

Nalcor Energy – Lower Churchill Project



Integrated Project Schedule (IPS)

LCP-PT-MD-0000-PC-SH-0001-01

Comments:	Total # of Pages (Including Cover): 81 ⁸² ₃₈
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Status/ Revision	Date	Reason For Issue	Prepared By	Functional Manager Approval	Project Manager (Marine Crossings) Approval	Project Manager (Generation + Island Link) Approval	Project Director Approval
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1.0 Purpose

The Integrated Project Schedule (IPS) is a Critical Path Method network derived from the various project participant schedules sources tied together with the Ready for Operation start-up sequences. The Integrated Project Schedule format will be structured to serve as an overall project control network modeling the major project interfaces and scope of work.

What the Integrated Project Schedule (Primavera) provides:

- Source for Schedule information for the LCP Stewardship process
- Source for Schedule information for the LCP Management Summary Schedule (MSS)
- Provide monitoring of the LCP Target Milestones and Key Dates throughout the Project
- Identify and monitor critical paths for LCP projects: Labrador Transmission Asset (LTA), Labrador Island Transmission Link (LITL), Muskrat Falls Generation (MFGen)
- Identify and monitor float between projects, sites and sections of work
- Identify main interfaces between the main Project participants schedules
- Provide a communication tool for the Project Management Team to forecast, identify, and analyze schedule outcomes, conflicts, opportunities, and vulnerabilities

What the Integrated Project Schedule (Primavera) does not provide:

- Updated progress information (provided by LCP Stewardship process)
- Updated resource curves / progress curves (provided by Stewardship process)
- % complete on activity bars (current versus baseline comparison will be utilized)

2.0 Scope

The Integrated Project Schedule includes the following scope of work:

- Labrador Transmission Asset - LTA
- Labrador Island Transmission Link – LITL
- Muskrat Falls Generation – MFGen
- Nalcor System Upgrades & Outages
- Maritime Link (Executed by Emera: reference only)

3.0 Definitions

Converter Stations	Converter stations house the specialized equipment necessary to convert power from ac to dc and back again.
Critical Path	The longest path or sequence of activities that drive the completion of a specific Target Milestone or Key date.
Dynamic Commissioning	Commissioning activities which simulate operation of a complete system or part system. These tests shall, as near as possible, be at full operating conditions in order to carry out operational performance tests to verify that the system/equipment performed in accordance with the design criteria, together with the recording of such tests. Such dynamic commissioning/systems commissioning shall be sufficient to allow systems, part system and/or equipment to be certified, turned over to Operations by the Ready For Operations team and rapidly brought into operational service by Operations, if not already operational.
Electrodes	Electrodes are necessary to permit a HVdc transmission to operate. The electrodes are connected to Converter Stations by dc transmission lines.
First Power	The point in time when the first turbine/generator unit is installed, commissioned, and producing power.

3.0 Definitions cont.

Float	The period of time that an activity or sequence of activities can be delayed and not cause a delay to a Milestone or Key date. This is calculated by the scheduling software.
Full Power	The point in time when all turbine/generator units are installed, commissioned and operating to generate commercial power.
Impoundment	The process of allowing the reservoir to fill to operational levels by means of restraining the natural flows of the river. In the case of the Muskrat Falls generating station, this is done by using two dams, the powerhouse structure and the spillway structure to retain the water. Closure of the spillway gates will reduce the downstream flow, allowing the reservoir to fill.
Key Dates	An activity that signifies the completion of a major goal, event or a decision point in the schedule, but not considered a Target Milestone as defined in the Target Milestone Schedule.
Management Summary Schedule (MSS)	A single page summary schedule derived from the Integrated Project Schedule used for reports and management discussions.
Physical Component	A breakdown of major physical components identified/associated with the NE-LCP.

3.0 Definitions cont.

RFO	Ready for Operations: A team, led by Company, consisting of qualified personnel from Company, Consultant, Contractors and Suppliers, who shall provide commissioning services of systems and part systems under technical supervision and direction of Consultant. Project Completions Philosophy Doc. #: LCP-PT-ED-0000-EN-PH-0043-01
Static Commissioning	All live/energized tests that are carried out after a section of work has reached mechanical completion. These shall be completed in compliance with the specifications at Contractors/Suppliers facilities, factory tests and during installation and/or construction as soon as it is safe for commissioning static checks to commence, initially on a single discipline basis.
Target Milestone	In the IPS a Target Milestone is a flag that signifies the completion or start of a major goal, a decision point, or a high-level snapshot for senior stakeholders.
LCP Sites	The physical locations of the work. These are defined in the Work Breakdown Structure (WBS) - Physical Components.
Transition Compound	The point at which overhead HVdc transmission transitions to subsea cabling requires specialized connections. These connections, and the physical facilities in which they are installed, are Transition Compounds.

4.0 Abbreviations and Acronyms

ac	Alternating Current	LCPMT	Lower Churchill Project Management Team
CF	Churchill Falls	LITL	Labrador Island Transmission Link
dc	Direct Current	LTA	Labrador Transmission Asset
EIS	Environmental Impact Statement	MF	Muskrat Falls
EOI	Expression of Interest	MFGen	Muskrat Falls Generation
EPCM	Engineering, Procurement and Construction Management	ML	Maritime Link
Gen	Generation	MSS	Management Summary Schedule
GI	Gull Island	NE-LCP	Nalcor Energy – Lower Churchill Project
HDD	Horizontal Directional Drilling	Ph	Phase
HVac	High Voltage ac Transmission	PH	Powerhouse
HVdc	High Voltage dc Transmission	RFO	Ready for Operations
HVGB	Happy Valley – Goose Bay	RFP	Request for Proposals
IPR	Independent Project Review	SLI	EPCM Contractor (SNC Lavalin)
IPS	Integrated Project Schedule	SOBI	Strait of Belle Isle
		SP (SOP)	Soldier's Pond
		T&Gs	Turbines & Generators (also T/G)
		TL	Transmission Line
		Tx	Transmission
		WBS	Work Breakdown Structure

5.0 Responsibilities

Project Controls

Responsible for development, periodic updating, analysis and communication of the analysis to monitor overall schedule performance of the Project

Project Managers

Responsible to provide accurate and timely:

- progress reporting
- updated contractor schedules
- changes to execution strategies

Project Director

Responsible for the approval and the execution of the project within the timelines of this Integrated Project Schedule.

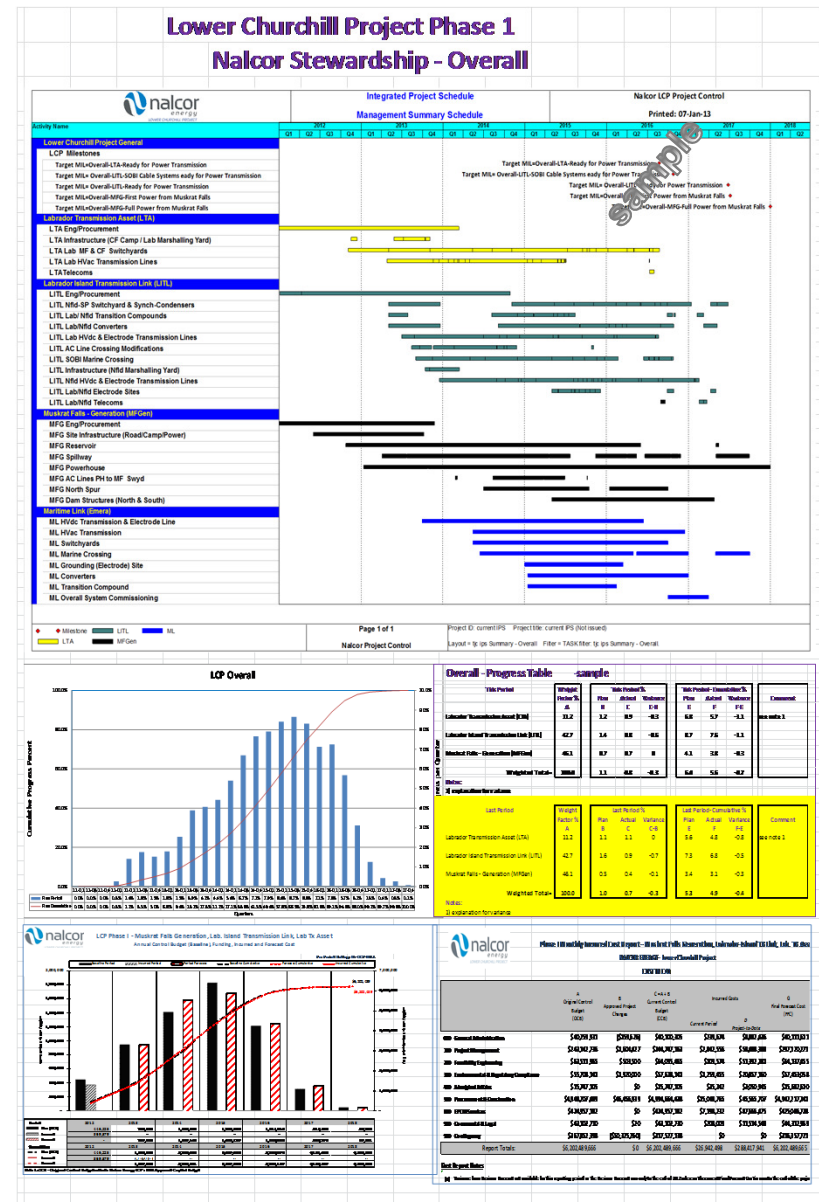
6.0 LCP Stewardship

6.1 Stewardship Process

Elements of the Stewardship Process

(from Project Controls Management Plan)

- Setting challenging cost and schedule targets based on competitive benchmarking data and Project and sub-Project optimization opportunities.
- A formal monthly Cost, Schedule and Change Management Stewardship Meeting.
- Senior Project Management interacting directly with Cost and Schedule stewards.
- One Page Summaries (see right) will be produced monthly for Overall, LTA, LITL, MFG and SOBI



6.0 LCP Stewardship

6.2 IPS in the Stewardship Process

This *Integrated Project Schedule* establishes the overall control schedule used in the Nalcor LCP Project Team Stewardship Process for monitoring schedule and performance on Phase 1 of the Nalcor Energy – Lower Churchill Project.

Source for Schedule and Progress information for:

- Stewardship process
- Management Summary Schedule (MSS)
- LCP Monthly Progress Report

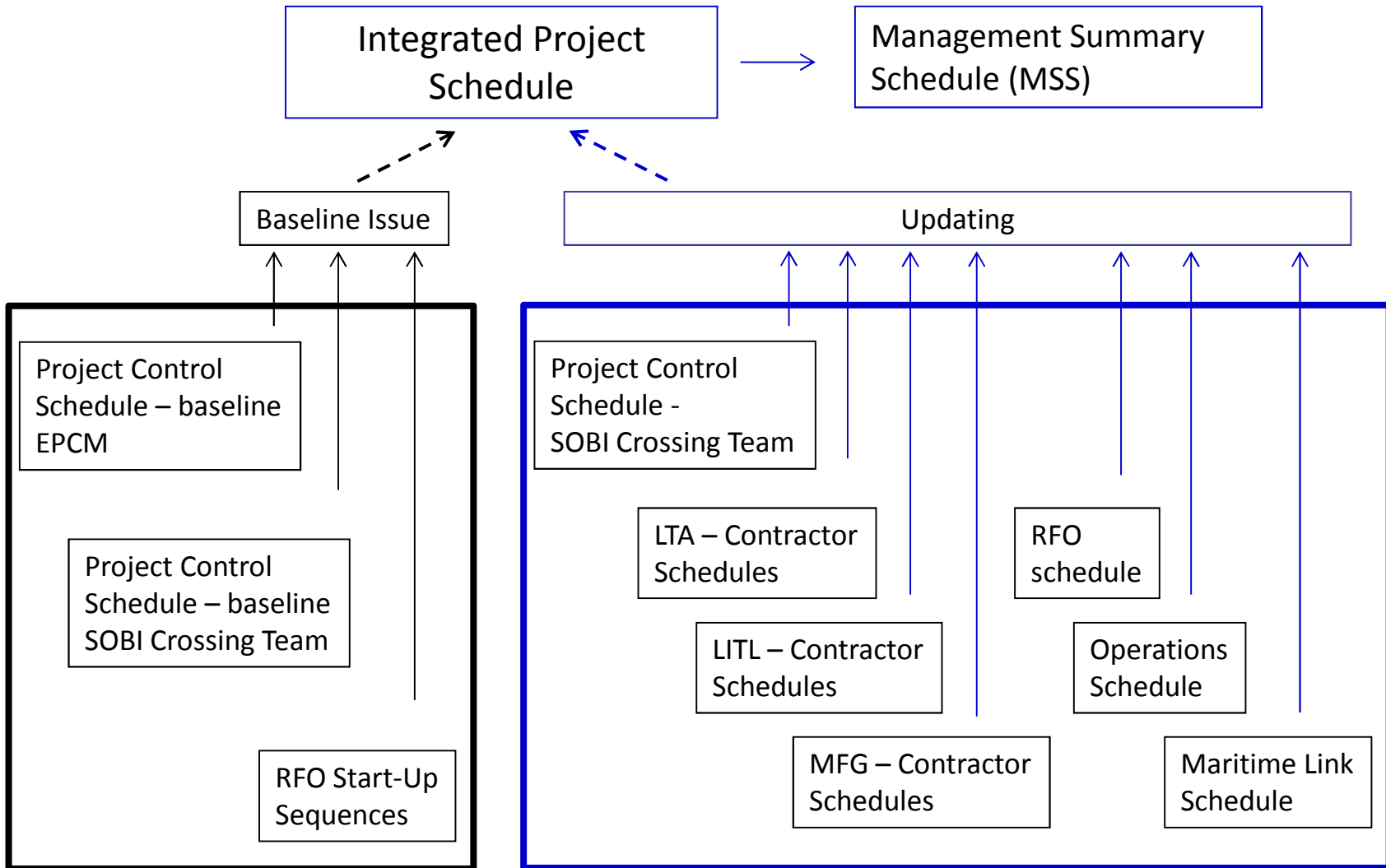
Identify and monitor :

- Target Milestones and Key Dates throughout the Project
- Critical paths for LCP projects: Labrador Transmission Asset (LTA), Labrador Island Transmission Link (LITL), Muskrat Falls Generation (MFGen)
- Float between projects, sites and sections of work
- Main interfaces between the main Project participants schedules and Nalcor Operations

Provides:

- Planned progress per month for LCP Overall, Projects (LTA, LITL MFGen) and LCP Sites (as defined by the WBS Physical Components)
- Communication tool for the Project Management Team to forecast, identify, and analyze schedule outcomes, conflicts, opportunities, and vulnerabilities

7.0 LCP Schedule Hierarchy



8.0 IPS Structure

8.1 IPS Structure - Sections

8.2 IPS Structure - What are the IPS Sites

8.3 IPS Structure - Level of detail of the IPS

8.4 IPS Structure - Typical site schedule for Switchyards, Transition Compounds and Converters

8.5 IPS Structure - Typical site schedule for Transmission Lines Hvac or HVdc

8.6 IPS Structure - Typical site schedule for Dams

8.7 IPS Structure - Site schedule for SOBI Crossing

8.1 IPS Structure - Sections

IPS Structure = What are the sections of the IPS.

The IPS has six major sections:

1) Lower Churchill Project General:

This section includes the Target Milestones found in the “Target Milestone Schedule”

2) LCP Overall System Completions

This section includes the Nalcor Ready for Operations (RFO) overall commissioning scope (including telecoms)

3) Labrador Transmission Asset (LTA)

HVac Line MF to CF and CF/MF Switchyards (Terminal Stations)

4) Labrador Island Transmission Link – (LITL)

Converters, MF to SP (SOP) HVdc TL, SOBI Crossing, Transition Compounds, SP (SOP) Switchyard (Terminal Station), Electrode TL and Electrode Stations

5) Muskrat Falls Generation – (MFGGen)

Access Road, Camps, Construction Power, North Spur, North Dam, Spillway, Powerhouse, South Dam, Collector Lines (PH to MF Swyrd) & Reservoir

6) Maritime Link – (ML)

Only summary level activities for alignment purposes with no logic

Coming soon : Nalcor Upgrades and Outages

8.2 IPS Structure - What are the IPS Sites

- An IPS Site is a designation from WBS – physical component. It generally refers to a geographical location.

Labrador

LCP Telecoms-CF
 LCP Telecoms-Lab
 LTA CF Camp
 LTA CF Switchyard
 LTA-735kV Interconnect at CF
 LTA-ac Line Marshalling Yard
 LTA (L3101/L3102) 315kV TL Seg1/2 MF-CF
 LTA (MFATS2) MF Terminal Station (Switchyard)
 LITL (MFACS) MF Converter Station
 LITL-Lab Electrode Line (L'Anse-au-Diable)
 LITL Lab Electrode Site (L'Anse-au-Diable)
 LITL-Lab dc Seg1/2
 MFGen Access Road
 MFGen Constr Pwr
 MFGen Reservoir
 MFGen Camp Accom
 MFGen North Spur
 MFGen North Dam
 MFGen Spillway/Diversion
 MFGen Power House
 MFGen-315kV Collector Line (PH->MF Swyd)
 MFGen South Dam
 MFGen Site Restore

Island (Newfoundland)

LCP Telecoms-Nfld
 LITL Nfld Trans Comp
 LITL-Nfld dc line Marshalling Yard
 LITL-Nfld dc TL Seg 3/4/5
 LITL (SOPCS) SP Converter Station
 LITL-Nfld Electrode Line (Dowden's Point)
 LITL Nfld Electrode Site (Dowden's Point)
 LITL (SOPTS) Soldiers Pond Terminal Station (Swyd)
 LITL-Nfld Line Crossing Mods
 LITL (SOPSC) SP Synch Cond

SOBI Crossing

LITL SOBI Crossing

8.3 IPS Structure - Level of detail of the IPS

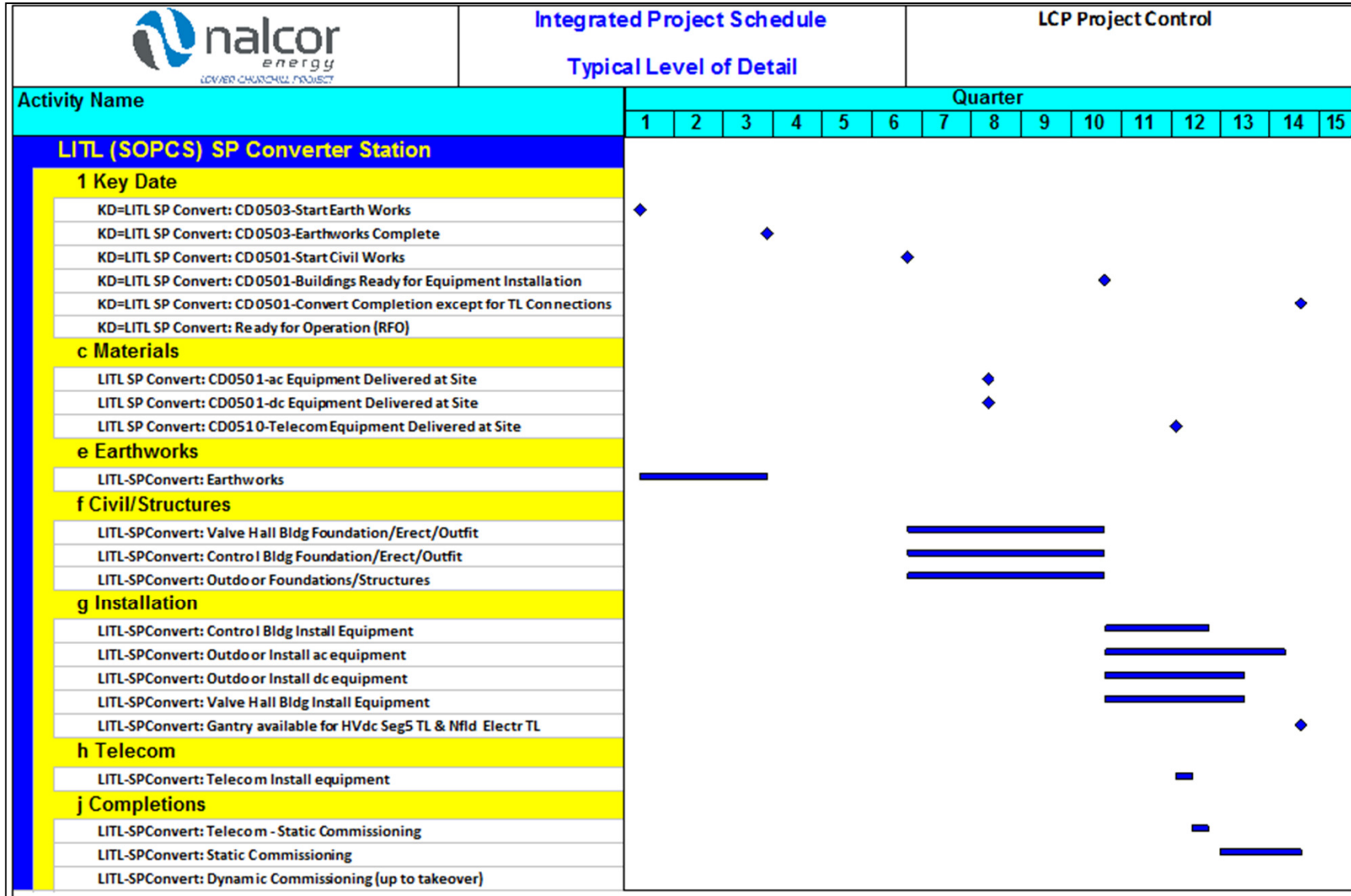
- The IPS was designed to include the total scope and provide the critical path(s) for Construction/Completions.
- Engineering activities included for planned progress only.

IPS Activity Distribution by:

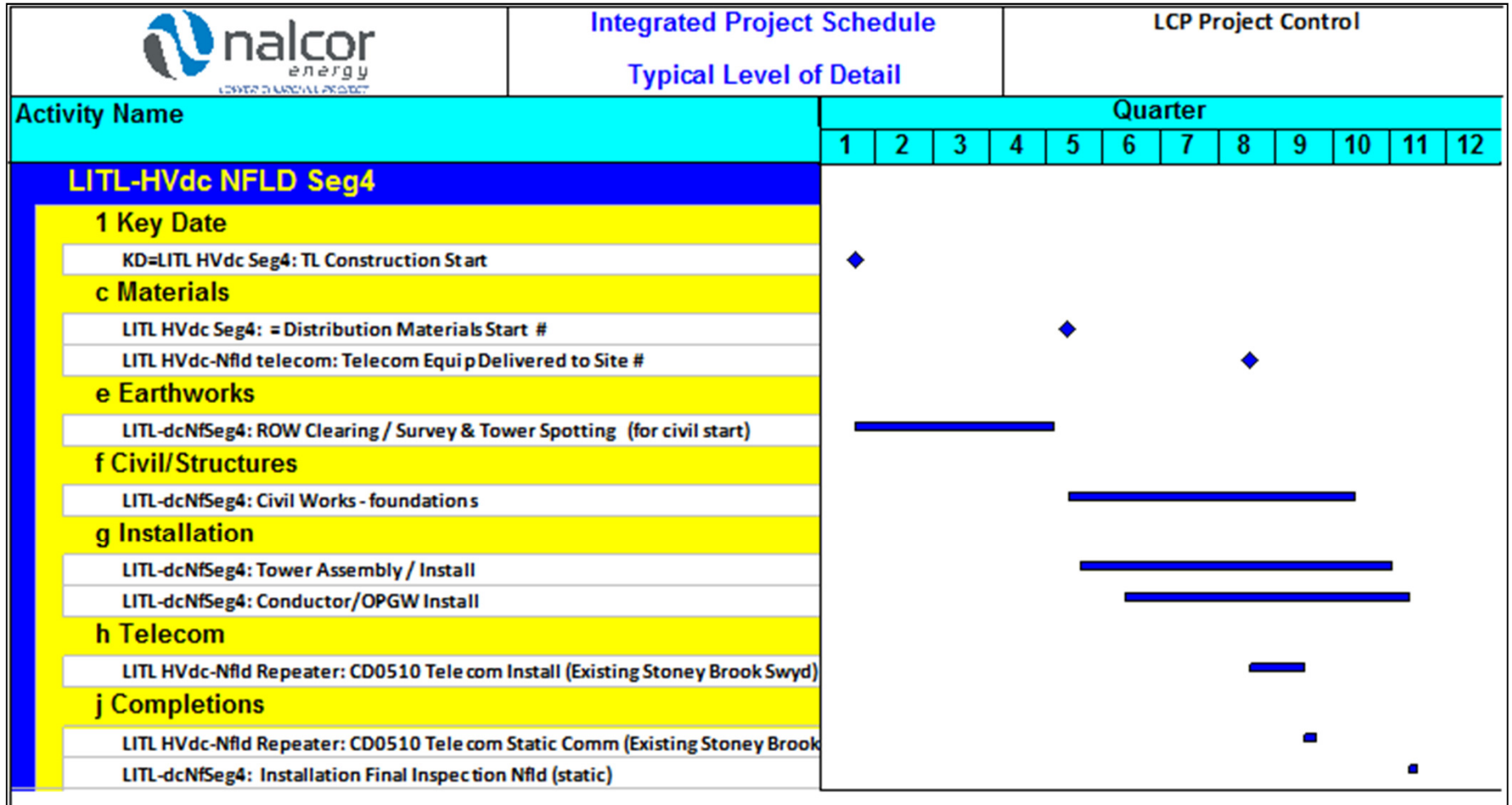
IPS Section	
LCP General Lower Churchill Project General	45
LCP Overall System Completions	25
LTA Labrador Transmission Asset (LTA)	91
LITL Labrador Island Transmission Link (LITL)	308
MF Gen Muskrat Falls - Generation (MFGen)	235
ML Maritime Link (Emera)	22
	726

IPS Activity Type	
Target Milestones	45
Key Date	169
Eng/Procure	6
RFO LTA	2
RFO LITL	11
Materials	46
Earthworks	50
Civil/Structures	79
SOBI Crossing	15
Installation	110
Telecom	17
Completions	108
Impoundment	4
Maritime Link	22
Misc	42
	726


8.4 IPS Structure – Typical site schedule for Switchyards, Transition Compounds and Converters



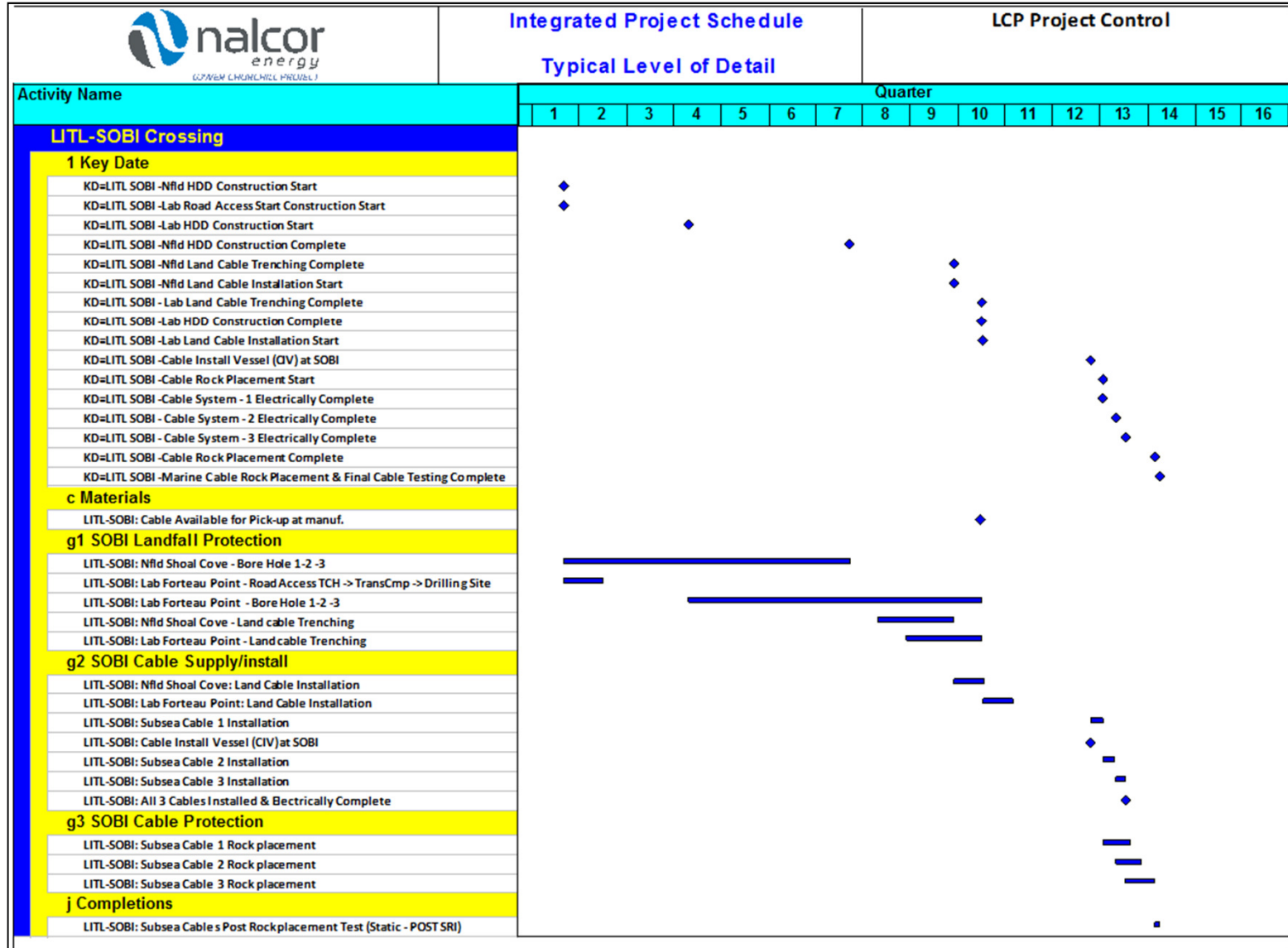
8.5 IPS Structure – Typical site schedule for Transmission Lines Hvac or HVdc



8.6 IPS Structure – Typical site schedule for Dams

	Integrated Project Schedule				LCP Project Control				
Activity Name	Typical Level of Detail								
	Quarter								
	1	2	3	4	5	6	7	8	
MF North Dam									
1 Key Date									
KD=MFG North Dam - Downstream Cofferdam(6) Complete		◆							
KD=MFG North Dam - Upstream Cofferdam(5) Complete		◆							
KD=MFG North Dam - Complete								◆	
KD=MFG North Dam - Ready To Close Diversion								◆	
e Earthworks									
MFG-North Dam: Upstream Cofferdam (5)	■								
MFG-North Dam: Downstream Cofferdam(6)		■							
MFG-North Dam Earth: Foundation Preparation		■	■	■	■				
MFG-North Dam Earth: Curtain grouting					■	■			
f Civil/Structures									
MFG-North Dam: CVC D/S Walls & Abutments			■	■	■	■			
MFG-North Dam: RCC					■	■	■		
MFG-North Dam: CVC Crest & D/S Facing						■	■	■	■
g Installation									
MFG-North Dam Install: Outfitting (Lighting/HVAC/Etc)							■	■	
j Completions									
MFG-North Dam Completions: Static - Dynamic Comm (Lighting/HVAC/Etc)								■	■

8.7 IPS Structure – site schedule for SOBI Crossing



9.0 Schedule Assumptions/RFO Start-UP Sequences

9.1 Schedule Assumptions

Since most of the activity durations are derived from the following schedules, the basic assumptions are found in those individual schedule issues. The exception is the Ready For Operations (RFO) start-up sequences. These start-up sequences are simplified block diagrams which represent the logic connecting the various sites in the IPS.

