Muskrat Falls Project Oversight Committee

Quarterly Project Update

Period Ending September 30, 2019

December 23, 2019

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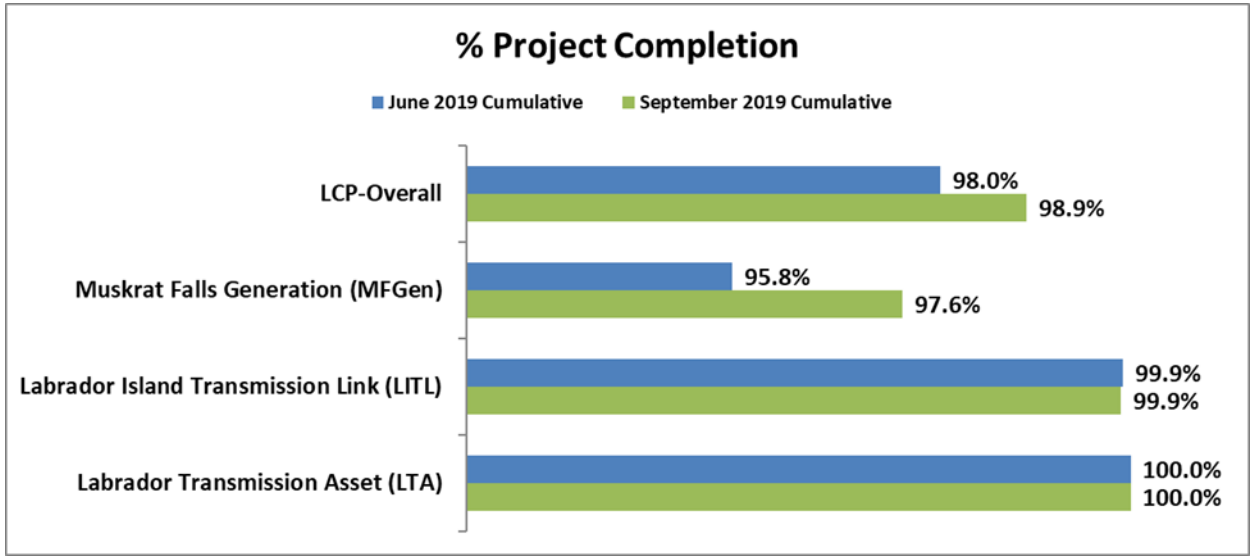
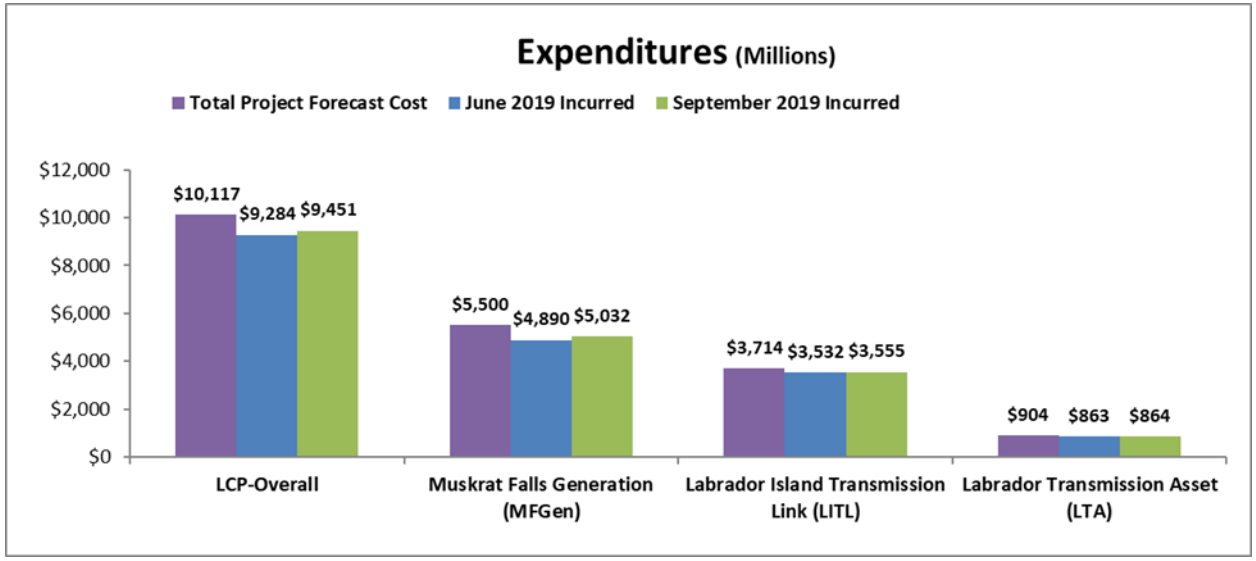
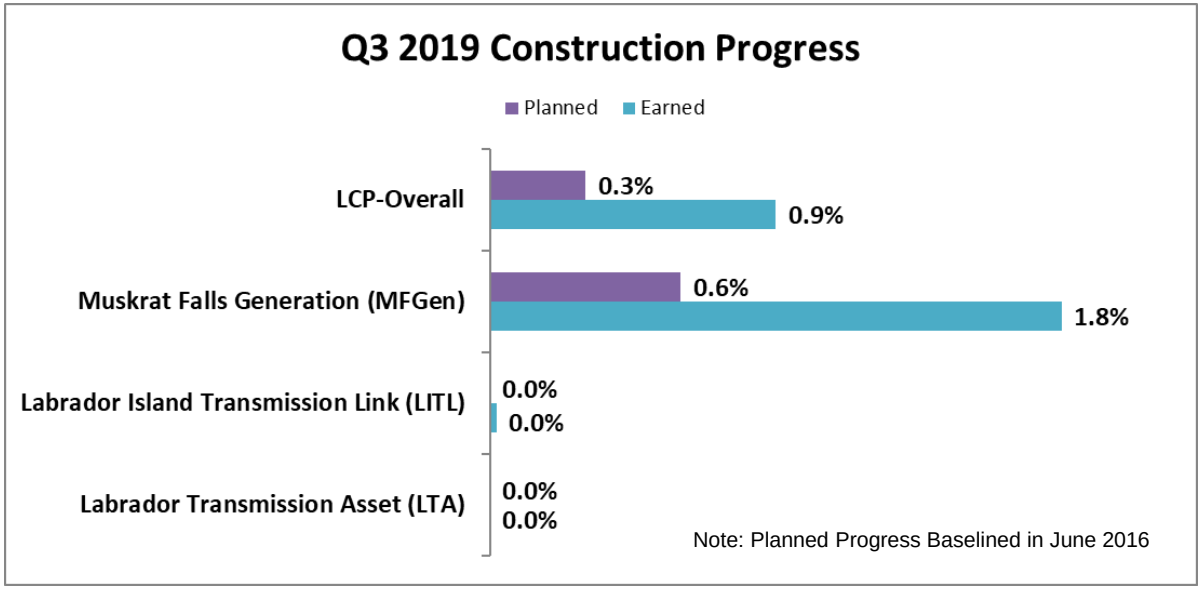
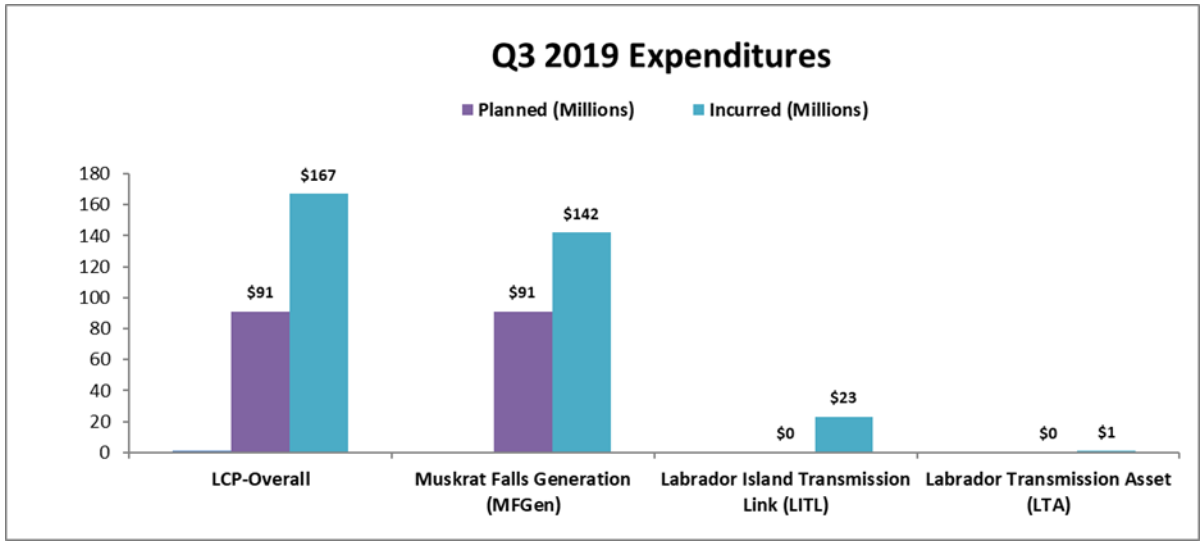
1. Q3 2019 Cumulative Project Progress





2. Q3 2019 Performance Summary





3.0 Oversight Committee Reporting

3.1 Overview
3.2 Committee Activities
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3.4 Risks and Issues Being Monitored by the Committee
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3.1 Overview

- The Oversight Committee (Committee) receives details on project costs incurred, schedule progress, changes in costs and milestone schedule, the status of construction, and manufacturing and installation contracts.
- The Committee identifies risks and issues and follows up with Nalcor to obtain more detail and explanation.
- This report covers the July to September 2019 period (Q3) and includes information on other notable project activity up to the date of drafting of this report.
- Section 3 of this report contains information developed by the Committee. Section 4 contains project cost and schedule information provided by Nalcor. The Annexes contain a more detailed accounting of the information provided in this report.
- The next Committee Report will cover the period October 2019 – December 2019.

