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 Q3 2016

October 15, 2016

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NSPML

1 **1.0 INTRODUCTION**

This is the Q3 2016 Quarterly Report for the Maritime Link as directed by the Utility
and Review Board (UARB) where the UARB ordered in its Supplemental Decision:
[115]....detailed reports must be filed by NSPML on a semiannual basis, on June 15 and December 15 each year. The reports
shall commence December 15, 2013. Updated status reports must
be filed quarterly.

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		project schedule, along with a variance explanation and general status updates.
5		
6		Please refer to Attachment 1 for the Detailed Project Schedule for the Level 1 Project
7		Schedule.
8		
9	2.1	Gates and Milestones
10		
11		The Project remains on schedule for commissioning and commencement of
12		operations scheduled by the end of Q4 2017.
13		
14	2.2	Safety
15		
16		As previously reported, the project safety procedure review for new upcoming field
17		activities by contractors is continuing to be followed. In this quarter, safety reviews
18		prior to the start of work included such activities as the civil and marine related work
19		at Big Lorraine site, the structural steel construction of the HVdc converter buildings
20		and the mobilization activities at Granite Canal substation site. These reviews are in
21		addition to the other safety activities outlined in the Safety Plans for each site. As
22		well, tool box safety discussions with each crew and Field Level Risk Assessments
23		(FLRAs) are standard activities each morning at the various construction sites by the
24		contractors.
25		
26	2.3	Abengoa Update
27		
28		In February 2015 NSPML entered into a contract with Abengoa S.A., a Spanish
29		energy company, for the transmission line construction on the Maritime Link Project.
30		On November 25, 2015 Abengoa S.A. filed a notice under Spanish law, which
31		provides for pre-insolvency protection in Spain, giving the company up to 4 months
32		to reach an agreement with creditors to avoid a full insolvency process. NSPML

1 retained external experts to provide advice with respect to this development to protect 2 customers' interests in ensuring the Project will continue to be completed on schedule 3 and within budget. In February 2016 NSPML reached agreement on a Term Sheet and Project Account Agreement involving Abengoa, its key subcontractor, PowerTel 4 5 Utilities Contracting, and the performance bond sureties. These agreements were 6 designed to maintain stability for the Project despite this period of financial 7 uncertainty for Abengoa. The agreements established monthly productivity targets for 8 Abengoa. The productivity target for March was not achieved, thereby requiring 9 Abengoa to provide a recovery plan for review by NSPML. On April 22, 2016, 10 NSPML rejected Abengoa's Recovery Plan, issued a Notice of Default to Abengoa 11 and issued a Notice of Claim on the Performance Bond. The productivity targets for 12 April, May and June were not achieved. Following discussions with Abengoa and the 13 Performance Bond Sureties, on June 30, 2016, NSPML issued a call on the \$38.5 14 million Letter of Credit that was associated with the Abengoa Transmission Line 15 Contract. On July 20, 2016 NSPML announced that a replacement contractor had 16 been selected. A copy of the announcement is attached as Attachment 2. While transmission line construction of the HVdc lines is behind schedule due to Abengoa's 17 18 lack of performance, timely completion is achievable with a new contractor now in 19 place (see Section 2.10 below for further detail). PowerTel continues as the contractor 20 for the Grounding Lines in NS and NL, and for the AC Line which is located in NL. 21 Abengoa has disputed NSPML's decisions and the dispute resolution process is being 22 followed in accordance with the Abengoa Transmission Line Construction Contract.

- 23
- 24 2.4 Commercial Activities
- 25

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

Page 5 of 20

1 **Table 1**

2

Commercial	Status in June 2016	Initiative	Status in October	
Activity		Number	2016	
HVdc Submarine	The Contract was awarded to Nexans	E11-18	No Change	
Cable Supply and	in January 2014.			
Installation				
Converter stations,	The Contract was awarded to ABB	E12-74	No Change	
switchyards and related	Inc. in June 2014.			
structures ("converters				
and structures")				
Right of Way Clearing	Contracts were awarded to Majors	E13-88	Contracts closeouts	
along Transmission	Logging Limited in NL and R.		are in progress.	
Lines	MacLean Forestry in NS in February			
	2014.			
Transmission	The Contract was awarded to	E13-85	No Change	
Structures and	Kalpataru Power Transmission Ltd. in			
Grillages	September 2014 for design and			
	delivery of Structures and Grillages.			
Site Preparation	The Contract was awarded to Joneljim	E13-92	Contract closeouts are	
Services (Includes	Concrete Construction (1994) Ltd. for		in progress.	
construction of access	NS Site Preparation Services in			
road upgrades)	September 2014.			
	The Contracts were awarded to Marine			
	Contractors Inc., MCI Limited			
	Partnership for NL Site Preparation			
	Services in September 2014.			
Transmission Line	The Contract was awarded to Aharase	E12.05	This contractor has	
Construction	S A in Echnics 2015	E13-93	heen replaced	
	S.A. III February 2015.		been replaced.	