Labrador Transmission Asset (LTA)

LCP-Project Control Schedule (SLI-PCS): LCP-PT-ED-0000-EP-SH-0002-01 Baseline Issue May 2012
RFO Start-up Sequence: (see section 9.2)

Labrador Island Transmission Link (LITL)

LCP-Project Control Schedule (SLI-PCS): LCP-PT-ED-0000-EP-SH-0002-01 Baseline Issue May 2012
LCP-SOBI Crossing Team Schedule (SOBI-PCS): pre-rebaseline schedule as of fall 2012
RFO Start-up Sequence: (see section 9.2)

Muskrat Falls Generation (MFGen)

LCP-Project Control Schedule: (SLI-PCS) as of Sep 2012 including approved changes to date
RFO Start-up Sequence (see section 9.2)

Maritime Link

Emera Maritime link Schedule: Decision Gate 2 "DG2 Cost and Schedule Estimate Sep 6 – 2012
Rev B1 Doc No 1005.xlsm"

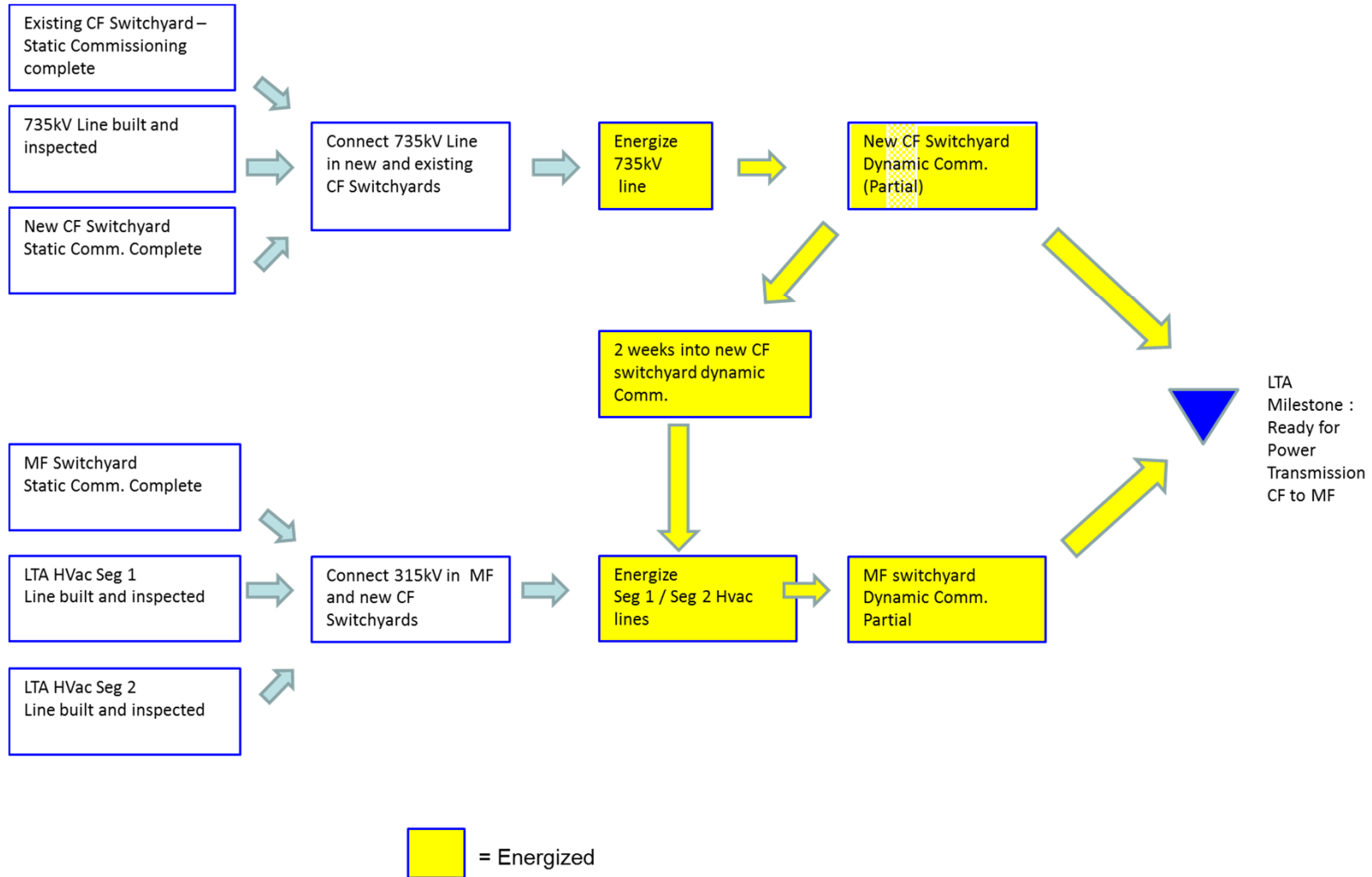
9.0 Schedule Basis/Assumptions

9.2 Ready for Operations (RFO) Start up Sequences

- 9.2.1 LTA
- 9.2.2 LITL - Labrador
- 9.2.3 LITL - Island (Newfoundland)
- 9.2.4 LITL - SOBI Crossing
- 9.2.5 Telecom Overall
- 9.2.6 LTA & LITL Overall

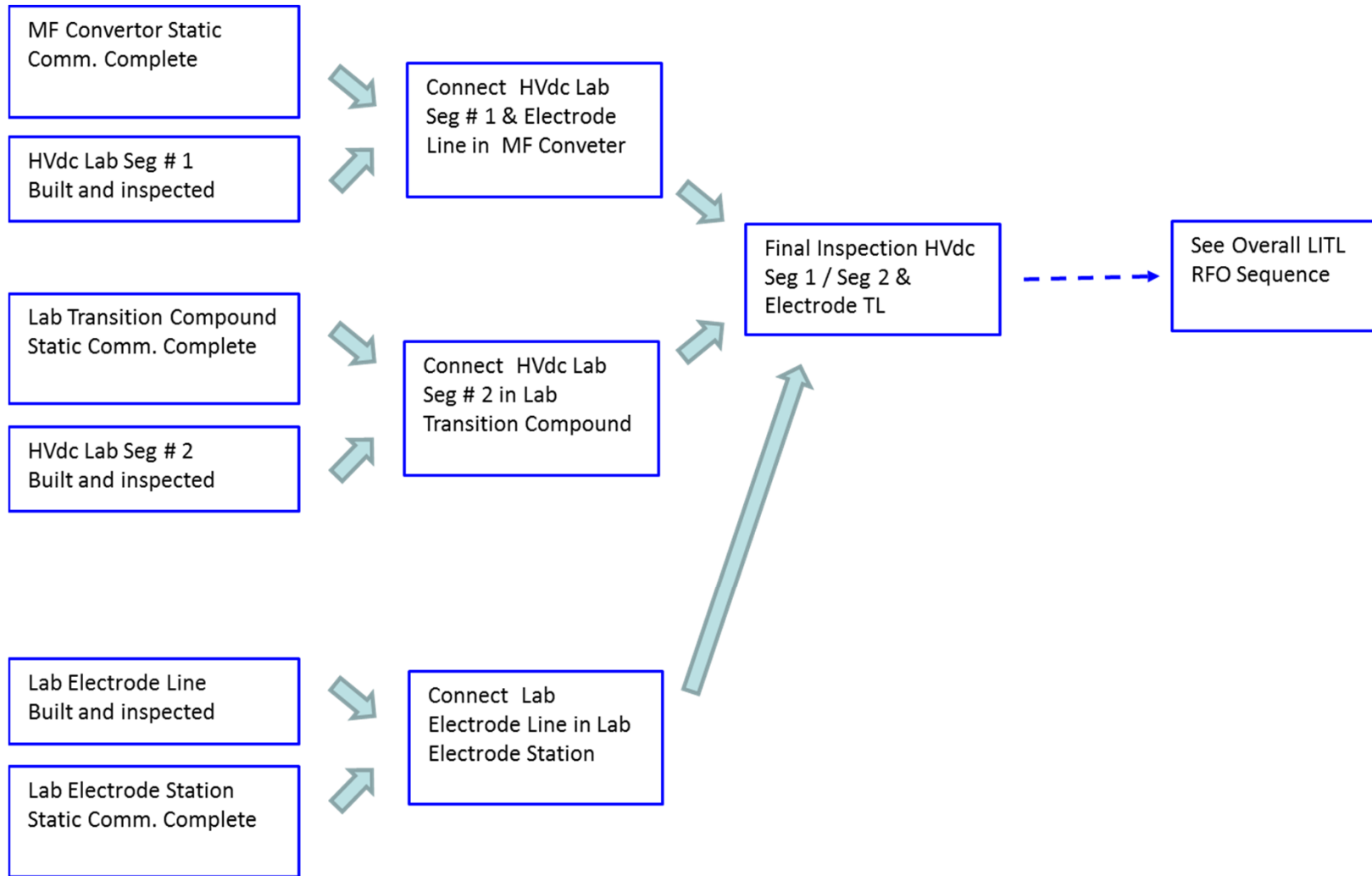
9.2 Ready for Operations (RFO) Start up Sequences

9.2.1 LTA



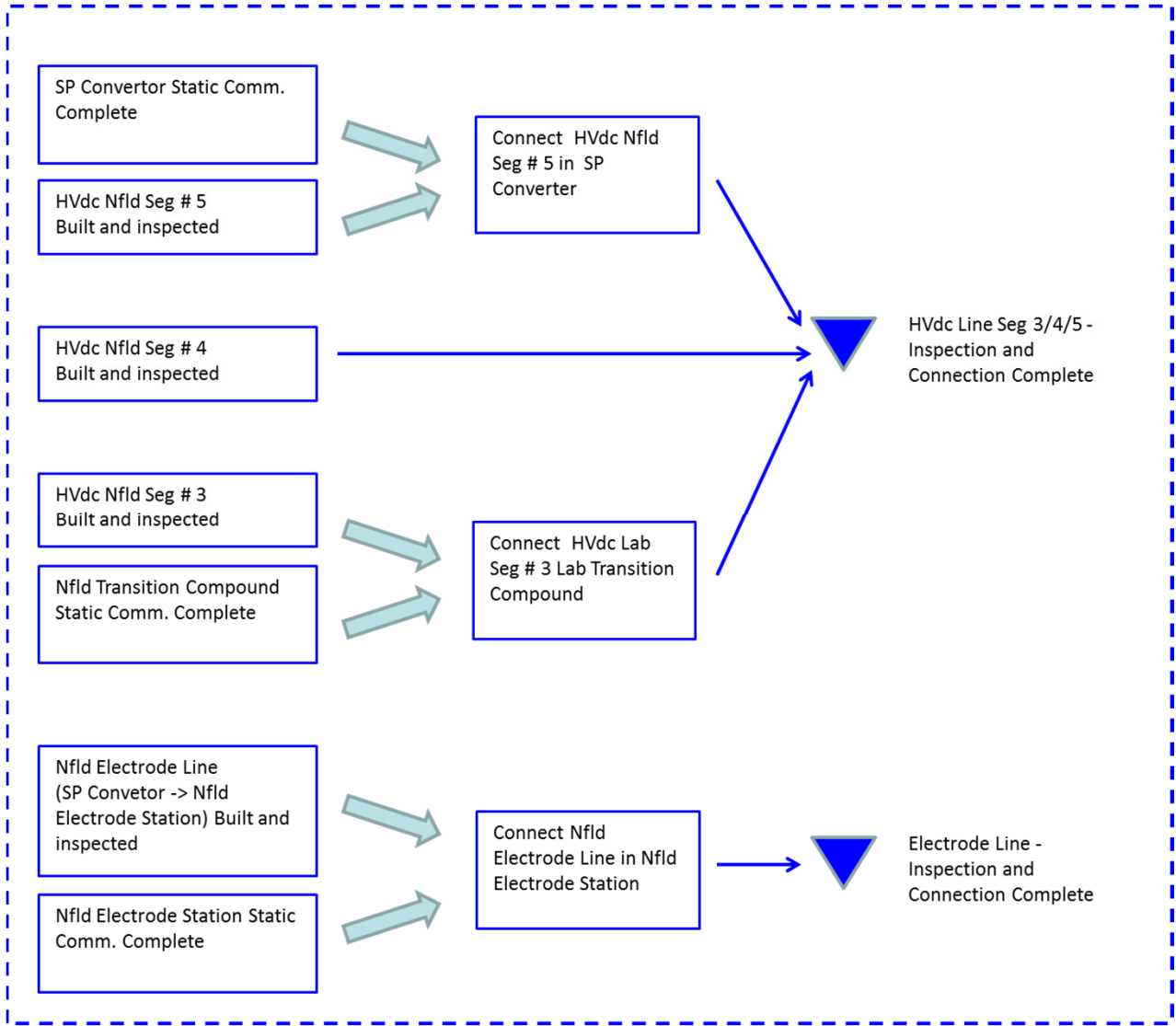
9.2 Ready for Operations (RFO) Start up Sequences

9.2.2 LITL - Labrador



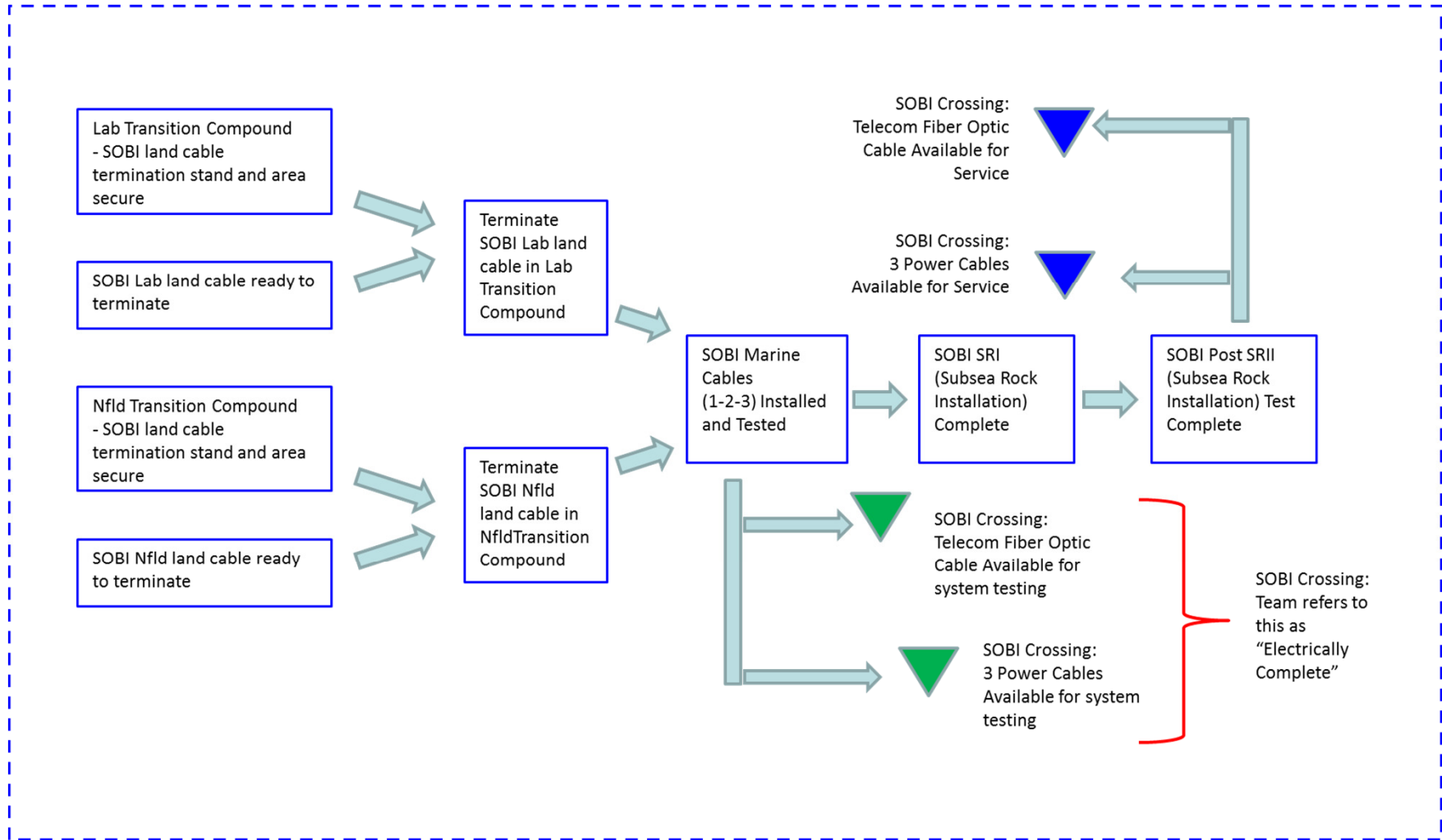
9.2 Ready for Operations (RFO) Start up Sequences

9.2.3 LITL - Island (Newfoundland)



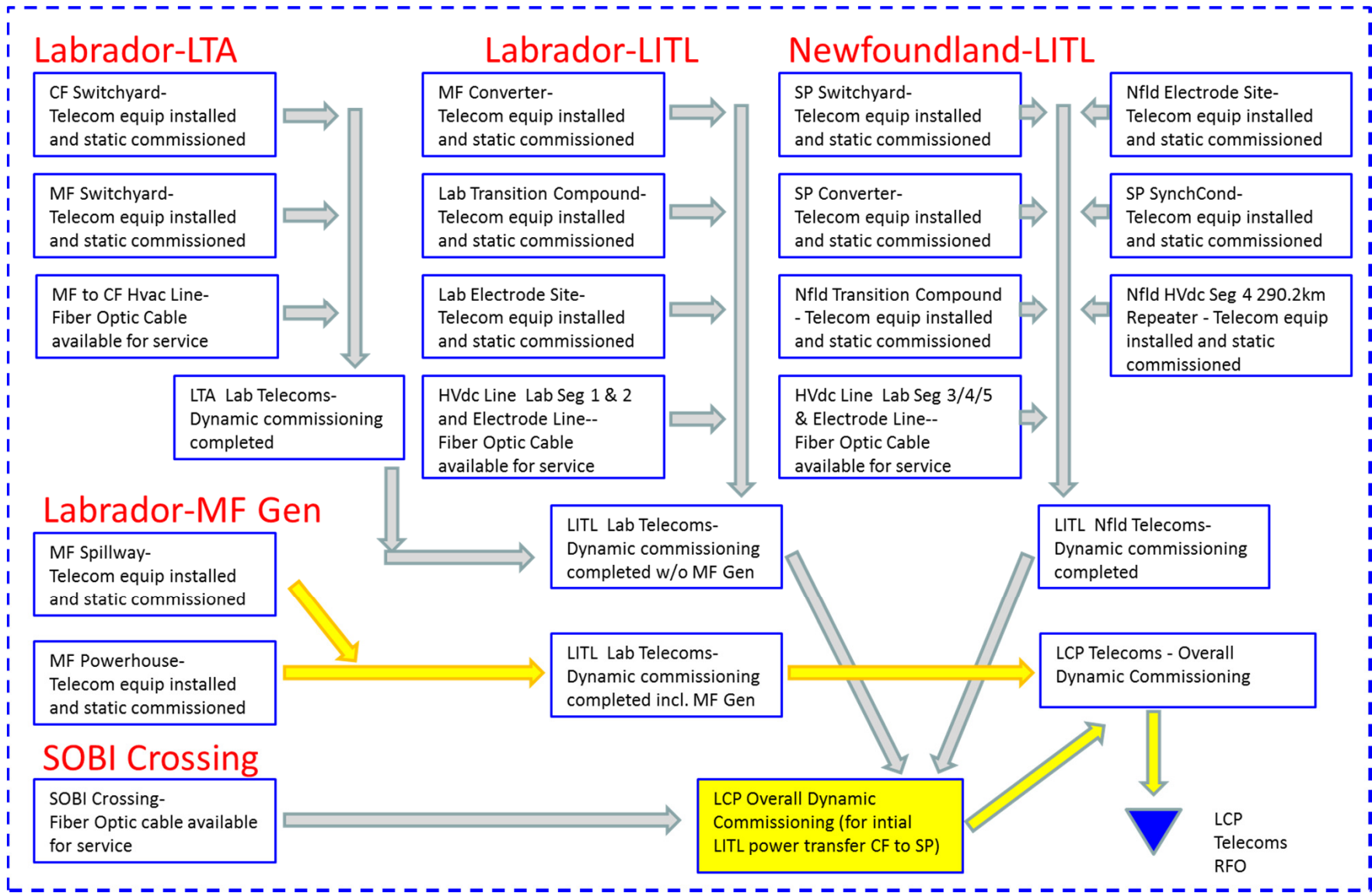
9.2 Ready for Operations (RFO) Start up Sequences

9.2.4 LITL - SOBI Crossing



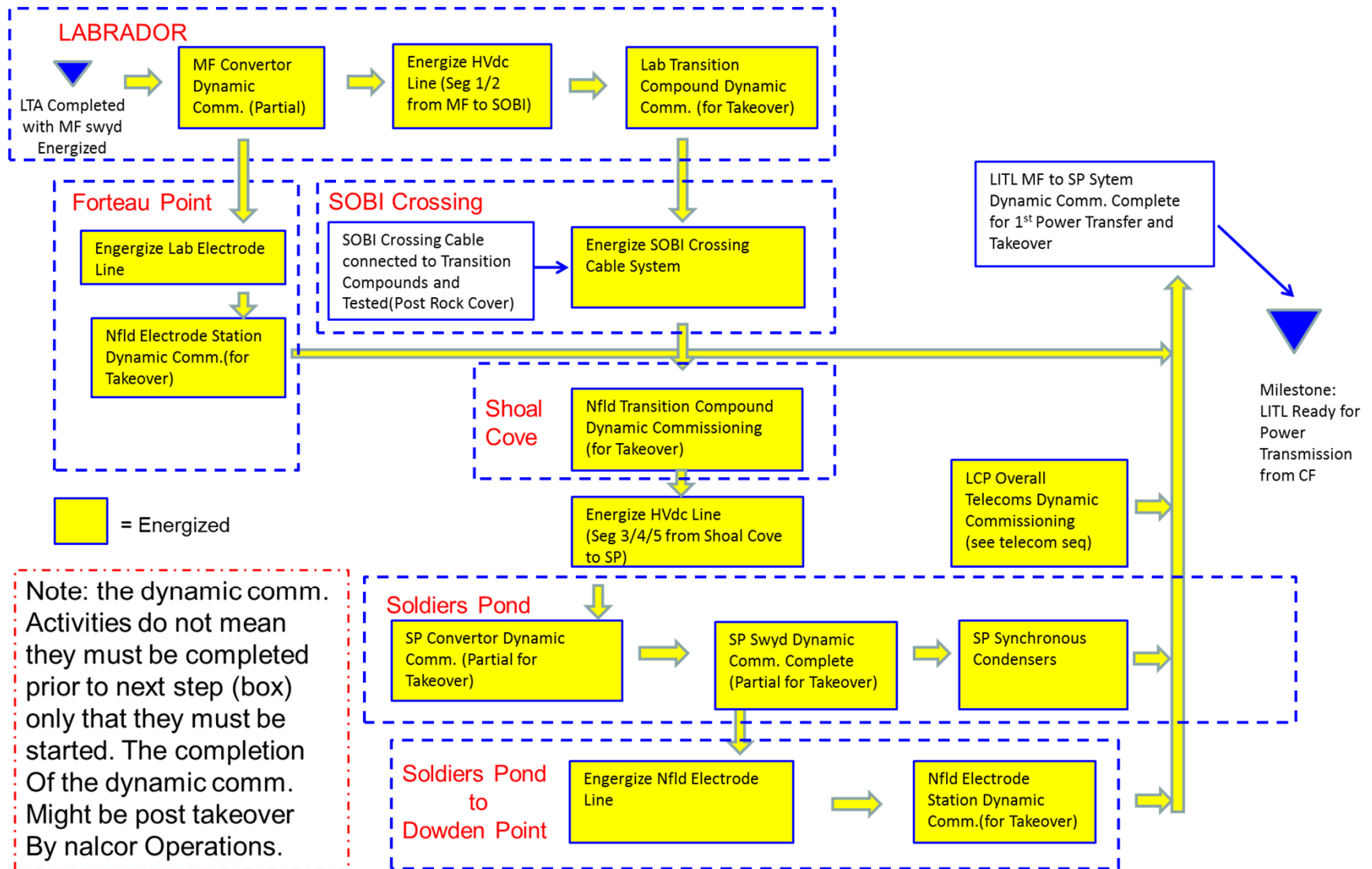
9.2 Ready for Operations (RFO) Start up Sequences

9.2.5 Telecom Overall



9.2 Ready for Operations (RFO) Start up Sequences

9.2.6 LTA & LITL Overall



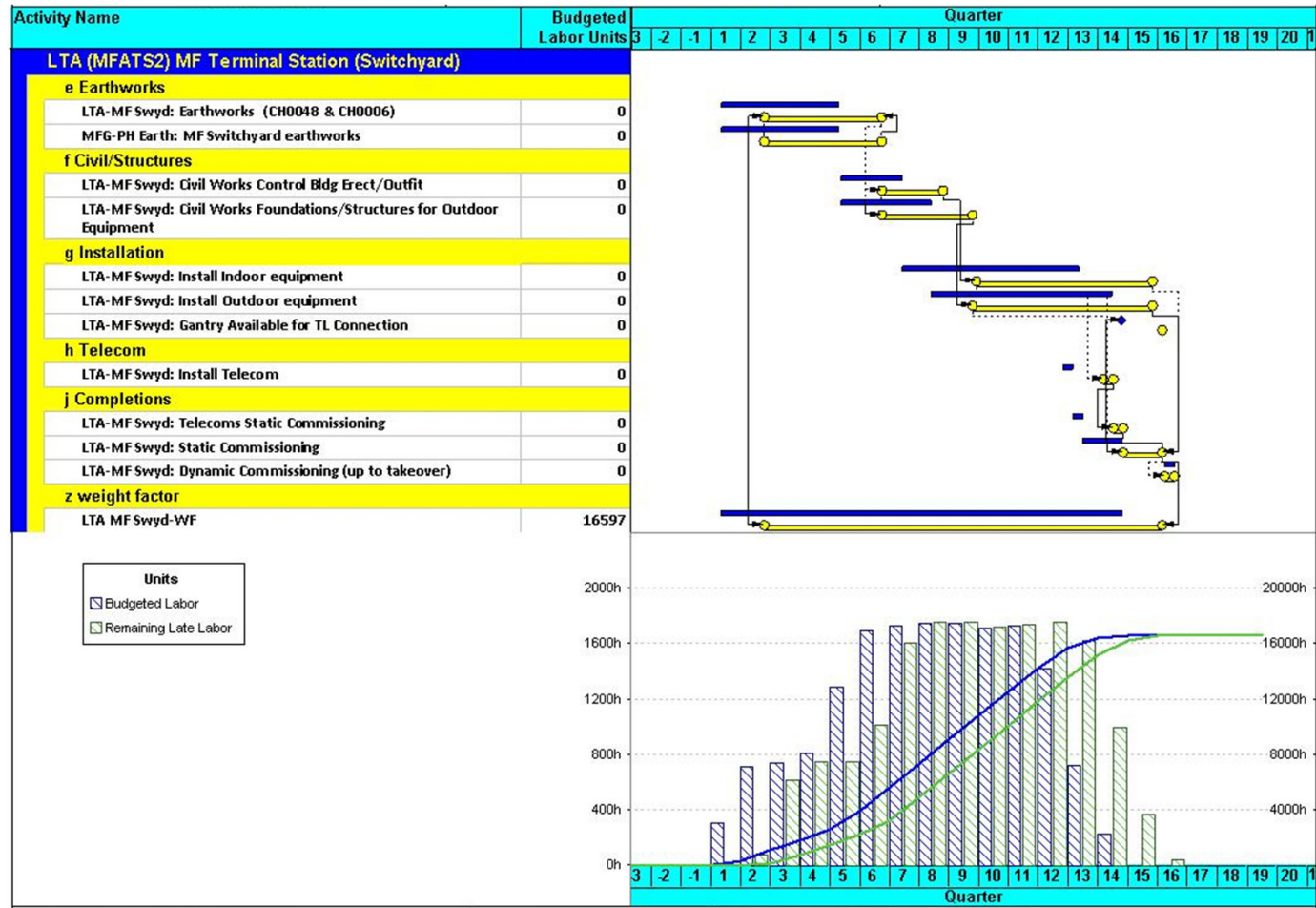
10.0 IPS Progress/Updating/Reporting & Critical Path Determination

- 10.1 IPS Planned Progress Determination
- 10.2 IPS Progress Weight Factors
- 10.3 IPS Updating
- 10.4 How is IPS updated info presented/distributed
- 10.5 Logic Structure between Projects for Float Determination
- 10.6 Management Summary Schedule

10.0 IPS Progress/Updating/Reporting & Critical Path Determination

10.1 IPS Planned Progress Determination

- The DG3 Capital Cost Estimate breakdown was applied to IPS sites using a “hammock” with a distribution profile which is site specific. This provides weight factors between all sites.
- The final single progress curve for each site is between the early and late curves.