3.2 Committee Activities

- The Committee met on two occasions during the period to receive project updates and conduct other Committee business. Committee meeting minutes and reports are available on the Committee website @ Click here and Click here.
- The Committee Chair Director participated in the Independent Engineer (IE) and Natural Resources Canada (NRCan) project site visits and meetings during July 16–19, 2019. These sessions included various meetings and a summary session along with site visits to Muskrat Falls, the North Spur and Soldiers Pond.
- The Committee Chair and Department of Natural Resources, Assistant Deputy Minister participated in project office meetings and a site visit to Soldiers Pond with the IE and NRCan officials during the week of September 16, 2019.

3.3 Independent Engineer Activities

- The IE and NRCan held project site visits and meetings during July 16-19, 2019. The IE report from the July 2019 visit and LCP management response to the IE can be found on the Committee's website @ Click here.
- In this report the IE commented:
  - Equipment installation, commissioning and site reclamations have either been progressing well or been completed.
  - Target dates for GE Protection and Control software development and FAT have been revised several times and appear to be somewhat fluid.
  - Nalcor and IE are not in agreement on the philosophy affecting some of the MF generator protection systems. Formal response from Nalcor was provided on October 9, 2019 and can be found on the Committee's website @ Click here.
  - IE propose further discussions and clarification on how the equipment designations will be reconciled between different documents, HMI's and equipment nameplates. Post meeting note: Formal response and explanations from Nalcor has been provided in Appendix 3 of the IE's report.
  - The IE suggests that Nalcor review if security/protection against vandalism of dam safety monitoring equipment and buildings at the North Spur is adequate, considering the isolated location and potential for public access.
- The IE and NRCan also visited Muskrat Falls and Soldiers Pond and held meetings with the project team members during the week of September 16, 2019.
- The IE and NRCan held project site visits and meeting during November 19-22, 2019. The report from this visit will be posted to the Committee website once received.
- The IE will be visiting Stafford UK, to observe GE Grid protection and control software development progress during the week of December 16, 2019.

3.4 Risk and Issues being Monitored by the Committee

- In its project reporting, Nalcor identifies risks which may impact project cost and schedule. The Committee reviews these and other project information to assess project risks. These risks can be found on pages 10-13 of this report.
- Over the reporting period the Committee noted:
  - Reservoir rim stability remained consistent over the Quarter;
  - Pennecon work (replacement contractor for Astaldi) in the powerhouse and spillway work is progressing well and nearing completion;
  - Litigation and Arbitration proceedings are ongoing with Astaldi;
    - Nalcor filed its defense and counter claim on August 26, 2019;
  - Full impoundment was achieved on September 4, 2019;
  - Protection and Controls (P&C) software completion for the HVdc system and schedule remains a key project risk. P&C software completion has placed the LITL on the critical path for the overall project schedule and there have been schedule milestone adjustments;
  - During commissioning of synchronous condensers at Soldiers Pond, new issues of vibration and binding of units have been observed;
  - Power Gereration schedule milestone changes have occurred; and
  - Nalcor/NLH preparedness for interconnection and operations following transfer of power and final completion of bipole remains a key focus area.

3.4 Risk and Issues being Monitored by the Committee

- The project is now largely in the installation, integration and static and dynamic commissioning phases which inherently carry associated risks.
- Risks that are being tracked by the Committee include:

A) Safety Performance

- Risk associated with simultaneous operations across multiple work sites, impact on project delivery particularly in the powerhouse, energized yards and other assets. This risk will continue through construction into operations.

B) Contractor Management and Productivity

- Nalcor ability to manage contractors and contractor ability to meet schedule;
- Contractor management and performance in the powerhouse;
- Potential commercial negotiations to settle claims; and
- Potential for new claims as construction nears completion.

3.4 Risk and Issues being Monitored by the Committee

C) Phased Commissioning

- Completion of P&C system to enhance functionality and reliability; associated warranty considerations with early asset handover during commissioning and completion;
- Final completion and testing of HVdc system under low and full power, in-service system reliability, and timing of contractor release and effective warranty period; and
- P&C software delivery and final commissioning completion to maintain project critical path and power delivery.

D) Astaldi

- Astaldi arbitration/litigation outcomes and potential impact on project costs.

E) Synchronous Condensers

- Remediation of vibration (Unit 3) and binding (Units 1 and 2) issues and potential impact on project schedule.

3.4 Risk and Issues being Monitored by the Committee

F) Insurance Claims and Coverage

- Claims ongoing: Lube oil contamination within the Synchronous condensers – As of September 2019, remedial work complete on all three units. Nalcor working with GE to optimize recovery through insurance coverage; and
- Potential coverage: Preservation/re-preservation of Turbine and Generator parts - investigations ongoing.

G) Powerhouse Commissioning

- Commissioning of powerhouse generation units 1 through 4 within the project schedule.

H) Reservoir Rim Stability

- Impact of reservoir full supply level on reservoir shoreline/slope stability.

I) Project Integration and Operations Readiness

- Nalcor/NLH readiness to connect the Muskrat Falls Project to the Island and North American electricity grid and operate facilities effectively.

3.4 Risk and Issues being Monitored by the Committee

J) Project Delivery Team Retention

- Project Team personnel departures and potential impact on project completion.

K) Additional Risks (above the June 2017 Project Budget)

- Protest unrest;
- Commission of Inquiry Respecting the Muskrat Falls Project;
- Other unforeseen directives from Government;
- Astaldi arbitration/litigation;
- HVdc P&C software development completion risk; and
- Potential impact on cost and schedule.
- Funds are not held within the June 2017 Project Budget for these additional risks.

3.5 Subsequent Events to Q3 2019

- On October 20, 2019 Nalcor initiated a safety stand down at the Muskrat Falls generation site and stopped all work to address safety concerns. Government of Newfoundland and Labrador, Occupational Health and Safety division (OH&S) initiated an investigation resulting in stop work orders to two contractors for some work in the powerhouse. Work activities resumed on November 5, 2019.
- On November 8, 2019 Nalcor released its third quarter financial results. These results can be found on the Nalcor website @ Click here.
- On November 29, 2019, The Minister of Natural Resources announced the appointment of a new independent member, Mr. David Billard, P. Eng., PMP, to fill a vacancy on the Committee.
- In Nalcor's December 2019 reporting updates, Nalcor advised that:
  - For the reporting period ending October 2019:
    - Amending agreement 8 with GE Grid was finalized with completion of interim Factory Acceptance tested (FAT) bipole software date moving from December 20, 2019 to January 19, 2020; and
    - Powerhouse Unit 1 First Power and Unit1 - Commissioned Ready for Operation milestone being forecasted for January 2020.
  - For the reporting period ending November 2019:
    - Interim FAT bipole software date being forecasted for February 2, 2019 and Bipole Dynamic Testing Complete milestone for July 15, 2020; and
    - Powerhouse First Power Unit 1, and Units 1 and 2 - Commissioned Ready for Operation milestones being forecasted for mid-February, mid-March and mid-April 2020 respectively.
- The Committee will report any changes to schedule and risk in reference to the previous bullets, following review of project materials over the reporting period in preparation of the Committee's Q4, 2019 report.

4.0 Nalcor Reporting

4.1 Summary - Quarter Ending September 2019
4.2 Project Expenditures
4.3 Contingency
4.4 Earned Progress

4.1 Summary – Quarter Ending September 2019

- September 2019 Summary:
  - Overall construction progress is at 98.9%;
  - $9,451 Million in incurred costs; and
  - $9,575 Million in committed costs.
- Overall, the project is tracking in compliance with the June 2017 budget and schedule, however there have been schedule milestone adjustments for Power Supply and Power Development.
- As of September 2019, the June 2017 budget final forecast cost remains unchanged.
  - While the overall budget and final forecast cost remains unchanged, variances between the project budget and final forecast costs have occurred within and among expenditure categories. Most variances are related to the transfer of budget between allocations from the contingency budget to the procurement and construction budget.
  - The June 2017 budget does not include funds for Additional Risks as indicated on page 13 of this report, which at the end of September 2019 totaled approximately $685 Million.
- The current forecast contingency budget at June 2019 is $153 Million, an increase of $12 Million from the previous Quarter. For further detail see Section 4.3.

