
Nova Scotia Utility and Review Board

IN THE MATTER OF

*The Maritime Link Act, S.N.S 2012 c.9
and the
Maritime Link Cost Recovery Process Regulation, N.S. Reg. 189/2012*

NSPML Quarterly Report Q2 2014

June 13, 2014

Table of Contents

1.0 Introduction..... 3

2.0 Update of Project Schedule with Variance Explanation..... 5

 2.1 Gates and Milestones 5

 2.2 Commercial Activities..... 5

 2.2.1 Land Access Agreements..... 7

 2.2.2 Funding – Schedule Reserve and Allowances 8

 2.2.3 Joint Development Agreements 8

 2.3 Engineering Activities..... 9

 2.4 Submarine Cables (Marine) 10

 2.5 Converter Stations 10

 2.6 Tree Clearing Contractor – Transmission Lines 10

 2.7 Construction Contractor – Transmission Lines..... 11

 2.8 Construction Contractor(s) –Other..... 11

3.0 Updated Cost Summary 12

4.0 Cost Flow 15

5.0 Federal Loan Guarantee/Financing..... 16

1 **1.0 INTRODUCTION**

2

3 This is the Q2 2014 quarterly report for the Maritime Link as directed by the UARB.

4

5 In its Decision dated July 22nd, 2013, the Board agreed with Enerco's reporting
6 recommendations, and directed as follows:

7

8 [405] Enerco, in Undertaking U-31, recommended filing of
9 various reports by NSPML during the design and construction
10 phase of the ML Project. The Board has reviewed Enerco's
11 recommendations and generally agrees that given the size of the
12 ML Project and that the final engineering design and tender
13 awards are not completed, it is appropriate for NSPML to
14 provide regular reports to the Board.

15

16 On November 8, 2013, the UARB filed a Memorandum confirming NSPML's intent
17 to provide regular reporting updates.

18

19 Additionally, the UARB ordered the following in its Supplemental Decision:

20

21 [115]....detailed reports must be filed by NSPML on a semi-
22 annual basis, on June 15 and December 15 each year. The reports
23 shall commence December 15, 2013. Updated status reports must
24 be filed quarterly.

25

26 As detailed in Enerco Undertaking 31, this report will provide updates on the
27 following:

28

- 1) Design and construction

- 1 • An updated quarterly schedule (as per Enerco U-31, item 1.1).
- 2 • A short explanation of any variance from the previous quarter
- 3 affecting any of the line items in the quarterly schedule (as per Enerco
- 4 U-31, item 1.2).
- 5 • A short status report for key activities (as per Enerco U-31, item 1.3).
- 6 • An updated detailed semi-annual schedule, based on the 8-page MLP
- 7 Summary Schedule of Enerco IR-8, Attachment 1 (as per Enerco U-
- 8 31, item 1.4). Please refer to Attachment 2 of this report for the
- 9 schedule.

10

11 2) Construction Cost Summary

- 12 • An updated cost summary, based on the financial table (reference
- 13 Enerco IR-25, Attachment 1, page 12), but extended to the end of the
- 14 construction period, including commissioning.
- 15 • A project cost flow based on the “MLP 2013 Cost Flow (reference
- 16 Enerco IR-25 Attachment 1 page 13), extended to the end of the
- 17 construction and commissioning period, showing the total anticipated
- 18 cost.

1 **2.0 UPDATE OF PROJECT SCHEDULE WITH VARIANCE EXPLANATION**

2

3 As per Enerco U-31, sections 1.1, 1.2, and 1.3, this section provides an update on the
4 Level 1 Project Schedule, along with a variance explanation and general status
5 updates.

6

7 Please refer to Attachment 1 for the Project Schedule.

8

9 **2.1 Gates and Milestones**

10

11 The project is following a Decision Gate methodology and has achieved Decision
12 Gate 3 (DG3) approval, the authority to move to construction. There are several
13 predecessor activities which were to be substantially completed prior to making the
14 final construction decision, which have all been achieved. As indicated in the last
15 report, DG3 had moved to Q2 from Q1 2014. The primary purpose of the change was
16 to ensure the financing supported by the Federal Loan Guarantee was completed, and
17 satisfactory rights associated with the subsea corridor and the transmission routes and
18 sites were able to be attained. These conditions are now complete and formal DG3
19 approval was achieved in May, 2014. Additional information on the financing is
20 contained in section 5.0 of this report.

21

22 **2.2 Commercial Activities**

23

24 The key major procurement activities are presented in Table 1 with an update of the
25 status for each initiative:

1

Table 1

Commercial Activity	Status April, 2014	Initiative Number	Status in June, 2014
HVDC Submarine Cable Supply and Installation	Contract awarded January 30, 2014.	E11-88	Closed.
Converter stations, switchyards and related structures (“converters and structures”)	Negotiations are ongoing and contract award forecasted for Q2 2014.	E12-74	Negotiations nearing completion, contract award planned for Q2, 2014.
Right of Way Clearing along Transmission Lines	Contracts awarded and tree clearing activities began in February.	E13-88	Closed.
Transmission Structures and Grillages	Evaluations completed. Negotiations in progress with contract award forecasted for Q2 2014.	E13-85	Negotiations nearing completion, contract award planned for Q2, 2014.
Site Preparation Services (Includes construction of access road upgrades)	RFP closed February 27, negotiations and contract award forecasted for Q2 2014.	E13-92	RFP closed in February, proponents’ evaluation in progress, contract award now planned for Q3, 2014.

2

Commercial Activity	Status April, 2014	Initiative Number	Status June, 2014
Transmission Line Construction	RFP to close mid-April, 2014. Negotiations and Contract award forecasted for Q3 2014.	E13-95	RFP closed in April, evaluations in progress, contract award planned for Q4, 2014.
Transmission Line Conductors	RFP closed March 4 th and review initiated. Contract award forecasted in Q3 2014.	E13-87	No Change.
Horizontal Directional Drill (HDD) Construction Program	RFP to be issued Q4, 2014 with contract award forecasted for Q2, 2015.	E13-137	No Change.
Accommodations	RFP issued February 14 th with a close of April 15 th . Contract award forecasted for Q2/Q3 2014.	E13-89	Evaluations in progress with award expected in Q3, 2014.

1

2 **2.2.1 Land Access Agreements**

3

4

5

6

In Nova Scotia, NSPML has identified the landowners along the primary HVDC transmission route from Point Aconi to Woodbine, and along the grounding line from Woodbine to Big Lorraine. Agreements with many landowners have been secured and

1 tree clearing activities started in February. In this period, agreements along the HVDC
2 transmission line continued to be secured since the last report. In addition,
3 considerable progress was achieved in securing access agreements along the
4 grounding line. An application for expropriation of certain parcels along the DC Line
5 was made on May 9, 2014 and is in progress. Access to lands and rights are
6 progressing positively with the Cape Breton Regional Municipality, provincial
7 government and Enterprise Cape Breton Corporation, for Crown and municipal lands.

