

From: David Steele
To: [Martin, Craig](#)
Cc: [Richard Noble](#)
Subject: EY's review and response to Nalcor's comments
Date: Thursday, June 25, 2015 4:11:55 PM
Attachments: [Response to EY FINAL_june 17_EY response_june 25.pdf](#)

Hello Craig,

We have reviewed the comments provided by Nalcor. Based on this review, we'd only advise very minor changes to the report we previously provided. Therefore, I would recommend, that rather than send a minor update of the previous report, we should schedule time to sit with Nalcor to step through each item. This would probably be better done face to face in St John's in the week of July 6th-10th. Sending a back and forward documents with comment and ripostes would not be productive. Before weeks end, it would be great to get a working session set with them (week of July 6th-10th), so proper preparation and arrangements can be made. Please let us know your thoughts.

In addition, attached is the EY response to Nalcor feedback. This is for internal/your purposes only, please do not forward to Nalcor.

Thank you.

Dave

David Steele | Partner | Advisory Services

Ernst & Young LLP
Cell: +1 709 769 2080 | David.Steele@ca.ey.com

Nalcor's Lower Churchill Project (LCP) Team has reviewed the draft document of Preliminary Findings for Nalcor feedback dated June 8th, 2015. We believe this proposed section requires a significant re-write to conform to the stated scope of work associated with the intended review and to more accurately reflect the information provided to facilitate this review.

General

In General, the LCP project team notes that the terminology adopted in many cases is indicative of an audit when the scope clearly intended for this to be a review. Examples are the title, "Preliminary Findings" and the label "observation" and/or "gap" for which we believe is intended to be a "suggestion" from the consultant. This may be characterized better in some other section of the overall report. However, it may be useful to restate this intent again in a preamble to the section on the outcome of the review.

Similarly, many of the suggestions (this response will use this term in lieu of "observation or gap") listed deviate from the review criteria and we believe they should be removed from, or altered within, the report. We believe many of the suggestions made address issues in the status of the project and/or performance of the Contractors (a Contract Administration focus). This is out of scope as these issues are not aligned to the principles and objectives of the review, which was to confirm project controls has effective processes in place and the quality of the reporting is appropriate. Furthermore, it does not properly address the fact that the LCP team is very much aware of project status and performance issues, has taken steps to mitigate and correct same (or maintain alternative methods until contractor rectification). All this was discussed with the consultant throughout the review period.

Among the suggestions being made, it should be expected that the consultant provide a reference to a standard and/or practice for review related to the execution of mega-capital projects. Otherwise, the statements made constitute an opinion expressed by the consultant, which is out of scope for this review.

In summary, the LCP team believes each of the suggestions made should not be incorporated as written in the report as they hinge on Contract Administration (not reviewed) rather than Project Controls issues according to the criteria of the review or are opinions of the Consultant which did not reasonably contemplate the Owner and Construction Management needs and requirements in reporting methodologies. Detailed feedback on the overall text and suggestions are provided in the following sections.

Comment [1]: This appears to be an opinion. What is the basis of this statement?

Comment [2]: The issues were the result of the compliance exercises on the sample of contracts on cost and schedule. There is no direct link or focus on performance.

Comment [3]: This does not completely capture the scope. Please see from approved SOW: "The scope of the work is to review Nalcor Energy's ("Nalcor") Lower Churchill project controls for cost and schedule. This will include assessing the methods for calculating and reporting cost and schedule progress. The objective of this review is to assess the project controls for cost and schedule against leading practices and standards (PMBOK) commensurate with projects of the scale and complexity of Lower Churchill project. The review will be tailored to the Muskrat Falls project and the requirements of the Oversight Committee. This will provide the Oversight Committee with an assessment of the Cost and Schedule management processes and controls, and the completeness and quality of Cost and Schedule information being provided to the Oversight Committee by Nalcor. Scope details:

- Perform an assessment of Cost and Schedule management processes and controls, and related reporting
- Assess methodology for calculating and reporting Cost and Schedule"

Comment [4]: PMBOK for the processes. Nalcor's own processes for compliance tests.