4.1 Summary – Quarter Ending September 2019

Quarterly Planned vs Incurred Cost Variances:

MFGen	
Cumulative Planned: $5,297M	Q3 2019 Planned: $91M
Cumulative Incurred: $5,032M	Q3 2019 Incurred: $142M
Variance: -$265M (-5.0%)	Variance: $51M (56.0%)

- Planned expenditure by month was set in June 2017.
- During Q3 2019, the variance in planned vs. incurred cost is primarily due to more than planned expenditure under Contract CH0031 for the Supply and Install Mechanical and Electrical Auxiliaries, Contracts CH0007/CH0011-002 for the Intake, Powerhouse, Transition Dams and Spillway and Contract CH0030 for the Supply and Install Turbine and Generators.
- See Section 4.2 and Appendix B for further detail.

4.1 Summary – Quarter Ending September 2019

Quarterly Planned vs Incurred Cost Variances:

LITL	
Cumulative Planned: $3,714M	Q3 2019 Planned: $0M
Cumulative Incurred: $3,555M	Q3 2019 Incurred: $23M
Variance: -$158M (-4.3%)	Variance: $23M (N/A)

LTA	
Cumulative Planned: $904M	Q3 2019 Planned: $0M
Cumulative Incurred: $864M	Q3 2019 Incurred: $1M
Variance: -$40M (-4.4%)	Variance: $1M (N/A)

- The planned expenditure by month was set in June of 2017.
- During Q3 2019, incurred was higher than planned due to extension of work scope into 2019, whereas work scope was planned to be substantially complete in 2018.
- See Section 4.2 and Appendix B for further detail.

4.1 Summary – Quarter Ending September 2019

Planned vs Earned Progress:

- MFGen
  - Cumulative progress as of end Q3 2019 was 97.6% vs. a plan of 99.2% (variance of -1.6%). Quarterly progress for Q3 2019 was 1.8% vs. a plan of 0.6% (variance of 1.2%).
  - During the Quarter, the cumulative variance decreased from 2.8% to 1.6% behind plan.
  - As noted in the previous reports, over the past 2 years the planned timing of installation of the rollways has changed. The first two rollways were completed in 2018. The third was planned for 2018; however was not completed due to the termination of the Astaldi contract. The last 3 are currently ongoing and expect to be complete in Q4 2019.
  - Progress on the installation of the Turbines and Generator units is also trending behind plan.
- LITL
  - > 99% complete.
- LTA
  - Complete.
- See Section 4.2 and Appendix C for further detail.

4.1 Summary – Quarter Ending September 2019

Power Development:

- Overall, the project remains on budget and on schedule with the June 2017 budget; however there have been schedule milestone adjustments for Power Development.
- Power Development's September 2019 summary schedule forecast can be found on slide 23. Unit 1 and 2 forecast dates reflect Andritz Hydro's current forecast schedule. Units 3 and 4 are also under review by Andritz Hydro and a schedule recovery plan has been requested from Andritz Hydro by Nalcor.
- Due to forecasted delays with Unit 1 and Unit 2, Nalcor has adjusted its First Power from Muskrat Falls, and Powerhouse Unit 2 Commissioned - Ready for Operation forecast schedule milestone dates by less than a month each, and adjusted Units 3 and 4 commissioned milestone dates to align with June 2017 budget planned dates, in its September project reporting. See Appendix D for further detail.
- Spillway and gates is at 98% construction complete;
- Powerhouse is at (97% complete);
    - Intake, Powerhouse, Transition Dams and Spillway
        - Rollway work ongoing; Bays 2,3 and 4 complete in Q4; and
        - Tail race rock plug excavation is complete.
- Arbitration with Astaldi continues; payment of Astaldi related liens against the project continues; Nalcor intends to recover any costs associated from Astaldi or the contract's securities; responses to statements of claims and counterclaims and document discovery ongoing.
- Funds are not held within the current June 2017 budget should net damages be awarded in Astaldi's favour.

4.1 Summary – Quarter Ending September 2019

- Hydro Mechanical Installation
  - Gates and stoplogs in the intake and spillway are performing well; water leakage well below specification requirements for leakage; and
  - Repairs associated with spillway guide and spillway secondary concrete defects are ongoing.

- Turbines and Generators

Unit	% Complete	Status
1	94	Installation of the cover support pocket cover plates commenced; installing air deflectors, preparing accumulator piping for Service NL inspection; commissioning of control systems ongoing with completion expected in the first week of November 2019.
2	65	Continued rotor rim plate stacking; installing GOR links and levers; rotor jacking/ air brake system piping installation ongoing inside the unit.
3	40	Lashing stator bars together; lowering the upper wicket gate bushings; installing pole jumpers on upper section of stator.
4	21	Torqueing bolts between discharge ring and draft tube liner; removing preservation material from outer head cover.

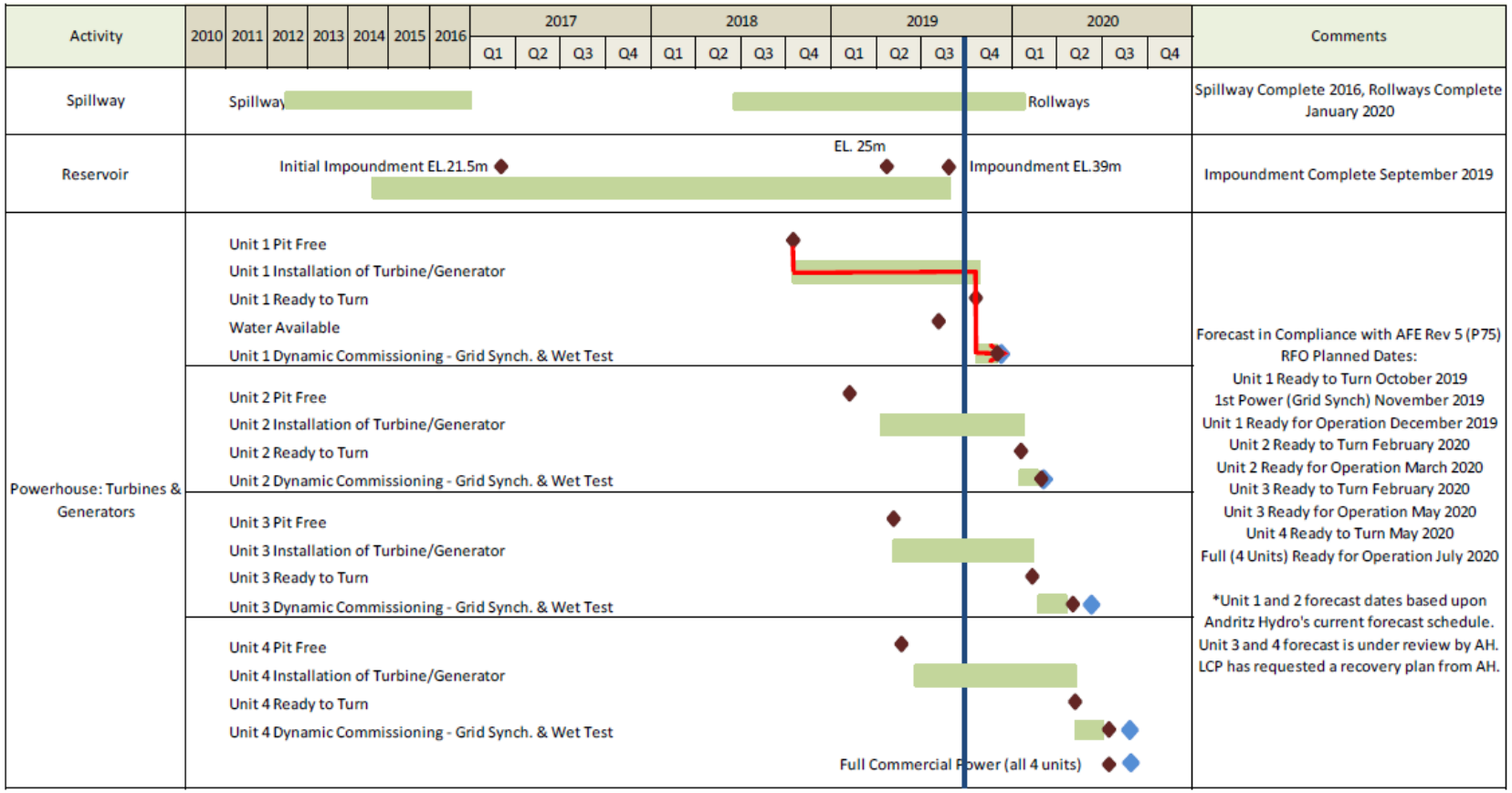
4.1 Summary – Quarter Ending September 2019

- Balance of Plant
  - Mechanic completion and commissioning activities ongoing;
  - Electrical and mechanical systems work ongoing; installation and commissioning of fire detection and dewatering systems to support Ready to Turn Unit 1;
  - Complete IPB testing and GCB ongoing in Unit 2;
  - Interim operating team in place for energized and upcoming energized assets;
  - Unit 1 ready for back feed energization has been achieved; energization is complete;
  - Systems to support Ready to Turn Unit 1 expected to be completed by mid-November 2019; and
  - As of the end of October, overall work scope is at 88%.
- Impoundment Readiness
  - Reservoir impoundment is compete (September 2019); all structures performing as expected;
  - Decision support package to convert debris ice safety boom to seasonal debris/safety boom issued and plan implemented; boom will be seasonal from post spring freshet to pre winter freeze; boom currently removed for winter ice season;
  - Dam safety program finalized; compiling documentation package; and
  - Preparation for winter operations ongoing.
- Focus areas for Q4 2019 include execution of remaining powerhouse and spillway work, and preparations for ready to turn and first power schedule milestones.
- The forecast expenditure for Q4 2019 is estimated at approximately $154 Million.