10.0 IPS Progress/Updating/Reporting & Critical Path Determination

10.2 IPS Progress Weight factors

What are the progress weight factors between Projects and between Sites

	LTA	Project
Labrador Transmission Asset (LTA)	WF	WF
LCP Telecoms - LTA	1.5%	0.2%
LTA Eng/Procure	6.8%	0.8%
LTA CF Camp	1.4%	0.2%
LTA CF Switchyard	22.1%	2.5%
LTA-735kV Interconnect at CF	0.4%	0.0%
LTA-ac Line Marshalling Yard	0.9%	0.1%
LTA (L3101/L3102) 315kV TL Seg1/2 MF-CF	52.0%	5.8%
LTA (MFATS2) MF Terminal Station (Switchyard)	14.9%	1.7%
subtotal=		
	100.0%	11.2%

	WF	WF
Labrador Island Transmission Link (LITL)	WF	WF
LCP Telecoms - LITL	1.3%	0.5%
LITL Eng/Procure	3.2%	1.4%
LITL (MFACS) MF Converter Station	9.1%	3.9%
LITL-Lab Electrode Line (L'Anse-au-Diable)	0.3%	0.1%
LITL Lab Electrode Site (L'Anse-au-Diable)	0.7%	0.3%
LITL-Lab dc Seg1/2	19.0%	8.1%
LITL Lab TransComp	1.2%	0.5%
LITL SOBI Crossing	16.6%	7.1%
LITL Nfld TransComp	1.1%	0.5%
LITL-Nfld dc line Marshalling Yard	0.3%	0.1%
LITL-Nfld dc TL Seg 3/4/5	25.9%	11.0%
LITL (SOPCS) SP Converter Station	9.7%	4.1%
LITL-Nfld Electrode Line (Dowden's Point)	0.2%	0.1%
LITL Nfld Electrode Site (Dowden's Point)	0.6%	0.3%
LITL (SOPTS) Soldiers Pond Swyd)	5.2%	2.2%
LITL-Nfld Line Crossing Mods	0.3%	0.1%
LITL (SOPSC) SP SynchCond	5.4%	2.3%
subtotal=		
	100.0%	42.7%

	MGen	Project
Muskat Falls - Generation (MGen)	WF	WF
LCP Telecoms - MF	0.9%	0.4%
MGen Access Road	2.8%	1.3%
MGen Eng/Procure	4.9%	2.2%
MGen Constr Pwr	1.0%	0.5%
MGen Reservoir	8.4%	3.9%
MGen Camp Accom	4.8%	2.2%
MGen North Spur	3.0%	1.4%
MGen North Dam	5.7%	2.6%
MGen Spillway/Diverson	8.5%	3.9%
MGen Power House	57.9%	26.7%
MGen Offsite Logistics	0.5%	0.3%
MGen-315kV Collector Line (PH->MF Swyd)	0.2%	0.1%
MGen South Dam	1.4%	0.6%
MGen Site Restore	0.0%	0.0%
subtotal=		
	100.0%	46.1%

10.0 IPS Progress/Updating/Reporting & Critical Path Determination

10.3 IPS Updating

- 1) The IPS is a date and duration driven schedule updated from contractor and other schedules
- 2) Planned % is derived from the IPS but earned % by site comes from PM+ and is used in the Stewardship process.

PM+ Summary Report by Site

Construction Contract Progress
PROJECT: S05S73 : LOWER CHURCHILL PROJECT
CLIENT: Nalcor Energy

nalcor
energy
CNRPCPRG

Grouped by: IPS Site
Period 037 From: 2013-01-20 To: 2013-01-20

C.P.	Contract	Item No	Item Description	O/C Amend.	Prog. Type	Facility	CRC	UoM	CPI	SPI	Quantities				Man-hours							
											Commit. To Date	Forecast Final	This Period	To Date	This Per.	To Date	Commit. To Date	Forecast Final	Spent To Date	Earned To Date		
MF03-1600 - MF03-1600: Accommodation Complex/Temp Bldgs																						
CH0004	CH0004	0006	ACCOMMODATION COMPLEX SITE AREA	O		311120	18000		0.00	0.66			5.00	80.00	25,100	25,100	0	0	1,255	15,080		
		0005.0001	ACCOMMODATION COMPLEX SITE ARE		C	311120	16000	LOT	0.00	0.55	1.00	1.00	0.05	0.60	5.00	60.00	25,100	25,100	0	0	1,255	15,060
CH0048	CH0048	0006	Clearing Accommodation Complex Site Au	O		311120	12100	HA	0.00	1.00	38.80	38.80	0.00	38.80	0.00	100.00	2,432	2,432	0	0	0	2,432
		0005.0001	Clearing Accommodation Complex Site Are		C	311120	12100	HA	0.00	1.00	38.60	38.60	0.00	38.60	0.00	100.00	2,432	2,432	0	0	0	2,432
PH0063	CH0066	0001	Installation of temporary used camp (Not 1	O		315000	94200		0.00	0.46			2.10	48.20	11,598	11,598	0	0	244	5,590		
		0001.0001	Installation of temporary used camp		C	315000	94200	LOT	0.00	0.46	1.00	1.00	0.021	0.482	2.10	48.20	11,598	11,598	0	0	244	5,590
		1 10.00%	Dorm Block 1										0.00	0.70	0.00	70.00	1,160	1,160			0	612
		2 10.00%	Dorm Block 2										0.00	0.66	0.00	66.00	1,160	1,160			0	764
		3 10.00%	Dorm Block 3										0.06	0.70	6.00	70.00	1,160	1,160			66	612
		4 10.00%	Dorm Block 4										0.00	0.66	0.00	66.00	1,160	1,160			0	673
		5 10.00%	Dorm Block 5										0.00	0.66	0.00	66.00	1,160	1,160			0	764
		6 10.00%	Dorm Block 6										0.00	0.60	0.00	60.00	1,160	1,160			0	696
		7 40.00%	Kitchen and others										0.04	0.236	4.00	23.60	4,639	4,639			166	1,090
Sub Total for : MF03-1600										0.00	0.66			3.83	68.89	38,130	38,130	0	0	1,499	23,082	
Grand Total:										0.12	0.66			3.83	68.89	38,130	38,130	4,817	193,366	1,499	23,082	

10.0 IPS Progress/Updating/Reporting & Critical Path Determination

10.3 IPS Updating cont.

3) Earned % complete is not entered in the IPS

WHY: actual/forecast start and actual/forecast finish dates and remaining durations derived from contractor schedules not calculated by machine

NOTE: What happens if contractor does not supply updated schedule/progress information on time for monthly stewardship update? **The scope lead will be required to deliver the updated schedule/progress information.** If this does not happen on a timely basis, the IPS and progress info will be entered by planning (best guess) but the **scope leader will be responsible for all impacts.**

4) Activity info from contractor schedules:

Actual Start and/or Forecast Start - Actual Finish and/or Forecast Finish and logic applied to a higher level summary than contractors level of detail

5) Contractor schedules are coded with the IPS level of detail for roll-up clarifications. (This process is in the co-ord procedures and is why we have Contractor Schedule Expectations Meetings as soon as possible after Kick-off meetings)

10.0 IPS Progress/Updating/Reporting & Critical Path Determination

10.4 How is IPS updated info presented/distributed

1. **IPS Monthly Schedule Analysis Report**
2. **Stewardship Process**
 - One page Summaries for Overall, LTA, LITL, MFG & SOBI
3. **LCP Monthly Report**
 - Schedule Summary per LTA LITL MFG
 - Progress per LTA LITL MFG
 - Critical Path LTA, LITL, MFG (not yet provided)
4. **Information Provided in Office (on Walls): Overall, LTA, LITL, MFG**
 - Summary Schedule
 - Milestones & Key Dates
 - Critical/Sub-Critical Paths
 - Progress Curves
4. **Meeting Updates (to be organized)**

10.0 IPS Progress/Updating/Reporting & Critical Path Determination

10.5 Logic Structure between Projects for Float Determination

The IPS has three projects and three critical paths. The projects are LTA, LITL and MFGen. The three critical paths are:

- LTA = Ready for Operations
- LITL = Ready for Operations
- Muskrat Falls Generation = Turbine/Generator Unit 1 - Ready for Operations

The interproject logic in the IPS has two main components as detailed below:

LTA * Technical requirement: ac power for the generator excitation system
 * LCP requirement: start HVac line construction prior to HVdc lines to relieve resourcing problems for line construction

LITL
 * Technical requirement: power transmission when Muskrat Falls powerhouse turbine/generators come online
 * LCP requirement: provide the ability to supply power to the island of Newfoundland prior to Muskrat Falls powerhouse turbine/generators come online.

The IPS utilizes one activity for each critical path to assist in calculating the float to be consistent with the LCP requirements. There are other benefits to this method including logic checking for late date analysis and longest path visibility.

10.0 IPS Progress/Updating/Reporting & Critical Path Determination

10.6 Management Summary Schedule (MSS) Updating

The Management Summary Schedule (MSS) is updated monthly after completion of :

- Updating the Integrated Project Schedule
- Updating the Stewardship Progress

11.0 IPS Further IPS Development

What needs to be added into the IPS

- Activities related to Nalcor Existing Asset Upgrades
- Outages / Shutdowns / Tie-ins
- Modify site start / finish / durations / etc when construction/completions contract schedules are **approved**.

Note: **Approval** also means that the IPS roll up imbedded in the contractors' schedules are clear, precise and agreed. A contractor schedule approval matrix based on coordination procedure requirements (with traffic lights) will be prepared soon.

12.0 When does the IPS get re-baselined

- Only when the accumulated changes / delays have had a significant impact on the Target Milestones
- Decision on IPS re-baseline lies with the Project Director (ref page 4 IPS Responsibilities)

IPS Graphics

A) LCP-IPS Summary Schedules

- A.1 LCP-IPS Overall Summary
- A.2 LCP-IPS Target Milestone Schedule
- A.3 LCP-IPS LTA Summary
- A.4 LCP-IPS LITL Summary
- A.5 LCP-IPS MFG Summary

B) Planned Progress Curves

- B.1 LCP-IPS Overall
- B.2 LCP-IPS LTA
- B.3 LCP-IPS LITL
- B.4 LCP-IPS MFGen

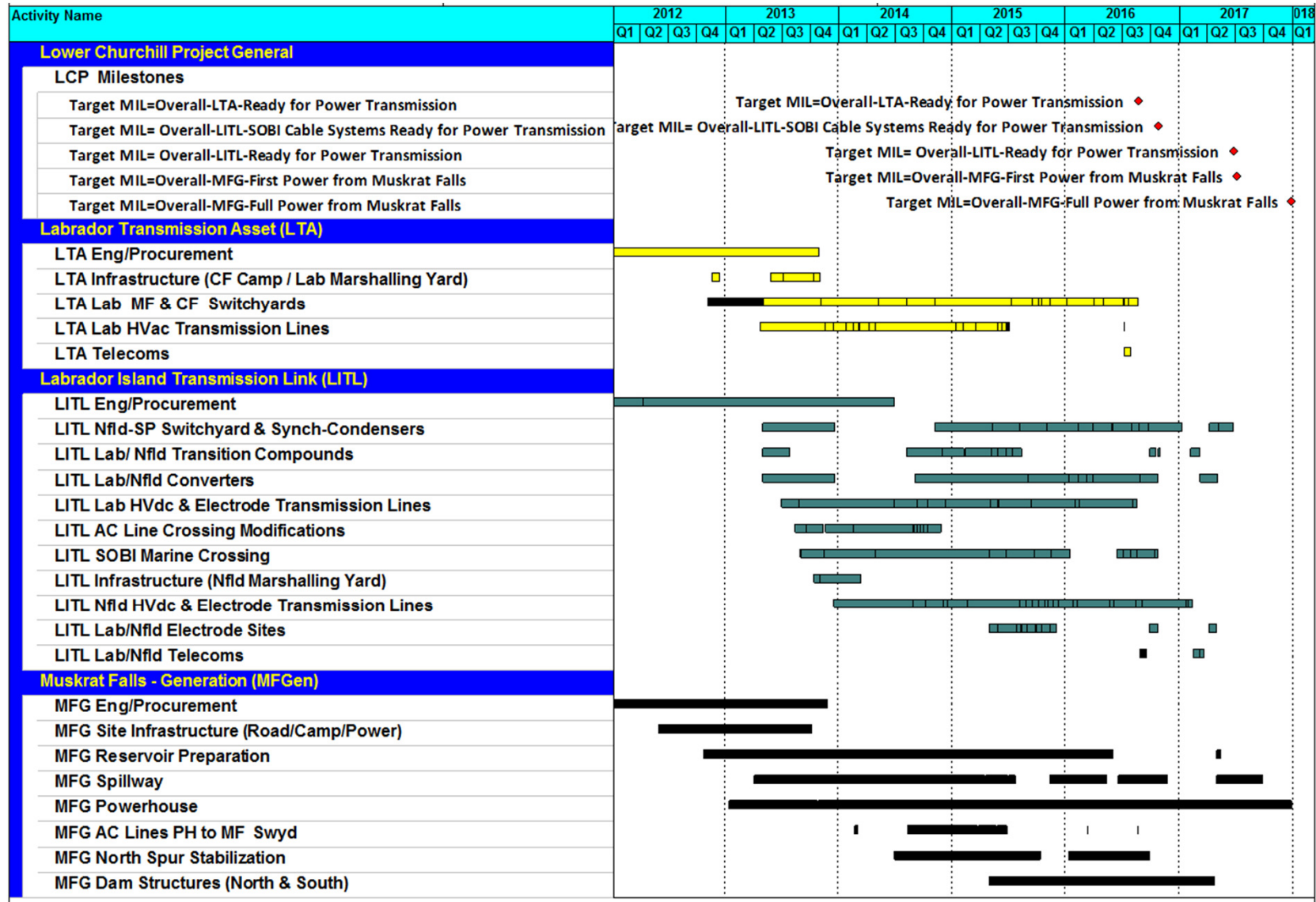
C) LCP-IPS Critical Paths

- C.1 IPS LTA Critical/Sub Critical Paths
- C.2 IPS LITL Critical/Sub Critical Paths
- C.3 IPS MFG Critical/Sub Critical Paths to Unit 1 Ready for Operations

D) Entire IPS Schedule

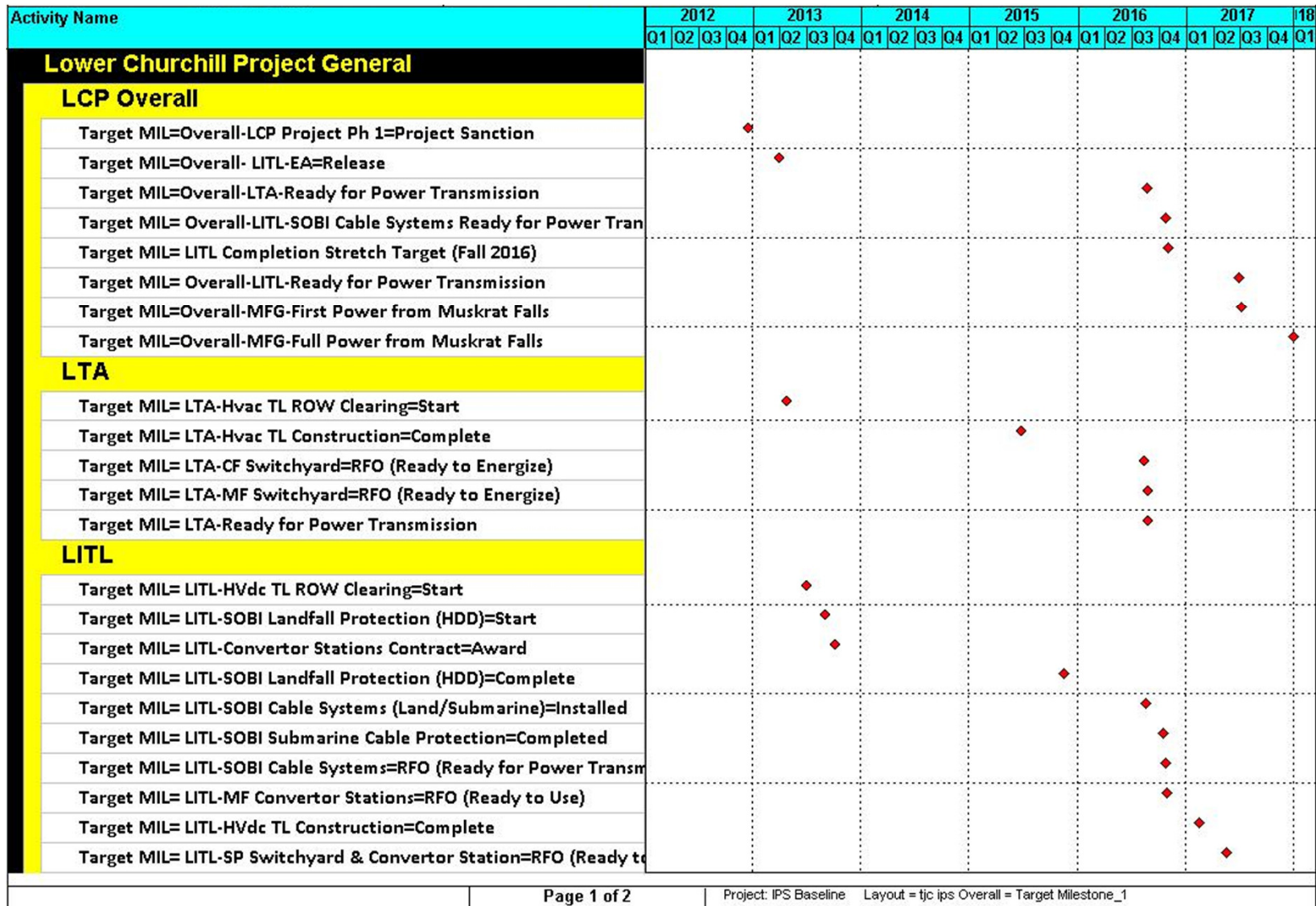
IPS Graphics: Summary Schedules / Progress Curves

A) LCP-IPS Summary Schedules = A.1 LCP-IPS Overall Summary



IPS Graphics: Summary Schedules / Progress Curves

A) LCP-IPS Summary Schedules = A.2 LCP-IPS Target Milestone Schedule 1 of 2



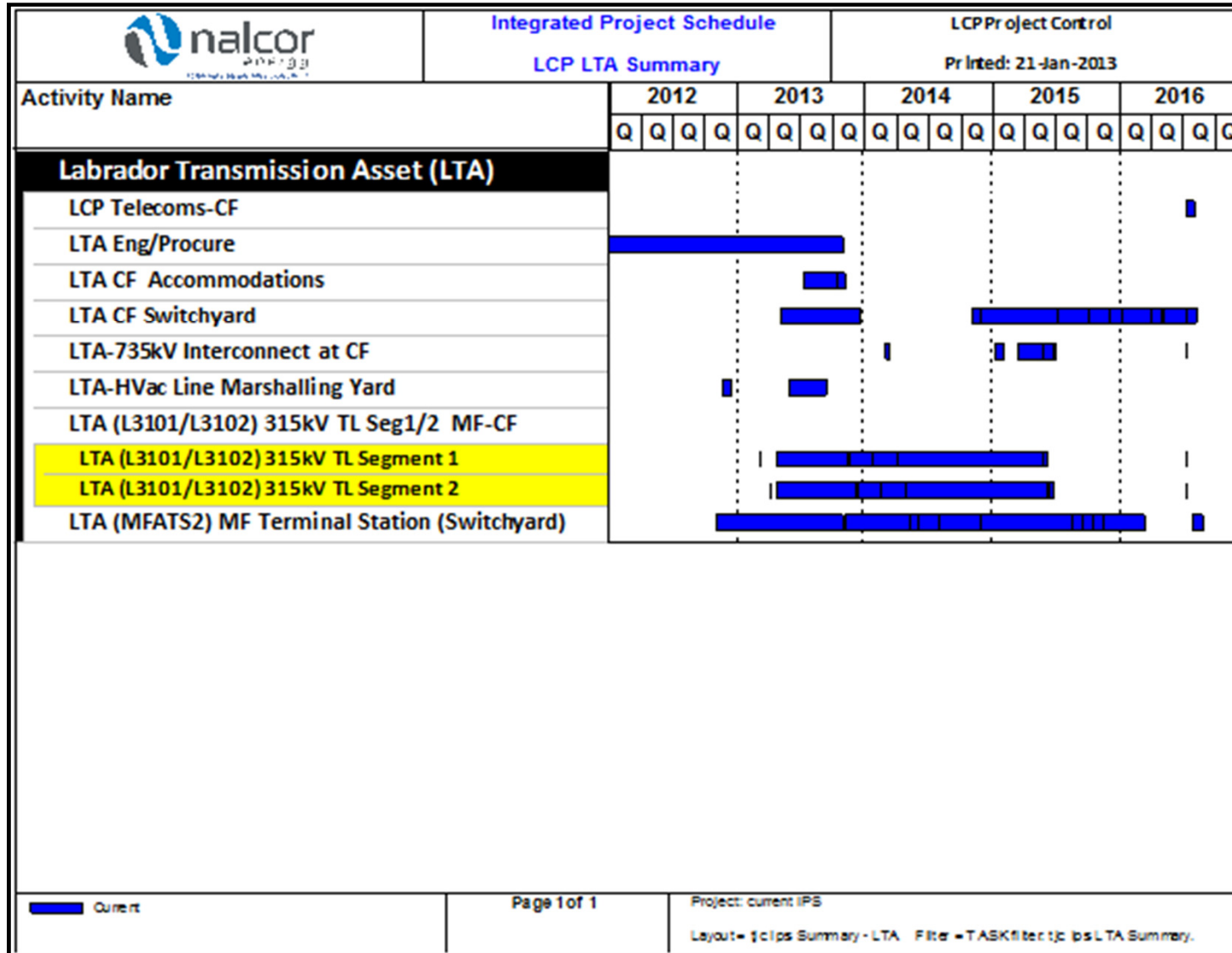
IPS Graphics: Summary Schedules / Progress Curves

A) LCP-IPS Summary Schedules = A.2 LCP-IPS Target Milestone Schedule 2 of 2

Activity Name	2012				2013				2014				2015				2016				2017				18		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1		
Target MIL= LITL RFO=Ready for Power Transmission																											
MF Gen																											
Target MIL= MFG-MF Access Road=Ready for Use				♦																							
Target MIL= MFG-Bulk Excavation Contractor=Mob (start of work)				♦																							
Target MIL= MFG-Powerhouse=Commence Construction				♦																							
Target MIL= MFG-Powerhouse/Intake/Spillway Contract=Award								♦																			
Target MIL= MFG-North Spur Works (Stabilization)=Commence												♦															
Target MIL= MFG-South Dam=Commence Construction																♦											
Target MIL= MFG-Powerhouse=Crane Commissioned																♦											
Target MIL= MFG-North Spur Works=Ready for Diversion																											
Target MIL= MFG-South Dam=Completed																											
Target MIL= MFG-River=Diverted																											
Target MIL= MFG-Reservoir Preparation=Completed																											
Target MIL= MFG-Powerhouse=T/G Unit 1= Pit Free																											
Target MIL= MFG-North Spur StabilizationWorks=Complete																											
Target MIL= MFG-Powerhouse=T/G Unit 4= Pit Free																											
Target MIL= MFG-North Dam (RCC)=Complete																											
Target MIL= MFG-Powerhouse=T/G Unit 1= Ready to Turn																											
Target MIL= MFG-Reservoir Impoundment=Complete																											
Target MIL= MFG-Powerhouse=T/G Unit 1=RFO (Commercial Power																											
Target MIL= MFG-First Power from Muskrat Falls																											
Target MIL= MFG-Powerhouse=T/G Unit 4=RFO (Commercial Power																											
Target MIL= MFG-Full Power from Muskrat Falls																											

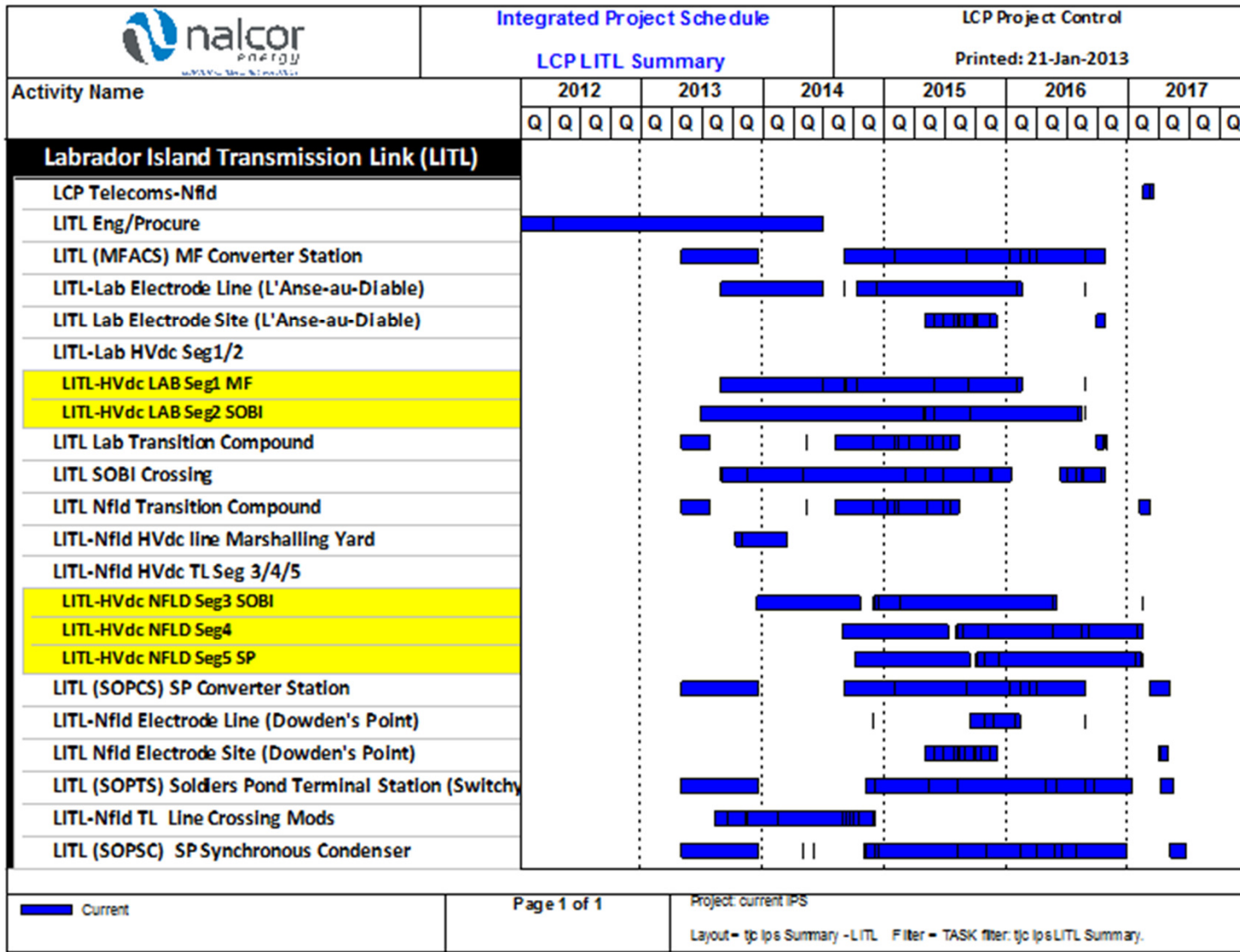
IPS Graphics: Summary Schedules / Progress Curves