8
9 In Newfoundland, NSPML continued to identify and secure the private landowners'
10 agreements along the primary HVDC and HVAC routes. Agreements to access Crown
11 land were secured in the previous reporting period. Land access agreements have
12 begun to be secured on the grounding line from Bottom Brook to Indian Head. The
13 NL Government has started issuing notices for untraceable owners along the lines and
14 sites. An application for expropriation of certain parcels along the DC Line was made
15 on June 6, 2014.

16
17 Work to achieve agreements with land owners continues to be a priority in both
18 Provinces in advance of the resumption of tree clearing, which is expected in late
19 summer or early fall, with all land rights secured by year-end.

21 **2.2.2 Funding – Schedule Reserve and Allowances**

22
23 NSPML has completed the FLG Financial Close, secured financing and begun
24 associated monthly procedures, and has completed the initial Construction Report, the
25 Funding Request, and the first drawdown of funds in April, 2014.

27 **2.2.3 Joint Development Agreements**

28
29 The original agreements were completed and signed on July 30, 2012.

30
31 The Sanction Agreement dated December 17, 2012 between Emera and Nalcor
32 contemplated (but did not require) that amendments would be made to the Commercial

1 Agreements to reflect the terms of the Sanction Agreement. The amendments to
2 Agreements are being finalized at this time and are forecasted to be complete in Q2
3 2014.

4 5 **2.3 Engineering Activities**

6
7 Commissioning of the Maritime Link continues to align with the in-service Decision
8 Gate 4 (DG4) target date of October 1, 2017. This schedule reflects the submarine
9 cable supply availability and installation optimization. Engineering is captured in three
10 main categories across several Work Breakdown Structures (“WBS’s”):

- 11
12 • HVDC Submarine Cable Supply and Installation – cable design and
13 manufacture is being engineered by the supplier of the cable, Nexans, and will
14 include performance criteria consistent with service life and reliability targets
15 subject to approval by NSPML. The horizontal directional drilled (HDD) bore
16 trajectories are being designed under a separate engineering contract (E13-
17 137), with work underway. The land-based geotechnical drilling activities in
18 both NL and NS were completed in May. The NS and NL marine-based
19 geotechnical work is planned to be completed late this summer as NSPML
20 works with fishery groups in the region. The HDD design will provide the
21 necessary data in advance of issuing the HDD construction related RFPs later
22 in 2014.
- 23
24 • HVDC Converters and Substations - engineering is included in the commercial
25 initiative for the supply and installation of these assets. The contract is in the
26 final stages of review and approval by both contractor and company. Site
27 preparation civil design for the converters and substation assets is being
28 completed under a separate engineering design service agreement (E13-92).
- 29
30 • Overland Transmission and Grounding Sites - engineering is being completed
31 under the same engineering design service agreement referred to above (E13-
32 92). These designs have advanced as planned since the last report. When these

1 designs are complete in Q3, 2014, the transmission line drawings will be
2 updated and issued for construction to the Transmission Line Construction
3 contractor(s) in Q4, 2014. Steel towers, grillages, conductor and transmission
4 construction contracts are at various stages of advancement as noted in Table 1.
5 Grounding site development plans are being advanced with the geotechnical
6 work scheduled for later in 2014 to support design requirements.

7
8 **2.4 Submarine Cables (Marine)**

9
10 The contract with Nexans was executed in January and the work was begun in
11 February. During this reporting period, the project planning deliverables were under
12 development. Those deliverables include such documents as the project execution
13 plan, project schedule, quality management plan, environmental management plan, the
14 safety management plan, procurement plan, and detailed list of deliverables. Site visits
15 by the key project team members from Nexans are scheduled in June 2014.

16
17 **2.5 Converter Stations**

18
19 Design reviews and discussion of optimization alternatives were ongoing during the
20 evaluation and negotiation activities with the preferred suppliers. Contract award
21 continues to be planned in Q2, 2014. Site preparation will be initiated when final civil
22 design is achieved, and will be based upon converter and substation layouts after the
23 supplier has finished its design work resulting from each of E12-74 (Supply of
24 Converters/ Substations) and E13-92 (Site Preparation Services).

25
26 **2.6 Tree Clearing Contractor – Transmission Lines**

27
28 Following contract awards, planning, training, surveys, and right of way agreements,
29 tree clearing advanced in NS in early February and March, completing phase one on
30 schedule. Similarly, tree clearing progressed in NL in February and continued through
31 to the end of April. During this period, environmental and safety monitoring resources
32 were in place to oversee contractor activities. Tree clearing will resume late summer or

1 early fall following the end of bird nesting seasons in both provinces pending land
2 rights being finalized.

3
4 **2.7 Construction Contractor – Transmission Lines**

5
6 Commencement of transmission line construction is scheduled for Q4, 2014. Line
7 design is in progress and all contracts are expected to be in-place for the construction
8 work to begin Q4- 2014.

9
10 **2.8 Construction Contractor(s) –Other**

11
12 Engineering designs for sites in NS and NL are in progress. The transition compound
13 site design was modified as part of the DG3 Basis of Design by removing the building
14 and design of the open-air facility (with the exception of site preparation), and
15 including it in the converter and substation contract (E12-74). Grounding site designs
16 will be finalized after geotechnical information is attained and assessed later this year,
17 with construction in 2015 and 2016.

3.0 UPDATED COST SUMMARY

As per Enerco U-31, section 2.1, the detail below outlines the DG3 forecasted costs.

Table 2 below provides an updated cost summary for the Maritime Link, which includes actual costs incurred to the end of Q1, 2014, as well as a forecast of costs for Q2, 2014 to the end of 2017. The total project forecast remains unchanged from the DG3 project capital cost estimate of \$1.577 billion.

Explanatory notes are listed below Table 2.

Table 2

Description	Actual Costs					Forecast						Total Project Estimate to Complete	Total Project Budget (IR 13)	Budget Reclass ¹	Budget Transfer ²	Current Project Budget
	2011	2012	2013	Q1 2014	Total Project to Date	2014			2015	2016	2017					
						Q2	Q3	Q4	Q1 - Q4	Q1 - Q4	Q1 - Q4					
Emera Internal	6,106	13,363	24,910	6,544	50,923	29,947	9,009	8,078	24,940	26,318	26,351	175,566	185,393	(9,827)	0	175,566
Nalcor Internal	0	0	0	0	0	8,380	50	30	120	120	120	8,820	8,820	0	0	8,820
Third Party	3,770	3,529	7,676	14,415	29,391	51,391	89,355	90,461	358,519	347,394	252,102	1,218,613	1,208,787	9,827	0	1,218,614
Environmental Approval	1,131	971	549	106	2,757	3,200	1,110	1,162	3,416	4,225	8,084	23,953	19,751	4,202	0	23,953
Cable	2,479	237	643	11,729	15,088	26,205	20,400	25,047	68,179	56,178	105,395	316,493	306,207	2,716	7,570	316,493
Converter Stations	0	0	1,517	761	2,278	4,309	41,337	31,831	164,164	217,857	113,756	575,532	574,459	1,074	0	575,533
Other Technical & Engineering	160	2,321	4,967	1,820	9,268	17,676	26,508	32,421	122,759	69,134	24,868	302,634	308,370	1,834	(7,570)	302,634
Total	9,876	16,892	32,586	20,960	80,314	89,719	98,414	98,569	383,579	373,832	278,574	1,403,000	1,403,000	0	0	1,403,000
Escalation												35,354	35,354	0	0	35,354
Contingency												139,000	139,000	0	0	139,000
Grand Total	9,876	16,892	32,586	20,960	80,314	89,719	98,414	98,569	383,579	373,832	278,574	1,577,354	1,577,354	0	0	1,577,354

Notes:

- Specific items included in the Total Project Budget that were submitted in the response to IR-13 from the December 13, 2013 Quarterly Report have simply been reclassified amongst major categories as Project costs and forecasts continue to be refined. There is no impact on the total project costs forecasted.
- There was a budget transfer of \$7.57 million to the Cable Contract account from the Other Technical and Engineering account as indicated in the above table with no impact on the total project costs forecasted.