4.1 Summary – Quarter Ending September 2019

Schedule (Generation)

Power Development Summary Schedule
Current Forecast (Sept 2019 Under Review)



* Construction of Dams and Powerhouse Intake Scope Complete (Removed from Schedule Summary)

Legend: Current Forecast (Sept 2019 Under Review)
Planned Dates (June 2017 AFE Rev 5)

4.1 Summary – Quarter Ending September 2019

Power Supply:

- The project remains on budget; however Protection and Controls (P&C) bipole software delivery has placed the LITL as critical path for the overall project schedule.
- Strait of Belle Isle (SOBI)
  - Construction complete (100%), commercially closed, and turned over to operations.
- Labrador Transmission Assets
  - Construction complete (100%) and turned over to operations.
- Labrador Island Transmission Link (99.94%)
  - Overhead transmission line construction and turn over to operations complete;
  - HVdc Specialties;
    - A new amending agreement has been reached with GE Power settling all past and future claims for work at the Muskrat Falls project.
    - Bipole software development continuing;
      - Continuous monitoring and validation of GE progress by Nalcor staff and independent third parties; and
      - A new amending agreement with GE Grid is being establishing with revised schedule delivery milestones based on progress observed (see page 25).
    - Bipole software completion and dynamic commissioning remains the largest risk for Power Supply.
    - Soldiers Pond synchronous condensers vibration and binding root cause investigations ongoing.
- Power Supply's September 2019 summary schedule forecast can be found on slide 29.

4.1 Summary – Quarter Ending September 2019

Monopole (Pole1) Status

- Ready for Power Transmission - Low Load Testing Pole 1 milestone is complete.

Bipole Software Status

- A static version of bipole software has been installed on the project site. This version is being used to check installation of pole 2 hardware;
- Nalcor executives have met with GE executives on software progress and alignment on milestone dates for quality interim bipole software.
- As of the end of October, GE Grid system integration testing (IST) progress is being accelerated and pass rates of tests are trending positively. IST is a prerequisite to deliver Factory Acceptance Tested (FAT) software for installation at the project site.
- A new amending agreement with GE grid is being developed that will set out revised bipole software schedule dates. Nalcor's position is that reliable software is paramount and GE Grid must recognize the importance of meeting committed milestone dates meeting.
- End of the Q3 reporting period Nalcor forecast milestone dates for delivery of bipole software are included on the following slide.
- For further details on schedule milestone dates see Appendix D.

4.1 Summary – Quarter Ending September 2019

Bi-Pole Schedule (Nalcor September forecast)

Activity	Timing
Interim Software	
Bi-Pole software FAT complete	December 20, 2019
Bi-Pole commissioning (low load testing) complete	February 28, 2020
Trial operations complete	May 28, 2020
Final Software	
Software FAT complete	June 1, 2020
Dynamic commissioning complete (low load testing)	June 2015, 2019
Load testing complete – at available power	June 30, 2019

4.1 Summary – Quarter Ending September 2019

Synchronous Condensers

- Construction
  - Construction of all three units and auxiliary systems is complete.

- Remediation
  - All remediation work associated with issues related to lube oil contamination, rotor lift and hydrogen piping system, have been resolved.

- Static and Dynamic Commissioning – (New Issues)

Unit	Status
3	Unit has rotated, however a vibration issue has been encountered
1	Unit is unable to rotate due to a binding issue
2	Unit is unable to rotate due to a binding issue

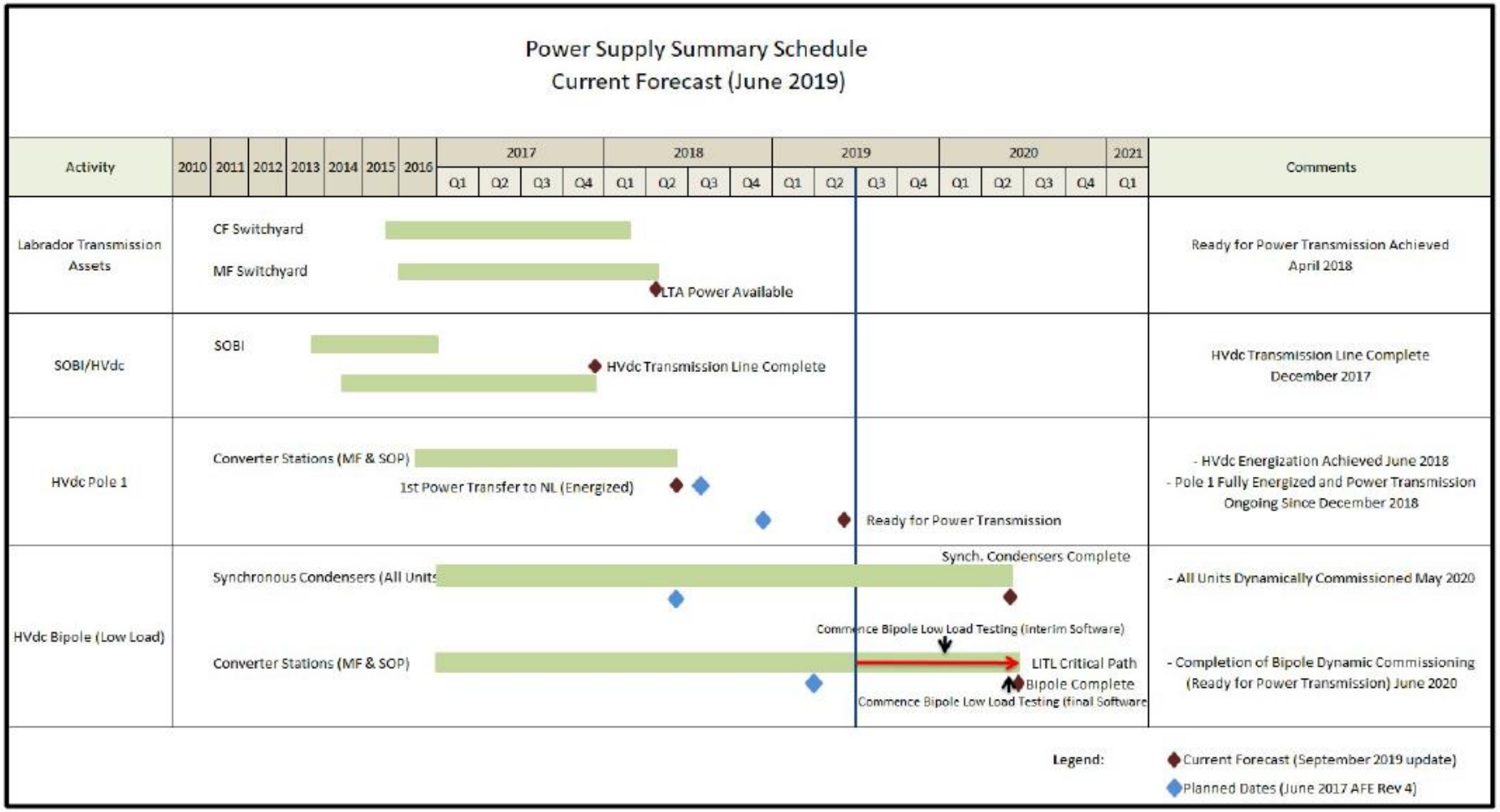
  - Investigations are ongoing to determine root cause of issues affecting all three units; Nalcor is working with GE to develop solutions;
  - Anti-tilt brackets were installed on unit housings in an attempt to correct the binding issue; this did not resolve the issue but provided information for further investigation into unit bearings;

4.1 Summary – Quarter Ending September 2019

- Nalcor has retained Ontario Power Generation (OPG) to assist in the root cause investigation; OPG will be conducting a comprehensive vibration test which is expected to identify the root cause of the vibration issue;
- Due to vibration and binding issues, commissioning of all three units has been moved to February, March and May 2020 and correspondingly the Soldiers Pond Synchronous Condenser Ready for Operation schedule milestone has moved from October 2019 to May 2020 since the last Quarterly reporting period;
- Synchronous condensers are not currently on the project critical path, however further schedule slippage remains a risk; and
- Evaluation of mitigation options is ongoing.