A) LCP-IPS Summary Schedules = A.3 LCP-IPS LTA Summary



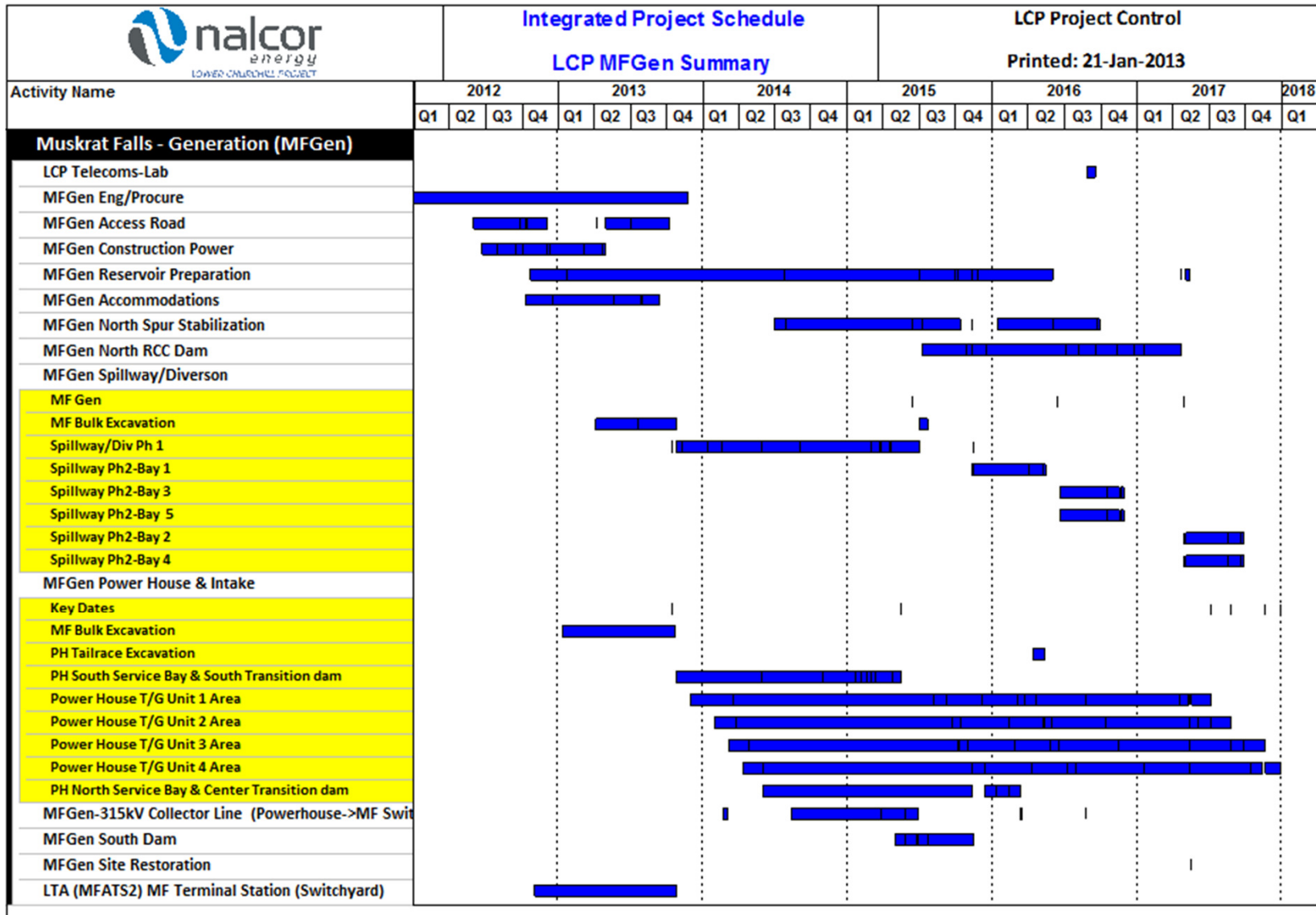
IPS Graphics: Summary Schedules / Progress Curves

A) LCP-IPS Summary Schedules = A.4 LCP-IPS LITL Summary

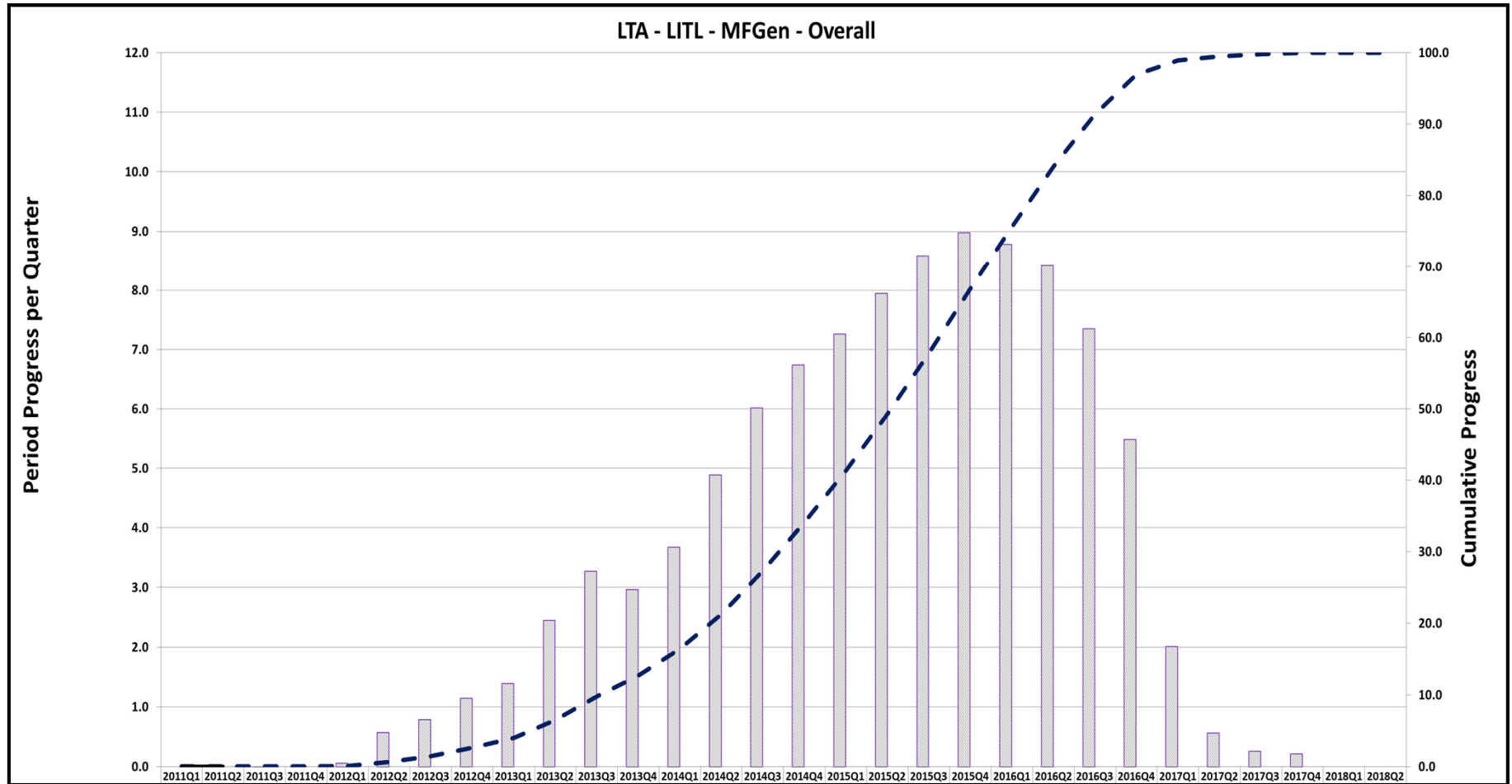


IPS Graphics: Summary Schedules / Progress Curves

A) LCP-IPS Summary Schedules = A.5 LCP-IPS MFG Summary



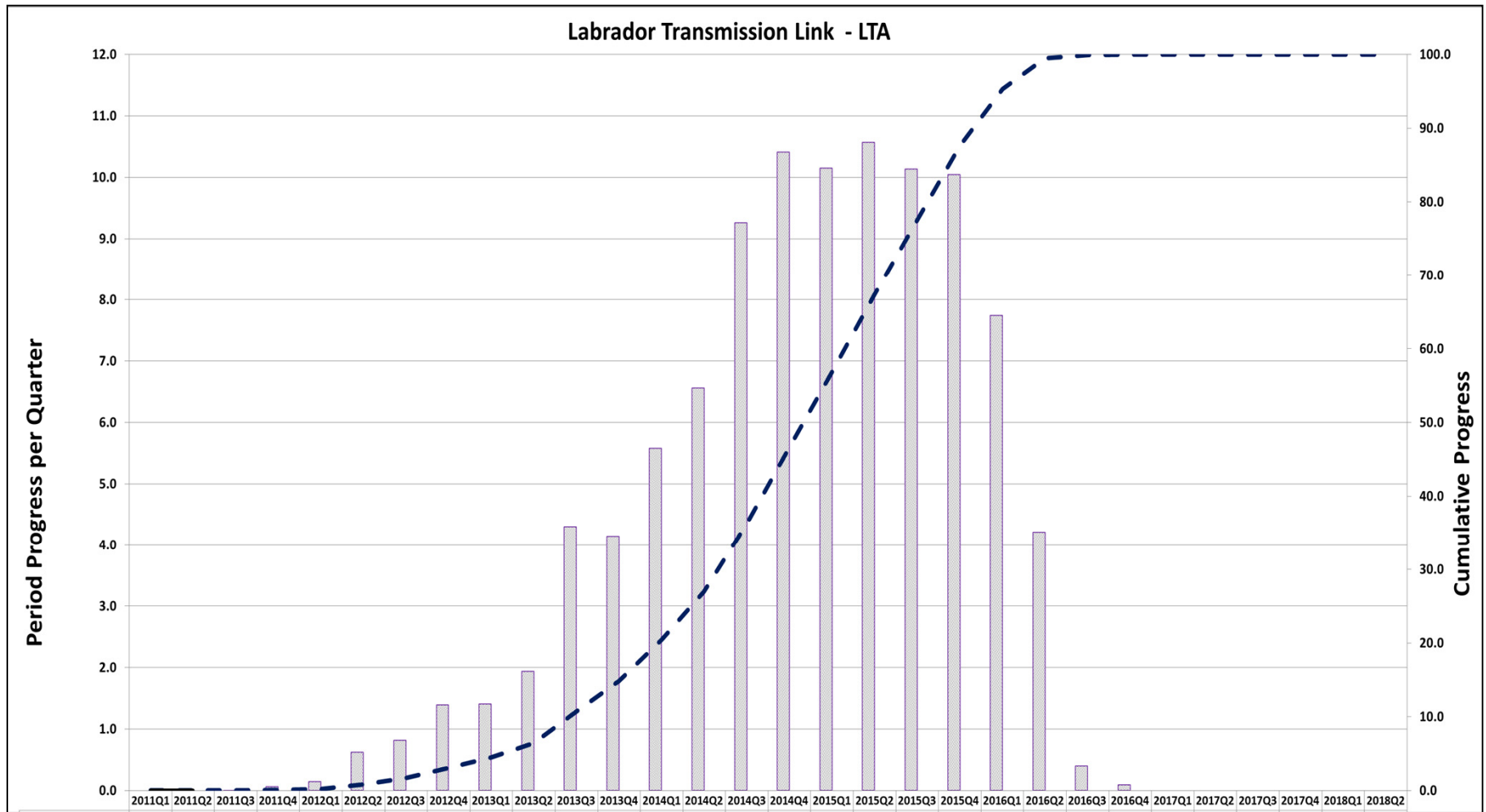
IPS Graphics: Summary Schedules / Progress Curves
 B) Planned Progress Curves = B.1 – LCP-IPS Overall



Planned Progress shown per Quarter

IPS Graphics: Summary Schedules / Progress Curves

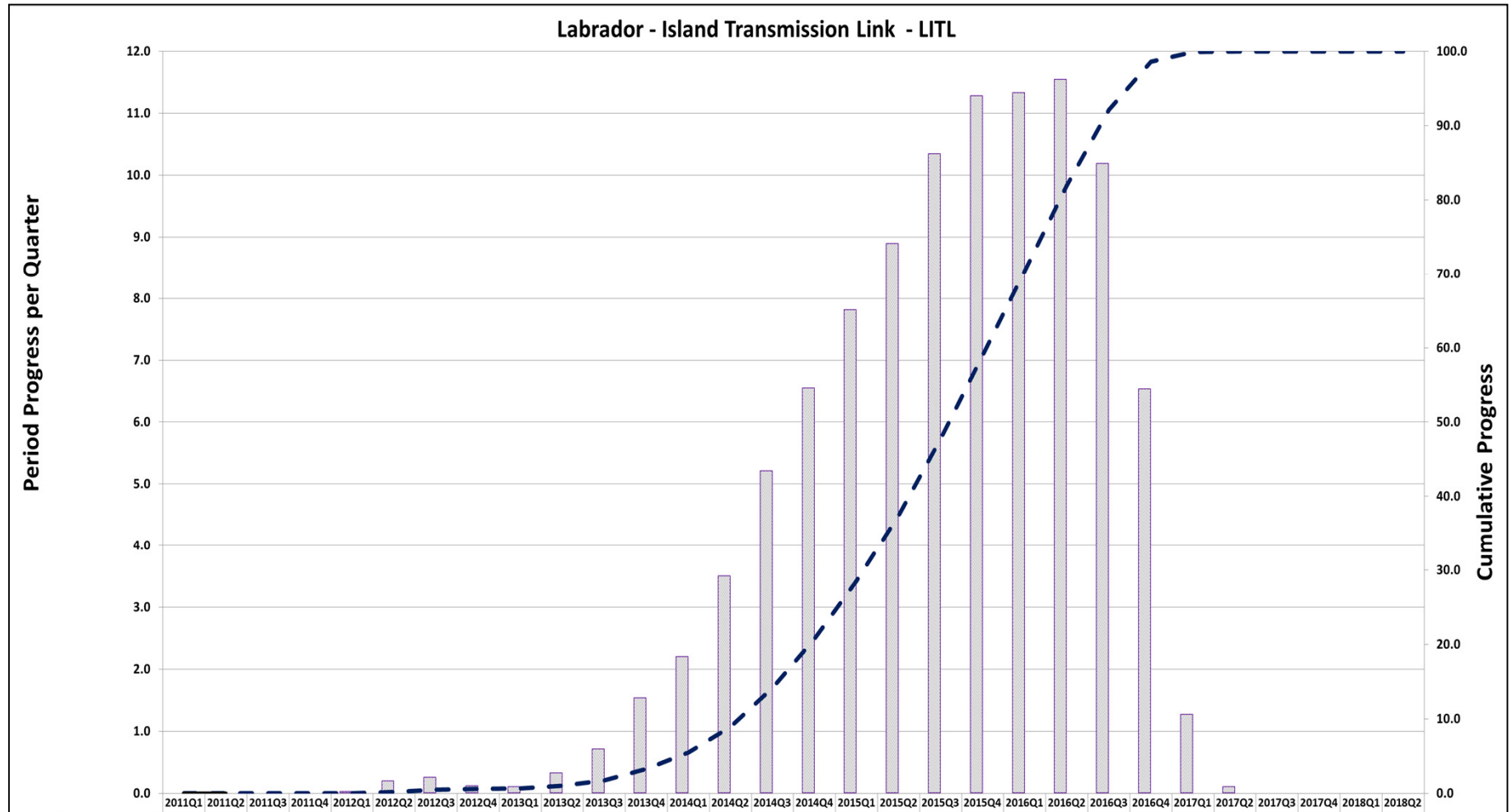
B) Planned Progress Curves B.2 – LCP-IPS LTA



Planned Progress shown per Quarter

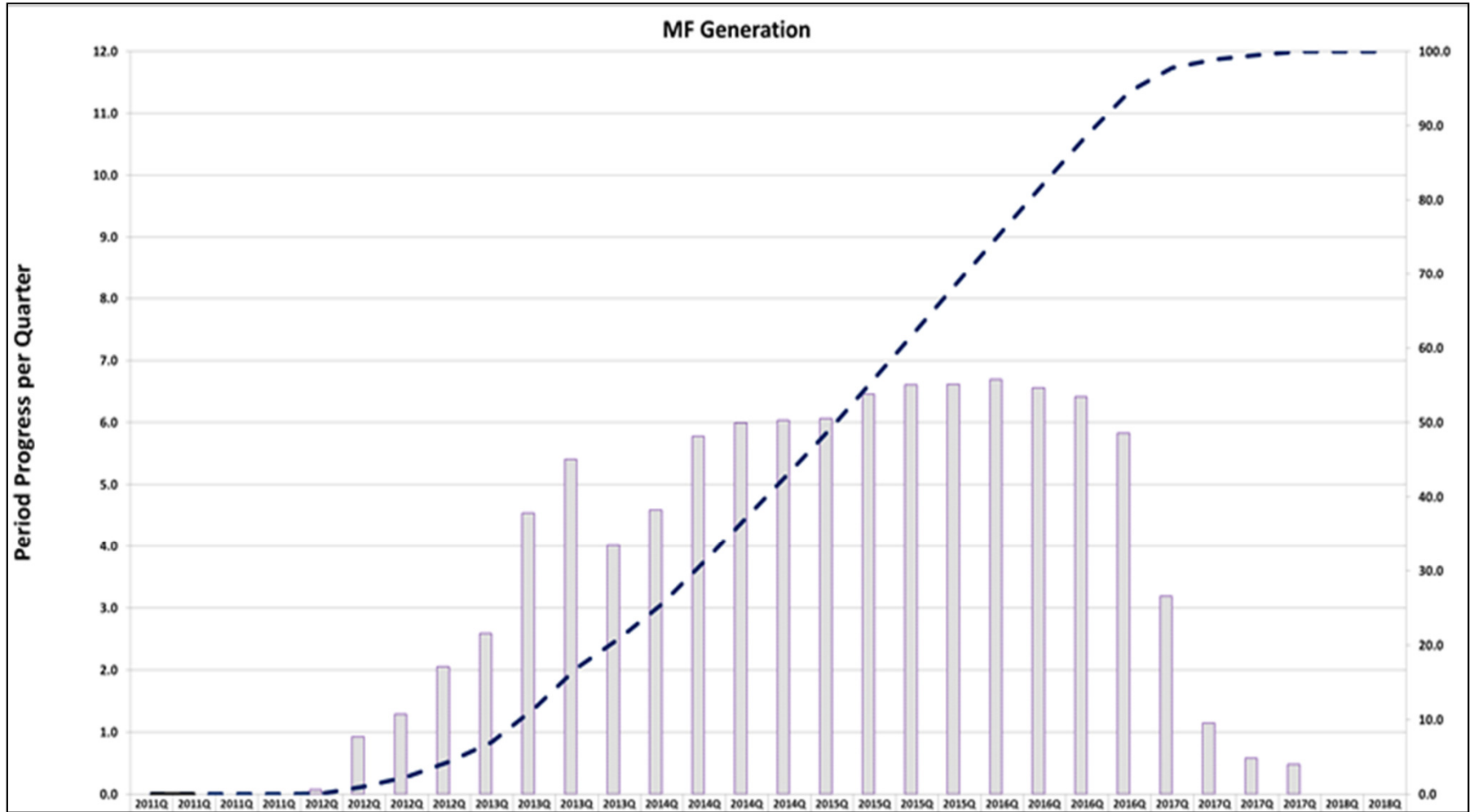
IPS Graphics: Summary Schedules / Progress Curves

B) Planned Progress Curves = B.3 LCP-IPS LITL



Planned Progress shown per Quarter

IPS Graphics: Summary Schedules / Progress Curves
 B) Planned Progress Curves = B.4 – LCP-IPS MFGen



Planned Progress shown per Quarter

IPS Graphics

C) LCP-IPS Critical Paths


C.1 IPS LTA Critical/Sub Critical Paths

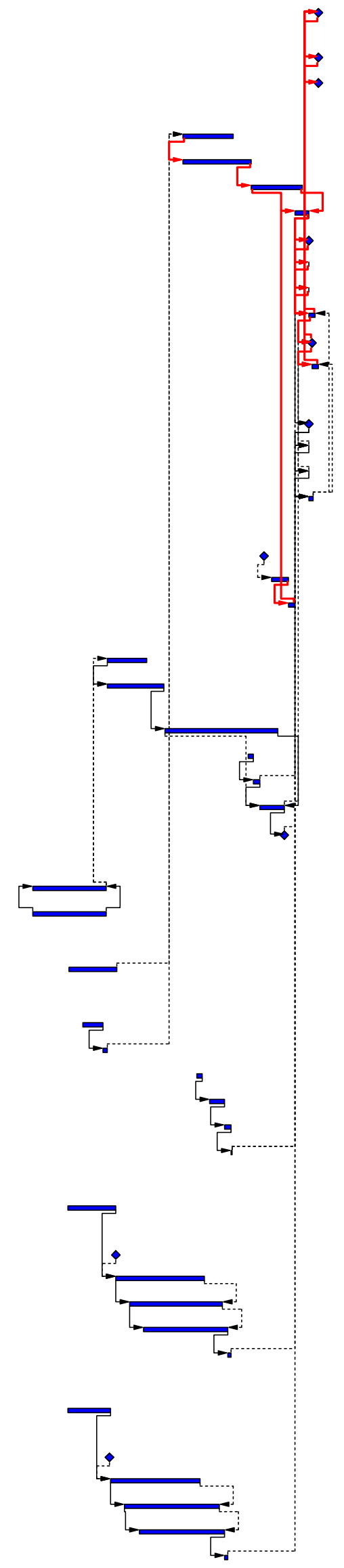
C.2 IPS LITL Critical/Sub Critical Paths

C.3 IPS MFG Critical/Sub Critical Paths to Unit 1 Ready for Operations

IPS Graphics

D) Entire IPS Schedule

 LOWER CHURCHILL PROJECT		Integrated Project Schedule LTA Critical / SubCritical Paths			Nalcor Project Control Printed: 18-Feb-2013														
Activity Name	Total Float	Start	Finish	2012 2013 2014 2015 2016															
				Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
LTA Critical Path - Key Dates				0	23-Aug-2016	23-Aug-2016													
RFO\$KD: LTA 315kV Switchyards and TL Ready for operations (RFO)	0		23-Aug-2016																
Target MIL= LTA-Ready for Power Transmission	0		23-Aug-2016																
Target MIL=Overall-LTA-Ready for Power Transmission	0		23-Aug-2016																
LTA Critical Path				0	05-Nov-2014	23-Aug-2016													
LTA-CF Swyd: Control/Utility Bldg Erect/Outfit #	0	05-Nov-2014*	09-Jul-2015																
LTA-CF Swyd: Foundations/Structure for Outdoor Equipment	0	05-Nov-2014	05-Oct-2015																
LTA-CF Swyd: Install Outdoor Equipment	0	06-Oct-2015	08-Jun-2016																
LTA-CF Swyd: Static Commissioning	0	03-May-2016	08-Jul-2016																
LTA-CF Swyd: Gantry Available for 735kV TL Connection	0		08-Jul-2016																
LTA 735kV CF: Connection to Existing CF Swyd (Slack Span)	0	09-Jul-2016	10-Jul-2016																
LTA 735kV CF: Connection to New CF Swyd (Slack Span)	0	09-Jul-2016	10-Jul-2016																
LTA-CF Swyd: Dynamic Commissioning (up to takeover)	0	11-Jul-2016	09-Aug-2016																
RFO\$: LTA 315kv ac TL (CF to MF) Dynamic Commissioning	0		24-Jul-2016																
LTA-MF Swyd: Dynamic Commissioning (up to takeover)	0	25-Jul-2016	23-Aug-2016																
LTA Sub- Critical Path 1				9	08-Jul-2016	31-Jul-2016													
LTA-CF Swyd: Gantry Available for HVac Seg 2 TL Connection	9		08-Jul-2016																
LTA-ac Seg1: Connection to MF Switchyard (Slack Span)	9	09-Jul-2016	10-Jul-2016																
LTA-ac Seg2 :Connection to CF Switchyard (Slack Span)	9	09-Jul-2016	10-Jul-2016																
LCP-Telecom LTA (CF): Dynamic Commissioning	9	11-Jul-2016	31-Jul-2016																
LTA Sub- Critical Path 2				0	03-Dec-2015	02-May-2016													
LTA CF Swyd: CD0510-Telecom Equipment Delivered at Site	36	03-Dec-2015*																	
LTA-CF Swyd: Install Telecom	0	08-Jan-2016	02-Apr-2016																
LTA-CF Swyd: Telecom Static Commissioning	0	03-Apr-2016	02-May-2016																
LTA Sub- Critical Path 3				126	05-Nov-2013	14-Mar-2016													
LTA-MF Swyd: Civil Works Control Bldg Erect/Outfit	126	05-Nov-2013*	12-May-2014																
LTA-MF Swyd: Civil Works Foundations/Structures for Outdoor Equipment	126	05-Nov-2013	07-Aug-2014																
LTA-MF Swyd: Install Outdoor equipment	126	08-Aug-2014	12-Feb-2016																
LTA-MF Swyd: Install Telecom	126	16-Sep-2015	15-Oct-2015																
LTA-MF Swyd: Telecoms Static Commissioning	126	16-Oct-2015	14-Nov-2015																
LTA-MF Swyd: Static Commissioning	126	15-Nov-2015	13-Mar-2016																
LTA-MF Swyd: Gantry Available for TL Connection	126	14-Mar-2016																	
LTA Sub- Critical Path 4				132	05-Nov-2012	29-Oct-2013													
LTA-MF Swyd: Earthworks (CH0048 & CH0006)	132	05-Nov-2012	29-Oct-2013																
MFG-PH Earth: MF Switchyard earthworks	132	05-Nov-2012*	29-Oct-2013																
LTA Sub- Critical Path 6				318	04-May-2013	21-Dec-2013													
LTA-CF Swyd: Earthworks #	318	04-May-2013*	21-Dec-2013																
LTA Sub- Critical Path 7				370	09-Jul-2013	04-Jul-2015													
LTA-CF Camp: Installation Works	365	09-Jul-2013*	14-Oct-2013																
LTA-CF Camp: Completions (static - dynamic)	365	15-Oct-2013	04-Nov-2013																
LTA 735kV CF: Civil Works Foundations	370	14-Jan-2015*	05-Feb-2015																
LTA 735kV CF: Tower Assembly / Install	370	17-Mar-2015	27-May-2015																
LTA 735kV CF: Conductor/OPGW Install	370	28-May-2015	29-Jun-2015																
LTA 735kV CF: Post Installation Final Inspection (static)	370	30-Jun-2015	04-Jul-2015																
LTA Sub- Critical Path 8				388	26-Apr-2013	25-Jun-2015													
LTA-ac Seg2: ROW Clearing / Survey & Tower Spotting (for civil start) #	388	26-Apr-2013*	15-Dec-2013																
LTA HVac Seg2: CT0319 = Distribution Materials Start #	391	13-Dec-2013*																	
LTA-ac Seg2: Civil Works - Foundations	388	16-Dec-2013	20-Feb-2015																
LTA-ac Seg2: Tower Assembly / Install	388	20-Feb-2014	15-May-2015																
LTA-ac Seg2 :Conductor/OPGW Install	388	30-Apr-2014	11-Jun-2015																
LTA-ac Seg2: Post Installation Final Inspection (static)	388	12-Jun-2015	25-Jun-2015																
LTA Sub- Critical Path 9				402	26-Apr-2013	11-Jun-2015													
LTA-ac Seg1: ROW Clearing / Survey & Tower Spotting (for civil start)	402	26-Apr-2013*	18-Nov-2013																
LTA HVac Seg1: CT0319 = Distribution Materials Start #	407	14-Nov-2013*																	
LTA-ac Seg1: Civil Works - foundations	402	19-Nov-2013	28-Jan-2015																
LTA-ac Seg1: Tower Assembly / Install	402	27-Jan-2014	01-May-2015																
LTA-ac Seg1: Conductor/OPGW Install	402	10-Apr-2014	28-May-2015																
LTA-ac Seg1: Post Installation Final Inspection (static)	402	29-May-2015	11-Jun-2015																