1 **Total Actual Project Costs to end of Q1 2014 Compared to Forecast**

2
3 The variance of total actual project costs to the end of Q1, 2014 compared to the
4 amounts forecasted to the end of Q1, 2014 included in the response to IR-13 from the
5 December 2013 Report is a total underspend of \$80.8 million. As reported in the
6 NSPML Quarterly Report Q1 2014, the major variance is attributable to approximately
7 \$36 million of costs to be paid to Nalcor which is now forecasted to be paid in Q2
8 2014. In addition, the 50% sharing of third party costs between NSPML and Nalcor
9 has continued through Q1, 2014 resulting in a reduction in actual costs versus
10 forecasted costs of approximately \$17 million. This has no impact on the overall
11 project schedule.

12
13 The remaining \$28 million of variance between last forecast and actual capital
14 spending is explained as follows:

15
16 Emera Internal: \$23 million underspend this period

- 17 • The insurance program payment originally forecasted in Q1 2014 is now
18 forecasted in Q2 2014.
- 19 • Remaining variance attributable to several factors including timing of land
20 access activities and careful management of general and administration
21 expenses as noted in the last quarterly report.

22
23 Third Party Costs: \$5.0 million underspend this period

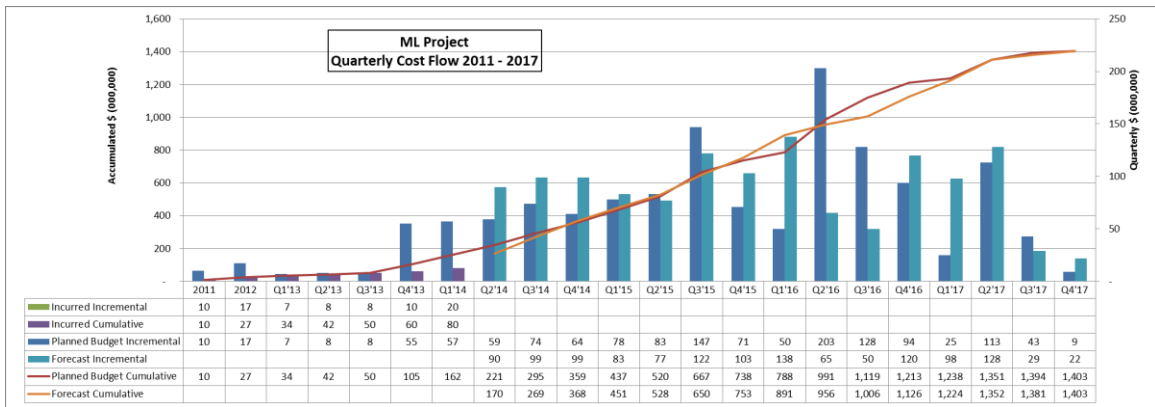
- 24 • Environmental Approval: \$1 million underspend
 - 25 ○ As referenced in the previous quarterly report, variance due to revised
26 permitting requirements and timing of stakeholder engagement
27 activities.
- 28 • Cable: \$4 million underspend
 - 29 ○ Additional clarification from marine contractors as to timing of work is
30 now incorporated in the forecast, to ensure that the forecast aligns with
31 the payment schedule within the contract.

- 1 ○ Horizontal directional drilling geotechnical and design activities
- 2 rescheduled from 2013/Q1 2014 to Q1/Q2 2014.
- 3 • Converters and structures: \$1 million underspend
- 4 ○ As noted in the previous quarterly report, updated timing of survey and
- 5 engineering work has been reflected in the forecast.
- 6 • Other Technical & Engineering: \$1 million additional spend
- 7 ○ Advancement of survey and tree clearing activities in Q1 2014.
- 8 ○ Timing of engineering services within 2014.

4.0 COST FLOW

As per Enerco U-31, section 2.2, please refer to Table 3 below for the cost flow until the Maritime Link is commissioned. This cost flow provides a base capital spending forecast of \$1.403 billion. Escalation and contingency in the amount of \$174 million will be allocated to appropriate accounts when necessary to account for expenditures associated with project risks. The total of the base capital spending, escalation, and contingency amounts to \$1.577 billion.