Commercial	Status in June 2016	Initiative	Status in October
Activity		Number	2016
		E16-284	The contract with
			PowerTel was re-
			assigned to NSPML
			from Abengoa for the
			completion of the two
			Grounding Lines and
			the HVac
			Transmission Line in
			NL.
		E16-269	The contract for the
			construction of the
			HVdo Transmission
			Lines was awarded to
			Lines was awarded to
			a joint venture of
			Samiasa and Dalastad
			Bewer Comparation
			rower Corporation.
			2.10)
Transmission Line	The Contract for the supply of	E13-87	Contract close out is
Conductors	conductors was awarded to Midal		in progress
	Cables in March 2015.		
	The contract for the supply of OPGW		
	was awarded to Composite Power		Contract closeout is in
	Group Inc. in June 2015		progress
	Group me. in June 2015.		r-00-000
	This is also within the scope of the		
	E13-87 initiative.		

Commercial	Status in June 2016	Initiative	Status in October
Activity		Number	2016
Horizontal Directional Drill (HDD) Construction Program	Contract awarded to Directional Horizontal Drilling (DHD) in January 2016 E13-157 was divided into two contracts. E13-157 A was awarded to Schlumberger in March 2016 for the supply of HDD fluids. E13-157B was awarded to Baker Hughes in April 2016 for the Supply of directional drilling services, drill bits and other materials.	E13-156 E13-157	The closeout of all HDD construction contracts is in progress.
	E13-158 for marine intervention services was awarded in April 2016 to DOF Marine.	E13-158	
	The supply of the HDD casing (E15- 238) was awarded to East Coast Tubulars Limited in October 2015.	E15-238	
Accommodations Operations	The contract for the accommodations operations services was awarded to East Coast Catering in April 2015.	E13-89	Contract continues and may be extended.

1

1	2.4.1	Land Access Agreements
2		
3		NSPML has continued to progress the applications before the UARB pursuant to the
4		Expropriation Act to determine the appropriate compensation for the remaining
5		parcels. Two applications in Nova Scotia remain outstanding and are scheduled for
6		hearing. Applications have been filed in Newfoundland and Labrador with respect to
7		the remaining parcels in that province and will proceed once the arbitration panel
8		processes have been established. Rights associated with access trails, as well as
9		additional easements relating to guying anchors and line adjustments, are continuing in
10		2016 as necessary in both provinces.
11		
12	2.4.2	Funding
13		
14		As in prior months, Funding and Drawdown Requests containing comprehensive
15		details of costs for the upcoming month were submitted to the Collateral Agent and
16		Government of Canada as necessary, and all requested funds were received on
17		schedule. Please refer to Attachment 3 for the IE Draw Confirmation Certificates for
18		the period. These draws permit payments to Material Project Participants to be paid
19		with the proceeds of the ML Construction Loan under the payment terms of the
20		Material Project Documents and the ML Credit Agreement.
21		
22	2.4.3	Joint Development Agreements
23		
24		NSPML continues to work with Nalcor and NS Power to finalize the remaining
25		operational agreements arising from the Formal Agreements with Nalcor. Of the 24
26		items originally identified for completion, only 8 items remain outstanding.

1	2.5	Engineering Activities
2		
3		Commissioning of the Maritime Link continues to align with the in-service target date
4		of Q4 2017. Engineering is captured in three main categories across several Work
5		Breakdown Structures ("WBS's"):
6		
7		• HVdc Submarine Cable Supply and Installation – cable design and manufacturing
8		is being engineered by the supplier of the cable, Nexans, which will include
9		performance criteria consistent with service life and reliability targets subject to
10		approval by NSPML. In this period, Nexans engineering activities continued. The
11		primary areas related to cable design included completion of type testing, pull in
12		procedures, storage and maintenance requirements and rock impact testing
13		procedures. Engineering related to marine activities included progress on Cable
14		Loadout and Laying procedures, cable protection analysis and assessing other third
15		party contractors required for the 2017 installation program.
16		
17		• The HDD drilling program was completed in this period.
18		
19		• HVdc Converters and Substations - engineering is included in the contract awarded
20		to ABB for the supply and installation of these assets. Advances continued in the
21		HVdc design of the Control and Protection system, civil designs, and the plant
22		electrical mechanical designs. Structural, electrical and station designs also
23		advanced for the HVac systems for the Woodbine, Granite Canal and Bottom
24		Brook locations. Designs for the telecommunications systems advanced in the
25		period. The Engineering team is actively engaged in Factory Acceptance Testing
26		(FAT) of many key electrical components at the manufacturing facilities. More
27		than 2000 engineering drawings are progressing through final approval to sustain
28		manufacturing, installation and construction schedules.
29		
30		• Overland Transmission– Designs for the transmission and grounding lines are
31		complete and in-field modifications resulting from the field construction activities
32		are ongoing.

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1	2.6	Submarine Cables (Marine)
2		
3		At Futtsu, Japan, cable manufacturing proceeded with armoring on Batch 1. Paper
4		lapping, impregnation and lead sheathing on Batch 2 were completed. Preparations are
5		underway to join Batch 1 and 2 and then complete armoring of Batch 2. Electrical
6		Type Testing of the cable was also completed in this period.
7		
8		At Halden, Norway, cable manufacturing continued with stranding completed on all
9		four Batches of this cable. Paper lapping was completed on Batch 103, and it is
10		currently in the impregnation tank. Paper lapping is in progress for Batch 101. The
11		quality issues reported in the previous month, related to paper repairs, were addressed
12		and are under final review by third party advisors. The manufacturing completion date
13		at Halden remains on schedule as required.
14		
15		The third party inspections at the manufacturing facility in Futtsu and Halden are
16		ongoing.
17		
18		The manufacturing of the Land Cables for the Transition Sites were completed and are
19		scheduled for shipment from Halden, Norway in Q4, 2016.

