Estimate) and June 2014 revision
- ▶ Cost report showing in period and cumulative data for the following: Budget (Baseline, Changes, Cost to Complete, Final Forecast Cost, Variance)
- ▶ Contingency draw log, report of planned vs. consumed contingency
- ▶ Performance graphs showing performance, trend and/or forecast
- ▶ Contract and Work Package level cost reporting including: original commitments, changes, revised commitments, invoiced and incurred to date
 - Detail should be provided for all material contracts, with summary level for all other contracts
 - Cost Performance Index (CPI) (period and cumulative), where that information is being tracked on a contract
- ▶ Rolling cash flow - forecast and planned versus actual
- ▶ PFA Funding Request/Log for tracking funding draws (Including record of all Liens as noted in McInnes Cooper report)
- ▶ Variance analysis and corrective action for all material cost variances

▶ Schedule Information

- ▶ Schedule Development & Control Plan including Schedule Specification, Basis of Schedule and Assumptions
- ▶ Integrated Program Schedule (IPS) report to Level 3, including: Schedule milestone report showing Baseline Finish, Actual/Forecast Start and Finish, Schedule Performance Index (where available), Variance, % Complete, Critical and Sub-Critical Path, Predecessor/Successor and Float analysis - with further Levels of detail available as requested
- ▶ Performance Graph showing performance, trend and forecast where available for the program as a whole and each Material Contract/Work Package



4

EY Recommendations for Improving Oversight Protocols

- ▶ Variance and analysis and corrective action for all material schedule variances
- ▶ **Other Information**
 - ▶ Standard project monthly progress reports (including Health & Safety, Environment, Community/Stakeholder, Scope & Change, Cost, Schedule, Quality, Risk and Contract reports)
 - ▶ Progress reporting of material contractors
 - ▶ Resource profile and graphs/histograms (planned versus actual/forecast)
 - ▶ Project Work Breakdown Structure (WBS) and dictionary
 - ▶ Project policies, plans and procedures
 - ▶ Project execution and contracting strategies
 - ▶ Monthly LCP risk register with further levels of detail available as requested
 - ▶ PCNs & Change request/ order log(s)
 - ▶ Claims log
 - ▶ Project assurance plans - including internal and third party assurance
 - ▶ Relevant assurance reports, as issued including Quality Management Metrics
 - ▶ Independent Engineer reports
 - ▶ Notification of the award of:
 - Material Contracts
 - Summary of awards (Value) of other contracts
 - ▶ Issues log or other established reports for recording and managing issues
 - ▶ Nalcor financial statements
 - ▶ Summary of Deviation Alert Notices (DANs) for the program, with further levels of detail available as requested

The above list is not exhaustive, but should form the baseline required from the Oversight Committee to Nalcor. Other information may be required depending on project phase and cost and schedule position.

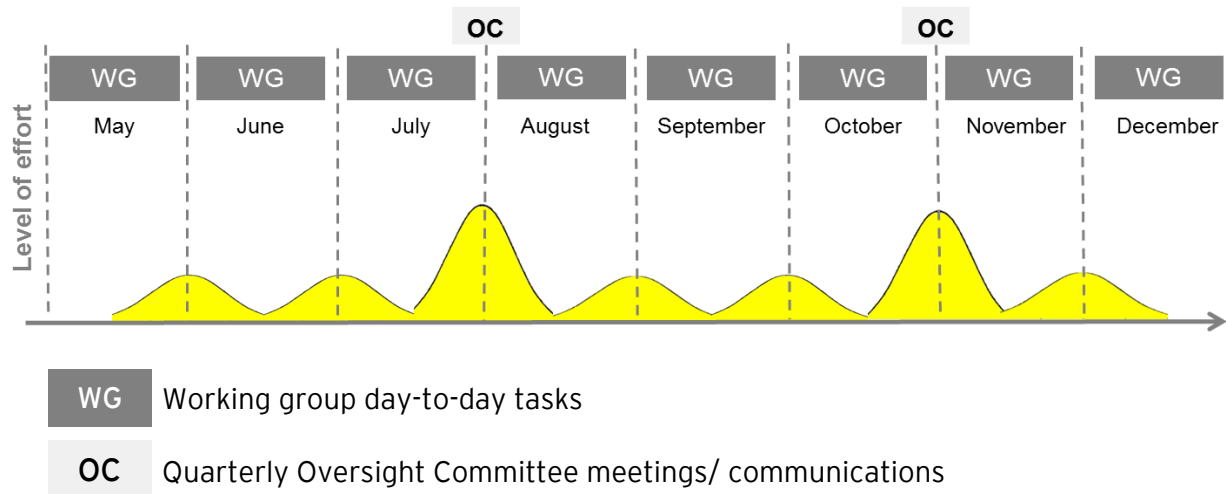


4

EY Recommendations for Improving Oversight Protocols

Alignment of reporting rhythm between Government and Nalcor

The Government and Nalcor should align the project related communication and information flow with the project's standard reporting rhythm. The diagram below illustrates a potential rhythm of business between the Government's Oversight Committee and working group and the change in effort required to support the monitoring activities.





5

Acknowledgements

As stated in Section 2.0, our approach included conducting structured interviews with members of the Oversight Committee. We also met with representatives from Nalcor to review the information request listing in this report. We would like to acknowledge and thank the individuals listed below for their participation in the interviews.

