



Boundless Energy



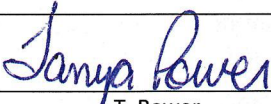

LOWER CHURCHILL PROJECT

MONTHLY PROGRESS REPORT

PERIOD ENDING: 30-JUNE-2016

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Section 1. EXECUTIVE SUMMARY

Scope and Purpose

This report covers the progress and associated cost pertaining to the Lower Churchill Project – Phase I (LCP) up to period end 30-June-2016. The scope includes all of the ongoing Engineering, Procurement, Construction and Project Management activities for Muskrat Falls Generation (MFG), Labrador Transmission Asset (LTA), and Labrador Island Transmission Link (LITL). Information pertaining to Newfoundland and Labrador Benefits and Aboriginal Affairs is excluded from this report and can be found at <http://muskratfalls.nalcorenergy.com> under Monthly Project Reports.

Health and Safety

Statistics registered during the period include 0 Lost Time Incidents; 4 Near Misses, and 2 High Potential Near Misses; 26 First Aid Incidents; 0 Medical Aids; and 23 Property Damage claims. Joint TapRoot, and technical investigations are continuing with respect to the collapse at the Muskrat Falls site in the prior period. Review of Strategic Roadmap to improve structure and process for health and safety management continues, with LCP Senior Management approval pending. Roll out of Line of Fire awareness campaign presentation update in progress; improvements under development to improve overall Safety Net inspection program, including counting rules and inspection strategy to ensure consistency amongst users. Safety recognition program is continuing regularly, with positive reports from field teams; revised standard for site handbook is awaiting final review and release for printing; and follow up to roll out of the revised Drug and Alcohol Standard is ongoing-providing responses to questions from Contractors and service providers pertaining to testing protocols. Learnings from table top drills conducted in May are in process of incorporation into the Project Wide Emergency Response Plan.

Environmental and Regulatory Compliance

All project Components were within regulatory compliance during the period, and environmental assessment commitments showed 411 completed, 38 on hold and 19 proposed. 28 recordable hazardous material spills (>2 liters) occurred during the period, with 1 reportable incident occurring under the CT0327-017 scope of work for Clearing and Access of the HVdc Transmission Line (Section 2 – Blocks 15 and 16) involving a spill of hydraulic fluid to the ground during malfunctioning of a foot valve on a harvester. During the period, 11 environmental monitoring reports were completed on various Contractors within the Muskrat Falls Generation (C1) scope; 25 under HVdc Specialties (C3) scope; and 374 under the Overland Transmission Line (C4) scope; an environmental audit was completed on the CH0032 Contractor for Supply and Install Powerhouse & Spillway Hydro-Mechanical Equipment; Transport Canada completed a site visit to the Dowden's Point Electrode Site under Contract CD0508-001; Marine Mammal Observer training sessions were completed under the Strait of Belle Isle scope; and recovery program and mobilization of an archaeologist to site under the Historic Resources Management Program commenced.

Quality

Quality performance during the period showed 89 non-conformances, 2 quality audits, 4 corrective, and 0 preventive actions issued during the period, along with 21 Factory Acceptance Tests.



Progress Highlights

Overall construction progress currently resides at 50.9% versus a plan of 67.6%. In June, the 2016 revised Authorization for Expenditure (AFE) was approved for the Lower Churchill Project, resulting from a Quantitative Cost and Schedule Risk Analysis completed for Muskrat Falls Generation, Labrador Transmission Asset, and the Labrador-Island Transmission Link based upon an assessment of risks to project completion and an analysis of the associated impact on cost and schedule. The revised planned dates (outlined in Section 10.1) reflect the high end (P75) of the probabilistic range of most likely outcomes resulting from this Risk Analysis. Although AFE Rev 3 has been implemented during the current reporting period, the aligned progress re-baseline will not be reported until July 2016.

The approved AFE (2016) is based upon the assumption that the CH0007 Contractor for the powerhouse (Astaldi) will remain on the project. During the period, the Contractor continued with concrete pour and placement activities, and formwork and rebar placement continued in the Powerhouse/Intake. Concrete placement for planned elements in the spillway discharge liner was completed, and drilling of rock anchors commenced; concrete aggregate crushing operation remobilized; and installation of the crane rail embedment plates continued.

Manufacturing continued under CH0030, Supply and Install Turbines and Generators. The last shipment of components from China is currently in transit to Goose Bay, and on schedule to arrive in early August. Manufacturing of primary anchor materials for the intake, powerhouse and spillway continued under Contract CH0032 for Supply and Installation of the Powerhouse Hydro-mechanical Equipment. Spillway installation is near completion, which is significant for activities associated with river diversion. Hoist towers and gate installation is ongoing, and second stage concrete is fully completed. Construction activities under Contract CH0024 for Construction of Reservoir Clearing – North and South Banks continued; approximately 22 hectares in three of the harvesting blocks were cleared, and work continued on the south side of the river, currently being accessed via river barges.

Excavation of the South Dam continued under Contract CH0009 for Construction of North and South Dams. Launch of the temporary bridge has been completed, along with construction of the by-pass road; batch plant and crusher erection activities continued; lowering of cofferdams 2 and 3 continued, and lowering of cofferdam 1 and drilling/blasting to remove the riverside RCC cofferdam commenced; screening and hauling of imperious fills to stockpiles continued, and stockpiling of rockfill along the riverside commenced. Construction activities continued at the North Spur under Contract CH0008 for Construction of North Spur Stabilization Works. Excavation continues, along with embankment construction in both the upstream and downstream areas; and work in the Kettle Lakes Area and on the Northwest Cut-off Wall commenced. There is continued schedule pressure with the CH0032 contractor with respect to the target dates for River Ready for Diversion. Recovery and mitigation plans are ongoing with the CH0032 and CH0009 Contractors, however despite this slippage the river diversion schedule is not considered to be at significant risk. The schedule for stabilization works currently aligns with the revised 2016 Authorization for Expenditure, and is not critical for the planned Winter Headpond (elev. 25 m) milestone date.

Construction activities for the HVac Transmission Line in Labrador under CT0319 continued to progress during the period. As previously reported, by the end of May 100% of the required foundations, anchor installation, testing, tower assembly and erection, and conductor stringing on the 315 kV line from Churchill Falls to Muskrat Falls was completed, with slack span connections to the gantries at each end remaining. Although installation of all quantities has been completed, reclamation and rework on some foundations is ongoing and expected to be completed in August. Preparations have commenced for the upcoming construction

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work of the 735 kV interconnect at Churchill Falls. All materials have been received for the HVac transmission line; the Labrador marshalling yard operation is ongoing and continuing to support the transmission line construction activities.

Work is continuing on the preparation of management, technical, and procurement deliverables for Construction of AC Substations under CD0502, along with civil works and building services' activities at both the Muskrat Falls and Churchill Falls sites. Mass backfilling around gantries and equipment foundations continued at Churchill Falls, along with work on the Churchill Falls extension outside of the CF(L) Co fence line; the pre-engineered control building is currently in transit to site. At Muskrat Falls, the GIS building concrete repairs continued with cutting and demolition work; framework assembly commenced. Assembly and dressing of the transformer units continued at Churchill Falls during the period under PD0537 for Supply of Power Transformers, AC Substations; assembly and dressing at Muskrat Falls is scheduled to commence by late July/early August.

Construction activities continued for the HVdc Transmission Line under CT0327 and by the end of June, quantities produced for Workfront 1 (of 3) in Labrador were as follows: 893 foundations installed, 1043 towers assembled and 780 erected, out of a total of 1288; 748 guy anchors tested, of the 792 installed, against an overall total of 1151; and 153,331 metres of conductor stringing out of a total of 396,205 metres, was completed. Construction activities for Workfront 2 (of 3), encompassing Shoal Cove through the Long Range Mountains, are progressing, and by the end of June quantities produced were as follows: 141 foundations installed, 122 towers assembled and 62 erected out of an overall total of 684; and 44 guy anchors tested, out of 56 installed, out of an overall total of 547. Construction activities are progressing on Workfront 3, encompassing the Long Range Mountains to Soldiers Pond, following commencement in the previous period, and by the end of June 37 foundations had been installed, and 22 towers assembled. Stringing operations for the HVdc transmission line were officially suspended on 06-June-2016 in order to facilitate an investigation by LCP into the root cause of a protruding strand anomaly observed on the as-installed conductor. During the current period the root cause investigation centred around exploring issues related to conductor design and manufacturing, while testing of the as-delivered conductor commenced at a third party testing facility in Ontario.

As previously reported, the final delivery of HVdc transmission line towers has arrived from Texas, Dubai and India, with receiving, storage and handling activities at both the Port of Argentia Marshalling Yard and the Labrador Marshalling Yard to support HVdc construction ongoing. ROW Clearing and access development of the HVdc Transmission Line under multiple packages for CT0327 is ongoing with approximately 2,981 hectares cleared to date in Newfoundland representing 71% complete of the clearing required on the Island, and 100% of the clearing required for Labrador fully completed in February; all clearing and access works is on target for completion by the end of 2016. LCP continues to work with the CT0327-001 Contractor to increase overall production in both Labrador and on the Island.

Nexans cable installation vessel, the Skagerrak, completed its transit from Norway during the current period, arriving in Newfoundland 19-June-2016, marking a significant achievement for the Marine Crossings scope of work. The vessel contained approximately 5000 tonnes of cable, including all three submarine cables, as well as the spare cable. Personnel mobilization has been completed and the vessel has commenced transit to the Straits, remaining on schedule to commence work in early July. Civil works has progressed, with all anchor and winch foundation work at both sites now completed, as well as the arrival of winches and wires at site, and completion of foundation placement and load testing; spare cable turntable manufacturing is nearing completion and ready for FAT.



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Work is continuing on the preparation of management, technical, and procurement deliverables under contracts CD0501 for the Supply and Installation of Converters and Cable Transition Compounds, CD0502 for Construction of AC Substations and CD0534 for EPC Synchronous Condensers at Soldiers Pond. Civil works activity for the Soldiers Pond Switchyard and Converter Stations at Soldiers Pond and Muskrat Falls continued during the period. At the Soldiers Pond Switchyard, delivery of the pre-engineered control building has been completed with full assembly scheduled for mid-July; assembly and dressing of the transformers continued and is scheduled to be complete by late July. At the Soldiers Pond Converter Station, roofing insulation is in progress, and interior steel of the Control Building has been completed. At Muskrat Falls, work is ongoing and progressing with the floor slabs inside the valve halls and control building. Valve Hall floor grinding has been completed; and raft foundations poured for the Pole 2 transformers. Offsite, fabrication of the converter transformers continues; FAT's have been completed for four of the transformers for Muskrat Falls, as well as one for Soldiers Pond as previously reported. Civil works at the Transition Compound site is ongoing at both Shoal Cove and at Forteau Point, with placement of pre-cast and pouring of cast-in-place in progress, and grounding ongoing at Shoal Cove. Civil works activity under CD0534 progressed at the Soldiers Pond site - roof installation, along with electrical conduit and various civil works continued; grounding connections have been made, however, will require re-work. Installation of oil/water separator tank, along with oil filling of main step-up transformers has commenced; and offsite activities are continuing.

Cost

In June, as noted above, the 2016 revised Authorization for Expenditure (AFE) was approved for the Lower Churchill Project resulting from a Quantitative Cost and Schedule Risk Analysis completed for Muskrat Falls Generation, Labrador Transmission Asset and the Labrador-Island Transmission Link based upon an assessment of risks to project completion and an analysis of the associated impact on cost and schedule. The revised budget reflects the high end (P75) of the probabilistic range of most likely outcomes resulting from this Risk Analysis. The overall project budget is now \$9.126B.

As of period end 30-June-2016, project to date incurred cost was \$4,915B, exclusive of all interest and project debt financing costs, while committed costs totalled \$6,857B. Incurred cost for the period was \$247.7M, and is aligned with the incurred cost flow for the 2016 revised AFE.

CCB changes this period are a direct result of the approved AFE Rev 3, resulting in an overall project increase of \$1,473 broken down as follows: MF-\$959M; LIL-\$258M; LTA-(\$6M); Contingency-\$264M. Primary drivers for the increase in budget include an increased requirement for more direct project management and additional costs to other Contractors due to schedule delays stemming from poor Contractor performance; increased services to accommodate additional manpower at the Muskrat Falls site; market conditions and pressures which is increasing the price of the work and the contracts required for Muskrat Falls Generation, including labour productivity matters as well as foreign exchange impact (now incorporated into the capital cost); design enhancements and interfaces which have accounted for scope changes and the need for additional quantity of materials, including those associated with the HVdc Converters and Transmission Line construction, in particular permanent access to the line which will improve future reliability. An adjustment to FFC has subsequently been made in order to align with the updated CCB as follows: MF-\$958M; LIL-\$237M; LTA-\$4; Contingency-\$275M.

The increase in commitment during the current period is due to the award of additional scope to clearing and access contracts for the HVdc Transmission line (CT0327-011 and CT0327-013); an increase to the CH0007 Contract for Construction of the Intake, Powerhouse, Spillway and Transition Dams to cover the Labour portion of the LMAX value; the addition of the currency impact cost to date as described above; and indirect costs.

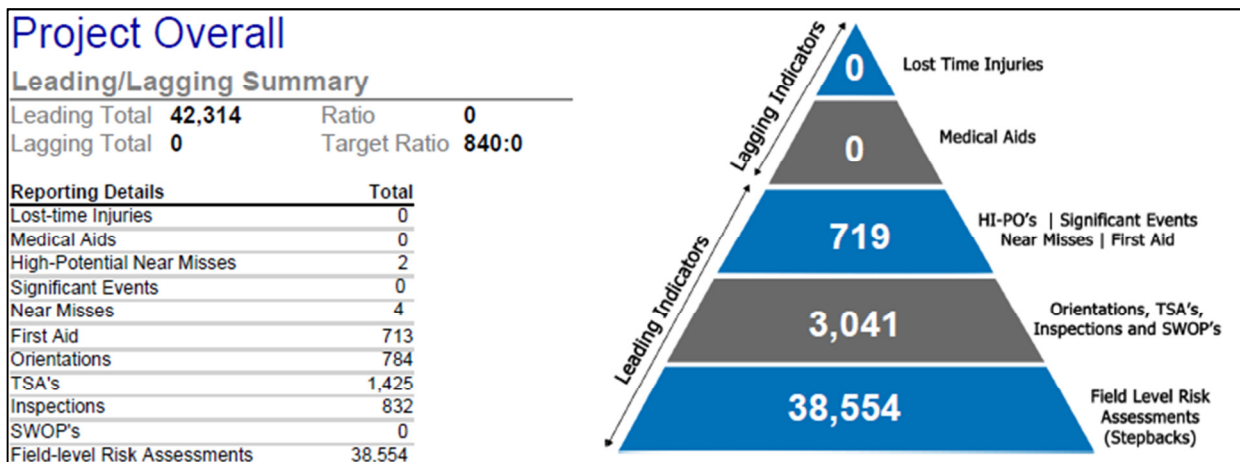
Key Priorities/Issues & Opportunities

- The performance of CH0007 Contractor, Astaldi Canada Inc., continues to trend behind plan, however, significant work is being undertaken to resolve issues with the Contractor. This month the Project schedule has been updated to reflect the current forecast of the Muskrat Falls scope, and development and review of the C1 workplan remains an ongoing activity. The current forecast dates are reflected in Section 10.1.
- In relation to other Contractor performance, schedule slippage is continuing to materialize across all assets. A strong management focus is being applied to resolve issues experienced by Contractors to limit potential future cost/schedule exposure, including increasing oversight to support & intervene as required.
- Contractor failure/abandonment can result in significant cost and schedule impacts despite contract securities being in place: LCP will continue to ensure confirming financial stability of contractors prior to award and monitor any contractors that are considered to have increased financial risk.
- Final Project Integration: LCP is pro-active in establishing the organization, processes, and procedures required; and has established specific teams to manage the Contractors and ensure readiness for commissioning and Startup, with efforts to ensure good planning & definition is developed.
- Building the Operations Organization: Internal coordination is ongoing with the Operations Team, and a road map identified to build the operations organization.
- To manage the increase in lagging frequencies, LCP continue to develop and implement various programs and procedures in ensuring safety is the number one priority, and targets for lagging frequencies are achieved. Roll out of the tool box talk program to all components has been completed, and the incident classification scale model now in use following official approval from Corporate Health and Safety.

Section 2. HEALTH, SAFETY AND SECURITY

2.1 MONTHLY STATISTICS

Description	Month	Year to Date	Total to Date	Comments
Hours Worked	920,002	4,251,490	23,246,648	June Estimate
Lost Time Injuries (LTI)	0	2	11	
Medical Aids	0	8	72	
TRIFR	3.26	2.92	2.33	Target=1.0
LTIFR	0.00	0.09	0.10	Target=0.0
AIFR	0.00	0.47	0.71	Target=1.0
Note 1: Total to Date: From January 2008 to present.				



Note:

1. Monthly Statistic Overview reported under Section 2.1 is based on estimated hours at month end.
2. Reported Total to Date is based on a June 1, 2006 start date for data compilation.
3. Formula for TRIFR: $((LTI + MA + MWC + OI) * 200000) / \text{Number of Hours Worked for the Period}$.
4. Formula for AIFR: $((LTI + MA) * 200000) / \text{Number of Hours Worked for the Period}$.
5. "Other Contractors" include all Contractors other than the EPCM Contractor (SLI), but does include hours expended by SLI outside of the EPCM contract.

2.2 HIGHLIGHTS

- Incident log registered for period ending June 2016:
 - 0 Lost Time Injuries (LTI).
 - 0 Medical Aids.
 - 26 First Aid Incidents.
 - 4 Near Misses and 2 High Potential Near Misses.
 - 15 Modified Work Cases (formerly labelled as "Restricted Work Cases").

- Safety Recognition Program: Program rolled out in early March; positive responses have been received on the program from field teams.
- Site handbook: Handbook changes have been finalized; revised standard in circulation for signatures; awaiting final review and release for printing.
- Project Wide Emergency Response Plan (ERP): Review and updates completed; 7 ERP tabletop exercises conducted to test the EOC process. Exercises went well, with significant learnings. EOC exercises held at the Muskrat Falls site. One additional exercise to be completed at Torbay Road and then full EOC exercise (incorporating site and CEOC) planned. Learnings from table top drills are being incorporated into the plan, which will be re-issued once all changes have been included.
- Safety Net Updates: Improvements in development to improve overall inspection system, including counting rules and inspection strategy to ensure consistency amongst users; will be revisited once the TapRoot investigation is complete.
- Management Inspections: Process developed to increase management visibility in the field; management inspection forms developed and converted into pronto forms; roll-out will be revisited once the TapRoot investigation is complete.
- Strategic Roadmap: Strategic Health and Safety Roadmap continues in development to improve structure and process for Health and Safety Management. Implementation of the Plan, Do, Check, Act Continuous Improvement Model; roadmap has been completed and is being reviewed at the Senior Management Level; awaiting comments.
- New or inexperienced worker hard hat program: Program has been approved and rolled out to Contractors. Overall compliance has been good; however, some contractors have been slow with the roll out. This issue was discussed with these contractors and implementation has proceeded.
- Line of Fire: Development of a Line of Fire Awareness campaign continues, to raise awareness of line of fire incidents; stickers have been received, with presentation to be finalized and delivered to Contractors by component HSSER leads/advisors; roll out scheduled for July.
- Incident Investigation Standard: Standard will require updating in order to reflect the LCP incident actual and severity scales, as well as the risk ranking matrix. Work is ongoing and will be revisited once the TapRoot Investigation is complete.
- Revised Drug and Alcohol standard previously approved – current providing responses to questions from Contractors and service providers with respect to particulars concerning the standard testing protocols.
- Internal Audit: Currently delayed due to ongoing investigation into the incident at Muskrat Falls.
- Muskrat Falls Generation:
 - Finalized UAV Flight Procedure.
 - Conducted inaugural Site Safety Steering Committee Meeting.
 - Communicated Lightning protocols for the Muskrat Falls site. (LCP and Contractor).
 - Roll-out of the new LCP Standard for Drug and Alcohol.
 - Completed quarterly inspections on LCP Fall Protection equipment.
- HVdc Specialties:
 - 83 Positive incentive cards issued across C3.
 - 1 Modified Work Case.
 - Commenced roll out of "In the Line of Fire" Campaign.
 - Completed 94 field inspections encompassing all C3 sites.
 - Commenced work in live switchyard in Churchill Falls; OHS Visit at Soldiers Pond.

- Overland Transmission Lines:
 - Safety Alerts generated for Dust generation on ROW trails, checking of Float Pins on trailers, Bolting and Torquing best practices, GFCI's, Impact from Compressed Air, Stroke Awareness, Hoodies and Ball caps, Implosions on Transmission Line works, Housekeeping Tips, Checking Fire Water Pumps, Physical barricading of Fuel storage, Curbs and Delineators on bridges, as well as Travelling Public on Resource Roads.
 - Participated in Kickoff of safe work operations for MKSL (clearing/access Contractor on Long Range Mountains).
 - Executed final successful Highway road crossing line pull operation near Soldiers Pond.
 - Finalized ERP development and abridged the safe work plan gap analysis for final clearing/access contract on Great Northern Peninsula; i.e. Mike Kelly and Sons.
 - Participated in quarterly IBEW 1620 meeting with LCP Senior Management.
 - Finalized approval of NxBurst for Construction use.
 - Coordinated transitioning of medical coverage responsibility for Part B Construction Contractors.
 - Finalized re-reviews of Contractor Safe Work Activity Plans (SWAPS).
 - Distributed Line of Fire stickers for hard hats.
 - Concluded approval of JCL planned safe execution of River Crossings to access Reservoir clearing blocks in Labrador.
- HSSER Management Team:
 - Continued with Joint TapRoot investigation with Astaldi.
 - Significant revisions to the Security Management Plan were made to further incorporate procedures for protests/civil unrest; will be submitted for review next week.
 - Incorporating Lessons Learned from Drills it to the Project Wide Emergency Response Plan; will be submitted for review after meeting with Muskrat Falls, C3 and C4 HSSER Personnel.
 - Provided additional clarification on the recently revised Drug and Alcohol Standard to Service Providers to ensure better understanding from all affected parties.
 - Significant changes to the Muskrat Falls Medical Response Procedures; to be submitted to Muskrat Falls HSSER Personnel before final review.
 - Conducted review (with revisions) to the Critical Risk Protocols; will submit for review by end of July.
 - Review of Bear Issue for C&T and Concerns Expressed by DNR, along with Environment. Jointly recommended the acquisition of a Bear Trap for use at the site with mobile capabilities.
 - Reviewed Muskrat Falls Site Handbook prior to final printing and forwarded to LCP Training Department.
 - Reviewed Audit Finding for recent Valard Audit, with recommendation for several changes to the document.
- Security Status for the period:

VSO	629
Orientations/access cards printed	449
Foot patrols	708
Mobile patrols	425
Vehicle searches	264
Baggage searches	763
Fire calls/alarms	6
Radar checks	2,006
Speeding warnings	20
Speeding/parking violations	11

- Fire Response Team:
 - 0 fire calls
 - 4 false fire alarm calls – camp.
 - 5 assistances to medical calls.
 - 26 training sessions under NFPA.
 - 515 Life Safety and Fire Prevention Patrols.
 - 777 daily fire alarm panel inspections.
 - 25 monthly fire alarm testing.
 - 260 monthly fire extinguisher inspections.
- Attachment 14.1 includes the Safety Statistics; and attachment 14.2 the detailed Safety Incidents Log for the current reporting period.

2.3 ISSUES & OPPORTUNITIES

- Joint TapRoot and Technical Investigations are continuing into the significant incident (classified as a HPNM) which occurred at the Muskrat Falls Site on 29-May-2016, involving the collapse of a section of Draft Tube No. 2 at the Powerhouse resulting in 5 workers (employees of Astaldi) falling to lower level. As previously reported, no serious injuries resulted.

2.4 ACTIVITIES PLANNED FOR THE UPCOMING PERIOD

- Muskrat Falls Generation:
 - Distribute Field Guide for Heat Stress Management.
 - Develop distribute Safety Focus for Manual Material Handling.
 - Review and revision of ERP for work at the MF Chlorination building.
 - Integrate C1 by-pass road into existing Traffic Management Plan.
- HVdc Specialties:
 - Kick off and monitor activities at 3 Repeater site locations.
 - Track close out actions from OHS inspection at Soldiers Pond.
 - Schedule Audit for GE/Power under CD0534.
 - Support mobilization of new contractors and subcontractors for changing scopes of work at all 3 sites.
 - Fill vacant HSSER Advisor Position.
 - Complete review of H&S plan for Telecoms Contractor.
- Overland Transmission Lines:
 - Continued Contractor Orientation Awareness and Respect of Island construction concerns.
 - Conclude focus on larger ERP mock drills for forest fire potentials.
 - Continue to develop targeted mini auditing tools for field use.
 - Continue to assess Work, Services, and Transportation's concern for crossing over passing lanes.
 - Continue to provide safety and medical oversight for Long Range Mountain and Island Central Blocks ROW clearing/access on DC Line (Island).
 - Conclude Component wide Audit of Valard Construction operations.
 - Continued focus on Forest Fire prevention, Bear Awareness, Hand Protection, and Young Worker program implementations.

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- HSSER Management Team:
 - Coordinate and Prepare an HSSER Review of Astaldi Health and Safety Performance.
 - Coordinate and Participate in Corporate Audit of LCP HSSER Risk Related Issues.
 - Coordinate and Present Monthly HSSER Meeting on 19-July-2016.
 - Participate in Coordination Meetings and Planning for River Closure and Diversion.

Section 3. ENVIRONMENT – REGULATORY COMPLIANCE

3.1 HIGHLIGHTS

- Environmental Engineering and Technical Support:
 - General
 - Ongoing daily environmental monitoring at various construction sites project-wide.
 - Issued B2 version of Waste Management Plan.
 - Held an EMC AGM in Sheshatshiu on June 7.
 - Completed interviews for fall 2016 engineering work term students.
 - Muskrat Falls Generation:
 - Water quality samples were collected on a weekly basis from D1, D2 and D3 due to TSS exceedances. TSS exceedances reported at each location are listed below and mostly contributed by frequent and high precipitation events. Sampling will continue on a weekly basis until four compliant sample sets are obtained.
 - D1 ranged from 51 to 1,300 mg/L;
 - D2 ranged from 128 to 367 mg/L; and
 - D3 ranged from 200 to 1,400 mg/L.
 - Closed out all Environment and Regulatory Compliance (ERC) action plans related to P1A (i.e. River Diversion).
 - Ongoing implementation of action plans developed for P1B (i.e. Winter Headpond Formation).
 - Waste management improvements have been observed.
 - Continued to work with SH0022 Contractor (Fuel Dispensing and Supply) on closing out items from environmental audit.
 - Provided ERC overview to SH0022 Contractor (Fuel Dispensing and Supply) which outlined environmental requirements and expectations to new Contractor environmental representatives.
 - Increased wildlife observations throughout the Site.
 - Installed culverts for temporary C1 bypass road.
 - Completed environmental audit on CH0032 Contractor (Gates).
 - Prepared more robust ERC dashboard for site which outlines items such as, but not limited to, fuel, water and quarry quantities, NCRs/CARs, etc.
 - Prepared and issued monthly water quality report for Generation Site.
 - No (0) Corrective Action Reports (CARs) were issued to Contractors in June, however, one Non-Conformance Report (NCR) was issued.
 - NCR-SH0022001-0014 issued to the SH0022 Contractor (Fuel Dispensing and Supply) due to lack of spill reporting and inaccuracy of spill reporting.
 - 11 environmental monitoring reports were completed on various Contractors in June.
 - HVdc Specialties:
 - Quarterly water quality samples were collected, as well as weekly samples due to the TSS exceedance of 49 mg/L. TSS exceedances are associated with high precipitation events. Sampling will continue on a weekly basis until four compliant sample sets are obtained.

- Ongoing transformer oil transfers at CD0502 (Churchill Falls AC Substation) and CD0534 (Synchronous Condensers).
- Transport Canada completed a site visit at CD0508-001 (Dowden's Point Electrode Site) on 28-Jun-2016 as part of their monitoring program.
- Providing guidance to LCP Construction and Contractors regarding sedimentation at CD0502 (Churchill Falls AC Substation).
- Potentially contaminated soil observed in excavation in Switchyard Extension at CD0502 (Churchill Falls AC Substation). Soil quality samples were collected and analyzed for PCBs, BTEX and F1-F4. PCBs, benzene, ethylbenzene, xylenes, F1 and F4 were reported as non-detect. F2 and F3 were detected but below the CCME Soil Quality Guidelines for Protection of Environmental and Human Health.
- No (0) CARs or NCRs were issued to Contractors in June.
- 25 environmental monitoring reports were completed on various Contractors in June.
- Overland Transmission Lines:
 - Merged all daily environmental reports into one consistent template for use going forward (Prontoforms).
 - Avifauna Surveys continuing for areas that needed to be cleared. (CT0327-017, CT0327-0051, CT0327-024 and CT0327-001)
 - Work continuing for Blocks 15 and 16 (CT0327-017: Badger to Clarenville). OSEMs monitored for water quality issues, quarry & borrow remediation as well as new access being constructed.
 - Clearing and Access Work ongoing for the Avalon Peninsula Clearing and Access contract, Blocks 17 and 18 (CT0327-0051: Clarenville to Soldiers Pond).
 - Continued environmental monitoring of tower construction for 230kv HVac line re-route beginning from Soldier's Pond to Dowden's Point (CT0324-002).
 - Clearing and Access Work ongoing for the Long Range Mountains contract. Buffer flagged for the Main River Provincial Park, and signs were erected by Parks to limit public access. (CT0327-024)
 - The set-up is ongoing for the Valard Birchy Narrows Camp (DC6), that will be fully open mid-July (CT0327-001)
 - Work fronts were re-opened on the Forteau end for tower construction (Valard) as well as clearing and access (C&T Enterprises). (CT0327-001 & CT0327-011)
 - Tower construction and access road works continuing on St. Pauls River Road workfront. (CT0327-001 & CT0327-013)
 - Conducted wildlife surveys along the transmission line in Labrador for Caribou when they were reported within proximity to workfronts. (CT0319-001 & CT0327-001)
 - NCR-CT0327001-0012 was issued on 14-Jun-2016 regarding clearing work for stringing pad preparation at S1-466, S1-440, and S1-439 without engaging LCP Environment to conduct avifauna pre-clearing surveys. This resulted in the clearing of three separate areas where avifauna surveys had not been conducted.
 - NCR-CT0327-051-001 was issued on 23-Jun-2016 regarding access construction work conducted in close proximity to watercourse WCd-74, which resulted in accidental excavation of a section of the stream bank. Additionally, watercourse WCd-74 was forded by an excavator without reassessing the site to ensure that compliant fording conditions were met.

- CAR-CT0327-001-002 was issued on 13-Jun-2016 regarding dewatering operations at structure S2-364 where the water was being directed close to watercourse WCd-453b. The crew was redirected to redirect the hose and no sedimentation was observed in WCd-453b. Crews were advised to be aware of flagged watercourse locations when completing dewatering work.
 - CAR-CT0327-001-003 was issued on 24-Jun-2016 regarding large amounts of construction waste remaining at S1-543, S1-272 laydowns, and S1-129. It was advised that all solid waste at the sites must be properly disposed of as soon as possible, as it may cause human safety and health concerns, public access/visibility concerns, and could affect wildlife in the regions.
 - 374 environmental monitoring reports were completed on various Contractors in June.
 - Strait of Belle Isle (SOBI):
 - Marine Mammal Observer (MMO) training session completed on 24-Jun-2016.
 - Marine mammal and turtle observations commenced from the ice monitoring vessel. Observations are being submitted via ProntoForms.
 - No CARs/NCRs issued to Contractors.
- Regulatory Compliance:
 - Permit applications submitted for Mike Kelly and Son's Bateau Barrens and Taylor's Brook Camps:
 - Building Applications;
 - Permit to Construct a Sewage Disposal Systems; and
 - Food Establishment Licenses.
 - Culvert installation amendments approved for Arnold's Cove, Whitbourne and Harbour Main PPWSAs.
 - Amendment for upgrading existing roads and construction of new access roads for Gander PPWSA submitted.
 - PPWSA variance request for upgrade to existing roads and construction of new access roads in the Port Blandford, Arnold's Cove and Clarendville PPWSAs
 - Nuisance bears have presented a potential safety issue at project work camps. Wildlife Enforcement with the Dept. of Natural Resources have been consulted and deployed to manage the issue. Consultation with DNR has suggested that they do not have the resources to manage the bear situation across project campsites. The recommendation was for LCP to purchase bear traps, DNR to train LCP personnel in their use, and for LCP to provide DNR access to helicopters to relocate captured animals.
 - Amendment for the HVdc transmission line Reroute within the Whitbourne PPWSA submitted
 - Received the Permit to Burn for the operation of the DC2 St. Paul's River Camp incinerator.
 - Quarry acquisition is ongoing:
 - Contacting each referral agency to facilitate approvals, currently working with municipalities on Avalon
 - Additional Segment 2 quarries (ongoing additional requests)
 - Bateau's Rd Quarry and Sunday Pond Rd Quarry
 - Blocks 15/16 additional capping quarries (ongoing additional requests)
 - Blocks 17/18 (working on filling in gaps and getting outstanding applications approved)
- Historic Resources Management:
 - Archaeologist mobilization to site on 16-Jun-2016.
 - Recovery program commenced 20-Jun-2016.
 - Weekly reports will be available throughout the season to monitor progress.

- Aquatic:
 - Preparations for 2016 field program ongoing.
- Avifauna Management:
 - 2016 directed surveys commenced:
 - 8 nests protected at Muskrat Falls sites
 - Muskrat Falls main site clearing activities in support of CH0009 work scope (North and South Dams)
 - Muskrat Falls north side clearing activities in support of CH0024 work scope (Reservoir Clearing)
 - 82 nests protected at HVdc sites
- Environmental Effects Monitoring:
 - Ongoing monitoring and reporting of island caribou for the environmental effects monitoring program.
 - Weekly Threatened Labrador Caribou Report prepared and submitted to Wildlife Division.
 - Ongoing monitoring and mitigation for the Labrador caribou herds. Sensitive calving period for Red Wine Mountain caribou begins on May 30 and continues until July 15.
 - Preparation of maps to provide a bi-weekly update of construction activities to the general public.
 - Avifauna point count surveys for the Avifauna EEM Program.
 - Answering questions from the public on the beaver harvesting program planned for
 - Preparing material for public on methylmercury
- Environmental Assessment Commitments:
 - Ongoing review and updating of 450+ commitments, including adding documentation of how commitments are being met.
 - Requesting variances from the regulator where commitment is no longer appropriate.
- Attachment 14.3 includes a detailed listing of Environmental Incidents for the current reporting period as well as a summary of occurrences ≥2L since January 2014.

3.2 ISSUES & OPPORTUNITIES

- Methyl Mercury and aquatic environmental effects monitoring questions.
- Increased attention from the public and Aboriginal groups (and subsequently regulators) on methylmercury monitoring and mitigation.
- Monitor the migration of Caribou herds into calving areas, implement buffer zones and mitigation measures as mandated in our Permit authorizations.

3.3 ACTIVITIES PLANNED FOR THE UPCOMING PERIOD

- General:
 - Prepare Environmental Audit Summary Report for CH0032 Contractor (Gates).
 - Ensure Spillway areas are free of loose waste, debris, etc. prior to diverting the river.
 - Prepare and issue monthly water quality report for Generation Site.
 - Submit variance request to ENVC WRMD regarding reducing sampling parameters required under ALT6700.
 - Continue to update ERC Readiness Checklist for Winter Head Pond (P1B) on a weekly basis.

- Obtain feedback from CH0007 Contractor (Intake, Powerhouse, Spillway, Transition Dams) regarding changes to the next revision of the Prescribed Burn Plan, Prescribed Burn Approval Form and Prescribed Burn Execution Form.
- Prepare lessons learned and positive observations for pilot burn of inert debris (i.e. cardboard and untreated wood) and communicate to CH0007 Contractor (Intake, Powerhouse, Spillway, Transition Dams).
- Continue to complete avifauna surveys for Contractors, as required.
- Finalize site rehabilitation requirements applicable to each contract and Company owned facilities (e.g. camp, sewage treatment plant, water wells, etc.).
- HVdc Specialties:
 - Review historical water quality data for Soldiers Pond and determine sampling parameters to be removed and submit variance request to ENVC WRMD.
 - Submit Environmental Completions Certificate for CD0508-001.
 - Review CD0501 (Converter Station) and CD0502 (AC Substation) Environmental Protection Plans.
 - Prepare Q2 water quality report for Soldiers Pond.
 - Continue to collect weekly water quality samples at Soldiers Pond until four compliant sample sets are obtained.
 - Transport Canada to complete a site visit at CD0508-001 (L'Anse au Diable Electrode Site) as part of their oversight and monitoring program.
- Overland Transmission Lines:
 - Continue culvert and bridge condition as-built assessments (Prontoforms).
 - Continue quarry and borrow pit rehabilitation on the AC/DC transmission lines.
 - Continue reclamation work effort for completed tower construction areas on the AC/DC line in Labrador.
 - Continue environmental oversight on Tower Construction works across workfronts in Labrador and Newfoundland (Contract CT0327-001).
 - Continue environmental oversight on quarry and final remediation work in the Upper Humber (Contract CT0327-014)
 - Continue environmental oversight on clearing, access and remediation work for Blocks 15 and 16 (CT0327-017: Badger to Clarendville).
 - Continue environmental oversight on work headings in Segment 5 (Blocks 17 &18) Contract CT0327-051
 - Continue to use GIS-based stream crossing reporting program.
 - Continue wildlife surveys on an as needed basis.
 - Working with contractors to implement a spring/summer bear awareness campaign to reduce impacts on wildlife and residents at remote work camps.
- SOBI:
 - Continue to monitor marine mammals and turtles during cable laying work scope.

Section 4. QUALITY ASSURANCE

4.1 HIGHLIGHTS

- Re-organized laboratory testing resources for MF Generation to ensure lab services are adequately provided to all customers
- Rolled out work instruction on the control of external non-conformances.
- Resolution of 2 open Corrective Actions Reports from 2014; disposition has been agreed.
- Third Party testing of powerhouse reinforcing bar and structural steel continues with good results.
- Muskrat Falls Generation:
 - Under CH0007 for Construction of the Intake, Powerhouse, Spillway and Transition Dams, started grouting the rails and base plate on the CTU; completed all punch list items for the Separation Wall; Anchor Bolts post survey report submitted to LCP; meeting on CH0030 post pour survey requirements; and SuperMetal ITP approved. Ongoing work includes progressive sign off for rebar, formwork, and waterstop for upcoming pours; monitoring and walk downs for Spillway, CTU and NTU structures; inspections of Piping and Pipe Packages; signoffs and work on Astaldi Master Punch list for spillway diversion; and material testing.
 - NCR and completions processes for the Construction of North Spur Stabilization Works, CH0008, have been reviewed; lab testing ongoing, and quality surveillance ongoing.
 - Bridge fabrication completed under CH0009 for Construction of North and South Dams, and repair procedure for temporary bridge launch nose approved and repairs completed. Ongoing work includes the continuation of screening, hauling and stockpiling of aggregates being produced at GD8 and TD7; grouting for south dam curtain wall; Batch plant erection; set up of crusher; and documentation review.
 - Most fabrication and manufacturing in China under CH0030 for Supply and Install Turbines and Generators is completed, and shipping is in progress and Oil Head Assembly near completion. Ongoing work includes TPI surveillance of non-China scope; scheduling of TPI surveillance of stator bars; and R02 MRBs review.
 - Under CH0032 for Supply and Install Powerhouse and Spillway Hydro-Mechanical Equipment, quality surveillance checks for the Stoplogs, Roller Gate, Guides, Draft Crane, Intake Hoist, Spillway Towers, etc.; MRBs reviewed for the Stoplog/Gate fabrications (Sinohydro); witnessed final dimension checking according to each measurement plan; installation of Bay's 3 and 4 tower and tower bridge assemblies; and installation of Bay's 1 and 2 MCC's and connections. Ongoing work includes LCP Material Testing of steel in China; documentation review in support of LCP quality releases, inspections of painting touch-ups and weld repairs for all bays, S1, S2, and SRG guides in preparation for final sign-off; witness bridge installation and hoist towers erection; and sign-off of NCRs and turnover documentation.
- HVDC Specialties:
 - Increased visibility of Contractor Group NCRs; alignment of Quality processes between GE/Alstom Grid packages via LCP quality coordinator reassignments; corrective action issued to contractor to reinstate Concrete works at Muskrat Falls under CD0501 for Supply and Install Converters and Cable Transition Compounds (EPC). Ongoing work includes Quality Plan, ITP and Manufacturing Release reviews; converter Transformer manufacturing, with witness and Hold points monitored by LCP Inspector; and supporting resumption of MF concrete pours.
 - Factory Acceptance Test completed for the HV Equipment: 800 kV Current Transformer from Germany, 800kV and 315kV Post Insulators from France; prototype test of Gantries from Turkey for Muskrat Falls substations completed; and shipment of 245kV Instrument Transformer from Germany and USA to Soldiers Pond site

completed under CD0502 for Construction of AC Substations. Ongoing work under CD0502 includes Quality Plan, ITP and Manufacturing Release reviews; Converter Transformer manufacturing, with witness and hold points monitored by LCP Inspector; and support of resumption of MF concrete pours.