2

1 2.7 Horizontal Directional Drilling (HDD) Boreholes

3		The bore holes at Cape Ray in NL were	
4		successfully completed in June. The	
5		contractor remobilized and the boreholes at	
6		Point Aconi in NS were successfully	and the second
7		completed in August. The bore holes are	
8		capped at both sites and are ready for the	
9		2017 marine cable installation activities.	
10		This concluded the HDD program, on	
11		schedule and within budget.	
12			A CARLEN AND AND
13	2.8	Converters and Substations	HDD Site at Point Aconi June 2016
14		At the Bottom Brook location, the structural s	teel and roof cladding for the HVdc
15		Converter building is more than 70% complet	e. Preparation for the concrete flooring is
16		in progress with gravels laid, wire mesh and g	rounding wire partially complete. At the
17		DC yard, 194 precast foundations are installed	l. At the new AC switch yard, all 29
18		gantry towers and 18 gantry bridges were con	pleted. Assembly of disconnect switches
19		and base supports along with the all 12 circuit	breaker steel foundations are installed.
20			
21		At the Woodbine location, approximately	
22		70 % of the steel erection and roof decking	
23		is complete for the HVdc Converter	
24		building. Preparation for the concrete	A AL ATALA AT A A MA

25 flooring progressed. DC yard foundations

- 26advanced during the quarter with 60 of 410
- 27 foundations installed. For the AC
- 28 switchyard, 315 of 325 AC foundations are
- 29 placed. Installation of trench boxes and
- 30 underground conduit for cables continued



31 and the duct bank from the AC to DC yard is approximately 70% complete.

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foundations are installed. Cast in place foundations are approximately 80% complete. Manufacturing and fabrication, Factory Acceptance Tests (FAT), and

At the Granite Canal location, the contractor mobilized to site and 52 of 69 pre cast

- 9 transportation of
- 10 the electrical
- 11 components and
- 12 subsystems for
- 13 both the
- 14 substations and



converter stations from the overseas suppliers progressed in the period. A significant
 milestone was reached with delivery of the first transformer to Woodbine along with
 other key components such as IGBT valves, breakers, disconnect switches.

18

19

20

2.9 Right of Way Clearing Contractor(s) – Transmission Lines

- Final completion of all right of way tree clearing in NL was achieved in May, 2016.
 Final completion in NS was achieved in Q4 of 2015.
- 23

24 **2.10** Construction Contractor(s) – Transmission Lines

- 25
- 26 The replacement contract for the NS and NL DC Transmission Lines was awarded to a
- 27 joint venture of Emera Utility Services (EUS) and Rokstad Power Corporation
- 28 (ERJV). NSPML has complied with the requirements of the Affiliate Code of
- 29 Conduct, given that EUS is an affiliate of NSPML. Planning and mobilization was
- 30 completed and work is in progress as outlined in Table 2 below.
- 31

1	The contract for the AC Transmission Line and the two grounding lines was re-
2	assigned to be directly managed by NSPML rather than Abengoa; PowerTel remains
3	as the contractor. Progress on these lines continued as described in Table 2 below.
4	PowerTel set the last pole on the NS Grounding Line in August.
5	
6	The target dates for the completion of all lines remains in Q2 2017.

Table 2

1 2

Transmission Line	Completion Target	Status
		The NL grounding line
NL Grounding Line	Santambar 2016	has achieved
	September 2010	approximately 98%
		completion.
		Installation of foundations
		remains at 5% complete
NI DC Transmission Lina	April 2017	and the new contractor is
NE DC Transmission Line	April 2017	mobilized and advancing
		the pre-assembly of towers
		in advance of installation.
		Work on the foundations
		is 48% complete and
NI AC Transmission Line	March 2017	approximately 28% of the
		structures/poles have been
		erected.
		NS Grounding line has
NS Grounding Line	September 2016	achieved Substantial
		Completion.
		Installation of foundations
		is approximately 18%
		complete and the new
NS DC Transmission Line	April 2017	contractor has mobilized
		and advanced the pre-
		assembly of towers prior
		to installation.

3

1	2.11	Construction Contractor(s) – Site Preparation
2		
3		In NL, all site preparation work was finalized with the completion of work at Cape
4		Ray in April 2016. In NS, all site preparation work was completed in Q4 2015.
5		
6	2.12	Granite Canal Accommodations Operations
7		
8		The contract for the operations of the Granite Canal accommodations facility (E13-
9		89A) was awarded to East Coast Catering in April 2015. The camp has been in full
10		operation since July 2015.
11		
12	2.13	Grounding Sites
13		
14		The construction of the grounding site at Indian Head, NL was completed in July.
15		
16		The construction of the
17		grounding site at Big
18		Lorraine in NS is in
19		progress and is scheduled
20		to be completed in
21		October 2016.
22		
23		The construction scopes of
24		work will be followed by
25		the installation of the
26		electrical equipment at
27		both Grounding Sites Indian Head Grounding Site
28		(E13-103 A/B). These contracts are expected to be awarded in Q3. The work is

29 forecasted to be completed in Q4 of 2016.