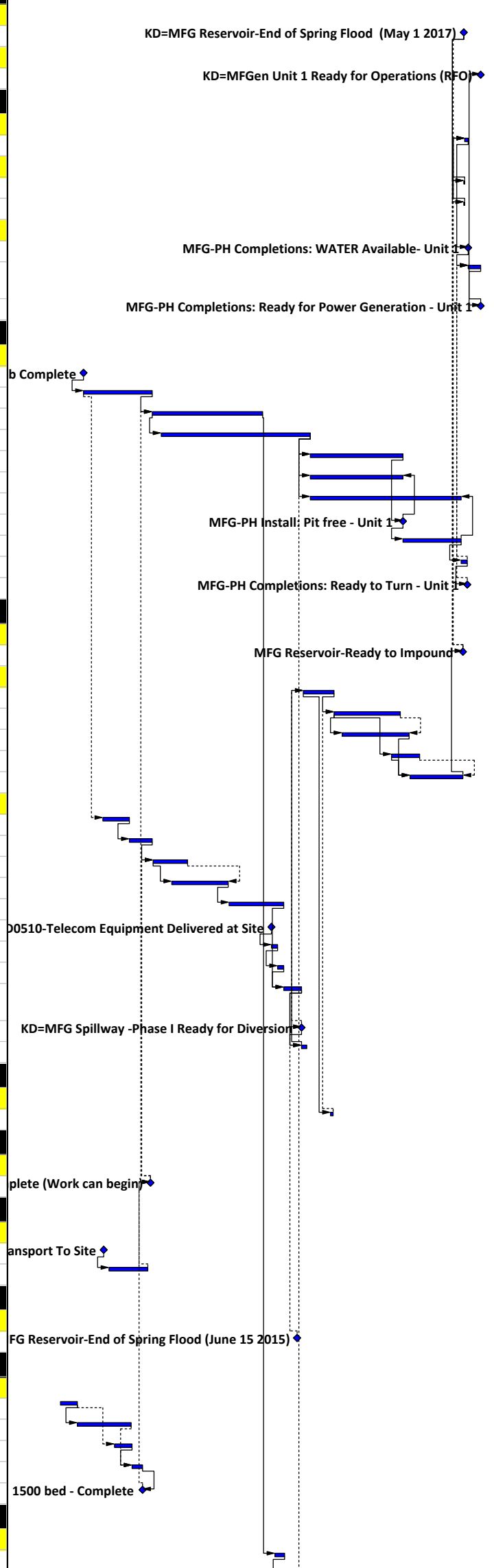




Integrated Project Schedule
MFGen Critical / SubCritical Paths

LCP Project Control
Printed: 18-Feb-2013

Activity Name	Total Float	Start	Finish	2012				2013				2014				2015				2016				2017			
				Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
MFG Critical Path - Key Dates																											
MFGen Spillway/Diverson																											
KD=MFG Reservoir-End of Spring Flood (May 1 2017)	0	01-May-2017*																									
MFGen Power House & Intake																											
KD=MFGen Unit 1 Ready for Operations (RFO)	0	07-Jul-2017																									
MFG Critical Path																											
MFGen Reservoir Preparation																											
MFG Reservoir -Impoundment	0	04-May-2017	17-May-2017																								
MFGen Spillway/Diverson																											
MFG-SpilDiv2 Place Stoplogs and Dewater Bay 2	0	02-May-2017	02-May-2017																								
MFG-SpilDiv2 Place Stoplogs and Dewater Bay 4	0	02-May-2017	02-May-2017																								
MFGen Power House & Intake																											
MFG-PH Completions: WATER Available- Unit 1	0		17-May-2017																								
MFG-PH Completions: Dynamic Comm. (Wet Tests to takeover) T/G- Unit 1	0	19-May-2017	07-Jul-2017																								
MFG-PH Completions: Ready for Power Generation - Unit 1	0		07-Jul-2017																								
MFG Sub-Critical Path 1																											
MFGen Power House & Intake																											
KD=MFG-PH: CH0006 Bulk Exca Equip Mob Complete	6	13-Jan-2013*																									
MFG-PH Excavation: Powerhouse (incl Cofferdam 3)	6	13-Jan-2013	25-Oct-2013																								
MFG-PH Civil: South Service Bay (Including Enclosure)	6	26-Oct-2013	21-Jan-2015																								
MFG-PH Civil: Unit 1 Structure Ph 1 (bldg enclosed)	6	02-Dec-2013	07-Aug-2015																								
MFG-PH Install: T/G Embedded Parts & Structure Ph 2 Unit 1	6	08-Aug-2015	22-Aug-2016																								
MFG-PH Install/Comm: Bldg Utility Systems - Unit 1	6	08-Aug-2015	22-Aug-2016																								
MFG-PH Install/Comm: T/G Ancillary Systems - Unit 1	6	08-Aug-2015	20-Apr-2017																								
MFG-PH Install: Pit free - Unit 1	6		22-Aug-2016																								
MFG-PH Install: Turbine/generator - Unit 1 Pit Free to Dry Test	6	23-Aug-2016	20-Apr-2017																								
MFG-PH Completions: Static Comm. (Dry Tests) - Unit 1	6	20-Apr-2017	13-May-2017																								
MFG-PH Completions: Ready to Turn - Unit 1	6		13-May-2017																								
MFG Sub-Critical Path 2																											
MFGen Reservoir Preparation																											
MFG Reservoir-Ready to Impound	6		25-Apr-2017																								
MFGen North RCC Dam																											
MFG-North Dam: Upstream Cofferdam(5)	6	09-Jul-2015	11-Nov-2015																								
MFG-North Dam Earth: Foundation Preparation	6	12-Nov-2015	10-Aug-2016																								
MFG-North Dam: CVC D/S Walls & Abutments	6	16-Dec-2015	18-Sep-2016																								
MFG-North Dam: RCC	6	05-Jul-2016	31-Oct-2016																								
MFG-North Dam: CVC Crest & D/S Facing	6	19-Sep-2016	25-Apr-2017																								
MFGen Spillway/Diverson																											
MFG-SpilDiv1: Excavation - Spillway	6	05-Apr-2013*	22-Jul-2013																								
MFG-SpilDiv1: Civil Works: Cofferdams 1/ 2/Riverside RCC(10)	6	23-Jul-2013	26-Oct-2013																								
MFG-SpilDiv1 Civil: Ph1 Foundation Preparation - Spillway	6	27-Oct-2013	20-Mar-2014																								
MFG-SpilDiv1 Civil: Ph1 Structures - Spillway	6	14-Jan-2014	04-Sep-2014																								
MFG-SpilDiv1 Install: Hydro-Mech Spillway (gates/Stoplogs)	6	05-Sep-2014	19-Apr-2015																								
MFG-SpilDiv1 Materials: CD0510-Telecom Equipment Delivered at Site	6	01-Mar-2015																									
MFG-SpilDiv1 Install: Install Telecom	6	01-Mar-2015	25-Mar-2015																								
MFG-SpilDiv1 Install: Telecom Static Comm	6	26-Mar-2015	19-Apr-2015																								
MFG-SpilDiv1 Completions: Hydro-Mech Spillway (static - dynamic-gates/Stoplogs)	6	20-Apr-2015	02-Jul-2015																								
KD=MFG Spillway -Phase I Ready for Diversion	6		02-Jul-2015																								
MFG-SpilDiv1: Civil Works:Cofferdams 1/2/Riverside RCC(10) Removed	6	03-Jul-2015	23-Jul-2015																								
MFG Sub-Critical Path 3																											
MFGen North RCC Dam																											
MFG-North Dam: Downstream Cofferdam(6)	7	28-Oct-2015	10-Nov-2015																								
MFG Sub-Critical Path 4																											
MFGen Spillway/Diverson																											
MFG-SW CH0007 Mobilization Complete (Work can begin)	15	17-Oct-2013*																									
MFG Sub-Critical Path 5																											
MFGen Access Road																											
MFG-South Side Site Access Bridge Rebar - Transport To Site	23		09-Apr-2013*																								
MFG-South Side Site Access permanent McKenzie bridge	23	01-May-2013	08-Oct-2013																								
MFG Sub-Critical Path 6																											
MFGen Spillway/Diverson																											
KD=MFG Reservoir-End of Spring Flood (June 15 2015)	23	15-Jun-2015*																									
MFG Sub-Critical Path 7																											
MFGen Accommodations																											
MFG-Camp Installation: Starter Camp (150 bed) and Utilities	50	12-Oct-2012*	19-Dec-2012																								
MFG-Camp Installation: 500 bed sections/Admin bldgs/Utilities	50	20-Dec-2012	30-Jul-2013																								
MFG-Camp Installation: 1000 bed sections and Utilities	47	23-May-2013*	02-Aug-2013																								
MFG-Camp Installation: 1500 bed sections and Utilities	47	03-Aug-2013	14-Sep-2013																								
MFG-Camp Completions: 1500 bed - Complete	47		14-Sep-2013																								
MFG Sub-Critical Path 8																											
MFGen Power House & Intake																											
MFG-PH Install: Powerhouse crane	90	14-Mar-2015	24-Apr-2015																								
MFG-PH Completions: Dynamic Comm. Overhead crane	90	25-Apr-2015	15-May-2015																								





Integrated Project Schedule

LCP Project Control

at Baseline

Printed: 18-Feb-2013

Activity Name	Start	Finish	2010				2011				2012				2013				2014				2015				2016				2017				D18
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	
Lower Churchill Project General																																			
Target Milestones																																			
LCP Overall																																			
0 Target Milestones																																			
Target MIL=Overall-LCP Project Ph 1=Project Sanction		17-Dec-2012*	Overall-LCP Project Ph 1=Project Sanction ◆																																
Target MIL=Overall- LITL-EA=Release	01-Apr-2013*		Target MIL=Overall- LITL-EA=Release ◆																																
Target MIL=Overall-LTA-Ready for Power Transmission		23-Aug-2016	Target MIL=Overall-LTA-Ready for Power Transmission ◆																																
Target MIL= Overall-LITL-SOBI Cable Systems Ready for Power Transmission		25-Oct-2016	Target MIL= Overall-LITL-SOBI Cable Systems Ready for Power Transmission ◆																																
Target MIL= LITL Completion Stretch Target (Fall 2016)		01-Nov-2016*	Target MIL= LITL Completion Stretch Target (Fall 2016) ◆																																
Target MIL= Overall-LITL-Ready for Power Transmission		27-Jun-2017	Target MIL= Overall-LITL-Ready for Power Transmission ◆																																
Target MIL=Overall-MFG-First Power from Muskrat Falls		07-Jul-2017	Target MIL=Overall-MFG-First Power from Muskrat Falls ◆																																
Target MIL=Overall-MFG-Full Power from Muskrat Falls		30-Dec-2017	Target MIL=Overall-MFG-Full Power from Muskrat Falls ◆																																
LTA																																			
0 Target Milestones																																			
Target MIL= LTA-Hvac TL ROW Clearing=Start	26-Apr-2013		Target MIL= LTA-Hvac TL ROW Clearing=Start ◆																																
Target MIL= LTA-Hvac TL Construction=Complete		25-Jun-2015	Target MIL= LTA-Hvac TL Construction=Complete ◆																																
Target MIL= LTA-CF Switchyard=RFO (Ready to Energize)		09-Aug-2016	Target MIL= LTA-CF Switchyard=RFO (Ready to Energize) ◆																																
Target MIL= LTA-MF Switchyard=RFO (Ready to Energize)		23-Aug-2016	Target MIL= LTA-MF Switchyard=RFO (Ready to Energize) ◆																																
Target MIL= LTA-Ready for Power Transmission		23-Aug-2016	Target MIL= LTA-Ready for Power Transmission ◆																																
LITL																																			
0 Target Milestones																																			
Target MIL= LITL-HVdc TL ROW Clearing=Start	02-Jul-2013		Target MIL= LITL-HVdc TL ROW Clearing=Start ◆																																
Target MIL= LITL-SOBI Landfall Protection (HDD)=Start	01-Sep-2013		Target MIL= LITL-SOBI Landfall Protection (HDD)=Start ◆																																
Target MIL= LITL-Convertor Stations Contract=Award		04-Oct-2013*	Target MIL= LITL-Convertor Stations Contract=Award ◆																																
Target MIL= LITL-SOBI Landfall Protection (HDD)=Complete		17-Nov-2015	Target MIL= LITL-SOBI Landfall Protection (HDD)=Complete ◆																																
Target MIL= LITL-SOBI Cable Systems (Land/Submarine)=Installed		20-Aug-2016	Target MIL= LITL-SOBI Cable Systems (Land/Submarine)=Installed ◆																																
Target MIL= LITL-SOBI Submarine Cable Protection=Completed		15-Oct-2016	Target MIL= LITL-SOBI Submarine Cable Protection=Completed ◆																																
Target MIL= LITL-SOBI Cable Systems=RFO (Ready for Power Transmission)		25-Oct-2016	Target MIL= LITL-SOBI Cable Systems=RFO (Ready for Power Transmission) ◆																																
Target MIL= LITL-MF Convertor Stations=RFO (Ready to Use)		27-Oct-2016	Target MIL= LITL-MF Convertor Stations=RFO (Ready to Use) ◆																																
Target MIL= LITL-HVdc TL Construction=Complete		16-Feb-2017	Target MIL= LITL-HVdc TL Construction=Complete ◆																																
Target MIL= LITL-SP Switchyard & Convertor Station=RFO (Ready to Use)		18-May-2017	Target MIL= LITL-SP Switchyard & Convertor Station=RFO (Ready to Use) ◆																																
Target MIL= LITL RFO=Ready for Power Transmission		27-Jun-2017	Target MIL= LITL RFO=Ready for Power Transmission ◆																																
MF Gen																																			
0 Target Milestones																																			
Target MIL= MFG-MF Access Road=Ready for Use		15-Oct-2012	Target MIL= MFG-MF Access Road=Ready for Use ◆																																
Target MIL= MFG-Bulk Excavation Contractor=Mob (start of work)	16-Oct-2012		Target MIL= MFG-Bulk Excavation Contractor=Mob (start of work) ◆																																
Target MIL= MFG-Powerhouse=Commence Construction	16-Oct-2012		Target MIL= MFG-Powerhouse=Commence Construction ◆																																
Target MIL= MFG-Powerhouse/Intake/Spillway Contract=Award		04-Jun-2013*	Target MIL= MFG-Powerhouse/Intake/Spillway Contract=Award ◆																																
Target MIL= MFG-North Spur Works (Stabilization)=Commence	01-Jul-2014		Target MIL= MFG-North Spur Works (Stabilization)=Commence ◆																																
Target MIL= MFG-South Dam=Commence Construction	02-May-2015		Target MIL= MFG-South Dam=Commence Construction ◆																																
Target MIL= MFG-Powerhouse=Crane Commissioned		15-May-2015	Target MIL= MFG-Powerhouse=Crane Commissioned ◆																																

◆ Milestone/Key Date
 ■ Activity



Integrated Project Schedule

LCP Project Control

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Activity Name	Start	Finish	2010		2011				2012				2013				2014				2015				2016				2017				D18								
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3		Q4							
Target MIL= MFG-North Spur Works=Ready for Diversion		15-Oct-2015																																							
Target MIL= MFG-South Dam=Completed		14-Nov-2015																																							
Target MIL= MFG-River=Diverted		26-Nov-2015																																							
Target MIL= MFG-Reservoir Preparation=Completed		02-Jun-2016																																							
Target MIL= MFG-Powerhouse=T/G Unit 1= Pit Free		22-Aug-2016																																							
Target MIL= MFG-North Spur StabilizationWorks=Complete		30-Sep-2016																																							
Target MIL= MFG-Powerhouse=T/G Unit 4= Pit Free		16-Jan-2017																																							
Target MIL= MFG-North Dam (RCC)=Complete		25-Apr-2017																																							
Target MIL= MFG-Powerhouse=T/G Unit 1= Ready to Turn		13-May-2017																																							
Target MIL= MFG-Reservoir Impoundment=Complete		17-May-2017																																							
Target MIL= MFG-Powerhouse=T/G Unit 1=RFO (Commercial Power)		07-Jul-2017																																							
Target MIL= MFG-First Power from Muskrat Falls		07-Jul-2017																																							
Target MIL= MFG-Powerhouse=T/G Unit 4=RFO (Commercial Power)		30-Dec-2017																																							
Target MIL= MFG-Full Power from Muskrat Falls		30-Dec-2017																																							

LCP Overall System Completions

LCP SysComp Key Date

LTA			
1 Key Date			
RFO\$KD: LTA 735kV ac TL Energized (existing to new CF switchyards)		11-Jul-2016	
RFO\$KD: LTA 315kV ac TL Energized (CF to MF switchyards)		25-Jul-2016	
RFO\$KD: LTA 735kV Switchyards and TL Ready for operations (RFO)			09-Aug-2016
RFO\$KD: LTA 315kV Switchyards and TL Ready for operations (RFO)			23-Aug-2016
LITL			
1 Key Date			
RFO\$KD: LITL Converters - Static Comm. Complete			28-Aug-2016
RFO\$KD: LITL dc TL Lab (Seg 1/Seg2/Electrode Line) - Ready for Operation			28-Sep-2016
Mil=SLI Milestone 6 - LITL Ready for Power Transmission			27-Jun-2017
LCP SysComp RFO			
LTA			
1 Key Date			
Mil=SLI Milestone 4 - CF to MF HVac TL Ready for power transmission			23-Aug-2016
3 RFO Compl LTA-735			
RFO\$: LTA 735kV ac TL (existing to new CF switchyards) Dynamic Commissioning		11-Jul-2016	15-Jul-2016
3 RFO Compl LTA-315			
RFO\$: LTA 315kv ac TL (CF to MF) Dynamic Commissioning			24-Jul-2016
LITL			
6 RFO Compl LITL			
RFO\$-LITL Transition Compounds - Static Comm. Complete			14-Aug-2015
RFO\$-LITL Electrode Sites - Static Comm. Complete			05-Dec-2015
RFO\$: LITL dc SOBI Cable Systems Post Rock placement Test (POST SRI)			25-Oct-2016
RFO\$-LITL Synchronous Condensor - Static Comm. Complete			30-Dec-2016

Target MIL= MFG-North Spur Works=Ready for Diversion	◆
Target MIL= MFG-South Dam=Completed	◆
Target MIL= MFG-River=Diverted	◆
Target MIL= MFG-Reservoir Preparation=Completed	◆
Target MIL= MFG-Powerhouse=T/G Unit 1= Pit Free	◆
Target MIL= MFG-North Spur StabilizationWorks=Complete	◆
Target MIL= MFG-Powerhouse=T/G Unit 4= Pit Free	◆
Target MIL= MFG-North Dam (RCC)=Complete	◆
Target MIL= MFG-Powerhouse=T/G Unit 1= Ready to Turn	◆
Target MIL= MFG-Reservoir Impoundment=Complete	◆
Target MIL= MFG-Powerhouse=T/G Unit 1=RFO (Commercial Power)	◆
Target MIL= MFG-First Power from Muskrat Falls	◆
Target MIL= MFG-Powerhouse=T/G Unit 4=RFO (Commercial Power)	◆
Target MIL= MFG-Full Power from Muskrat Falls	◆
RFO\$KD: LTA 735kV ac TL Energized (existing to new CF switchyards)	◆
RFO\$KD: LTA 315kV ac TL Energized (CF to MF switchyards)	◆
RFO\$KD: LTA 735kV Switchyards and TL Ready for operations (RFO)	◆
RFO\$KD: LTA 315kV Switchyards and TL Ready for operations (RFO)	◆
RFO\$KD: LITL Converters - Static Comm. Complete	◆
RFO\$KD: LITL dc TL Lab (Seg 1/Seg2/Electrode Line) - Ready for Operation	◆
Mil=SLI Milestone 6 - LITL Ready for Power Transmission	◆
Mil=SLI Milestone 4 - CF to MF HVac TL Ready for power transmission	◆
RFO\$: LTA 315kv ac TL (CF to MF) Dynamic Commissioning	◆
RFO\$-LITL Transition Compounds - Static Comm. Complete	◆
RFO\$-LITL Electrode Sites - Static Comm. Complete	◆
RFO\$: LITL dc SOBI Cable Systems Post Rock placement Test (POST SRI)	◆
RFO\$-LITL Synchronous Condensor - Static Comm. Complete	◆

◆ Milestone/Key Date
 ■ Activity



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Activity Name	Start	Finish	2010			2011				2012				2013				2014				2015				2016				2017				D18
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
RFO\$-LITL Switchyard (SP) - Static Comm. Complete		13-Jan-2017																																
RFO\$: LITL dc TL NFLD (Seg 3/Seg4/Seg5) - Dynamic Comm -Energize		09-Mar-2017																																
RFO\$: LITL dc TL NFLD Electrode TL - Dynamic Comm-Energize		08-Apr-2017																																
6 RFO Compl LITL-Lab																																		
RFO\$: LITL dc TL Lab (Seg 1/Seg2/Electrode) - Inspection/Connection Complete		29-Aug-2016																																
RFO\$: LITL dc TL Lab (Seg 1/Seg2/ElectrLine)-Dynamic Comm-Energize		28-Sep-2016																																
6 RFO Compl LITL-Nfld																																		
RFO\$: LITL dc TL NFLD Electrode TL - Inspection/Connection Complete		28-Aug-2016																																
RFO\$: LITL dc TL NFLD (Seg 3/Seg4/Seg5) - Inspection/Connection Complete		16-Feb-2017																																
MF Gen																																		
1 Key Date																																		
Mil=SLI Milestone 3 - Start Bulk Excavation		13-Jan-2013																																
Mil=SLI Milestone 5 - 1st Power from MF (via Churchill Falls)		07-Jul-2017																																
Mil=SLI Milestone 7 - Full Power		30-Dec-2017																																
LCP Telecoms-Overall																																		
LCP telecoms																																		
j Completions																																		
LCP-Telecom: Overall Dynamic Commissioning (via SOBI Cable)		24-Mar-2017																																
Labrador Transmission Asset (LTA)																																		
LCP Telecoms-CF																																		
LCP telecoms																																		
j Completions																																		
LCP-Telecom LTA (CF): Dynamic Commissioning		11-Jul-2016																																
LTA Eng/Procure																																		
LTA- Eng/Procure																																		
2 Eng/Procure																																		
LTA - ENG - RFI: LTA RFI Engineering		19-Sep-2011*																																
LTA - ENG - AFC: LTA AFC Engineering		20-Oct-2011*																																
LTA CF Accommodations																																		
LTA-CF Camp																																		
1 Key Date																																		
KD=LTA CF Camp: CD0502-CF Start Construction		09-Jul-2013																																
KD=LTA CF Camp: CD0502-CF Camp Available for Occupancy		04-Nov-2013																																
g Installation																																		
LTA-CF Camp: Installation Works		09-Jul-2013*																																
j Completions																																		
LTA-CF Camp: Completions (static - dynamic)		15-Oct-2013																																
LTA CF Switchyard																																		
LTA-CF Switchyard																																		
1 Key Date																																		



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Activity Name	Start	Finish	2010																2011																2012																2013																2014																2015																2016																2017																Q18
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4																																																																																										
			Gantt Chart: Activity bars and Milestones (diamonds) are plotted across the quarterly grid from 2010 to 2017.																																																																																																																																
KD=LTA CF Swyd: Start Earth Works	04-May-2013		KD=LTA CF Swyd: Start Earth Works																																																																																																																																
KD=LTA CF Swyd: Earthworks Complete		21-Dec-2013	KD=LTA CF Swyd: Earthworks Complete																																																																																																																																
KD=LTA CF Swyd: Start Civil Works	05-Nov-2014		KD=LTA CF Swyd: Start Civil Works																																																																																																																																
KD=LTA CF Swyd: Control & Utility Buildings Ready for Equipment Installation		09-Jul-2015	KD=LTA CF Swyd: Control & Utility Buildings Ready for Equipment Installation																																																																																																																																
KD=LTA CF Swyd: Completed Static Commissioning		08-Jul-2016	KD=LTA CF Swyd: Completed Static Commissioning																																																																																																																																
KD=LTA CF Swyd: Ready for Operations (RFO)		09-Aug-2016	KD=LTA CF Swyd: Ready for Operations (RFO)																																																																																																																																
c Materials																																																																																																																																			
LTA CF Swyd: PD0505-Equipment Delivered at Site		03-Dec-2014*	LTA CF Swyd: PD0505-Equipment Delivered at Site																																																																																																																																
LTA CF Swyd: PD0537-Transformers Delivered at Site		03-Dec-2014*	LTA CF Swyd: PD0537-Transformers Delivered at Site																																																																																																																																
LTA CF Swyd: CD0510-Telecom Equipment Delivered at Site	03-Dec-2015*		LTA CF Swyd: CD0510-Telecom Equipment Delivered at Site																																																																																																																																
e Earthworks																																																																																																																																			
LTA-CF Swyd: Earthworks #	04-May-201...	21-Dec-2013	[Gantt Bar]																																																																																																																																
f Civil/Structures																																																																																																																																			
LTA-CF Swyd: Control/Utility Bldg Erect/Outfit #	05-Nov-2014*	09-Jul-2015	[Gantt Bar]																																																																																																																																
LTA-CF Swyd: Foundations/Structure for Outdoor Equipment	05-Nov-2014	05-Oct-2015	[Gantt Bar]																																																																																																																																
g Installation																																																																																																																																			
LTA-CF Swyd: Install Indoor Equipment	10-Jul-2015	14-Jan-2016	[Gantt Bar]																																																																																																																																
LTA-CF Swyd: Install Outdoor Equipment	06-Oct-2015	08-Jun-2016	[Gantt Bar]																																																																																																																																
LTA-CF Swyd: Gantry Available for HVac Seg 2 TL Connection		08-Jul-2016	LTA-CF Swyd: Gantry Available for HVac Seg 2 TL Connection																																																																																																																																
LTA-CF Swyd: Gantry Available for 735kV TL Connection		08-Jul-2016	LTA-CF Swyd: Gantry Available for 735kV TL Connection																																																																																																																																
h Telecom																																																																																																																																			
LTA-CF Swyd: Install Telecom	08-Jan-2016	02-Apr-2016	[Gantt Bar]																																																																																																																																
j Completions																																																																																																																																			
LTA-CF Swyd: Telecom Static Commissioning	03-Apr-2016	02-May-2016	[Gantt Bar]																																																																																																																																
LTA-CF Swyd: Static Commissioning	03-May-2016	08-Jul-2016	[Gantt Bar]																																																																																																																																
LTA-CF Swyd: Dynamic Commissioning (up to takeover)	11-Jul-2016	09-Aug-2016	[Gantt Bar]																																																																																																																																
LTA-735kV Interconnect at CF																																																																																																																																			
LTA-735kV ac Intercon CF																																																																																																																																			
1 Key Date																																																																																																																																			
KD=LTA 735kV CF: Start Construction	07-Mar-2014		KD=LTA 735kV CF: Start Construction																																																																																																																																
KD=LTA 735kV CF: TL Inspection/Connection Complete		10-Jul-2016	KD=LTA 735kV CF: TL Inspection/Connection Complete																																																																																																																																
e Earthworks																																																																																																																																			
LTA 735kV CF: ROW Clearing	07-Mar-2014*	13-Mar-2014	[Gantt Bar]																																																																																																																																
f Civil/Structures																																																																																																																																			
LTA 735kV CF: Civil Works Foundations	14-Jan-2015*	05-Feb-2015	[Gantt Bar]																																																																																																																																
g Installation																																																																																																																																			
LTA 735kV CF: Tower Assembly / Install	17-Mar-2015	27-May-2015	[Gantt Bar]																																																																																																																																
LTA 735kV CF: Conductor/OPGW Install	28-May-2015	29-Jun-2015	[Gantt Bar]																																																																																																																																
j Completions																																																																																																																																			
LTA 735kV CF: Post Installation Final Inspection (static)	30-Jun-2015	04-Jul-2015	[Gantt Bar]																																																																																																																																
LTA 735kV CF: Connection to Existing CF Swyd (Slack Span)	09-Jul-2016	10-Jul-2016	[Gantt Bar]																																																																																																																																

◆ Milestone/Key Date
 [Blue Bar] Activity



Integrated Project Schedule

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Activity Name	Start	Finish	2010				2011				2012				2013				2014				2015				2016				2017				2018
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	
			LTA 735kV CF: Connection to New CF Swyd (Slack Span) LTA-HVAc Line Marshalling Yard LTA-HVAc Line Marshalling Yard 1 Key Date KD=LTA Lab Marshalling Yard (ac and dc): Start Construction 19-Nov-2012 KD=LTA Lab Marshalling Yard (ac and dc): Available 16-Sep-2013 e Earthworks LTA Lab Marshalling Yard (ac and dc): Clear 19-Nov-2012* 14-Dec-2012 f Civil/Structures LTA Lab Marshalling Yard (ac and dc): Construct 28-May-201... 16-Sep-2013 LTA Lab Marshalling Yard (ac and dc): Available 16-Sep-2013 LTA (L3101/L3102) 315kV TL Seg1/2 MF-CF LTA (L3101/L3102) 315kV TL Segment 1 1 Key Date KD=LTA HVAc Seg1: Telecom Services Available (for Line Construction) 08-Mar-2013* KD=LTA HVAc Seg1: TL Construction Start 26-Apr-2013 KD=LTA HVAc Seg1: TL Inspection/Connection Complete 10-Jul-2016 c Materials LTA HVAc Seg1: CT0319 = Distribution Materials Start # 14-Nov-2013* e Earthworks LTA-ac Seg1: ROW Clearing / Survey & Tower Spotting (for civil start) 26-Apr-2013* 18-Nov-2013 LTA-ac Seg1: ROW Clearing / Survey & Tower Spotting (balance) 19-Nov-2013 21-Feb-2014 f Civil/Structures LTA-ac Seg1: Civil Works - foundations 19-Nov-2013 28-Jan-2015 g Installation LTA-ac Seg1: Tower Assembly / Install 27-Jan-2014 01-May-2015 LTA-ac Seg1: Conductor/OPGW Install 10-Apr-2014 28-May-2015 j Completions LTA-ac Seg1: Post Installation Final Inspection (static) 29-May-2015 11-Jun-2015 LTA-ac Seg1: Connection to MF Switchyard (Slack Span) 09-Jul-2016 10-Jul-2016 LTA (L3101/L3102) 315kV TL Segment 2 1 Key Date KD=LTA HVAc Seg2: Telecom Services Available (for Line Construction) 05-Apr-2013* KD=LTA HVAc Seg2: TL Construction Start 26-Apr-2013 KD=LTA HVAc Seg2: TL Inspection/Connection Complete 10-Jul-2016 c Materials LTA HVAc Seg2: CT0319 = Distribution Materials Start # 13-Dec-2013* e Earthworks LTA-ac Seg2: ROW Clearing / Survey & Tower Spotting (for civil start) # 26-Apr-2013* 15-Dec-2013 LTA-ac Seg2: ROW Clearing / Survey & Tower Spotting (balance) 16-Dec-2013 06-Mar-2014																																

