March 21, 2014

VIA COURIER, EMAIL, RESS

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge Street, 27th Floor
Toronto, ON
M4P 1E4

Dear Ms. Walli:

Re: EB-2011-0140: East-West Tie Line Designation
Monthly Report March 21, 2014

Enclosed for filing is the monthly report for Upper Canada Transmission, In. ("NextBridge"), a copy of which was filed through RESS earlier today.

Yours truly,

(Original Signed)

Tania Persad
Senior Legal Counsel, Enbridge Gas Distribution Inc.

EB-2011-0140

ONTARIO ENERGY BOARD

IN THE MATTER OF sections 70 and 78 of the *Ontario Energy Board Act, 1998*;

AND IN THE MATTER OF a Board-initiated proceeding to designate an electricity transmitter to undertake development work for a new electricity transmission line between Northeast and Northwest Ontario: the East-West Tie Line.

UPPER CANADA TRANSMISSION, INC.
(d/b/a NextBridge Infrastructure)

Monthly Report

March 21, 2014

1. By the *Decision and Order* dated August 7, 2013 (Decision), the Ontario Energy Board (OEB or Board) decided that the designated transmitter for the development phase of the proposed East-West Tie Line (EWT Project) is NextBridge Infrastructure (NextBridge).

2. In accordance with Ordering Paragraph 2 (page 42) of the Decision and the Board's September 26, 2013 *Decision and Order regarding Reporting by Designated Transmitter*, NextBridge provides this monthly report. This report reflects the financial status of development work on the EWT Project through February 28, 2014. Other aspects of this report are current as of the close of business on the last business day prior to the filing date.

3. This report is organized as follows:

   (a) A summary report on overall EWT Project progress.

   (b) A cost summary providing details for each cost category included in NextBridge's Board approved development cost budget of: i) actual costs to date; ii) percentage of budgeted costs spent to date; iii) updated budget forecast (if applicable); and iv) forecast variance. Reasons for any forecast

variance and associated mitigating measures for negative forecast variances are also provided.

(c) A summary of the status of NextBridge's Board approved development milestones, indicating those that are complete and the status (i.e. on schedule, ahead of schedule or delay/potential delay) of those in progress. If any delay or potential delay in achievement of any of the milestones has been identified, the reasons for the delay, the magnitude and impact of the delay on the broader development schedule and cost, and mitigating steps that have been or will be taken, are reviewed.

(d) A summary of risks and issues that have arisen during development work, including discussion of potential impact of any such developments on schedule, cost or scope, and discussion of options for mitigating or eliminating the risk or issue. This section also provides an update on any previously identified risks or issues.

Overall Project Progress

4. Overall during this period, work towards all milestones continued to progress and the EWT Project is on schedule.

5. In respect of engineering work:

(a) The conductor optimization study was completed in accord with milestone 4;

(b) A tower manufacturer for the detailed engineering, testing and supply of the lattice towers has been selected and the contract documents are being prepared for execution. Detailed structural engineering has commenced in support of final designs and prototype testing; and

(c) Preparations for land surveying and geotechnical testing are in progress and are scheduled to commence after the spring thaw.

6. In respect of route selection, land/ROW acquisition and community/municipal consultation activities, discussions with landowners, permitting agencies and other stakeholders have continued.

(a) Activities within the community/municipal consultation area included continued development of the record of consultation and responding to and tracking stakeholder inquiries, including queries in connection with the Terms of Reference (the "ToR");

(b) Activities in respect of route selection, land/ROW acquisition included:

(i) Responding to and tracking landowner inquiries and other landowner engagement activity, including queries in connection with the ToR; and

(ii) Awarding of contract for balance of landowner consultation and land acquisition activities in support of the environmental assessment (EA) and leave-to-construct application.

7. In respect of Aboriginal engagement, consultation and participation, activities included:

(a) Ongoing engagement with the identified First Nation and Métis communities;

(b) ToR were delivered to all communities, either by courier service or hand delivery by NextBridge;

(c) Meetings with Bingwi Neyaashi Anishinaabek (Sand Point First Nation), Long Lake No. 58 First Nation, Biinjitiwaabik Zaaging Anishinaabek First Nation (Rocky Bay) and Animbiigoo Zaagi'igan Anishinaabek First Nation (Lake Nipigon Ojibway); and

(d) Further discussions on ways Aboriginal communities can commercially participate in the EWT Project, as outlined in the Aboriginal Participation Plan (Schedule C) submitted as part of the EWT Project January 22, 2014 Monthly Report.