1 2.14 Independent Engineer

2 3 On June 15, 2016, the Independent Engineer (IE) conducted a site visit to all NS 4 construction sites including the Point Aconi Horizontal Directional Drilling and 5 Transition Compound sites, HVdc Transmission Line, Woodbine Converter Station 6 and Switchyard, Grounding Line, and Grounding Site at Big Lorraine. Please see 7 Attachment 4 for a copy of the IE's site visit report. In August, the IE conducted a site 8 visit in NL to all construction sites including the Indian Head Grounding Site, 9 Grounding Line, Cape Ray HDD and Transition compound site, Burgeo Highway 10 HVac line, Bottom Brook Converter Station and Switchyard, Granite Canal 11 Switchyard and Granite Canal HVac line. A third visit to construction sites in NS and 12 NL are planned in October. A site visit to the Nexan's manufacturing facility at 13 Halden was completed in September, with another visit to this facility planned in Q1, 14 2017. All of these visits are aligned with the increase in construction and 15 manufacturing activities this year. All site visit reports will be filed with the Quarterly 16 reports once completed.

1	3.0	UPDATED COST SUMMARY
2		
3		As per Enerco U-31, section 2.1, the detail below outlines the DG3 forecasted costs.
4		
5		Table 3 below provides an updated cost summary for the Maritime Link, which
6		includes actual costs incurred as of June 30, 2016 and forecasted costs for the
7		remainder of the Project's construction phase.
8		
9		NSPML continues to track and report all costs, actual and forecast (2011-2017),
10		consistent with the methodologies used in the cost forecast represented in the ML
11		Project Application. Project costs include fully allocated costs for the entire Project
12		Management Team, including contractors, employees, executives dedicated to the
13		project, and NS Power seconded employees at affiliate mark-up rates according to the
14		Code of Conduct for Affiliate Transactions. All costs provided are in Canadian dollars.
15		
16		Actual AFUDC is being tracked and recorded monthly. AFUDC remains within the
17		\$230 million amount estimated at the time of filing of NSPML's Application.
18		
19		The project remains on target for completion in 2017 and within the approved budget
20		of \$1.577B.
21		

- 22 **Table 3**
- 23

(000's of Canadian Dollars)			Actua	l Costs		Total Project				
Description	2011-2013	2014	2015	Q1 2016	Q2 2016	Total Project to Date	Q3 2016	Q4 2016	2017	Estimate at Completion
Emera NL Project Management Costs	44,379	42,315	24,599	6,818	8,275	126,386	4,644	9,409	38,470	178,909
Nalcor Project Support Costs	-	15,232	425	(20)	241	15,879	101	25	100	16,104
Construction and Engineering Initiatives	14,975	167,980	259,750	83,891	89,966	616,562	155,908	150,520	299,775	1,222,766
Environmental Approval	2,651	4,378	1,082	81	255	8,447	770	3,559	8,603	21,379
Submarine and related	3,359	83,797	74,439	9,946	23,534	195,076	15,639	5,503	106,587	322,805
Converters, structures, and other ancillary equipment	1,517	48,747	106,195	40,317	47,347	244, 123	105,531	81,333	108,357	539,342
AC and DC Transmission	7,448	31,057	78,035	33,547	18,830	168,918	33,968	60,126	76,228	339,239
Total	59,354	225,527	284,774	90,689	98,482	758,827	160,652	159,954	338,345	1,417,779
Escalation									33,954	33,954
Contingency								11,378	114,244	125,621
Grand Total	59,354	225,527	284,774	90,689	98,482	758,827	160,652	171,332	486,543	1,577,355

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1	Total Actual Project Costs at end of Q2, 2016 Compared to Previous Forecast
2	
3	The total actual project costs for Q2 2016 were \$29.9 million less than the costs for the
4	same period forecasted in the NSPML Quarterly Report of June 15, 2016. The
5	explanations of the variances are as follows:
6	
7	• ENL Project Management and Nalcor Project Support: \$1.2 million higher cost
8	incurrence due to resourcing, legal, and land.
9	
10	• Environmental Approval: \$2.2 million lower cost incurrence primarily due to the
11	timing of expenditures along with permitting, environment studies, and stakeholder
12	engagement costs.
13	
14	• Submarine and related: \$1.3 million lower cost incurrence due to schedule and
15	efficiencies at the Horizontal Directional Drilling (HDD) sites at Cape Ray, NL
16	and Point Aconi. NS
17	
18	• Converters structures and other ancillary equipment: \$15.1 million lower cost
10	incurrence due to rescheduling of the engineering procurement manufacturing
20	and civil construction activities for the Converter / Substations supply contract and
20	site preparation
21	she preparation
22	
23	• AC and DC Transmission: \$12.1 million lower cost incurrence attributable to the
24	lack of performance on the DC Lines by the former transmission line construction
25	contractor, Abengoa.
26	
27	The variances do not change the forecasted in-service date of Q4 2017 and project
28	remains within budget. Progress to date on the DC components of Transmission Line
29	Construction remains a key focus; recovery plans are in progress and the completion
30	of this scope of work to enable Project completion by the end of 2017 remains
31	achievable.