Table 3



10

1 **5.0 FEDERAL LOAN GUARANTEE/FINANCING**

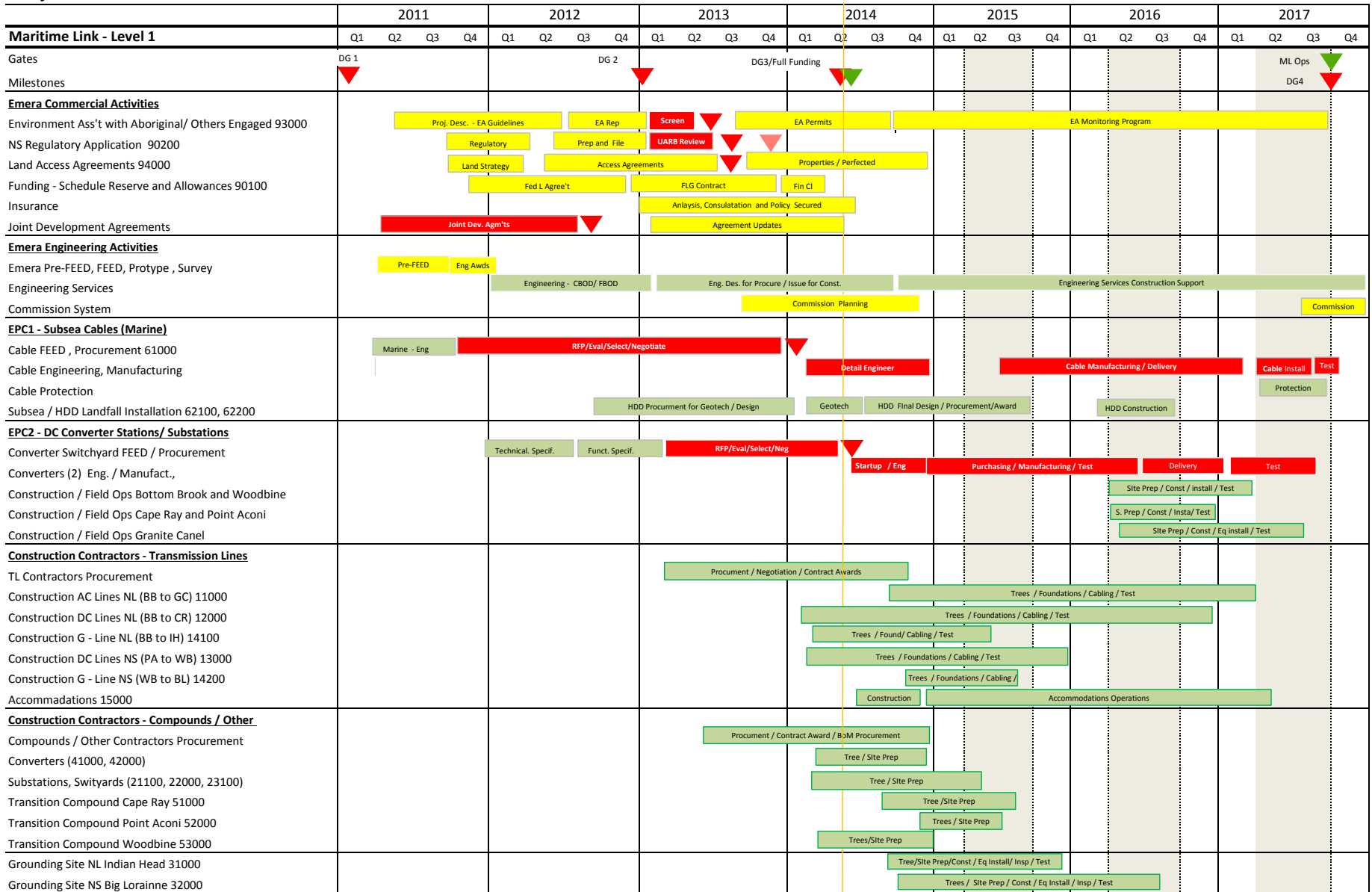
- 2
- 3 • On April 23, 2014, a \$1.3 billion bond offering was completed using the newly
- 4 formed special purpose vehicle, Maritime Link Funding Trust (“MLFT”).
- 5 • The bonds amortize over the life of the Maritime Link project.
- 6 • The full amount of the bonds has been guaranteed by the Government of Canada.
- 7 • On May 1, 2014, an initial draw was made from the MLFT to NSPML to fund
- 8 project costs.
- 9 • Up to the closing of the bond offering, all incurred project costs were funded with
- 10 equity as required by the FLG and consistent with NSPML’s original Application
- 11 with the UARB.
- 12 • From the date the bonds were received until such time as the 70:30 Debt: Equity
- 13 ratio is achieved, 100% of project costs incurred will be funded with debt. After
- 14 that time, all project costs will be funded using 70% debt and 30% equity. Again,
- 15 this is consistent with the terms of the FLG and with what was filed in the original
- 16 Application with the UARB.
- 17 • Since all bond proceeds have been received upon closing, the funds will be
- 18 invested in the MLFT until needed by the project. These funds have been invested
- 19 in securities approved by the Government of Canada.
- 20

21 The next quarterly report is scheduled to be filed on Oct 15th, 2014.

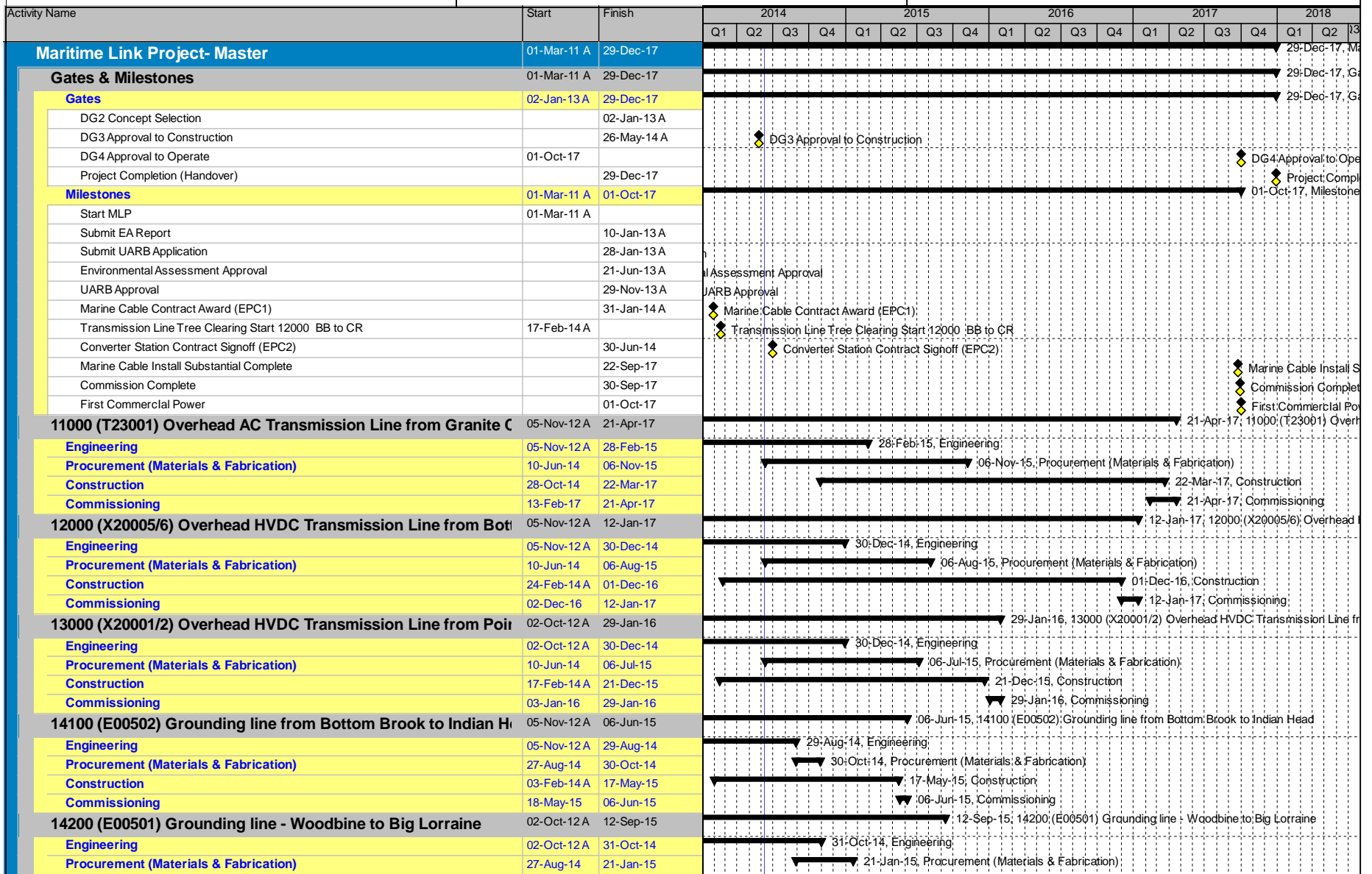
ML Project

Project Level 1 Schedule

May



Schedule Date - April 30, 2014



Primary Baseline
 Remaining Work
 Actual Work
 Critical Remaining ...