- CARE (Customer Acceptance and Review Process) was effectively utilized to require GE/Alstom Power to have LCP approve all purchases of critical equipment; Hydrostatic Test of Unit 3 stator frame completed; Rotor Rim Unit 2 machining including NCR treatment completed; and limited NTP provided for IPB under CD0534 for Supply and Install Soldiers Pond Synchronous Condensers. Ongoing work includes Company surveillance of Stator frames fabrication, rotor rim and flywheel machining, collector shaft machining, and Pole manufacturing.
- Transformers manufacturing completed, with quality release provided and items placed in final pad at sites under PD0537 for Supply of Power Transformers; compilation of final documentation continues.
- Overland Transmission Lines:
 - Reviewed and processed a total of 2,402 (HVac & HVdc) QC/QA documents; began processing and review of HVac Notices of Completion; participated in contractor internal audits in Forteau (HVdc); and reviewed and witnessed HVdc conductor samples for FAT/routine and type tests at TPL under CT0319 for Construction of 315 kV HVac Transmission Line and CT0327 for Construction of 350kV HVdc Transmission Line.
 - Ongoing work under CT0319 and CT0327 includes remediation plan for strung concrete foundations; core testing for remainder of HVac concrete foundations; follow-up on resolution of CARs/PARs issued during quality audit; reviewing Material Test Records (MTRs) for H-pile and Micro-pile materials; working with contractor on reviewing and closing out on-hold documentations; updating tracking database for ongoing concrete rework in both HVac and HVdc lines; on-hold QC/QA documents monthly report for HVac & HVdc; micro pile ITP final submission by contractor; review and implementation of improved field documentation process proposed by site and office quality team; Investigation teams from Manufacturer, Contractor and LCP are reviewing the resolution of HVdc conductor popping issues.
 - Under PT0308 for Supply of Steel Tower Foundations-350 kV HVdc, working with supplier to resolve MTR issues such as incomplete Charpy test results, mechanical testing and possible over usage of plate material.
 - Dubai scope completed and documentation received under PT0330 Supply of Steel Towers – 350 kV HVdc. Quality documentation ongoing.
- Strait of Belle Isle (SOBI):
 - FAT on turntable manufacturing in Portugal completed; concrete repairs in Corner Brook for turntable foundation completed; cable vessel arrived in St. John's, passed Transport Canada inspection and departed for SOBI under LC-SB-003 for SOBI Submarine Cable Design, Supply and Install. Ongoing work includes preparations for cable installation works on site; review of MRBs for all cable components completed to date; and review of installation procedures; mobilization for installation season.
 - Under LC-SB-011 for Subsea Rock Protection Design Supply and Installation, received procedure for third party surveillance personnel to be present on the Flintstone.

4.2 ISSUES & OPPORTUNITIES

- Use of materials from unapproved sources continues to be an area of concern resulting in increased focus to ensure all materials meet specifications.
- Muskrat Falls Generation:



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- Under CH0007 for Construction of the Intake, Powerhouse, Spillway and Transition Dams, completing all punch list items to complete MCC; progressive completion of surface prep and bolt replacement; Alma Soudre are required to have their own ITP for all work they perform regarding painting/basting; documentation submittals from SuperMetal and Astaldi; shipping material with open NCRs; getting material test samples.
- Under CH0008 Construction of North Spur Stabilization Works, lab report errors, lab supervision, broken lab equipment, and technician testing.
- Documentation submittal errors under CH0030 for Supply and Install Turbines and Generators.
- AH/JHMC need to speed up the backlog of documentation overdue under CH0032 for Supply and Install Powerhouse and Spillway Hydro-Mechanical Equipment. Additionally, documentation and workmanship issues for the Draft Tube Crane and Intake Hoist; component embeds CH0030 from Andritz to Astaldi have had discrepancies on delivery slips and crates; Andritz executing work without approved ITP; and torquing of SRG main connection in Bay 1 indicated potential over-torque applied.
- HVdc Specialties:
 - 4 Converter Transformers NCRs raised by Company regarding non-compliance with testing and release requirements; GE/Alstom Grid quality team supports of concrete pour resumption in MF; and NCR, Quality and Shipping Release processes under review under CD0501 for Supply and Install Converters and Cable Transition Compounds (EPC).
 - FAT for MV and LV Switchgear and Control Panels is postponed to August 2016 under CD0502 for Construction of AC Substations.
 - Under CD0534 Contractor for Supply and Install Solder's Pond Synchronous Condensers; Company notification of witness and hold points; lack of NCR Register; Quality Shipping Release process; integrity of roof liner panel installed on synchronous condenser building at SP; building grounding installation at SP; Protection and Control Panel manufacturing ongoing without IFC drawings (NCR to be issued).
- Overland Transmission Lines:
 - Inadequate contractor QC program under CT0319/CT0327. Additionally, 100% oversight, monitoring, and surveillance of concrete, grout, and guy wire anchor installation and rework ongoing; Conductor strands popping out during HVdc stringing process; and foundations installed prior to engineering approval.
 - Supplier performing an inadequate review of quality documentation prior to issuance to LCMC under PT0308 for Supply of Steel Tower Foundations. NCR008 issued to supplier for disposition.
 - Conroe facility delinquent in providing required SDRL documentation under PT0330 for Supply of Steel Towers-350 kV HVdc.
- Strait of Belle Isle (SOBI):
 - Closure of NCR's not yet complete, and PAR's to be addressed more timely under LC-SB-003 for Submarine Cable Design, Supply and Install.

4.3 ACTIVITIES PLANNED FOR THE UPCOMING PERIOD

- Use of materials from unapproved sources continues to be an area of concern resulting in increased focus to ensure all materials meet specifications.
- Two Internal Corrective Actions have been outstanding for a long time.
- CH0007-Construction of Intake and Powerhouse, Spillway and Transition Dams: signoff of upcoming pours; meeting on status of open NCRs; finalize material testing plan details internally; third party NACE inspections at Alma Soudure (painting); approve shipping releases; ongoing quality surveillance.

- CH0008 Contractor for Construction of North Spur Stabilization Works: lab supervision will change to Jeff McGovern; lab testing of materials; and Joint Audit planned for week of July 04, 2016.
- CH0009-Construction of North and South Dams: Upstream Spillway Bridge final jack down and decking to begin; placement of fill materials for intake cofferdam; continuation of construction of South Dam foundation preparation; finalize bridge documentation review; work with contractor for the R05 dispatch dossier submittal.
- CH0030-Supply and Install Turbines and Generators: R02 MRBs review; working to close-out NCRs in Aconex; final phase of documentation review and sign-off in China and non-China scope; Stator bar production is to commence after hold is released.
- CH0032-Supply and Install Powerhouse and Spillway Hydro-Mechanical Equipment: Material testing Spreadsheet to be updated and issued bi-weekly; verify the daily inspection records; continue to follow up the NCR close-out; issue quality surveillance report for Sinohydro and CEC (Intake Hoist); Mechanical / Chemical testing of nuts / bolts from China for conformity; verification of contractor quality control records and ITP progressive sign off; progressive inspections of all ongoing work related to river diversion; closeout of NCRs and final documentation for MCC.
- CD0501 - Supply and Install Converters and Cable Transition Compounds (EPC): NCR, Quality Release and Shipping Release processes to be rolled out to GE/Alstom Grid; monitoring of procurement activity; further third party assignments to be arranged; resumption of concrete pours at MF; manufacturing Release process to be finalized.
- CD0502-Construction of AC Substations: Further third party assignments to be arranged; FAT upcoming in early July for HV Cable and Accessories.
- CD0534 - Supply and Install Soldiers Pond Synchronous Condensers: follow-on of CARE process; overhead crane FAT; third party inspector assignment for Stacking and Winding; Stator Assembly Unit 2 Loop Test.
- PD0537 - Supply of Power Transformers: Continuation of final documentation review.
- CT0319/CT0327-Construction of the HVac and HVdc Transmission Lines: improvement of QC/QA document submission process by contractor at site; refresher training and brainstorming sessions in June/July at Site on key ITP check sheets and procedures; HVac Quality Audit 2016.
- PT0308 – Supply of Steel Tower Foundations-350 kV HVdc: audit documentation review process and galvanization area; scope nearing the end and Third Party Inspections to be reduced.
- PT0330 – Supply of Steel Towers-350 kV HVdc: Final documentation review of Conroe and Dubai facilities.
- LC-SB-003-SOBI Submarine Cable Design, Supply and Install: Continue to work on and close out NCR's and PAR's; finalize review of MRBs for all cable components completed to date; and cable installation.
- LC-SB-011 Subsea Rock Protection Design Supply and Install: Preparations for 2016 installation season.
- Attachment 14.4 includes the LCP Quality Performance Statistics as at 30-June-2016.



Section 5. CHANGE MANAGEMENT

5.1 HIGHLIGHTS

- Roll out of Budget Transfer Authorization Register and form to change management and cost control teams.
- LCP Tracker modifications to allow all actioned on DANs and PCNs to have permission to see those notices.

5.2 CURRENT PRIORITIES

- Continued focus and resolving High Impact DANs.

5.3 ISSUES AND OPPORTUNITIES

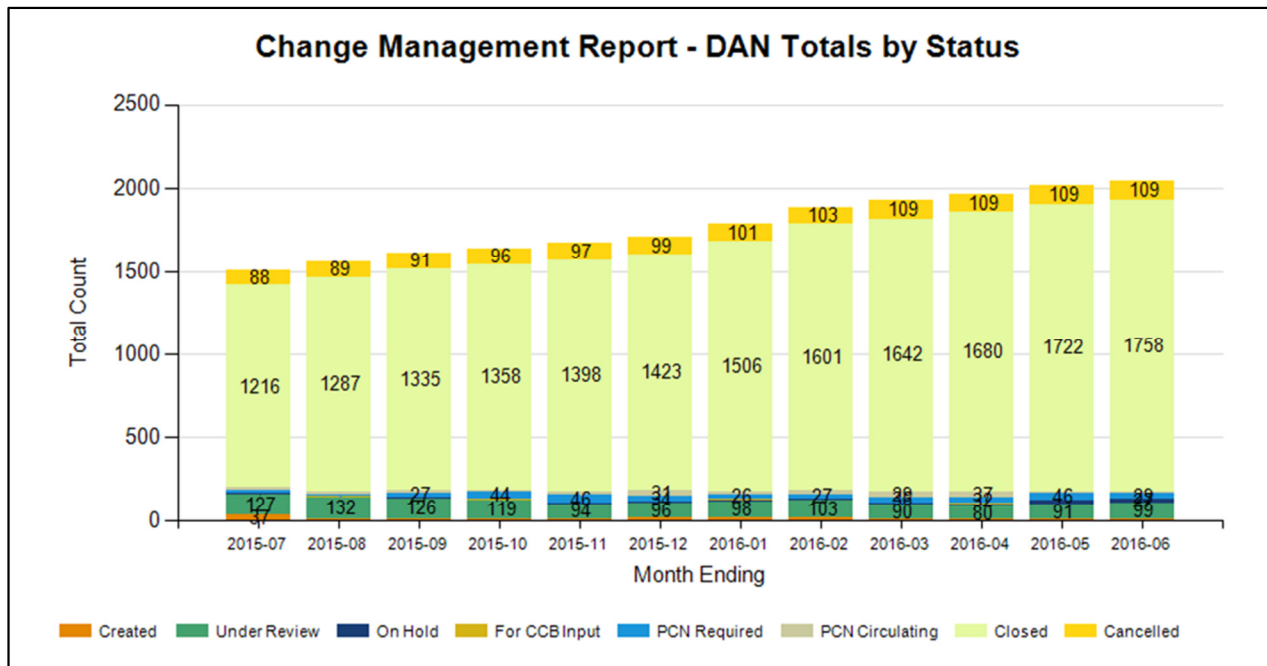
- Issues:
 - Delays in circulating PCNs.
 - Completion of DAN & PCN actions and reporting of completion of actions.
- Opportunities:
 - Focus on DANs and PCNs not associated with the main Components.

5.4 ACTIVITIES FOR THE UPCOMING PERIOD

- Focus on further reducing volume of High Impact DANs.

5.5 DEVIATION ALERTS

Figure 5.5-1: Deviation Alert Notices (DANs) Monthly Totals (to date) by Status





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Figure 5.5-2: Deviation Alert Notices (DANs) Monthly Totals by Status

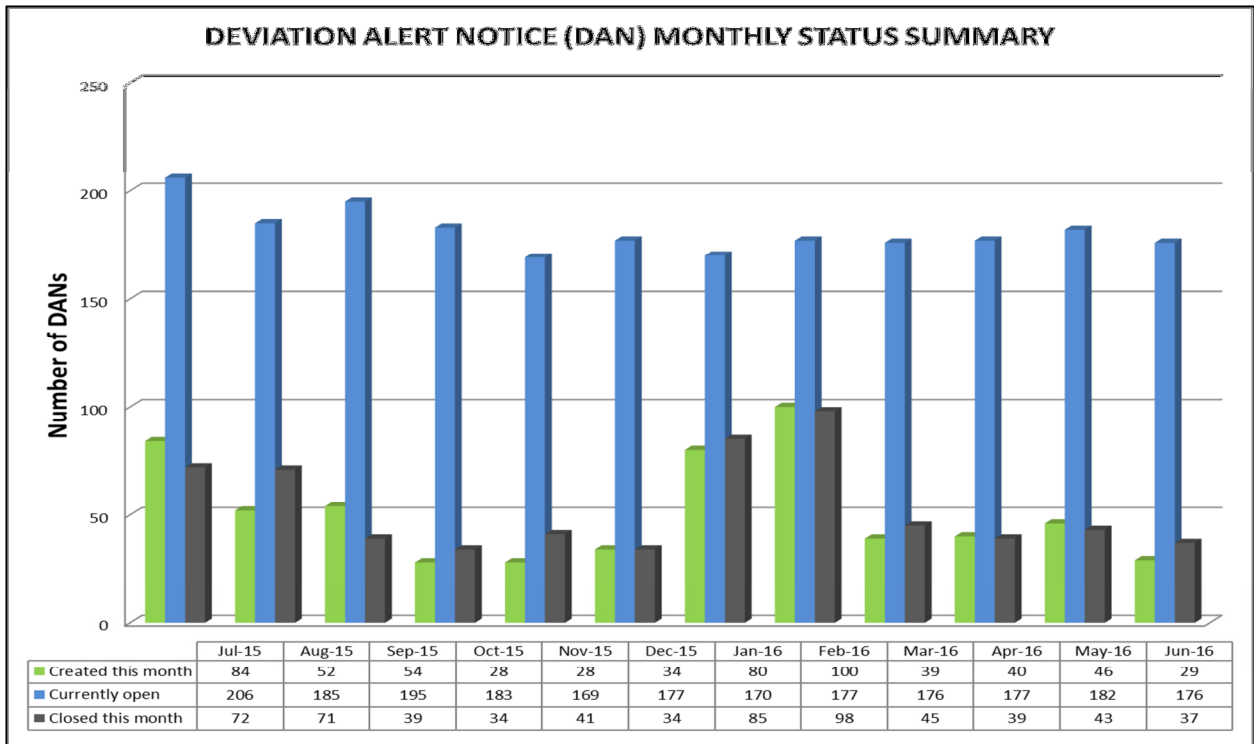
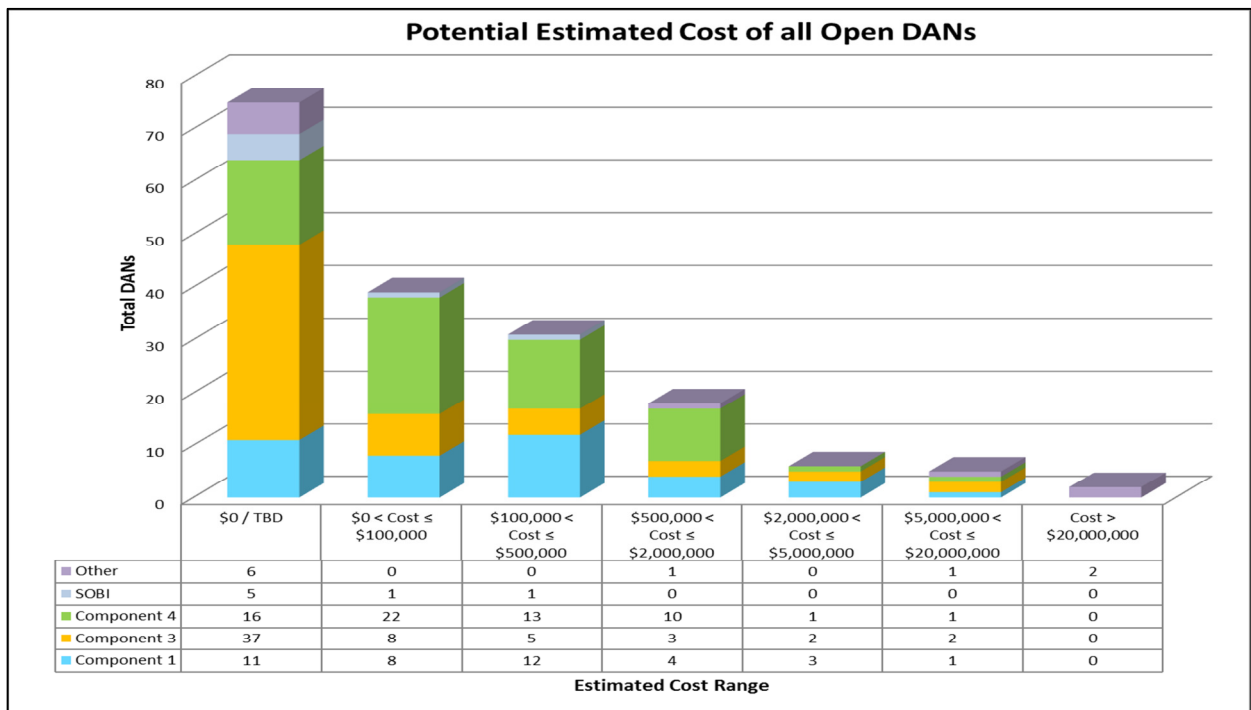


Figure 5.5-3: Deviation Alert Notices (DANs) – Potential Estimated Cost





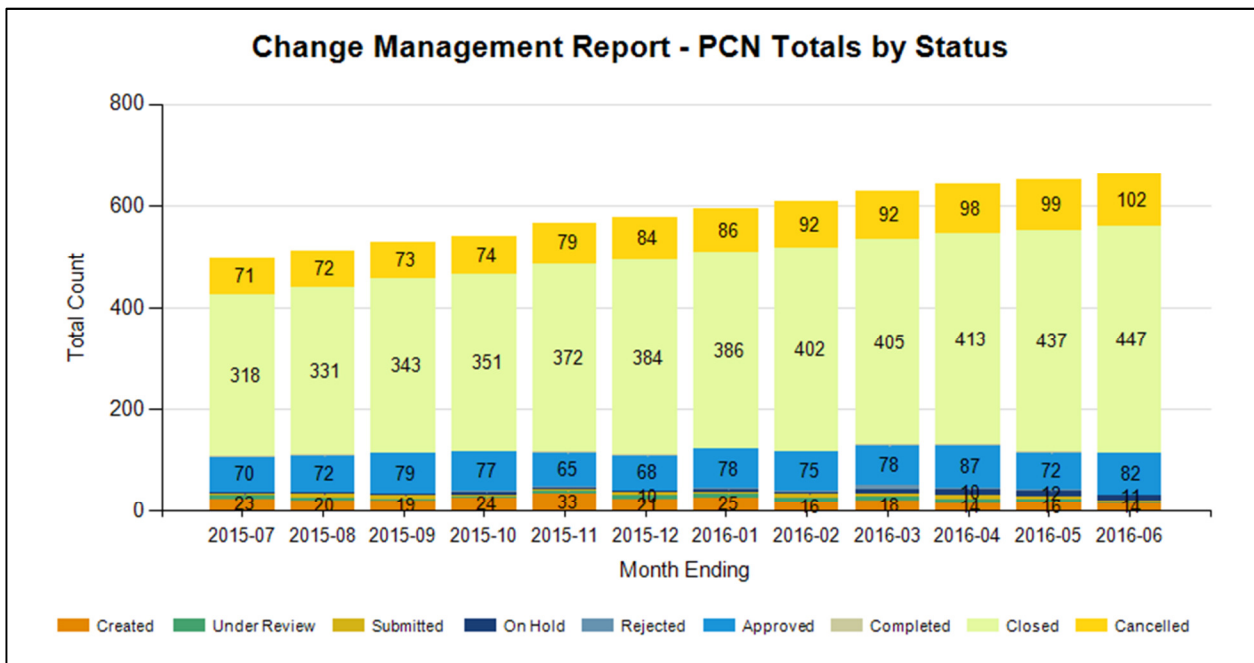
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5.6 PROJECT CHANGES

- PCN-0495: North Spur - Telecoms Fibre Optic Cable Relocation to Existing Pumphouse 25kV Line Poles.
- PCN-0608: 315 kV HVac Lines: T-Tap Compression Connectors for Powerhouse Interconnection.
- PCN-0612: CD0534 - Installation of Neutral Disconnect Switch.
- PCN-0613: Budget Transfer from SD0560 to CH0068 for the Churchill Falls - Emergency VHF radio repair.
- PCN-0617: Supply and Delivery of Concrete at Muskrat Falls from Component 1 (CH0007-001) to Component 4 (CT0319-001).
- PCN-0618: Additional Quantity of Counterpoise Ground Rod Assemblies Required for 315 kV HVac Lines.
- PCN-0619: Strategy to facilitate the transfer of budget between commitment packages for items defined as Non-Scope Change-budget transfers.
- PCN-0620: Turbine Embedded Parts Installation Sequence.
- PCN-0634: Use of Local Accommodations by LCP in lieu of Contractor's Camp - Transfer funds to owners team (Package CT0327-001).
- PCN-0635: Strategy for Concrete Supply and Delivery by Astaldi to Company's Other Contractors under Muskrat Falls Corporation Agreements.
- PCN-0639: CD0509 - Fibre Optic Cable to MF Concrete Lab.

Figure 5.6-1: Project Change Notices (PCNs) Monthly Totals (to date) by Status

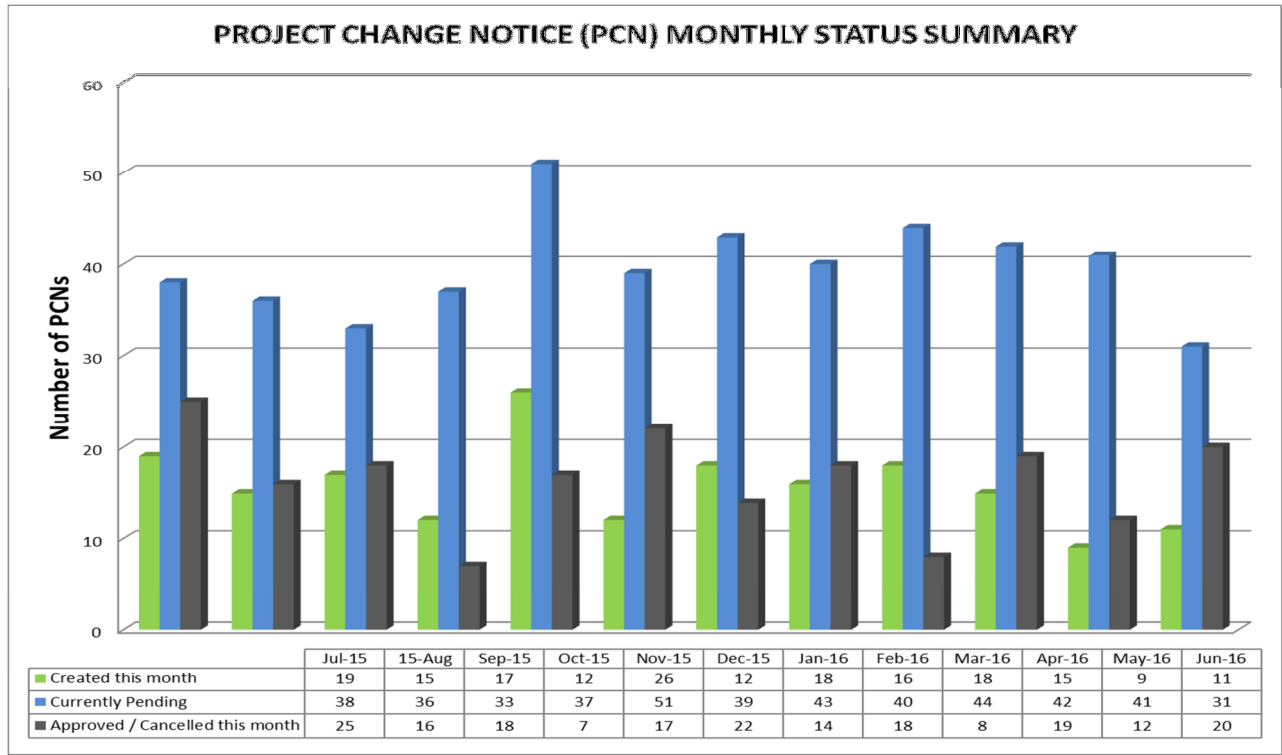




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Figure 5.6-2: Project Change Notices (PCNs) Monthly Totals (to date) by Status



Section 6. TECHNICAL INTERFACE MANAGEMENT

6.1 HIGHLIGHTS

- Progress to date in the implementation of the Technical Interface Management process:

Type	Open	Closed/Cancelled	Total
Technical Interface – Internal (TII)	41	254	295
Technical Interface – External (TIE)	57	179	236
Technical Interface – Contractor (TIC)	123	227	350
Technical Queries (TQ)	30	175	350
Requests for Information (RFI)	97	390	487
Total	348	1225	1573

6.2 CURRENT PRIORITIES

- LCP-Operations Interface working groups requested to finalise team structures (add remove members) and revisit issues log.
- Technical Interface Management process with respect to EPC and other key contractors:
 - Management of Astaldi and Andritz interfaces (T&G and Gates).
 - Management of Andritz and GE/Alstom Grid interfaces (Powerhouse to Switchyard).
- Hydro Quebec engagement in CF switchyard extension and associated interfaces.
- Weekly interface meetings between LCP and NLH.
- Progress of NLH Points List technical interfaces and enhancement of process for managing these more effectively.
- Component 3 currently has a focus on closing out the high number of Priority 1 Technical Interfaces.
- MCT working interface point register.
- Development of interface point sketches for CH0007 and CH0030.
- Complete review of CF(L)Co Aconex requirements and support establishment of self-administration .

6.3 ISSUES & OPPORTUNITIES

- Issues:
 - LCP-Operations Interface Steering Committee purpose / strategy under review.
 - Lack of direct communication between EPCs impacting potential for change requests (reference “Current Priorities” section above).
- Opportunities:
 - Pursuing option to establish CF(L)Co as a separate organisation in Aconex to better manage documentation requirements.
 - Investigate opportunity to leverage “The Current” for interface reporting and action by team members.

6.4 ACTIVITIES PLANNED FOR THE UPCOMING PERIOD

- Continued efforts to maintain and progress technical interface management effectiveness (particularly with EPCs).



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Figure 6.4-1: Lower Churchill Project Interface Management Dashboard – LCP-Operations (by Request Group)

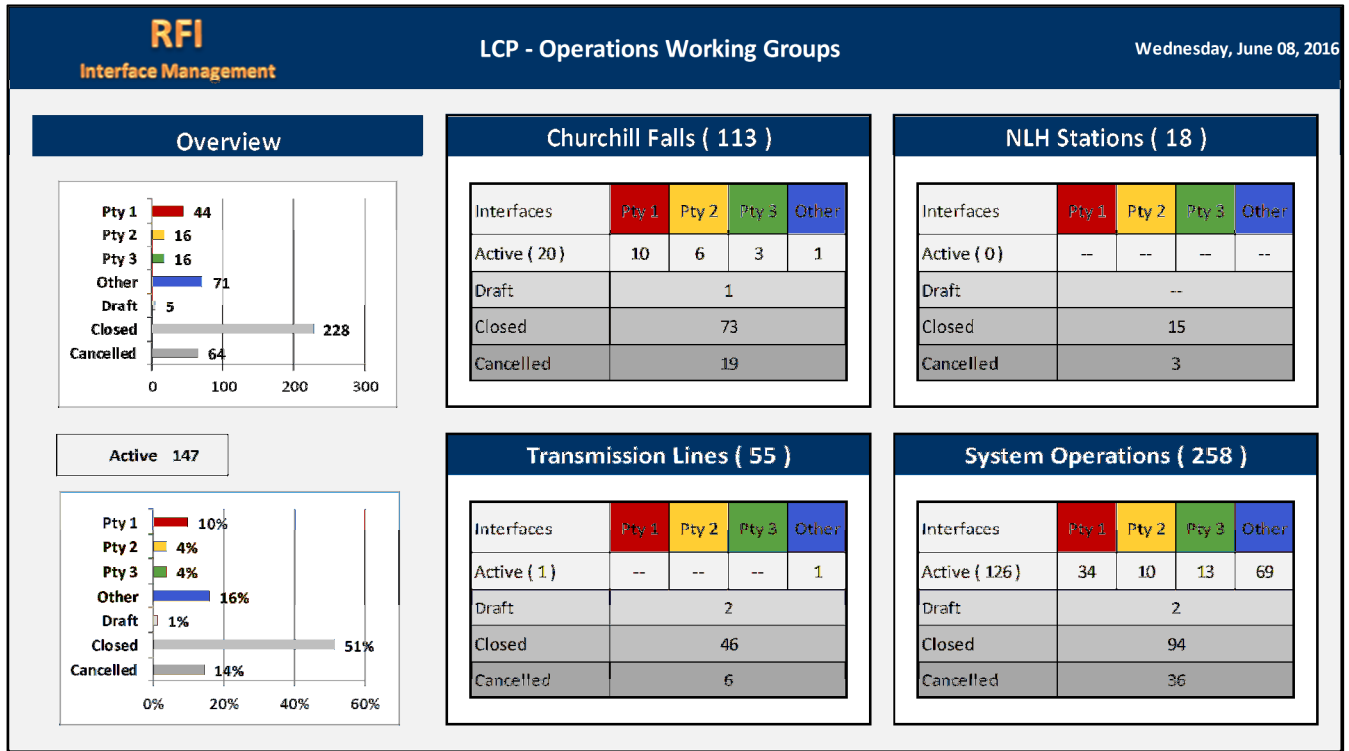
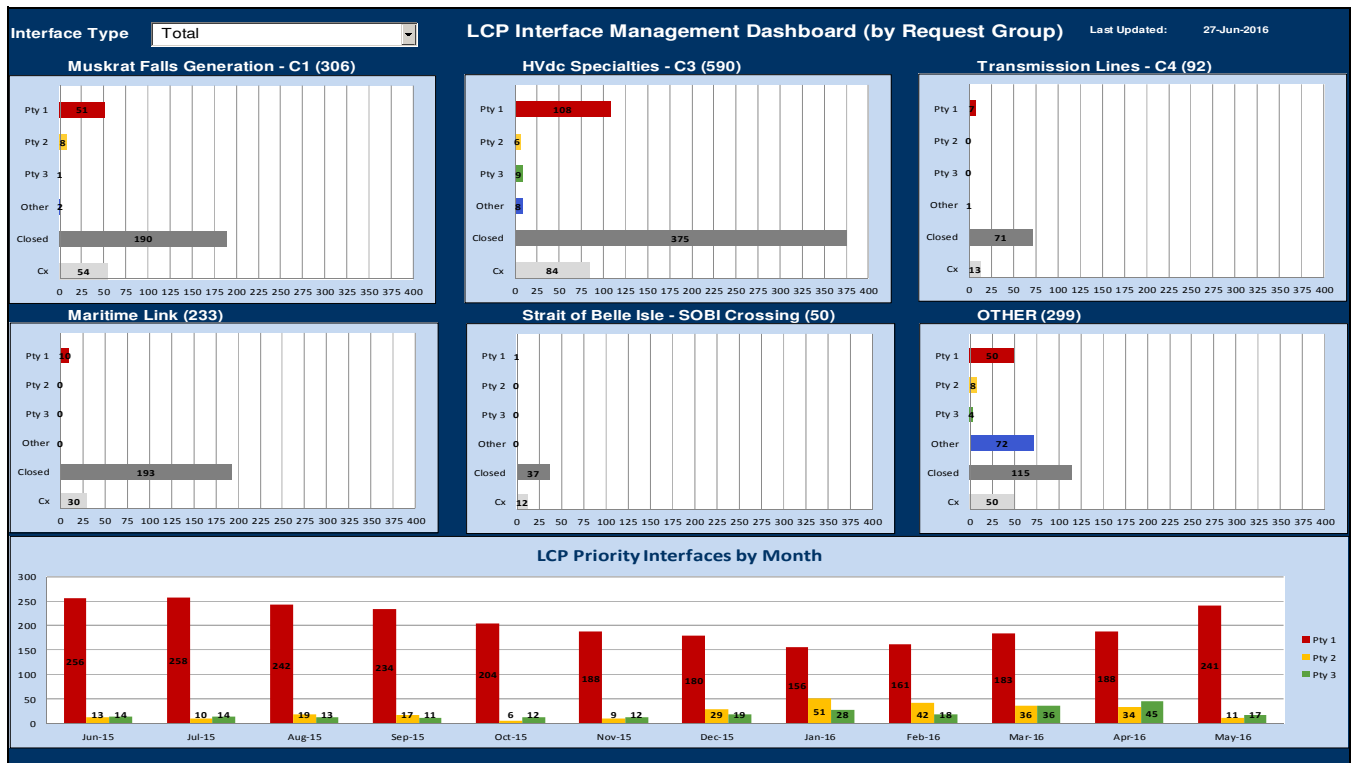


Figure 6.4-2: Lower Churchill Project Interface Management Dashboard – Project Totals (by Request Group)

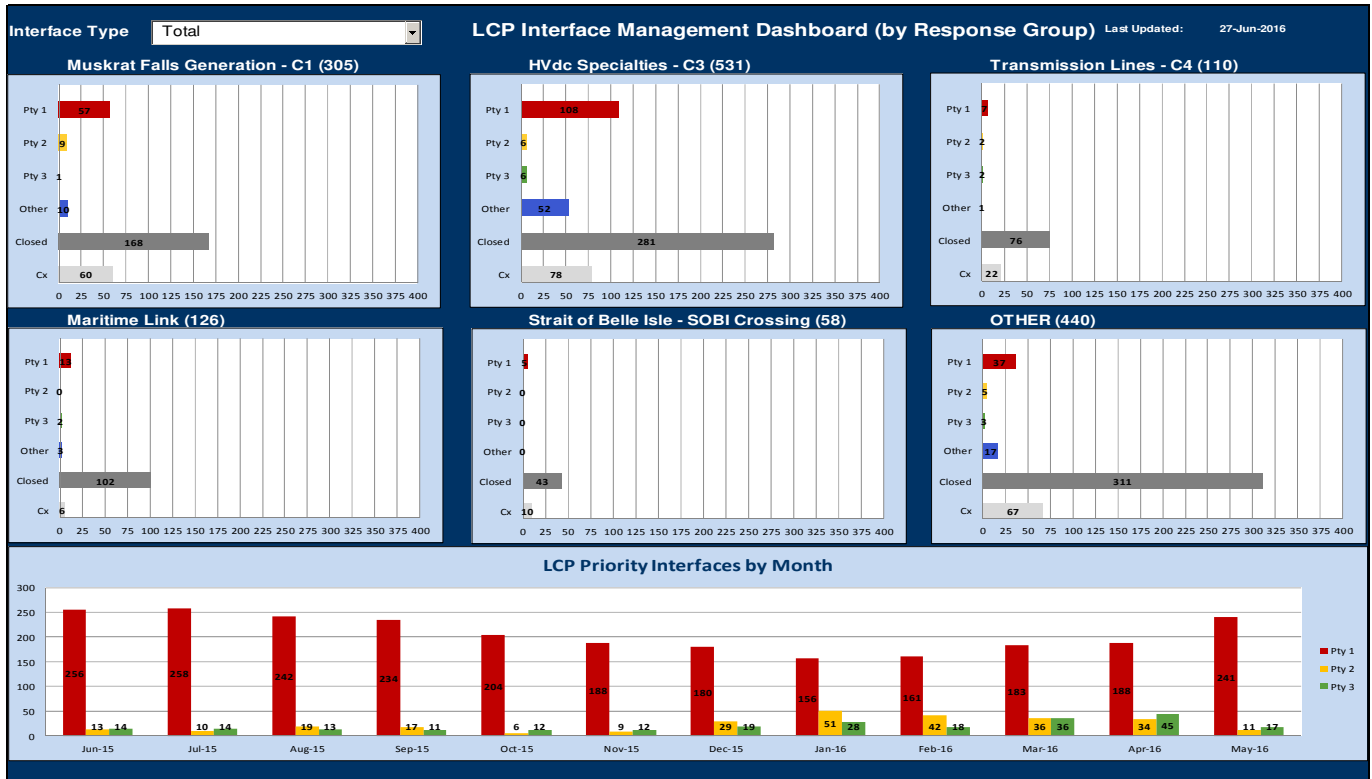




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Figure 6.4-3: Lower Churchill Project Interface Management Dashboard – Project Totals (by Response Group)



Section 7. RISK MANAGEMENT

7.1 HIGHLIGHTS

- No significant highlights to report during the current reporting period.

7.2 CURRENT PRIORITIES

- Monitoring and control of LCP risk register (strategic) based on updated responses plans (mitigations strategies-actions) implemented according to the current context of the LCP Project.
- Completing definition and implementation of mitigations – action (risk response step) for all identified LCP Sub-Projects' risks (tactical) in the LCP Risk Management tool to carry-on with the monitoring and control step, including reporting.
- Follow-up internal risk review meetings conducted for major packages related to MFG Sub-Project; risk review completed; updating response (mitigations-actions) plans with risk owners.
- Continued review of LCP Contractors/Suppliers Risk Register submitted as part of their monthly progress reports.
- Continued internal meetings with LCP Sub-Projects Risk Coordinators to review definition and implementation of mitigations-actions (risk response step) for identified risks.
- Continued monitoring and reporting process of responses (mitigation strategies – actions) identified and implemented for risks registered in the LCP Risk Register (strategic and tactical).