1 **4.0 COST FLOW**

2 3

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As per Enerco U-31, section 2.2, please refer to Table 4 below for the cost flow until the Maritime Link is commissioned. This cost flow for the base capital spending is now forecast at \$1.418 billion from \$ 1.403 billion and a corresponding decrease in contingency and escalation has been forecasted for the remainder of the project. The total of the base capital spending, escalation, and contingency amounts remains at \$1.577 billion.

9 10

Table 4

11



12

Maritime Link Project Level 1 Project Schedule

Project Level 1 Schedule

		2011		2012			2013				2014			2015				20	
Maritime Link - Level 1	Q1	Q2	Q3 Q4	Q1	Q2 (Q3 Q4	Q1	Q2 Q3	3 Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Gates	DG 1					DG 2			DG3/Fu	III Funding	1								
Milestones										1		•							
Emera Commercial Activities																		Ī	
Environment Ass't with Aboriginal/ Others Engaged 93000			Proj. Desc E	A Guidelines		EA Rep	Scree	n 🗸		E	A Permits							l	
NS Regulatory Application 90200			Rep	gulatory	F	Prep and File	UARB	Review		·		•							
Land Access Agreements 94000			Land	Strategy		Access Agr	eements	T	7	F	Properties / I	Perfected							
Funding - Schedule Reserve and Allowances 90100				Fe	d L Agree't			FLG Contract		Fin Cl								l	
Insurance					-			Analysis	, Consultation	and Policy	Secured								
Joint Development Agreements			Joint Dev	. Agm'ts				Ag	reement Upda	ates									
Emera Engineering Activities						•				1		_							
Emera Pre-FEED, Procurement		Pre-FE	ED Eng Av	<mark>ds</mark>															
Engineering Services				Enj	igineering - Cl	BOD/ FBOD		Eng. D	esign for Proc	urement /	Issue for Cor	nst.						Engineerir	ig Services
Commission System / RFO (Ready For Operations)										RFO / Com	mission Plai	nning			Co	mmission P	lanning Up	odate	
EPC1 - Subsea Cables (Marine)										1									
Cable FEED , Procurement 61000		Marine - E	ng		RF	FP/Eval/Select/N	Vegotiate												
Cable Engineering, Manufacturing											Detail E	Engineer / P	rocureme	ent		:	Cab	le Manuf	acturing /
Cable Protection																			
Subsea / HDD Landfall Installation 62100, 62200						HD	D Procureme	ent for Geotech ,	/ Design		Geotech	HDD	Final Des	sign	HDD A	Award / plar	nning	HDD Co	nstruction
EPC2 - DC Converter Stations/ Substations																			
Converter Switchyard FEED / Procurement				Technical. S	Specif.	Funct. Specif.		RFP/Eval/Sel	ect/Neg. Con	t./ Award		•							
Converters (2) Eng. / Manufact. / Delivery											St	art-up /Er	g			Purchas	ing / Manu	ufacturing	/ FAT / De
Construction / Field Ops Bottom Brook and Woodbine																		Site P	rep / Cons
Construction / Field Ops Cape Ray and Point Aconi																			
Construction / Field Ops Granite Canal																			S
Testing & Commissioning																			
Construction Contractors - Transmission Lines																			
TL Contractors Procurement								Pro	ocurement / N	Negotiation	/ Contract A	Awards							
Construction AC Lines NL (BB to GC) 11000																Tree	es / Found	lations / C	abling / Te
Construction DC Lines NL (BB to CR) 12000															Trees /	Foundation	ns / Cabling	g / Test	
Construction G - Line NL (BB to IH) 14100														Trees	/ Found/ 0	Cabling / Te	st		
Construction DC Lines NS (PA to WB) 13000															Trees /	Foundatior	ns / Cabling	g / Test	
Construction G - Line NS (WB to BL) 14200																Trees / Fo	ound. / Cab	ling / Test	
Accommodations 15000															Constr	uction / Acc	commodat	ions Oper	ations
Construction Contractors - Compounds / Other																			
Compounds / Other Contractors Procurement									Procurem	nent / Contr	ract Award								
NS Woodbine (23200,42000, 53000)											Trees			Site Prep	1				
NS Point Aconi (62100)											Trees				Site I	Prep			
NS - Big Lorraine (32000 / 52000)														Tree		Site Prep			
NL - Bottom Brook (22000/ 41000											Trees	Sit	e Prep	Si	ite Prep				
NL - Granite Canal												Si	ite Prep		S	ite Prep			
NL - Indian Head (31000)											Trees			Site Pre	р				
NL - Cape Ray (51000)												[Trees			Site	e Prep	-	
Procurement - Grounding Site Breakwater / Electrical												Procurer	ment / Co	ontract Av	vards				
Grounding Site NL Indian Head 31000	1			1												Break	water		B/W
Grounding Site NS Big Lorraine 32000																			Br
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		ENL Lead	Activities	С	Critical Path	h Activities									Wei Inst	ather allation			Weather Installati
		Other Lea	d Activities	N 1	vilestones	;									Win	idow 1			Window

Sept 1



other allation dow 2

Marine Weather Installation Window 3

News release



NSPML Replaces Transmission Line Contractor for Maritime Link Project

July 20, 2016 - St. John's, NL - NSP Maritime Link Inc. (NSPML), a subsidiary of Emera Inc. (TSX: EMA), today announced a new transmission line contractor for the Maritime Link Project. The original contractor, Abengoa S.A., has been under ongoing global creditor protection proceedings that have hampered the company's ability to perform its work. As a result, NSPML was forced to place Abengoa in default and to work with Abengoa's sureties, Liberty Mutual Insurance Company and Zurich Insurance Company (Sureties) to find a replacement contractor.