◆ Milestone/Key Date
 ■ Activity



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Activity Name	Start	Finish	2010		2011				2012				2013				2014				2015				2016				2017				2018	
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
f Civil/Structures																																		
LTA-ac Seg2: Civil Works - Foundations	16-Dec-2013	20-Feb-2015																																
g Installation																																		
LTA-ac Seg2: Tower Assembly / Install	20-Feb-2014	15-May-2015																																
LTA-ac Seg2 :Conductor/OPGW Install	30-Apr-2014	11-Jun-2015																																
j Completions																																		
LTA-ac Seg2: Post Installation Final Inspection (static)	12-Jun-2015	25-Jun-2015																																
LTA-ac Seg2 :Connection to CF Switchyard (Slack Span)	09-Jul-2016	10-Jul-2016																																
LTA (MFATS2) MF Terminal Station (Switchyard)																																		
LTA-MF Switchyard																																		
1 Key Date																																		
KD=LTA MF Swyd: Start Earthworks	05-Nov-2012																												KD=LTA MF Swyd: Start Earthworks					
KD=LTA MF Swyd: Earthworks Complete		29-Oct-2013																											KD=LTA MF Swyd: Earthworks Complete					
KD=LTA MF Swyd: Start Civil Works	05-Nov-2013																												KD=LTA MF Swyd: Start Civil Works					
KD=LTA MF Swyd: Control Building Ready for Equipment Installation		12-May-2014																											LTA MF Swyd: Control Building Ready for Equipment Installation					
KD=LTA MF Swyd: Completed Static Commissioning		13-Mar-2016																											KD=LTA MF Swyd: Completed Static Commissioning					
KD=LTA MF Swyd: Ready for Operations (RFO)		23-Aug-2016																											KD=LTA MF Swyd: Ready for Operations (RFO)					
c Materials																																		
LTA MF Swyd: PD0537-Transformers Delivered at Site		06-Jun-2014*																											LTA MF Swyd: PD0537-Transformers Delivered at Site					
LTA MF Swyd: PD0505-Equipment Delivered at Site		03-Dec-2014*																											LTA MF Swyd: PD0505-Equipment Delivered at Site					
LTA MF Swyd: CD0510-Telecom Equipment Delivered at Site	19-Aug-2015*																												LTA MF Swyd: CD0510-Telecom Equipment Delivered at Site					
e Earthworks																																		
LTA-MF Swyd: Earthworks (CH0048 & CH0006)	05-Nov-2012	29-Oct-2013																																
f Civil/Structures																																		
LTA-MF Swyd: Civil Works Control Bldg Erect/Outfit	05-Nov-2013*	12-May-2014																																
LTA-MF Swyd: Civil Works Foundations/Structures for Outdoor Equipment	05-Nov-2013	07-Aug-2014																																
g Installation																																		
LTA-MF Swyd: Install Indoor equipment	13-May-2014	03-Nov-2015																																
LTA-MF Swyd: Install Outdoor equipment	08-Aug-2014	12-Feb-2016																																
LTA-MF Swyd: Gantry Available for TL Connection	14-Mar-2016																												LTA-MF Swyd: Gantry Available for TL Connection					
h Telecom																																		
LTA-MF Swyd: Install Telecom	16-Sep-2015	15-Oct-2015																																
j Completions																																		
LTA-MF Swyd: Telecoms Static Commissioning	16-Oct-2015	14-Nov-2015																																
LTA-MF Swyd: Static Commissioning	15-Nov-2015	13-Mar-2016																																
LTA-MF Swyd: Dynamic Commissioning (up to takeover)	25-Jul-2016	23-Aug-2016																																
Labrador Island Transmission Link (LITL)																																		
LCP Telecoms-Nfld																																		
LCP telecoms																																		
j Completions																																		
LCP-Telecom LITL: Dynamic Commissioning w/o SW & PH	17-Feb-2017	09-Mar-2017																																

◆ Milestone/Key Date
 ■ Activity



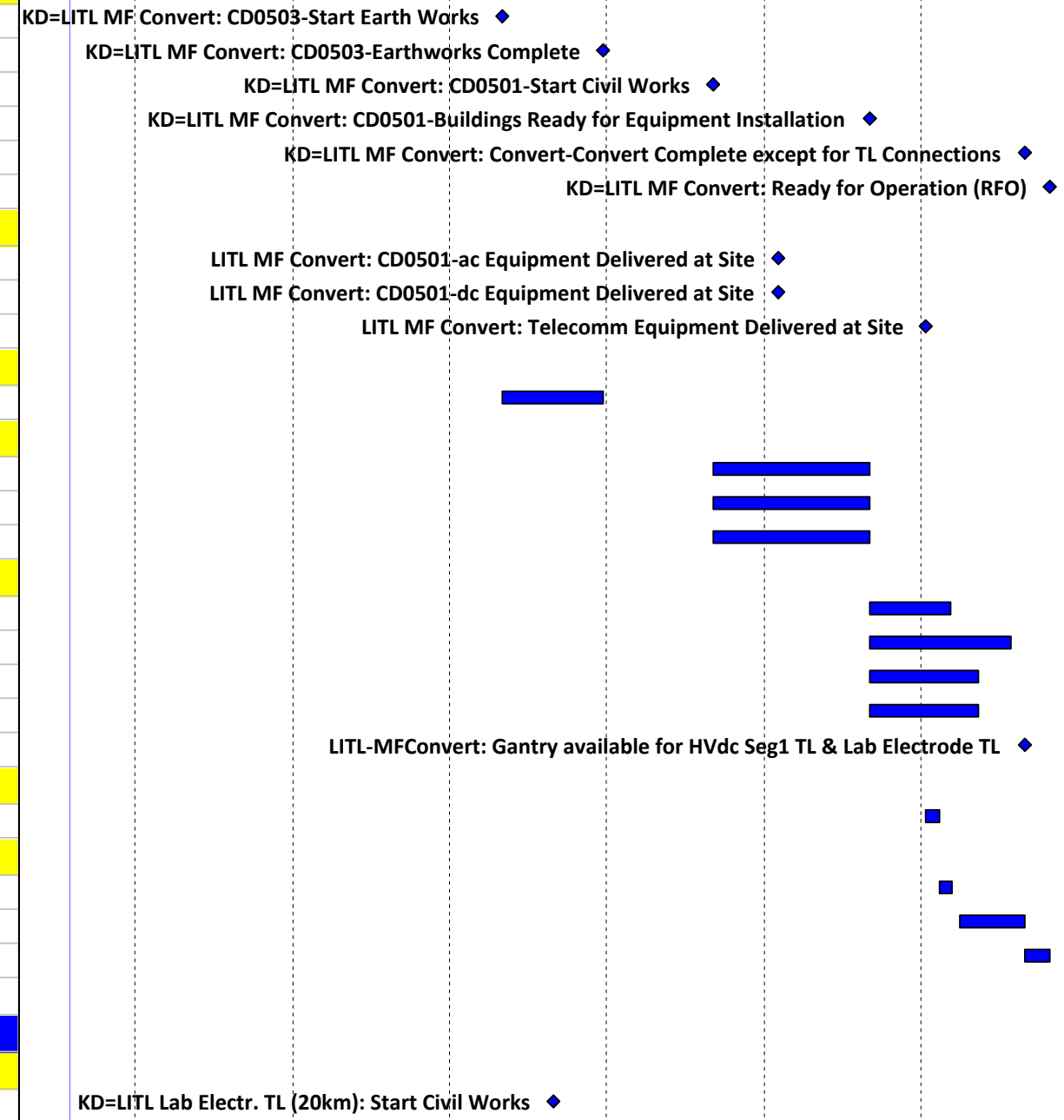
Integrated Project Schedule

LCP Project Control

at Baseline

Printed: 18-Feb-2013

Activity Name	Start	Finish	2010				2011				2012				2013				2014				2015				2016				2017				D18
			Q2	Q3	Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
LCP-Telecom LITL: Dynamic Commissioning with SW & PH	10-Mar-2017	23-Mar-2017																																	
LITL Eng/Procure																																			
LITL-Eng/Procure																																			
2 Eng/Procure																																			
LITL - ENG - RFI: LITL RFI Engineering	05-Jan-2012*	08-Oct-2013																																	
LITL - ENG - AFC: LITL AFC Engineering	11-Apr-2012*	01-Jul-2014																																	
LITL (MFACS) MF Converter Station																																			
LITL MF Converter																																			
1 Key Date																																			
KD=LITL MF Convert: CD0503-Start Earth Works	03-May-2013																																		
KD=LITL MF Convert: CD0503-Earthworks Complete		21-Dec-2013																																	
KD=LITL MF Convert: CD0501-Start Civil Works	05-Sep-2014																																		
KD=LITL MF Convert: CD0501-Buildings Ready for Equipment Installation		03-Sep-2015																																	
KD=LITL MF Convert: Convert-Convert Complete except for TL Connections		28-Aug-2016																																	
KD=LITL MF Convert: Ready for Operation (RFO)		27-Oct-2016																																	
c Materials																																			
LITL MF Convert: CD0501-ac Equipment Delivered at Site		02-Feb-2015*																																	
LITL MF Convert: CD0501-dc Equipment Delivered at Site		02-Feb-2015*																																	
LITL MF Convert: Telecomm Equipment Delivered at Site	13-Jan-2016*																																		
e Earthworks																																			
LITL-MFConvert: Earthworks	03-May-201...	21-Dec-2013																																	
f Civil/Structures																																			
LITL-MFConvert: Valve Hall Bldg Foundation/Erect/Outfit	05-Sep-2014*	03-Sep-2015																																	
LITL-MFConvert: Control Bldg Foundation/Erect/Outfit	05-Sep-2014	03-Sep-2015																																	
LITL-MFConvert: Outdoor Foundations/Structures	05-Sep-2014	03-Sep-2015																																	
g Installation																																			
LITL-MFConvert: Control Bldg Install Equipment	04-Sep-2015	10-Mar-2016																																	
LITL-MFConvert: Outdoor Install ac equipment	04-Sep-2015	29-Jul-2016																																	
LITL-MFConvert: Outdoor Install dc equipment	04-Sep-2015	14-May-2016																																	
LITL-MFConvert: Valve Hall Bldg Install Equipment	04-Sep-2015	14-May-2016																																	
LITL-MFConvert: Gantry available for HVdc Seg1 TL & Lab Electrode TL		28-Aug-2016																																	
h Telecom																																			
LITL-MF Convert: Telecom Install equipment	13-Jan-2016	11-Feb-2016																																	
j Completions																																			
LITL-MFConvert: Telecom - Static Commissioning	12-Feb-2016	12-Mar-2016																																	
LITL-MFConvert: Static Commissioning	01-Apr-2016	28-Aug-2016																																	
LITL-MFConvert: Dynamic Commissioning (up to takeover)	29-Aug-2016	27-Oct-2016																																	
LITL-Lab Electrode Line (L'Anse-au-Diable)																																			
LITL-Electrode TL Lab																																			
1 Key Date																																			
KD=LITL Lab Electr. TL (20km): Start Civil Works	28-Aug-2013																																		



◆ Milestone/Key Date
 ■ Activity



Integrated Project Schedule

LCP Project Control

at Baseline

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Activity Name	Start	Finish	2010		2011				2012				2013				2014				2015				2016				2017				Q1
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
			Gantt chart area with activity bars and milestones																														
LITL Lab Electrode Site (L'Anse-au-Diable)																																	
LITL-Electrode Station Lab																																	
1 Key Date																																	
KD=LITL Lab Electrode: Start Earthworks	01-May-2015																																
KD=LITL Lab Electrode: Start Civil Works	30-May-2015																																
KD=LITL Lab Electrode: CD0508-Control Building Ready for Equipment Installation		27-Jun-2015																															
KD=LITL Lab Electrode: Complete except for Line Connections		05-Dec-2015																															
KD=LITL Lab Electrode: Site: Ready for Operations (RFO)		26-Oct-2016																															
c Materials																																	
LITL Lab Elect: CD0508- Equipment Delivered at Site	08-Aug-2015*																																
LITL Lab Elect: CD0510- Telecomm Equipment Delivered at Site	01-Sep-2015*																																
e Earthworks																																	
LITL-LabElectrSt: Earthworks	01-May-201...	29-May-2015																															
f Civil/Structures																																	
LITL-LabElectrSt: Pre-Fab Building Foundations Erect & Outfit	30-May-2015	27-Jun-2015																															
LITL-LabElectrSt: Breakwater	30-May-2015	09-Nov-2015																															
LITL-LabElectrSt: Foundations & Structures for Outdoor Equipment	30-May-2015	27-Jul-2015																															
g Installation																																	
LITL-LabElectrSt: Install Indoor equipment	10-Aug-2015	07-Sep-2015																															
LITL-LabElectrSt: Install Outdoor equipment	14-Aug-2015	15-Nov-2015																															
LITL-LabElectrSt: Gantry available for Lab Electrode TL	06-Dec-2015																																
h Telecom																																	
LITL-LabElectrSt: Install Telecom	01-Sep-2015	28-Sep-2015																															
j Completions																																	
LITL-LabElectrSt: Telecom Static commissioning	29-Sep-2015	08-Oct-2015																															
LITL-Lab ElectrSt: Static Commissioning	12-Nov-2015	05-Dec-2015																															
LITL-LabElectrSt: Dynamic Commissioning	28-Sep-2016	26-Oct-2016																															
LITL-Lab HVdc Seg1/2																																	

◆ Milestone/Key Date
 ■ Activity



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LCP Project Control

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Printed: 18-Feb-2013

Activity Name	Start	Finish	2010 2011 2012 2013 2014 2015 2016 2017 2018																																
			2010				2011				2012				2013				2014				2015				2016				2017				2018
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	
LITL-HVdc LAB Seg1 MF																																			
1 Key Date																																			
KD=LITL-dcLabSeg1/Electr TL: Construction Start	28-Aug-2013		KD=LITL-dcLabSeg1/Electr TL: Construction Start ◆																																
KD=LITL-dcLabSeg1/Electr TL: Inspection/Connection Complete		28-Aug-2016	KD=LITL-dcLabSeg1/Electr TL: Inspection/Connection Complete ◆																																
c Materials																																			
LITL-dcLabSeg1/Electr TL: Distribution Materials Start #	05-Sep-2014*		LITL-dcLabSeg1/Electr TL: Distribution Materials Start # ◆																																
e Earthworks																																			
LITL-dcLabSeg1/Electr TL: ROW Clearing / Survey & Tower Spotting (for civil start)	28-Aug-2013*	30-Jun-2014	[Activity Bar]																																
LITL-dcLabSeg1/Electr TL: ROW Clearing / Survey & Tower Spotting (balance)	01-Jul-2014*	19-Oct-2014	[Activity Bar]																																
f Civil/Structures																																			
LITL-dcLabSeg1/Electr TL: Civil Works - foundations	10-Sep-2014	08-Oct-2015	[Activity Bar]																																
g Installation																																			
LITL-dcLabSeg1/Electr TL: Tower Assembly / Install	13-Oct-2014	03-Feb-2016	[Activity Bar]																																
LITL-dcLabSeg1/Electr TL: Conductor/OPGW Install	28-May-2015	09-Sep-2015	[Activity Bar]																																
j Completions																																			
LITL-dcLabSeg1/Electr TL: Post Installation Final Inspection (static)	04-Feb-2016	17-Feb-2016	[Activity Bar]																																
LITL-dcLabSeg1/Electr TL: HVdc Seg 1 & Electrode TL Connection to MF Converter (Slack)		28-Aug-2016	LITL-dcLabSeg1/Electr TL: HVdc Seg 1 & Electrode TL Connection to MF Converter (Slack Span) ◆																																
LITL-HVdc LAB Seg2 SOBI																																			
1 Key Date																																			
KD=LITL-dcLabSeg2/Electr TL: Construction Start	02-Jul-2013		KD=LITL-dcLabSeg2/Electr TL: Construction Start ◆																																
KD=LITL-dcLabSeg2/Electr TL: Inspection/Connection Complete		28-Aug-2016	KD=LITL-dcLabSeg2/Electr TL: Inspection/Connection Complete ◆																																
c Materials																																			
LITL-dcLabSeg2/Electr TL: Distribution Materials Start #	01-May-201...		LITL-dcLabSeg2/Electr TL: Distribution Materials Start # ◆																																
e Earthworks																																			
LITL-dcLabSeg2/Electr TL: ROW Clearing / Survey & Tower Spotting (for civil start)	02-Jul-2013*	30-Apr-2015	[Activity Bar]																																
f Civil/Structures																																			
LITL-dcLabSeg2/Electr TL: Civil Works - foundations	06-May-2015	06-Jun-2016	[Activity Bar]																																
g Installation																																			
LITL-dcLabSeg2/Electr TL: Tower Assembly / Install	01-Jun-2015	24-Jun-2016	[Activity Bar]																																
LITL-dcLabSeg2/Electr TL: Conductor/OPGW Install	14-Sep-2015	05-Aug-2016	[Activity Bar]																																
j Completions																																			
LITL-dcLabSeg2/Electr TL: Post Installation Final Inspection (static)	06-Aug-2016	19-Aug-2016	[Activity Bar]																																
LITL-dcLabSeg2/Electr TL: Connection to Lab TransCmp (Slack Span)		28-Aug-2016	LITL-dcLabSeg2/Electr TL: Connection to Lab TransCmp (Slack Span) ◆																																
LITL Lab Transition Compound																																			
LITL-TransCmp Lab																																			
1 Key Date																																			
KD=LITL Lab TranCmp: CD0503-Start Earth Works	03-May-2013		D=LITL Lab TranCmp: CD0503-Start Earth Works ◆																																
KD=LITL Lab TranCmp: CD0503-Earthworks Complete		29-Jul-2013	D=LITL Lab TranCmp: CD0503-Earthworks Complete ◆																																
KD=LITL Lab TranCmp: CD0501-Start Civil Works	06-Aug-2014		KD=LITL Lab TranCmp: CD0501-Start Civil Works ◆																																
KD=LITL Lab TranCmp: CD0501- Buildings Ready for Equipment Installation		10-Feb-2015	KD=LITL Lab TranCmp: CD0501- Buildings Ready for Equipment Installation ◆																																

◆ Milestone/Key Date
 [Bar] Activity



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Activity Name	Start	Finish	2010				2011				2012				2013				2014				2015				2016				2017				Q1
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4						
KD=LITL Lab TranCmp: CD0501-Complete except for TL Connections		14-Aug-2015	KD=LITL Lab TranCmp: CD0501-Complete except for TL Connections ◆																																
KD=LITL Lab TranCmp: SOBI Cable Systems available (Post SRI Test)	26-Oct-2016		KD=LITL Lab TranCmp: SOBI Cable Systems available (Post SRI Test) ◆																																
KD=LITL Lab TranCmp: Ready for Operations (RFO)		02-Nov-2016	KD=LITL Lab TranCmp: Ready for Operations (RFO) ◆																																
c Materials																																			
LITL Lab TranCmp: CD0501-ac Equipment Delivered at Site		13-May-2014*	LITL Lab TranCmp: CD0501-ac Equipment Delivered at Site ◆																																
LITL Lab TranCmp: CD0501-dc Equipment Delivered at Site		02-Feb-2015*	LITL Lab TranCmp: CD0501-dc Equipment Delivered at Site ◆																																
LITL Lab TranCmp: CD0510-Telecom Equipment Delivered at Site		18-Mar-2015*	LITL Lab TranCmp: CD0510-Telecom Equipment Delivered at Site ◆																																
e Earthworks																																			
LITL-LabTrnCmp: Earthworks #	03-May-201...	29-Jul-2013	[Bar chart activity]																																
f Civil/Structures																																			
LITL-LabTrnCmp: Civil Works - Switchgear Bldg Foundation/Erect/Outfit	06-Aug-2014*	10-Feb-2015	[Bar chart activity]																																
LITL-LabTrnCmp: Civil Works - Control Bldg Foundation/Erect/Outfit	06-Aug-2014	10-Feb-2015	[Bar chart activity]																																
LITL-LabTrnCmp: Civil Works - Outdoor Equipment Foundations/Structures	06-Aug-2014	29-Nov-2014	[Bar chart activity]																																
g Installation																																			
LITL-LabTrnCmp: Install Outdoor Equipment	01-Dec-2014	10-Feb-2015	[Bar chart activity]																																
LITL-LabTrnCmp: Install Control Bldg Equipment	11-Feb-2015	08-May-2015	[Bar chart activity]																																
LITL-LabTrnCmp: Install Switchgear Bldg Equipment	09-May-2015	25-Jul-2015	[Bar chart activity]																																
LITL-LabTrnCmp: Ready for SOBI Land Cable to terminate		14-Aug-2015	LITL-LabTrnCmp: Ready for SOBI Land Cable to terminate ◆																																
LITL-LabTrnCmp: Gantry available for HVdc Seg 2 TL Connection		14-Aug-2015	LITL-LabTrnCmp: Gantry available for HVdc Seg 2 TL Connection ◆																																
h Telecom																																			
LITL-LabTrnCmp: Install Telecom	27-May-2015	25-Jun-2015	[Bar chart activity]																																
j Completions																																			
LITL-LabTrnCmp: Telecom Static Commissioning	26-Jun-2015	15-Jul-2015	[Bar chart activity]																																
LITL-LabTrnCmp: Completions - Static Commissioning	16-Jul-2015	14-Aug-2015	[Bar chart activity]																																
LITL-LabTrnCmp: Completions - Dynamic Commissioning	28-Sep-2016	21-Oct-2016	[Bar chart activity]																																
LITL-LabTrnCmp: Completions - Dynamic Commissioning (with SOBI)	26-Oct-2016	02-Nov-2016	[Bar chart activity]																																
LITL SOBI Crossing																																			
LITL-SOBI Crossing																																			
1 Key Date																																			
KD=LITL SOBI -Nfld HDD Construction Start	01-Sep-2013		KD=LITL SOBI -Nfld HDD Construction Start ◆																																
KD=LITL SOBI -Lab Road Access Start Construction Start	02-Sep-2013		KD=LITL SOBI -Lab Road Access Start Construction Start ◆																																
KD=LITL SOBI -Lab HDD Construction Start	01-May-2014		KD=LITL SOBI -Lab HDD Construction Start ◆																																
KD=LITL SOBI -Nfld HDD Construction Complete		06-Mar-2015	KD=LITL SOBI -Nfld HDD Construction Complete ◆																																
KD=LITL SOBI -Nfld Land Cable Trenching Complete		23-Sep-2015	KD=LITL SOBI -Nfld Land Cable Trenching Complete ◆																																
KD=LITL SOBI -Nfld Land Cable Installation Start	24-Sep-2015		KD=LITL SOBI -Nfld Land Cable Installation Start ◆																																
KD=LITL SOBI - Lab Land Cable Trenching Complete		17-Nov-2015	KD=LITL SOBI - Lab Land Cable Trenching Complete ◆																																
KD=LITL SOBI -Lab HDD Construction Complete		17-Nov-2015	KD=LITL SOBI -Lab HDD Construction Complete ◆																																
KD=LITL SOBI -Lab Land Cable Installation Start	18-Nov-2015		KD=LITL SOBI -Lab Land Cable Installation Start ◆																																
KD=LITL SOBI -Cable Install Vessel (CIV) at SOBI	15-Jun-2016		KD=LITL SOBI -Cable Install Vessel (CIV) at SOBI ◆																																
KD=LITL SOBI -Cable Rock Placement Start	08-Jul-2016		KD=LITL SOBI -Cable Rock Placement Start ◆																																
KD=LITL SOBI -Cable System - 1 Electrically Complete	08-Jul-2016		KD=LITL SOBI -Cable System - 1 Electrically Complete ◆																																

◆ Milestone/Key Date
 [Bar] Activity



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Activity Name	Start	Finish	2010		2011				2012				2013				2014				2015				2016				2017				018					
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1				
KD=LITL SOBI - Cable System - 2 Electrically Complete	01-Aug-2016																																					
KD=LITL SOBI - Cable System - 3 Electrically Complete	21-Aug-2016																																					
KD=LITL SOBI -Cable Rock Placement Complete		15-Oct-2016																																				
KD=LITL SOBI -Marine Cable Rock Placement & Final Cable Testing Complete		25-Oct-2016																																				
c Materials																																						
LITL-SOBI: Cable Available for Pick-up at manuf.	15-Nov-2015*																																					
g1 SOBI Landfall Protection																																						
LITL-SOBI: Nfld Shoal Cove - Bore Hole 1-2 -3	01-Sep-2013*	06-Mar-2015																																				
LITL-SOBI: Lab Forteau Point - Road Access TCH -> TransCmp -> Drilling Site	02-Sep-2013*	16-Nov-2013																																				
LITL-SOBI: Lab Forteau Point - Bore Hole 1-2 -3	01-May-2013*	17-Nov-2015																																				
LITL-SOBI: Nfld Shoal Cove - Land cable Trenching	01-May-2015	23-Sep-2015																																				
LITL-SOBI: Lab Forteau Point - Land cable Trenching	25-Jun-2015	17-Nov-2015																																				
g2 SOBI Cable Supply/install																																						
LITL-SOBI: Nfld Shoal Cove: Land Cable Installation	24-Sep-2015	22-Nov-2015																																				
LITL-SOBI: Lab Forteau Point: Land Cable Installation	18-Nov-2015	16-Jan-2016																																				
LITL-SOBI: Subsea Cable 1 Installation	15-Jun-2016	07-Jul-2016																																				
LITL-SOBI: Cable Install Vessel (CIV) at SOBI	15-Jun-2016*																																					
LITL-SOBI: Subsea Cable 2 Installation	08-Jul-2016	31-Jul-2016																																				
LITL-SOBI: Subsea Cable 3 Installation	01-Aug-2016	20-Aug-2016																																				
LITL-SOBI: All 3 Cables Installed & Electrically Complete		20-Aug-2016																																				
g3 SOBI Cable Protection																																						
LITL-SOBI: Subsea Cable 1 Rock placement	08-Jul-2016	29-Aug-2016																																				
LITL-SOBI: Subsea Cable 2 Rock placement	01-Aug-2016	19-Sep-2016																																				
LITL-SOBI: Subsea Cable 3 Rock placement	21-Aug-2016	15-Oct-2016																																				
j Completions																																						
LITL-SOBI: Subsea Cables Post Rock placement Test (Static - POST SRI)	16-Oct-2016	25-Oct-2016																																				
LITL Nfld Transition Compound																																						
LITL-Transition Compound Nfld																																						
1 Key Date																																						
KD=LITL Nfld TranCmp: CD0503-Start Earth Works	03-May-2013																																					
KD=LITL Nfld TranCmp: CD0503-Earthworks Complete		29-Jul-2013																																				
KD=LITL Nfld TranCmp: CD0501-Start Civil Works	06-Aug-2014																																					
KD=LITL Nfld TranCmp: CD0501- Buildings Ready for Equipment Installation		10-Feb-2015																																				
KD=LITL Nfld TranCmp: CD0501-Complete except for Line Connections		14-Aug-2015																																				
KD=LITL Nfld TranCmp: Ready for Operations (RFO)		09-Mar-2017																																				
c Materials																																						
LITL Nfld TranCmp: CD0501-ac Equipment Delivered at Site		14-May-2014*																																				
LITL Nfld TranCmp: CD0510-Telecomm Equipment Delivered at Site		13-Jan-2015*																																				
LITL Nfld TranCmp: CD0501-dc Equipment Delivered at Site		02-Feb-2015*																																				
e Earthworks																																						
LITL-NfldTrnCmp: Earthworks #	03-May-2013	29-Jul-2013																																				

◆ Milestone/Key Date
—■ Activity



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Activity Name	Start	Finish	2010		2011				2012				2013				2014				2015				2016				2017				D18	
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3		Q4
			Gantt Chart Area																															
f Civil/Structures																																		
LITL-NfldTrnCmp: Civil Works - Switchgear Bldg Foundation/Erect/Outfit	06-Aug-2014*	10-Feb-2015	[Gantt bar from Q3 2014 to Q1 2015]																															
LITL-NfldTrnCmp: Civil Works - Control Bldg Foundation/Erect/Outfit	06-Aug-2014	10-Feb-2015	[Gantt bar from Q3 2014 to Q1 2015]																															
LITL-NfldTrnCmp: Civil Works - Outdoor Equipment Foundations/Structures	06-Aug-2014	29-Nov-2014	[Gantt bar from Q3 2014 to Q4 2014]																															
g Installation																																		
LITL-NfldTrnCmp: Install Outdoor Equipment	01-Dec-2014	10-Feb-2015	[Gantt bar from Q4 2014 to Q1 2015]																															
LITL-NfldTrnCmp: Install Control Bldg Equipment	11-Feb-2015	08-May-2015	[Gantt bar from Q1 2015 to Q2 2015]																															
LITL-NfldTrnCmp: Install Switchgear Bldg Equipment	09-May-2015	25-Jul-2015	[Gantt bar from Q2 2015 to Q3 2015]																															
LITL-NfldTrnCmp: Ready for SOBI Lans Cable Install		14-Aug-2015	[Milestone diamond at Q3 2015]																															
LITL-NfldTrnCmp: Gantry available for HVdc Seg 3 TL Connection		14-Aug-2015	[Milestone diamond at Q3 2015]																															
h Telecom																																		
LITL-NfldTrnCmp: Telecom	09-May-2015	07-Jun-2015	[Gantt bar from Q2 2015 to Q3 2015]																															
j Completions																																		
LITL-NfldTrnCmp: Telecom Static Commissioning	26-Jun-2015	15-Jul-2015	[Gantt bar from Q3 2015 to Q4 2015]																															
LITL-NfldTrnCmp: Completions - Static Commissioning	16-Jul-2015	14-Aug-2015	[Gantt bar from Q3 2015 to Q4 2015]																															
LITL-NfldTrnCmp: Dynamic Commissioning	08-Feb-2017	09-Mar-2017	[Gantt bar from Q1 2017 to Q2 2017]																															
LITL-Nfld HVdc line Marshalling Yard																																		
LITL-HVdc Line Marshalling Yard Nfld																																		
1 Key Date																																		
KD=LITL Nfld Marshalling Yard (dc): Start Construction	14-Oct-2013		[Milestone diamond at Q4 2013]																															
KD=LITL Nfld Marshalling Yard (dc): Available		14-Mar-2014	[Milestone diamond at Q1 2014]																															
e Earthworks																																		
LITL Nfld Marshalling Yard (dc): Clear	14-Oct-2013*	02-Nov-2013	[Gantt bar from Q4 2013 to Q1 2014]																															
f Civil/Structures																																		
LITL Nfld Marshalling Yard (dc): Construct	03-Nov-2013	14-Mar-2014	[Gantt bar from Q4 2013 to Q1 2014]																															
LITL-Nfld HVdc TL Seg 3/4/5																																		
LITL-HVdc NFD Seg3 SOBI																																		
1 Key Date																																		
KD=LITL HVdc Seg3: TL Construction Start	17-Dec-2013		[Milestone diamond at Q4 2013]																															
KD=LITL HVdc Seg3: TL Inspection/Connection Complete (Ready to Energize)		16-Feb-2017	[Milestone diamond at Q1 2017]																															
c Materials																																		
LITL HVdc Seg3: = Distribution Materials Start #	28-Nov-2014*		[Milestone diamond at Q4 2014]																															
e Earthworks																																		
LITL-dcNfSeg3: ROW Clearing / Survey & Tower Spotting (for civil start)	17-Dec-2013*	23-Oct-2014	[Gantt bar from Q4 2013 to Q4 2014]																															
f Civil/Structures																																		
LITL-dcNfSeg3: Civil Works - foundations	03-Dec-2014	18-Mar-2016	[Gantt bar from Q4 2014 to Q1 2016]																															
g Installation																																		
LITL-dcNfSeg3: Tower Assembly / Install	17-Dec-2014	08-Apr-2016	[Gantt bar from Q4 2014 to Q2 2016]																															
LITL-dcNfSeg3: Conductor/OPGW Install	20-Feb-2015	23-May-2016	[Gantt bar from Q1 2015 to Q2 2016]																															
j Completions																																		