- For further details on schedule milestone dates see Appendix D.
- The focus for Q4 2019 remains on continued completions, commissioning and integration of operations; and the forecast expenditure for Q4 2019 is estimated at approximately $54 Million.

4.1 Summary – Quarter Ending September 2019



*Schedule forecast is for the period ending September 20, 2019 not June, as indicated in the schedule title header.

4.2 Project Expenditures

September 2019 ($000)	Project Budget June 2017 AFE	Cumulative $			Cumulative %		
		Plan	Incurred	Variance	Plan	Incurred	Variance
Description	*A*	*B*	*C*	*C-B*	*D=B/A*	*E=C/A*	*E-D*
NE-LCP Owners Team, Admin and EPCM Services	$1,115,235	$1,085,321	$1,014,926	($70,395)	97.3%	91.0%	-6.3%
Feasibility Engineering	$37,072	$37,073	$35,847	($1,226)	100.0%	96.7%	-3.3%
Environmental & Regulatory Compliance	$42,669	$42,413	$38,852	($3,561)	99.3%	91.0%	-8.3%
Aboriginal Affairs	$17,478	$16,225	$44,432	$28,207	92.8%	254.2%	161.4%
Procurement & Construction	$8,475,290	$8,653,227	$8,242,774	($410,453)	102.1%	97.3%	-4.8%
Commercial & Legal	$90,423	$80,123	$74,010	($6,113)	88.6%	81.8%	-6.8%
Contingency	$339,162	$0	$0	$0	0.0%	0.0%	0.0%
TOTAL	$10,117,328	$9,914,382	$9,450,841	($463,541)	98.0%	93.4%	-4.6%

September 2019 ($000)	Project Budget June 2017 AFE	Incurred Cumulative Costs September 2019	Project Final Forecast Cost September 2019	Variance PFC from Budget
Description	*A*	*B*	*C*	*D=A-C*
NE-LCP Owners Team, Admin and EPCM Services	$1,115,235	$1,014,926	$1,166,569	($51,334)
Feasibility Engineering	$37,072	$35,847	$35,847	$1,225
Environmental & Regulatory Compliance	$42,699	$38,852	$41,408	$1,291
Aboriginal Affairs	$17,478	$44,432	$51,451	($33,973)
Procurement & Construction	$8,475,290	$8,242,774	$8,560,092	($84,802)
Commercial & Legal	$90,423	$74,010	$109,228	($18,805)
Contingency	$339,162	$0	$152,733	$186,429
TOTAL	$10,117,328	$9,450,841	$10,117,328	$0

Columns in tables may not total due to rounding

4.3 Contingency

Q3 September 2019 ($000)	Project Budget June 2017 AFE	March 2018 AFE Adjustment	Project Forecast Cost June 2019	Project Forecast Cost September 2019	Change from Previous Quarter	Variance PFC from Budget
	A	-	*B*	*C*	*C - B*	*C - A*
Total Project	$339,162	$339,162	$140,694	$152,733	$12,039	($186,429)

.

Columns in tables may not total due to rounding

4.4 Earned Progress

Cumulative to end of September 2019	Weight Factor %	September 2019 Cumulative %			June 2019 Variance
		Planned	Earned	Variance	
Sub-Project	A	B	C	D = C - B	E
Muskrat Falls Generation (MFGen)	46.3%	99.2%	97.6%	-1.6%	-2.8%
Labrador Island Transmission Link (LITL)	43.9%	100.0%	99.9%	-0.1%	-0.08%
Labrador Transmission Asset (LTA)	9.8%	100.0%	100.0%	0.0%	0.00%
Muskrat Falls Project - Overall	100.0%	99.6%	98.9%	-0.7%	-1.3%

September 2019 Period	Weight Factor %	Period %		
		Planned	Earned	Variance
Sub-Project	A	B	C	D = C - B
Muskrat Falls Generation (MFGen)	46.3%	0.2%	0.6%	0.4%
Labrador Island Transmission Link (LITL)	43.9%	0.0%	0.00%	0.0%
Labrador Transmission Asset (LTA)	9.8%	0.0%	0.0%	0.0%
Muskrat Falls Project - Overall	100.0%	0.1%	0.3%	0.2%

Columns in tables may not total due to rounding

Annex A

I. Project Capital Budget
II. Project Milestone Schedule

Columns in tables may not total due to rounding

I. Project Capital Budget

Muskrat Falls Generating Facility (in $ thousands)	June 2017 AFE
Expenditure Category	
NE-LCP Owners Team, Admin and EPCM Services	$655,850
Feasibility Engineering	$17,543
Environmental & Regulatory Compliance	$27,125
Aboriginal Affairs	$16,395
Procurement & Construction	$4,501,984
Commercial & Legal	$54,760
Contingency	$226,400
Muskrat Falls Generation Total	$5,500,056
Labrador-Island Transmission Link (in $ thousands)	**March 2018 AFE**
Expenditure Category	
NE-LCP Owners Team, Admin and EPCM Services	$322,101
Feasibility Engineering	$19,167
Environmental & Regulatory Compliance	$14,726
Aboriginal Affairs	$1,003
Procurement & Construction	$3,233,690
Commercial & Legal	$30,280
Contingency	$92,750
Labrador-Island Transmission Link Total	$3,713,716
Labrador-Transmission Assets (in $ thousands)	**March 2018 AFE**
Expenditure Category	
NE-LCP Owners Team, Admin and EPCM Services	$137,284
Feasibility Engineering	$363
Environmental & Regulatory Compliance	$817
Aboriginal Affairs	$80
Procurement & Construction	$739,617
Commercial & Legal	$5,383
Contingency	$20,012
Labrador Transmission Assets Total	$903,556
Muskrat Falls Capital Cost Budget Total	**$10,117,328**

Contingency Budget (in $ thousands)	March 2018 AFE
Sub-Project:	
Muskrat Falls Generating Facility	$226,400
Labrador-Island Transmission Link	$92,750
Labrador Transmission Assets	$20,012
Total Project	$339,162

II. Project Milestone Schedule

Muskrat Falls Generating Facility	June 2017 Planned Dates
North Spur Works Ready for Diversion	Oct-16
River Diversion Complete	Feb-17
Reservoir Impoundment Complete	Nov-19
Powerhouse Unit 1 Commissioned - Ready for Operation	Dec-19
First Power from Muskrat Falls	Nov-19
Powerhouse Unit 2 Commissioned - Ready for Operation	Mar-20
Powerhouse Unit 3 Commissioned - Ready for Operation	Jun-20
Powerhouse Unit 4 Commissioned - Ready for Operation	Aug-20
Full Power from Muskrat Falls	Aug-20
Commissioning Complete - Commissioning Certificate Issued	Sep-20

Labrador-Island Transmission Link	June 2017 Planned Dates
SOBI Cable Systems Ready	Dec-16
Soldiers Pond Switchyard Ready to Energize	Aug-17
Ready for Power Transmission (LTA)	Dec-17
Muskrat Falls Converter Station Ready to Energize (Pole 1)	Jun-18
HVdc Transmission Line Construction Complete	Dec-17
Soldier's Pond Converter Station Ready to Energize (Pole 1)	Jun-18
1ST Power Transfer (Pole 1)	Jul-18
Soldiers Pond Synchronous Condenser Ready for Operation	Jun-18
Ready for Power Transmission (Low Load Testing Complete Pole 1)	Dec-18
Muskrat Falls and Soldiers Pond Converter Stations - Bipole Dynamic Testing Complete	Mar-19
Commissioning Complete - Commissioning Certificate Issued	Sep-20

Labrador Transmission Assets	June 2017 Planned Dates
HVac Transmission Line Construction Complete	May-17
Churchill Falls Switchyard Ready to Energize	Nov-17
Muskrat Falls Switchyard Ready to Energize	Nov-17
Ready for Power Transmission	Dec-17
Commissioning Complete - Commissioning Certificate Issued	Sep-20