Activity Name	Start	Finish	2014		2015			2016				2017				2018	
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
Construction	03-Nov-14	23-Aug-15															
Commissioning	24-Aug-15	12-Sep-15															
15000 Accommodations	06-Jan-14	26-Jun-17															
Engineering	06-Jan-14	29-Jun-14															
Procurement (Materials & Fabrication)	28-Jul-14	03-Oct-14															
Construction	02-Jul-14	03-Nov-14															
Commissioning (Operations)	03-Nov-14	26-Jun-17															
21100 (103NL) Switchyard at Granite Canal	03-Dec-12 A	30-Aug-17															
Engineering	03-Dec-12 A	16-May-16															
Procurement (Materials & Fabrication)	21-Jul-15	01-Sep-16															
Construction	03-Nov-14	09-Aug-17															
Commissioning	10-Aug-17	30-Aug-17															
21200 (102NL) Modifications for P&C Communications, Ductba	01-Oct-14	21-Jun-17															
Engineering	01-Oct-14	20-Jul-15															
Procurement (Materials & Fabrication)	22-Jun-15	04-Aug-16															
EPC2 Construction	20-Jun-15	10-Mar-17															
Commissioning	03-Mar-17	21-Jun-17															
22000 (101NL) Switchyard at Bottom Brook	03-Dec-12 A	14-Mar-17															
Engineering	03-Dec-12 A	14-Mar-17															
Procurement (Materials & Fabrication)	25-Feb-15	11-Apr-16															
Construction	03-Nov-14	02-Nov-16															
Commissioning	26-Oct-16	14-Feb-17															
22100 Generator Fuel Supply	13-Jan-17	14-Feb-17															
23100 (301NS) Connect 345 kV Substation at Woodbine to Con	01-Apr-14 A	11-Aug-16															
Engineering	01-Apr-14 A	09-Aug-16															
Construction	03-Nov-14	08-Jun-16															
Commissioning	09-Jun-16	11-Aug-16															
23200 (301NS) Extension of Substation at Woodbine	02-Sep-14	02-Sep-16															
Engineering EPC2	02-Sep-14	24-Mar-15															
Procurement	30-Dec-14	24-Mar-15															
Construction	07-Sep-14	29-Jul-16															
Commissioning	02-Aug-16	02-Sep-16															
23300 (301NS) NSPI Control Centre Modifications	04-Jul-16	08-Dec-16															
Construction	04-Jul-16	08-Dec-16															
Commissioning	07-Nov-16	08-Dec-16															
23400 (301NL) NLH Control Centre Modifications	06-Sep-16	10-Feb-17															
Construction	06-Sep-16	10-Feb-17															
Commissioning	11-Jan-17	10-Feb-17															
31000 (901NL) Grounding Site NL - Indian Head	17-Jul-13 A	13-Jun-16															
Engineering	17-Jul-13 A	05-Nov-14															
Procurement (Materials & Fabrication) - Contractor	05-Nov-14	16-Feb-15															
Construction	03-Nov-14	11-Apr-16															

Primary Baseline
 Remaining Work
 Actual Work
 Critical Remaining ...

Activity Name	Start	Finish	2014				2015				2016				2017				2018	
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Commissioning	08-Mar-16	13-Jun-16																		
32000 Grounding Site NS - Big Lorraine	27-Sep-13 A	02-Dec-16																		
Engineering	27-Sep-13 A	05-Nov-14																		
Procurement (Materials & Fabrication) - Contractor	05-Nov-14	16-Feb-15																		
Construction	03-Nov-14	29-Sep-16																		
Commissioning	30-Aug-16	02-Dec-16																		
41000 (301NL) Bottom Brook Converter Station	01-Oct-12 A	08-Aug-17																		
Engineering	01-Oct-12 A	20-Aug-15																		
Procurement (Materials & Fabrication)	05-Aug-15	15-Feb-17																		
Construction	10-Jun-14	15-Feb-17																		
Commissioning	16-Feb-17	08-Aug-17																		
42000 (301NS) Woodbine Converter Station	01-Oct-12 A	23-Jun-17																		
Engineering	01-Oct-12 A	03-Nov-15																		
Procurement (Materials & Fabrication)	05-Aug-15	16-Feb-17																		
Construction	16-Jul-14	16-Feb-17																		
Commissioning	17-Feb-17	23-Jun-17																		
51000 (701NL) Overhead to Underground Transition Compound	28-Jan-13 A	15-Jun-17																		
Engineering	28-Jan-13 A	02-May-16																		
Procurement (Materials & Fabrication)	10-Jun-14	22-Apr-15																		
Construction	01-Dec-14	07-Mar-17																		
Commissioning	08-Mar-17	15-Jun-17																		
52000 (701NS) Overhead to Underground Transition Compound	08-Oct-12 A	27-Apr-17																		
Engineering	08-Oct-12 A	02-May-16																		
Procurement (Materials & Fabrication)	10-Jun-14	22-Apr-15																		
Construction	16-Jul-14	22-Feb-17																		
Commissioning	23-Feb-17	27-Apr-17																		
53000 (702NS) Woodbine Transition Compound	10-Mar-14 A	16-Jun-17																		
Engineering	10-Mar-14 A	17-Apr-15																		
Procurement (Materials & Fabrication)	17-Apr-15	05-Nov-15																		
Construction	16-Jul-14	14-Feb-17																		
Commissioning	15-Feb-17	16-Jun-17																		
55000 Telecommunication Links	03-Dec-12 A	16-May-17																		
Engineering	03-Dec-12 A	30-Dec-14																		
Procurement (Materials & Fabrication)	05-Jan-15	30-Dec-15																		
Construction	04-Jan-16	30-Mar-17																		
Commissioning	03-Apr-17	16-May-17																		
56000 Control Center Data Link	10-Jun-14	03-Jan-17																		
Engineering	10-Jun-14	26-Oct-16																		
Procurement	01-Nov-16	15-Nov-16																		
Construction	16-Dec-16	28-Dec-16																		
Commissioning	30-Dec-16	03-Jan-17																		
58000 Improvement of Access Road Infrastructure (E13-92)	06-Jan-14 A	10-Oct-14																		

▬ Primary Baseline ▬ Remaining Work
▬ Actual Work ▬ Critical Remaining ...