◆ Milestone/Key Date
 [Gantt bar] Activity



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Activity Name	Start	Finish	2010		2011				2012				2013				2014				2015				2016				2017				2018
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1			
LITL-dcNfSeg3: Installation Final Inspection Nfld (static)	24-May-2016	06-Jun-2016																															
LITL-dcNfSeg3: Connection to Nfld TransCmp (Slack Span)		16-Feb-2017																															
LITL-HVdc NFD Seg4																																	
1 Key Date																																	
KD=LITL HVdc Seg4: TL Construction Start	29-Aug-2014																																
c Materials																																	
LITL HVdc Seg4: = Distribution Materials Start #	04-Aug-2015*																																
LITL HVdc-Nfld telecom: Telecom Equip Delivered to Site #		23-May-2016*																															
e Earthworks																																	
LITL-dcNfSeg4: ROW Clearing / Survey & Tower Spotting (for civil start)	29-Aug-2014*	13-Jul-2015																															
f Civil/Structures																																	
LITL-dcNfSeg4: Civil Works - foundations	07-Aug-2015	07-Nov-2016																															
g Installation																																	
LITL-dcNfSeg4: Tower Assembly / Install	26-Aug-2015	05-Jan-2017																															
LITL-dcNfSeg4: Conductor/OPGW Install	05-Nov-2015	02-Feb-2017																															
h Telecom																																	
LITL HVdc-Nfld Repeater: CD0510 Telecom Install (Existing Stoney Brook Swyd)	24-May-2016	17-Aug-2016																															
j Completions																																	
LITL HVdc-Nfld Repeater: CD0510 Telecom Static Comm (Existing Stoney Brook Swyd)	18-Aug-2016	06-Sep-2016																															
LITL-dcNfSeg4: Installation Final Inspection Nfld (static)	03-Feb-2017	16-Feb-2017																															
LITL-HVdc NFD Seg5 SP																																	
1 Key Date																																	
KD=LITL HVdc Seg5: TL Construction Start	07-Oct-2014																																
KD=LITL HVdc Seg5:TL Inspection/Connection Complete (Ready to Energize)		16-Feb-2017																															
c Materials																																	
LITL HVdc Seg5: = Distribution Materials Start #	01-Oct-2015*																																
e Earthworks																																	
LITL-dcNfSeg5: ROW Clearing / Survey & Tower Spotting (for civil start)	07-Oct-2014*	16-Sep-2015																															
f Civil/Structures																																	
LITL-dcNfSeg5: Civil Works - foundations	06-Oct-2015	04-Oct-2016																															
g Installation																																	
LITL-dcNfSeg5: Tower Assembly / Install	28-Oct-2015*	02-Dec-2016																															
LITL-dcNfSeg5: Conductor/OPGW Install	11-Dec-2015	26-Jan-2017																															
j Completions																																	
LITL-dcNfSeg5: Installation Final Inspection Nfld (static)	27-Jan-2017	09-Feb-2017																															
LITL-dcNfSeg5: Connection to SP Converter (Slack Span)		16-Feb-2017																															
LITL (SOPCS) SP Converter Station																																	
LITL SP Converter																																	
1 Key Date																																	
KD=LITL SP Convert: CD0503-Start Earth Works	03-May-2013																																

◆ Milestone/Key Date
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Activity Name	Start	Finish	2010		2011				2012				2013				2014				2015				2016				2017				Q18	
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3		Q4
			Gantt Chart Area																															
j Completions																																		
LITL Nfld Electr. TL: Post installation Final Inspection (static)	28-Jan-2016*	10-Feb-2016	[Gantt bar from Jan 2016 to Feb 2016]																															
LITL Nfld Electr. TL: Connection to Electrode Site (slack span)		28-Aug-2016	[Gantt bar from Aug 2016 to Aug 2016]																															
LITL Nfld Electrode Site (Dowden's Point)																																		
LITL-Electrode Station Nfld																																		
1 Key Date																																		
KD=LITL Nfld Electrode Site: CD0508-Start Earthworks	01-May-2015		[Milestone diamond at May 2015]																															
KD=LITL Nfld Electrode Site: CD0508-Start Civil Works	30-May-2015		[Milestone diamond at May 2015]																															
KD=LITL Nfld Electrode Site: CD0508-Control Building Ready for Equipment Installation		27-Jun-2015	[Milestone diamond at Jun 2015]																															
KD=LITL Nfld Electrode Site: CD0508-Complete except for Line Connection		05-Dec-2015	[Milestone diamond at Dec 2015]																															
KD=LITL Nfld Elec Line: Electrode Line Ready (Link with Converter Station & Electrode Site)		08-Apr-2017	[Milestone diamond at Apr 2017]																															
KD=LITL Nfld Electrode Site: Ready for Operations (RFO)		02-May-2017	[Milestone diamond at May 2017]																															
c Materials																																		
LITL Nfld Electr: CD0508- Equipment Delivered at Site	08-Aug-2015*		[Milestone diamond at Aug 2015]																															
LITL Nfld Electr: CD0510- Telecom Equipment Delivered at Site	01-Sep-2015*		[Milestone diamond at Sep 2015]																															
e Earthworks																																		
LITL-Nfld ElectrSt: Earthworks	01-May-2015	29-May-2015	[Gantt bar from May 2015 to May 2015]																															
f Civil/Structures																																		
LITL-Nfld ElectrSt: Breakwater	30-May-2015	09-Nov-2015	[Gantt bar from May 2015 to Nov 2015]																															
LITL-Nfld ElectrSt: Pre-Fab Building Foundations Erect & Outfit	30-May-2015	27-Jun-2015	[Gantt bar from May 2015 to Jun 2015]																															
LITL-Nfld ElectrSt: Foundations & Structures for Outdoor Equipment	30-May-2015	27-Jul-2015	[Gantt bar from May 2015 to Jul 2015]																															
g Installation																																		
LITL-Nfld ElectrSt: Install Indoor equipment	10-Aug-2015	07-Sep-2015	[Gantt bar from Aug 2015 to Sep 2015]																															
LITL-Nfld ElectrSt: Install Outdoor equipment	14-Aug-2015	15-Nov-2015	[Gantt bar from Aug 2015 to Nov 2015]																															
LITL-Nfld ElectrSt: Gantry available for Electrode Line	06-Dec-2015		[Milestone diamond at Dec 2015]																															
h Telecom																																		
LITL-Nfld ElectrSt: Install Telecom	01-Sep-2015	28-Sep-2015	[Gantt bar from Sep 2015 to Sep 2015]																															
j Completions																																		
LITL-Nfld ElectrSt: Telecom Static commissioning	29-Sep-2015	18-Oct-2015	[Gantt bar from Sep 2015 to Oct 2015]																															
LITL-Nfld ElectrSt: Static Commissioning	12-Nov-2015	05-Dec-2015	[Gantt bar from Nov 2015 to Dec 2015]																															
LITL-Nfld ElectrSt: Dynamic Commissioning	09-Apr-2017	02-May-2017	[Gantt bar from Apr 2017 to May 2017]																															
LITL (SOPTS) Soldiers Pond Terminal Station (Switchyard)																																		
LITL-SP Switchyard																																		
1 Key Date																																		
KD=LITL SP Swyd: CD0503-Start Earth Works	03-May-2013		[Milestone diamond at May 2013]																															
KD=LITL SP Swyd: CD0503-Earthworks Complete		21-Dec-2013	[Milestone diamond at Dec 2013]																															
KD=LITL SP Swyd: CD0502-Start Civil Works	05-Nov-2014		[Milestone diamond at Nov 2014]																															
KD=LITL SP Swyd: CD0502-Control Building Ready for Equipment Installation		12-May-2015	[Milestone diamond at May 2015]																															
KD=LITL SP Swyd: CD0502-Completed Static Commissioning		13-Jan-2017	[Milestone diamond at Jan 2017]																															
KD=LITL SP Swyd: CD0502-Ready for Re-terminations - Holyrood/Hardwoos/Oxenpond/West Av		18-May-2017	[Milestone diamond at May 2017]																															
KD=LITL SP Swyd: Ready for Operations (RFO)		18-May-2017	[Milestone diamond at May 2017]																															

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Activity Name	Start	Finish	2010		2011				2012				2013				2014				2015				2016				2017				018	
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3		Q4
			<p>c Materials</p> <p>LITL SP Swyd: PD0505-Equipment Delivered at Site 03-Dec-2014*</p> <p>LITL SP Swyd: CD0510-Telecom Equipment Delivered at Site 03-May-2011...</p> <p>e Earthworks</p> <p>LITL-SP Swyd: Earthworks 03-May-2011... 21-Dec-2013</p> <p>f Civil/Structures</p> <p>LITL-SP Swyd: Civil Works Control Bldg Erect/Outfit 05-Nov-2014* 12-May-2015</p> <p>LITL-SP Swyd: Civil Works Foundations/Structures for Outdoor Equipment 05-Nov-2014 07-Aug-2015</p> <p>g Installation</p> <p>LITL-SP Swyd: Install Indoor equipment 13-May-2015 03-Nov-2016</p> <p>LITL-SP Swyd: Install Outdoor equipment 08-Aug-2015 14-Dec-2016</p> <p>h Telecom</p> <p>LITL-SP Swyd: Install Telecom 03-Jun-2016 28-Aug-2016</p> <p>j Completions</p> <p>LITL-SP Swyd: Telecom Static Commissioning 28-Aug-2016 27-Sep-2016</p> <p>LITL-SP Swyd: Static Commissioning 27-Sep-2016 13-Jan-2017</p> <p>LITL-SP Swyd: Dynamic Commissioning (up to takeover) 09-Apr-2017 18-May-2017</p> <p>LITL-Nfld TL Line Crossing Mods</p> <p>LITL-Nfld HVac Crossing Mods</p> <p>1 Key Date</p> <p>KD=LITL-Nfld ac TL Crossing Mods: Start 14-Aug-2013</p> <p>KD=LITL-Nfld ac TL Crossing Mods: Start of TL Shutdowns TL218,242,265>268 20-Feb-2014</p> <p>KD=LITL-Nfld ac TL Crossing Mods: Complete TL218,242,265>268 20-Sep-2014</p> <p>KD=LITL-Nfld ac TL Crossing Mods: Complete Mods 1 to 6 02-Dec-2014</p> <p>e Earthworks</p> <p>LITL-Nfld ac TL Crossing Mods: Earth ROW Clearing TL218,242,265>268 14-Aug-2013* 19-Sep-2013</p> <p>LITL-Nfld ac TL Crossing Mods: Earth ROW Clearing- Mods 1 to 6 29-Aug-2014* 09-Oct-2014</p> <p>f Civil/Structures</p> <p>LITL-Nfld ac TL Crossing Mods: Civil TL218,242,265>268 20-Sep-2013 12-Nov-2013</p> <p>LITL-Nfld ac TL Crossing Mods: Civil- Mod 3 30-Sep-2014 14-Oct-2014</p> <p>g Installation</p> <p>LITL-Nfld ac TL Crossing Mods: Install TL218,242,265>268 20-Nov-2013 19-Feb-2014</p> <p>LITL-Nfld ac TL Crossing Mods: Install- Mods 1 to 6 31-Aug-2014 27-Nov-2014</p> <p>j Completions</p> <p>LITL-Nfld ac TL Crossing Mods Completions: Line Final Inspections TL218,242,265>268 (static) 19-Feb-2014</p> <p>LITL-Nfld ac TL Crossing Mods Completions: Shut Down & Connect to Existing Lines TL218,242,265>268 20-Feb-2014 10-Sep-2014</p> <p>LITL-Nfld ac TL Crossing Mods Completions: ReConnect in SP Swyrd- TL218,242,265>268 11-Sep-2014 20-Sep-2014</p> <p>LITL-Nfld ac TL Crossing Mods Completions: Line Final Inspections- Mods 1 to 6 (static) 28-Nov-2014 02-Dec-2014</p> <p>LITL (SOPSC) SP Synchronous Condenser</p> <p>LITL-SP Synch Cond</p> <p>1 Key Date</p>																															

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Activity Name	Start	Finish	2010				2011				2012				2013				2014				2015				2016				2017				Q18
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1					
KD=LITL SP SynCond: CD0503-Start Earth Works	03-May-2013		KD=LITL SP SynCond: CD0503-Start Earth Works ◆																																
KD=LITL SP SynCond: CD0503-Earthworks Complete		21-Dec-2013	KD=LITL SP SynCond: CD0503-Earthworks Complete ◆																																
KD=LITL SP SynCond: CD0502-Start Civil Works	05-Nov-2014		KD=LITL SP SynCond: CD0502-Start Civil Works ◆																																
KD=LITL SP SynCond: CD0502-Building Ready for Equipment Installation		07-Aug-2015	KD=LITL SP SynCond: CD0502-Building Ready for Equipment Installation ◆																																
KD=LITL SP SynCond: CD0534-Complete Ready for Enerization		30-Dec-2016	KD=LITL SP SynCond: CD0534-Complete Ready for Enerization ◆																																
KD=LITL SP SynCond: Ready for Operations (RFO)		27-Jun-2017	KD=LITL SP SynCond: Ready for Operations (RFO) ◆																																
c Materials																																			
LITL SP SynCond: CD0534-Sync Cond/Equipment Available for Delivery to Site (1st unit)	02-May-201...		CD0534-Sync Cond/Equipment Available for Delivery to Site (1st unit) ◆																																
LITL SP SynCond: PD0537-Transformers Delivered at Site	06-Jun-2014*		LITL SP SynCond: PD0537-Transformers Delivered at Site ◆																																
LITL SP SynCond: CD0534-Sync Cond/Equipment Available for Delivery to Site (2nd unit)	03-Nov-2014*		CD0534-Sync Cond/Equipment Available for Delivery to Site (2nd unit) ◆																																
LITL SP SynCond: PD0505-Swyd equipment Delivered at Site	03-Dec-2014*		LITL SP SynCond: PD0505-Swyd equipment Delivered at Site ◆																																
LITL SP SynCond: CD0534-Sync Cond/Equipment Available for Delivery to Site (3rd unit)	14-Dec-2014*		CD0534-Sync Cond/Equipment Available for Delivery to Site (3rd unit) ◆																																
LITL SP SynCond: CD0510-Telecom Equipment Delivered at Site	01-Apr-2016*		LITL SP SynCond: CD0510-Telecom Equipment Delivered at Site ◆																																
e Earthworks																																			
LITL-SPSynCd: Earthworks	03-May-201...	21-Dec-2013																																	
f Civil/Structures																																			
LITL-SPSynCd: Outdoor equipment foundations/structure	05-Nov-2014	07-Aug-2015																																	
LITL-SPSynCd: Bldg Foundation/Erect/Outfit	05-Nov-2014*	07-Aug-2015																																	
g Installation																																			
LITL-SPSynCd: Outdoor equipment Installation	08-Aug-2015	03-Nov-2015																																	
LITL-SPSynCd: Indoor Installation of 1st Unit	08-Aug-2015	05-Aug-2016																																	
LITL-SPSynCd: Indoor Installation of 2nd Unit	04-Nov-2015	03-Sep-2016																																	
LITL-SPSynCd: Indoor Installation of 3rd Unit	13-Feb-2016	30-Nov-2016																																	
h Telecom																																			
LITL-SPSynCd: Telecom	01-Apr-2016	30-May-2016																																	
j Completions																																			
LITL-SPSynCd: Telecom - Static Commissioning	31-May-2016	19-Jun-2016																																	
LITL-SPSynCd: Static Commissioning	03-Aug-2016	30-Dec-2016																																	
LITL-SPSynCd: Dynamic Commissioning (up to takeover)	09-May-2017	27-Jun-2017																																	
Muskrat Falls - Generation (MGen)																																			
LCP Telecoms-Lab																																			
LCP telecoms																																			
j Completions																																			
LCP-Telecom MGen (Lab): Dynamic Commissioning	29-Aug-2016	18-Sep-2016																																	
MGen Eng/Procure																																			
MF Eng/Procure																																			
2 Eng/Procure																																			
MFG - ENG - RFI: MGen RFI Engineering	28-Oct-2011*	30-May-2013																																	
MFG - ENG - AFC: MFG AFC Engineering	05-Dec-2011*	25-Nov-2013																																	
MGen Access Road																																			
MGen Access Road																																			

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Activity Name	Start	Finish	2010		2011				2012				2013				2014				2015				2016				2017				J18
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
1 Key Date																																	
KD=MFG -South Side Site Access Road Start Construction	02-Jun-2012		e Access Road Start Construction ◆																														
KD=MFG -South Side Site Access Road Passable		15-Oct-2012	g -South Side Site Access Road Passable ◆																														
KD=MFG -South Side Site Access Road & Temp. McKenzie Bridge - Complete		05-Dec-2012	oad & Temp. McKenzie Bridge - Complete ◆																														
KD=MFG -South Side Site Access Road & perm. McKenzies Bridge-Complete		08-Oct-2013	Site Access Road & perm. McKenzies Bridge-Complete ◆																														
c Materials																																	
MFG-South Side Site Access: McKenzie River Temp Bridge - Transport To Site		27-Sep-2012*	River Temp Bridge - Transport To Site ◆																														
MFG-South Side Site Access Bridge Rebar - Transport To Site		09-Apr-2013*	de Site Access Bridge Rebar - Transport To Site ◆																														
MFG-South Side Site Access: McKenzie River Bridge Deck Beams - Transport To Site		04-Jul-2013*	Kenzie River Bridge Deck Beams - Transport To Site ◆																														
e Earthworks																																	
MFG-South Side Site Access Tote Road - Up to Passable Site Access	02-Jun-2012*	15-Oct-2012	[Bar]																														
MFG-South Side Site Access Road Earthworks - McKenzie and other Bridges	16-Oct-2012	05-Dec-2012	[Bar]																														
g Installation																																	
MFG-South Side Site Access McKenzie Temp. bridge	28-Sep-2012	13-Oct-2012	[Bar]																														
MFG-South Side Site Access permanent McKenzie bridge	01-May-2013	08-Oct-2013	[Bar]																														
MFGen Construction Power																																	
MF Gen Constr Power																																	
1 Key Date																																	
KD=MFG -Start Construction Power	23-Jun-2012		D=MFG -Start Construction Power ◆																														
KD=MFG ConstrPwr -25 kV Construction Power Available for Starter Camp		11-Dec-2012	ruction Power Available for Starter Camp ◆																														
KD=MFG ConstrPwr -25 kV Construction Power Available for Main Camp		01-May-2013	kV Construction Power Available for Main Camp ◆																														
c Materials																																	
MFG-ConsPwr Material: 25 kV Switchgear Arrive at Site		07-Mar-2013*	Pwr Material: 25 kV Switchgear Arrive at Site ◆																														
e Earthworks																																	
MFG-ConsPwr Earthworks: Clear North Spur ROW and Swyd	23-Jun-2012*	02-Aug-2012	[Bar]																														
MFG-ConsPwr Earthworks: Clear South Side ROW	19-Sep-2012*	04-Oct-2012	[Bar]																														
g Installation																																	
MFG-ConsPwr Installation: Poles/Lines/Equip for Starter Camp	03-Aug-2012	06-Dec-2012	[Bar]																														
MFG-ConsPwr Installation Remaining Poles/Lines/Equip for Main Camp	07-Dec-2012	23-Apr-2013	[Bar]																														
MFG-ConsPwr Installation: Equipment for Main Camp	08-Mar-2013	23-Apr-2013	[Bar]																														
j Completions																																	
MFG-ConsPwr: Completions (Static - Dynamic Comm) for Starter Camp	19-Sep-2012	11-Dec-2012	[Bar]																														
MFG-ConsPwr: Completions (Static - Dynamic Comm) for Main Camp	24-Apr-2013	01-May-2013	[Bar]																														
MFGen Reservoir Preparation																																	
MF Reservoir																																	
1 Key Date																																	
KD=MFG-Reservoir: Start Reservoir Works	25-Oct-2012		=MFG-Reservoir: Start Reservoir Works ◆																														
KD=MFG Reservoir-Ready to Impound		25-Apr-2017	KD=MFG Reservoir-Ready to Impound ◆																														
KD=MFG Reservoir -Impoundment Complete		17-May-2017	KD=MFG Reservoir -Impoundment Complete ◆																														
e Earthworks																																	
MFG-Reservoir North:Clearing	25-Oct-2012*	19-Feb-2016	[Bar]																														

◆ Milestone/Key Date
 [Bar] Activity



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Activity Name	Start	Finish	2010				2011				2012				2013				2014				2015				2016				2017				Q18
			Q2	Q3	Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
MFG-Reservoir South:Clearing	24-Jan-2013	02-Jun-2016	[Gantt bar from Q1 2013 to Q2 2016]																																
MFG-Reservoir Aquatic Habitat Restoration	26-Jul-2014	07-Oct-2015	[Gantt bar from Q3 2014 to Q4 2015]																																
f Civil/Structures																																			
MFG-Reservoir :Upstream & Downstream- Log Booms	01-Jul-2015*	29-Sep-2015	[Gantt bar from Q3 2015 to Q4 2015]																																
g Installation																																			
MFG-Reservoir Reservoir Works Complete		02-Jun-2016	[Milestone diamond at Q2 2016]																																
n Impoundment																																			
MFG Reservoir - Ready for Diversion Headpond		11-Nov-2015	[Milestone diamond at Q4 2015]																																
MFG Reservoir - Diversion Head Pond	12-Nov-2015	26-Nov-2015	[Gantt bar from Q4 2015 to Q1 2016]																																
MFG Reservoir-Ready to Impound		25-Apr-2017	[Milestone diamond at Q2 2017]																																
MFG Reservoir -Impoundment	04-May-2017	17-May-2017	[Gantt bar from Q2 2017 to Q3 2017]																																
MFGGen Accommodations																																			
MFGGen Accommodations																																			
1 Key Date																																			
KD=MFG Camp -150 Bed Capacity (Starter Camp) - Start Construction	12-Oct-2012		[Milestone diamond at Q4 2012]																																
KD=MFG Camp -150 Bed Capacity (Starter Camp) - Ready to Occupation		19-Dec-2012	[Milestone diamond at Q4 2012]																																
KD=MFG Camp -500 Bed Capacity - Complete		30-Jul-2013	[Milestone diamond at Q3 2013]																																
KD=MFG Camp -1000 Bed Capacity - Complete		02-Aug-2013	[Milestone diamond at Q3 2013]																																
KD=MFG Camp -1500 Bed Capacity - Complete		14-Sep-2013	[Milestone diamond at Q4 2013]																																
KD=MFG Camp -Accomodations Complete		14-Sep-2013	[Milestone diamond at Q4 2013]																																
g Installation																																			
MFG-Camp Installation: Starter Camp (150 bed) and Utilities	12-Oct-2012*	19-Dec-2012	[Gantt bar from Q4 2012 to Q4 2012]																																
MFG-Camp Installation: 500 bed sections/Admin bldgs/Utilities	20-Dec-2012	30-Jul-2013	[Gantt bar from Q4 2012 to Q3 2013]																																
MFG-Camp Installation: 1000 bed sections and Utilities	23-May-201...	02-Aug-2013	[Gantt bar from Q2 2013 to Q3 2013]																																
MFG-Camp Installation: 1500 bed sections and Utilities	03-Aug-2013	14-Sep-2013	[Gantt bar from Q3 2013 to Q4 2013]																																
j Completions																																			
MFG-Camp Completions: 150 bed - Starter camp complete		19-Dec-2012	[Milestone diamond at Q4 2012]																																
MFG-Camp Completions: 500 bed sections/Admin bldgs/Utilities Complete		30-Jul-2013	[Milestone diamond at Q3 2013]																																
MFG-Camp Completions: 1000 bed - Complete		02-Aug-2013	[Milestone diamond at Q3 2013]																																
MFG-Camp Completions: 1500 bed - Complete		14-Sep-2013	[Milestone diamond at Q4 2013]																																
MFGGen North Spur Stabilization																																			
MF North Spur																																			
1 Key Date																																			
KD=MFG North Spur - Start Work	01-Jul-2014		[Milestone diamond at Q3 2014]																																
KD=MFG North Spur - Ready for Diversion Headpond		11-Nov-2015	[Milestone diamond at Q4 2015]																																
KD=MFG North Spur - Ready for Impoundment (Complete)		30-Sep-2016	[Milestone diamond at Q3 2016]																																
e Earthworks																																			
MFG-North Spur: North Spur earthworks Phase 1 & cut-off	01-Jul-2014*	15-Oct-2015	[Gantt bar from Q3 2014 to Q4 2015]																																
MFG-North Spur: North Spur earthworks Phase 2	02-Jun-2016*	21-Sep-2016	[Gantt bar from Q2 2016 to Q3 2016]																																
f Civil/Structures																																			
MFG-North Spur Civil: Refurbish existing wells #check#	29-Jul-2014	14-Jun-2015	[Gantt bar from Q3 2014 to Q2 2015]																																

◆ Milestone/Key Date
 [Gantt bar] Activity



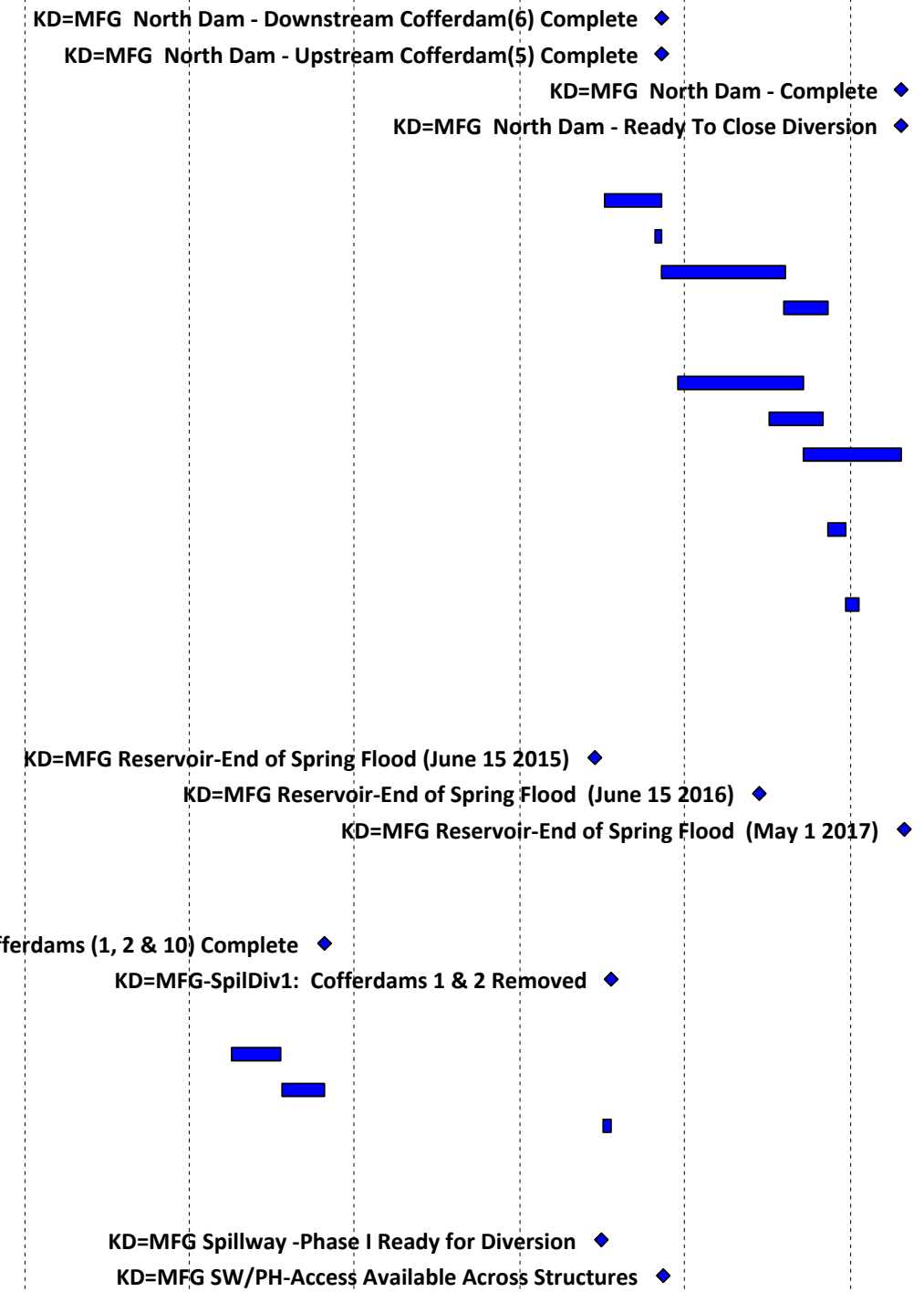
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Activity Name	Start	Finish	2010		2011				2012				2013				2014				2015				2016				2017				Q18	
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3		Q4
g Installation																																		
MFG-North Spur: Instrumentation	08-Jul-2015	15-Oct-2015																																
MFG-North Spur: Pumpwells and Relief Wells	14-Jan-2016	30-Sep-2016																																
MFGen North RCC Dam																																		
MF North Dam																																		
1 Key Date																																		
KD=MFG North Dam - Downstream Cofferdam(6) Complete		10-Nov-2015																																
KD=MFG North Dam - Upstream Cofferdam(5) Complete		11-Nov-2015																																
KD=MFG North Dam - Complete		25-Apr-2017																																
KD=MFG North Dam - Ready To Close Diversion		25-Apr-2017																																
e Earthworks																																		
MFG-North Dam: Upstream Cofferdam(5)	09-Jul-2015	11-Nov-2015																																
MFG-North Dam: Downstream Cofferdam(6)	28-Oct-2015	10-Nov-2015																																
MFG-North Dam Earth: Foundation Preparation	12-Nov-2015	10-Aug-2016																																
MFG-North Dam Earth: Curtain grouting	06-Aug-2016	11-Nov-2016																																
f Civil/Structures																																		
MFG-North Dam: CVC D/S Walls & Abutments	16-Dec-2015	18-Sep-2016																																
MFG-North Dam: RCC	05-Jul-2016	31-Oct-2016																																
MFG-North Dam: CVC Crest & D/S Facing	19-Sep-2016	25-Apr-2017																																
g Installation																																		
MFG-North Dam Install: Outfitting (Lighting/HVAC/Etc)	12-Nov-2016	23-Dec-2016																																
j Completions																																		
MFG-North Dam Completions: Static - Dynamic Comm (Lighting/HVAC/Etc)	24-Dec-2016	19-Jan-2017																																
MFGen Spillway/Diverson																																		
MF Gen																																		
1 Key Date																																		
KD=MFG Reservoir-End of Spring Flood (June 15 2015)	15-Jun-2015*																																	
KD=MFG Reservoir-End of Spring Flood (June 15 2016)	15-Jun-2016*																																	
KD=MFG Reservoir-End of Spring Flood (May 1 2017)	01-May-201...																																	
MF Bulk Excavation																																		
1 Key Date																																		
KD=MFG-SpilDiv1: Spillway Cofferdams (1, 2 & 10) Complete		26-Oct-2013																																
KD=MFG-SpilDiv1: Cofferdams 1 & 2 Removed		23-Jul-2015																																
e Earthworks																																		
MFG-SpilDiv1: Excavation - Spillway	05-Apr-2013*	22-Jul-2013																																
MFG-SpilDiv1: Civil Works: Cofferdams 1/ 2/Riverside RCC(10)	23-Jul-2013	26-Oct-2013																																
MFG-SpilDiv1: Civil Works:Cofferdams 1/2/Riverside RCC(10) Removed	03-Jul-2015	23-Jul-2015																																
Spillway/Div Ph 1																																		
1 Key Date																																		
KD=MFG Spillway -Phase I Ready for Diversion		02-Jul-2015																																
KD=MFG SW/PH-Access Available Across Structures		14-Nov-2015																																