Annex B

Project Expenditures

I. Muskrat Falls Generation
II. Labrador Island Transmission Link
III. Labrador Transmission Assets

Columns in tables may not total due to rounding

I. Muskrat Falls Generation

September2019 ($000)	Project Budget June 2017 AFE	Cumulative $			Cumulative %		
		Planned	Incurred	Variance	Planned	Incurred	Variance
Description	*A*	*B*	*C*	*C-B*	*D=B/A*	*E=C/A*	*E-D*
NE-LCP Owners Team, Admin and EPCM Services	$655,850	$613,586	$537,787	($75,799)	93.6%	82.0%	-11.6%
Feasibility Engineering	$17,543	$17,543	$16,865	($678)	100.0%	96.1%	-3.9%
Environmental & Regulatory Compliance	$27,125	$26,870	$26,468	($402)	99.1%	97.6%	-1.5%
Aboriginal Affairs	$16,395	$15,142	$43,639	$28,497	92.4%	266.2%	173.8%
Procurement & Construction	$4,501,984	$4,579,508	$4,361,391	($218,117)	101.7%	96.9%	-4.8%
Commercial & Legal	$54,760	$44,460	$45,786	$1,326	81.2%	83.6%	2.4%
Contingency	$226,400	$0	$0	$0	0.0%	0.0%	0.0%
TOTAL	$5,500,056	$5,297,109	$5,031,935	($265,174)	96.3%	91.5%	-4.8%

September 2019 ($000)	Project Budget June 2017 AFE	Incurred Cumulative Costs September 2019
Description	*A*	*B*
NE-LCP Owners Team, Admin and EPCM Services	$655,850	$537,787
Feasibility Engineering	$17,543	$16,865
Environmental & Regulatory Compliance	$27,125	$26,468
Aboriginal Affairs	$16,395	$43,639
Procurement & Construction	$4,501,984	$4,361,391
Commercial & Legal	$54,760	$45,786
Contingency	$226,400	$0
TOTAL	$5,500,056	$5,031,935

II. Labrador Island Transmission Link

September 2019 ($000)	Project Budget March 2018 AFE	Cumulative $			Cumulative %		
		Plan	Incurred	Variance	Plan	Incurred	Variance
Description	*A*	*B*	*C*	*C-B*	*D=B/A*	*E=C/A*	*E-D*
NE-LCP Owners Team, Admin and EPCM Services	$322,101	$332,101	$346,717	$14,616	103.1%	107.6%	4.5%
Feasibility Engineering	$19,167	$19,167	$18,679	($488)	100.0%	97.5%	-2.5%
Environmental & Regulatory Compliance	$14,726	$14,726	$11,572	($3,154)	100.0%	78.6%	-21.4%
Aboriginal Affairs	$1,003	$1,003	$625	($378)	100.0%	62.3%	-37.7%
Procurement & Construction	$3,233,690	$3,316,440	$3,155,698	($160,742)	102.6%	97.6%	-5.0%
Commercial & Legal	$30,280	$30,280	$21,985	($8,295)	100.0%	72.6%	-27.4%
Contingency	$92,750	$0	$0	$0	0.0%	0.0%	0.0%
TOTAL	$3,713,716	$3,713,716	$3,555,276	($158,440)	100.0%	95.7%	-4.3%

September 2019 ($000)	Project Budget March 2018 AFE	Incurred Costs Cumulative September 2019
Description	*A*	*B*
NE-LCP Owners Team, Admin and EPCM Services	$322,101	$346,717
Feasibility Engineering	$19,167	$18,679
Environmental & Regulatory Compliance	$14,726	$11,572
Aboriginal Affairs	$1,003	$625
Procurement & Construction	$3,233,690	$3,155,698
Commercial & Legal	$30,280	$21,985
Contingency	$92,750	$0
TOTAL	$3,713,716	$3,555,276

III. Labrador Transmission Assets

September 2019 ($000)	Project Budget March 2018 AFE	Cumulative $			Cumulative %		
		Plan	Incurred	Variance	Plan	Incurred	Variance
Description	*A*	*B*	*C*	*C-B*	*D=B/A*	*E=C/A*	*E-D*
NE-LCP Owners Team, Admin and EPCM Services	$137,284	$139,634	$130,422	($9,212)	101.7%	95.0%	-6.7%
Feasibility Engineering	$363	$363	$303	($60)	100.0%	83.5%	-16.5%
Environmental & Regulatory Compliance	$817	$817	$812	($5)	100.0%	99.4%	-0.6%
Aboriginal Affairs	$80	$80	$168	$88	100.0%	210.0%	110.0%
Procurement & Construction	$739,617	$757,279	$725,685	($31,594)	102.4%	98.1%	-4.3%
Commercial & Legal	$5,383	$5,383	$6,239	$856	100.0%	115.9%	15.9%
Contingency	$20,012	$0	$0	$0	0.0%	0.0%	0.0%
TOTAL	$903,556	$903,556	$863,629	($39,927)	100.0%	95.6%	-4.4%

September 2019 ($000)	Project Budget March 2018 AFE	Incurred Costs Cumulative September 2019
Description	*A*	*B*
NE-LCP Owners Team, Admin and EPCM Services	$137,284	$130,422
Feasibility Engineering	$363	$303
Environmental & Regulatory Compliance	$817	$812
Aboriginal Affairs	$80	$168
Procurement & Construction	$739,617	$725,685
Commercial & Legal	$5,383	$6,239
Contingency	$20,012	$0
TOTAL	$903,556	$863,629