Name	Title	Department
Julia Mullaley	Clerk of the Executive Council & Secretary to the Cabinet	Executive Council
Tracey King	Assistant Secretary to Cabinet	Executive Council
Craig Martin	Executive Director	Executive Council
Charles Bown	Deputy Minister	Natural Resources
Tracy English	Associate Deputy Minister	Natural Resources
Paul Morris	Assistant Deputy Minister	Natural Resources
Randy Pelletier	Solicitor	Justice
Donna Brewer	Deputy Minister	Finance
Peter Au	Assistant Deputy Minister	Finance
Paul Myrden	Director Debt Management Division	Finance
Derrick Sturge	Chief Financial Officer	Nalcor
Gilbert Bennett	Vice President, Lower Churchill Project	Nalcor
Paul Harrington	Project Director, Lower Churchill Project	Nalcor
Jim Meaney	GM Finance, Lower Churchill Project	Nalcor
Robb Hull	GM Finance, Nalcor	Nalcor
Mark Bradbury	Internal Audit	Nalcor
Ed Busch	Project Controls Manager, Lower Churchill Project	Nalcor

EY | Assurance | Tax | Transactions | Advisory

About EY

EY is a global leader in assurance, tax, transaction and advisory services. The insights and quality services we deliver help build trust and confidence in the capital markets and in economies the world over. We develop outstanding leaders who team to deliver on our promises to all of our stakeholders. In so doing, we play a critical role in building a better working world for our people, for our clients and for our communities.

EY refers to the global organization, and may refer to one or more, of the member firms of Ernst & Young Global Limited, each of which is a separate legal entity. Ernst & Young Global Limited, a UK company limited by guarantee, does not provide services to clients.

For more information about our organization, please visit ey.com.

© 2014 Ernst & Young LLP. All Rights Reserved.
A member firm of Ernst & Young Global Limited.

ey.com

Final Document Request Recommendation

1. Cost Information

- a. Baseline Budget with Basis of Estimate (DG3 Estimate) and June 2014 revision
- b. Cost report showing in period and cumulative data for the following: Budget (Baseline, **changes**, Cost to Complete, Final Forecast Cost, Variance
- c. Contingency draw log, report of planned vs. consumed contingency
- d. Performance graphs showing performance, trend and/or forecast where management has this information
- e. Contract and Work Package level cost reporting including: original commitments, **changes**, revised commitments, invoiced and incurred to date.
 - i. Detail shall be provided for all material contracts
 - ii. Summary level for all other contracts
 - iii. Note: CPI (period and cumulative) is required where that information is being tracked on a contract.
- f. Rolling cash flow– forecast and planned versus actual
- g. PFA Funding Request/Log for tracking funding draws. (Including record of all Liens as noted in McInnes Cooper report)
- h. Variance analysis and corrective action for all material cost variances.

Deleted: **Change Approved**
Formatted: Highlight
Deleted: Changes Pending (with status),

Deleted: **approved**
Formatted: Highlight
Deleted: pending changes (with status),

2. Schedule Information

- a. Schedule Development & Control Plan including Schedule Specification, Basis of Schedule and Assumptions
- b. Integrated Program Schedule (IPS) report to Level 3, including: Schedule milestone report showing Baseline Finish, Actual/Forecast Start and Finish, Schedule Performance Index (where available), Variance, % Complete, Critical and Sub-Critical Path, Predecessor/Successor and Float analysis, **with further levels of detail available as requested.**
- c. Performance Graph showing performance, trend and forecast where available for Program as a whole and each Material Contract/Work Package
- d. Variance and analysis and corrective action for all material schedule variances

Deleted: <#>Updated Program Gantt Charts to Level 3 and Contractors/Work Package Gantt Charts to level 4 including with critical path, baseline, float, % complete, actual/forecast start, actual/forecast end date and predecessor/successor (full requirements for Gantt specifications to be provided in addition to Level 4 information where requested) ¶
Deleted: **(where available)**
Formatted: Highlight
Formatted: Highlight
Deleted: s

3. Other Information

- a. Standard project monthly progress report (including Health & Safety, Environment, Community/Stakeholder, Scope & Change, Cost, Schedule, Quality, Risk and Contract reports)
- b. Progress reporting of Material contractors

- c. Resource profile and graphs/histograms (planned versus actual/forecast)
- d. Project WBS structure and dictionary
- e. Project policies, plans and procedures
- f. Project execution and contracting strategies
- g. Monthly LCP risk register, with further detail available as requested.
- h. PCNs & Change request/ order log(s)
- i. Claims log
- j. Project assurance plans – including internal and third party assurance
- k. Relevant assurance reports, as issued including Quality Management Metrics.
- l. Independent Engineer reports
- m. Notification of the award of:
 - i. Material Contracts
 - ii. Summary of awards (Value) of other contracts
- n. Issues log or other established reports for recording and managing issues
- o. Nalcor financial statements
- p. Summary of Deviation Alert Notices (DANs) status for the program, with further detail available as requested.
- q. Other information as the Committee may from time to time require

Deleted: Project risk

Formatted: Highlight

Deleted: with detailed risk logs where requested updates

Deleted: <#>Deviation Alert Notices and accompanying scope, cost and schedule impact/control information:¶
<#>For material deviations: Analysis and proposed management corrective captured in Deviation Alert Notices (DANs) listing and Change Control documentation ¶

Deleted: including summary of deviation alerts not captured under material deviations above

Formatted: Highlight

Deleted: as a whole

Formatted: Highlight

Deleted: .