Section i) Schedule Management Processes

Reference	Report Text	Nalcor LCP Team Feedback	EY response
Page 3, 2 nd Paragraph	While not running a full Earned Value Management System, which would constitute leading practice, a majority of alternate conventional schedule control plans, processes and procedures have been developed and substantially deployed by Nalcor’s LCP team. This includes:	<p>LCP does not find it helpful that the consultant chooses to start the review by stating what we are not doing rather than state what it is that we are doing. Furthermore, we do not agree with the statement that a full earned value management system constitutes leading practice when the structure and set up of LCP is an integrated Owners and Construction Management portfolio.</p> <p>We believe the statement used misleads the recipients of the report that we do not have leading practice systems in place, that that is simply not true. Owner’s level reporting does not benefit from Earned Value analysis when that system is employed at the lower detailed level, and the true structure of the project is managed via individual projects (components) that have integration points, yet remain as individual projects with their own critical paths and execution strategies. At the Contractor reporting level, full earned value systems are in place, to capture the intent, in accordance with PMBOK.</p>	<p>Quoting from PMBOK 5th edition pg 217. “The principles of EVM can be applied to all projects in any industry...EVM is a methodology that combines scope, cost schedule and resource management to assess project performance and progress..” EVM is a recognized leading practice and has proven itself to one of the most effective performance measurement and feedback tools for managing projects. There are plenty of qualified articles and papers on the subject.</p> <p>Our concern is also that expectation is “Best Practice”. This comment calibrates the reader that while not “best practice”, Nalcor has put in place other conventional processes and controls.</p>
Page 4, 1 st paragraph	The following observations/gaps were identified:	We reiterate that using the word “gaps” implies this is an audit, which this is not, nor	This appears to be a personal opinion. What is the basis of this

Reference	Report Text	Nalcor LCP Team Feedback	EY response
Detailed Observation 1	The process used to update the status and record progress of the project in the IPS is complex and requires a number of manual inputs and tools (i.e. LCP database, IPS progress spreadsheet "Rosetta Stone") and processing each month. This process is not yet fully documented.	The LCP team believes that the process is fully documented to an appropriate level of detail within the procedures provided to the consultant (i.e., Project Controls Management Plan and the internal working document IPS [resent due to error made in copy uploaded to data room]).	statement? We were provided some data (as described in the observation) which helped us in understanding the process, however we were not able to see an approved and comprehensive document describing in detail the process for updating the status and record progress in the IPS.
Detailed Observation 2	Variance thresholds for monitoring schedule performance are not defined. Control thresholds are typically used to indicate the predefined scale of variation permissible before a documented corrective action plan is put in place and the issues is escalated in reporting.	We agree that, according to PMBOK, appropriate thresholds should be defined to trigger an action response for deviations, however, it is our belief the LCP has defined appropriate processes and procedures which comply with these threshold requirements. The team utilizes a variety of milestones and integration points within the Contractor's and Component schedules to monitor slippage in the program and any slippage within those constitutes a deviation. In the meantime, any and all variances in performance are noted and managed at the component and Contractor levels for mitigation and corrective actions. Therefore LCP believes we are applying the most stringent thresholds as the Contractors are expected	It is agreed that thresholds should be defined. PMBOK gives flexibility on the definition of the threshold values as they may be based on the risk profile of the company and the level of risk it is willing to accept. Usually, companies may determine appropriate threshold values by reviewing historical trend data and identifying the limit of 'common variance'. EY can suggest what we have seen used in the past, However, the actual threshold values to be used are ultimately at the discretion of Nalcor.