7.3 ISSUES & OPPORTUNITIES

- The concept of risk exposure activity and timeframe is being introduced to LCP Suppliers/Contractors for implementation in their risk registers. Impacts have been narrowed to the following outcomes: schedule, quality, safety and environment. Cost is considered for reimbursable agreements. Status: ongoing.

Section 8. HUMAN RESOURCES/INFORMATION SYSTEMS

8.1 HIGHLIGHTS

- Human Resources:
 - 8 new hires mobilized during the period; 10 orientation sessions completed in the Torbay Road Office.
 - Final adjustments ongoing for the revised LCP Standard for Business Travel, renamed “Travel Procedure”, before distribution for approval signatures.
 - LCP Rotational Travel audit finalized; action plan in place.
- Information Systems:
 - Mobile Device Management Phase 2 – Airwatch production installation completed and ready to start rollout.
 - Extended Aconex contract agreement for an additional 3 years.
 - Completed Deer Lake office IS and Telecoms requirements review.
 - Completed testing for Google Chrome (Citrix).
 - Completed upgrade of Prism G2.

8.2 CURRENT PRIORITIES

- Human Resources:
 - Ongoing recruitment for the Lower Churchill Project and preparation for onboarding of 28 Co-op students for the Fall 2016 semester.
 - Finalize LCP Recruitment Process Document and issue via Aconex.
 - Updating LCP Assignment Conditions to reflect current adjustments due to Government Renewal Initiative – cost savings for the Project.
 - Issue LCP Site Safety Absolute Review Committee Procedure.
 - Finalize update and collection of all LCP Project Delivery Team members job/scope descriptions.
- Information Systems:
 - Finalize Two-factor authentication implementation for Aconex accounts with access to sensitive data.
 - Continued focus on IS/Telecom improvements in remote field locations. Finalize setups for Deer Lake, Clarendville and Blaketown.
 - General network performance review continues.
 - Mobile Device Management - Phase 2. Airwatch rollout to mobile users.
 - Primavera upgrade review.

8.3 ISSUES & OPPORTUNITIES

- Human Resources:
 - Ongoing timely recruitment for the Project of key roles to meet timelines—currently 28 competitions running in various stages for Components 1, 3 and 4.
- Information Systems:
 - Aconex security improvements.
 - Continue focus on information and data access across the Project.
 - Enhanced use of “The Current”.

- Unauthorized use of Dropbox and other cloud storage solutions by project team members to transfer information outside of established processes. Consultations with IS Corporate and LCP Management on next steps to address the issue.
- Expansion of Thirdlight usage for C1 and C3.

8.4 ACTIVITIES PLANNED FOR THE UPCOMING PERIOD

- Human Resources:
 - Continue LCP recruitment; orientation and onboarding of new hires.
 - Continue student recruitment and onboarding for the Fall 2016 semester.
- Information Systems:
 - Mobile Device Management Phase 2 – Start rollout of Airwatch.
 - Aconex security enhancements – Two-factor authentication.
 - Test advanced GIS web interface functionality using ArcGIS Online.
 - Phase 2 enhancements to “The Current” which includes mobile device access, calendars and shared documents.
 - Acumen Fuse - complete training/implementation (site personnel) rollout.
 - Prepare Primavera 16.1 Test environment in preparation for upgrade.
 - Google Chrome - rollout Citrix version to LCP production environment. Establish testing for desktop version.
 - Implement updated and more detailed Quarry tracking in Powerline including links to Aconex.

Section 9. LABOUR RELATIONS

9.1 HIGHLIGHTS

- Meeting held 07-June-2016 with Labour Relations Agency, TCEA and IBEW, with positive relations being reported.
- Meeting held 16-June-2016 with TCEA/IBEW Liaison Committee Meeting, with constructive and positive dialogue between Contractors and IBEW.

9.2 CURRENT PRIORITIES

- Respectful Workplace Complaints Status for the month of June:
 - 2 new complaints received.
- Innu Cultural Sensitivity Training to date - 13,267 workers.
- Muskrat Falls labour availability - as of 30-June-2016, majority of trades recalled are supplied from within the Province with the exception of surveyors.
- Muskrat Falls labour productivity - as of 30-June-2016, Contractors indicate there are no significant issues impacting their labour productivity. The MFEA and RDTC, at the request of Astaldi and subject to senior management approval, will be entering into discussions to provide Contractors the option of having two 30 minute paid breaks as opposed to the current two 15 minute paid breaks and one 30 minute unpaid break; the Matter is still under review with the RDTC.
- Transmission labour availability - as of 30-June-2016, majority of workers are obtained from within the Province, with the following trades being recalled from outside the Province: drillers and blasters, core members of assembling crews (long time contractor employees), core members of foundation crews (long time contractor employees), and powerline technicians (majority from outside the Province).
- Transmission labour productivity – as of 30-June-2016, Contractors indicate there are no issues impacting their labour productivity. Two stringing crews have been stood down for approximately 1-2 months pending investigation of the line.
- Labour Acquisition Plan – no current initiatives planned.

9.3 ISSUES & OPPORTUNITIES

- Muskrat Falls Labour Relations:
 - 195 grievances to date: 52 considered abandoned; 77 settled; 31 referred to arbitration or arbitrated; 28 under alternative dispute resolution; and 7 active.
- Transmission Labour Relations:
 - C4: 49 grievances to date: 42 considered abandoned/settled; 4 referred to arbitration or arbitrated; 3 active.
 - C3: Grievances filed by RDTC are included in the Muskrat Falls Labour Relations log; transmission grievances are included in the Transmission Labour Relations log, with 4 filed to date.
- Reservoir Clearing Labour Relations:
 - No issues impacting labour productivity noted.
- Development of Site Standards:
 - No outstanding Site Standards under review.

Section 10. COST AND SCHEDULE

10.1 Overall Project Schedule

- The updated planned and forecast dates for the Lower Churchill Project resulting from the Quantitative Cost and Schedule Risk Analysis are outlined below. As noted, the current schedule of dates are based upon an assessment of risks to project completion and an analysis of the associated impact on cost and schedule, and the revised Planned dates reflect the high end (P75) of the probabilistic range of most likely outcomes resulting from this Risk Analysis.

Milestone/Key Date	Planned/Late Finish (AFE June 2016)	Actual	Forecast (IPS June 2016)	Commentary
HVAC Transmission Line Construction Complete	31-Oct-2016		19-Sep-2016	
Churchill Falls Switchyard Ready to Energize	17-Jun-2017		03-May-2017	
Muskrat Falls Switchyard Ready to Energize	15-Sep-2017		05-Jun-2017	
Ready for Power Transmission - LTA	31-Oct-2017		22-Jul-2017	
SOBI Cable Systems Ready	15-Dec-2016		06-Nov-2016	
Muskrat Falls Converter Station Ready for Energization	15-Mar-2018		22-Sep-2017	
HVdc Transmission Line Construction Complete	15-Mar-2018		09-Dec-2017	
Soldiers Pond Converter Station Ready for Energization	15-Mar-2018		22-Sep-2017	
Soldiers Pond Synchronous Condenser Ready for Operation	30-Nov-2017		27-Jul-2017	*Planned/Late Finish dates reflect the high end (P75) of the probabilistic range of the most likely outcomes resulting Quantitative Cost and Schedule Risk Analysis.
Soldiers Pond Switchyard Energized	15-Jun-2017			
1st Power Transfer - LIL	20-Apr-2018		01-Apr-2018	
Ready for Power Transmission (Low Load Testing Complete)	20-Sep-2018		15-Jun-2018	*Forecast schedule fully updated in June 2016. All forecast dates are within the required (Late Finish) dates.
North Spur Works Ready for Diversion	31-Oct-2016		31-Oct-2016	
River Diversion Complete (to 25m)	15-Dec-2016		15-Nov-2016	
Reservoir Impoundment Complete (to 39m)	01-Aug-2019		05-Dec-2018	
First Power from Muskrat Falls	02-Aug-2019		01-Apr-2019	
Powerhouse Unit 1 Commissioned - Ready for Operation	19-Sep-2019		29-Apr-2019	
Powerhouse Unit 2 Commissioned - Ready for Operation	03-Dec-2019		23-Jul-2019	
Powerhouse Unit 3 Commissioned - Ready for Operation	09-Mar-2020		28-Oct-2019	
Powerhouse Unit 4 Commissioned - Ready for Operation	14-May-2020		01-Feb-2020	
Full Power from Muskrat Falls	14-May-2020		01-Feb-2020	



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- Overall project construction progress is 50.9%. The Progress for overall and for the individual assets is provided in Figure 10.1-1, the Overall Project Schedule is outlined in Figure 10.1-2, and the Construction Progress Curves are provided in Figure 10.1-3. As noted, LCP Progress Re-baseline in alignment with AFE Rev 3 will be implemented and reported in July 2016

10.1-1: Summary Construction Progress Table - Overall Project

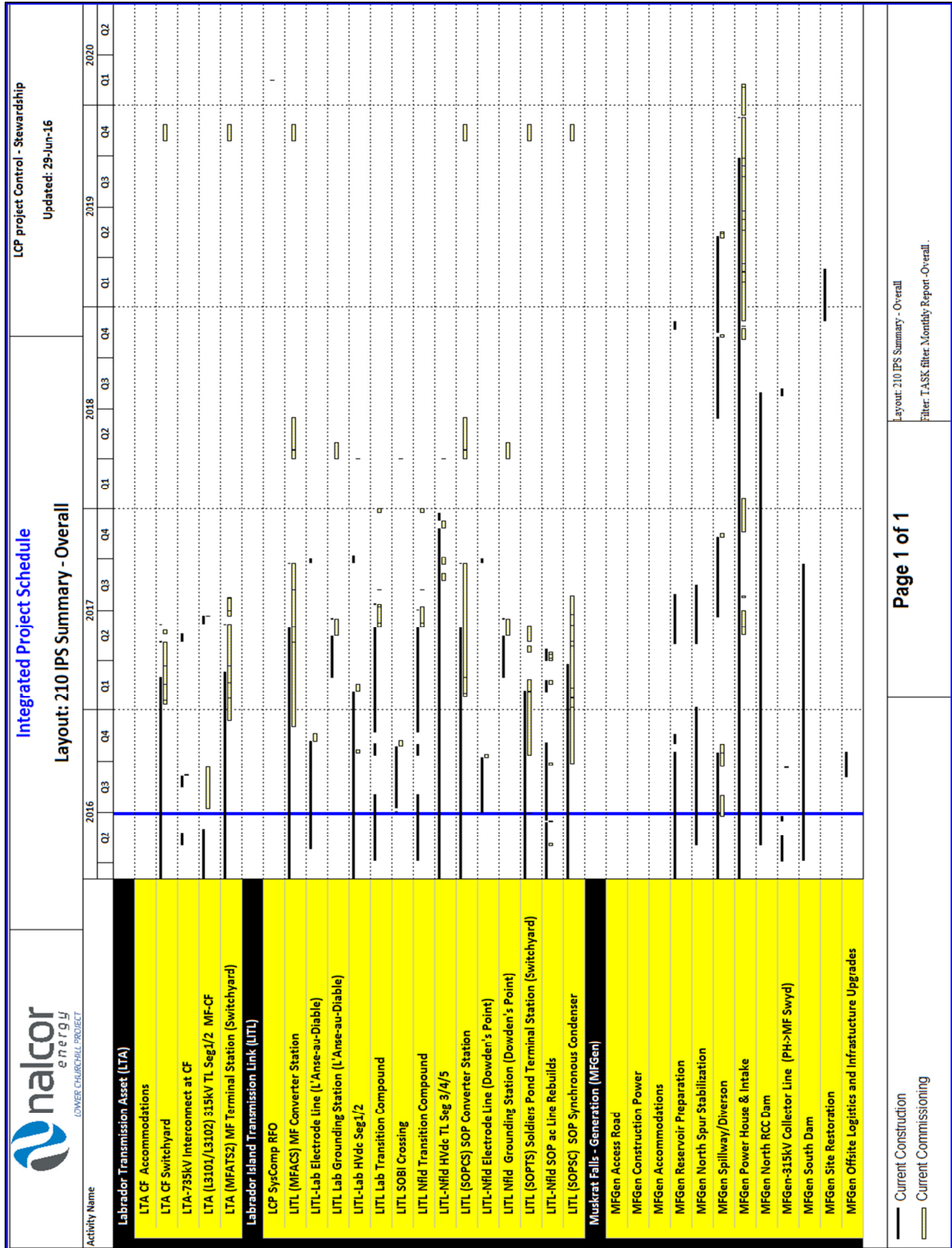
LCP - Overall 2016 June							
This Reporting Period							
	Weight	Period %			Cumulative % *2		
	Factor %	Plan *1	Earned	Var	Plan	Earned	Variance
	A	B	C	C-B	E	F	F-E
Labrador Transmission Asset (LTA)	11.1%	5.4%	2.7%	-2.7%	89.1%	80.7%	-8.4%
Labrador Island Transmission Link (LITL)	42.2%	4.4%	3.3%	-1.1%	61.7%	46.3%	-15.4%
Muskrat Falls Generation (MFGen)	46.7%	1.9%	2.3%	0.4%	67.9%	48.0%	-19.9%
LCP-Overall	100.0%	3.3%	2.7%	-0.6%	67.6%	50.9%	-16.7%
Last Reporting Period							
	Weight	Period %			Cumulative %		
	Factor %	Plan	Earned		Plan	Earned	
	A	B	C		E	F	
Labrador Transmission Asset (LTA)	11.1%	6.2%	1.2%		83.7%	78.0%	
Labrador Island Transmission Link (LITL)	42.2%	2.7%	1.3%		57.3%	43.0%	
Muskrat Falls Generation (MFGen)	46.7%	2.0%	2.8%		66.0%	45.8%	
LCP-Overall	100.0%	2.7%	2.0%		64.3%	48.2%	



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10.1-2: IPS Summary – Overall Project





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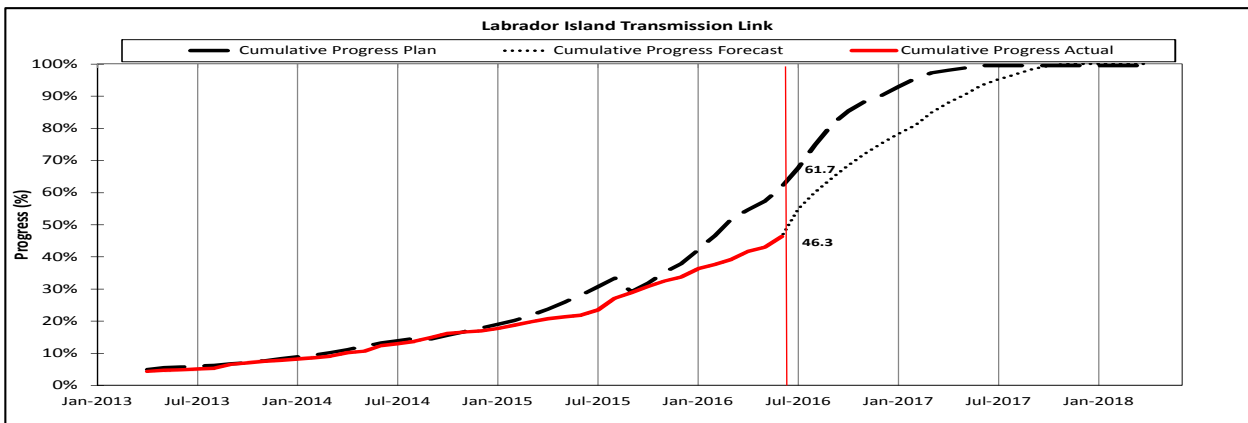
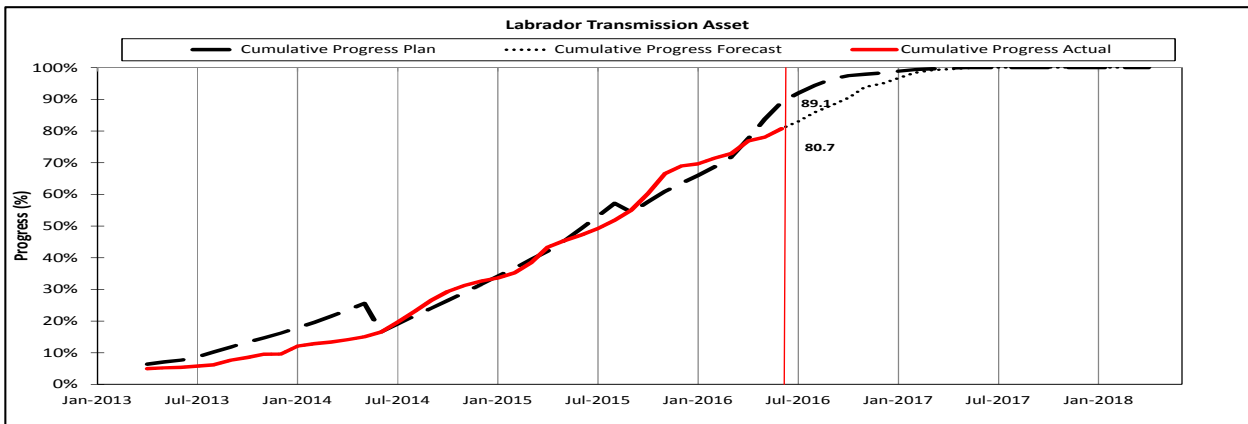
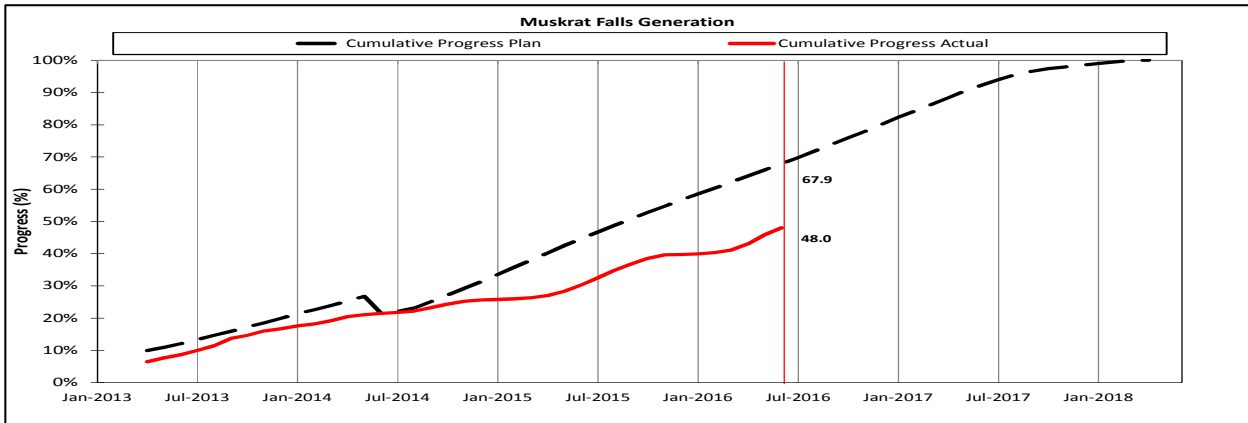
10.1-3: Construction Progress Curves

	Plan	Earned
MFG	67.9%	48.0%
LTA	89.1%	80.7%
LITL	61.7%	46.3%
Overall	67.6%	50.9%

Note 1: Cumulative planned progress for LTA/LITL is representative of September 2015 re-baseline

Note 2: Cumulative planned progress for MFG is representative of June 2014 baseline until update available-forecast unavailable

Note 3: LCP Progress Re-baseline in alignment with AFE Rev 3 will be implemented and reported in July 2016





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**10.2 Capital Cost
Control Basis**

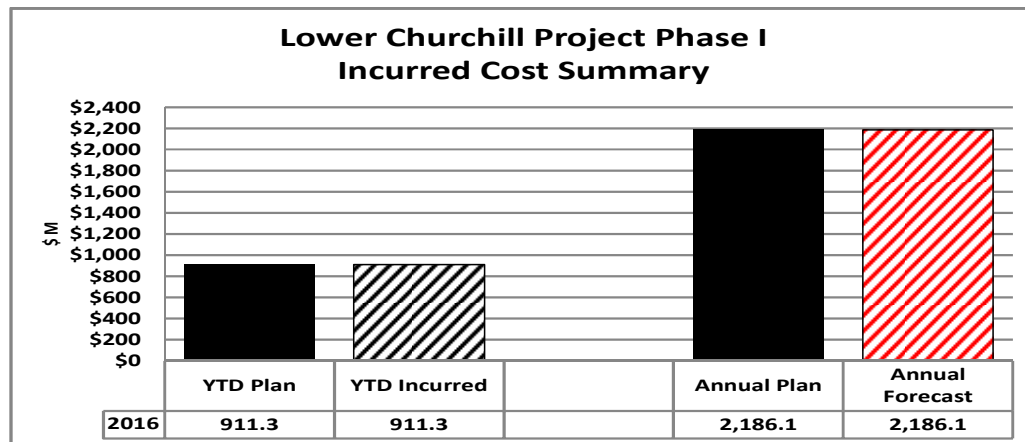
- This section reports costs only related to Phase I of the Lower Churchill Project encompassing Muskrat Falls Generation, the Labrador Island Transmission Link, and the Labrador Transmission Asset. Costs associated with the Maritime Link and Gull Island Generation are not included in this report.
- Reporting is now being undertaken against the capital budgets provided in revised AFE Rev 3 for Muskrat Falls Generation, the Labrador Transmission Asset, and the Labrador Island Transmission Link, approved by their respective Boards of Directors in June 2016 (CCB). CAPEX cost for Phase I is \$9.126 billion comprised of Muskrat Falls Generation: \$4.801 billion; Labrador Island Transmission Link: \$3.447 billion and the Labrador Transmission Asset: \$0.878 billion.
- Costs related to interest (historical) and debt financing are not included in this report.

Period Incurred versus Plan Incurred Cost

- Incurred cost for the June 2016 reporting period was \$247.7 million versus re-baseline for the period of \$247.7 million and a forecast provided at the end of May 2016 of \$229.3 million broken down by component as follows:

Component	Baseline	Forecast	Incurred Cost	Variance
Muskrat Falls Generation	120,872,191	106,382,846	120,872,191	14,489,345
Labrador Island Transmission Link	114,626,023	105,990,967	114,626,023	8,635,056
Labrador Transmission Asset	12,181,401	16,922,954	12,181,401	-4,741,553
	\$247,679,615	\$229,296,767	\$247,679,615	\$18,382,848

- Project incurred cost to date is \$4.915 billion, inclusive of CAPEX costs only. The overall variance between June’s incurred cost and the forecasted value reported in May is \$18.4 million, with primary drivers being attributable to accounting of the Foreign Exchange impact on project incurred cost to date, reconciling items related to the Owner’s team cost with finance records, lower than forecasted progress in the reservoir clearing, and an incurred adjustment to the Converters and the Switchyards contracts to align with the contractor’s schedule. Cost details by asset and reporting categories are contained in Sections 11.4, 12.3 and 13.4.
- The 2016 planned, incurred and forecast costs in alignment with the June 2016 re-baseline are summarized below. Project year-to-date incurred costs are \$911 million.



Note: The above values exclude Interest Charges, Project Debt Financing and Other Costs.



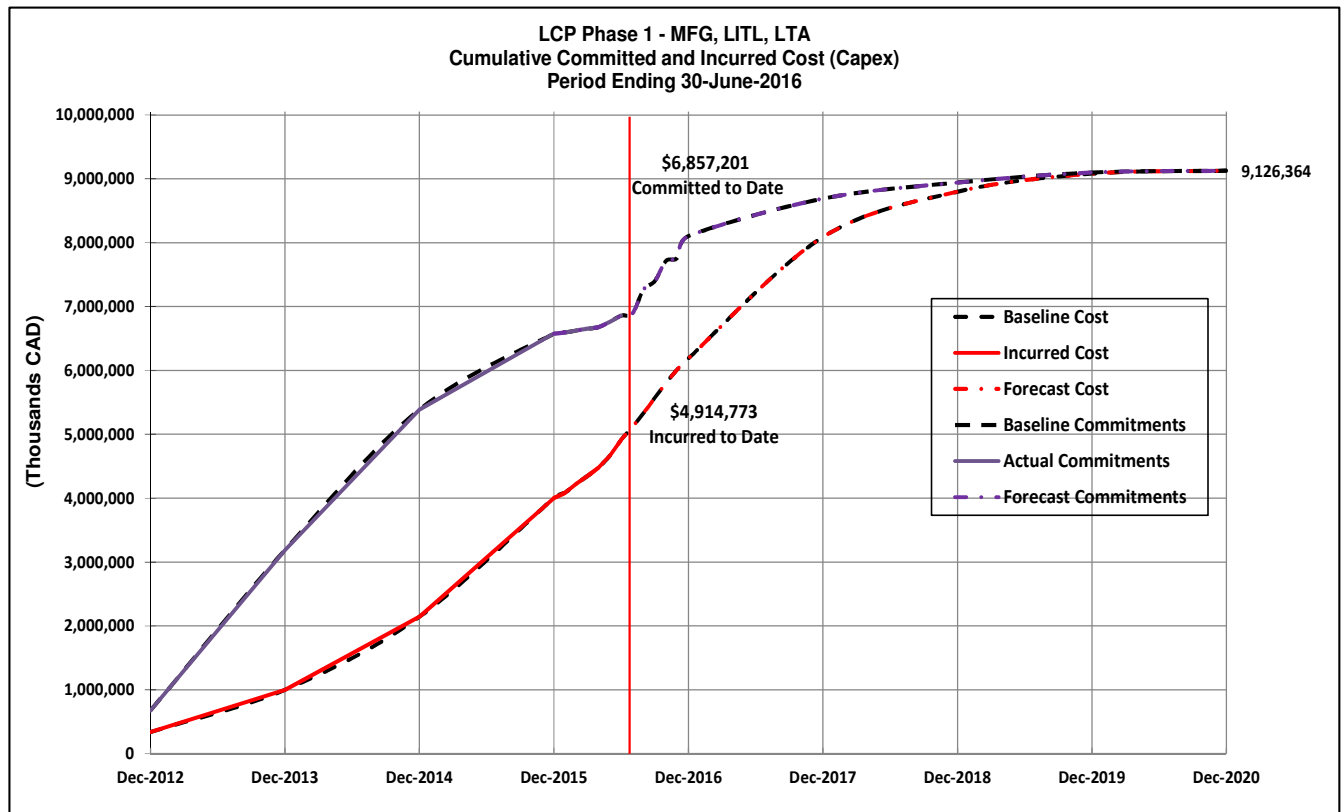
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Committed Costs

- Total committed cost to date is \$6.857 billion, inclusive of CAPEX costs only, with an overview of the cumulative commitment and incurred cost outlined below in Figure 10.2-1. Increase in commitment during the current period is due to the award of additional scope to clearing and access contracts for the HVdc Transmission line (CT0327-011 and CT0327-013); an increase to the CH0007 Contract for Construction of the Intake, Powerhouse, Spillway and Transition Dams to cover the Labour portion of the LMAX value; the addition of the currency impact cost to date; and indirect costs.

10.2-1: Cumulative Committed and Incurred Cost Overview



Note: Baseline represents the 2016 revised Authorization for Expenditure (AFE) approved in June 2016.

Current Forecast

- As of the end of the June reporting period the total FFC for CAPEX costs is \$9.126 billion. Final Forecast Cost details by asset can be found under Sections 11.4, 12.3, and 13.4 respectively.

Contingency

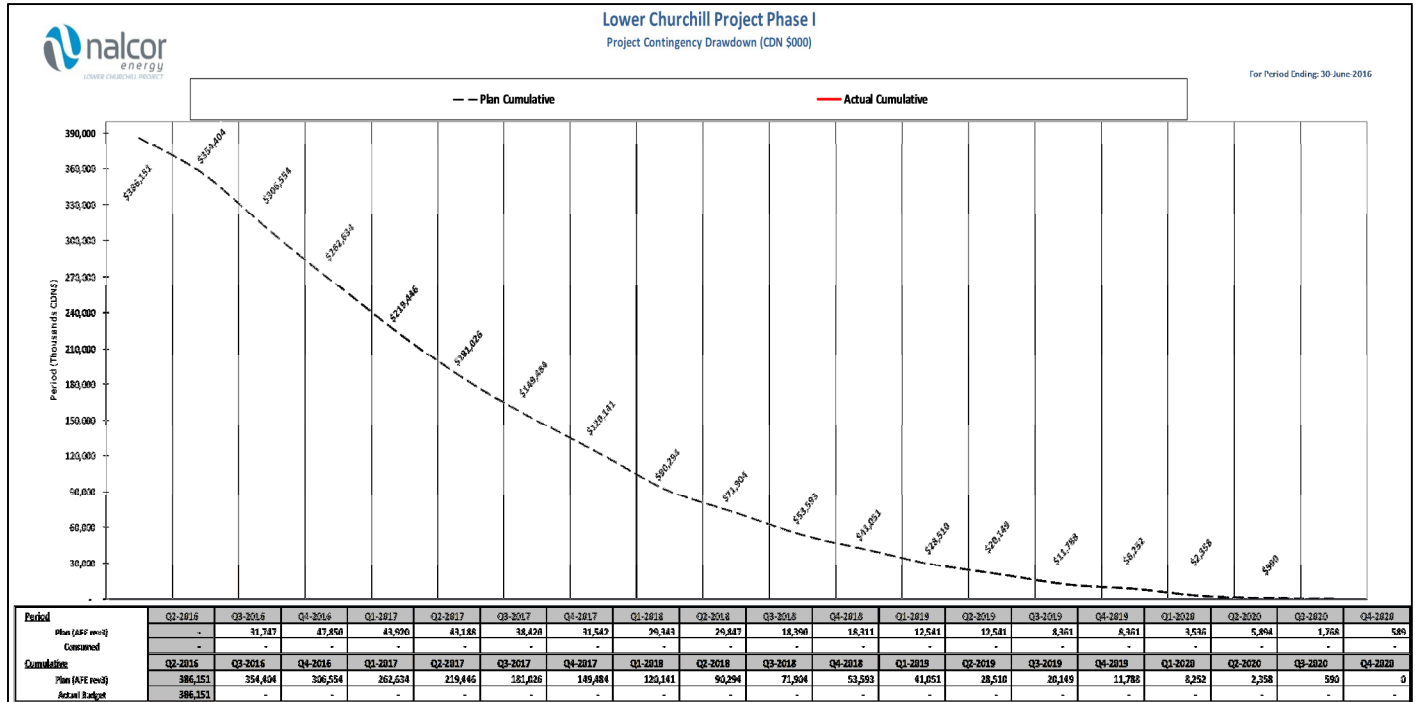
- Available Budget Contingency as a result of the revised AFE Rev 3 totals \$386.2 million (Muskrat Falls: \$235.8 million; LITL: \$128.8 million; LTA: \$21.6 million). The overall project contingency drawdown curve is updated and provided in Figure 10.2-2, and for each asset is provided under Figures 11.4-4, 12.3-4, and 13.4-4.



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Figure 10.2-2: Project Contingency Drawdown Curve



Cost Reports

- The LCP cost report is outlined below in Figure 10.2-3. Figure 10.2-4 outlines the current year control budget, incurred and forecast costs; and Figure 10.2-5 outlines the annual budget, incurred and forecast cost for the overall project.

Figure 10.2-3: Phase 1 Monthly Incurred Cost Report

Phase I Monthly Incurred Cost Report - Muskrat Falls Generation, Labrador-Island TX Link, Lab. TX Asset
NALCOR ENERGY - Lower Churchill Project
COST IN CAD (\$ Thousands)
For Period Ending: 25-June-2016

	A	B	C = A + B	Incurred Costs		E	G = E - C
	Original Control Budget (OCB)	Approved Project Changes	Current Control Budget (CCB)	Current Period	D Project-to-Date	Final Forecast Cost (FFC)	Variance from CCB
100 NE-LCP Owners Team, Admin and EPCM Services	\$711,963	\$277,075	\$989,038	\$14,070	\$626,405	\$989,038	\$0
200 Feasibility Engineering	\$51,750	-\$14,292	\$37,458	-\$1,963	\$37,458	\$37,458	\$0
300 Environmental & Regulatory Compliance	\$44,404	-\$3,042	\$41,362	\$251	\$30,559	\$41,362	\$0
400 Aboriginal Affairs	\$15,746	\$1,564	\$17,311	\$404	\$8,941	\$17,311	\$0
500 Procurement & Construction	\$4,967,670	\$2,620,013	\$7,587,683	\$234,637	\$4,178,996	\$7,587,683	\$0
900 Commercial & Legal	\$43,103	\$24,258	\$67,361	\$281	\$32,415	\$67,361	\$0
990 Contingency	\$367,852	\$18,298	\$386,151	\$0	\$0	\$386,151	\$0
CAPEX Total:	\$6,202,489	\$2,923,874	\$9,126,364	\$247,680	\$4,914,773	\$9,126,364	\$0



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Figure 10.2-4: Phase 1 Current Year Budget, Incurred and Forecast Cost

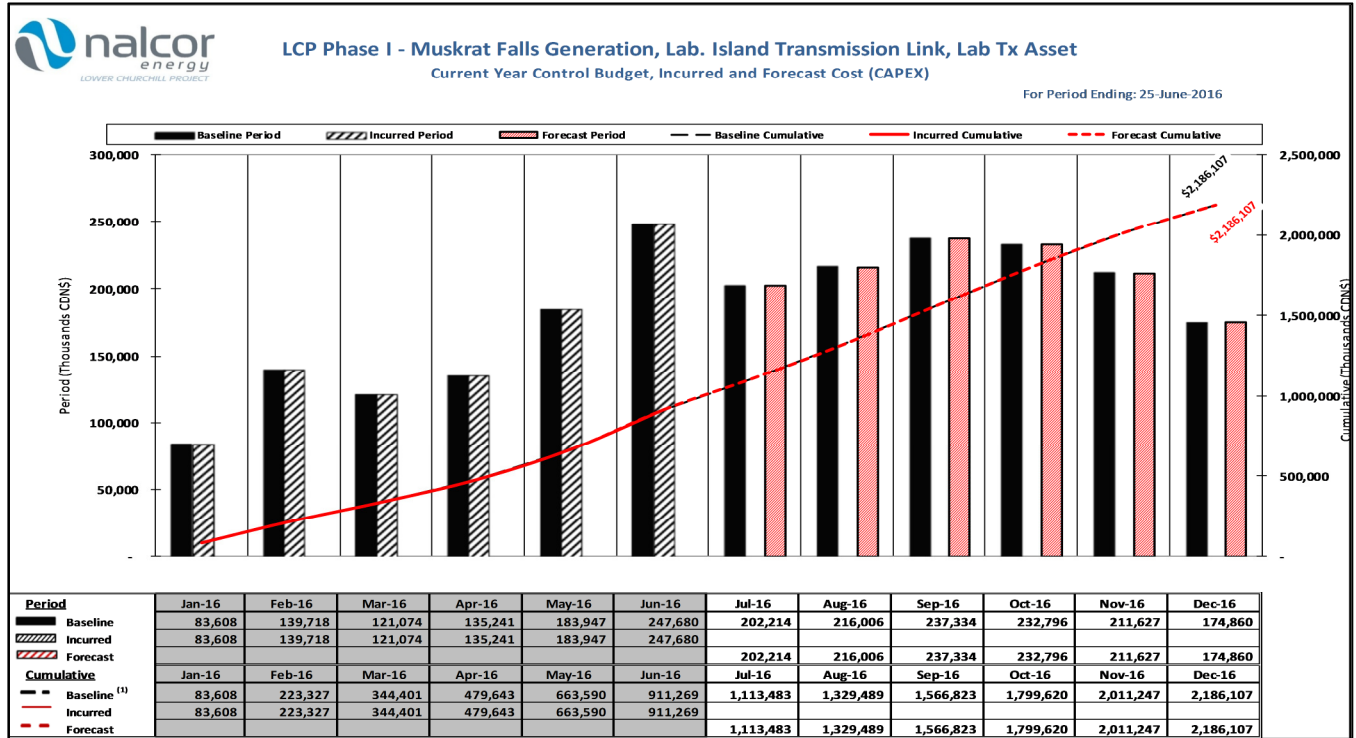
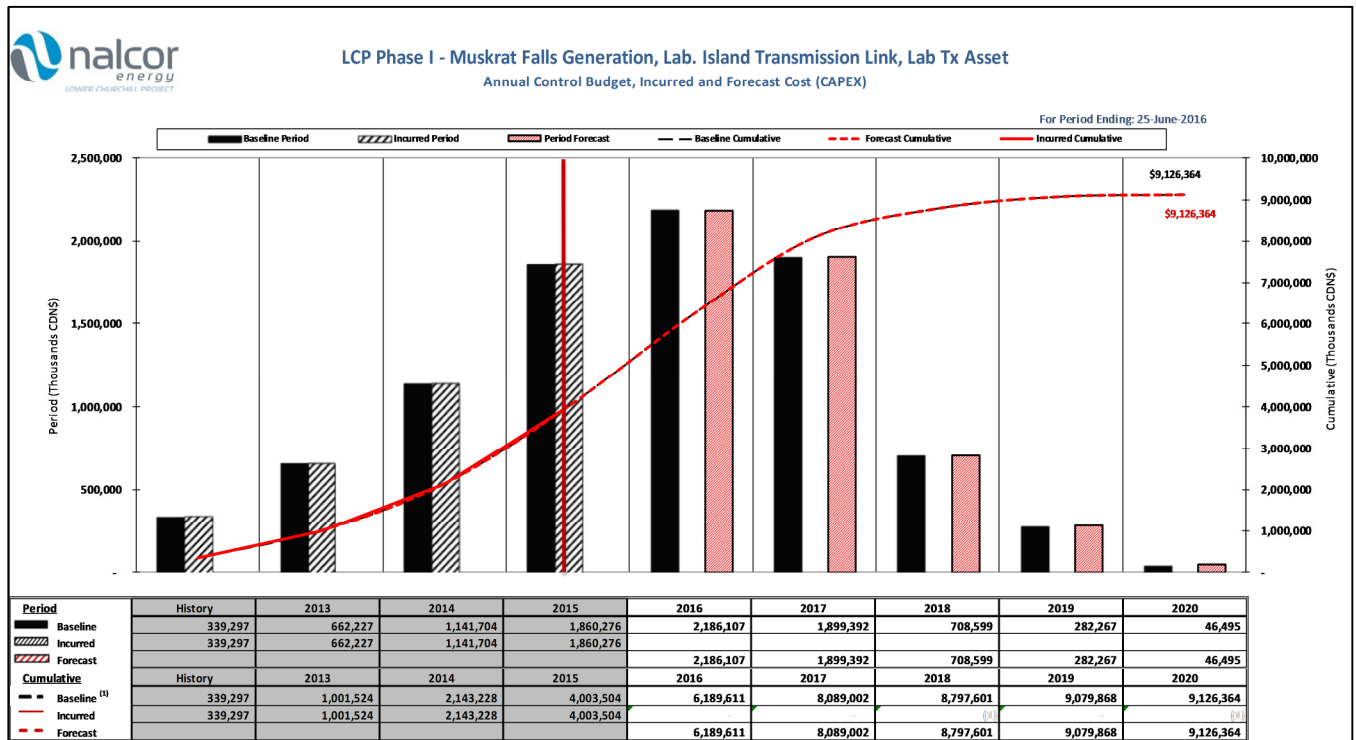


Figure 10.2-5: Phase 1 Annual Budget, Incurred and Forecast Cost



Section 11. MUSKRAT FALLS GENERATION (MFG)

11.1 ENGINEERING

- Under Contract CH0009 for Construction of North and South Dams, RCC mix design and 2016 Full Scale Trials plans continue, along with North Dam design optimization and phased cofferdam removals; engineer foundation treatment requirements along core of south dam; location of alternate, closer source of imperious till; and plan underway to develop till pit Area B along the transmission line ROW along the temporary C1 bypass road.
- Engineering coordination continues under Contract CH0007 for the Intake, Powerhouse, Spillway & Transition Dams, with the issuance of Engineering Change Notice No. 50 Rev 3 (Powerhouse Structural Steel Member Design Loads and location of splice), Engineering Change Notice No. 52 Rev 1 (Staged Erection of Powerhouse Steel Structure – Additional Modification of Column Base Plates and Anchors), Engineering Change Notice No. 58 (Modification of HPU Guardrails), Engineering Change Notice No. 59 (Update of Duct Bank Wall Penetration Detail); Engineering Change Notice No. 60 (Powerhouse Structural Steel Staged Erection); and Engineering Change Notice No. 61 (Centre Transition Dam Guardrail Modifications for Trash Cleaning Machine). The Engineering Team continues follow-up activities (Site queries, Concession Requests, and other Construction Management Forms), and process of submittals (drawings and material submission) received from Astaldi is under review.
- In the area of Mechanical and Electrical, engineering work for the Turbines and Generators under Contract CH0030 is at 99.6% complete versus 100% planned. Engineering primarily focused on resolving outstanding interfaces with various packages. The switchyard protection panel redesign is on hold awaiting change request approval. Mechanical and Electrical Auxiliaries under CH0031 is continuing to support bid reviews/clarifications. Engineering is 99% complete under Contract CH0032 for Powerhouse Hydro-Mechanical Equipment. New drawing package for construction received by LCP under CH0034; and continued oversight of both active and upcoming WTOs is ongoing under CH0068 for Construction Power.
- Under CH0008 for Construction of North Spur Stabilization Works ECN 0008 is in progress.
- Under the area of River Management, Habitat and Site Restoration, river management weekly progress meetings are ongoing, along with the maintenance of River Closure Readiness checklists, completion of the River Closure Readiness Plan, and continuation with river closure readiness meetings. Coordinated decision support package to obtain senior management approval for river diversion in 2016. Completed Emergency Preparedness Plans for Winter Headpond and Full Supply levels during construction phase, and finalized contingency plan for temporary transportation of Mud Lake residents during impoundment periods - circulating for signoff Rev B1. Hatch finalized Third Party Review report of River Management documentation and processes. Ordered and received public safety signage for winter headpond phase - prepared drawing details for installation of signs on Spillway structure. Ordered materials for setup of radio telemetry at WSC hydromet station - WSC visited site in early June and confirmed proposed relocation site is suitable. Spillway operators and coordinator continue to provide support during completions and commissioning phase of Spillway Mechanical Electrical P1A scopes. Continued working with third party contractor (OTS) on preparation of Spillway Permit to Work procedure. Vista Inflow Model simulations for flows at Muskrat Falls continued.
- Under CH0049-01, Revelstoke continued to support log boom package on as required basis. Under CH0049-03, M&M Offshore have received steel for pontoons; rigging materials for log booms have been ordered; and bi-weekly meetings held with contractor and site visit to fabrication facility completed. Under CH0052 for Habitat Compensation, RFP was issued in early June with closing date of 07-July-2016; responded to clarification requests from bidders, conducted a site

visit with bidders and issued a number of addendums. LCP Environment were provided comments on draft Wetland Compensation Plan for regulatory approval.