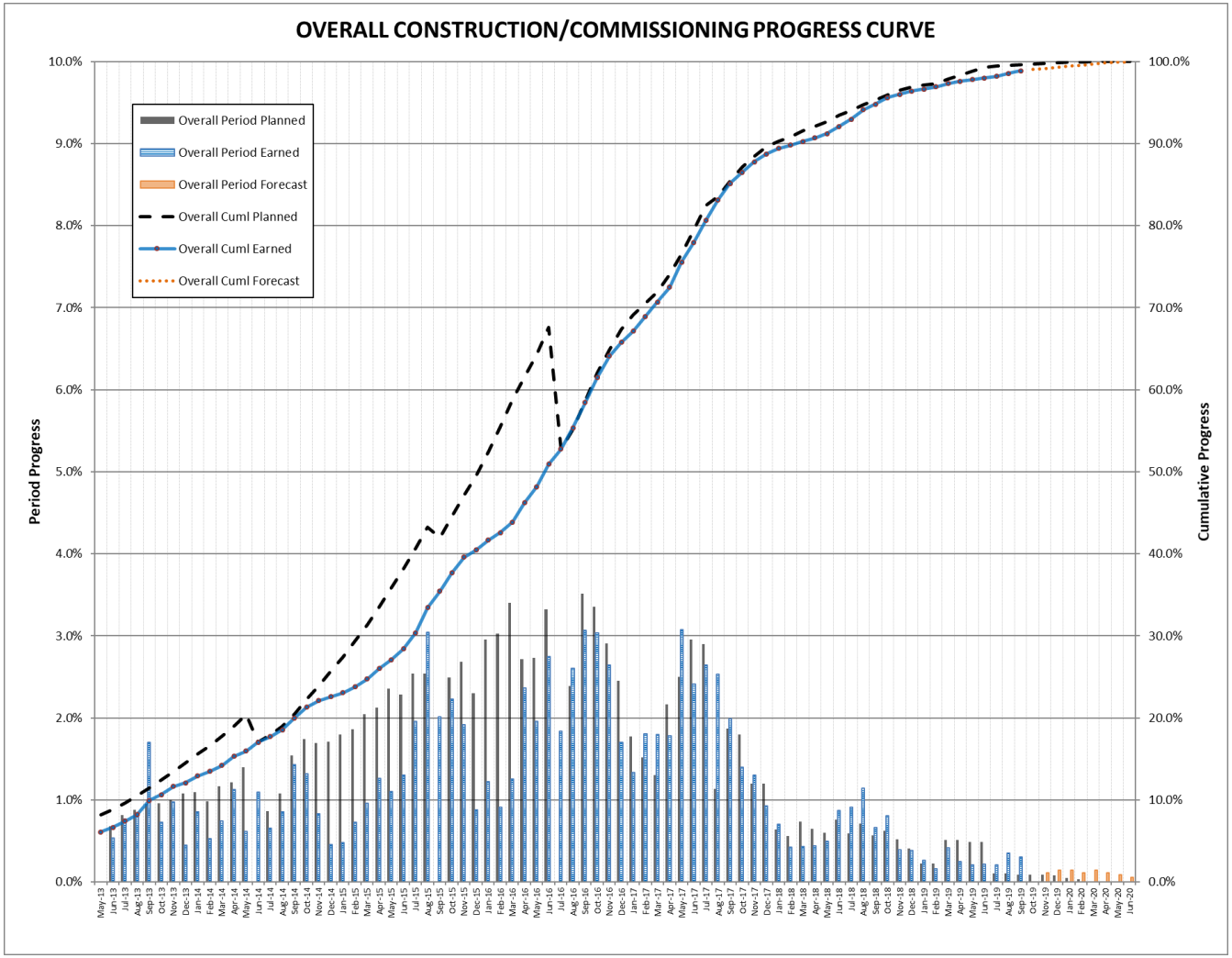
Annex C

Earned Progress

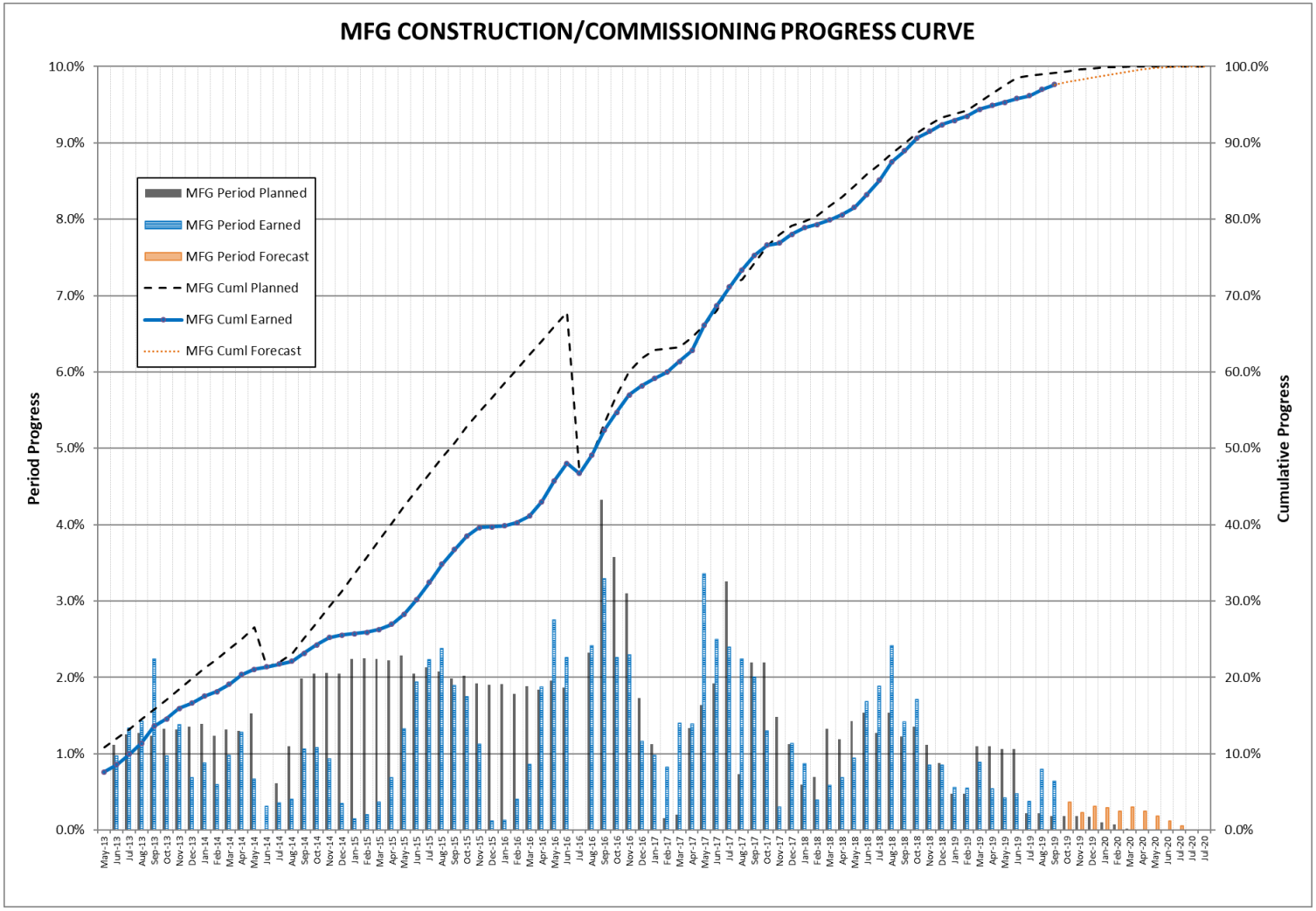
I. Overall Construction
II. Muskrat Falls Generation
III. Labrador Island Transmission Link
IV. Labrador Transmission Assets

Columns in tables may not total due to rounding

I. Overall Construction



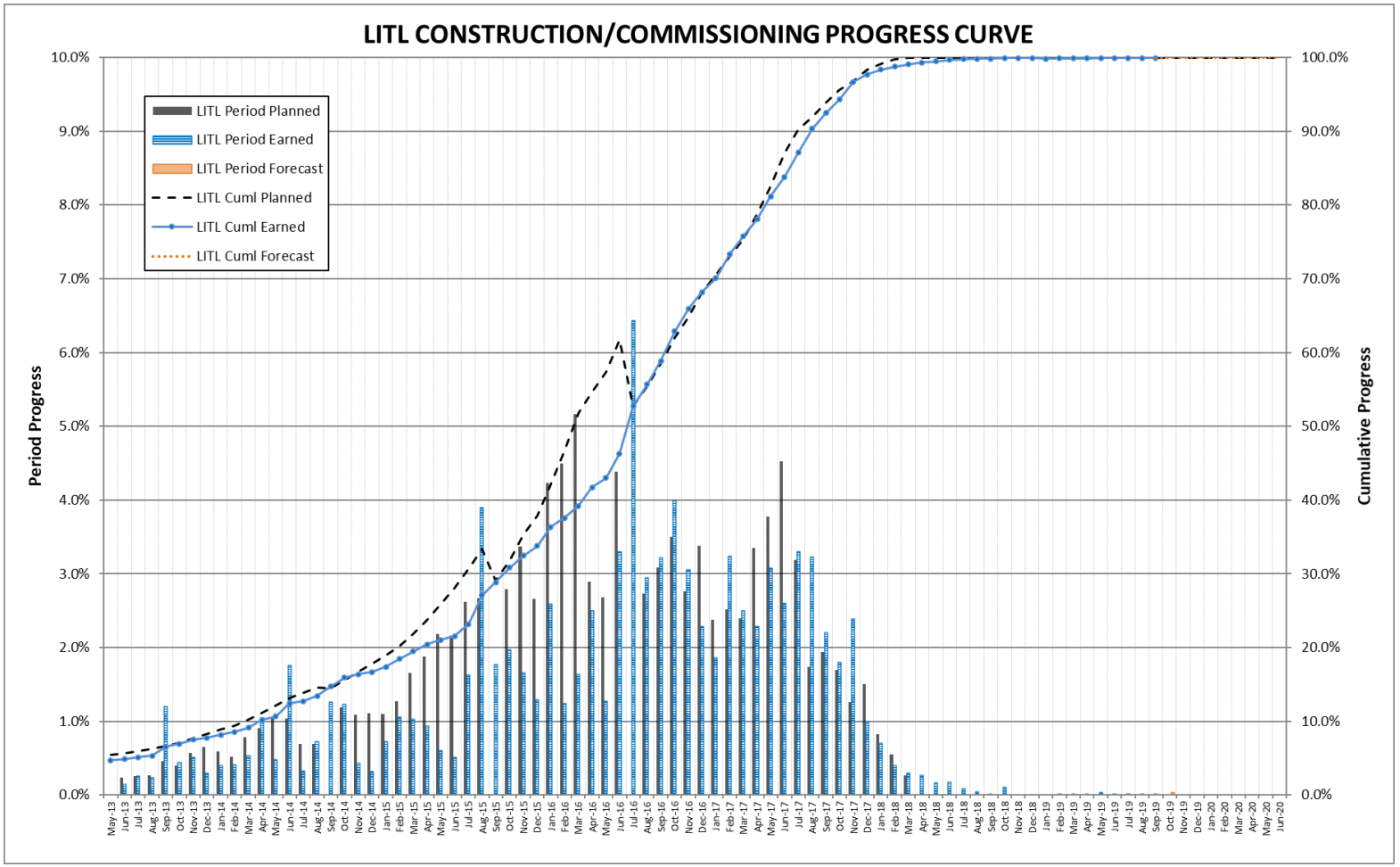
II. Muskrat Falls Generation



II. Muskrat Falls Generation

September 2019	Weight Factor %	September 2019 Cumulative %			June 2019 Variance
		Plan	Earned	Variance	
Sub-Project	A	B	C	D = C - B	E
MFG Road/Camp/Constr. Power	8.9%	100.0%	100.0%	0.0%	0.0%
MFG Reservoir Preparation	5.8%	100.0%	100.0%	0.0%	0.0%
MFG Spillway & Gates	12.2%	100.0%	98.2%	-1.8%	-8.6%
MFG North Spur Stabilization	3.9%	100.0%	100.0%	0.0%	0.0%
MFG North Dam	5.7%	100.0%	100.0%	0.0%	0.0%
MFG Powerhouse & Intake	61.3%	98.7%	96.6%	-2.1%	-2.8%
MFG South Dam	1.1%	100.0%	100.0%	0.0%	0.0%
MFG Misc:Eng/ 315kV/Site Rest./logistic	1.1%	97.0%	92.7%	-4.3%	1.6%
MFGen - Overall	100.0%	99.2%	97.6%	-1.6%	-2.8%
* Adjusted for MFGen rollway installation schedule		99.0%	97.6%	-1.4%	-1.8%