Reference	Report Text	Nalcor LCP Team Feedback	EY response
		<p>to provide mitigation strategies for all reported deviations no matter the scale of variation.</p> <p>If the consultant has other ideas, the LCP team requests a reference to Variance Threshold Standards the consultant is advising should be in place.</p>	
<p>Detailed Observation 3</p>	<p>Variance thresholds for monitoring schedule performance are not defined. Control thresholds are typically used to indicate the predefined scale of variation permissible before a documented corrective action plan is put in place and the issues is escalated in reporting.</p>	<p>The purpose of the IPS is to function as an Owners level schedule and not a roll up of the detailed schedules of each of the projects. The LCP team manages both the Owners team and Component levels and applies appropriate controls for each intended purpose. LCP disagrees that both shall be a roll up of the component levels due to the independent nature of the components on the overall outcome of the entire Project as discussed with the reviewer. The ability to cross check forecasted end dates is managed by understanding the relationship of the activities mapped that influence the IPS from the Component or Contractors Schedules.</p>	<p>From Integrated Project Schedule LCP-PT-MD-000-PC-SH-001-01, with regard to purpose of IPS and the comment of not being a roll up of detailed schedule:</p> <p>Pag. 4 – Purpose: The Integrated Project Schedule (IPS) is a Critical Path Method network derived from the various project participant schedules sources tied together with the Ready for Operation startup sequences. The Integrated Project Schedule format will be structured to serve as an overall project control network modeling the major project interfaces and scope of work.</p> <p>Pag 12. 6.2 IPS in the Stewardship Process. This Integrated Project Schedule establishes the overall control schedule used in the Nalcor LCP Project Team Stewardship Process for monitoring schedule and performance on Phase 1 of the Nalcor Energy – Lower Churchill</p>

Reference	Report Text	Nalcor LCP Team Feedback	EY response
			<p>Project.</p> <p>Pag. 34 IPS Updating. 5) Contractor schedules are coded with the IPS level of detail for roll-up clarifications. (This process is in the co-ord procedures and is why we have Contractor Schedule Expectations Meetings as soon as possible after Kick-off meetings)</p> <p>Pag. 38 Further IPS developments. What needs to be added into the IPS:</p> <ul style="list-style-type: none"> • Activities related to Nalcor Existing Asset Upgrades • Outages / Shutdowns / Tie-ins • Modify site start / finish / durations / etc when construction/completions contract schedules are approved. • Note: Approval also means that the IPS roll up which is imbedded in the contractors' schedules are clear, precise and agreed. A contractor schedule approval matrix based on coordination procedure requirements (with traffic lights) will be prepared soon.
Detailed Observation	While IPS focuses on construction,	We do not believe this to be an observation but a comment that a misunderstanding of	The finding is correct.

Reference	Report Text	Nalcor LCP Team Feedback	EY response
4	<p>commissioning and operations start-up, it does not include information on engineering, procurement and fabrication. Logic relationships and delays of engineering, procurement or fabrication with construction are not reported; therefore it is not clear how any delays may impact construction.</p>	<p>the purpose and how the IPS and Component reporting functions. The IPS is an Owners level report which reflects the variances of the Components of major or crucial areas of the project. Our reporting does not, nor is it intended to, use the IPS as a stand alone tool for understanding where delays occur on the Project. The Component level reporting is the source for that information. The Engineering and Procurement portions of the Component level schedules would influence the Construction phase if any delays were noted and thus would be reflected in the IPS.</p> <p>However, it is also worthy to note, the Engineering is essentially complete for C1, C4 and SOBI. C3 engineering is contained within the EPC forms of Contracts and managed at the component level.</p>	<p>With regards to the role of IPS, this is addressed in our commentary above.</p> <p>This notwithstanding, if IPS has a more limited purpose, then the gap identified needs to be addressed by another control.</p>

Section ii) Schedule Management Compliance

Reference	LCP Team Feedback	EY response
1 st sentence	Nalcor LCP team has established a reasonably conventional organization structure to support the management of the Program and the execution of the processes and controls.	<p>What does “established a reasonably conventional organization structure” mean exactly? Is the consultant trying to offer an opinion on the organization structure adopted to support management of the program? Why not drop the qualifiers “reasonably conventional”.</p> <p>EY’s original text was positive commentary supportive of the management action to date.</p> <p>The organizational structure is conventional (matrix with delineation of responsibilities and accountabilities between PM’s, Project Controls, Planners, Estimating, Cost Control etc.)</p> <p>It is reasonable.</p>
Paragraph 2	EY’s observations below are based on Nalcor’s management using the IPS and a sample of 5 key projects whose aggregate value is just over \$2.3 billion. Assessment was made of the quality (accuracy and completeness) of schedule information reported and the compliance with schedule management work flows.	<p>The word “assessment” implies more of an audit function? We believe “review” is more consistent with the scope and would be more appropriate?</p> <p>As before, we need to agree with Client and Nalcor IA if wording changes are required. Our initial point of view is that the wording is appropriate.</p>
Bullet 1	Nalcor is regularly updating and	<p>The IPS is not the “Core” schedule management tool. It is the Owners level</p> <p>See comment above on IPS role</p>