11.2 PROCUREMENT

- Bid Evaluations are ongoing for the following Packages:
 - CH0031-001 - Supply and Install of Mechanical & Electrical Auxiliaries (MF).
 - CH0049-004 - Installation of Debris/Ice/Safety Boom.
- RFI – RFP statistics and charts:

Description	Total Packages to Procure	Schedule to Date	Actual to Date
Issue EOI/Pre-qual.	61	60	60
Issue Request for Proposal	61	60	60
Issue PO/Contract	61	58	57

- RFP's issued for the following Packages:
 - CH0052-001 - Construction of Habitat Compensation.
- PH0014 - Generator Step-up Transformers: LCP requested Supplier to delay start of Fabrication to align with site need dates; document submittals and review in progress.
- PH0015 - Isolated Phase Bus: LCP requested Supplier to delay start of Fabrication to align with site need dates; document submittals and review in progress.
- PH0016 - Generator Circuit Breakers: LCP requested Supplier to delay start of Fabrication to align with site need dates; document submittals and review in progress.
- Activities planned for the upcoming period:
 - Continue to manage procurement activities to meet project schedule.
 - Continue to manage procurement activities to work toward the award of Contract CH0031 for Supply and Install of Mechanical & Electrical Auxiliaries (MF).
 - Bidder's List Approved for CH0049-005 - Reservoir Debris Management.
 - RFP closing for CH0052-001 - Construction of Habitat Compensation Works.
 - Contract award for CH0049-004 - Installation of Debris/Ice/Safety Boom.

11.3 CONSTRUCTION

11.3.1. INFRASTRUCTURE AND SERVICES

- All contracts have progressed to warranty and contract close out, and all service contracts are in place and are being managed as per contractual arrangements.

11.3.2. DAMS

CONSTRUCTION HIGHLIGHTS:

- CH0009 - Construction of North and South Dams:
 - Electrical assembly at crusher continues.
 - South dam excavation and Zone 3D placement continued; installation of Grout Curtain commenced.
 - Relocate access over footprint of south dam to maintain traffic flow.
 - C1 By-Pass road construction base constructed; road topping placement remains outstanding.
 - Continue lowering Cofferdams 2 and 3; commence lowering Cofferdam 1 – while maintaining access.

- Commence drilling and blasting to remove riverside RCC cofferdam.
- Commence screening and hauling granular to stockpiles near closure works from GD-8.
- Continue screening and hauling impervious till to stockpiles near closure works from TD-7.
- Commence stockpiling of rockfill along riverside.
- Launch of temporary bridge upstream of spillway complete; preparation of abutments complete.
- Batch plant and crusher erection continued.

COMMISSIONING:

- Nothing to report this period.

ISSUES & OPPORTUNITIES:

- Nothing to report this period.

ACTIVITIES PLANNED FOR THE UPCOMING PERIOD:

- Complete removal of Cofferdams 1, 2 and Riverside RCC Cofferdam.
- Continue stockpiling rockfills, granular and impervious materials for use in river closure.
- Continue excavation of overburden within footprint of south dam.
- Continue permanent fill placement within shells of south dam.
- Continue construction of grout curtain under south dam.
- Complete erection of batch plant and crushing plants.
- Commence crushing operations for RCC aggregates.
- Commission temporary upstream spillway bridge.
- Continue to plan for 2017 North Dam construction.
- Commence placing large rock blocks into river for river closure by 15-July-2016.

11.3.3. POWERHOUSE/INTAKE AND SPILLWAY

CONSTRUCTION HIGHLIGHTS:

- CH0007 - Intake, Powerhouse, Spillway & Transition Dams:
 - Concrete pour and placement activities continued during the period.
 - 69 elements poured for a total of 8,989 m³.
 - Formwork and rebar placement continued.
 - Completed concrete placement of planned elements in the Spillway discharge liner; completed installation of rock dowels in over-break concrete discharge liner and began drilling for rock anchors.
 - Continued installation of crane rail embedment plates.
 - Dismantled Tower Crane 5 (Downstream of CTU).
 - Remobilized concrete aggregate crushing operation.

COMMISSIONING:

- Nothing to report this period.

ISSUES & OPPORTUNITIES:

- As previously reported and noted in Section 2, investigations are ongoing into the incident involving formwork collapse in the Powerhouse at Muskrat Falls in May.
- The LCP team continue to collaborate with the Contractor in the implementation of organizational and production changes at the construction management level and the review of the Muskrat Falls Generation work plan will remain an ongoing activity. This month, the Project schedule has been updated to reflect the current forecast of the Muskrat Falls scope. The current forecast dates have been reflected in the Milestones.
- Schedule pressure with the CH0032 contractor with respect to the target dates for River Ready for Diversion continues. Recovery and mitigation plans are ongoing with the CH0032 and CH0009 Contractors, however despite this slippage the river diversion schedule is not considered to be at significant risk.

ACTIVITIES PLANNED FOR THE UPCOMING PERIOD:

- Target concrete forecast of 110 elements for 16725 m3.
- Complete all remaining work for the Spillway discharge liner including downstream rock anchor installation.
- Install crane rails on CTU blocks 3 and 4; commence erection of structural steel.
- Equalize water in Spillway Intake and complete river diversion.

11.3.4. MECHANICAL AND ELECTRICAL**CONSTRUCTION HIGHLIGHTS:**

- CH0030 - Turbines and Generators:
 - Manufacturing progress is 82% compared with a plan of 99.6%. The components for the last shipment from China have been loaded on a vessel and are on route to Goose Bay. The vessel is scheduled to arrive in Goose Bay at the beginning of August.
- CH0032 - Powerhouse & Spillway Hydro-Mechanical Equipment:
 - Spillway installation is 85% complete (31% overall).
 - Second Stage Concrete has been completed.
 - Hoist towers and gate installation commenced.
- CH0033 - Powerhouse Cranes:
 - Fabricated and in storage.
- CH0068 - Construction Power Remaining Works:
 - WTO # 17 - Poles installed for the CH0009 contractor in Area B1, south connection and road crossing is complete.

COMMISSIONING:

- Andritz Hydro Completions and Commissioning Strategy in process of implementation. Completions process for heavy mechanical has been implemented and being progressively signed off at the work site for Spillway diversion work scope.

ISSUES & OPPORTUNITIES:

- Initial quality/management issues, including material testing and preparation of material test reports, and Inspection Test Protocols, at SinoHydro have been addressed. Identification of specific technical solutions; management meetings with LCP, Andritz Canada and Linz; and the majority of actions, have been completed; documentation backlog addressed in

audit held October 2015; LCP are continuing to re-address issues with movement of fabricated items from SinoHydro fabrication shop by Andritz without approved QA documentation in place. As of the end of the current period, QA release of spillway components is ongoing, managing the issue.

- P&C Manufacturing under CH0030 has been on hold for an extended period due to technical and commercial issues; technical issues are nearing resolution but the commercial issues are undergoing internal discussion.

ACTIVITIES PLANNED FOR THE UPCOMING PERIOD:

- CH0030 - Turbines and Generators: The focus for the next period will be on completion of the manufacturing documentation, planning for installation work at site, and resolution of outstanding change requests.
- CH0031 - Mechanical and Electrical Auxiliaries: Bid review/clarification activities; clarification and clarification meetings ongoing with bidders.
- CH0032 - Hydro-mechanical equipment: Complete ready for diversion scopes.
- CH0033 - Powerhouse cranes: Ongoing storage and preservation.
- CH0034 - Powerhouse elevator: Approve construction drawings.
- PH0014 - Generator Step-Up Transformer: Continue with review of submitted documents.
- PH0015 - Isolated Phase Bus: Continue with review of documentation.
- PH0016 - Generator Circuit Breaker: Continue with review of documentation.
- CH0068 - Construction Power Remaining Work: Issue WTO for installation of transition structures to route 25 kV power to 315/138 kV towers to provide clearance under 25 kV line for river impoundment. Install drop conductors on the South side of the river for the transition from 25 kV to the 138 kV Transmission Tower; continued assistance with CH0009 package construction team to enable safe and efficient start-up of Contractor's crusher plant.

11.3.5. NORTH SPUR STABILIZATION AND RESERVOIR CLEARING

CONSTRUCTION HIGHLIGHTS:

- CH0024 - Reservoir Clearing North and South Banks:
 - Contractor cleared an area of approximately 22 hectares in harvesting blocks N05 (100% complete); N06 (95% complete); and S13 cut block on south side of river accessing site via river barges (approximately 26% complete).
- CH0008 - Construction of North Spur Stabilization:
 - Upstream embankment construction ongoing:
 - Upstream Embankment Elevation at 39.0 (+/-) m between Stations 900 to 500.
 - Upstream Embankment Elevation at 34.0 m (+/-) between Stations 500 to 100.
 - Downstream Embankment Construction ongoing in the vicinity of Finger Drains 1 and 2 with river side protection and access progressing towards to North End/Kettle Lakes Area.
 - Work commenced at excavation/backfill in the Kettle Lakes Area.
 - Northwest Cut-Off Wall commenced in the first week of June with progress at 21% (+/-) up to 29-June-2016 when Inqip started their first 7 day turn around/shut down.

COMMISSIONING:

- Sign Off/Acceptance of Upstream Embankment to Elevation 27.0 m for initial River Impoundment which is scheduled to start at the end of October 2016.

ISSUES & OPPORTUNITIES:

- Inquip's 2nd Crane out of service for the majority of their first 21 day rotation. Concern with both production and schedule and available backup should the other Crane experience mechanical breakdowns: GNLC/Inquip working on alternate arrangements.
- Inquip's night shift operation was shutdown effective 26-Jun-2016 due to operator Issues: Intend to resume night shift operations on 07-July-2016 when they return from first turn around.
- Bank Swallows Nesting in Upstream near Station 0 + 500 (/). As per Environment Canada, procedure area has been flagged off with a 50 m Buffer and all work has stopped in this area: Work expected to resume mid-August.

ACTIVITIES PLANNED FOR THE UPCOMING PERIOD:

- CH0008 - Construction of North Spur Stabilization:
 - Embankment construction on the upstream and downstream areas.
 - Excavation/backfill activities in Kettle Lakes Area.
 - Slurry wall Contractor scheduled to return from first turnaround on 07-July-2016 to continue construction activities associated with the Northwest cut-off wall.
 - Borrow pits and quarry operations.
 - Crusher crew remobilization and setup to begin production of Zone 3A Crushed Rockfill Materials scheduled to start 10-July-2016.
- CH0024 - Reservoir Clearing North and South Banks:
 - Work will continue on the south blocks in July focusing on S13 and S1-12, then mobilize further up the river to finish off the reservoir.

11.3.6. RIVER MANAGEMENT/HABITAT/SITE RESTORATION**CONSTRUCTION HIGHLIGHTS:**

- Nothing to report this period.

COMMISSIONING:

- Nothing to report this period.

ISSUES & OPPORTUNITIES:

- In-river work component of debris/safety/ice boom has a narrow window for Fall 2016 installation. In-river work is scheduled to be completed after inundating the upper falls which is dependent on the schedule of two contractors (CH0009 and CH0032), and is also weather dependent (when ice formation begins). Meetings to be held with package CH0009 once contractor updates schedule to determine when incremental impoundment may begin to control of upper falls. Continuing to review contingencies for temporary reservoir debris management if required.

ACTIVITIES PLANNED FOR THE UPCOMING PERIOD:

- Finalize order for hut to provide real-time water level data for spillway operations.
- Continue with planning for tie-in water levels to fire panel for 24/7 monitoring.
- Vista Inflow Model simulations for river flows at Muskrat Falls to continue in July to support river closure activities.
- Continue with River Closure coordination meetings.

- Installation of public safety signage on spillway structure prior to diversion.
- Engage Hatch in third party engineering services to prepare Operation, Maintenance and Surveillance Manual for Muskrat Falls Construction Phase.
- CH0052 Habitat Compensation - Complete bid evaluation process and make recommendation to award of Phase 1 work in July.
- CH0049-001 Design of Debris/Ice/Safety boom (Revelstoke) - Revelstoke to continue to provide support during fabrication of log boom and installation of boom.
- CH0049-03 Fabrication and Supply of Debris/Ice/Safety Boom - Continue bi-weekly meetings and ensure quality and schedule is maintained during execution of package.
- CH0049-04 Installation of Debris/Ice/Safety Boom - Finalize bid evaluations, make recommendation and award package to successful contractor.
- Monitor CH0009 schedule to determine any impacts on boom installation schedule.

11.4 COST

- Incurred costs for the current period and project-to-date are aligned with the incurred cost flow for the 2016 revised Authorization for Expenditure (AFE) approved during the current period. The net negative Planned and Incurred Cost for the Current Period under “Feasibility Engineering” is as a result of the alignment with the AFE to Final Forecast Cost. The incurring of the Contingency is reflected within the incurred and future incurred costs in the categories outlined in Figure 11.4-1 as and where the work is performed. Cost to complete continues to remain significant as construction activities for work in progress are ongoing, and the remaining major construction contract for MF (CH0031) is pending award.
- The overall Approved Final Forecast Cost (FFC) has been updated to align with the 2016 revised AFE, resulting in an increase of \$1,115B in the overall FFC for MFG. The approved AFE budget is the result of a Quantitative Cost and Schedule Risk Analysis that was completed for Muskrat Falls Generation based upon an assessment of risks to project completion and an analysis of the associated impact on cost and schedule. The revised project budget of \$4,801B is the high end (P75) of the probabilistic range of most likely outcomes resulting from this Risk Analysis. The approved AFE (2016) is based upon the assumption that the Contractor for the powerhouse (Astaldi) will remain on the project. The main component of this variance is an increase of \$818M in the category of “Procurement & Construction”, followed by increases of \$126M in the category of “Owners Team, Admin and EPCM Services”, \$2M in the category of “Aboriginal Affairs”, \$12M in the category of “Environmental & Regulatory Compliance”, and a decrease of \$323k in the category of “Feasibility Engineering”, amended from the last reporting period as a result of the impacts indicated above. The Final Forecast Cost for “Environmental & Regulatory Compliance” remains unchanged from the last reporting period; and the Final Forecast Cost for “Contingency” has increased by a net amount of \$157M from the last reporting period as a result of the analysis of this category during the AFE revision.
- The primary drivers for the increased budget are: poor Contractor performance which has resulted in an increased requirement for more direct project management, additional costs to other Contractors due to the schedule delays, along with increased services to accommodate additional manpower at the Muskrat Falls site; market conditions and pressures which is increasing the price of the work and the contracts required for Muskrat Falls Generation, including labour productivity matters as well as foreign exchange impact, which has now been incorporated into the capital cost; and design enhancements and interfaces which have accounted for scope changes and the need for additional quantity of materials.



MONTHLY PROGRESS REPORT

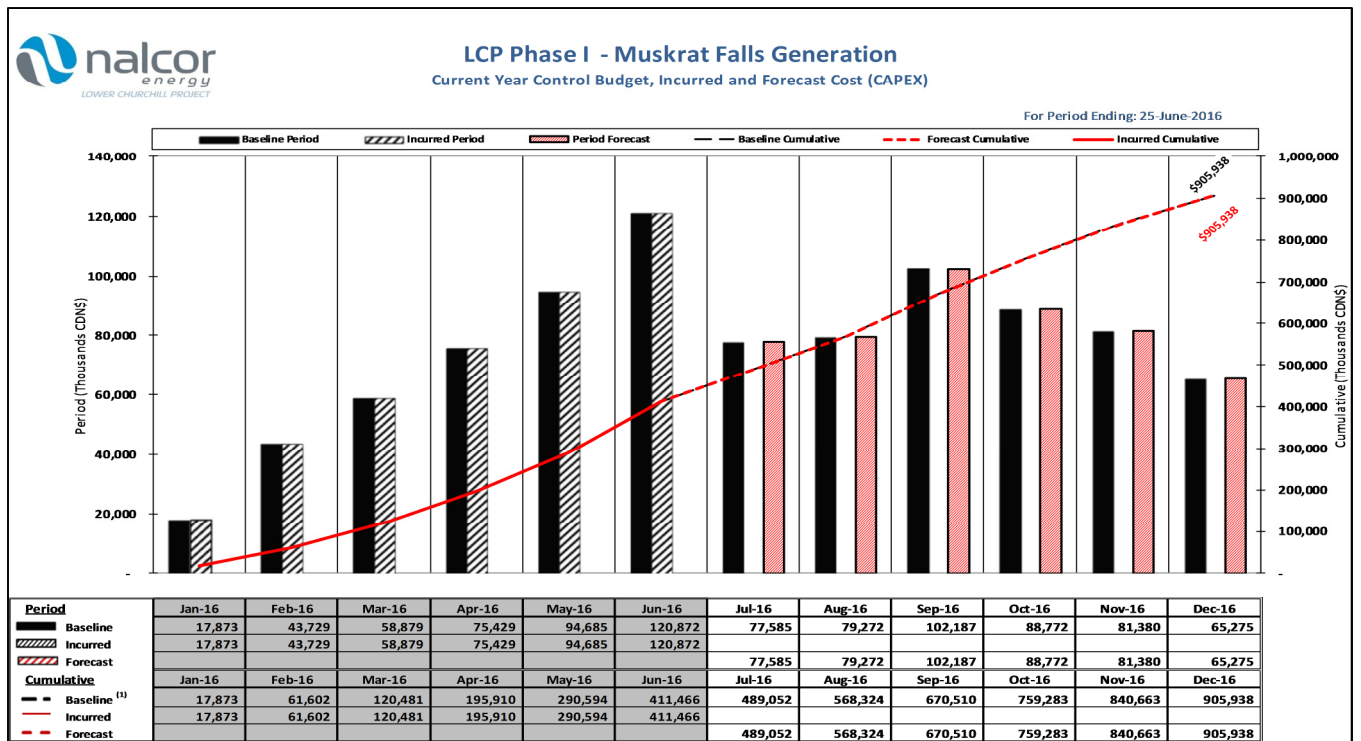
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- A summary of the revised MFG cost profile, along with the asset overview of Project Contingency Drawdown are provided in Figures 11.4-1, 11.4-2, 11.4-3, 11.4-4 and 11.4-5.

Figure 11.4-1: Muskrat Falls Generation Monthly Incurred Cost Report

		Monthly Incurred Cost Report - Muskrat Falls Generation			NALCOR ENERGY - Lower Churchill Project		COST IN CAD (\$ Thousands)		For Period Ending: 25-June-2016
		A	B	C = A + B	Incurred Costs		E	G = E - C	
		Original Control Budget (OCB)	Approved Project Changes	Current Control Budget (CCB)	Current Period	D Project-to-Date	Final Forecast Cost (FFC)	Variance from CCB	
100	NE-LCP Owners Team, Admin and EPCM Services	\$368,215	\$168,208	\$536,423	\$13,584	\$337,061	\$536,423	\$0	
200	Feasibility Engineering	\$17,985	-\$359	\$17,626	-\$323	\$17,626	\$17,626	\$0	
300	Environmental & Regulatory Compliance	\$17,927	\$7,898	\$25,825	\$165	\$19,230	\$25,825	\$0	
400	Aboriginal Affairs	\$13,314	\$2,056	\$15,370	\$404	\$8,329	\$15,370	\$0	
500	Procurement & Construction	\$2,236,847	\$1,691,137	\$3,927,984	\$106,858	\$2,050,847	\$3,927,984	\$0	
900	Commercial & Legal	\$20,021	\$22,410	\$42,431	\$185	\$16,086	\$42,431	\$0	
990	Contingency	\$226,849	\$8,905	\$235,755	\$0	\$0	\$235,755	\$0	
CAPEX Total:		\$2,901,158	\$1,900,255	\$4,801,412	\$120,872	\$2,449,178	\$4,801,412	\$0	

Figure 11.4-2: Muskrat Falls Generation Current Year Budget, Incurred and Forecast Cost





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Figure 11.4-3: Muskrat Falls Generation Annual Budget, Incurred and Forecast Cost

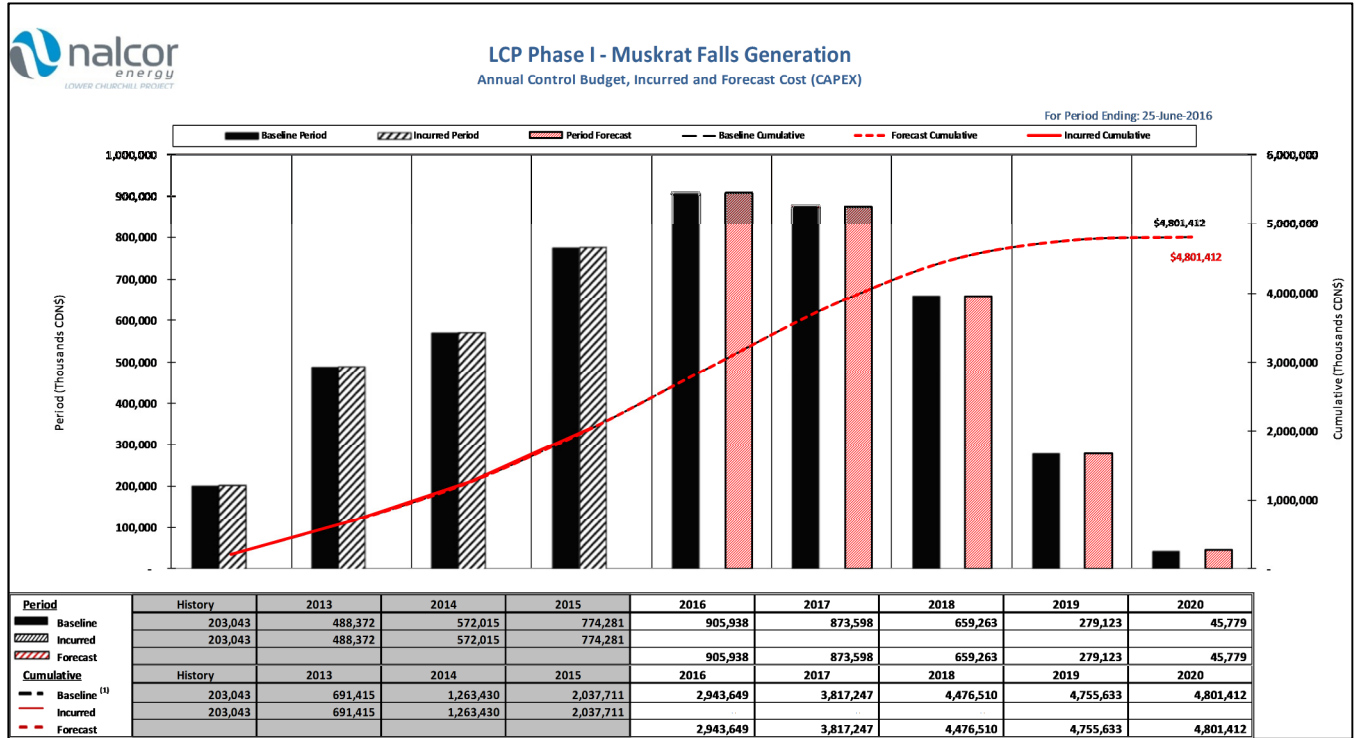
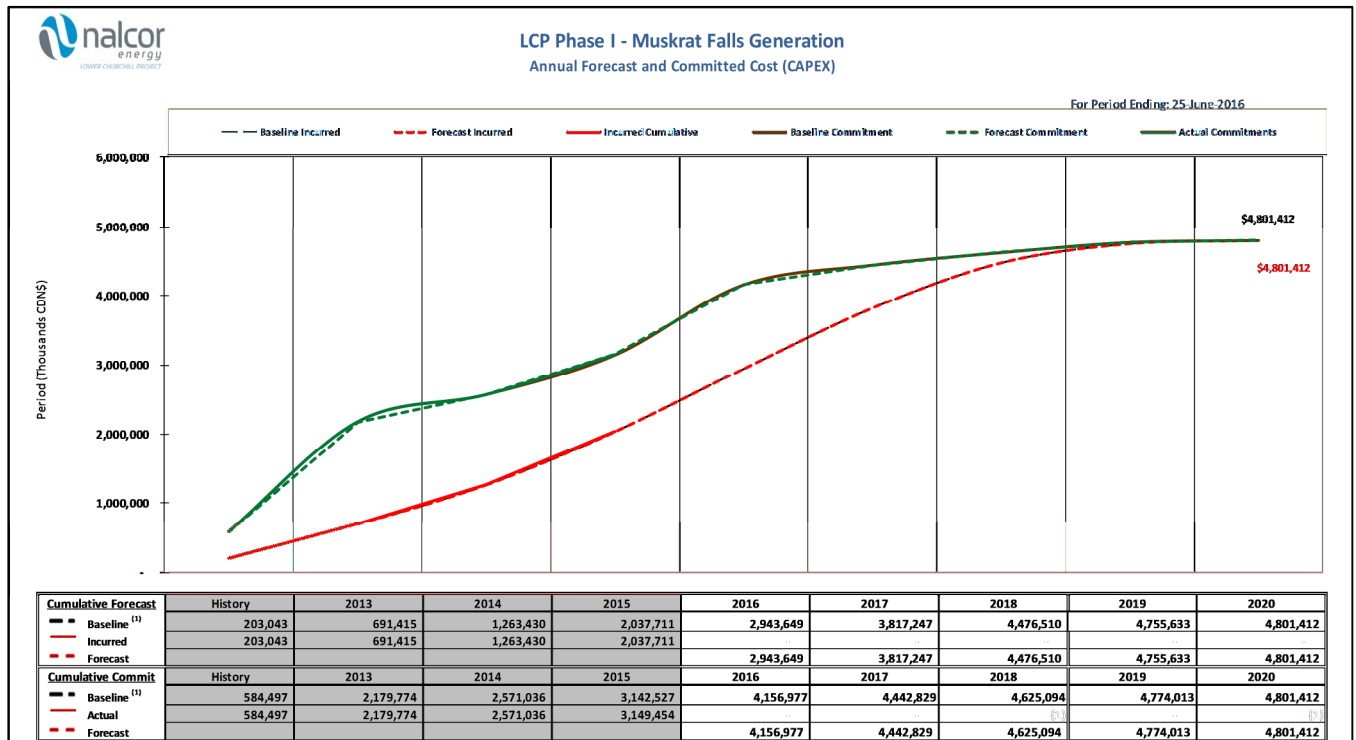


Figure 11.4-4: Muskrat Falls Generation Annual Forecast and Committed Cost

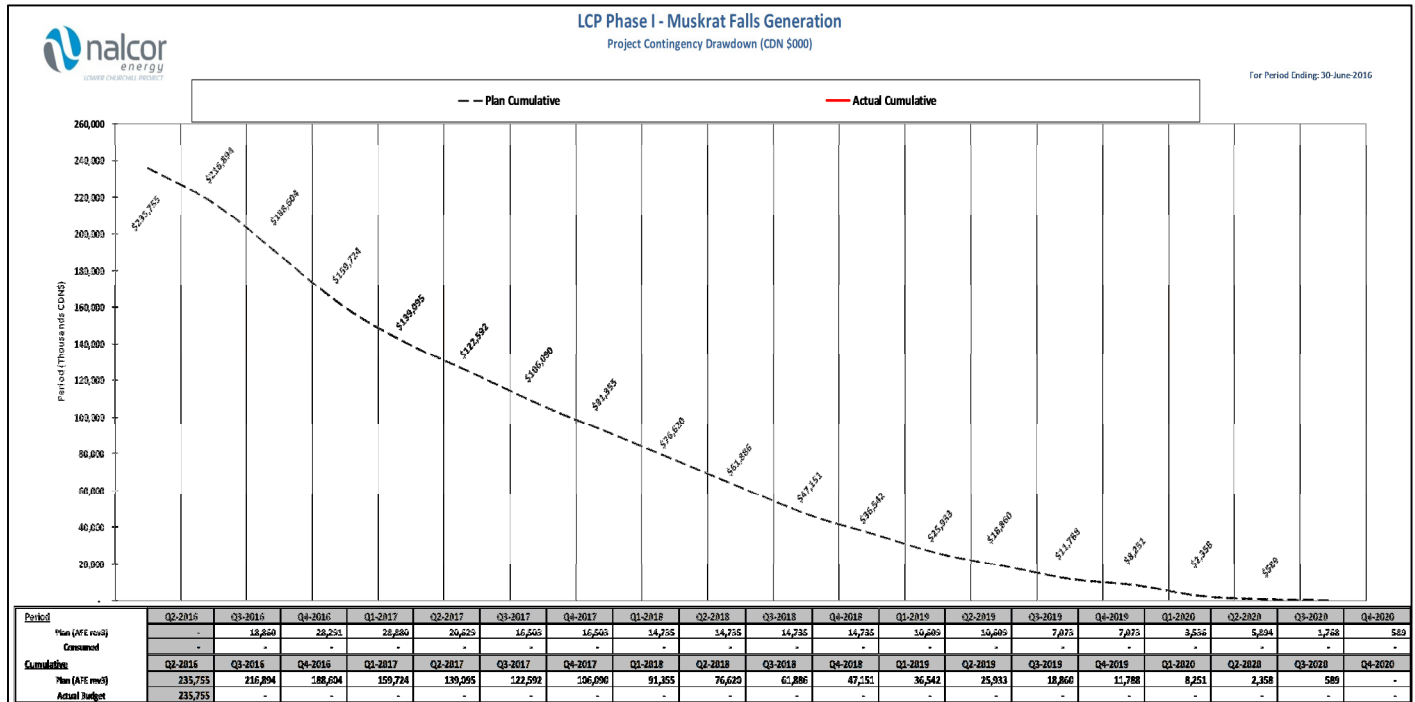




MONTHLY PROGRESS REPORT

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Figure 11.4-5: Muskrat Falls Generation Project Contingency Drawdown Curve



11.5 SCHEDULE

- Period Planned Progress was 1.9% vs. Period Earned Progress of 2.3% - Variance: 0.4%; while Period Forecast Progress was 2.9% as stated in last month’s report.
- Cumulative Planned Progress was 67.9% vs. Cumulative Earned Progress of 48.0% - Variance: -19.9%; Cumulative Forecast Progress was 48.7%, as stated in last month’s report.
- Progress commentary:
 - Period and Cumulative Planned progress will be updated for the July reporting period to align with the approved AFE Rev 3.
- Float Watch:
 - Diversion - River Closure (priority P1a): Forecast Start - 15-July-2016/Forecast Complete - 02-Oct-2016.
 - Diversion - Establish Winter Headpond El. 25m (priority P1b): Forecast Start - 01-Nov-2016/Forecast Complete - 15-Nov-2016.
 - Diversion - Impoundment Full Supply Level El. 39m (priority P1c): Forecast Start – 22-Nov-2018/Forecast Complete - 05-Dec-2018.
- Reservoir Clearing: Forecast completion – 05-Oct-2016.
- North Spur: Forecast completion date for North Spur P1b scope (Winter Headpond at 25m) - 31-Oct-2016 (Critical Path).
- Spillway: Forecast completion date for Spillway ready for P1b scope (Winter Headpond at 25m) - 31-Oct-2016.
- Transition Dams/North & South Dams: Forecast completion date for P1b scope (Winter Headpond at 25m)-Upstream Cofferdam (5) to EL 26m - 31-Oct-2016.
- Powerhouse: All powerhouse related activities have now been revised this month and outlined in the IPS:
 - P1b scope (Winter Headpond at 25m): Intake channel cofferdam installation complete by 15-July-2016.



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- A summary of the Schedule and Construction Progress data for Muskrat Falls Generation as reported in the Integrated Project Schedule (IPS) is outlined in Figures 11.5-1, 11.5-2 and 11.5-3.