NSPML has selected EUS-Rokstad, a joint venture between Emera Utility Services (an affiliate of Emera Inc.) and Rokstad Power to complete construction of the High Voltage Direct Current (HVdc) transmission line work for the Maritime Link Project. NSPML will work with all parties to ensure a smooth transition of the work.

"Today's decision is based on acting in the best interest of the project and our Nova Scotia electricity customers. Our goal is to complete the Maritime Link Project on budget by late 2017. With the transition from Abengoa to EUS-Rokstad, this work can resume and be completed to meet our overall timeline," said Rick Janega, President and CEO of Emera Newfoundland and Labrador.

The selection of EUS-Rokstad by NSPML was based on a competitive procurement process administered by, and with third-party oversight from, Abengoa's sureties, and is compliant with NSPML's Code of Conduct for Affiliate Transactions. As part of the evaluation, contractors were required to meet NSPML's and the Sureties requirements, including with respect to costs and the ability to complete the HVdc transmission lines within required timelines.

EUS-Rokstad will construct the HVdc transmission lines in both provinces, including the construction of tower foundations; tower assembly and stringing of conductors. In addition, Abengoa's main subcontractor, Powertel Utilities Limited, will continue to have responsibility for the construction of the two grounding lines and the AC line while working directly with NSPML.

"We continue to advance all components of the Project in both provinces. With construction of the HVdc transmission lines set to resume immediately, we continue to be on budget and are on target to complete the Project by late 2017," says Janega.

As part of the agreement EUS will have responsibility for approximately 50km of HVdc transmission line in Nova Scotia. Rokstad will be responsible for approximately 140km of HVdc transmission line on the island of Newfoundland.

About The Maritime Link Project

The Maritime Link is part of a larger strategy to address the growing demand for more renewable energy. The Maritime Link will create more energy options and reduce dependency on fossil fuel generation. By connecting the island of Newfoundland to the North American grid for the first

time in history, the Link will create a new electricity loop in Atlantic Canada, providing access to market for the region's abundance of clean, renewable energy. For more information on the Maritime Link visit <u>www.EmeraNL.com</u>.

-30-

Jeff Myrick Emera Newfoundland & Labrador Senior Manager, Communications and Public Affairs 709-727-4754 Jeff.Myrick@emera.com

SCHEDULE "Q"

DRAW CONFIRMATION CERTIFICATE BY INDEPENDENT ENGINEER

ML PROJECT FINANCING

This Draw Confirmation Certificate is provided by MWH Canada, Inc. (the "Independent Engineer") to The Toronto-Dominion Bank (the "Collateral Agent") in connection with the credit agreement dated February 24, 2014, between NSP Maritime Link Incorporated (the "Borrower"), Maritime Link Financing Trust (the "Lender") and the Collateral Agent (said agreement, as same may be amended, supplemented or restated from time to time, is hereinafter referred to as the "ML Credit Agreement"). Capitalized terms used in this Draw Confirmation Certificate not defined herein shall have the meanings assigned to them in Exhibit A of the ML Credit Agreement.

The Independent Engineer has (i) discussed matters believed pertinent to this Draw Confirmation Certificate with the Borrower and any relevant Material Project Participants, (ii) made such other inquiries as we have determined appropriate and (iii) reviewed:

- (a) the Construction Report dated June 20, 2016 (the "Construction Report"); and
- (b) the Borrower's funding request dated June 24, 2016 (the "Funding Request").

On the basis of the foregoing limited review procedures and on the understanding and assumption that the factual information contained in the Construction Report and Funding Request is true, correct and complete in all material respects, the Independent Engineer makes the following statements in favour of the Collateral Agent and to the best of its knowledge, information and belief, as of the date hereof that:

1. Construction of the Project is progressing in a satisfactory manner and in accordance with the terms of the applicable Material Project Documents with the following exceptions:

NO EXCEPTIONS NOTED

2. All payments to the Material Project Participants to be paid with the proceeds of the ML Construction Loan (including any payments using advances from the Working Capital Reserve Account during the period from the last Draw Confirmation Certificate to this Draw Confirmation Certificate) requested to be made pursuant to the Funding Request are allowed under the payment terms of the applicable Material Project Documents and the ML Credit Agreement as to the advance requirements of Section 7.3, with the following exceptions:

NO EXCEPTIONS NOTED

3. Assuming the Borrower exercises proper engineering and construction management throughout the remainder of the Project, we have no reason to believe that the

Commissioning Date will not occur prior to the Date Certain, or that the total Project Costs will exceed [\$1,577,354,028] with the following exceptions:

NO EXCEPTIONS NOTED

This Draw Confirmation Certificate is solely for the information and assistance of the Collateral Agent, the Lender and Canada in connection with the Funding Request and shall not be used, circulated or relied upon for any other purpose or by any other party.