Reference	LCP Team Feedback	EY response
	<p>maintaining the IPS as its core schedule management tool and basis of reporting. IPS updates are performed using the established tools (IPS progress spreadsheet "Rosetta Stone", LCP database);</p>	<p>reporting tool. The Core is the use and integration of all Schedules including the IPS.</p>
<p>Bullet 4</p>	<p>The Nalcor LCP team is also making significant effort to work collaboratively with contractors to them comply with project requirements; and</p>	<p>Typo - "...Contractors to get them to comply..." add bolded words</p>
<p>Detailed Observation 1</p>	<p>The process for integrated maintenance of the IPS and contractors schedules is not yet fully deployed and consistently executed. Schedule Control Baseline Documents (SCBD) and Schedule Development and Control Plans (SDCP) are incomplete and/or</p>	<p>LCP believes the observation should be adjusted in its direction due to the fact that the Process is fully deployed and consistently executed on how the contractor's schedules are to be incorporated, and that full implementation will not occur until <u>all</u> Contracts are executed. Where Contractor's Schedules are approved and functioning according to the requirements, they have been embedded. The issue that remains, and is</p>
		<p>The non-compliance appears to be acknowledged. Note this is also at point in time.</p> <p>We will add some wording to identify that in industry more broadly, others have encountered challenges in getting contractors to comply with schedule standards.</p> <p>However, the overall responsibility for ensuring the program management system is effective (including the role of contractors) lies with the Nalcor PM</p>

Reference	LCP Team Feedback	EY response	
	<p>fail criteria, as per Nalcor’s coordination procedures. These are key documents that describe the approach to planning and schedule control including schedule development, analysis, forecasting, reporting, progress measurement and corrective actions. Specifically:</p>	<p>not properly represented by the Consultant (as it implies “all” rather than in instances, relevant to the timing of the execution of the Contract), that the schedule control document and plans are incomplete and/or fail is a Contract Administration issue, not examined as part of the scope of this review, whereby there are known challenges with some of the Contractors that have not submitted compliant schedules and/or plans in a timely manner upon Contract execution. It should also be noted that this is an industry known issue across all Mega projects.</p> <p>The management team is aware and addressing these challenges. Our response to this matter is that the management team is utilizing additional elements to ensure the integrity of delays and corrective actions can still be employed and has demonstrated the efforts within the correspondence to Contractors and highlighted deviations in reporting at all levels. The need to roll up to the IPS level is again, not the intent and purpose of the IPS</p>	<p>team.</p>
<p>Detailed Observation 2</p>	<p>One key contractor’s [Astaldi] most recent approved schedule (dated October 2014) does not fully comply</p>	<p>This observation is out of scope as it directly relates to status and performance of a contractor. With the procedures in place, the observation noted has indeed been escalated to the</p>	<p>This observation is the result of a compliance test and assessment of the methodology for calculating and reporting on schedule (refer to SOW) . The observation does not relate to</p>

Reference	LCP Team Feedback	EY response	
with Nalcor’s coordination procedure:	highest levels of the Organization as well as the Contractor.	contractor performance and does not mention SPI.	
Detailed Observation 3	<p>Schedule corrective actions are not always implemented in a timely manner. Appendix C captures the results of corrective action test performed on 3 contractors of the sample.</p>	<p>LCP Team disagrees with the statement that corrective actions are not implemented timely based on the examples provided in Appendix C.</p> <p>Both Alstom and Valard’s baseline schedules were approved with the typically frowned upon constraints. However, due to the logic employed by the contractor and confirmed with the approval of the schedule in accordance with our procedures, these constraints were deemed appropriate. For Alstom the constraints are mainly on Owner supplied transformers, which is an appropriate constraint for the activity noted. For Valard, although the Coordination Procedures state that the use of constraints should be minimized. This schedule uses these constraints on the completion milestones for major construction efforts (4) for each of 4 Work Fronts—Foundations, Assembly, Erection and Stringing—resulting in 16 constraints. The other two constraints are on the start and end of this project and are typical. The use of these 16 constraints on a complex network of 5,499 activities is not excessive—this project consists of 5 segments over 3</p>	<p>The management response provided with regards to Alstom and Valard seem reasonable. This is also true for Nexans.</p> <p>However the statement of the findings is accurate. And appears to be acknowledged by LCP Team albeit they characterize this as being done so “with typically frowned upon constraints”.</p>