Figure 11.5-1: IPS Summary - Muskrat Falls Generation

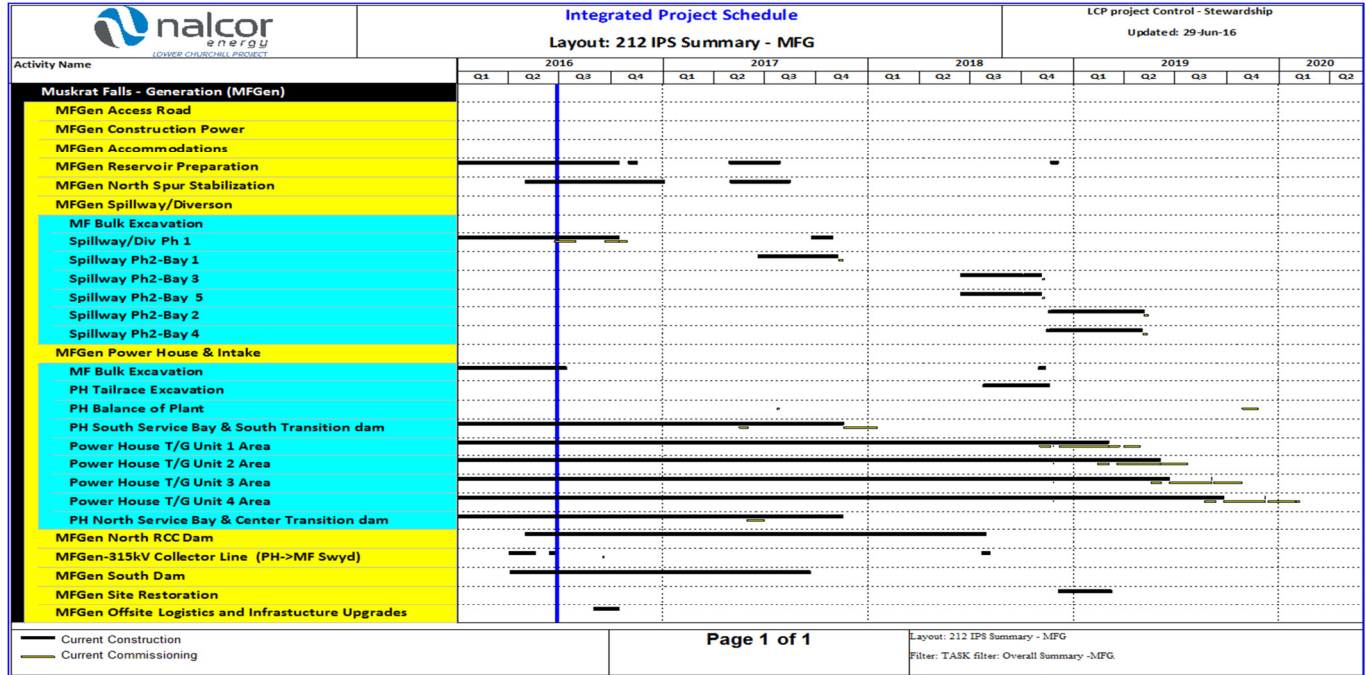


Figure 11.5-2: Summary Construction Progress Table – Muskrat Falls Generation

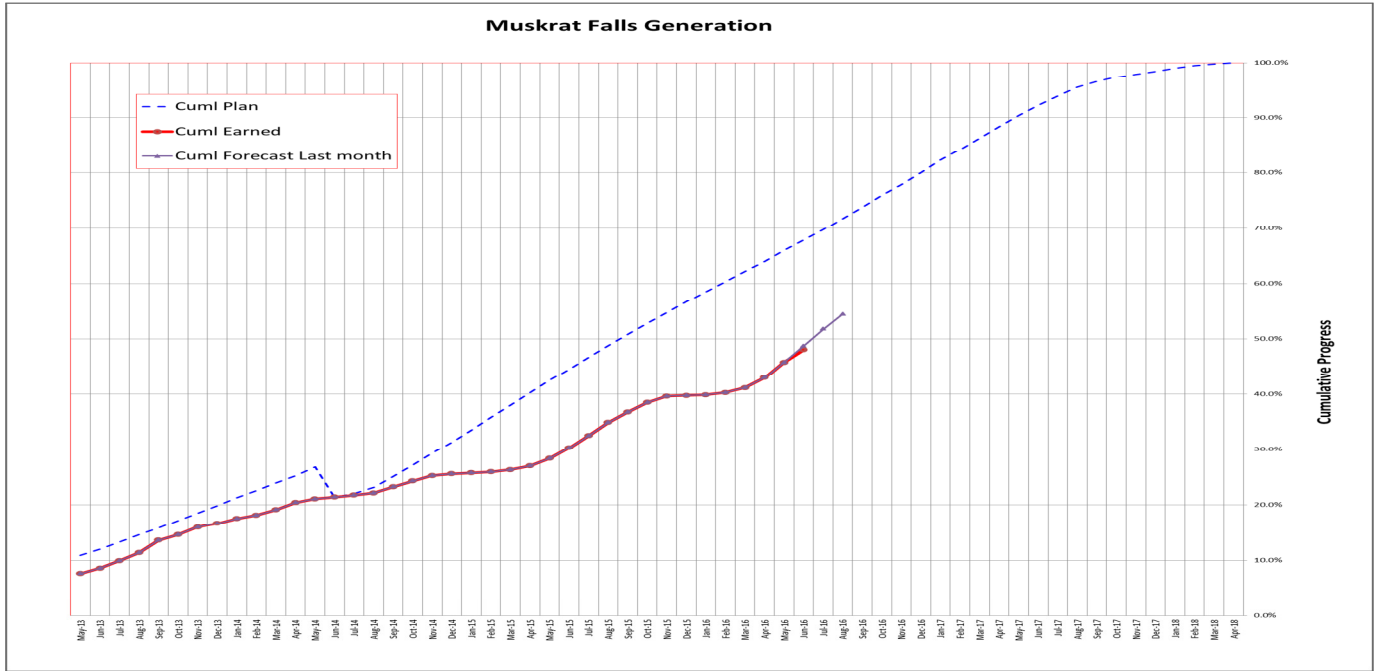
MFGen Progress Table 2016 June								
This Reporting Period								
	Weight Factor %	Period %			Cumulative %			
		Plan	Earned	Variance	Plan	Earned	Variance	
		B	C	C-B	E	F	F-E	
MFG Road/Camp/Constr. Power	7.9%	0.0%	0.0%	0.0%	100.0%	99.8%	-0.2%	
MFG Reservoir Preparation	6.5%	1.2%	0.0%	-1.2%	62.0%	72.4%	10.4%	
MFG Spillway & Gates	11.4%	2.0%	4.7%	2.7%	75.1%	86.7%	11.6%	
MFG North Spur Stabilization	4.2%	9.8%	0.0%	-9.8%	58.1%	53.3%	-4.8%	
MFG North Dam (incl North Transition Dam)	7.5%	0.8%	0.8%	0.0%	0.8%	5.1%	4.3%	
MFG Powerhouse & intake	54.9%	2.3%	2.5%	0.2%	66.8%	31.0%	-35.8%	
MFG South Dam (incl South Transition Dam)	1.1%	9.9%	3.5%	-6.4%	26.5%	24.1%	-2.4%	
MFG Misc:Eng/ 315kV/Site Rest./logistic	6.5%	0.0%	3.9%	3.9%	83.7%	87.4%	3.7%	
MFGen TOTAL	100.0%	1.9%	2.3%	0.4%	67.9%	48.0%	-19.9%	
Last Reporting Period								
	Weight Factor %	Period %			Cumulative %			
		Plan	Earned	Variance	Plan	Earned	Variance	
		B	C	C-B	E	F	F-E	
MFG Road/Camp/Constr. Power	7.9%	0.0%	0.0%	0.0%	100.0%	99.8%	-0.2%	
MFG Reservoir Preparation	6.5%	0.0%	4.4%	4.4%	60.8%	72.4%	11.6%	
MFG Spillway & Gates	11.4%	2.0%	6.9%	4.9%	73.1%	82.0%	8.9%	
MFG North Spur Stabilization	4.2%	9.1%	9.7%	0.6%	48.3%	53.3%	5.0%	
MFG North Dam (incl North Transition Dam)	7.5%	0.0%	0.0%	0.0%	0.0%	4.3%	4.3%	
MFG Powerhouse & intake	54.9%	2.4%	2.2%	-0.2%	64.5%	28.5%	-36.0%	
MFG South Dam (incl South Transition Dam)	1.1%	13.8%	6.3%	-7.5%	16.6%	20.6%	4.0%	
MFG Misc:Eng/ 315kV/Site Rest./logistic	6.5%	0.1%	0.0%	-0.1%	83.7%	83.5%	-0.2%	
MFGen TOTAL	100.0%	2.0%	2.8%	0.8%	66.0%	45.8%	-20.2%	



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Figure 11.5-3: Construction Progress Curve - Muskrat Falls Generation



11.6 PHOTOS



CH0007: South Transition Dam



CH0007: Powerhouse



CH0007: Completing spillway structure



CH0008: North Spur Stabilization Works



CH0009: Temporary Spillway Bridge



CH0009: South Dam Construction

Section 12. LABRADOR TRANSMISSION ASSET (LTA)

12.1 HVdc SPECIALTIES

12.1.1 ENGINEERING

- CD0502 - Construction of AC Substations:
 - Actual (May) – 76.6%/Forecast for June – 85.0%.
 - Two hundred and twenty nine (229) Supplier Documents were returned to Contractor and accepted (Code 01). These include engineering and quality documents.
 - Company continues to work proactively with Contractor to help progress the engineering and construction work.
 - As of 27-June-2016, 982 Contractor engineering documents in total have been assigned Code 01. This is a decrease from last month's report, mainly due to Contractor's redesign of Package 3 – Building Fit Out. This makes up approximately 50% of the total engineering documents to be delivered.
 - Contractor issued one concession request related to low voltage cable requirements. Company has accepted, which will provide a cost savings of \$205,000 to the Project.
 - LCP and Contractor held weekly teleconferences to discuss technical matters for a number of drawings. This included low and medium voltage switchgear, as well as overhead crane. This will assist in providing manufacturing releases of equipment.
 - Road routing redesign at CF(L)Co for review where the interface control building is being installed has been accepted.
 - Company representatives visited the STACE factory, the manufacturer of the medium voltage switchgear for CF and MF. The visit was satisfactory and the supplier is now approved by Company.
 - Risk review session was held between Company and Contractor on 17-June-2016.
 - Three change requests, all related to MF, were issued to Contractor.
- PD0537 - Supply of Power Transformers, AC Substations at Churchill Falls, Muskrat Falls and Soldiers Pond: Engineering is 100% complete for Churchill Falls, Muskrat Falls and Soldiers Pond units; as-built submissions process is complete.

12.1.2 PROCUREMENT

- Contracts and POs awarded for the following packages:
 - All HVdc Specialties contracts and POs under the Labrador Transmission Asset have been awarded, excluding the following which are managed under the EPC Contractor's scope of work:
 - CD0504 - Civil Works and Buildings Services for HVdc Specialties: Awarded to Pomerleau for Labrador.
- Activities planned for the upcoming period:
 - Continue to manage Contractor procurement activities to meet project schedule.

12.1.3 CONSTRUCTION

12.1.3.1 SWITCHYARDS

FABRICATION AND CONSTRUCTION HIGHLIGHTS:

- PD0537 - Supply of Power Transformers, AC Substations at Churchill Falls, Muskrat Falls and Soldiers Pond:
 - Working with GE/Alstom Grid, CD0502, to ensure site preservation routines are followed, mainly dry air monitoring and inspection of spares/accessories storage requirements continue to be met. To date, inspections of all storage facilities have been complete and preservation is ongoing.

- Assembly of the Churchill Falls unit is well underway; the Muskrat Falls units are scheduled to start late July/early August.
- CD0502-001 - Construction of AC Substations:
 - Four (4) FAT's were completed during the period; these included surge arresters, gantries, post insulators and 800 kV disconnect switches.
 - Churchill Falls:
 - Mass backfilling around gantries and equipment foundations continued.
 - Work continued on the Churchill Falls extension, outside the CF(L)Co fence line; permits have been granted, and excavation work has started inside the existing CF(L)Co switchyard.
 - Dressing of six out of seven power transformers is complete.
 - Wall and roof for GIS building is substantially completed.
 - Pre-engineered control building in transit to site.
 - Muskrat Falls:
 - GIS concrete rework.
 - Hydro blasting of the beams between columns C13 and B13 is complete.
 - Saw cutting and demolition for the GIS building from gridline 14.5 to gridline 16 due to be completed mid-late July.
 - Framework assembly for the GIS building has started on the end of the building not affected by the hydro-demolition.

COMMISSIONING:

- Nothing to report this period.

12.1.4 ISSUES & OPPORTUNITIES

- During site visit to CF(L)Co., and subsequent meeting held in July 2015, CD0502 Contractor was notified of some potential design requirement which may need to follow Hydro-Quebec standards, which were not known: Technical Interfaces previously sent to CF(L)Co requesting these specific requirements, and initial meeting held between RFI and Hydro-Quebec in March 2016. As of end of June, report from Hydro-Quebec has not been issued, and LCP have submitted a request to RFI group for an update.
- CD0502 Contractor is well behind schedule for secondary design which includes P&C design and design for the GIS local control cubicles: Company is continuing to work with Contractor to get design back on schedule. Contractor has submitted the majority of drawings required for manufacturing release for the LCC's. Manufacturing is slated to begin by mid-July.
- Slow construction progress at Churchill Falls and Muskrat Falls: Issues with Construction Management and Planning, Labour forecasting and supply at Site, especially at Muskrat Falls, have led to slower progress than anticipated. Extra resources have been allocated and progress is expected to increase once the repairs are made to the GIS building; building repairs and hydro-demolition is progressing well.
- Contractor has not finalized its cable schedule; however, is proceeding with cable trench layout and conduit design: Company had previously requested Contractor to submit a realistic cable schedule prior to completing engineering design of conduit and trench layouts. During the current period, Contractor has submitted cable lists for all sites, and has accepted the conduit and trench layouts for Muskrat Falls and Churchill Falls.
- CF(L)Co has requested that load studies be completed for the ac and dc loads being added as part of the Churchill Falls extension. In May, Rev. A2 of the DC load study was issued to CF(L)Co for review, and scope of the AC load study was

agreed. CF(L)Co advised in June they will provide latest comments on the DC load study in early July, stating no major comments are expected. First revision of the AC load study will be issued to CF(L)Co during first week of July.

12.1.5 ACTIVITIES PLANNED FOR UPCOMING PERIOD

- CD0502 - Construction of AC Substations:
 - Continue to review document deliverables from Contractor.
 - Review and respond to site queries and concession requests provided from Contractor. Hold weekly teleconferences with Contractor and CWC/Site teams to help progress with engineering design.
 - Further FAT's planned for HV cables and terminations, and SOP station service transformers.
 - Issue manufacturing releases for both the LV and MV switchgear.
 - Issue first revision of ac System Study to CF(L)Co for review and finalize DC load study.
 - Finalize CF grounding study.
 - Delivery of pre-engineered control buildings to MF and CF.
- PD0537 - Supply of Power Transformers, AC Substations at Churchill Falls, Muskrat Falls and Soldiers Pond:
 - Finalize document as-builts in preparation of package closeout.
 - Monitor preservation routines at all sites and storage locations.

12.2 TRANSMISSION LINE

12.2.1 ENGINEERING

- Post award follow on support is continuing for all 315 kV HVac packages in support of construction of the HVac Transmission Line.
- Reviews conducted of potential solutions for concrete remediation.

12.2.2 PROCUREMENT

- Contracts and POs awarded for the following packages: All Transmission Line contracts and POs under the Labrador Transmission Asset have been awarded.
- Expediting Releases: All materials for the HVac Transmission Line have been received.
- Logistics: Small quantities of additional materials to support ongoing construction will be purchased and supplied as needed.
- Weekly material meeting with Contractor to stay ahead of potential material issues at site. Only potential sources of issues could be the stringing hardware for the interconnect structures and all materials for the 735 kV scope at CF.
- Surplus materials from ROW and laydown areas being returned to the HVGB Marshalling Yard.
- Activities planned for the upcoming period: Continue to manage procurement activities to meet project schedule.

12.2.3 CONSTRUCTION

12.2.3.1 HVac TRANSMISSION LINE

CONSTRUCTION HIGHLIGHTS:

- CT0319 - Construction of 315kV HVac Transmission Line:
 - Cumulative Progress to Date:

Commodity	Budget Total QTY	Planned to Date	Installed to Date	Variance	% Complete
Anchor Installation	1082	1082	1082	0	100.00%
Anchor Testing	1082	1082	1082	0	100.00%
Foundation Installation	1262	1262	1262	0	100.00%
Tower Assembly	1262	1262	1262	0	100.00%
Tower Erections	1262	1262	1262	0	100.00%
Conductor Stringing	490,481	467,811	490,481	22,670	100.00%

- The 315 kV HVac Transmission Line from Churchill Falls to Muskrat Falls is fully strung, except for the slack span connections to the gantries at each end.
- Interconnect towers at Muskrat Falls are strung, except for the slack span connections to the gantries at each end.
- OPGW splice, counterpoise and reclamation/rehabilitation work is ongoing.
- Coordination planning with C1 and C3 across all interaction points.
- Preparations to commence the 735 kV scope in Churchill Falls.

COMMISSIONING:

- Preparations underway to commence Completions walk down. Contractor has submitted Notice of Completions for segments of line.

12.2.4 ISSUES & OPPORTUNITIES

- C4, along with other components (C1 and C3), are now working beside each other with more interaction between contractors and sharing access and work spaces, increasing the risk of work stoppage or incident: Close coordination between components required as necessary when contractors are working at the same time. Regular meetings between construction management teams are ongoing to share information and plan work accordingly.
- Tower foundation tolerance and concrete quality issues have been raised and continue to be investigated; rework on some foundations is ongoing and expected to be completed in August; however, overall schedule impact is minimal: C4 is working closely with Contractor on solutions to correct existing issues and continuing to deploy solutions in the field to resolve.
- Contractor may have to remobilize to complete final slack span connections from HVac TL to gantries at MF and CF switchyards. This is because switchyard infrastructure may not be ready in time; this could cause a cost impact: Perform as much scope as possible, with preparation for later remobilization (i.e. materials staged/organized in yards, cables spooled and tied down/ready, etc.); stage slack span work to include HVdc scope to address all outstanding items at one time; determine potential costs.

12.2.5 ACTIVITIES PLANNED FOR UPCOMING PERIOD

- Post award follow-on engineering support for all open 315 kV HVac packages, as well as resolving site queries and concession requests generated in the field, and issuing any site instructions as necessary.
- Commence work on 735 kV at Churchill Falls.
- Continue coordination planning with C1 and C3 across all interaction points.
- Continue remainder construction work, reclamation/rehabilitation work.
- Award of navigation lighting installation works.
- Continue and ramp up completions walk downs.

12.3 COST

- Incurred costs for the current period and project-to-date are aligned with the incurred cost flow for the 2016 revised Authorization for Expenditure (AFE) approved during the current period. The incurring of the Contingency is reflected within the incurred and future incurred costs in the categories outlined in Figure 12.3-1 as and where the work is performed. Cost to complete continues to remain significant for LTA as construction activities for work in progress are ongoing.
- The overall Approved Final Forecast Cost (FFC) is an alignment with the 2016 revised AFE, and remains unchanged from the previous reporting period; however, changes at the specific category level are outlined below. A Quantitative Cost and Schedule Risk Analysis was completed for Labrador Transmission Asset based upon an assessment of risks to project completion and an analysis of the associated impact on cost and schedule. The high end (P75) of the probabilistic range of most likely outcomes resulting from this Risk Analysis confirmed that the current Project Budget is sufficient to complete the project scope. The main component of the change at category level is in relation to an increase of \$14.5M in the category of "Procurement & Construction", followed by increases of \$143k in the category of "Feasibility Engineering", and a decrease of \$10.5M in the category of "Owners Team, Admin and EPCM Services", amended from the last reporting period as a result of the impacts indicated above. The Final Forecast Costs for "Environmental & Regulatory Compliance", "Aboriginal Affairs", and "Commercial & Legal", remain unchanged from the last reporting period; and the Final Forecast Cost for "Contingency" has decreased by a net amount of \$4M from the last reporting period as a result of the transfers noted above in direct relation to the analysis of these categories during the AFE revision.
- A summary of the revised LTA cost profile, along with the asset overview of Project Contingency Drawdown are provided in Figures 12.3-1, 12.3-2, 12.3-3, 12.3-4, and 12.3-5.



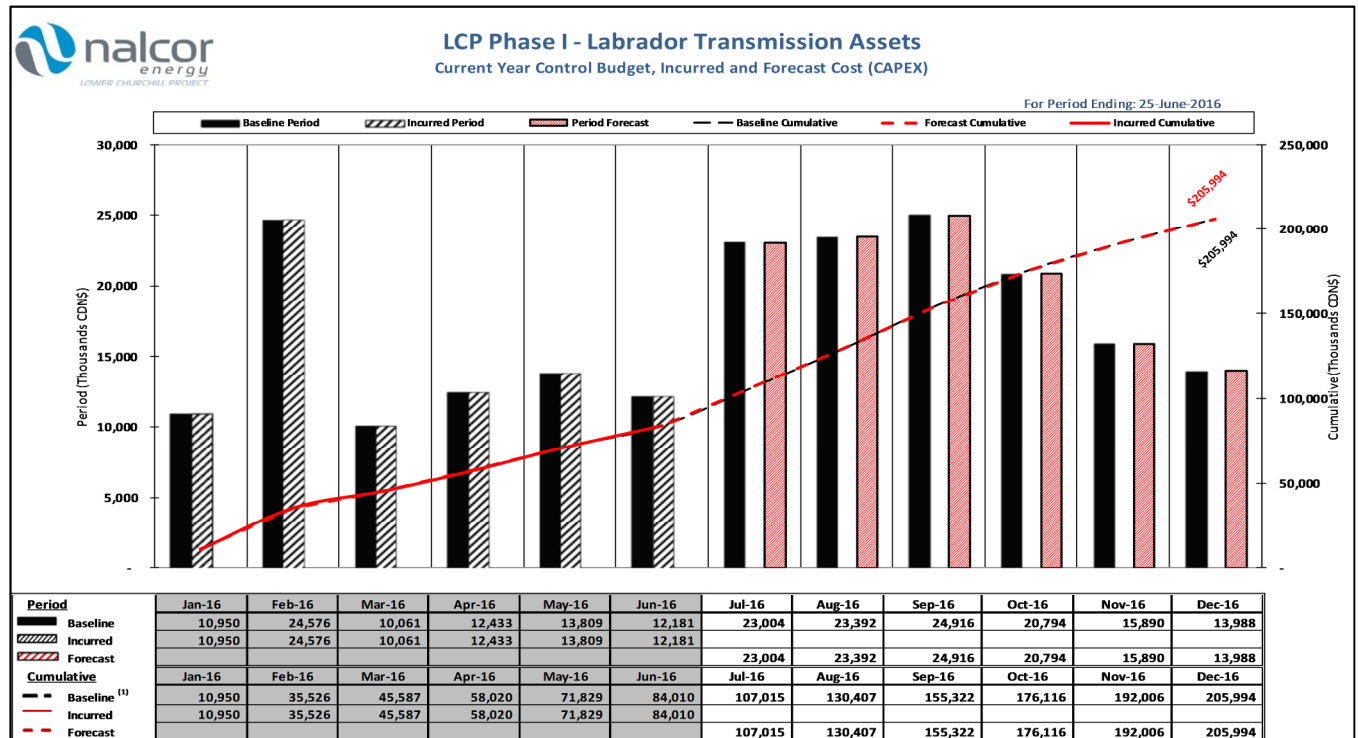
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Figure 12.3-1: Labrador Transmission Asset Monthly Incurred Cost Report

		Monthly Incurred Cost Report - Labrador Transmission Asset			For Period Ending: 25-June-2016			
		NALCOR ENERGY - Lower Churchill Project						
		COST IN CAD (\$ Thousands)						
		A	B	C = A + B	Incurred Costs		E	G = E - C
		Original Control Budget (OCB)	Approved Project Changes	Current Control Budget (CCB)	Current Period	D Project-to-Date	Final Forecast Cost (FFC)	Variance from CCB
100	NE-LCP Owners Team, Admin and EPCM Services	\$90,385	\$55,463	\$145,848	\$1,542	\$103,231	\$145,848	\$0
200	Feasibility Engineering	\$136	\$227	\$363	\$143	\$363	\$363	\$0
300	Environmental & Regulatory Compliance	\$709	\$102	\$811	\$0	\$811	\$811	\$0
400	Aboriginal Affairs	\$188	\$0	\$188	\$0	\$0	\$188	\$0
500	Procurement & Construction	\$543,309	\$161,575	\$704,884	\$10,480	\$570,327	\$704,884	\$0
900	Commercial & Legal	\$2,479	\$1,412	\$3,891	\$16	\$2,372	\$3,891	\$0
990	Contingency	\$54,375	-\$32,804	\$21,571	\$0	\$0	\$21,571	\$0
CAPEX Total:		\$691,582	\$185,976	\$877,557	\$12,181	\$677,104	\$877,557	\$0

Figure 12.3-2: Labrador Transmission Asset Current Year Budget, Incurred and Forecast Cost





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Figure 12.3-3: Labrador Transmission Asset Annual Budget, Incurred and Forecast Cost

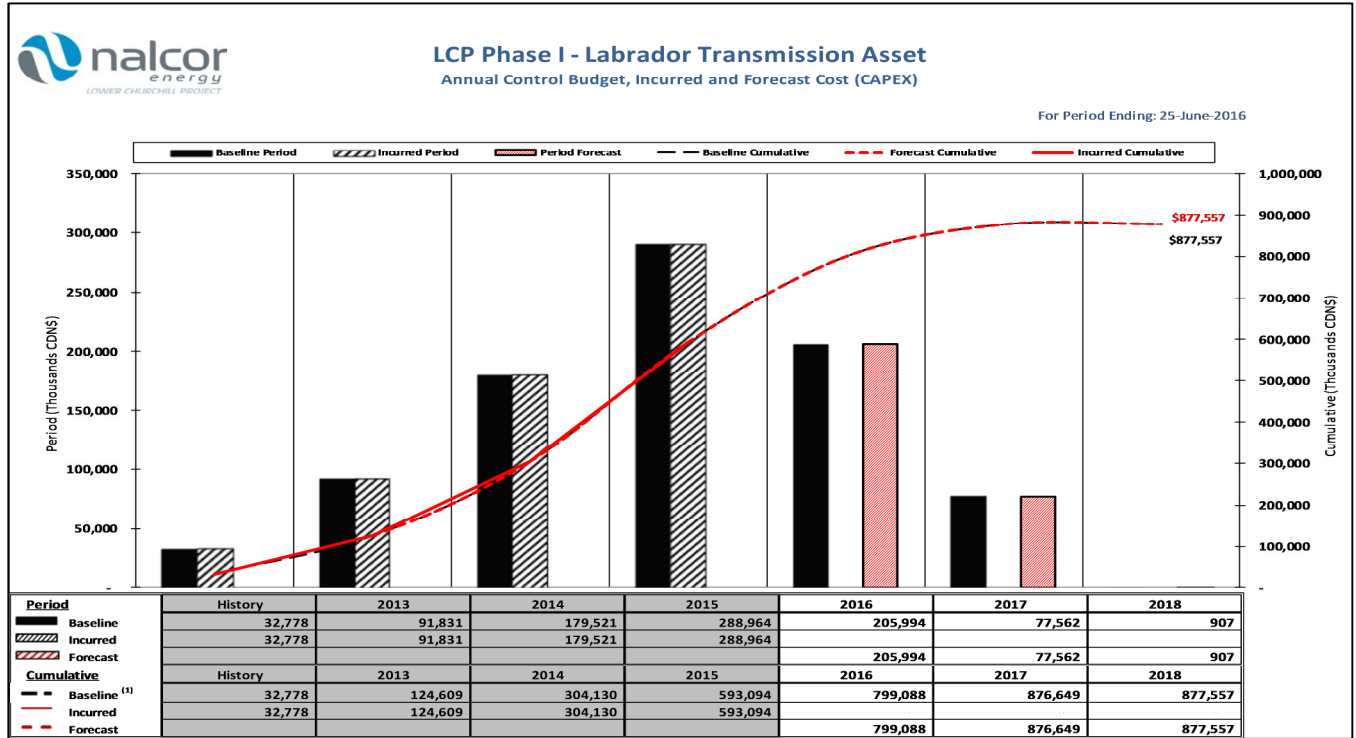
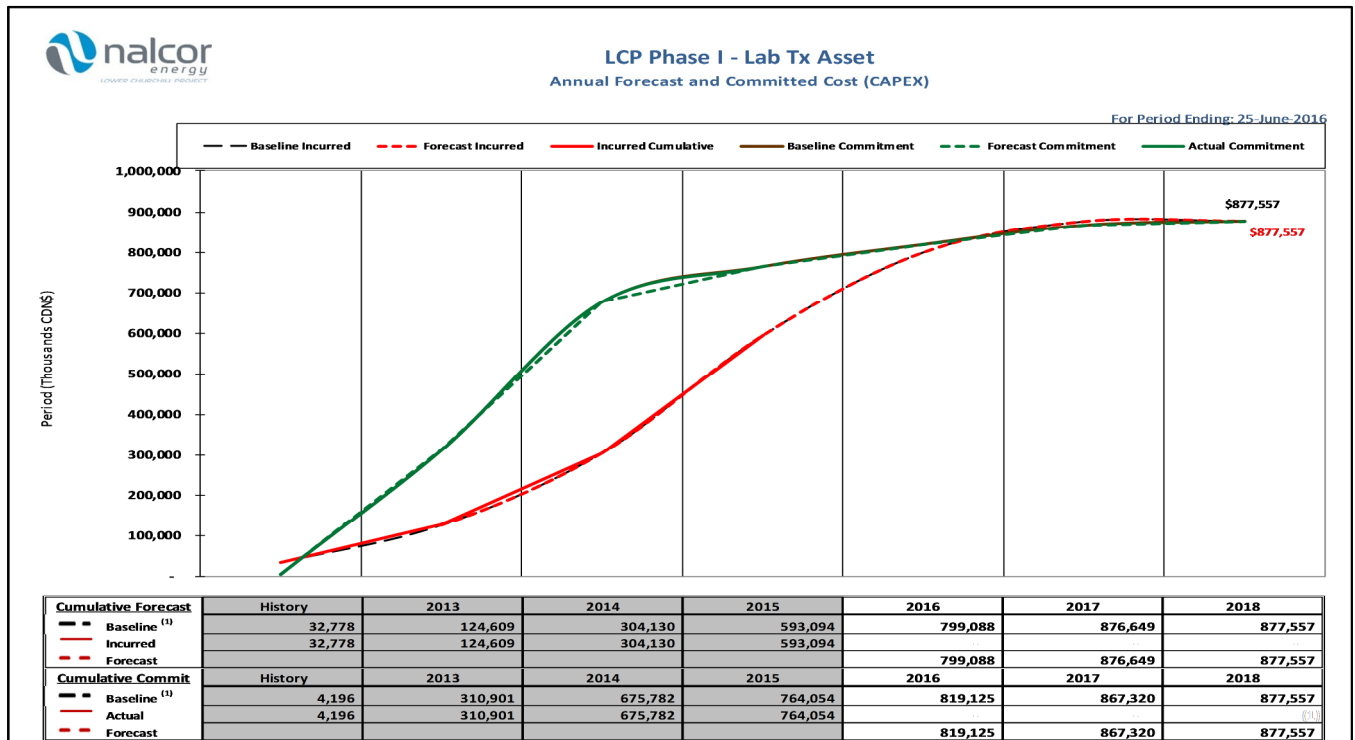


Figure 12.3-4: Labrador Transmission Asset Annual Forecast and Committed Cost

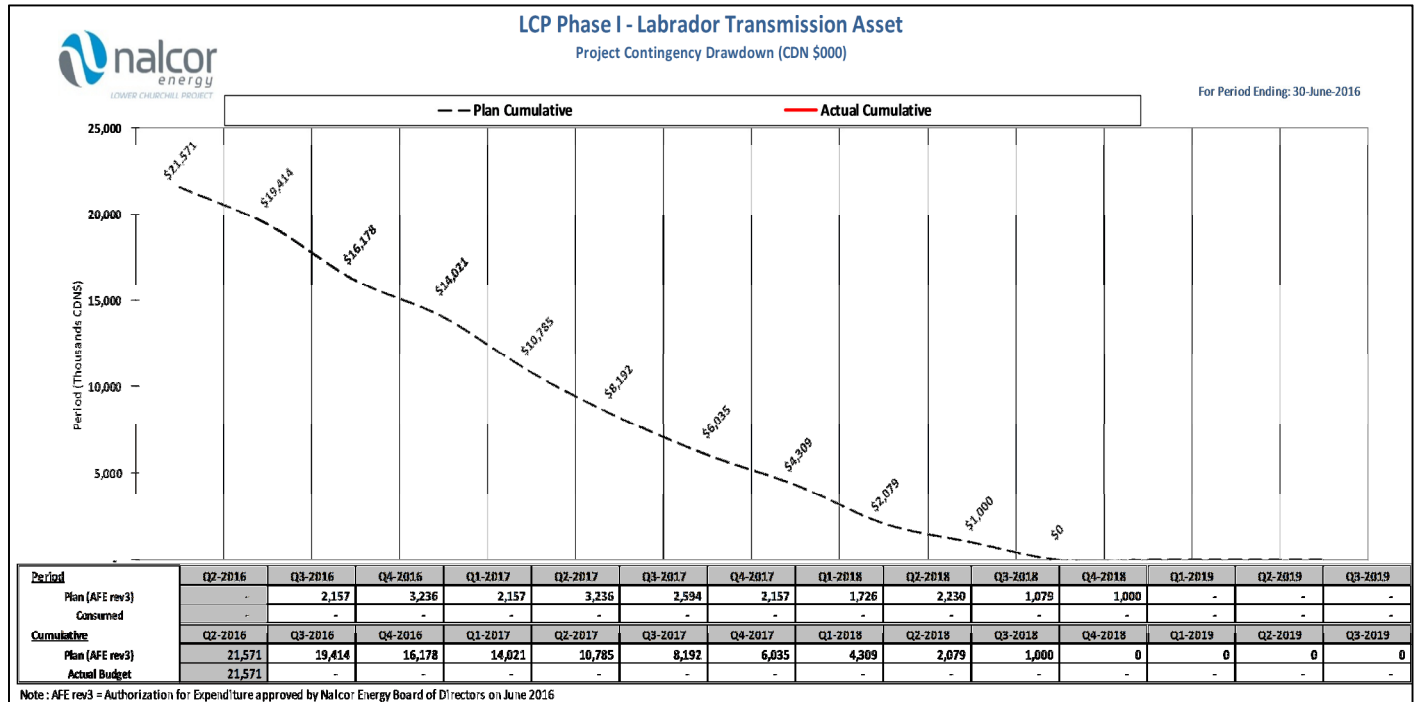




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Figure 12.3-5: Labrador Transmission Asset Project Contingency Drawdown Curve



12.4 SCHEDULE

- Period Planned Progress was 5.4% vs. Period Earned Progress of 2.7% - Variance: -2.7%; while Period Forecast Progress was 2.5% as stated in last month’s report.
- Cumulative Planned Progress was 89.1% vs. Cumulative Earned Progress of 80.7% - Variance: -8.4%; Cumulative Forecast Progress was 80.5%, as stated in last month’s report.
- Progress commentary:
 - Period and Cumulative Planned progress will be updated for the July reporting period to align with the approved AFE Rev 3.
- Critical Path: MF Switchyard continues to be on the critical path to LTA Power Available forecast for July 2017.
- Switchyards:
 - Civil works at the Churchill Falls switchyard commenced in late July 2015; and at the Muskrat Falls switchyard in early August 2015.
 - The current forecast date for completion of Static Commissioning for the Muskrat Falls and Churchill Falls Switchyards is 05-June-2017 and 03-May-2017 respectively, a 7 day slippage for the Churchill Falls Switchyard. The Contractual milestone date for both facilities is 01-Mar-2017, and liquidated damages will apply if the Contractor does not recover schedule.
- 315kV HVac Lines CF-MF:
 - HVac Seg 1/2 – TL final inspection date (end of line construction), is now 82 days later this month. The stringing is complete, but inspection is planned for the period of July - September 2016.
 - Slack span connection date is in June 2017, unchanged this month.
- 735kV HVac CF Interconnection (Bus Extension):



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- CF 735kV (bus extension) – TL final inspection date, which is end of line construction, is currently forecast for September 2016, no change from last month.
- Slack span connection date is in May 2017, 9 days later this month.
- A summary of the Schedule and Construction Progress data for the Labrador Transmission Asset (LTA) as reported in the Integrated Project Schedule (IPS) is outlined in Figures 12.4-1, 12.4-2 and 12.4-3.

Figure 12.4-1: IPS Summary - Labrador Transmission Asset

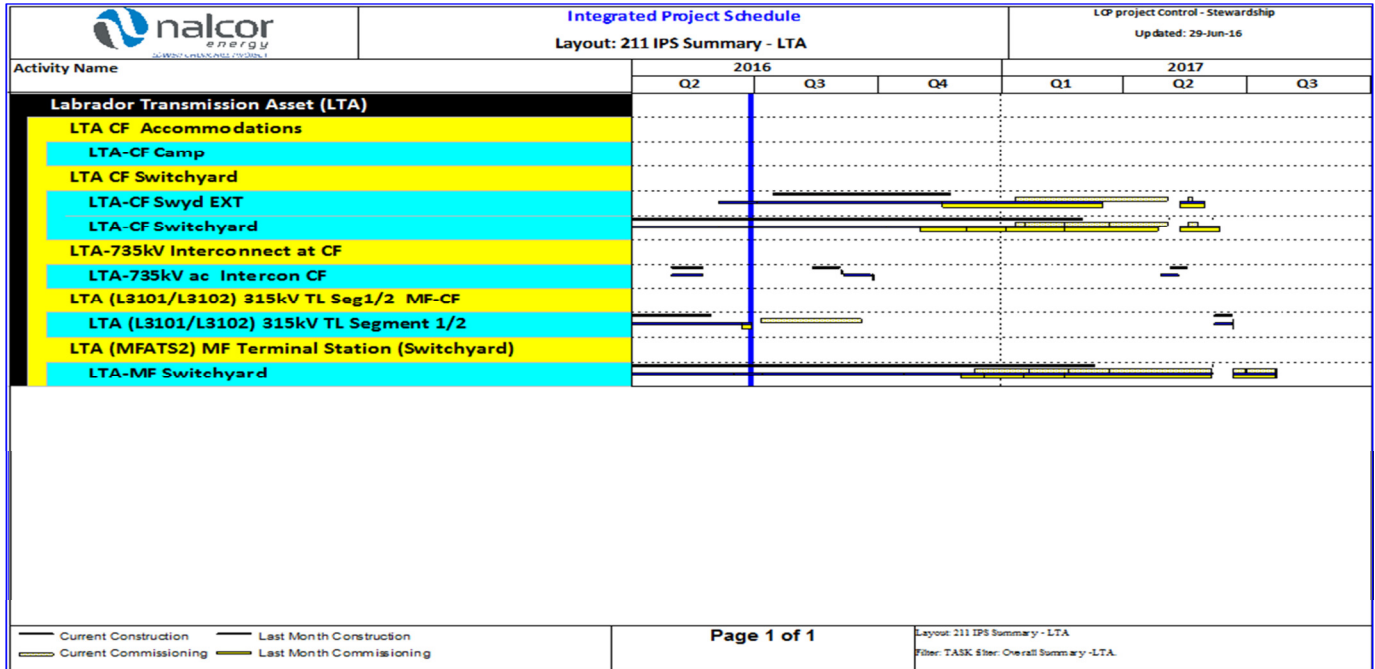


Figure 12.4-2: Summary Construction Progress Table - Labrador Transmission Asset

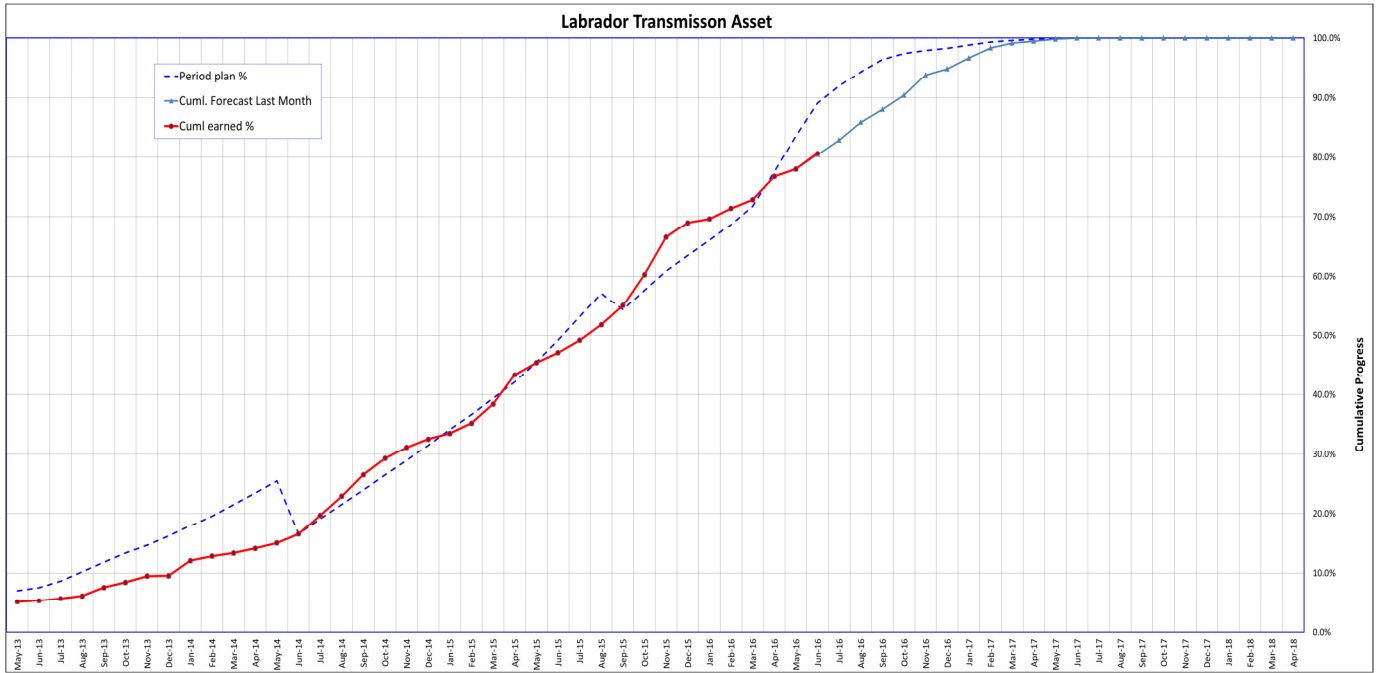
LTA Progress Table 2016 June								
This Reporting Period								
Activity Name	Weight Factor %	Period %			Cumulative %			
		Plan	Earned	Variance	Plan	Earned	Variance	
		A	B	C	C-B	E	F	F-E
LTA CF Accommodations	1.1%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	
LTA HVac Transmission Line Seg1/2 - MF to CF	56.0%	4.2%	3.8%	-0.4%	98.8%	100.0%	1.2%	
LTA Churchill Falls Switchyard	20.9%	7.4%	2.6%	-4.8%	78.5%	59.6%	-18.9%	
LTA Muskrat Falls Switchyard	14.0%	10.3%	0.0%	-10.3%	61.1%	28.4%	-32.7%	
LTA Misc	8.0%	1.3%	0.2%	-1.1%	97.6%	90.0%	-7.6%	
LTA TOTAL	100.0%	5.4%	2.7%	-2.8%	89.1%	80.7%	-8.5%	
Last Reporting Period								
Activity Name	Weight Factor %	Period %			Cumulative %			
		Plan	Earned	Variance	Plan	Earned	Variance	
		A	B	C	C-B	E	F	F-E
LTA CF Accommodations	1.1%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	
LTA HVac Transmission Line Seg1/2 - MF to CF	56.0%	3.0%	0.4%	-2.6%	94.6%	96.2%	1.6%	
LTA Churchill Falls Switchyard	20.9%	16.0%	4.7%	-11.3%	71.1%	57.0%	-14.1%	
LTA Muskrat Falls Switchyard	14.0%	7.5%	0.2%	-7.3%	50.8%	28.4%	-22.4%	
LTA Misc	8.0%	1.3%	0.0%	-1.3%	96.3%	89.8%	-6.5%	
LTA TOTAL	100.0%	6.2%	1.2%	-4.9%	83.7%	78.0%	-5.7%	



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Figure 12.4-3: Construction Progress Curve - Labrador Transmission Asset



12.5 PHOTOS



Preparations for 735 kV Interconnect at Churchill Falls



CD0502: Churchill Falls Switchyard



CD0502: Churchill Falls Extension



CD0502: Churchill Falls Switchyard



CD0502: Muskrat Falls Switchyard



CD0502: Muskrat Falls Switchyard

Section 13. LABRADOR ISLAND TRANSMISSION LINK (LITL)

13.1 HVdc SPECIALTIES

13.1.1 ENGINEERING

- CD0502 - Construction of AC Substations:
 - Actual (May) – 76.6%/Forecast for June – 85.0%.
 - Two hundred and twenty nine (229) Supplier Documents were returned to Contractor and accepted (Code 01). These include engineering and quality documents.
 - Company continues to work proactively with Contractor to help progress the engineering and construction work.
 - As of 27-June-2016, 982 Contractor engineering documents in total have been assigned Code 01. This is a decrease from last month's report, mainly due to Contractor's redesign of Package 3 – Building Fit Out. This makes up approximately 50% of the total engineering documents to be delivered.
 - Contractor issued one concession request related to low voltage cable requirements. Company has accepted, which will provide a cost savings of \$205,000 to the Project.
 - LCP and Contractor held weekly teleconferences to discuss technical matters for a number of drawings. This included low and medium voltage switchgear, as well as overhead crane. This will assist in providing manufacturing releases of equipment.
 - Three Expediting Release Notices were signed off by Company for the shipment of equipment to Soldiers Pond. This included the pre-engineered control building, which is currently being erected on Site.
 - Risk review session was held between Company and Contractor on 17-Jun-2016.
- PD0537 - Supply of Power Transformers, AC Substations at Churchill Falls, Muskrat Falls and Soldiers Pond: Engineering is 100% complete for the Soldiers Pond units; as-built submissions process is complete.
- CD0501 - Supply and Install Converters and Cable Transition Compounds:
 - Actual (May) – 78.0%/Forecast for June – 81.7%.
 - 957/3190 (30.0%) of all GE/Alstom Grid documents are Code 1 (Reviewed and Accepted – No Comments).
 - Company have seen a total of 1950/3190 (61.3%) GE/Alstom Grid documents.
 - Analysis is ongoing for determining whether a reactor will be required at the Muskrat Falls site to counteract the high voltages produced by ac filter switching.
 - A decision was made to not install high speed switches on the electrode line based on report from RFI.
 - Received twelve (12) new Concession Requests during the month of June-2016. One (1) Concession Request was approved, two (2) were rejected; one (1) was open (conditionally approved) and eight (8) are presently being reviewed during the month of June 2016.
- CD0534 - Supply and Install Soldiers Pond Synchronous Condensers:
 - Actual (May) – 92.1%/Forecast for June – 99.0%.
 - Contractor reports Engineering as 92.1% complete as of the end of May.
 - Contractor's consultations with FM Global and Service NL have led to their confirmation that sprinklers are not required in the Electrical Gallery, due to construction and ratings of equipment that will be contained within the Electrical Gallery Contractor investigating a means of fire proofing for the main step-up transformer gantries.
 - Contractor finalizing calculations and details relating to main step-up transformer gantry design. Finalization of design was contingent, in part on the fire protection aspects, which have been resolved through Contractor's discussions with FM Global.