8. In respect of environmental assessment activities, work included:

(a) Finalization and submission of the ToR to the Ontario Ministry of the Environment on February 27, 2014 in accord with milestone 22;

(b) Continued consultation with the Ministry of Environment, Natural Resources, and Tourism, and Culture and Sport in support of the EA;

(c) Background review of available data and planning of field work as part of the EA;

(d) Review of permits and approvals required, including discussions with relevant agencies on requirements and scheduling of applications; and

(e) Continued evaluation of the Parks Canada decision regarding the routing through the Pukaskwa National park.

9. Additional general updates for the reporting period include:

   (a) A System Impact Assessment Study Agreement was executed with IESO in accord with milestone 5.

   (b) The procedural steps respecting the appeal by the Ojibways of Pic River First Nation (Pic River) of the Board's designation decision continue to proceed on schedule. All parties and intervenors who have opted to participate have now provided their written arguments. The appeal remains scheduled to be heard in Toronto on Wednesday April 2, 2014 and Thursday April 3, 2014.

Cost Summary

10. Table 1, below, details for each cost category included in NextBridge's Board approved development cost budget: i) actual costs to date; ii) percentage of budgeted costs spent to date; iii) updated budget forecast (if applicable); and iv) forecast variance.

11. In an effort to address increased stakeholder and municipal interest, NextBridge expanded the number of planned open houses and municipal meetings. As a result, Other Consultation is anticipated to exceed its budgeted amount resulting in a negative variance. NextBridge has identified a cost reduction in the Land Rights` budget that is anticipated to address the negative variance currently projected in Other Consultation. NextBridge does not anticipate that the total development phase deferral account will exceed $22.4 million approved for recovery by the Board.

Table 1: Budgeted Costs Status

	PROJECT TO DATE		TOTAL PROJECT ESTIMATE			
Cost Category Budgeted	**Actual[1]**	**% of total budget**	**Forecast**	**Budget**	**Variance $**	**Variance %**
Engineering, Design and Procurement Activity	$1,115,193	10.6%	$10,553,292	$10,553,292	-	0%
Permitting and Licensing	-	0.0%	47,320	47,320	-	0%
Environmental and Regulatory Approvals	789,043	22. 0%	3,592,680	3,592,680	-	0%
Land Rights (Acquisitions or options)	699,682	35.1%	1,746,000	1,991,000	245,000	12.3%
First Nation and Métis Consultation	401,315	23.3%	1,724,000	1,724,000	-	0%
Other Consultation	419,620	84.6%	741,001	496,001	(245,000)	(49.4%)
Regulatory (legal support, rate case and LTC filings)	343,547	34.9%	985,000	985,000	-	0%
Interconnection Studies	43,245	24.2%	179,000	179,000	-	0%
Project Management	499,328	38.4%	1,300,000	1,300,000	-	0%
Contingency (Engineering, Design and Procurement)	-	0.0%	1,529,708	1,529,708	-	0%
Total	**$4,310,973**	**19.2%**	**$22,398,001**	**$22,398,001**	**-**	**0%**

12. Table 2, below, details costs to date not included in NextBridge's Board approved development cost budget. This table includes two categories of cost expressly excluded from the development cost budget filed by NextBridge: First Nation and

[1] "Actual" refers to actual costs plus estimated accruals.

Métis land acquisition costs and First Nation and Métis participation costs (see NextBridge Response to Interrogatory 26 to all applicants, attachment 1).

13. The "Other" category on Table 2 records unbudgeted costs that are, to date, for the most part related to the Notice of Appeal filed by Pic River in the Ontario Divisional Court in respect of the Decision.

Table 2: Unbudgeted Costs

Cost Category	Project to Date Actual[2]
Not Budgeted	
First Nation and Métis Land Acquisition	$ -
First Nation and Métis Participation	178,216
Other Costs Not included in Budgeted Categories	217,708
Carrying Cost	2,397
Taxes and Duties	-
Total Not Budgeted	**$398,321**

Development Milestone Summary

14. Table 3, below, provides a summary of the status of NextBridge's Board approved development milestones, indicating those that are complete and the status of those in progress (i.e. on schedule, ahead of schedule or delay/potential delay).

15. For each of the Board approved milestones, Table 3 provides:

(a) The Board approved milestone date.

(b) The status of those milestones due within 3 months of the reporting date.

[2] "Actual" refers to actual costs plus estimated accruals.

(c) A “revised forecast date” if applicable, indicating NextBridge’s current forecast of the date for completion of the relevant milestone if the current forecast differs from the Board approved date.