Reference	LCP Team Feedback	EY response
	<p>Work Fronts. Although Finish On or Before constraints will not allow an activity to develop positive float but will reflect negative float which is the reason for their use in a T/L schedule such as this.</p> <p>Using these constraints provides heightened visibility of these various series of activities which is beneficial to the C4 project. These milestones may not necessarily be on the longest path to project completion and the use of these constraints provides knowledge of how late these milestones may be from originally planned completion dates and therefore their use on this schedule was deemed appropriate. Engineer's approval was received when this baseline schedule was approved in Aconex. NOTE: The use of the word Engineer in these documents is a left over from the SNC beginnings. It means Owner or Project Representative.</p> <p>For Nexans, the timeliness is subjective by the consultant. LCP team does not see a concern with the time since awareness of the constraints was made by LCP and the ongoing changes the Contractor is implementing. An agreement to complete the corrective action was made with the Contractor and falls outside the timeline of this review, yet will be</p>	

Reference	LCP Team Feedback	EY response
	<p>completed well ahead of the start of Construction for this portion of the Contract.</p>	
<p>Detailed Observation 4</p> <p>Spot checks revealed instances where progress reported in the IPS differed from the progress reported from contractors in the Rosetta Stone (refer to Appendix B for more detail). Although the gaps are not themselves material the reported progress may be viewed as subject to interpretation and so not fully objective.</p>	<p>LCP team refers to the discussion that the Owner’s schedule and Component or Contractors detailed schedules are not executed as exact roll ups of the other, the IPS filters to critical significant work while the detail schedules can include significant other work not deemed a requirement for the IPS report. The examples noted are of insignificant value to the outcome of the reports.</p>	<p>The analysis was done on very same activities in contractor’s and IPS schedule. They have same WBS code and progress should match. Also during the interview with the IPS planner he explained that he used his own judgment to report progress.</p>
<p>Detailed Observation 5</p> <p>A target date for completion of corrective action on the schedule management and reporting challenges at the contractor level has not been established.</p>	<p>This observation has not been tested against the Contract Administration department as it was not part of the review thus possibly should not be included. LCP PC Team does not agree with setting a Target date for the completion of corrective actions by contractors as the contractor has a responsibility to complete the action in accordance with their Contract. The delays to this are being monitored and part of the overall management of the Contractor.</p>	<p>LCP team is responsible for managing the program. The program has not established a target date for corrective action on a variance from their own process... this is a reasonable observation.</p> <p>As with any issue, we would assume Nalcor tracks and manages issues and non-compliances from process and insists on due dates for completion of any actions.</p>

Section iii) Cost Management Processes

Reference	Report Text	LCP Team Feedback	EY response
Paragraph 2	While not running a full earned value management system (which would constitute leading practice), a majority of alternate conventional cost management and controls have been developed.	Similar to the introduction to Section i), it is not helpful to start the discussion with what LCP is not doing rather than get to the point of what we are doing. Furthermore, LCP disagrees with the statement that we are not following Leading Practices. As discussed in the review, a full earned value management system is not applicable at the summary level on a Mega Project as the use of, and intended actions that stem from Earned Value Methodologies are effective and maintained at the Contractor level in accordance with the type of contract fit for Earned Value practice. The attempt to use and control the project at the highest level using Earned Value would be extremely cumbersome and ineffective for determining necessary corrective actions. This can only be effective at the proper levels within each contract.	Same response previously provided on EVM
Bullets 1 and 2	Nalcor's LCP cost management processes are reasonably detailed and documented in the Project Execution Plan, Project Controls Management Plan and Procedure for Cost Control.	We recommend "reasonably" be replaced with "appropriately" to align to adherence to PMBOK or other leading practices.	We recommend reasonable.