Dated: June 28, 2016

MWH CANADA, INC.

By:

Title: <u>IE Team Leader</u>

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- (a) the Construction Report dated July 20, 2016 (the "Construction Report"); and
- (b) the Borrower's funding request dated July 25, 2016 (the "Funding Request").

On the basis of the foregoing limited review procedures and on the understanding and assumption that the factual information contained in the Construction Report and Funding Request is true, correct and complete in all material respects, the Independent Engineer makes the following statements in favour of the Collateral Agent and to the best of its knowledge, information and belief, as of the date hereof that:

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Dated: July 27, 2016

MWH CANADA, INC.

By:

Title: <u>IE Team Leader</u>

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The Independent Engineer has (i) discussed matters believed pertinent to this Draw Confirmation Certificate with the Borrower and any relevant Material Project Participants, (ii) made such other inquiries as we have determined appropriate and (iii) reviewed:

- (a) the Construction Report dated August 22, 2016 (the "Construction Report"); and
- (b) the Borrower's funding request dated August 25, 2016 (the "Funding Request").

On the basis of the foregoing limited review procedures and on the understanding and assumption that the factual information contained in the Construction Report and Funding Request is true, correct and complete in all material respects, the Independent Engineer makes the following statements in favour of the Collateral Agent and to the best of its knowledge, information and belief, as of the date hereof that:

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Dated: August 29, 2016

MWH CANADA, INC.

By:

Title: <u>IE Team Leader</u>

SCHEDULE "Q"

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- (a) the Construction Report dated September 20, 2016 (the "Construction Report"); and
- (b) the Borrower's funding request dated September 27, 2016 (the "Funding Request").

On the basis of the foregoing limited review procedures and on the understanding and assumption that the factual information contained in the Construction Report and Funding Request is true, correct and complete in all material respects, the Independent Engineer makes the following statements in favour of the Collateral Agent and to the best of its knowledge, information and belief, as of the date hereof that:

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Dated: September 29, 2016

MWH CANADA, INC.

By:

Title: <u>IE Team Leader</u>

LCP - ML PROJECT SITE VISIT REPORT JUNE 15, 2016

Prepared for: Natural Resources Canada and Emera IE Point of Contact: Nik Argirov Date: August 21, 2016

Quality Assurance Statement

Office Address	740-1185 W Georgia Street, Vancouver BC, V6E 4E6
Prepared by	Tim Little, Hamdy Khalil & Nik Argirov
Reviewed by	Nik Argirov & Howard Lee
Approved for Issue by	Howard Lee

Disclaimer

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1. GENERAL

The MWH Independent Engineer (IE) team, together with a representative of Natural Resources Canada participated in the site visit for the Maritime Link (ML) project in Nova Scotia on June 15, 2016. Emera senior management representative, Ken Meade, Assistant Project Manager, accompanied the MWH team as listed below.

IE team:

Nik Argirov (IE Team Lead) Tim Little (IE Geotechnical Subject Matter Expert (SME)) Paul Hewitt (IE Cost & Schedule SME) Hamdy Khalil (IE Transmission Lines SME)

Visits were made to the following project sites:

- Point Aconi landfall site
- Transmission Line Materials storage yards
- HVDC line from Point Aconi to Woodbine (with stops at towers 151, 144, 164)
- Woodbine Converter station and AC switchyard expansion
- Grounding line from Woodbine to Big Lorraine
- Big Lorraine grounding site

Transportation to all sites was by road. The team started at the Sydney Maritime Link project office on the morning of June 15 for a Field Level Risk Assessment (FLRA) and to pick up hard hats and safety vests & glasses. The team then visited the above-listed project sites and returned to the Sydney office at the end of the day for a trip closure meeting. Joseph Krupski of Natural Resources Canada joined the meeting via conference call. Photographs of major features were taken during the site visits to document the current status of construction; selected photos are included in this report.

The IE team noted that safety was a top priority throughout the site visits. At each project site, a representative from either Emera or the site contractor reviewed the applicable FLRA with the IE team and escorted the team around the site.

2. NOVA SCOTIA PROJECT SITES – JUNE 15, 2016

In Nova Scotia the subsea cables will come ashore just west of the existing Point Aconi thermal generating station. The Nova Scotia portion of the project includes approximately 46 km of ±200 kV HVDC transmission line from Point Aconi to the Woodbine converter station site, and approximately 40 km of grounding line from Woodbine to the Big Lorraine grounding site. Associated infrastructure includes an onshore cable anchor and cable transition compound at Point Aconi, a transition compound, converter station and substation expansion at Woodbine, a marine ground at Big Lorraine, and two sections of underground cable each of about 1 km length at Point Aconi and Woodbine. Most of the Nova Scotia rights of way (ROW) for the new lines either parallel or are close to existing access roads or existing transmission rights of way.



The team started from Sydney in the morning, and first stopped at the local Maritime Link project office for a safety briefing and to pick up safety vests and hard hats. The team then proceeded in sequence to the following sites:

Point Aconi Landfall Site

The contractor, Direct Horizontal Drilling, was set up on site and surface casing installation was in progress. The IE team noted that the work site was very well-organized and tidy.