- Contractor gave presentation to Company during day long workshop on its revised design philosophy for emergency power systems. The new design philosophy is in-line with Technical Specifications. Company will be approving CARE PO, which will allow Contractor to finalize the detailed design.
- CD0508 - Supply and Install of Electrode Sites: Civil construction work scope has been completed; electrical scope planned for Q2/Q3 2017.
- SD0560 - Provision of Early Works Construction Telecommunications Services:
 - Continued with preparation of as-built drawings and documentation.
 - Completed design and ordered telecommunications services from local providers for C4 Blaketown, Clarenville, and Deer Lake site offices.
- CD0509 - Construction Telecommunications Services at Muskrat Falls:
 - Muskrat Falls Engineering:
 - Continued with preparation of as-built drawings and documentation.
 - Completed design and provided construction support for optical fiber connection/telecoms services to the concrete lab.
- CD0510 - Supply and Install Permanent Communication Systems:
 - CD0510-001 Optical Transport network (OTN) EPC Contract – Bell Canada:
 - Weekly progress meetings with Contractor continued during the period. Scope of work is currently on schedule and within budget.
 - A response to Change Request No. 1 (pricing and technical information for a 40 Gbps system for the Muskrat Falls – Churchill Falls link) was received from the Contractor on 22-Jun-2016. The change request is being evaluated.
 - Continued to work with Contractor to develop SDR and to reserve document numbers in Aconex.
 - CD0510-002 Repeater Buildings EPC Contract – Talon Energy Services:
 - Weekly progress meetings with Contractor ongoing. Scope of work is currently within budget. Contractor is currently one month behind schedule for final completion. Contractor’s schedule recovery plan is currently being reviewed; no impact to CD0510 permanent telecommunications schedule.
 - Technical meetings were held with Contractor to confirm White Hills (Clarenville) building electrical and mechanical details.
 - Reviewed Contractor building structural, architectural, electrical and mechanical drawings for White Hills buildings through Aconex workflow.
 - Reviewed Contractor building structural and architectural drawings for Hampden buildings through Aconex workflow.
 - Site civil works is expected to commence as follows:
 - White Hills Repeater (Clarenville) - 04-July-2016.
 - Hampden Repeater - 29-August-2016.
 - Three Rocks Repeater (Labrador) - 08-August-2016.
 - CD0510 Structured Cabling - Fiber Cable/Tail Circuits:
 - Continued design for CD0510 scope of work.
 - CD0510 Engineering Deliverables:
 - Updated deliverables list has approximately 525 internal deliverables and 469 external deliverables to be completed. Of the external deliverables, 344 have been assigned to Talon Energy, and 125 have been assigned to Bell Canada.
 - 188 Talon Energy deliverables have been started and are at various stages of review.



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- 321 internal deliverables have been started and are at various stages of review, with 187 of the deliverables issued in Aconex at revision B1 or higher.
 - Continued work on technical specifications for SACS, PA and CCTV systems and PA Philosophy document.
 - Commenced Scope of Work for document for SACS.
- System Integration:
 - Continued ECC interface design.
 - Negotiations continued with 3rd party providers for the Optical Transport Network Fiber Optic Redundant Path as follows:
 - Eastlink - Final review of Indefeasible Right of Use (IRU) agreement was completed by Eastlink during the month. Agreement is now complete with the exception of final signatures. CIAC of approximately \$250,000.00 required to complete 45 km of fiber build between Plum Point and Shoal Cove, pending Eastlink acceptance.
 - EMERA - Final review of Indefeasible Right of Use (IRU) agreement was completed by EMERA during the month. Agreement is now complete with the exception of final signatures.
 - Labrador B – Path - Negotiations are ongoing with two 3rd party providers. Negotiations are expected to conclude in August 2016.
- Interfaces:
 - Interface management ongoing; continued to review OTDR fiber test results provided by C4 for acTL OPGW.
- Integration Laboratory:
 - Established architecture and interfaces between the Energy Control Center (ECC), CD0510 OTN gateway and CD0501 Contractor gateway to prove redundant operation.
 - Continued testing between ECC, CD0510 OTN gateway and CD0501 Contractor gateway.
 - Received all materials for Great Northern Peninsula B Path testing. Initial configurations on B Path electronics were completed.

13.1.2 PROCUREMENT

- Bid evaluations ongoing for the following packages:
 - Nothing to report for the current period.
- RFI – RFP statistics and charts:

Description	Total Packages to Procure	Schedule to Date	Actual to Date
Issue EOI/Pre-qual.	8	8	8
Issue Request for Proposal	8	8	8
Issue PO/Contract	8	8	8

- The following are managed under the EPC Contractor’s scope of work:
 - CD0534-002 - Civil Works for Synchronous Condensers: Awarded in June 2015.
 - CD0534-003 - Third Party FEA.
 - CD0504 - Civil Works and Buildings Services for HVdc Specialties: Awarded to Pomerleau for Labrador, and H.J. O’Connell for Newfoundland.
- Contracts and POs awarded for the following packages:
 - Nothing to report this period.
- Activities planned for the upcoming period:
 - Continue to manage procurement activities to meet project schedule.

13.1.3 CONSTRUCTION

13.1.3.1 SWITCHYARD

FABRICATION AND CONSTRUCTION HIGHLIGHTS:

- PD0537 - Supply of Power Transformers, AC Substations at Churchill Falls, Muskrat Falls and Soldiers Pond:
 - Assembly and dressing of the Soldiers Pond units have commenced and scheduled to be completed by late July.
- CD0502-001 - Construction of AC Substations:
 - Four (4) FAT's were completed during the period; these included surge arresters, gantries, post insulators and 800 kV disconnect switches.
 - Manufacturing continued for the Soldiers Pond protection panels.
 - Soldiers Pond:
 - Excavation/Backfill/Placement for Drainage Pipe of the control building was previously completed, along with pouring of eighteen Circuit Breaker Control Boxes and the arrival of steel structures on Site.
 - Pre-engineered control building delivered to site, and will be fully assembled mid-July.
 - Locke's Electrical (installation contractor) have begun mobilization on site.

COMMISSIONING:

- Nothing to report this period.

13.1.3.2 CONVERTER STATIONS AND CABLE TRANSITION COMPOUNDS

CONSTRUCTION HIGHLIGHTS:

- CD0501 - Supply and Install Converters and Cable Transition Compounds:
 - Many items are ready for start of manufacturing; challenge remains in ensuring that all documentation is up to date prior to manufacturing starting.
 - Converter Transformer Fabrication ongoing at both TST and TCT. Four MFA transformers and one SOP transformer have completed FAT (all from TST/Stafford). MFA transformer P0221/02 undergoing modifications to cooling circuit to meet specification.
 - Soldiers Pond work on insulating the roofing is in progress. Interior steel in Control Building completed.
 - Muskrat Falls work is in progress with the floor slabs inside the valve halls and the control building ongoing. Valve Hall floor grinding to reach required flatness completed. Raft foundations poured for the Pole 2 transformers.
 - Pennecon Heavy Civil working at both Transition Compounds. Placement of pre-cast and pouring of cast-in-place in progress. Grounding ongoing at Shoal Cove. Forteau Point is 69% complete and on schedule while Shoal Cove is 55% complete and is slightly behind schedule.
 - Eleven purchase orders were placed during the month out of the twenty-three forecast in the May Monthly Report. Package 3 and 5, cable trenches and some steel for the AC yard and the filter area are some of the major items that were missed in this month.

COMMISSIONING:

- The third and fourth MFA converter transformers (P0221/03 &/04) underwent Factory Acceptance Testing, and was completed in June 2016.
- Kickoff meeting held with Contractor (GE/Alstom Grid) to obtain alignment on scope & roles and responsibilities.

13.1.3.3 SYNCHRONOUS CONDENSERS AND ELECTRODES

FABRICATION AND CONSTRUCTION HIGHLIGHTS:

- CD0534 - Supply and Install Soldiers Pond Synchronous Condensers:
 - Roof installation continues, along with electrical conduit and various civil works. Grounding connections had been made but will require re-work, based on inspections finding non-compliant work.
 - Installation of oil/water separator tank at site has begun, along with oil filling of main step-up transformers.
 - Machining activities associated with unit 2 & 3 rotor rims are in process.
 - Winding of Unit 1 stator continues at FAB3R with electrical testing in progress. Stacking of Unit 2 has begun. Fabrication work for Unit 3 continues, nearing completion.
 - Unit 1 rotor shaft system assembled at Sorel-Tracey GE shop is nearly complete, with all rotor poles in place and finishing work taking place on miscellaneous connections for the rotor assembly.
- CD0508 - Supply and Install of Electrode sites:
 - Civil construction work scope has been completed at both the Dowden's Point site and the L'Anse Au Diable site.

COMMISSIONING:

- Nothing to report this period.

13.1.3.4 TELECOMMUNICATIONS

CONSTRUCTION HIGHLIGHTS:

- SD0560 - Provision of Early Works Construction Telecommunications Services:
 - Ongoing operations and maintenance support.
 - Completed construction for telecoms services to the C4 Deer Lake site office; awaiting connection by local service provider.
- CD0509 - Construction Telecommunications Services at Muskrat Falls:
 - Ongoing operations and maintenance support.
 - Completed optical fiber connection/telecoms services to the concrete lab.

COMMISSIONING:

- Nothing to report this period.

13.1.4 ISSUES & OPPORTUNITIES

- **Switchyard:**
 - CD0502 Contractor is well behind schedule for secondary design which includes P&C design: Company is continuing to work with Contractor to get design back on schedule.
 - Contractor has not finalized its cable schedule; however, is proceeding with cable trench layout and conduit design: Company had previously requested Contractor to submit a realistic cable schedule prior to completing engineering design of conduit and trench layouts. During the current period, Contractor has submitted cable lists for all sites, and has accepted the conduit and trench layouts for Soldiers Pond.
- **Converter Stations and Cable Transition Compounds:**
 - Concern remains around the cost of the changes that have not been quantified by Contractor yet: The capacitor bank costs are awaiting presentation of backup.

- Engineering progress continues to be behind: Monitor the mitigation plan progress, and challenge Contractor to meet their updated forecast. Meetings previously held in Stafford, with future sessions being investigated.
- Schedule accuracy: Awaiting presentation on schedule logistics.
- Logistics – converter transformer delivery at MFA has been compressed to two deliveries – August and September: Review of strategy has been requested to examine feasibility of the advanced manufacturing dates.
- Converter Transformer P0221/02 not meeting hot spot temperature and questions remain regarding lead discolouration – review was held with GE/Alstom Grid regarding options available to meet spec; dialogue continuing.
- **Synchronous Condensers and Electrodes:**
 - CD0534 - Concern that civil works progress is slow, and the civil works contractor is significantly behind their baseline schedule. CWC continues to report a low rate of progress. Contractor now has Site Planner, and has stated their intention to document and challenge CWC about open work fronts with no progress. Investigating alternate/additional Subcontractors to improve productivity.
 - Facilitation of civil works change management by Contractor is slow and requires extensive Company oversight. A weekly meeting is occurring between Company and Contractor to review open CHR; Contractor and CWC meet on a biweekly basis to discuss any open items.
- **Telecommunications:**
 - CD0510-002 Repeater Buildings - Contractor is one month behind schedule for final completion; Contractor recovery plan has been received: Approve schedule recovery plan and work with Contractor to implement mitigations.

13.1.5 ACTIVITIES PLANNED FOR UPCOMING PERIOD

- CD0502 - Construction of AC Substations:
 - Continue to review document deliverables from Contractor.
 - Review and respond to site queries and concession requests provided from Contractor. Hold weekly teleconferences with Contractor and CWC/Site teams to help progress with engineering design.
 - Further FAT's planned for HV cables and terminations, and SOP station service transformers.
 - Issue manufacturing releases for both the LV and MV switchgear.
 - Commencement of equipment supports at SOP.
- PD0537 - Supply of Power Transformers, AC Substations at Churchill Falls, Muskrat Falls and Soldiers Pond:
 - Finalize document as-builts in preparation of package closeout.
 - Monitor preservation routines at all sites and storage locations.
 - Complete assembly and dressing of units in Soldiers Pond.
- CD0501 - Supply and Install Converters and Cable Transition Compounds:
 - Ongoing review of submitted Contractor technical documents.
 - Review and negotiation of cost items on DC capacitor (modified LFL) at Shoal Cove.
 - Review of outstanding Change Requests.
 - Ongoing monitoring of works of CD0501-004 (Transition Compound Civil Works) Contractor Pennecon Heavy Civil.
 - AC HV Current Transformer FAT.
 - MFA Converter Transformer units 2, 5 and 6 FAT in Stafford, UK.
 - SOP Converter Transformer unit 111.704/1 FAT in Canoas, Brasil.
 - Ongoing review of effectiveness of the Quality Manufacturing Release process to ensure proper documentation approved before manufacturing starts.
- CD0534 - Supply and Install Soldiers Pond Synchronous Condensers:
 - Ongoing review of submitted Contractor technical and engineering design documents and evaluation of Concession Requests.

- Finalize design aspects associated with fire protection, water treatment, gantry modifications, and emergency power – the main outstanding engineering deliverables.
- Continued surveillance on fabrication and Construction activities.
- Continue to participate in CARE process for all critical equipment POs.
- P&C workshop with Contractor, focusing on Contractor’s proposed strategy for FAT. Workshop to be held in LCP’s office, Torbay Road.
- HAZOP workshop with Contractor, focusing on hydrogen gas delivery system and other systems directly affected by hydrogen gas. Workshop to be held in LCP’s office, Torbay Road.
- Complete building roofing and close up, synchronous condenser foundations, transformer assembly and remaining general civil works.
- SD0560 - Provision of Early Works Construction Telecommunications Services:
 - VHF Radio System – Bell Mobility to install backup battery system by 29-July-2016.
 - C4 Site Offices – complete temporary telecommunications to Blaketown, Clarenville, Birchy Narrows and Deer Lake site offices.
- CD0509 - Construction Telecommunications Services at Muskrat Falls:
 - Nothing to report this period.
- CD0510 - Supply and Install Permanent Communication Systems (Permanent Telecoms):
 - Complete installation of foundations and fabrication of buildings for White Hills Repeater.
 - Order remaining major telecom equipment for convergence and access layers, and SCADA.
 - Continue with team review of drawings at revision A0/A1.
 - Continue with Aconex review of telecoms drawings at revision B1.
 - Continue work on technical specifications for SACS, PA and CCTV systems and PA Philosophy Document.
 - Continue work on technical specifications and bill of materials for CD0510 structured cabling.
 - Design temporary links for Soldiers Pond 230 kV line redirects.
 - Continue to assist C4 with review of splicing and attenuation test results for LTA acTLs.
 - Continue review of Contractor engineering deliverables for CD0510-001 Optical Transport Network.
 - Continue review of Contractor engineering deliverables for CD0510-002 Repeater Buildings for White Hills, Hampden, and Three Rocks repeater sites.
 - Integration Laboratory Continue testing of redundant Optical Transport Network gateways.
 - Continue SCADA network device configuration and testing.
 - Complete testing for OTN B Path electronics (Ciena equipment field trial).
 - System Integration:
 - Maritime Link – Obtain signatures for EMERA Infeasible Right of Use (IRU) Agreement.
- CD0510 Interfaces:
 - Continue review of all interface agreements for all CD0510 interface points.
 - Continue Aconex review of telecom related Contractor drawings and documents from other packages.
- Terrestrial Fibre Optic Mapping:
 - Conclude negotiations for 3rd party telecom IRU agreements for exchange of fibres for redundant “B” path (Labrador).
 - Obtain signatures for Eastlink Infeasible Right of Use (IRU) agreement.

13.2 TRANSMISSION LINE

13.2.1 ENGINEERING

- Post award follow on support is continuing for all 350 kV HVdc packages in support of construction of the HVdc Transmission Line.

13.2.2 PROCUREMENT

- Bid evaluations ongoing for the following packages:
 - Nothing to report this period.
- RFI – RFP statistics and charts:

Description	Total Packages to Procure	Schedule to Date	Actual to Date
Issue EOI/Pre-qual.	20	20	20
Issue Request for Proposal	20	20	20
Issue PO/Contract	20	20	20

- Expediting Releases: All materials for the HVdc Transmission Line are either on route or have been delivered. Small quantities of additional materials to support ongoing construction will be purchased and supplied as needed.
- Significant to note:
 - PT0308 - Supply of Steel Tower Foundations: Delivery of extra foundations to support construction and Segment 5 foundations continues.
 - PT0328 - Supply of Transmission Line Conductors: All planned deliveries from the supplier are complete; however some were damaged in transportation and will have to be reordered; no impact on schedule is expected.
 - PT0330 - Supply of Steel Towers: Ongoing manufacturing and shipments; working closely with supplier to maintain schedule.
 - PT0330-003 - Supply of DC Fasteners and 230 kV Towers and Foundations: Tower and foundations have all been shipped; ongoing issues regarding missing washers, bolts and members are being managed daily.
 - PT0331-001 - Supply of Tower Hardware: Deliveries for 350 kV HVdc Line Segment 5 continue; production for wood pole electrode lines has commenced.
 - PT0352 - Supply of Anchor Materials: All materials for original order have been delivered. Additional guy anchors quantities being investigated for potential procurement; production and shipment of reworked guy anchor top bars.
 - PT0353 - Supply of Transmission Line OPGW and Accessories: All the required OPGW reels are at site; have enough quantity at site to support the construction.
 - PT0356 - Supply of Transmission Line Dampers: All the required dampers are at site for pole and electrode lines.
 - Weekly material meeting with contractor to stay ahead of potential material issues at site.
 - Material sourcing for NL Electrode line construction for 2015/16 ongoing, and requires priority from full C4 team. Review sessions held and material quantities finalized. Material receipt at Argentia ongoing; and hardware shipping for NL Electrode Line and 230 kV Steel lines ongoing.
- Activities planned for the upcoming period:
 - Continue to manage procurement activities to meet project schedule.

13.2.3 CONSTRUCTION

13.2.3.1 HVdc TRANSMISSION LINE

- CT0327-001 – 350 kV HVdc Transmission Line:
 - Initial and limited mobilization of Contractor to Deer Lake area on Island, Segment 4.
 - Cumulative Progress to Date:

- Work Front 1 (Segment 1 & 2):

Commodity	Budget Total QTY	Planned to Date	Installed to Date	Variance	% Complete
Anchor Installation	1151	1151	792	(359)	68.81%
Anchor Testing	1151	1151	748	(403)	64.99%
Foundation Installation	1288	1284	893	(391)	69.33%
Tower Assembly	1288	1285	1043	(242)	80.98%
Tower Erections	1288	1285	780	(505)	60.56%
Conductor Stringing	396,205	396,205	153,331	(242,874)	38.70%

- Work Front 2 (Segment 3):

Commodity	Budget Total QTY	Planned to Date	Installed to Date	Variance	% Complete
Anchor Installation	547	435	56	(379)	10.24%
Anchor Testing	547	422	44	(378)	8.04%
Foundation Installation	684	518	141	(377)	20.61%
Tower Assembly	684	432	122	(310)	17.84%
Tower Erections	684	247	62	(185)	9.06%
Conductor Stringing	226,593	1192	0	(1192)	0.00%

- Work Front 3 (Segment 4 & 5):

Commodity	Budget Total QTY	Planned to Date	Installed to Date	Variance	% Complete
Anchor Installation	1085	629	0	(629)	0.00%
Anchor Testing	1085	629	0	(629)	0.00%
Foundation Installation	1257	703	37	(666)	2.94%
Tower Assembly	1257	608	22	(586)	1.75%
Tower Erections	1257	312	0	(312)	0.00%
Conductor Stringing	469,397	58,908	0	(58,908)	0.00%

- ROW clearing and access development is proceeding, and staying in front of planned construction activities under multiple HVdc clearing contracts:
 - Labrador - approximately 2,377 hectares have been cleared to date representing 100% complete of the clearing required for Labrador.
 - Newfoundland - approximately 2,981 hectares have been cleared to date representing 71.38% complete of the clearing required for Newfoundland.

COMMISSIONING:

- Nothing to report this period.

13.2.3.2 AREA HVAC LINES RE-TERMINATIONS AND MODIFICATIONS

CONSTRUCTION HIGHLIGHTS:

- CT0342-001 - Construction of AC Transmission Line-Island:

- Final outage construction and tie-in structures for TL218, TL201, and TL232 completed in 2015 and energized; contract closed.
- CT0342-002 - Transmission Line Construction (HVac 230 kV Modifications and Island Electrode Line): All major foundation and tower work completed for TL217; work ongoing on TL242, including granted outage from NL Hydro; clearing completed for Soldiers Pond re-termination lines; and for NL Electrode Line 8 hectares.

COMMISSIONING:

- Full inspection of TL218, TL201, TL201E, TL232 and TL217 complete, and turnover documentation signed off by NL Hydro.
- Handover preparation ongoing for TL242 interim connection.

13.2.4 ISSUES & OPPORTUNITIES

- Considering line construction progress to date, critical path work of Long Range Mountains (LRM) and degree of effort and difficulty constructing suitable access, there is a growing potential for schedule impact: Working both internally and with Valard to optimize work in order to seek efficiencies and recover schedule. Schedule working meetings have been established along with dedicated team members to focus on the Long Range Mountains.
- Tower foundation tolerance and concrete quality issues have been raised and continue to be investigated. Subsequent activities such as tower erection and stringing may be delayed as a result, and rework in some cases is ongoing. Overall schedule impact is minimal: Data is being gathered on the specific issues and remediation planning is underway to address concerns. Some rework has commenced. C4 is working closely with Contractor on solutions to correct existing issues and mitigate them moving forward.
- There is a risk of having insufficient or the wrong type of foundation for the remainder structures to be built on the HVdc TL. The original estimate was by way of a desktop study, and actual field conditions may differ: Additional investigation with geotechnical works and test pitting under way for remainder HVdc TL to provide better accuracy on types of foundations required. Working with Locweld to make available raw steel to support fabrication of additional foundations as required.
- With construction work fronts commenced on Segment 3 at Plum Point, working closer to communities and more recreational users, the risk of a potential safety incident has increased: Company continues, and has ramped up dialogue with stakeholders and Contractor in the area to communicate plans and schedule, and show areas that are being worked. Signage is now up along access roads and the ROW and regular meetings are being held in the communities.
- Contractor ITP's and concreting procedure remain outstanding: Working closely to revise the ITP's and concreting procedure to ensure compliance with technical specification.
- There is a risk of potential schedule impact as a result of an issue identified on the conductor: Investigations are underway with the contractor and vendor to understand source of the problem, determine mitigations and plan a path forward.

13.2.5 ACTIVITIES PLANNED FOR UPCOMING PERIOD

- Post award follow-on engineering support for all open 350 kV HVdc packages, as well as resolving site queries and concession requests generated in the field.
- Implementation of Valard micropile foundation design on a trial basis, to access cost, etc.
- Valard macropile design for tangent towers under development.

- Re-termination and modification of 230 KV Lines: Finalize C1 documents for construction contract for electrode line; monitor material list to support procurement and construction efforts.
- Various Material packages NL Electrode Line Focus - coordinate quantities and respond to clarifications for hardware suppliers; ensure proper receipt and expediting of NL Electrode Line Material.
- Electrode Line NL: Finalize line design C1 revision.
- Outage readiness sessions to be held with Contractor for TL 242.
- PT0308 - Supply of Steel Tower Foundations: Installation trends and geotechnical program information to be monitored and foundations ordered as required.
- PT0352 - Supply of Anchor Materials: Analyzing construction consumption rates to determine additional quantities of 45 mm guy anchor bottom bars. Production of reworked guy anchor top bars to be completed.
- PT0331-001 - Supply of Tower Hardware: Production of Newfoundland and Labrador Electrode Line Wood Pole hardware.
- PT0353 - Supply of Transmission Line OPGW and Accessories: Release additional dampers from Mosdorfer to LMY and AMY.
- PT0356 - Supply of Transmission Line Dampers: Obtain site approval for six vibration recorders which will be installed on engineering identified towers.
- CT0327-024 - Long Range Mountains (LRM) – Access and Clearing – finalize contract documents and IFC package.
- CT0327-001: Continue installing foundations, anchors, tower assembly, erection and stringing for Segment 1, Segment 2, and Segment 3; commence installation in Segment 4; ongoing concreting operation in Segment 3-new concrete mix design proposed 40MPa and 45 MPa under review; geotechnical program consisting of borehole construction on the ROW commencing in Forteau; Weekly Workface meetings between Nalcor and Valard East and West Construction, Quality and Engineering teams established to help prioritize, identify roadblocks, align resources to focused areas and resolve workface issues with the field teams; stringing work has been stopped at this time to further investigate conductor issue.
- CT0327-013 Clearing (JCL): Completed, with contract closeout ongoing.
- CT0327-011 Clearing (C&T): Completed, with contract closeout ongoing.
- CT0327-014 Clearing (SFR): Clearing and access on punch list completion on Blocks 13 & 14 on the Island.
- CT0327-015 Clearing (JCL): Clearing and access on punch list completion on Blocks 9-12 on the Island.
- CT0327-050 Clearing Section 2 RFP: Awarded Blocks 15 & 16, and work ongoing in Glenwood and Dead Wolf areas.
- CT0342-002: Foundations, tower assembly and installation for TL242 and TL268 at Soldiers Pond. Outage readiness plan for TL242 to be completed with Contractor.

13.3 STRAIT OF BELLE ISLE (SOBI)

CONSTRUCTION HIGHLIGHTS:

- LC-SB-003 - Submarine Cable Design, Supply and Install (Nexans): Contractor completed early civil works at Shoal Cove and Forteau Point – ready for conduit cables pull-ins and transition jointing of land cables with conduit cables. Contractor completed early civil works for spare turntable site in Corner Brook. Fabrication of turntable still ongoing at subcontractor plant in Portugal, and will be ready to ship late July. Routine inspections of Cable Sealing Ends ongoing at Transition Compounds in Forteau and Shoal Cove. Nexans is progressing procurement for spare turntable, surge arrestors, DTS, and installation equipment. Skagerrak transited from Halden, Norway and arrived at St. John's Harbor for customs clearance. Cable installation equipment and necessary personnel mobilized to site; ready for cable pull-ins and trans-jointing.

- LC-SB-011 - Subsea Rock Placement Design, Supply and Install (Tideway): Routine site inspections, as well as engineering and procedure development is ongoing for the 2016 loadout and offshore installation campaign. Tideway's Conveyor belts and accessory equipment to Forteau "Crow" head is scheduled for late July; SRI kick-off is planned for third week of July and SRI equipment readiness at site is planned for mid-August. Company notification window to contractor to begin submarine cables protection between 15-28-August-2016.
- Met-Ocean and final revision of Ice Risk Analysis reports ongoing.
- Iceberg monitoring program developed to support submarine cables installation campaign.

COMMISSIONING:

- Nothing to report this period.

ISSUES & OPPORTUNITIES:

- LC-SB-003 - Submarine Cable Design, Supply and Install: Conduit handover and condition engineering discussions ongoing; interface and schedule management between CD0501 and Nexans at transition compound requirements.
- LC-SB-011 - Subsea Rock Placement Design, Supply & Install: Monitoring of Tideway/Pennecon in SOBI region regarding political and environmental sensitivities; optimization of Traffic Management Plan.

ACTIVITIES PLANNED FOR THE UPCOMING PERIOD:

- LC-SB-003 - Submarine Cable Design, Supply and Install: Site readiness for installation vessel arrival; 2016 installation procedure review and revision; cable installation HIRAs; and site preparation for pull-ins.
- LC-SB-011 - Subsea Rock Placement Design, Supply and Install: Ensure installation procedures are revised addressing comments from constructability sessions; ensure all procedures and engineering for 2016 mobilization and installation activities are approved for use; preparations for 2016 SIMOPS between Tideway and Nexans for 2015 offshore campaign; finalization of all installation documentation.
- Spare Cable Turntable Site: Logistics and mobilization coordination ongoing for arrival of turntable kit in Q3, 2016; readiness for trans-spooling from Nexans Skagerrak in 2016.
- A detailed update with regard to the Strait of Belle Isle can be found in the [Labrador - Island Link – SOBI Marine Crossing 29-June-2016 Monthly Report](#).

13.4 COST

- Incurred costs for the current period and project-to-date are aligned with the incurred cost flow for the 2016 revised Authorization for Expenditure (AFE) approved during the current period. The net negative Planned and Incurred Cost for the Current Period under "Owners Team, Admin and EPCM Services", and "Feasibility Engineering" is as a result of the alignment with the AFE to Final Forecast Cost. The incurring of the Contingency is reflected within the incurred and future incurred costs in the categories outlined in Figure 13.4-1 as and where the work is performed. Cost to complete continues to remain significant for LITL as construction activities for work in progress are ongoing.
- The overall Approved Final Forecast Cost (FFC) has been updated to align with the 2016 revised AFE, resulting in an increase of \$358M in the overall FFC for LITL. The approved AFE budget is the result of a Quantitative Cost and Schedule Risk Analysis that was completed for Labrador-Island Transmission Link based upon an assessment of risks to project completion and an analysis of the associated impact on cost and schedule. The revised project budget of \$3,447B is the high end (P75) of the probabilistic range of most likely outcomes resulting from this Risk Analysis. The main component of

this change is an increase of \$157M in the category of “Procurement & Construction”, followed by increases of \$77.7M in the category of “Owners Team, Admin and EPCM Services”, \$280k in the category of “Environmental & Regulatory Compliance”, \$4.5M in the category of “Commercial & Legal”, and decreases of \$1.7M in the category of “Feasibility Engineering”, and \$931k in “Aboriginal Affairs”, amended from the last reporting period as a result of the impacts indicated above. The Final Forecast Cost for “Contingency” has increased by a net amount of \$121M from the last reporting period as a result of the analysis of this category during the AFE revision.

- The primary drivers for the increased budget are: design enhancements and additional quantities associated with the HVdc Converters and the line construction, in particular, permanent access to the line which will improve future reliability; poor Contractor performance which has resulted in an increased requirement for more direct project management and additional costs to other Contractors due to the schedule delays; and foreign exchange impact which has now been incorporated as part of the capital cost.
- A summary of the revised LITL cost profile, along with the asset overview of Project Contingency Drawdown are provided in Figures 13.4-1, 13.4-2, 13.4-3, 13.4-4, and 13.4-5.