Reference	Report Text	LCP Team Feedback	EY response
Detailed Observation 1	<p>Cost variance thresholds are not defined. These thresholds are usually used to establish a permissible variation from budget before documented corrective action must be taken. Variance thresholds are also usually used to define what constitutes a variance requiring escalation for senior management attention.</p>	<p>Cost Variance thresholds are not necessary as all cost items are maintained under Contract line items which are, through numerous methods, reviewed and forecasted monthly. Any deviations are reviewed and upon validation, raised through the trend and change management process which is visible to senior management. Due to the wide variations of contract models and line item progress methods employed, a “one-size-fits-all” variance threshold analysis would prove effort intensive and of little value as other processes in place are superior.</p> <p>If the consultant has other ideas, the LCP team requests a reference to Variance Threshold Standards the consultant is advising should be in place.</p>	<p>Same response as previously provided on thresholds</p>
Detailed Observation 2	<p>Management indicated that rebaselining of the program was at their discretion and dependent on a variety of factors including forecast and rate of draw down on contingency. The explicit conditions and processes for rebaselining are not</p>	<p>It is not appropriate to try to define explicit criteria of when to Re-baseline. The overarching basis is when a significant event occurs whereby the previous execution plan is deviated against, a revised plan due to scope, mitigations or revised execution plan. The discretion to re-baseline is maintained as noted in the procedures with the Project Director’s direction.</p>	<p>Re-baselining criteria would help better defining and possibly quantify the overarching basis indicated in Nalcor feedback.</p> <p>What makes an event ‘significant’? can this be quantified?</p> <p>The OC will also want visibility into any impending rebaselining of the project as they will carry the cost. The observation and recommendation</p>

Reference	Report Text	LCP Team Feedback	EY response
	defined in the program's control processes and procedures.		should stand.
Detailed Observation 3	A detailed checklist has not been prepared to be used by cost controllers to review and validate contractor costs and ensure consistency of the review.	LCP team does believe a detailed checklist is in place to validate contractors cost. Contractor costs are validated through the Payment Certificate process, against the terms of the Contract (quantity takeoffs, measurement, man-hours signed for etc.). Each line/pay item of the Contract has its own means and methods to calculate and verify the accuracy of the submission by the contractor. Thus the Payment Certificate in itself is the checklist.	The checklist we are referring to is a 'to-do' list for the cost controller to verify costs. That would provide improved consistency and more effective process
Detailed Observation 4	The shape of the contingency curve is conventionally defined by aggregation of the forecasted materialization of estimate uncertainties or tactical risks. It was indicated that the basis of the forecast contingency draw down curve did not include quantified material risks. This significantly limits the precision of comparison of the rate	LCP team believes the review has mixed the intention of the Contingency and Risk Management. The Contingency is to manage known unknowns and is typically modelled against the progress of the Project and the certainty earned as the project progresses through development and execution. Uncertainties or Risk are managed outside the Project contingency and, in practice, are handled through a management reserve (not reported at the Project level).	Contingency and risk are intimately related. Please see couple of definition from AACE and PMBOK: "An amount added to an estimate to allow for items, conditions, or events for which the state, occurrence, or effect is uncertain and that experience shows will likely result, in aggregate, in additional costs. Typically estimated using statistical analysis or judgment based on past asset or project experience (source: AACE-I)" Budget within the cost baseline or performance measurement baseline that is allocated for identified risk for

Reference	Report Text	LCP Team Feedback	EY response
	<p>of realized cost risks versus original forecast. This in turn also limits its ability to act as a basis of assessment of the need for rebaselining.</p>		<p>which contingent or mitigating responses are developed (source: PMBOK Guide, PMI)</p> <p>From Project Control Mgmt Plan section 9.3.9 “Estimate Contingency Rundown” curves will be developed to forecast the usage of estimate Contingency over the Project life. The shape of the curve will not be driven by the base estimate cost flow profile, rather by the view on the materialization of key estimate uncertainties or tactical risks; as such the contingency rundown curve may have quite a different profile than the base estimate cost flow profile”</p>