Activity Name	Start	Finish	2014		2015				2016				2017				2018	
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Engineering	06-Jan-14 A	31-Jan-14 A	▼ 31-Jan-14 A, Engineering															
Procurement	02-Jul-14	09-Jul-14	▼ 09-Jul-14, Procurement															
Construction	08-Jul-14	30-Sep-14	▼ 30-Sep-14, Construction															
Commissioning	01-Oct-14	10-Oct-14	▼ 10-Oct-14, Commissioning															
61000 Submarine Cable, Land Cable, and Terminations	30-Jan-14 A	26-Sep-17	▶ 26-Sep-17, 61000 Submarine Cable, Land Cable, and Terminations															
Project (Payment) Milestones	30-Jan-14	26-Sep-17	▶ 26-Sep-17, Project (Payment) Milestones															
Engineering	01-May-14 A	07-May-17	▶ 07-May-17, Engineering															
Procurement (Materials & Fabrication)	10-Jul-14	26-Aug-17	▶ 26-Aug-17, Procurement (Materials & Fabrication)															
Construction	21-Aug-16	16-Aug-17	▶ 16-Aug-17, Construction															
Commissioning	07-Aug-17	15-Sep-17	▶ 15-Sep-17, Commissioning															
62000 Landfall HDD	03-Sep-12 A	14-Aug-16	▶ 14-Aug-16, 62000 Landfall HDD															
62100 Landfall HDD Point Aconi, NS	03-Sep-12 A	14-Aug-16	▶ 14-Aug-16, 62100 Landfall HDD: Point Aconi, NS															
Engineering	03-Sep-12 A	12-Mar-15	▶ 12-Mar-15, Engineering															
Construction - Landfall	10-Mar-14 A	14-Aug-16	▶ 14-Aug-16, Construction - Landfall															
62200 Landfall HDD Cape Ray, NL	27-Jul-13 A	04-Jul-16	▶ 04-Jul-16, 62200 Landfall HDD Cape Ray, NL															
Engineering	27-Jul-13 A	07-Jan-15	▶ 07-Jan-15, Engineering															
Construction - Landfall	01-Jul-14	04-Jul-16	▶ 04-Jul-16, Construction - Landfall															
63000 Marine Consultancy Services	17-Aug-12 A	29-Sep-17	▶ 29-Sep-17, 63000 Marine Consultancy Services															
63100 Marine Warranty Survey Services	20-Jan-16	29-Sep-17	▶ 29-Sep-17, 63100 Marine Warranty Survey Services															
63200 Marine 3rd Party Engineering Verification Services	26-Jan-15	29-Sep-17	▶ 29-Sep-17, 63200 Marine 3rd Party Engineering Verification Services															
63300 Engineering Studies (finalize cable protection studies, design rock berm)	17-Aug-12 A	10-Jun-14	▶ 10-Jun-14, 63300 Engineering Studies (finalize cable protection studies, design rock berm, etc.)															
20000 NSPI	10-Jun-14	19-Oct-16	▶ 19-Oct-16, 20000 NSPI															
20200 NSPI - Strait of Canso Crossing/Separate L-8004/L-7005	10-Jun-14	19-Oct-16	▶ 19-Oct-16, 20200 NSPI - Strait of Canso Crossing/Separate L-8004/L-7005															
Procurement	03-Nov-14	30-Sep-15	▶ 30-Sep-15, Procurement															
Construction	10-Jun-14	18-Oct-16	▶ 18-Oct-16, Construction															
Commission	13-Oct-16	19-Oct-16	▶ 19-Oct-16, Commission															
Engineering	10-Jun-14	16-Apr-15	▶ 16-Apr-15, Engineering															
20100 NSPI - L6513 - Onslow to Springhill Rebuild	10-Jun-14	06-May-16	▶ 06-May-16, 20100 NSPI - L6513 - Onslow to Springhill Rebuild															
Engineering	10-Jun-14	28-Apr-15	▶ 28-Apr-15, Engineering															
Procurement	07-Aug-14	24-Apr-15	▶ 24-Apr-15, Procurement															
Construction	02-Oct-14	06-May-16	▶ 06-May-16, Construction															
Commission	02-May-16	06-May-16	▶ 06-May-16, Commission															
20600 NSPI - Transmission Line (7015 pinch Points)(E12-50)(overlap with 13000)	10-Jun-14	12-Jan-15	▶ 12-Jan-15, 20600 NSPI - Transmission Line (7015 pinch Points)(E12-50)(overlap with 13000)															
Engineering	10-Jun-14	12-Jan-15	▶ 12-Jan-15, Engineering															
Procurement	10-Jun-14	20-Aug-14	▶ 20-Aug-14, Procurement															
Construction	14-Jul-14	31-Oct-14	▶ 31-Oct-14, Construction															
Commission	27-Oct-14	31-Oct-14	▶ 31-Oct-14, Commission															
20400 NSPI - L-8001 & L-8002 Node Swap at 67N-Onslow (Onslow to NB, O)	10-Jun-14	25-Dec-15	▶ 25-Dec-15, 20400 NSPI - L-8001 & L-8002 Node Swap at 67N-Onslow (Onslow to NB, O)															
Engineering	10-Jun-14	25-Dec-15	▶ 25-Dec-15, Engineering															
Procurement	10-Jun-14	13-May-15	▶ 13-May-15, Procurement															
Construction	15-Sep-14	21-May-15	▶ 21-May-15, Construction															
Commission	01-May-15	29-May-15	▶ 29-May-15, Commission															
20300 NSPI - L-6511/L-7019	10-Jun-14	04-Aug-15	▶ 04-Aug-15, 20300 NSPI - L-6511/L-7019															

Primary Baseline
 Remaining Work
 Actual Work
 Critical Remaining ...

Activity Name	Start	Finish	2014		2015				2016				2017				2018	
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Engineering	10-Jun-14	29-Jun-15																
Procurement	10-Jun-14	26-Jun-15																
Construction	02-Jul-14	28-Jul-15																
Commission	22-Jul-14	04-Aug-15																
20700 NSPI - SPS Modification	10-Jun-14	15-Sep-16																
Engineering	10-Jun-14	23-Jun-16																
Procurement	01-Oct-15	22-Mar-16																
Construction	01-Apr-16	30-Aug-16																
Commission	02-Sep-16	15-Sep-16																
90100 Project Management	15-Mar-11 A	05-Oct-17																
ENL Finance	02-Jan-14 A	30-Apr-14 A																
DG3 Deliverables	21-Jan-13 A	26-May-14 A																
Project Controls	04-Mar-13 A	30-Jul-14																
Integrated Commission Planning	18-Mar-13 A	31-Dec-14																
HS and S Program	04-Jun-12 A	27-Sep-13 A																
Quality Management Program	23-Sep-13 A	05-Oct-17																
Purchasing (Contracts)	15-Mar-11 A	31-Jul-15																
Marine EPC 1 (E11-18)	15-Mar-11 A	31-Jan-14 A																
Marine	15-Jun-12 A	31-Jul-15																
Marine 3rd Party Engineering Verification Services E13-155	04-Nov-13 A	23-Jan-15																
Marine Warranty Services E12-75	05-Nov-12 A	27-May-15																
HDD Geotech and Detail Design Program E12-51	15-Jun-12 A	14-Feb-14 A																
HDD Directional Drilling and Casing Installation E13-156	06-Jan-14 A	31-Jul-15																
HDD Services E13-157	06-Jan-14 A	27-May-15																
HDD Marine Intervention Services E13-158	06-Jan-14 A	27-May-15																
Cable Study E13-159	10-Jun-14	17-Jun-15																
Converter Stations (EPC2) E12-74	09-Oct-12 A	30-Jun-14																
Land Assets	18-Jun-12 A	31-Mar-15																
E12-53 Geotech Study - Site Facility Investigations	18-Jun-12 A	19-Dec-12 A																
E12-62 Engineering Services for Detail Design and Procurement	01-Oct-12 A	03-May-13 A																
E12-73 Survey Services - NS and NL	03-Dec-12 A	08-Nov-13 A																
E12-79 Geotech Study - TL Route Geotechnical Investigations	12-Nov-12 A	10-Apr-13 A																
E13-85 Transmission Structures and Grillage	04-Feb-13 A	22-Jul-14																
E13-87 TL Conductors	18-Feb-13 A	26-Aug-14																
E13-88 Right of Way Clearing Along Transmission Lines	11-Feb-13 A	18-Feb-14 A																
E13-89 Accommodations	21-Jan-13 A	25-Jul-14																
E13-92 Site Prep Services (Includes Construction of Access Road Upgrades)	11-Feb-13 A	17-Jul-14																
E13-95 Transmission Line Construction	18-Feb-13 A	20-Oct-14																
E13-102 Grounding Site Breakwater Construction	25-Feb-13 A	13-Mar-15																
E13-103 Grounding Site Technical Construction	11-Feb-13 A	31-Mar-15																
E13-107 Transition Compound Construction (Cancelled)	18-Feb-13 A	04-Nov-14																
Environment	22-Jun-11 A	31-Oct-14																
Project Control Office	09-Jul-12 A	16-Jul-14																
Land Acquisition Services	29-Oct-12 A	22-Feb-13 A																
Risk Assessments	09-Sep-13 A	19-Jan-17																
Phase 3 Prior to DG3	09-Sep-13 A	31-Jan-14 A																