Figure 13.4-1: Labrador Island Transmission Link Monthly Incurred Cost Report

		Monthly Incurred Cost Report - Labrador-Island Transmission Link			For Period Ending: 25-June-2016			
		NALCOR ENERGY - Lower Churchill Project			COST IN CAD (\$ Thousands)			
		A	B	C = A + B	Incurred Costs		E	G = E - C
		Original Control Budget (OCB)	Approved Project Changes	Current Control Budget (CCB)	Current Period	D Project-to-Date	Final Forecast Cost (FFC)	Variance from CCB
100	NE-LCP Owners Team, Admin and EPCM Services	\$253,363	\$53,404	\$306,767	-\$1,056	\$186,113	\$306,767	\$0
200	Feasibility Engineering	\$33,629	-\$14,159	\$19,470	-\$1,782	\$19,470	\$19,470	\$0
300	Environmental & Regulatory Compliance	\$25,768	-\$11,042	\$14,726	\$87	\$10,518	\$14,726	\$0
400	Aboriginal Affairs	\$2,244	-\$492	\$1,753	\$0	\$612	\$1,753	\$0
500	Procurement & Construction	\$2,187,514	\$767,300	\$2,954,814	\$117,298	\$1,557,821	\$2,954,814	\$0
900	Commercial & Legal	\$20,603	\$436	\$21,039	\$79	\$13,957	\$21,039	\$0
990	Contingency	\$86,628	\$42,197	\$128,825	\$0	\$0	\$128,825	\$0
CAPEX Total:		\$2,609,749	\$837,645	\$3,447,394	\$114,626	\$1,788,491	\$3,447,394	\$0



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Figure 13.4-2: Labrador Island Transmission Link Current Year Budget, Incurred and Forecast Cost

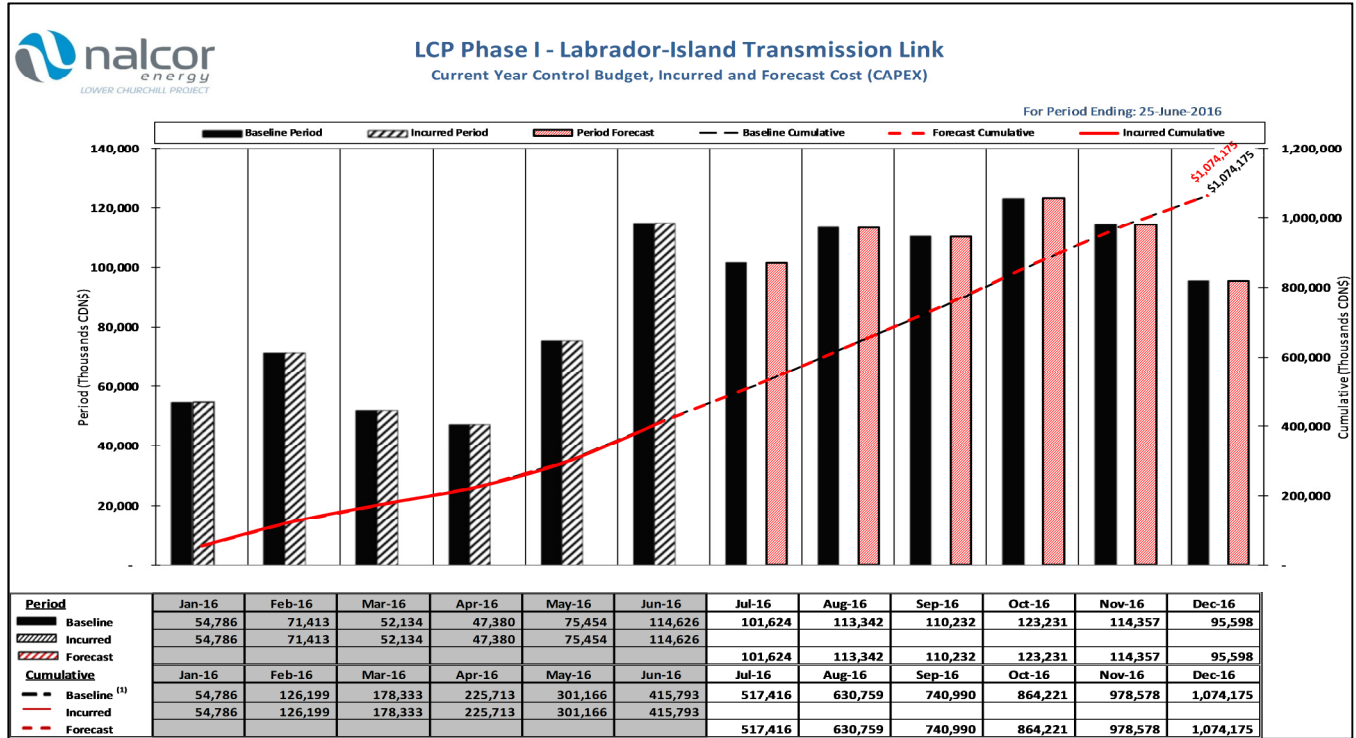
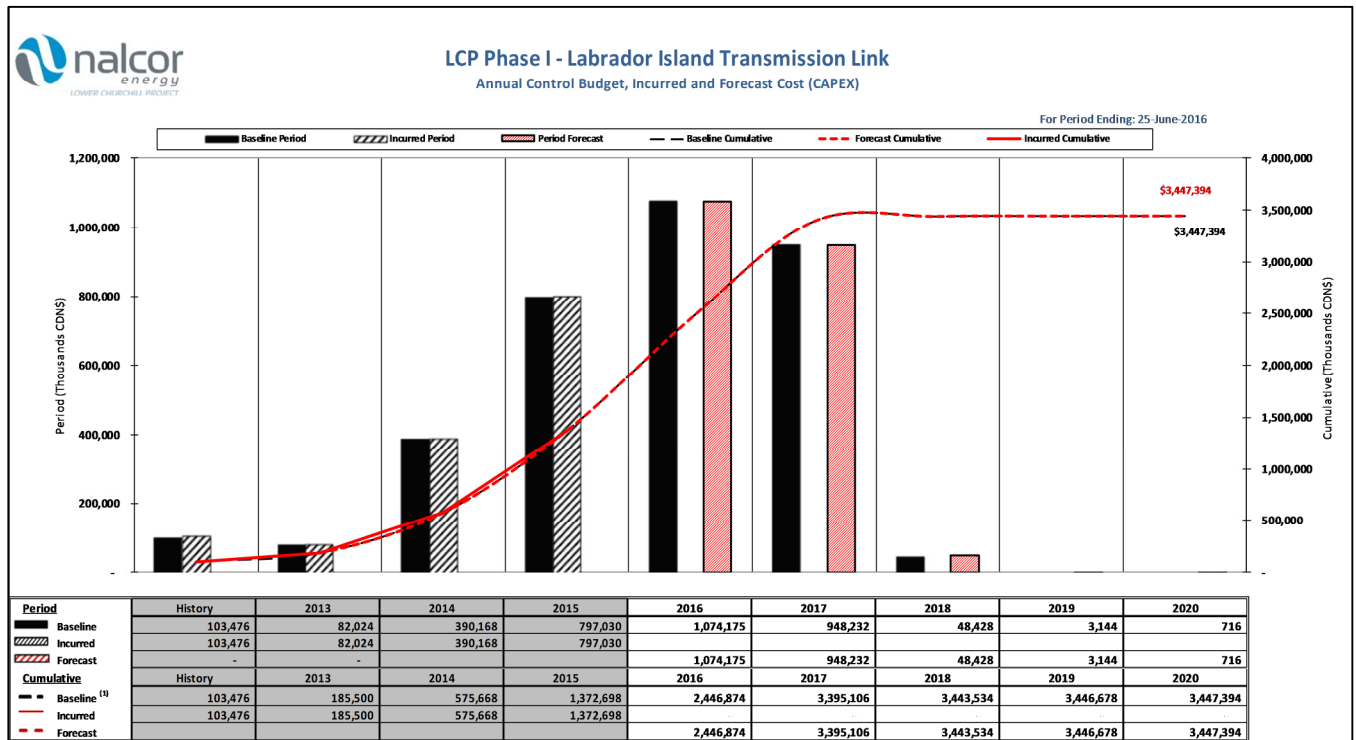


Figure 13.4-3: Labrador Island Transmission Link Annual Budget, Incurred and Forecast Cost





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Figure 13.4-4: Labrador Island Transmission Link Annual Forecast and Committed Cost

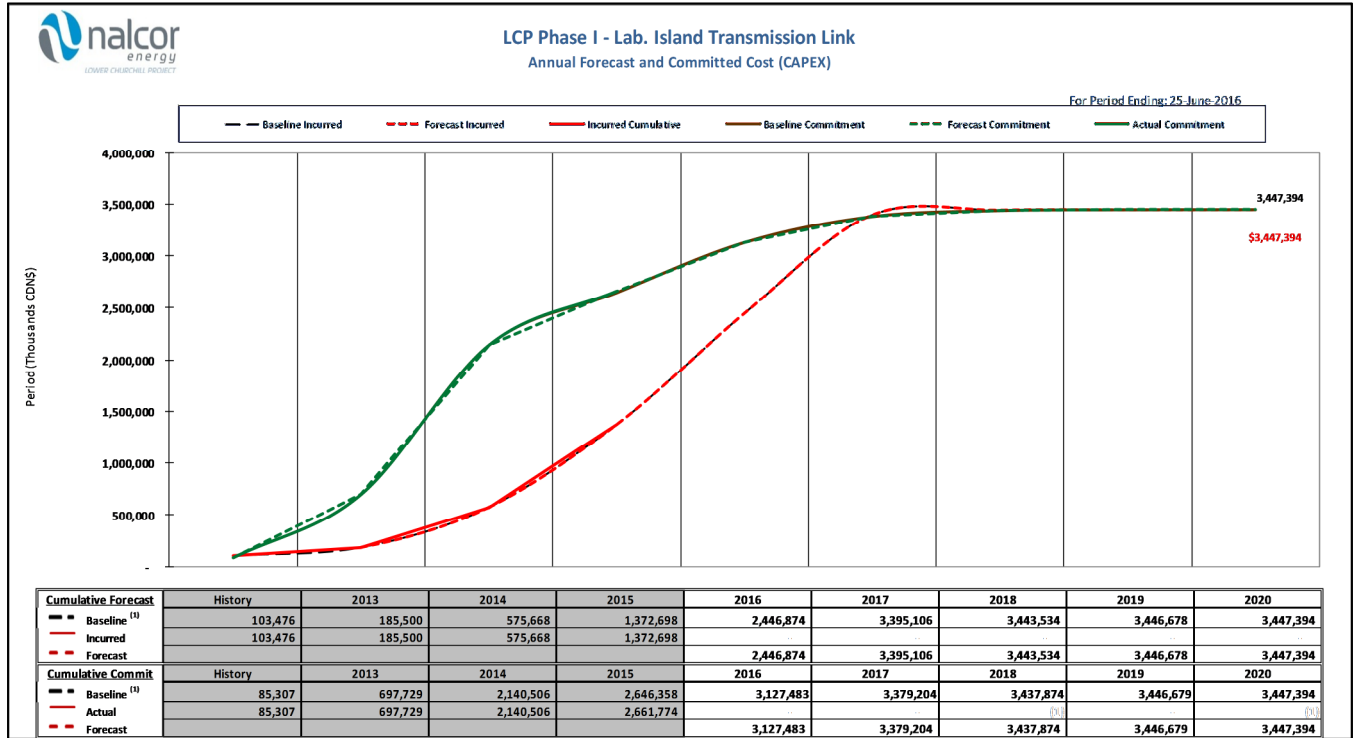
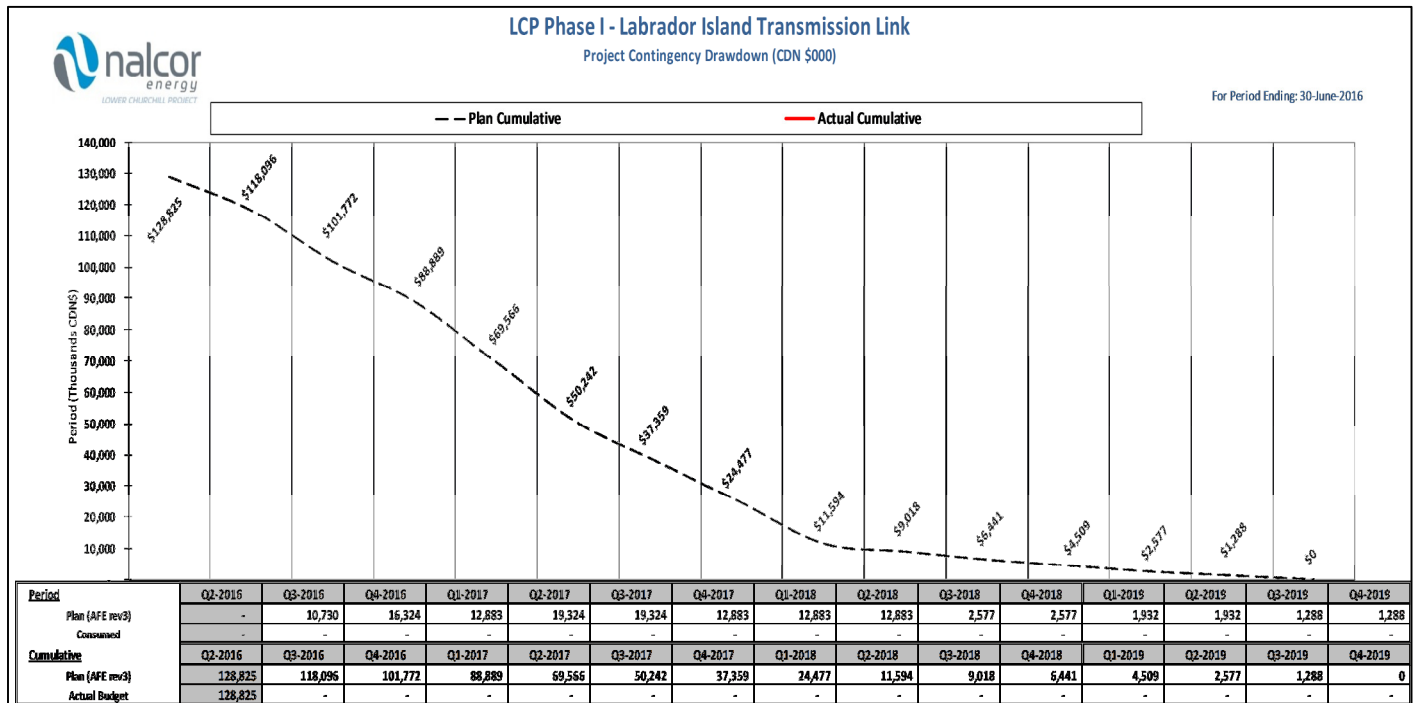


Figure 13.4-5: Labrador Island Transmission Link Project Contingency Drawdown Curve



13.5 SCHEDULE

- Period Planned Progress was 4.4% vs. Period Earned Progress of 3.3% - Variance: -1.1%; while Period Forecast Progress was 6.6% as stated in last month's report.
- Cumulative Planned Progress was 61.7% vs. Cumulative Earned Progress of 46.3% - Variance: -15.4%; Cumulative Forecast Progress was 49.6%, as stated in last month's report.
- Progress commentary:
 - Period and Cumulative Planned progress will be updated for the July reporting period to align with the approved AFE Rev 3.
- Critical Path for 1st Power Transfer Labrador to Newfoundland:
 - HVdc Segment 5 Transmission Line continues to drive the LITL critical path.
- SOBI Crossing:
 - Arrival of cable laying vessel forecasted for July 2016; subsea cable installation starts early July.
- HVdc Line:
 - HVdc Labrador Segment 1/Segment 2 – February 2017, 78 day delay this month; however, within float.
 - HVdc Newfoundland Segment 3/Segment 4/Segment 5 – December 2017, 29 day delay this month; HVdc still critical path for 1st power transfer.
- Converters / Switchyards / Synchronous Condensers:
 - MF Converter earthworks was completed in December 2013; and concrete and building scope commenced in late July 2015. The current forecast date for completion of Static Commissioning for MF Converter is 22-Sept-2017, no change from last month. The Contractual milestone date remains on 15-Jun-2017 and liquidated damages will apply if the Contractor does not recover schedule.
 - Soldiers Pond Converter earthworks was completed 31-Oct-2014; and concrete and building scope commenced in early July 2015. Similar to the Converters at Muskrat Falls, the current forecast date for completion of Static Commissioning for SP Converter is also 22-Sept-2017, no change from last month. The Contractual milestone date remains on 15-Jun-2017 and liquidated damages will apply if the Contractor does not recover schedule.
 - SOP Switchyard earthworks was completed 31-Oct-2014; and concrete and building scope commenced in early July 2015. The current forecast date for completion of Static Commissioning is 02-Feb-2017, a 2 day delay from last month. The Contractual milestone date is 01-Dec-2016 and liquidated damages will apply if the Contractor does not recover schedule.
 - SOP Synchronous Condensers earthworks was completed 31-Oct-2014; concrete and building scope commenced in May 2015, with static commissioning of the third unit forecast for 29-May-2017, a 3 week delay from last month. This date meets the Contractual milestone date of 05-Jun-2017.
- Transition Compounds/Grounding (Electrode Stations):
 - Work at both the Newfoundland grounding station and the Labrador grounding station (electrode sites) is scheduled to resume Q1 2017; static commissioning dates are forecast for June 2017, no change from last month.
 - Transition compound/civil structures: Static commissioning for Forteau Point is forecast for 11-July-2017, a 6 week delay from last month, and in alignment with Contractor's plan to complete both sites in parallel; Shoal Cove is forecast for 11-July-2017, a 9 day delay from last month.
- SOP Transmission Line Rebuilds: Work continues with reliance on outages.
- A summary of the Schedule and Construction Progress data for the Labrador Island Transmission Link (LITL) as reported in the Integrated Project Schedule (IPS) is outlined in Figures 13.5-1, 13.5-2 and 13.5-3.



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Figure 13.5-1: IPS Summary - Labrador Island Transmission Link

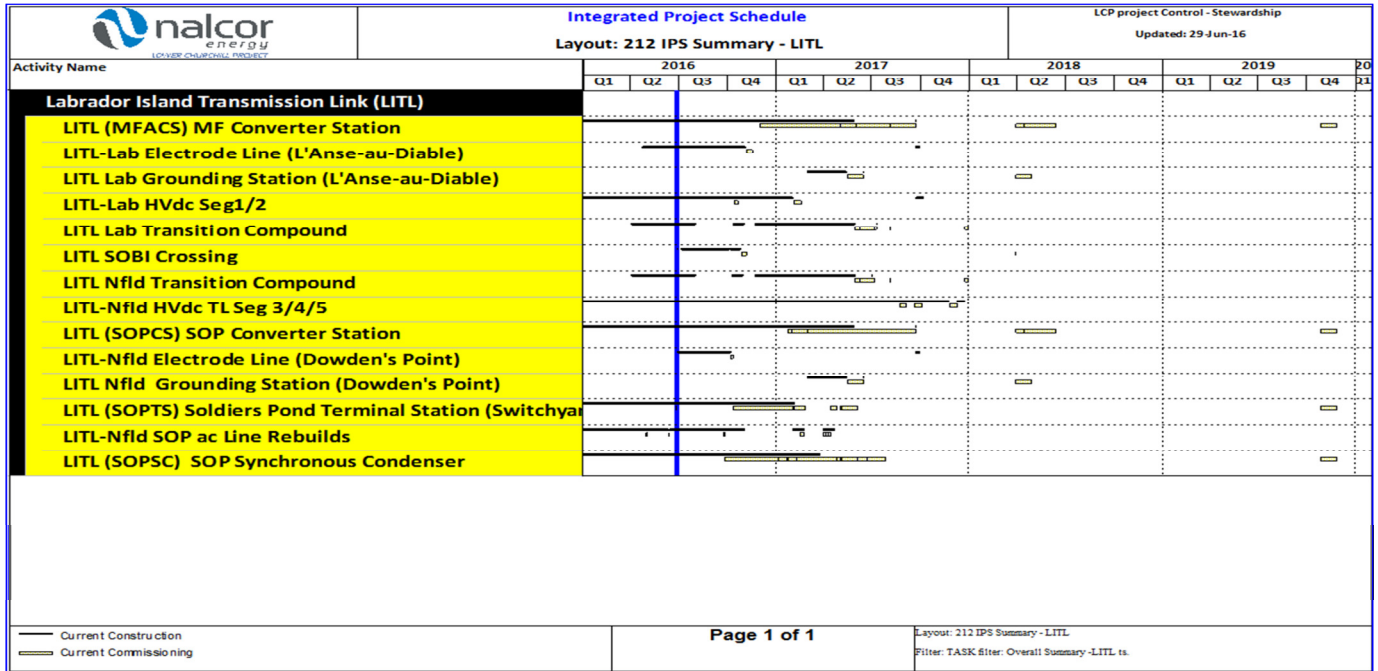


Figure 13.5-2: Summary Construction Progress Table - Labrador Island Transmission Link

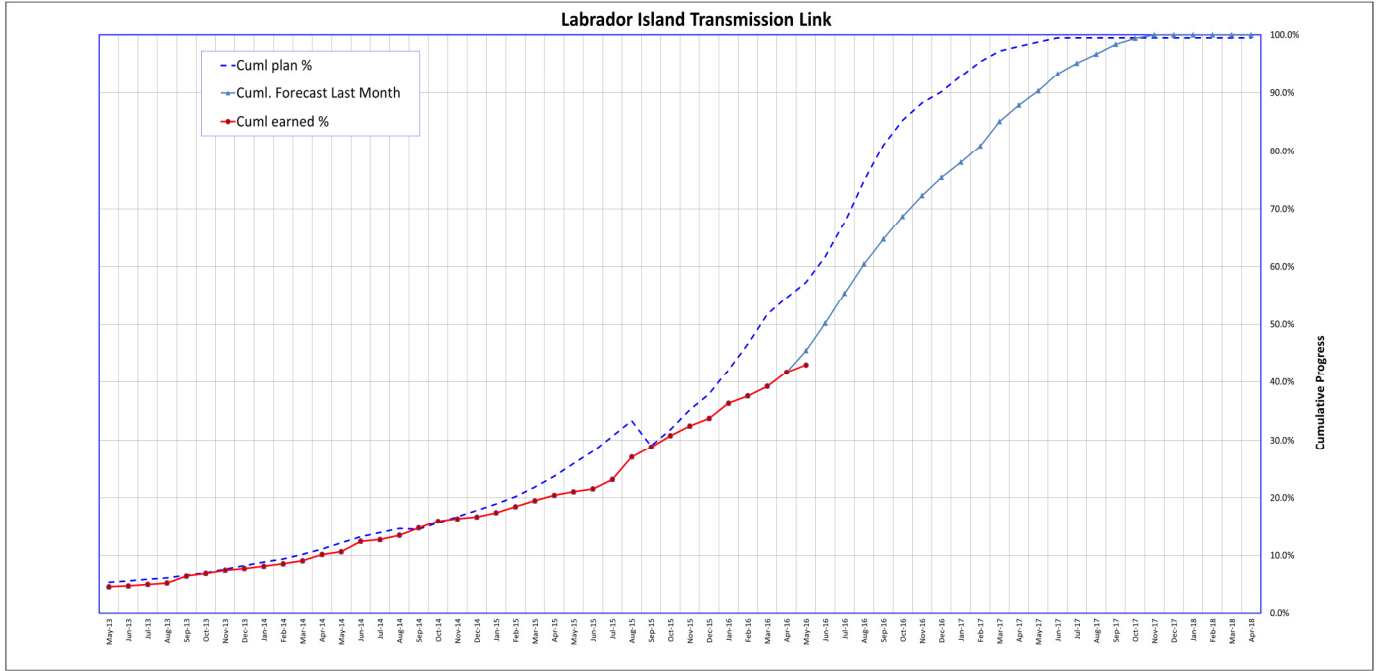
LITL Progress Table 2016 June								
This Reporting Period								
	Weight Factor % A	Period %			Cumulative %			
		Plan B	Earned C	Variance C-B	Plan E	Earned F	Variance F-E	
LITL Muskrat Falls Converter	5.7%	1.8%	5.4%	3.6%	27.0%	19.4%	-7.6%	
LITL Soldiers Pond Converter	5.8%	1.6%	1.5%	-0.1%	28.9%	26.8%	-2.1%	
LITL HVdc Transmission Line Seg 1/2	19.3%	5.9%	5.9%	0.0%	77.8%	70.1%	-7.7%	
LITL HVdc Transmission Line Seg 3/4/5	35.3%	4.3%	2.8%	-1.5%	48.6%	15.6%	-33.0%	
LITL Grounding (Electrode) Sites	1.7%	0.0%	0.0%	0.0%	75.0%	75.0%	0.0%	
LITL Transition Compounds	1.8%	28.4%	8.8%	-19.6%	61.3%	48.7%	-12.6%	
LITL SOBI Cable Crossing	18.0%	3.1%	2.1%	-1.0%	81.7%	84.3%	2.6%	
LITL Soldiers Pond Switchyard	3.2%	9.7%	2.2%	-7.5%	69.1%	50.2%	-18.9%	
LITL Soldiers Pond Synchronous Condensers	4.9%	1.2%	2.3%	1.1%	63.7%	34.4%	-29.3%	
LITL Misc	4.3%	1.9%	1.0%	0.0%	86.4%	86.6%	0.2%	
LITL TOTAL	100.0%	4.4%	3.3%	-1.1%	61.7%	46.3%	-15.4%	
Last Reporting Period								
	Weight Factor % A	Period %			Cumulative %			
		Plan B	Earned C	Variance C-B	Plan E	Earned F	Variance F-E	
LITL Muskrat Falls Converter	5.7%	3.2%	1.4%	-1.8%	25.2%	14.0%	-11.2%	
LITL Soldiers Pond Converter	5.8%	1.2%	0.5%	-0.7%	27.3%	25.3%	-2.0%	
LITL HVdc Transmission Line Seg 1/2	19.3%	2.9%	1.8%	-1.1%	71.9%	64.2%	-7.7%	
LITL HVdc Transmission Line Seg 3/4/5	35.3%	2.9%	0.4%	-2.5%	44.2%	12.8%	-31.4%	
LITL Grounding (Electrode) Sites	1.7%	0.0%	0.0%	0.0%	75.0%	75.0%	0.0%	
LITL Transition Compounds	1.8%	0.0%	6.4%	6.4%	32.9%	39.9%	7.0%	
LITL SOBI Cable Crossing	18.0%	2.3%	2.3%	0.0%	78.7%	82.2%	3.5%	
LITL Soldiers Pond Switchyard	3.2%	8.5%	2.1%	-6.4%	59.4%	48.0%	-11.4%	
LITL Soldiers Pond Synchronous Condensers	4.9%	0.8%	1.2%	0.4%	62.4%	32.1%	-30.3%	
LITL Misc	4.3%	2.0%	0.3%	0.0%	84.4%	85.6%	1.2%	
LITL TOTAL	100.0%	2.7%	1.3%	-1.5%	57.3%	43.0%	-14.4%	



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Figure 13.5-3: Construction Progress Curve - Labrador Island Transmission Link



13.6 PHOTOS



CT0327-001: HVdc Transmission Line-Clearing/Access-LRM



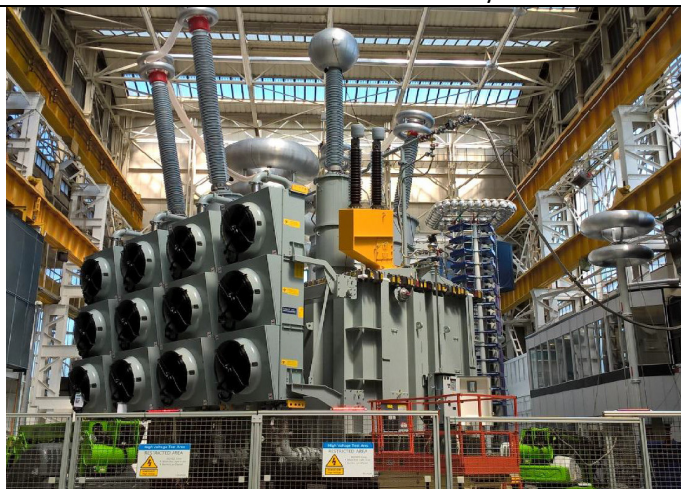
Soldiers Pond – Synchronous Condenser
20-Jun-2016



CD0502: Soldiers Pond Switchyard



Soldiers Pond – Converter Station 20-Jun-2016



CD0501: Muskrat Falls Converter Transformer No. 3-Stafford, UK



SOBI: Skagerrak Arrival in St. John's



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Section 14. ATTACHMENTS



MONTHLY PROGRESS REPORT

PERIOD ENDING: 30-JUNE-2016

14.1 SAFETY STATISTICS – JUNE 2016



HSE Report
For period 01-Jun-2016 to 30-Jun-2016

	Current Period			Year to Date			Project to Date		
	Project Delivery Organization	Contractors	Total	Project Delivery Organization	Contractors	Total	Project Delivery Organization	Contractors	Total
Exposure Hours	90,000	830,002	920,002	523,794	3,727,696	4,251,490	4,804,820	18,441,828	23,246,648
Leading Indicators									
High Potential Near Misses	0	2	2	0	5	5	2	188	190
Near Misses	0	4	4	1	48	49	41	425	466
First Aid	0	26	26	0	117	117	18	695	713
Conditions/Hazards, Practices, & Commendations	0	0	0	1,824	42	1,866	7,108	499	7,607
Orientalions Completed	196	588	784	2,518	6,404	8,922	13,405	19,478	32,883
TSA's Completed	0	1,425	1,425	0	7,602	7,602	25	18,159	18,184
StepBacks Completed	580	37,974	38,554	8,989	163,179	172,168	30,484	802,303	832,787
Worksite Inspections	185	647	832	1,897	2,860	4,757	9,633	19,770	29,403
Lagging Indicators									
Lost Time Injuries	0	0	0	0	2	2	0	11	11
Medical Aids	0	0	0	0	8	8	1	71	72
Occupational Illnesses	0	0	0	0	0	0	0	0	0
Modified Work Cases	0	15	15	0	52	52	0	188	188
Vehicle Incidents	0	3	3	6	23	29	22	81	103
Modified Work Days	0	203	203	0	632	632	0	3,134	3,134
Lost Time Days	0	14	14	0	45	45	0	319	319
Property & Equipment Damage	0	23	23	7	124	131	33	614	647
Security Incidents	0	0	0	0	8	8	6	39	45
Lagging Frequencies									
Total Recordable Incident Frequency Rate	0.000	3.614	3.261	0.000	3.326	2.917	0.042	2.928	2.332
Lost Time Incidents Frequency Rate	0.000	0.000	0.000	0.000	0.107	0.094	0.000	0.119	0.095
All Injury Frequency Rate	0.000	0.000	0.000	0.000	0.537	0.470	0.042	0.889	0.714

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14.2 SAFETY INCIDENTS – JUNE 2016

Component	Company	Contract	Time of Incident	Reported	Description	Class	Potential Safety/ Absolute Violation
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	5/29/2016 05:00:00 AM	5/29/2016 01:58:17 PM	Worker was suspected of being in non-compliance of site drug & alcohol standard.	Safety Absolute	Yes
C3 – HVdc Specialties	GE/Alstom Grid	CD0502-CF	5/30/2016 04:30:00 AM	5/30/2016 09:25:26 AM	An excavator operator, using a CAT 336, was performing backfill operations in zone B around concrete precast. While placing material around one of the precast a corner was struck by the excavator bucket causing damage; injuries were sustained.	Safety Absolute	Yes
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	5/29/2016 03:00:00 PM	5/30/2016 10:32:20 AM	Tower Crane 5 swung into the permanent stair tower erected on top of the spillway bridge resulting in minor damage to the exterior cladding. The crane was locked out and unmanned at the time. There were no injuries.	Property & Equipment Damage	
C1 - Muskrat Falls Generation	Labrador Catering	SH0018	5/29/2016 10:30:00 PM	5/30/2016 01:02:31 PM	At 10:41pm the Lab Catering (LC) Accommodations Manager informed the HSE Advisor there was a suspicion of an individual whom they believed to be under the influence of alcohol.	Safety Absolute	Yes
C3 - HVdc Specialties	GE/Alstom Grid	CD0502-CF	5/30/2016 10:40:00 AM	5/30/2016 03:06:23 PM	The loader operator was getting ready to dump a load of materials into the gantry area when the window made a crack sound and a star formed on the window.	Property & Equipment Damage	
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	5/30/2016 10:50:00 PM	5/31/2016 07:44:46 AM	As worker started to climb a DOKA ladder the worker's hard hat contacted the ladder's safety cage, forcing hard hat down on the safety glasses and safety glasses down on right cheek, resulting in small laceration below right eye.	First Aid	
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	5/31/2016 02:50:00 AM	5/31/2016 07:47:08 AM	While stepping off an I-Beam on a Doka deck, a workers foot slipped and rolled inward resulting in discomfort to the right ankle.	Modified Work	
C4 - Overland Transmission	Valard Construction	CT0327-001	5/30/2016 12:30:00 PM	5/31/2016 08:30:18 AM	Str 365 seg 2 Assembler hit in face while tensioning bolt, small laceration to bridge of nose.	First Aid	
C3 - HVdc Specialties	GE/Alstom Grid	CD0502-MF	5/31/2016 04:30:00 PM	5/31/2016 06:45:16 PM	OE was cleaning loose material around the column. OE decided to lay the bucket on the flat instead of using the cutting edge, as the cutting edge may have caused damage to the footing. As the OE dragged the bucket back, the bucket rolled over a rock which caused the bucket to pitch to the right and make slight contact with the concrete footing.	Property & Equipment Damage	

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Component	Company	Contract	Time of Incident	Reported	Description	Class	Potential Safety/ Absolute Violation
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	5/31/2016 11:30:00 AM	6/1/2016 08:07:39 AM	Worker was walking down a DOKA panel when they slipped and landed on their tailbone resulting in discomfort to their lower back.	First Aid	
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	5/31/2016 04:45:00 PM	6/1/2016 08:09:03 AM	Excavator was busting bedrock next to the pier in the spillway when the boom struck the wall resulting in damage to the concrete.	Property & Equipment Damage	
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	5/31/2016 10:45:00 PM	6/1/2016 08:12:05 AM	While one worker was passing a T-70 drill to another worker through the gaps in rebar the trigger was accidentally engaged, and pulled the worker's glove around the bit. This resulted in discomfort to the worker's right hand.	Modified Work	
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	6/1/2016 11:50:00 PM	6/2/2016 08:32:06 AM	A worker was lowering a water-filled mop bucket to the floor and felt discomfort to their lower back.	Modified Work	
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	6/1/2016 08:05:00 PM	6/2/2016 08:36:01 AM	While traveling the zoom boom the operator was in the process of opening the forks on the zoom boom and the forks made contact with the ground causing damage to one fork.	Property & Equipment Damage	
C1 - Muskrat Falls Generation	Labrador Catering	SH0018	5/31/2016 09:20:00 PM	6/2/2016 10:52:07 AM	IP sustained superficial laceration to right ring finger while opening a box of J cloths. IP was not wearing gloves at the time of the incident.	First Aid	
C1 - Muskrat Falls Generation	Gilbert NL Construction	CH0008	5/30/2016 02:00:00 PM	6/2/2016 01:18:01 PM	The fuel man has left the remote control on the right front fender of the haul truck after fueling it. The damaged remote was found on the haul road.	Property & Equipment Damage	
C1 - Muskrat Falls Generation	Andritz	CH0032	6/1/2016 10:00:00 AM	6/2/2016 03:35:06 PM	A worker stepped on a plywood plank resulting in a slip/fall	First Aid	
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	6/2/2016 09:20:00 PM	6/3/2016 08:16:42 AM	While in the process of emptying a vacuum half full of water, a worker pinched their finger between the vacuum handle and a rock bit.	Modified Work	
C3 - HVdc Specialties	GE/Alstom Grid	CD0501-SP	6/2/2016 12:00:00 AM	6/3/2016 10:16:16 AM	Damage (indentation) to top end of wall panel at line 9 on Valve Hall 2.	Property & Equipment Damage	

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Component	Company	Contract	Time of Incident	Reported	Description	Class	Potential Safety/Absolute Violation
C3 - HVdc Specialties	GE/Alstom Grid	CD0501-MF	6/2/2016 02:30:00 PM	6/3/2016 02:55:14 PM	Individual was carrying a box of nails down a walkway in the valve hall control building. There was a slope in the walkway, as well as a depression. Individual stepped on slope, and or depression, causing ankle to slightly roll. Individual claims that at this time there was no significant pain. The individual also claimed that a piece of wood was stepped on this morning which caused pain in the ankle. It was this second event which triggered the individual to seek medical attention.	Safety Absolute	Yes
C4 - Overland Transmission	Valard Construction	CT0327-001	6/2/2016 05:30:00 PM	6/3/2016 03:12:41 PM	km 14 SPRR - Truck driver delivering partial reels, slowed down, two reel rolled off the end of the trailer.	Property & Equipment Damage	
C3 - HVdc Specialties	GE/Alstom Grid	CD0502-MF	6/3/2016 04:00:00 PM	6/4/2016 01:00:06 PM	Individual was pulling on a wrench to tighten a bolt on the aqua cutter. The wrench let go, causing the individual to lose balance and step backwards into a depression. Right foot rolled over. Individual thought it would be fine, but woke up this morning with some pain. Reported it to supervisor right away this morning.	First Aid	
C3 - HVdc Specialties	GE/Alstom Grid	CD0501-MF	6/4/2016 09:15:00 AM	6/4/2016 04:25:16 PM	While worker was removing Ties from the concrete wall of Pole 2 attached to the Control Building, worker made contact with Metal Flashing with Left Hand causing abrasion to the knuckle. Worker was wearing PPE (Gloves) at the time. Worker reported incident to foreman which then reported to Pomerleau Safety Dept. Worker was taken to site clinic and was assessed by cleaning of the abrasion and given bandages to apply if necessary. Worker returned to full duties without restrictions.	First Aid	
C1 - Muskrat Falls Generation	Labrador Catering	SH0018	6/4/2016 11:00:00 AM	6/4/2016 06:23:29 PM	Employee was removing cart from janitors room and her finger got pinched between the cart and the wall	First Aid	
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	6/4/2016 11:45:00 PM	6/5/2016 08:47:43 AM	While walking on a work platform a worker's right foot stepped into a partially opened Doka hatch, at the same time another worker was opening the hatch from the access ladder below. This resulted in discomfort to the first workers right knee.	Modified Work	
C3 - HVdc Specialties	GE/Alstom Grid	CD0502-CF	6/5/2016 07:45:00 AM	6/5/2016 11:43:57 AM	While the excavator was travelling forward to the work area in Zone D the bucket of the excavator struck the top corner of a buried pre cast causing minor damage to the pre cast.	Property & Equipment Damage	

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Component	Company	Contract	Time of Incident	Reported	Description	Class	Potential Safety/Absolute Violation
C1 - Muskrat Falls Generation	Labrador Catering	SH0018	6/5/2016 11:45:00 AM	6/6/2016 02:43:13 PM	Between the time line of 11:30 and 11:45 worker was mopping floor when a small splinter protruding from a wooden handled mop caught middle finger on right hand	First Aid	
C4 - Overland Transmission	Springdale Forest Resources	CT0327-051	6/6/2016 03:42:00 PM	6/6/2016 08:59:53 PM	The operator was backing down a slope in a Dozer when the fire extinguisher bracket, which was mounted outside on the front of the Dozer, broke causing the fire extinguisher to slide out and hit the front windshield shattering it.	Property & Equipment Damage	
C1 - Muskrat Falls Generation	Andritz	CH0032	6/7/2016 01:45:00 AM	6/7/2016 08:45:21 AM	Worker arrived at the site access gate displaying signs of intoxication.	Safety Absolute	Yes
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	6/2/2016 11:30:00 AM	6/7/2016 10:04:02 AM	While in the process of retrieving a tool the individual inadvertently dislodged a wrench which fell approximately 2 feet and made contact with their back. This resulted in discomfort to their lower back.	Modified Work	
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	6/7/2016 10:30:00 AM	6/7/2016 02:15:53 PM	Worker was installing coil rods when they felt discomfort in their right wrist. Upon following the Canadian Model worker was found to be in violation of LCP Site Safety Absolute #10, Non-Compliance to the LCP Alcohol and Drug Standard.	Safety Absolute	Yes
C4 - Overland Transmission	Lower Churchill Management Corporation	LCP-LITL	6/4/2016 05:50:00 PM	6/7/2016 02:25:46 PM	Employee was driving on a straightaway when a vehicle (non-project) attempted to pass. The passing vehicle came too close to the LCP vehicle and the passenger's side mirror of the passing vehicle made contact with LCP vehicle, causing minor damage to the light case and scratching the paint on the rear driver's side. The employee went to the RCMP detachment in Port Saunders to report but there was no one at the detachment.	Vehicle Incident	
C4 - Overland Transmission	Lower Churchill Management Corporation	LCP-LITL	6/7/2016 07:00:00 AM	6/7/2016 02:34:15 PM	Unit 2075 was discovered with damage to the rear quarter panel and rear passenger door. Cause of damage is unknown.	Property & Equipment Damage	
C4 - Overland Transmission	Valard Construction	CT0327-001	6/7/2016 01:10:00 PM	6/7/2016 04:26:07 PM	Squid Cove Road - Worker slipped and fell, struck left ear on the tailgate of pickup.	First Aid	
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	6/7/2016 08:45:00 PM	6/8/2016 08:57:20 AM	While in the process of relocating a piece of steel with a co-worker, individual felt discomfort between their upper back.	Modified Work	
C1 - Muskrat Falls Generation	Andritz	CH0032	6/8/2016 06:00:00 AM	6/9/2016 07:51:06 AM	A worker reported that he felt eye irritation post welding operations.	First Aid	

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Component	Company	Contract	Time of Incident	Reported	Description	Class	Potential Safety/Absolute Violation
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	6/8/2016 07:45:00 AM	6/9/2016 09:11:29 AM	Worker felt discomfort to right shoulder by catching self from falling after slipping on a piece of plywood while walking to their work area at the start of their shift.	Modified Work	
C3 - HVdc Specialties	GE/Alstom Grid	CD0501-MF	6/8/2016 10:00:00 PM	6/9/2016 12:02:21 PM	Individual was working with 36" power trowel and backing up during the task. Individual tripped over 48" power trowel that was positioned to their rear.	Modified Work	
C1 - Muskrat Falls Generation	Labrador Catering	SH0018	6/9/2016 10:00:00 PM	6/10/2016 08:08:24 AM	Worker was reaching for a dirty food tray to take from the rack and roll and hit left thumb on the edge of the tray shelf.	First Aid	
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	6/9/2016 09:30:00 AM	6/10/2016 02:49:21 PM	Worker was descending off a Doka shoring ladder and misjudged the last rung, causing discomfort in left knee. After re-assessment at the site medic, the worker was given limitations.	Modified Work	
C3 - HVdc Specialties	Labrador Catering	SD0564-001	5/29/2016 11:00:00 PM	6/10/2016 04:07:47 PM	At approximately 11:00 pm the Lab Catering (LC) Camp Manager received a report from LC Kitchen staff that there was a Camp Resident (not LC) present in the dining room for whom they suspected was under the influence of alcohol.	Security Incident	
C1 - Muskrat Falls Generation	Barnard-Pennecon	CH0009	6/10/2016 09:35:00 AM	6/10/2016 05:50:34 PM	Screening foreman was in area of GD-8 and instructed operator of unit to start production. The foreman entered the pickup truck, started to leave the area, but realized that the screening plant was still not operational while the jaw unit was started up. The foreman stopped, placed the truck in park and exited to start up the screening plant, not realizing the close proximity of the truck to the discharge belt. A small amount of residual material fell from the discharge belt, resulting in minor damage to the hood of the truck. No one was in the truck at the time of the incident. No injuries occurred.	Property & Equipment Damage	
C1 - Muskrat Falls Generation	Gilbert NL Construction	CH0008	6/10/2016 09:10:00 AM	6/12/2016 08:57:39 AM	A pipe fuser was cutting a pipe to remove a clogged section using a portable jigsaw. After it was cut, there was a projection of water caused by the pressure left in the pipe. The pipe moved vertically for approximately 1 meter. The pressure jolted him back; the worker fell on the ground but no injury.	To Be Determined	
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	6/12/2016 02:45:00 AM	6/12/2016 09:43:53 AM	Worker was using a cordless drill; when it kicked back resulting in discomfort to their right hand.	Modified Work	