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Section iv) Cost Management Compliance

Reference		Feedback	EY response
1 st paragraph	<p>Nalcor LCP team has established a reasonably conventional organization structure to support the management of the Program and the execution of the processes and controls. This organization structure has been staffed with experienced resources in key roles for related to the management, monitoring and control of the Program's cost.</p>	<p>We recommend replacing “a reasonably” with “an appropriate”</p>	<p>Our wording “reasonable” is appropriate.</p>
Detailed Observation 1	<p>A trend, quantified risk and/or early identification of potential variance have not been raised for the challenges on one key contractor, specially related to progress delays [Astaldi]. It is also not clear how the quantification of the related cost risk has been communicated in</p>	<p>LCP maintains it has raised and communicated the issues through all levels of management appropriately and has continually reviewed the situation in accordance with the Astaldi Contract, which at the time of the review and reporting periods remains with the Contractor to develop a solution. Quantification of an impact is not possible due to the terms of the Contract that maintains the figures as reported; this was discussed with the consultant.</p>	<p>Trend is the tools to communicate and capture these types of situations. Trend should be created in any case even if quantification of the impact cannot be determined.</p> <p>Quantification should appear either in a trend or in a risk. This is important so that OC is aware and can advise on the need to make suitable budgetary provisions.</p>

Reference	Feedback	EY response
	reporting, limiting the understanding of the scale of the risk or issue	Specifically, OC was not aware of the quantification of performance issues and their scale.
Detailed Observation 2	While cost risks are somewhat mitigated by the structure of the contract and the use of a quantity surveyor, the contractor's forecast are not fully used as a basis of the FFC.	<p>This is a compliance issue as the coordination procedure required the contractor to provide forecast cost and not all contractors are doing that (see Astaldi). Please see excerpt from Coordination Procedure, section 6:</p> <p>Cost Report: Contractor shall prepare a cost report to be included as a section of the Monthly Progress Report... (omission)... Within thirty (30) days of the Effective Date, Contractor shall submit to Engineer a sample cost report for Engineer's Acceptance. In general, the cost report shall address the following as a minimum:</p> <ul style="list-style-type: none"> a) Contract Price and all changes thereto; b) Forecast final Contract Price (previous period, current period and monthly variance); c) Reimbursable cost status, if applicable; d) Change Order status; e) Contract incurred cost flow (actual/forecast); and f) Invoice and payment status,

Reference	Feedback	EY response
Detailed Observation 3	FFC does not include trends for another contractor [Nexans] as a different system is used to track costs.	LCP team does not believe the review has appropriately reported the issue. The different system stated is irrelevant to trending and forecasting. Nexans forecast remains in line with projections thus no trending has been raised.
		including cash flow forecast by currency. Also There is a risk that the information provided by the contractor can vary significantly from what Nalcor is reporting. During the review we were made aware that PRISM does not have the functionality to track trends, therefore Nexans trend are not included in FFC. What is the process to track trend in case Nexans deviate from projections?

Appendix A

- CD0502 Alstom – Status of control Schedule baseline comment incorrect – Approved baseline was provided to the Reviewer.
- CT0327 Valard – Status of control Schedule baseline comment incorrect – Approved baseline was provided to the Reviewer, there is no re-baseline anticipated during the period of review.
- LC-SB-003 – Status of control Schedule baseline comment should add “due to change order issued”.

Appendix B

- Construction Power – 100% Complete according to the requirements of the IPS, secondary construction power elements are of contractors own need and both primary and secondary elements are included at the detailed component level.
- South Dam – The reference to South Dam under the IPS bar Chart relates to 1 particular area whereas in the Rosetta stone spreadsheet, South Dam and South transition dam are together. Thus only work has progressed on the South Transition dam not the South dam.
- 735kV AC – The particular area on the IPS bar chart shows work complete, however the IPS progress rosetta stone includes other areas whereby the 100% of the item noted accounts for an overall insignificant amount of progress.

Appendix C

Comments noted above under response to Section ii) Schedule Management Compliance – Detailed Observation 3.

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