Primary Baseline
 Remaining Work
 Actual Work
 Critical Remaining ...

Activity Name	Start	Finish	2014		2015				2016				2017				2018	
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Phase 4 Detailed Engineering (After DG3)	10-Jun-14	20-Oct-14																
Phase 4 Execution Phase Preparation (After DG3)	10-Jun-14	01-Apr-16																
Phase 4 Main Campaigns (Prior to DG4)	20-Jan-15	19-Jan-17																
Construction Management	06-Aug-13 A	01-Jun-17																
90200 External Services	04-Jan-12 A	28-Nov-14																
Legal Services	25-Jun-12 A	28-Nov-14																
NL Legal Materials/Agreements	25-Jun-12 A	26-Jul-12 A																
Marine Route Access	02-Jan-14 A	30-Apr-14																
Records Retention Policy	02-Oct-12 A	31-Dec-12 A																
Aboriginal Support and other agreements	07-Aug-12 A	08-Sep-14																
Exercise Land Options Easements / Fee Simples	04-Mar-13 A	28-Nov-14																
Legal Exercise Options - NS	04-Mar-13 A	30-Sep-14																
Legal Exercise Options - NL	01-Oct-13 A	28-Nov-14																
Insurance Services	03-Jul-12 A	20-Aug-14																
Regulatory (UARB) Affairs	02-Jan-13 A	24-Jun-14																
Regulatory (UARB) Affairs Application and Reviews	02-Jan-13 A	26-Jun-13 A																
UARB 2013 update	29-Nov-13 A	24-Jun-14																
UARB Public Hearings	24-Jun-13 A	29-Nov-13 A																
Independent Project Reviews	08-Jul-13 A	11-Aug-14																
Land Based Assets - Design and Constructability Review	08-Jul-13 A	03-Oct-13 A																
Marine Based Assets - Design and Installability Review	12-Aug-13 A	10-Oct-13 A																
Financial and Schedule Review	19-Aug-13 A	11-Aug-14																
Independent Project Review (IPR)	26-Aug-13 A	11-Aug-14																
Human Resources, Diversity and Gender Equity and Benefits Strategy	01-Aug-12 A	10-Jun-14																
CBOD/FBOD Hatch	04-Jan-12 A	22-Jan-13 A																
93000 Environmental	02-Apr-12 A	29-Sep-17																
EA Approval	11-Jan-13 A	09-Sep-13 A																
Environmental Studies	02-Apr-12 A	18-Jan-16																
Permits	01-Apr-13 A	30-Dec-16																
11000 Permits (Transmission GC to BB)	01-May-13 A	03-Sep-15																
12000 Permits (Transmission BB to CR)	01-May-13 A	27-Nov-14																
13000 Permits (Transmission Pt.A to WB)	01-May-13 A	03-Nov-14																
14100 Permits (Grounding Line BB to ESA#2)	11-Oct-13 A	03-Nov-14																
31000 Permits (Grounding Site NL)	11-Oct-13 A	03-Nov-14																
32000 Permits (Grounding Site NS)	11-Oct-13 A	03-Nov-14																
14200 Permits (Grounding Line WB to GS#11)	11-Oct-13 A	03-Nov-14																
21100 Permits (103NL) Switchyard at Granite Canal	11-Oct-13 A	03-Nov-14																
21200 Permits (GC Switchyard)	10-Jun-14	27-Mar-15																
22000 Permits (BB Switchyard)	11-Oct-13 A	03-Nov-14																
23100 Permits (Connect 345KV Sub at WB to Conv. Sta)	11-Oct-13 A	03-Nov-14																
23200 Permits (Extension of 345KV Substation at WB)	11-Oct-13 A	30-Jun-14																
41000 Permits (Converter Station BB)	11-Oct-13 A	03-Nov-14																
42000 Permits (Converter Station WB)	11-Oct-13 A	11-Jul-14																
51000 Permits (Overhead to U/G Transition CR)	11-Oct-13 A	03-Nov-14																

Primary Baseline
 Remaining Work
 Actual Work
 Critical Remaining ...