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Component	Company	Contract	Time of Incident	Reported	Description	Class	Potential Safety/Absolute Violation
C4 - Overland Transmission	Johnson's Construction	CH0024-001	6/11/2016 08:00:00 AM	6/12/2016 12:28:13 PM	At approximately 8:00am on June 11, 2016, a float truck operator was travelling a forwarder from the temp camp location to another work location. When the operator pulled onto the highway the pin in the float slipped causing it to drop and make contact with the pavement. The contact caused damage to the Trans Labrador Highway.	Property & Equipment Damage	
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	6/12/2016 08:30:00 AM	6/13/2016 07:51:19 AM	While pulling on a pipe wrench to loosen a bolt on embed the worker felt discomfort to their lower back.	Modified Work	
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	6/12/2016 11:30:00 AM	6/13/2016 07:53:18 AM	While a worker was lifting a Doka bracket, the bracket rolled back causing discomfort in their left thumb.	Modified Work	
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	6/11/2016 11:20:00 PM	6/13/2016 09:26:08 AM	While moving a load from D-Line the boom of tower crane 2 contacted the load line of the 14,000 crawler crane that was positioned on the North Side of A-Line. Upon following the Canadian Model the worker was found to be in violation of LCP Site Safety Absolute #10 Non-Compliance to the LCP Alcohol and Drug Standard.	Property & Equipment Damage	Yes
C4 - Overland Transmission	Valard Construction	CT0327-001	6/12/2016 03:45:00 PM	6/13/2016 02:43:04 PM	Northstar Employee was cleaning steel on the back of a pick-up truck and pinched their left pinky finger, causing a small cut.	First Aid	
C3 - HVdc Specialties	Alstom Grid	CD0501-MF	6/13/2016 02:30:00 PM	6/13/2016 05:48:21 PM	OE was operating mini excavator to level ground near building. While swinging the excavator it was noticed that hydraulic oil was leaking. Damage to the hose on boom arm occurred.	Safety Absolute	Yes
C3 - HVdc Specialties	GE/Alstom Grid	CD0502-CF	6/13/2016 01:35:00 PM	6/13/2016 06:15:51 PM	Worker was entering Zone H break trailer and upon entrance a squirrel was present inside the trailer. While the worker was trying to guide the squirrel out of the trailer the squirrel bit the worker on his right index finger.	First Aid	
C1 - Muskrat Falls Generation	Labrador Catering	SH0018	6/13/2016 11:20:00 AM	6/14/2016 09:21:28 AM	Employee was leaned over putting laundry into laundry bags. While coming up she hit her head on the door knob	First Aid	
C3 - HVdc Specialties	GE/Alstom Grid	CD0501-SP	6/14/2016 09:35:00 AM	6/14/2016 01:00:44 PM	Worker felt pain in lower back after assisting other workers in moving a liner for a generator.	First Aid	
C3 - HVdc Specialties	GE/Alstom Grid	CD0501-SP	6/14/2016 08:30:00 AM	6/14/2016 01:44:07 PM	Worker observed using a generator that was not grounded correctly.	Observation Only	
C4 - Overland Transmission	Valard Construction	CT0327-001	6/11/2016 01:30:00 PM	6/14/2016 01:47:27 PM	Employee was pulling guy wire. The wire had dust on it. The wind picked up causing dust to enter the workers right eye under his safety glasses.	First Aid	

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Component	Company	Contract	Time of Incident	Reported	Description	Class	Potential Safety/Absolute Violation
C3 - HVdc Specialties	GE/Alstom Power	CD0534-001	6/9/2016 12:00:00 AM	6/14/2016 02:32:08 PM	On June 11,2016 at approx. 3pm it was observed that the cover had been removed from the sump of the spare transformer and had not been replaced.	Near Miss	
C3 - HVdc Specialties	GE/Alstom Grid	CD0501-SP	6/14/2016 03:45:00 PM	6/15/2016 06:37:02 AM	Generator observed not properly grounded, extension cord plugged into generator did not have a ground prong, and a GFCI adapter was not being used.	Near Miss	
C4 - Overland Transmission	Springdale Forest Resources	CT0327-051	6/15/2016 08:19:00 AM	6/15/2016 11:33:54 AM	Worker used a pocket knife to open a sleeve of ribbon that was stuck together. The knife slid across the tip of index finger causing a small cut. Worker received first aid on site and returned to work.	First Aid	
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	6/16/2016 04:00:00 AM	6/16/2016 12:34:19 PM	Worker was accessing 9th lift of South Transition Dam through a DOKA hatch. In doing so, their hard hat got caught on the rung of the access ladder. As a result the workers hard hat fell off and while attempting to catch it the DOKA hatch dropped making contact with the workers head.	First Aid	
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	6/16/2016 01:30:00 PM	6/16/2016 04:27:23 PM	While in the process of removing a handrail the individual dislodged a piece of 2x6 weighing approximately 3lbs which landed 80ft to an unoccupied uncontrolled area below.	High Potential Near Miss	
C4 - Overland Transmission	Valard Construction	CT0327-001	6/15/2016 05:00:00 PM	6/16/2016 05:12:02 PM	Forteau RoW S2 km 83 - Foundations Operator, dump of Rock Truck tipped over on its side.	Near Miss	
C4 - Overland Transmission	Valard Construction	CT0327-001	6/13/2016 03:30:00 PM	6/17/2016 08:59:57 AM	Str 49 Taylors Brook Road - AMEC QC & Nalcor QC Vehicle Incident backing.	Property & Equipment Damage	
C3 - HVdc Specialties	Labrador Catering	SD0564-001	6/16/2016 11:30:00 AM	6/17/2016 09:50:33 AM	While retrieving food stores from storage container for kitchen, worker tripped over a milk crate that was on the floor, fell to the ground and landed on right side and struck left hand on floor.	Near Miss	
C1 - Muskrat Falls Generation	Labrador Catering	SH0018	6/17/2016 02:30:00 AM	6/17/2016 10:05:09 AM	Worker was taking garbage from the building to the outside garbage skip; when opening the door of the building he hit the door bar with right hand very hard and felt pain radiate up to his right shoulder.	Modified Work	

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Component	Company	Contract	Time of Incident	Reported	Description	Class	Potential Safety/Absolute Violation
C1 - Muskrat Falls Generation	Andritz	CH0032	6/15/2016 11:00:00 AM	6/17/2016 11:02:56 AM	An outside vendor (J.F. Millette trucking) was at camp laydown offloading some material for Andritz. When he was off loaded the driver was driving in the parking lot Bobtailing (tractor with no trailer attached) to go and connect his truck with the trailer when he attempted a left hand turn. In making the left hand turn the truck made contact with a piece of 8" x 8" post with an electrical outlet attached to it breaking it off at the base.	Property & Equipment Damage	
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	6/17/2016 11:00:00 AM	6/17/2016 04:08:06 PM	While positioning a steel whaler, a worker's thumb was pinched between the whaler and a 4X6, resulting in discomfort to the worker's right thumb.	Modified Work	
C4 - Overland Transmission	Springdale Forest Resources	CT0327-017	6/16/2016 04:00:00 PM	6/17/2016 04:20:59 PM	Excavator Operator and Operator of light vehicle with slip tank were performing refueling operation of an excavator. The excavator operator refueled his own excavator. Once refueling was complete, he passed the fuel nozzle and hose to the other operator. The operator returned the nozzle and hose to the light vehicle and began preparations to leave the area. While doing so the excavator operator got back into his excavator and started the excavator up. The other operator finished preparations and got in his light vehicle and prepared to move out of the area. Before the light vehicle could move the excavator swung causing the blindside counter weight to make contact with and damage the back, passenger side, panel of the light vehicle.	Property & Equipment Damage	
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	6/17/2016 08:00:00 AM	6/17/2016 04:54:33 PM	Worker was suspected of being in non-compliance of the site drug and alcohol standard.	Safety Absolute	Yes
C1 - Muskrat Falls Generation	Barnard-Pennecon	CH0009	6/17/2016 10:40:00 AM	6/18/2016 09:42:07 AM	On June 17, 2016 at approx. 10:40am a teamster was attempting to off load his tandem at stockpile 2C. As he was lifting the dump of the tandem the dump shifted causing a bed/partial truck tip over No one was hurt.	Property & Equipment Damage	
C4 - Overland transmission	Valard Construction	CT0327-001	6/19/2016 05:00:00 AM	6/19/2016 11:42:35 AM	North of Corner Brook - Moose stepped out of the ditch in front of the truck, truck hit moose.	Vehicle Incident	
C4 - Overland Transmission	Springdale Forest Resources	CT0327-051	6/19/2016 01:00:00 PM	6/19/2016 03:48:40 PM	Operator was using excavator with buster attachment. While busting rock a piece of rock came back and hit the front windshield causing it to shatter. The excavator was equipped with forestry package with tempered glass.	Property & Equipment Damage	

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Component	Company	Contract	Time of Incident	Reported	Description	Class	Potential Safety/Absolute Violation
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	6/19/2016 02:10:00 PM	6/19/2016 05:06:58 PM	While in the process of loading a trailer the zoom boom made slight contact with the corner of the trailer, which resulted in minor damage to the zoom boom.	Property & Equipment Damage	
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	6/19/2016 02:10:00 AM	6/20/2016 10:48:01 AM	Worker was suspected to be in non-compliance of LCP site Drug & Alcohol standard.	Safety Absolute	Yes
C3 - HVdc Specialties	GE/Alstom Grid	CD0502-SP	6/20/2016 11:15:00 AM	6/20/2016 12:54:34 PM	Worker leaving site had a pallet in the back of the truck shift, struck and bent the pole on which the access pad is mounted.	Property & Equipment Damage	
C4 - Overland Transmission	Springdale Forest Resources	CT0327-051	6/21/2016 10:30:00 AM	6/21/2016 01:16:38 PM	The SFR Mechanic was working underneath a trailer attached to the float truck. He was changing an airbag when sand or dust from the airbag fell, lodging on his left eye. He then used an eyewash bottle to flush out his eye and returned to work. He was wearing his safety glasses.	First Aid	
C3 - HVdc Specialties	GE/Alstom Grid	CD0501-MF	6/21/2016 03:30:00 PM	6/21/2016 07:36:31 PM	Door beam located at main entrance into pole 2 became dislodged due to high winds. Therefore resulting in damage to outside wall panel.	Property & Equipment Damage	
C1 - Muskrat Falls Generation	Stassinu Stantec Ltd. Partnership	LC-EV-102-MF	6/21/2016 02:30:00 PM	6/21/2016 09:29:06 PM	A Field Assistant/Tech received a fly bite and had an allergic reaction (localized, on left hand).	First Aid	
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	6/21/2016 03:50:00 PM	6/22/2016 09:21:34 AM	While in process of doing an inspection of tower crane #3, a gust of wind dislodged a worker's hardhat causing it to fall approximately 120' into the elevator shaft below.	Near Miss	
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	6/22/2016 02:15:00 AM	6/22/2016 10:02:45 AM	Worker was kneeling out a walkway. As they lifted their head up, their ear contacted a waler resulting in a small scratch.	First Aid	
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	6/22/2016 10:15:00 AM	6/22/2016 04:14:36 PM	A worker, who was exhibiting signs of being in violation of the site Drug and Alcohol Standard, was requested to comply with Canadian Model. The worker refused, and was therefore, found to be in violation of Safety Absolute #10, for failure to comply with the standard.	Safety Absolute	Yes
C3 - HVdc Specialties	GE/Alstom Grid	CD0501-MF	6/22/2016 07:00:00 AM	6/22/2016 04:45:20 PM	Individual smelled of alcohol. A&D testing was conducted as per protocol, and the test confirmed the presence of alcohol.	Safety Absolute	

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Component	Company	Contract	Time of Incident	Reported	Description	Class	Potential Safety/Absolute Violation
C3 - HVdc Specialties	GE/Alstom Grid	CD0502-CF	6/22/2016 06:35:00 PM	6/23/2016 12:02:54 AM	Diver exited the light duty vehicle without turning off the ignition or putting the vehicle in park. The vehicle rolled forward into a steel bin resulting in minor damage to the vehicle. No injuries were sustained.	Vehicle Incident	
C4 - Overland Transmission	Lower Churchill Management Corporation	LCP-LITL	6/22/2016 01:30:00 AM	6/23/2016 04:32:47 PM	Employee was backing into parking spot outside of trailer and came into contact with the trailer, resulting in a cracked tail light.	Vehicle Incident	
C1 - Muskrat Falls Generation	Astaldi Canada Inc.	CH0007	6/23/2016 09:00:00 AM	6/24/2016 09:09:05 AM	While worker was walking though the South Transition Dam a small foreign body lodged in the workers right cheek.	First Aid	
C4 - Overland Transmission	Springdale Forest Resources	CT0327-051	6/23/2016 10:30:00 AM	6/25/2016 07:57:17 AM	The mechanic was travelling on the access road on the transmission right of way. He went pass the branch road he was supposed to go on, so he stopped and backed up. When doing so he noticed that he was close to the roads edge, so he stopped and turned his wheels to move ahead and suddenly before moving ahead the road edge gave away and the truck went in the ditch ending up on its roof.	Vehicle Incident	
C4 - Overland Transmission	Valard Construction	CT0327-001	6/23/2016 10:15:00 AM	6/25/2016 01:47:46 PM	S3 km 23 Squid Cove South - North Star Driller Helper - Pinched hand while loading casing.	First Aid	
C4 - Overland Transmission	Valard Construction	CT0327-001	6/19/2016 11:00:00 AM	6/25/2016 02:06:42 PM	Seg 2 Str 423 - Erection Crew Member - spud wrench slipped and hit upper lip. Minor laceration.	First Aid	
C4 - Overland Transmission	Valard Construction	CT0327-001	6/19/2016 08:40:00 AM	6/26/2016 08:24:47 AM	S2 km 62 - LEG Mechanic - pinched finger between steel beam and truck.	First Aid	
C4 - Overland Transmission	Locke's Electrical	CT0342-002	6/9/2016 09:30:00 AM	6/28/2016 03:07:19 PM	Wallace Baker and his crew were sagging kcmil AACSR which was attached to the bridge of structure #10. The conductor was pulled up to sag with Baker attached. The 3/4 eye nut broke causing the conductor to fall to the ground. Repairs were made to the conductor. Job review was conducted and job was complete. No injuries occurred to any crew members. All crew members were out of Line of Fire.	Property & Equipment Damage	
C4 - Overland Transmission	Valard Construction	CT0327-001	6/15/2016 02:30:00 PM	6/29/2016 05:06:19 PM	Trucker hauling puller, snagged fibre lead line across highway 510.	Property & Equipment Damage	

14.3 ENVIRONMENTAL INCIDENTS – JUNE 2016

Transmission Line Type / Contract	Date of Incident	Description of Incident: Fluid Release Incidents (>2L)	Risk Assessment	
			Actual Consequence	Maximum Reasonable Consequence
AC Construction (Labrador)				
CT0319	11-Jun-2016	5L of power hydraulic oil was discovered on the ground from an unreported spill at Highway 187.	Contamination of the immediate ground.	No migration
CT0319	16-Jun-2016	15L of power hydraulic oil was released to the ground from a broken hose on a dozer at AT-152 Entrance.	Contamination of the immediate ground.	No migration
CT0342-002	23-Jun-2016	2L of diesel was released to the ground from a pickup truck that had been transporting fuel in the Parking Lot near Locke's Lunch Trailer.	Contamination of the immediate ground.	No migration
DC Construction (Newfoundland and Labrador)				
CT0327-001	03-Jun-2016	5L of hydraulic fluid was discovered on the ground in the form of staining at S2-216.	Contamination of the immediate ground.	No migration
CT0327-001	03-Jun-2016	20L of hydraulic oil was released to the ground when the hydraulic line on a rock truck broke at S4-102.	Contamination of the immediate ground.	No migration
CT0327-001	03-Jun-2016	20L of hydraulic oil was released to the ground when the quick coupler burst on an excavator at S2-270.	Contamination of the immediate ground.	No migration
CT0327-001	10-Jun-2016	3L of hydraulic oil was released to the ground due to a broken hydraulic line fitting on a drill at S3-151.	Contamination of the immediate ground.	No migration
CT0327-001	11-Jun-2016	2L of hydraulic oil was released to the ground when a mechanic was repairing an excavator without using a spill tray in the S2-305 Quarry Pit.	Contamination of the immediate ground.	No migration
CT0327-001	25-Jun-2016	30L of hydraulic oil was released to the ground due to an unknown reason at S2-351.	Contamination of the immediate ground.	No migration
CT0327-001	26-Jun-2016	5L of diesel was released to the ground when a water truck fuel tank was heated and expanded at the KM 60 Laydown.	Contamination of the immediate ground.	No migration

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Transmission Line Type / Contract	Date of Incident	Description of Incident: Fluid Release Incidents (>2L)	Risk Assessment	
			Actual Consequence	Maximum Reasonable Consequence
DC Clearing/Access (Newfoundland and Labrador)				
CT0327-011	12-Jun-2016	2L of diesel was released to the ground when the fuel line seal broke on a fuel truck at the KM 92 C&T Camp.	Contamination of the immediate ground.	No migration
CT0327-011	19-Jun-2016	2L of hydraulic fluid was released to the ground when the steering hose on a grader broke at KM 27 of the ROW.	Contamination of the immediate ground.	No migration
CT0327-013	12-Jun-2016	24L of hydraulic fluid was released to the ground due to a broken hydraulic line on a grader at KM 106 of SPRR.	Contamination of the immediate ground.	No migration
CT0327-013	19-Jun-2016	5-10L of diesel was released to the ground due to a pickup truck parking on an incline and the spill tank overflowing at KM 129 of SPRR.	Contamination of the immediate ground.	No migration
CT0327-017	22-Jun-2016	2-5L of hydraulic fluid was released to the ground when a foot valve malfunctioned on a harvester 3km down from White Hills Resource Road coordinates UTM 21 E716721 N5344809. This spill was reportable, as it occurred within a PPWSA.	Contamination of the immediate ground.	No migration
CT0327-024	13-Jun-2016	4L of hydraulic fluid was released to the ground due to an equipment malfunction in Batteau Barrens.	Contamination of the immediate ground.	No migration
CT0327-024	26-Jun-2016	2L of hydraulic fluid was released to the ground due to an equipment malfunction at KM 16 of Taylor's Brook Road.	Contamination of the immediate ground.	No migration
CT0327-051	23-Jun-2016	2L of motor oil was released to the ground when a mechanic truck toppled over the edge of the road between S5-228 and S5-229.	Contamination of the immediate ground.	No migration
Muskrat Falls Generation Site				
CH0007	24-Jun-2016	35L of hydraulic fluid released to ground due to hydraulic line connection failure on the concrete truck.	Contamination of the immediate ground.	No migration
CH0008	17-Jun-2016	10L of hydraulic fluid released to ground due to hydraulic hose failure on an excavator.	Contamination of the immediate ground.	No migration
CH0008	21-Jun-2016	50L of hydraulic fluid released to ground due to a seal leak on haul truck.	Contamination of the immediate ground.	No migration

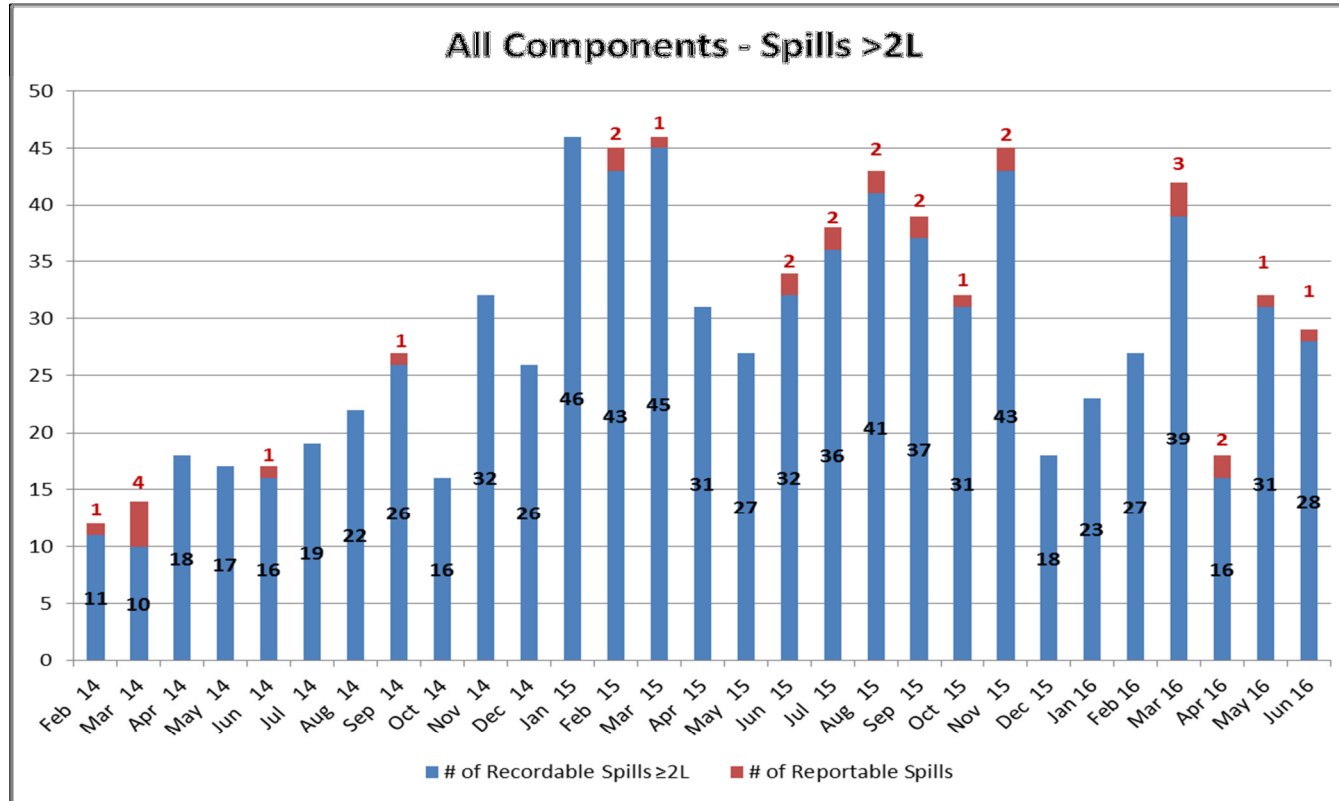
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Transmission Line Type / Contract	Date of Incident	Description of Incident: Fluid Release Incidents (>2L)	Risk Assessment	
			Actual Consequence	Maximum Reasonable Consequence
CH0024-001	11-Jun-2016	5L of gasoline was released to the ground from a punctured pickup truck gas tank near the wash station at Edward's Brook Camp.	Contamination of the immediate ground.	No migration
CH0024-001	18-Jun-2016	5L of hydraulic fluid was released to the ground due to a broken fitting on a forwarder at the Block N05 Access.	Contamination of the immediate ground.	No migration
CH0024-001	21-Jun-2016	12L of hydraulic fluid was released to the ground due to a broken hose on a processor in Block S13.	Contamination of the immediate ground.	No migration
HVdc Specialties				
CD0501-001 (Muskrat Falls)	13-Jun-2016	12L of hydraulic fluid released to ground due to hydraulic hose failure on an excavator.	Contamination of the immediate ground.	No migration
CD0501-004 (Shoal Cove)	28-Jun-2016	5L of sewage/septic released to ground due to tank high level alarm being unplugged and not sounding, which resulted in tank overflowing.	Contamination of the immediate ground.	No migration
CD0502-001 (Churchill Falls)	09-Jun-2016	45L of hydraulic fluid released to ground due to a hydraulic hose on a dump truck. A cylinder, which loose fasteners due to vibration came out of its moring and pinch the hose.	Contamination of the immediate ground.	No migration
CD0502-001 (Churchill Falls)	11-Jun-2016	69L of diesel fuel released to ground due to fuel hose failure caused by storing in a manner that created extra tension on the hose.	Contamination of the immediate ground.	No migration
SOBI				
No spills >2L occurred in June 2016.				

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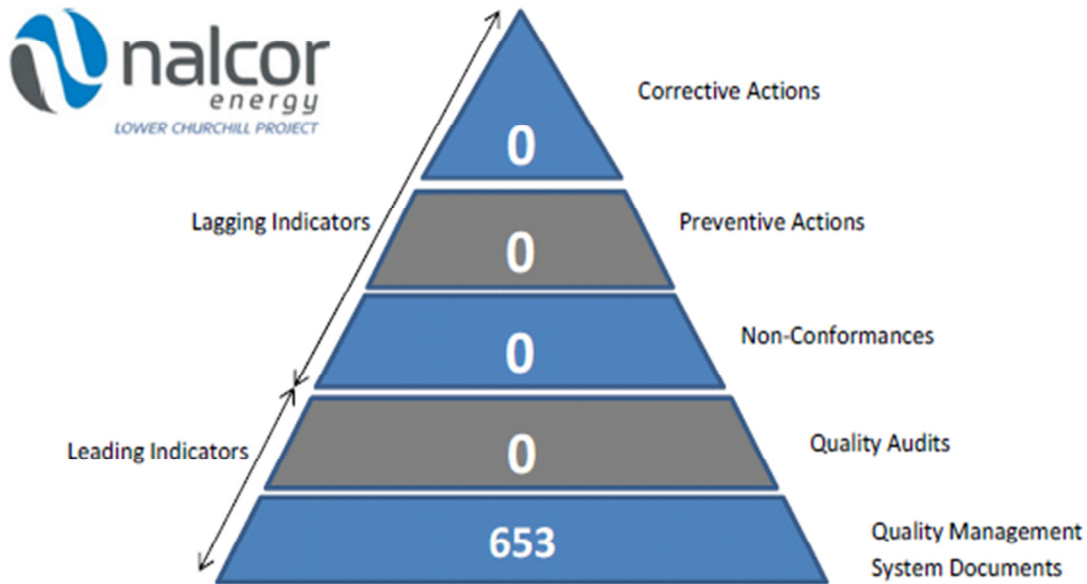
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14.4 QUALITY PERFORMANCE – JUNE 2016

QUALITY PERFORMANCE

LOWER CHURCHILL

**PROJECT DELIVERY TEAM – Issued Internal
Year to Date – June 2016**



Identifying and reporting on quality audits and taking action is critical to prevent non-conformances and corrective actions.

PROJECT DELIVERY TEAM QUALITY METRICS				
2016 Actual			Performance	Target
June	YTD		2015	2016
0	0	Corrective Actions	0	0
0	0	Preventive Actions	0	4
0	0	Non-Conformances	0	0
0	0	Quality Audits	0	5
12	653*	Quality Management System Documents	597*	675*

*Includes previous years.



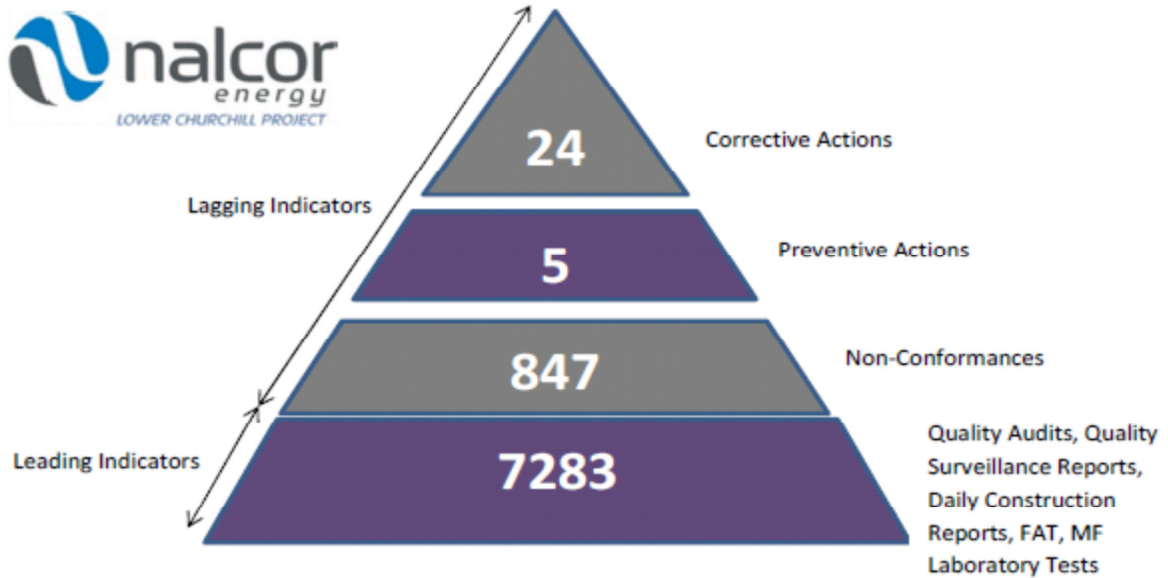
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QUALITY PERFORMANCE

LOWER CHURCHILL

**LCMC, SUPPLIERS / CONTRACTORS- Issued External
Year to Date - June 2016**



Identifying and reporting quality audits, surveillance and daily reporting is and taking action is critical to prevent non-conformances and corrective actions.

SUPPLIERS / CONTRACTORS QUALITY METRICS				
2016 Actual			Performance	Target
June	YTD		2015	2016
4	24	Corrective Actions	61	100
0	5	Preventive Actions	37	65
89	847	Non-Conformances	1126	1400
2	9	Quality Audits	16	36
58	340	Quality Surveillance Reports	254	250
856	4505	Daily Construction Reports	9934	13000
21	84	Factory Acceptance Test/Type Test	13	75
1162	2345	Laboratory Tests	2249	3000

* Statistics indicate those issued by the Project Delivery Team and the below Main Suppliers / Contractors:

- CH0007 Construction of Intake and Powerhouse, Spillway and Transition Dams
- CH0008 Construction of North Spur Stabilization Works
- CH0009 Construction of North and South Dams
- CH0030 Supply and Install Turbines and Generators
- CH0032 Supply and Install Powerhouse Hydro-Mechanical Equipment
- CD0501 Supply and Install Converters and Cable Transition Compounds (EPC)
- CD0502 Construction of AC Substations
- CD0534 EPC Synchronous Condensers at Soldiers Pond
- CT0319 315 kV HVac Transmission Line Construction (MF to CF)
- CT0327 350 kV HVdc Transmission Line Construction (MF to SP)
- LC-SB-003 SOBI Submarine Cable Design, Supply and Installation
- LC-SB-011 Subsea Rock Protection Design, Supply and Installation

Note: Review of Quality Metrics in process.



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LCMC NCR, PAR and CAR Status			Non-conformance Status					Preventive Action Status					Corrective Action Status				
			June		PTD			June		PTD			June		PTD		
			New	Closed	Issued	Open	Close	New	Closed	Issued	Open	Close	New	Closed	Issued	Open	Close
Contract	Package Name																
CH0007-001	Construction of Intake and Powerhouse, Spillway and Transition Dams	Astaldi	40	37	405	80	325	N/A	0	0	0	0	N/A	0	0	0	0
		LCMC	0	0	21	2	19	0	2	36	4	32	0	2	21	5	16
CH0008-001	Construction of North Spur Stabilization Works	Gilbert	12	27	54	14	40	0	0	0	0	0	0	0	0	0	0
		LCMC	0	0	4	0	4	0	0	0	0	0	0	0	20	1	19
CH0009-001	Construction of North and South Dams	Bernard-Pennecon	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
		LCMC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CH0030-001	Supply and Install Turbines and Generators	Andrtiz Hydro	2	3	505	199	306	0	0	0	0	0	0	0	0	0	0
		LCMC	0	2	12	0	12	0	0	0	0	0	4	0	14	4	10
CH0032-001	Supply and Install Powerhouse Hydro-Mechanical Equipment	Andrtiz Hydro	15	17	311	82	229	0	0	0	0	0	0	0	0	0	0
		LCMC	1	0	20	4	16	0	0	0	0	0	0	0	20	4	16
CD0501-001	Supply and Install Converters and Cable Transition Compounds (EPC)	Alstom Grid	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		LCMC	0	0	9	6	3	0	0	1	1	0	0	0	2	2	0
CD0502-001	Construction of AC Substations	Alstom Grid	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0
		LCMC	1	1	8	3	5	0	0	1	1	0	0	0	1	1	0
CD0534-001	EPC Synchronous Condensers at Soldiers Pond	Alstom Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		LCMC	6	0	7	7	0	0	0	0	0	0	0	0	0	0	0
CT0319-001	Construction of 315 kV HVac Transmission Line (MF to CF)	Valard	2	0	229	119	110	0	0	0	0	0	0	0	0	0	0
		LCMC	0	0	1	0	1	0	0	1	0	1	0	0	16	5	11
CT0327-001	350 kV HVdc Transmission Line Construction	Valard	15	198	594	199	395	0	0	0	0	0	0	0	0	0	0
		LCP	0	0	1	0	1	0	0	2	2	0	0	0	11	11	0
LC-SB-003	SOBI Submarine Cable Design, Supply and Install	Nexans	3	0	83	9	74	0	0	0	0	0	0	0	0	0	0
		LCP	6	0	5	2	3	0	0	17	13	4	0	0	15	13	2
LC-SB-011	Subsea Rock Protection Design, Supply and Installation	Tideway	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0
		LCMC	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0
	Total	Contractor	89	282	2188	704	1484	0	0	0	0	0	0	0	0	0	0
		LCMC	14	3	86	25	65	0	2	58	21	37	4	2	120	46	74
Grand Total			103	285	2274	729	1549	0	2	58	21	37	4	2	120	46	74

PTD: Project To Date



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14.5 LCP RISK ASSESSMENT REGISTER – JUNE 2016

Note: As a result of the review performed in January 2016 to review risk profile of the project and identify events that potentially impact project objectives, the Risk Assessment Register has been restructured and presented below.

Legend:

Risk Level / Probability / Impact:

- Low
- Medium
- High

Status: Ongoing, Removed

Trend:

- Increasing
- Decreasing
- No Change

Note: Items marked as "Removed" for the current reporting period are still considered a Project risk, however, are not necessary to report as part of this specific assessment. Items with this status will not appear in the next reporting period

Risk Assessment Level	Risk Title	Mitigation Update	Status	Trend This Period (June-2016)		Trend Last Period (May-2016)		Comments
				Probability	Impact	Probability	Impact	
	Managing Contractors performance under T&M compensation scheme <i>(Productivity & Production)</i>	Minimize number of T&M Contracts and manage any that cannot be avoided implementing the necessary field oversight and controls to pre-approve work and monitor contract performance. Nalcor Project Management teams are working with all Contractors to identify and implement initiatives designed to improve production/productivity.	Ongoing	↔	↔	↔	↔	For the present reporting period no changes have been identified in relation to the probability and impact related to the risk.



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Risk Assessment Level	Risk Title	Mitigation Update	Status	Trend This Period (June-2016)		Trend Last Period (May-2016)		Comments
				Probability	Impact	Probability	Impact	
	Effective Interface Management and Coordination <i>(Contractor interface management)</i>	Contracting strategy has been adjusted to reduce the number of interfaces and potential for claims. Large contract packages, EPC or Unit Price have been selected to reduce the interface risks. Continue internal coordination to enhance LCP interface management process with Contractors and Suppliers.	Ongoing	↔	↔	↔	↔	For the present reporting period no changes have been identified in relation to the probability and impact related to the risk.
	Lack of safety culture <i>(Safety performance of contractors)</i>	Project team has qualified and experienced H&S professionals who are reviewing safety of the bidders to ensure required standards are being met in the bids. Furthermore, once awarded, safety is a key feature of the kick off meeting and is followed up at site with toolbox talks, JSA's and if necessary safety standdowns if leading indicators point to potential incidents/accidents. The safety record of the Project is better than industry norms in NL however our goal is zero accidents and zero incidents. That is our safety culture, so it is a relentless pursuit of improvement in all areas. Safety culture program implemented with Contractors & Suppliers, and annual Safety Forum.	Ongoing	↑	↔	↑	↔	Increasing probability of risk due to number of Contractors generating increases in personnel & workfronts. Additional effort at all work sites to focus on safety concerns.



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Risk Assessment Level	Risk Title	Mitigation Update	Status	Trend This Period (June-2016)		Trend Last Period (May-2016)		Comments
				Probability	Impact	Probability	Impact	
	River diversion in 2016	<p>This is a critical milestone towards first power; critical path activities are spillway construction and the north dam contract, as well as completion of that contract. Concrete placement rate at the Spillway is much improved.</p> <p>Project team, hydro-mechanical, and civil contractors have this as their highest priority with daily meetings to ensure progress towards the completion of the spillway to allow the river diversion to occur as planned.</p>	Ongoing	↑	↔	↑	↔	Increasing risk probability due to performance of the hydro-mechanical contractor.
	Powerhouse concrete placement	<p>There is a significant amount of concrete placement required to complete the powerhouse; project team and civil contractor are continuing to work together.</p> <p>Concrete production rates have increased in 2015. Nalcor & Astaldi are working to improve productivity and concrete placement.</p>	Ongoing	↔	↔	↔	↔	For the present reporting period no changes have been identified in relation to the probability and impact related to the risk.



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Risk Assessment Level	Risk Title	Mitigation Update	Status	Trend This Period (June-2016)		Trend Last Period (May-2016)		Comments
				Probability	Impact	Probability	Impact	
	Weather impact on schedule	<p>Site preparation contracts have been scheduled to carry out work this coming Summer. SOBI cable installation has a one year float built in and work will be carried out in summer. Transmission construction and ROW are year round activities but could be impacted by extreme weather conditions; if so, additional work fronts can be opened during the Summer months to recover lost time. Reservoir and ROW clearing are scheduled in advance of following activity and have not been a risk to date.</p> <p>LCP and Contractors/Suppliers coordinating internally in the development of appropriate winterization execution plans beyond 2016.</p>	Ongoing	↔	↔	↔	↔	For the present reporting period no changes have been identified in relation to the probability and impact related to the risk.



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Risk Assessment Level	Risk Title	Mitigation Update	Status	Trend This Period (June-2016)		Trend Last Period (May-2016)		Comments
				Probability	Impact	Probability	Impact	
	Contractor or supplier failure/default <i>(Contractor performance causing schedule delays)</i>	<p>Only top tier contractors and suppliers have been selected with reputations that they complete on time. Furthermore, contract clauses include liquidated damages to ensure contractor meets required schedule dates. Site teams are monitoring performance on a daily basis and LCP meet with senior contract management at Steering Committee level to ensure full corporate alignment and commitment.</p> <p>LCMC have increased staffing to manage areas of Contractor weaknesses.</p> <p>Contractor performance continues to be a top priority for the Nalcor Project Management Team. Major efforts are underway with all major</p> <p>Contractors at senior levels to address Nalcor’s concerns regarding contractor performance, to avoid any critical path delays. Continued performance issues are noted in Astaldi, Alstom, Andritz, and Valard.</p> <p>The LCP Project Delivery Team continues identification of alternative options to carry on LCP execution.</p>	Ongoing	↔	↔	↔	↔	For the present reporting period no changes have been identified in relation to the probability and impact related to the risk. There is an ongoing assessment by financial experts of major Contractor’s financial situation.



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Risk Assessment Level	Risk Title	Mitigation Update	Status	Trend This Period (June-2016)		Trend Last Period (May-2016)		Comments
				Probability	Impact	Probability	Impact	
	Final Project Integration	Project Delivery Team is working within the execution plan that defines processes, tools and people complemented with a clear definition of responsibilities between Project/System Planning and Asset Manager.	Ongoing	↔	↔	↔	↔	For the present reporting period no changes have been identified in relation to the probability and impact related to the risk.
		Develop Training and Competency plan for all personnel.						
	Building the Operations Organization	Develop people, processes and systems requirements to meet the defined scope of work.	Ongoing	↔	↔	↔	↔	For the present reporting period no changes have been identified in relation to the probability and impact related to the risk.
		Operations Team Lead has been appointed and working in the execution plan that defines processes, tools and people.						
		Internal coordination ongoing with the engagement of Nalcor System Planning team.						
		Internal coordination ongoing and road map identified to build the Operations Organization.						



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Risk Assessment Level	Risk Title	Mitigation Update	Status	Trend This Period (June-2016)		Trend Last Period (May-2016)		Comments
				Probability	Impact	Probability	Impact	
	Application of Robust Commercial Management Practices	<p>A Dispute and Claim Avoidance team has been implemented to enhance Contractors claims avoidance philosophy.</p> <p>Claims avoidance training implemented for the LCP Project Delivery Team.</p> <p>Review of processes and compliance following Agreements' provisions to avoid contractor's claims.</p>	Ongoing	↔	↔	↔	↔	For the present reporting period probability of this event has decreased due to risk response actions implemented. Monitoring ongoing through life cycle of the project.