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Activity Name	Start	Finish	2010				2011				2012				2013				2014				2015				2016				2017				018
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
c Materials																																			
MFG-SpilDiv1 Materials: CD0510-Telecom Equipment Delivered at Site	01-Mar-2015		MFG-SpilDiv1 Materials: CD0510-Telecom Equipment Delivered at Site ◆																																
f Civil/Structures																																			
MFG-SW CH0007 Mobilization Complete (Work can begin)	17-Oct-2013*		G-SW CH0007 Mobilization Complete (Work can begin) ◆																																
MFG-SpilDiv1 Civil:: Ph1 Foundation Preparation - Spillway	27-Oct-2013	20-Mar-2014	[Gantt bar: Oct 2013 to Mar 2014]																																
MFG-SpilDiv1 Civil: Ph1 Foundation Preparation - other Structures req for Diversion	27-Oct-2013	17-Jul-2014	[Gantt bar: Oct 2013 to Jul 2014]																																
MFG-SpilDiv1 Civil: Ph1 Structures - other Structures req for Diversion	12-Nov-2013	11-Feb-2015	[Gantt bar: Nov 2013 to Feb 2015]																																
MFG-SpilDiv1 Civil: Ph1 Structures - Spillway	14-Jan-2014	04-Sep-2014	[Gantt bar: Jan 2014 to Sep 2014]																																
MFG-SpilDiv1 Civil: Ph1 Structures - Upstream Temp bridge	20-Feb-2014	30-May-2014	[Gantt bar: Feb 2014 to May 2014]																																
g Installation																																			
MFG-SpilDiv1 Install: Hydro-Mech Spillway (gates/Stoplogs)	05-Sep-2014	19-Apr-2015	[Gantt bar: Sep 2014 to Apr 2015]																																
h Telecom																																			
MFG-SpilDiv1 Install: Install Telecom	01-Mar-2015	25-Mar-2015	[Gantt bar: Mar 2015 to Mar 2015]																																
j Completions																																			
MFG-SpilDiv1 Install: Telecom Static Comm	26-Mar-2015	19-Apr-2015	[Gantt bar: Mar 2015 to Apr 2015]																																
MFG-SpilDiv1 Completions: Hydro-Mech Spillway (static - dynamic-gates/Stoplogs)	20-Apr-2015	02-Jul-2015	[Gantt bar: Apr 2015 to Jul 2015]																																
Spillway Ph2-Bay 1																																			
1 Key Date																																			
KD=MFG Spillway -Complete Phase 2 - Gate 1		15-May-2016	KD=MFG Spillway -Complete Phase 2 - Gate 1 ◆																																
f Civil/Structures																																			
MFG-SpilDiv2 Place Stoplogs and Dewater Bay 1	13-Nov-2015	13-Nov-2015	[Gantt bar: Nov 2015 to Nov 2015]																																
MFG-SpilDiv2 Civil Works: Rollway 1	15-Nov-2015	02-Apr-2016	[Gantt bar: Nov 2015 to Apr 2016]																																
g Installation																																			
MFG-SpilDiv2 Install: Stoplog/Gate Guides Gate 1	03-Apr-2016	07-May-2016	[Gantt bar: Apr 2016 to May 2016]																																
j Completions																																			
MFG-SpilDiv2 Completions: Spillway Gates Bay 1 - Dry Test (Static)	08-May-2016	15-May-2016	[Gantt bar: May 2016 to May 2016]																																
Spillway Ph2-Bay 3																																			
1 Key Date																																			
KD=MFG Spillway -Complete Phase 2 - Gate 3		27-Nov-2016	KD=MFG Spillway -Complete Phase 2 - Gate 3 ◆																																
f Civil/Structures																																			
MFG-SpilDiv2 Place Stoplogs and Dewater Bay 3	19-Jun-2016	20-Jun-2016	[Gantt bar: Jun 2016 to Jun 2016]																																
MFG-SpilDiv2 Civil Works: Rollway 3	21-Jun-2016	15-Oct-2016	[Gantt bar: Jun 2016 to Oct 2016]																																
g Installation																																			
MFG-SpilDiv2 Install: Guides Rollway 3 -Phase 2	16-Oct-2016	19-Nov-2016	[Gantt bar: Oct 2016 to Nov 2016]																																
j Completions																																			
MFG-SpilDiv2 Completions: Spillway Gates Bay 3 - Dry Test (static)	20-Nov-2016	27-Nov-2016	[Gantt bar: Nov 2016 to Nov 2016]																																
Spillway Ph2-Bay 5																																			
1 Key Date																																			
KD=MFG Spillway -Complete Phase 2 - Gate 5		27-Nov-2016	KD=MFG Spillway -Complete Phase 2 - Gate 5 ◆																																
f Civil/Structures																																			

◆ Milestone/Key Date
 [Gantt bar] Activity



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Activity Name	Start	Finish	2010				2011				2012				2013				2014				2015				2016				2017				D18																															
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4																																	
MFG-SpilDiv2 Place Stoplogs and Dewater Bay 5	19-Jun-2016	20-Jun-2016																																																																
MFG-SpilDiv2 Civil Works: Rollway 5	21-Jun-2016	15-Oct-2016																																																																
g Installation																																																																		
MFG-SpilDiv2 Install: Guides Rollway 5 - Phase 2	16-Oct-2016	19-Nov-2016																																																																
j Completions																																																																		
MFG-SpilDiv2 Completions: Spillway gates Rollway 5 - Dry test (static)	20-Nov-2016	27-Nov-2016																																																																
Spillway Ph2-Bay 2																																																																		
1 Key Date																																																																		
KD=MFG Spillway -Complete Phase 2 - Gate 2		29-Sep-2017																																																																
f Civil/Structures																																																																		
MFG-SpilDiv2 Place Stoplogs and Dewater Bay 2	02-May-2017	02-May-2017																																																																
MFG-SpilDiv2 Civil Works: Rollway 2	04-May-2017	21-Aug-2017																																																																
g Installation																																																																		
MFG-SpilDiv2 Install: Guides Rollway 2 - Phase 2	21-Aug-2017	22-Sep-2017																																																																
j Completions																																																																		
MFG-SpilDiv2 Completions: Spillway Gates Bay 2 - Dry Test (static)	22-Sep-2017	29-Sep-2017																																																																
Spillway Ph2-Bay 4																																																																		
1 Key Date																																																																		
KD=MFG Spillway -Complete Phase 2 - Gate 4		29-Sep-2017																																																																
f Civil/Structures																																																																		
MFG-SpilDiv2 Place Stoplogs and Dewater Bay 4	02-May-2017	02-May-2017																																																																
MFG-SpilDiv2 Civil Works: Rollway 4	04-May-2017	21-Aug-2017																																																																
g Installation																																																																		
MFG-SpilDiv2 Install: Guides Rollway 4 - Phase 2	21-Aug-2017	22-Sep-2017																																																																
j Completions																																																																		
MFG-SpilDiv2 Completions: Spillway gates Rollway 4 - Dry test (static)	22-Sep-2017	29-Sep-2017																																																																
MFGen Power House & Intake																																																																		
Key Dates																																																																		
1 Key Date																																																																		
KD=MFG-PH CH0007 Mobilization Complete	17-Oct-2013																																																																	
KD=MFG -Main Powerhouse Bridge Crane Ready		15-May-2015																																																																
KD=MFGen Unit 1 Ready for Operations (RFO)		07-Jul-2017																																																																
KD=MFGen Unit 2 Ready for Operations (RFO)		26-Aug-2017																																																																
KD=MFGen Unit 3 Ready for Operations (RFO)		20-Nov-2017																																																																
KD=MFGen Unit 4 Ready for Operations (RFO)		30-Dec-2017																																																																
MF Bulk Excavation																																																																		
e Earthworks																																																																		
MFG-PH Excavation: Powerhouse (incl Cofferdam 3)	13-Jan-2013	25-Oct-2013																																																																
KD=MFG-PH: CH0006 Bulk Exca Equip Mob Complete	13-Jan-2013*																																																																	
PH Tailrace Excavation																																																																		

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Activity Name	Start	Finish	2010		2011				2012				2013				2014				2015				2016				2017				2018
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1			
e Earthworks																																	
MFG-PH Earth: Tail race plug excavation	14-Apr-2016	13-May-2016																															
PH South Service Bay & South Transition dam																																	
f1 civil Phase-1																																	
MFG-PH Civil: South Service Bay (Including Enclosure)	26-Oct-2013	21-Jan-2015																															
MFG-PH Civil: South transition dam	30-May-201...	31-Oct-2014																															
g Installation																																	
MFG-PH Civil: South Service Bay Bldg Utilities	22-Jan-2015	20-Feb-2015																															
MFG-PH Install: Powerhouse crane	14-Mar-2015	24-Apr-2015																															
h Telecom																																	
MFG-PH: Install Telecom South Service bay	06-Feb-2015	02-Mar-2015																															
j Completions																																	
MFG-PH: Static - Dynamic Checks South Service Bay Utilities	21-Feb-2015	22-Mar-2015																															
MFG-PH Telecom: Static Comm-South Service bay	03-Mar-2015	22-Mar-2015																															
MFG-PH Completions: Dynamic Comm. Overhead crane	25-Apr-2015	15-May-2015																															
Power House T/G Unit 1 Area																																	
f1 civil Phase-1																																	
MFG-PH Civil: Unit 1 Structure Ph 1 (bldg enclosed)	02-Dec-2013	07-Aug-2015																															
MFG-PH Civil: Unit 1 Intake Structure	20-Mar-2014	08-Sep-2015																															
f2 Civil/Install																																	
MFG-PH Install: T/G Embedded Parts & Structure Ph 2 Unit 1	08-Aug-2015	22-Aug-2016																															
g Installation																																	
MFG-PH Install: Hydro-mech Draft tube (incl Dry Test) Unit 1	08-Aug-2015	23-Mar-2016																															
MFG-PH Install/Comm: T/G Ancillary Systems - Unit 1	08-Aug-2015	20-Apr-2017																															
MFG-PH Install/Comm: Bldg Utility Systems - Unit 1	08-Aug-2015	22-Aug-2016																															
MFG-PH Install: Hydro-mech Intake (incl Dry Test) Unit 1	09-Sep-2015	19-Apr-2016																															
MFG-PH Install: Pit free - Unit 1		22-Aug-2016																															
MFG-PH Install: Turbine/generator - Unit 1 Pit Free to Dry Test	23-Aug-2016	20-Apr-2017																															
h Telecom																																	
MFG-PH: Install Telecom - Unit 1	06-Dec-2015	04-Mar-2016																															
j Completions																																	
MFG-PH Telecom: Static Comm-Unit 1	05-Mar-2016	24-Mar-2016																															
MFG-PH Completions: Static Comm. (Dry Tests) - Unit 1	20-Apr-2017	13-May-2017																															
MFG-PH Completions: Ready to Turn - Unit 1		13-May-2017																															
MFG-PH Completions: WATER Available- Unit 1		17-May-2017																															
MFG-PH Completions: Dynamic Comm. (Wet Tests to takeover) T/G- Unit 1	19-May-2017	07-Jul-2017																															
MFG-PH Completions: Ready for Power Generation - Unit 1		07-Jul-2017																															
Power House T/G Unit 2 Area																																	
f1 civil Phase-1																																	
MFG-PH Civil: Unit 2 Structure Ph 1 (bldg enclosed)	03-Feb-2014	13-Oct-2015																															
MFG-PH Civil: Unit 2 Intake Structure	28-Mar-2014	22-Sep-2015																															

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Activity Name	Start	Finish	2010		2011				2012				2013				2014				2015				2016				2017				018
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
			Gantt Chart Area																														
f2 Civil/Install																																	
MFG-PH Install:T/G Embedded Parts & Structure Ph 2 Unit 2	14-Oct-2015	11-Oct-2016	[Gantt bar from Q4 2015 to Q4 2016]																														
g Installation																																	
MFG-PH Install: Hydro-mech Intake (incl Dry Test) Unit 2	23-Sep-2015	03-May-2016	[Gantt bar from Q3 2015 to Q1 2016]																														
MFG-PH Install: Hydro-mech Draft tube (incl Dry Test) Unit 2	14-Oct-2015	30-Mar-2016	[Gantt bar from Q4 2015 to Q1 2016]																														
MFG-PH Install/Comm: Bldg Utility Systems - Unit 2	14-Oct-2015	11-Oct-2016	[Gantt bar from Q4 2015 to Q4 2016]																														
MFG-PH Install/Comm: T/G Ancillary Systems - Unit 2	14-Oct-2015	07-Jun-2017	[Gantt bar from Q4 2015 to Q2 2017]																														
MFG-PH Install: Pit free - Unit 2		11-Oct-2016	[Milestone diamond at Q4 2016]																														
MFG-PH Install: Turbine/generator - Unit 2 Pit Free to Dry Test	12-Oct-2016	07-Jun-2017	[Gantt bar from Q4 2016 to Q2 2017]																														
h Telecom																																	
MFG-PH: Install Telecom - Unit 2	11-Feb-2016	10-May-2016	[Gantt bar from Q1 2016 to Q2 2016]																														
j Completions																																	
MFG-PH Telecom: Static Comm-Unit 2	11-May-2016	30-May-2016	[Gantt bar from Q2 2016 to Q2 2016]																														
MFG-PH Completions: WATER Available- Unit 2		17-May-2017	[Milestone diamond at Q1 2017]																														
MFG-PH Completions: Static Comm. (Dry Tests) - Unit 2	07-Jun-2017	07-Jul-2017	[Gantt bar from Q2 2017 to Q2 2017]																														
MFG-PH Completions: Ready to Turn - Unit 2		07-Jul-2017	[Milestone diamond at Q2 2017]																														
MFG-PH Completions: Dynamic Comm. (Wet Tests to takeover) T/G- Unit 2	07-Jul-2017	26-Aug-2017	[Gantt bar from Q2 2017 to Q3 2017]																														
MFG-PH Completions: Ready for Power Generation - Unit 2		26-Aug-2017	[Milestone diamond at Q3 2017]																														
Power House T/G Unit 3 Area																																	
f1 civil Phase-1																																	
MFG-PH Civil: Unit 3 Structure Ph 1 (bldg enclosed)	10-Mar-2014	30-Oct-2015	[Gantt bar from Q4 2013 to Q4 2015]																														
MFG-PH Civil: Unit 3 Intake Structure	28-Apr-2014	08-Oct-2015	[Gantt bar from Q2 2014 to Q4 2015]																														
f2 Civil/Install																																	
MFG-PH Install: T/G Embedded Parts & Structure Ph 2 Unit 3	31-Oct-2015	14-Nov-2016	[Gantt bar from Q4 2015 to Q4 2016]																														
g Installation																																	
MFG-PH Install: Hydro-mech Intake (incl Dry Test) Unit 3	09-Oct-2015	17-May-2016	[Gantt bar from Q3 2015 to Q1 2016]																														
MFG-PH Install: Hydro-mech Draft tube (incl Dry Test) Unit 3	31-Oct-2015	06-Apr-2016	[Gantt bar from Q4 2015 to Q1 2016]																														
MFG-PH Install/Comm: Bldg Utility Systems - Unit 3	31-Oct-2015	14-Nov-2016	[Gantt bar from Q4 2015 to Q4 2016]																														
MFG-PH Install/Comm: T/G Ancillary Systems - Unit 3	31-Oct-2015	29-Aug-2017	[Gantt bar from Q4 2015 to Q3 2017]																														
MFG-PH Install: Pit free - Unit 3		14-Nov-2016	[Milestone diamond at Q4 2016]																														
MFG-PH Install: Turbine/generator - Unit 3 Pit Free to Dry Test	15-Nov-2016	29-Aug-2017	[Gantt bar from Q4 2016 to Q3 2017]																														
h Telecom																																	
MFG-PH: Install Telecom - Unit 3	28-Feb-2016	27-May-2016	[Gantt bar from Q1 2016 to Q2 2016]																														
j Completions																																	
MFG-PH Telecom: Static Comm-Unit 3	28-May-2016	16-Jun-2016	[Gantt bar from Q2 2016 to Q2 2016]																														
MFG-PH Completions: WATER Available- Unit 3		17-May-2017	[Milestone diamond at Q1 2017]																														
MFG-PH Completions: Static Comm. (Dry Tests) - Unit 3	29-Aug-2017	28-Sep-2017	[Gantt bar from Q3 2017 to Q3 2017]																														
MFG-PH Completions: Dynamic Comm. (Wet Tests to takeover) T/G- Unit 3	28-Sep-2017	20-Nov-2017	[Gantt bar from Q3 2017 to Q4 2017]																														
MFG-PH Completions: Ready to Turn - Unit 3		28-Sep-2017	[Milestone diamond at Q3 2017]																														
MFG-PH Completions: Ready for Power Generation - Unit 3		20-Nov-2017	[Milestone diamond at Q4 2017]																														
Power House T/G Unit 4 Area																																	

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 [Gantt bar] Activity



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Activity Name	Start	Finish	2010		2011				2012				2013				2014				2015				2016				2017				Q18	
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3		Q4
			Gantt Chart Area																															
f1 civil Phase-1																																		
MFG-PH Civil: Unit 4 Structure Ph 1 (bldg enclosed)	14-Apr-2014	11-Dec-2015	[Gantt bar from Q2 2014 to Q4 2015]																															
MFG-PH Civil: Unit 4 Intake Structure	02-Jun-2014	12-Nov-2015	[Gantt bar from Q2 2014 to Q4 2015]																															
f2 Civil/Install																																		
MFG-PH Install: T/G Embedded Parts & Structure Ph 2 Unit 4	12-Dec-2015	16-Jan-2017	[Gantt bar from Q4 2015 to Q1 2017]																															
g Installation																																		
MFG-PH Install: Hydro-mech Intake (incl Dry Test) Unit 4	13-Nov-2015	09-Jun-2016	[Gantt bar from Q4 2015 to Q2 2016]																															
MFG-PH Install: Hydro-mech Draft tube (incl Dry Test) Unit 4	12-Dec-2015	13-Apr-2016	[Gantt bar from Q4 2015 to Q1 2016]																															
MFG-PH Install/Comm: Bldg Utility Systems - Unit 4	12-Dec-2015	16-Jan-2017	[Gantt bar from Q4 2015 to Q1 2017]																															
MFG-PH Install/Comm: T/G Ancillary Systems - Unit 4	12-Dec-2015	17-Oct-2017	[Gantt bar from Q4 2015 to Q4 2017]																															
MFG-PH Install: Pit free - Unit 4		16-Jan-2017	[Milestone diamond at Q1 2017]																															
MFG-PH Install: Turbine/generator - Unit 4 Pit Free to Dry Test	17-Jan-2017	17-Oct-2017	[Gantt bar from Q1 2017 to Q4 2017]																															
h Telecom																																		
MFG-PH: Install Telecom - Unit 4	10-Apr-2016	08-Jul-2016	[Gantt bar from Q2 2016 to Q3 2016]																															
j Completions																																		
MFG-PH Telecom: Static Comm-Unit 4	09-Jul-2016	28-Jul-2016	[Milestone diamond at Q3 2016]																															
MFG-PH Completions: WATER Available- Unit 4		17-May-2017	[Milestone diamond at Q2 2017]																															
MFG-PH Completions: Static Comm. (Dry Tests) - Unit 4	17-Oct-2017	16-Nov-2017	[Milestone diamond at Q4 2017]																															
MFG-PH Completions: Ready to Turn - Unit 4		16-Nov-2017	[Milestone diamond at Q4 2017]																															
MFG-PH Completions: Dynamic Comm. (Wet Tests to takeover) T/G- Unit 4	20-Nov-2017	30-Dec-2017	[Milestone diamond at Q4 2017]																															
MFG-PH Completions: Ready for Power Generation - Unit 4		30-Dec-2017	[Milestone diamond at Q4 2017]																															
PH North Service Bay & Center Transition dam																																		
f1 civil Phase-1																																		
MFG-PH Civil: Center transition dam (PH side)	02-Jun-2014	11-Nov-2015	[Gantt bar from Q2 2014 to Q4 2015]																															
MFG-PH Civil: North Service bay (Including Enclosure)	12-Dec-2015	12-Jan-2016	[Milestone diamond at Q1 2016]																															
g Installation																																		
MFG-PH Civil: North Service Bay Bldg Utilities	13-Jan-2016	11-Feb-2016	[Milestone diamond at Q1 2016]																															
j Completions																																		
MFG-PH Completions: Static - Dynamic Checks Service Bay North	12-Feb-2016	12-Mar-2016	[Milestone diamond at Q1 2016]																															
MFGGen-315kV Collector Line (Powerhouse->MF Switchyard)																																		
MF HVac TL PH-> MF Swyd																																		
1 Key Date																																		
KD=MFGGen-315 PH-SY TL: Start Construction	24-Feb-2014		[Milestone diamond at Q1 2014]																															
KD=MFGGen-315 PH-SY TL: TL Inspection/Connection Complete		24-Aug-2016	[Milestone diamond at Q3 2016]																															
e Earthworks																																		
MFGGen-315 PH-SY TL: ROW Clearing	24-Feb-2014*	05-Mar-2014	[Milestone diamond at Q1 2014]																															
f Civil/Structures																																		
MFGGen-315 PH-SY TL: Foundations	12-Aug-2014*	26-Mar-2015	[Gantt bar from Q3 2014 to Q1 2015]																															
g Installation																																		
MFGGen-315 PH-SY TL: Tower Assembly / Install	27-Mar-2015	26-May-2015	[Milestone diamond at Q2 2015]																															
MFGGen-315 PH-SY TL: Conductor/OPGW Install	27-May-2015	28-Jun-2015	[Milestone diamond at Q2 2015]																															



Integrated Project Schedule

LCP Project Control

at Baseline

Printed: 18-Feb-2013

Activity Name	Start	Finish	2010		2011				2012				2013				2014				2015				2016				2017				J18
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
j Completions																																	
MFGen-315 PH-SY TL: Post Installation Final Inspection (static)		28-Jun-2015																															
MFGen-315 PH-SY TL: Connection to MF Swyd (Slack Span)	14-Mar-2016*	15-Mar-2016																															
MFGen-315 PH-SY TL: Connection to PH (Slack Span)	23-Aug-2016	24-Aug-2016																															
MFGen South Dam																																	
MF South Dam																																	
1 Key Date																																	
KD=MFG -South Dam - Start Construction	02-May-2015																																
KD=MFG -South Dam - Complete		14-Nov-2015																															
e Earthworks																																	
MF-South Dam Earthworks: Access Road	02-May-2015	28-May-2015																															
MF-South Dam Earthworks: Grub/strip/excav	29-May-2015	26-Jun-2015																															
f Civil/Structures																																	
MF-South Dam Civil: Foundations/Grout	27-Jun-2015	24-Jul-2015																															
MF-South Dam Civil: Fill	25-Jul-2015	14-Nov-2015																															
MFGen Site Restoration																																	
MFG-Site Restoration																																	
1 Key Date																																	
KD=MFG- Start Restoration	18-May-2017																																
LTA (MFATS2) MF Terminal Station (Switchyard)																																	
LTA-MF Switchyard																																	
e Earthworks																																	
MFG-PH Earth: MF Switchyard earthworks	05-Nov-2012*	29-Oct-2013																															
Maritime Link (Emera)																																	
ML Overall																																	
ML Overall																																	
w Maritime Link																																	
ML-Overall System Commissioning	01-Oct-2016	31-Mar-2017																															
ML Marine Crossing EPC1																																	
ML Marine Crossing																																	
w Maritime Link																																	
ML-Crossing- Landfalls (incl. HDD)	15-Jun-2014*	30-Apr-2016																															
ML-Crossing-Cable System Install	15-May-2016	10-Oct-2016																															
ML-Crossing-Cable Protect Ph 1	01-Jul-2016	15-Dec-2016																															
ML-Crossing-Cable System Commissioning	01-Oct-2016*	31-Dec-2016																															
ML-Crossing-Cable Protect Ph 2	01-May-2017	30-Sep-2017																															
ML Converters EPC2																																	
ML Marine Crossing																																	
w Maritime Link																																	
ML-NL-Convert: Converter Bottom Brook Commissioning	16-Sep-2016	31-Dec-2016																															

◆ Milestone/Key Date
 ■ Activity



Integrated Project Schedule

LCP Project Control

at Baseline

Printed: 18-Feb-2013

Activity Name	Start	Finish	2010				2011				2012				2013				2014				2015				2016				2017				2018
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	
ML Converters																																			
w Maritime Link																																			
ML-NL-Convert: Converter Bottom Brook Construction	15-Jan-2015*	15-Sep-2016																																	
ML-NS-Convert: Converter Woodbine Construction	15-Jan-2015*	15-Sep-2016																																	
ML-NS-Convert: Converter Woodbine Commissioning	16-Sep-2016	31-Dec-2016																																	
ML AC Transmission																																			
ML AC TransLines																																			
w Maritime Link																																			
ML-NL-TL: AC TL in NL - Bottom Brook to Granite Canal	15-May-201...	15-Dec-2016																																	
ML DC Transmission & Electrode Line																																			
ML DC TransLines																																			
w Maritime Link																																			
ML-NS-TL: DC TL in NS - Point Aconi to Woodbine	01-Oct-2013*	30-Sep-2015																																	
ML-NL-TL: DC TL in NL - Bottom Brook to Cape Ray	15-Nov-2013*	15-Jun-2016																																	
ML-NL-TL: TL Grounding (Electrode) Line Bottom Brook to S'ville	15-Dec-2013*	31-Dec-2014																																	
ML-NS-TL: TL Grounding (Electrode) Line NS	15-Dec-2013*	15-Feb-2015																																	
ML Switchyards																																			
ML Swyds																																			
w Maritime Link																																			
ML-NL-Swyd: Bottom Brooke	15-May-201...	15-Nov-2015																																	
ML-NL-Swyd: Granite Canal	01-Apr-2015*	30-Sep-2016																																	
ML-NS-Swyd: Woodbine	01-Apr-2015*	30-Jun-2016																																	
ML Transition Compound																																			
ML Ttransition Compound																																			
w Maritime Link																																			
ML-NS-Transition Compound - Point Aconi	15-Jan-2015*	15-Jan-2016																																	
ML-NL-Transition Compound - Cape Ray	15-Feb-2015*	15-Feb-2016																																	
ML Grounding (Electrode) Site																																			
ML Grounding (Electrodes)																																			
w Maritime Link																																			
ML-NS-GS: Grounding Site (Electrode Site) Nova Scotia - Gabarus	01-Jan-2015*	31-Dec-2015																																	
ML-NL-GS: Grounding Site (Electrode Site) Newfoundland - S'ville	15-Jan-2015*	15-Mar-2016																																	

◆ Milestone/Key Date
 ■ Activity