The initial 42-inch diameter steel casing was being installed at an angle of 16 degrees below horizontal. Casing installation is an incremental process. First a 36-inch diameter drill hole is advanced about 2 m using an auger bit, then the casing is driven to the end of the augured hole using a casing hammer. Following each incremental advance, an additional length of casing is then welded onto the top end. At the time of the site visit, the bottom of the casing was at a depth of 34.4 m, and contractor staff advised that the target depth was about 46 m. Based on drill cuttings being removed from the hole during the site visit, it appeared that the drill hole had reached the top of the sedimentary bedrock. Contractor staff advised that driving the last run of casing had been difficult, as evidenced by a split in the heavy duty casing hammer.

The IE team also viewed the stainless steel drilling string (tool) that will be used to drill the Horizontal Directional Drilling (HDD) hole and a Contractor representative explained the details of the drill bits, rods and steering mechanisms that will be used to achieve the designed hole alignment. The drilling fluid to be used was described as a "gel mud". Drill cuttings that will be recovered are to be mixed with peat moss and placed in a designated location near the landfall site.

The contractor is currently trucking water for HDD requirements to the site from a nearby authorized pond. In anticipation of higher water demand during the subsea drilling, a temporary pumping system was being installed to supplement the water supply with seawater.



Photo 1 – HDD drill rig installing surface casing at 16 degrees below horizontal.

Photo 2 - Large 42-inch diameter pipe is a steel casing. Smaller pipe inside casing is the drill rod which connects to a 36-inch diameter auger bit being used to drill the pilot hole. Drill operator is located in glass booth at right side behind drill rig.



Photo 3 - Auger drill bit used to advance drill hole ahead of casing. Photo is taken from inside of drill operator's control room.

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Photo 4 - Casing hammer used to drive 42-inch casing.



Photo 5 - Crack in casing hammer resulting from driving casing against high resistance.





Photo 6 - Drill bit and following drill rod sections. Blue sections contain movable components that are used to steer the drill along its design alignment.

Transmission Construction Materials storage yards



Photo 7 - General view of yard.





Photo 8 - Guy wire for towers.



Photo 9 - Threadbar anchors for tower footings.



Photo 10 - Grillage and tower steel.



Photo 11 - Grillage footing components.



Photo 12 - Vibration Dampers containers





Photo 13 - Type 1 grillage (footing) for rock conditions.



Photo 14 - Type 2 grillage (footing) for soil conditions.



Photo 15 - DC conductor spools.



Photo 16 - ACSR Bluebird type conductor

HVDC line from Point Aconi to Woodbine

Total structures are 164; 48 Self-supporting and 116 guyed structures. Total installed structures are 3.



Photo 17 - Tower 151 (left) and adjacent tower (right).



Photo 18 - Tower 144



Photo 19 - Pin footing for tower 144.



Photo 20 - Marking to confirm the bolt torque





Photo 21 - Foundation preparation for tower 164 (last tower before Woodbine convertor station)



Photo 22 - Assembled type 2 grillages for tower 164 foundation. Rock covered slope in background is typical of permanent erosion protection along roads and ditches.

The IE team noted extensive use of shot rock for permanent erosion control on excavated soil surfaces along ditches, roads and substation areas. This cover appeared to well-installed and effective.

Also noted, the use of grillages on all soil types including rocky soil while there are no concrete foundation types.

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Woodbine Converter station and AC switchyard expansion

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At Woodbine, the new DC line will transition from overhead to underground where it will cross other existing overhead AC lines. IE observed significant advancement in construction progress of this site. Many of the cast in place as well as precast foundations in the AC switchyard expansion site are completed. The concrete foundations of the Convertor building are completed and ready for erection of the steel frame of the building.



Photo 23 - Expansion of existing AC switchyard. Most of the concrete footings in foreground are precast.



Photo 24 - Components for new DC switchyard.





Photo 25 - Precast concrete sections for cable ducts.



Photo 26 - Converter station concrete foundation ready for the building steel structure erection.





Photo 27 - Converter station foundation.

Grounding line from Woodbine to Big Lorraine

Approximately 90% of the poles already installed with 80 poles remaining to be installed. Approximately 65% of the stringing is complete.



Photo 28 - Stringing grounding line across road near entrance to Woodbine converter station (PowerTel is contractor)



Big Lorraine Grounding Site

Since the last site visit in July 2015, the access road from the local highway to the waterfront had been constructed. Construction of the final section of access road along the waterfront to the grounding site was in progress. Overburden stripping of the alignment was almost completed, and drilling of blast holes to remove high points of bedrock to design grade had started. The IE team noted that sediment fencing and scattered straw were the primary measures for temporary erosion and sediment control and generally appeared to be effective.



Photo 29 - Rock berm for grounding element wells is to be constructed across this bay of water.





Photo 30 - Overburden stripping of access road alignment in progress.



Photo 31 - Access road alignment after stripping of overburden. Silt fences and straw bales are elements of erosion and sediment control. Light grey material in center background is piles of drill cuttings from drilling of blast holes.





Photo 32 - Access road alignment adjacent to water area where rockfill berm will be constructed.

3. COMMENTS

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It was evident that the work on site is proceeding with good quality and safety awareness and with the exception of the HVDC transmission line, within the baseline schedule.