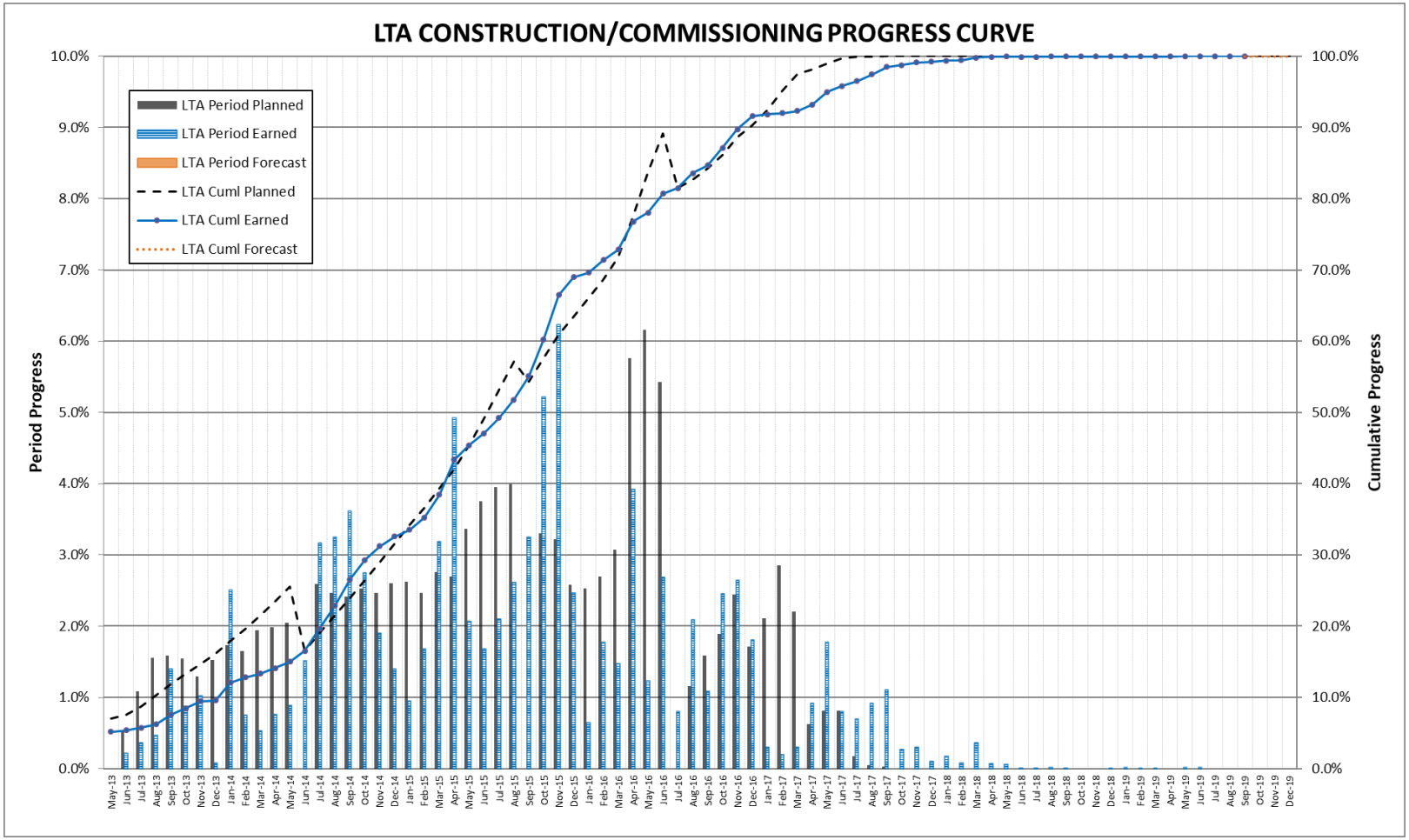
III. Labrador Island Transmission Link



III. Labrador Island Transmission Link

September 2019	Weight Factor %	September 2019 Cumulative % Plan	Earned	Variance	June 2019 Variance
Sub-Project	A	B	C	D = C - B	E
LITL Muskrat Falls Converter	6.1%	100.0%	99.7%	-0.3%	-0.5%
LITL Soldiers Pond Converter	5.5%	100.0%	99.4%	-0.6%	-0.7%
LITL HVdc Transmission Line Seg 1/2	26.8%	100.0%	100.0%	0.0%	0.0%
LITL HVdc Transmission Line Seg 3/4/5	34.2%	100.0%	100.0%	0.0%	0.0%
LITL Electrode Sites	0.8%	100.0%	100.0%	0.0%	0.0%
LITL Transition Compounds	1.7%	100.0%	100.0%	0.0%	0.0%
LITL SOBI Cable Crossing	17.7%	100.0%	100.0%	0.0%	0.0%
LITL Soldiers Pond Switchyard	2.7%	100.0%	100.0%	0.0%	0.0%
LITL Soldiers Pond Sync. Condensors	3.1%	100.0%	99.9%	-0.1%	-0.3%
LITL Misc	1.4%	100.0%	100.0%	0.0%	0.0%
LITL- Overall	100.0%	100.0%	99.94%	-0.06%	-0.08%

IV. Labrador Transmission Assets



IV. Labrador Transmission Assets

September 2019	Weight	September 2019 Cumulative %			June 2019
	Factor %	Plan	Earned	Variance	Variance
Sub-Project	A	B	C	D = C - B	E
LTA HVac Transmission Line Seg1/2 - MF to CF	62.8%	100.0%	100.0%	100.0%	0.0%
LTA Churchill Falls Switchyard	21.7%	100.0%	100.0%	100.0%	0.0%
LTA Muskrat Falls Switchyard	13.4%	100.0%	100.0%	100.0%	0.00%
LTA Misc	2.1%	100.0%	100.0%	100.0%	0.00%
LTA - Overall	100.0%	100.0%	100.0%	100.0%	0.00%

Annex D

Project Milestone Schedule Forecast

I. Muskrat Falls Generation
II. Labrador Island Transmission Link
III. Labrador Transmission Assets

I. Muskrat Falls Generation

September 2019	Planned Date June 2017	September 2019 Actual/Forecast
Project Sanction	17-Dec-12	Complete
North Spur Works Ready for Diversion	31-Oct-16	Complete
River Diversion Complete	15-Feb-17	Complete
Reservoir Impoundment Complete	1-Nov-19	Complete
Powerhouse Unit 1 Commissioned - Ready for Operation	19-Dec-19	19-Dec-19
First Power from Muskrat Falls	2-Nov-19	[1]16-Nov-19
Powerhouse Unit 2 Commissioned - Ready for Operation	3-Mar-20	[2]25-Mar-20
Powerhouse Unit 3 Commissioned - Ready for Operation	9-Jun-20	9-Jun-20
Powerhouse Unit 4 Commissioned - Ready for Operation	14-Aug-20	14-Aug-20
Full Power from Muskrat Falls	14-Aug-20	14-Aug-20
Commissioning Complete - Commissioning Certificate Issued	1-Sep-20	1-Sep-20

[1] < 1 month forecast date adjustment beyond the June 2017 planned date.
[2] < 1 month forecast date adjustment beyond the June 2017 planned date.

II. Labrador Island Transmission Link

June 2019	Planned Date June 2017	June 2019 Actual/forecast
Project Sanction	17-Dec-12	Complete
SOBI Cable Systems Ready	9-Dec-16	Complete
Soldiers Pond Switchyard Ready to Energize	31-Aug-17	Complete
Ready for Power Transmission (LTA)	31-Dec-17	Complete
Muskrat Falls Converter Station Ready to Energize (Pole 1)	1-Jun-18	Complete
HVdc Transmission Line Construction Complete	31-Dec-17	Complete
Soldier's Pond Converter Station Ready to Energize (Pole 1)	1-Jun-18	Complete
1ST Power Transfer (Pole 1)	1-Jul-18	Completion of 45 megawatt heat run
Soldiers Pond Synchronous Condenser Ready for Operation	1-Jun-18	[1] 31-May-2020
Ready for Power Transmission (Low Load Testing Complete Pole 1)	1-Dec-18	Complete
Muskrat Falls and Soldiers Pond Converter Stations - Bipole Dynamic Testing Complete	31-Mar-19	[2]30-Jun-20
Commissioning Complete - Commissioning Certificate Issued	1-Sep-20	1-Sep-20

[1] > 7month forecast date change since Q2 reporting period due to Unit 3 vibration and binding on Units 1and 2.
[2] < I month forecast date change since Q2 2019 reporting period.

III. Labrador Transmission Assets

September 2019	June 2017 Budget Planned Date	September 2019 Actual/Forecast
Project Sanction	17-Dec-12	Complete
HVac Transmission Line Construction Complete	31-May-17	Complete: Turnover of HVac TL and all subsystems complete
Churchill Falls Switchyard Ready to Energize	30-Nov-17	Complete
Muskrat Falls Switchyard Ready to Energize	30-Nov-17	Complete
Ready for Power Transmission	31-Dec-17	Complete
Commissioning Complete - Commissioning Certificate Issued	1-Sep-20	1-Sep-20

End of Report