Activity Name	Start	Finish	2014		2015				2016				2017				2018	
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
52000 Permits (Overhead to U/G Transition Pt.A)	11-Oct-13 A	11-Jul-14	11-Jul-14, 52000 Permits (Overhead to U/G Transition Pt.A)															
53000 Permits (Overhead to U/G Transition WB)	11-Oct-13 A	11-Jul-14	11-Jul-14, 53000 Permits (Overhead to U/G Transition WB)															
55000 Permits (Telecommunications Links)	05-Feb-15	30-Jun-15	30-Jun-15, 55000 Permits (Telecommunications Links)															
58000 Permits (Road Infrastructure Improvements)	10-Jun-14	03-Nov-14	03-Nov-14, 58000 Permits (Road Infrastructure Improvements)															
61000 Permits (Submarine Cable)	10-Nov-15	07-Apr-16	07-Apr-16, 61000 Permits (Submarine Cable)															
62000 Permits (NS & NF Landfall HDD)	11-Oct-13 A	03-Nov-14	03-Nov-14, 62000 Permits (NS & NF Landfall HDD)															
Permits Planning	01-Apr-13 A	30-Dec-16	30-Dec-16, Permits Planning															
Environmental Protocol Documents	10-Jun-14	10-Jun-14	10-Jun-14, Environmental Protocol Documents															
Aboriginal Relations	11-Jun-12 A	31-Jul-14	31-Jul-14, Aboriginal Relations															
Other Stakeholder Relations	28-Jan-13 A	30-Dec-16	30-Dec-16, Other Stakeholder Relations															
Compliance Monitoring	18-Feb-14 A	29-Sep-17	29-Sep-17, Compliance Monitoring															
Environmental Compensation Prog.	11-Jan-16	21-Aug-17	21-Aug-17, Environmental Compensation Prog.															
Post EA Environmental Monitoring Program	01-Jun-13 A	18-Aug-17	18-Aug-17, Post EA Environmental Monitoring Program															
Environmental Program 14001	31-Jan-13 A	10-Jun-14	10-Jun-14, Environmental Program 14001															
94000 Land Acquisition	15-Jul-12 A	13-Nov-14	13-Nov-14, 94000 Land Acquisition															
Land Acquisition Planning and Support	16-Jul-12 A	08-Jan-13 A	08-Jan-13 A, Land Acquisition Planning and Support															
Securing Access to NS Land	15-Jul-12 A	30-Sep-14	30-Sep-14, Securing Access to NS Land															
13000 - X20001/2 - +/- 200 kV HVDC Overhead transmission line from PA to WB	15-Jul-12 A	29-Aug-14	29-Aug-14, 13000 - X20001/2 - +/- 200 kV HVDC Overhead transmission line from PA to WB Converter Station															
14200 - E00501 - Grounding line from Woodbine to NS Converter Grounding Site	25-Feb-13 A	30-Sep-14	30-Sep-14, 14200 - E00501 - Grounding line from Woodbine to NS Converter Grounding Site															
61000 - NS Underground line from Anchor to Transition Compound	06-May-13 A	13-Sep-13 A	13-Sep-13 A, 61000 - NS Underground line from Anchor to Transition Compound															
23100 - 301NS - Connect 345 kV Substation at Woodbine to Converter Station	18-Nov-13 A	31-Jul-14	31-Jul-14, 23100 - 301NS - Connect 345 kV Substation at Woodbine to Converter Station															
23200 - 301NS - Extension of 345 kV Substation at Woodbine	05-Nov-12 A	20-Nov-12 A	20-Nov-12 A, 23200 - 301NS - Extension of 345 kV Substation at Woodbine															
42000 - 301NS - +/- 200 kV HVDC Woodbine Converter Station	03-Dec-12 A	06-Dec-12 A	06-Dec-12 A, 42000 - 301NS - +/- 200 kV HVDC Woodbine Converter Station															
52000 - 701NS - Overhead to Underground Transition Compound at Point Aconi	05-Nov-12 A	05-Dec-12 A	05-Dec-12 A, 52000 - 701NS - Overhead to Underground Transition Compound at Point Aconi															
52000 - 702NS - Overhead to Underground Transition Compound at Woodbine	05-Nov-12 A	07-Nov-12 A	07-Nov-12 A, 52000 - 702NS - Overhead to Underground Transition Compound at Woodbine															
61000 - NS HDD Landfall	05-Nov-12 A	07-Nov-12 A	07-Nov-12 A, 61000 - NS HDD Landfall															
61000 - NS Landfall Anchor	05-Nov-12 A	07-Nov-12 A	07-Nov-12 A, 61000 - NS Landfall Anchor															
32000 - 901NS - Grounding Site Nova Scotia	05-Nov-12 A	29-Aug-14	29-Aug-14, 32000 - 901NS - Grounding Site Nova Scotia															
Land Access on 7015 and Others (Pinch Points)	01-Mar-13 A	29-Aug-14	29-Aug-14, Land Access on 7015 and Others (Pinch Points)															
Securing Access to NL Land	05-Nov-12 A	13-Nov-14	13-Nov-14, Securing Access to NL Land															
NL HDD Landfall	18-Feb-13 A	29-Aug-14	29-Aug-14, NL HDD Landfall															
NL Landfall Anchor	05-Feb-13 A	29-Aug-14	29-Aug-14, NL Landfall Anchor															
NL Underground line from Anchor to Transition Compound	21-Jan-13 A	29-Aug-14	29-Aug-14, NL Underground line from Anchor to Transition Compound															
Improvement of Road Infrastructure (e.g. bridges)	29-Nov-13 A	13-Nov-14	13-Nov-14, Improvement of Road Infrastructure (e.g. bridges)															
T23001 - 230 kV AC transmission Line from the Granite Canal Switchyard to the Bottom Brook Converter Station	05-Nov-12 A	13-Aug-14	13-Aug-14, T23001 - 230 kV AC transmission Line from the Granite Canal Switchyard to the Bottom Brook Converter Station															
E00502 - Grounding line from Bottom Brook Converter Station to Site NL	01-May-13 A	30-Sep-14	30-Sep-14, E00502 - Grounding line from Bottom Brook Converter Station to Site NL															
103NL - 230 kV New Switchyard at Granite Canal	07-Jan-13 A	01-Aug-14	01-Aug-14, 103NL - 230 kV New Switchyard at Granite Canal															
101NL - 230 kV Switchyard at Bottom Brook	07-Jan-13 A	31-Jan-14 A	31-Jan-14 A, 101NL - 230 kV Switchyard at Bottom Brook															
901NL - Grounding Site Newfoundland	06-May-13 A	01-Aug-14	01-Aug-14, 901NL - Grounding Site Newfoundland															
301NL - +/-200 kV HVDC Bottom Brook Converter Station	01-Apr-13 A	31-Jan-14 A	31-Jan-14 A, 301NL - +/-200 kV HVDC Bottom Brook Converter Station															
701NL - Overhead to Underground Transition Compound at Cape Ray	18-Feb-13 A	29-Aug-14	29-Aug-14, 701NL - Overhead to Underground Transition Compound at Cape Ray															
X20005/6 - +/- 200 kV HVDC Overhead transmission line from Bottom Brook to Cape Ray	07-Jan-13 A	29-Aug-14	29-Aug-14, X20005/6 - +/- 200 kV HVDC Overhead transmission line from Bottom Brook to Cape Ray															
90500 Other NLH System Upgrades	31-Aug-12 A	30-Dec-14	30-Dec-14, 90500 Other NLH System Upgrades															

Primary Baseline
 Remaining Work
 Actual Work
 Critical Remaining ...

Activity Name	Start	Finish	2014				2015				2016				2017				2018	
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Engineering (TL201, Bay D'Espoir, Upper Salmon)	31-Aug-12 A	23-Dec-14																		
TL201 (Avalon)	31-Aug-12 A	23-Dec-14																		
Bay D'Espoir Line Terminal Swap	31-Aug-12 A	02-Dec-14																		
Upper Salmon Breaker Addition	31-Aug-12 A	27-Nov-14																		
Procurement (Materials & Fabrication)	27-Nov-14	23-Dec-14																		
Procurement - TL201 (Avalon)	23-Dec-14	23-Dec-14																		
Procurement - Bay D'Espoir Line Terminal Swap	04-Dec-14	04-Dec-14																		
Procurement - Upper Salmon Breaker Addition	27-Nov-14	27-Nov-14																		
Construction	01-Dec-14	29-Dec-14																		
Construction - TL201 (Avalon)	29-Dec-14	29-Dec-14																		
Construction - Bay D'Espoir Line Terminal Swap	05-Dec-14	05-Dec-14																		
Construction - Upper Salmon Breaker Addition	01-Dec-14	01-Dec-14																		
Commissioning	02-Dec-14	30-Dec-14																		
Dynamic Commissioning (90100)	31-Aug-17	29-Sep-17																		

Primary Baseline
 Remaining Work
 Actual Work
 Critical Remaining ...