16. NextBridge has focussed, for the purposes of this reporting, on the status of those milestones due within 3 months of the reporting date in order to highlight the development activities in respect of which efforts are primarily focussed, and which are of most immediate relevance to project progress and status. At this stage in project development, but for this approach all milestones would indicate “On schedule”, but such information would be of limited use to the Board given that the relevant milestones are currently far out in time. As the development work progresses, the status column will be completed for more of the milestones.

17. NextBridge does review its development schedule on a monthly basis, in conjunction with preparation of these monthly reports, and should an issue or risk regarding a milestone that is scheduled beyond 3 months from the reporting date be identified, NextBridge will nonetheless report on that issue or risk, and include an appropriate status indication and revised forecast date in Table 3.

Table 3: Milestone Progress and Status

Engineering Milestones

	Milestone	Board Approved Date	Status	Revised Forecast Date
1	Initiate engineering	13 Sep 2013	Completed	
2	Sign contract for engineering	31 Oct 2013	Completed	
3	Finalize design criteria for conductor and structure	31 Jan 2014	Completed	
4	Complete conductor optimization study	7 Mar 2014	Completed	
5	File request for a System Impact Assessment (SIA) with the IESO	12 Mar 2014	Completed	
6	Status report on progress toward finalization of structure choice	31 Mar 2014	On schedule	
7	Obtain senior management approval of the structure configuration proposal	1 July 2014		
8	Complete aerial surveys	14 Oct 2014		
9	Receive final SIA from the IESO	21 Nov 2014		

Route Selection, Land/ROW Acquisition and Community/Municipal Consultation Milestones

	Milestone	Board Approved Date	Status	Revised Forecast Date
10	Prepare list of landowners along the ROW	10 Oct 2013	Completed	
11	Complete design of Landowner, Community and Municipal Consultation Plan	1 Nov 2013	Completed	
12	Commence negotiations or discussions with all landowners and permitting agencies	25 Nov 2013	Substantially completed as per EWT Project December 20, 2013 Monthly Report	
13	Finalize proposed route and obtain senior management approval	1 Jul 2014		

Aboriginal Engagement, Consultation and Participation Milestones

	Milestone	Board Approved Date	Status	Revised Forecast Date
14	Send introductory correspondence to aboriginal communities	30 Aug 2013	Completed	
15	Initial meeting with Ministry of Energy regarding the MOU for delegation	15 Sept 2013	Completed	
16	Complete initial/introductory contact with all aboriginal communities identified by the Ministry of Energy	30 Sept 2013	Completed	
17	Sign MOU with Ministry of Energy regarding the delegation	5 Nov 2013	Completed	
18	Complete design of First Nations and Métis Participation Plan with community input	2 Jan 2014	Completed	
19	Complete design of First Nations and Métis Consultation Plan with community input	2 Jan 2014	Completed	

Environmental Assessment (Provincial) Milestones

	Milestone	Board Approved Date	Status	Revised Forecast Date
20	Consult with environmental agencies (Ministry of Environment, Ministry of Natural Resources, Parks Canada and Ontario Parks)	10 Oct 2013	Completed	
21	Issue notice of draft Terms of Reference (ToR) available for review	16 Jan 2014	Completed	
22	File Environmental Assessment ToR	28 Feb 2014	Completed	
23	Initiate wildlife, aquatics and early season vegetation assessments	1 May 2014	On schedule	
24	Approval of Environmental Assessment ToR	3 Jul 2014		
25	Complete Environmental Assessment Consultation Report	27 Jan 2015		
26	Submit Environmental Assessment to Ministry of Environment	27 Jan 2015		

Leave to Construct Milestone

	Milestone	Board Approved Date	Status	Revised Forecast Date
27	Submit Leave to Construct (LTC) application	28 Jan 2015		

18. In respect of the milestones achieved during this reporting period:

    (a) **Milestone 4: Complete conductor optimization study.** Attached at Schedule A is a copy of the completed conductor optimization study as proof of completion of this milestone.

    (b) **Milestone 5: File request for a System Impact Assessment (SIA) with the IESO**. As demonstrated at the below link, the SIA agreement between NextBridge Infrastructure LP's general partner, Upper Canada Transmission, Inc. and IESO is registered under Application number 2014-514 and is active:

    http://www.ieso.ca/Pages/Participate/Connection-Assessments/Application-Status.aspx

    (c) **Milestone 22: File Environmental Assessment ToR**. Attached at Schedule B is a copy of electronic mail correspondence from the Ontario Ministry of Environment (MOE) confirming posting of the ToR notice to the MOE website as proof of completion of this milestone.

19. With respect to milestones due within the next 3 months, activity is on track to achieve the relevant milestones in accordance with the Board approved target dates.

Issues/Risks/Mitigation Summary

20. This section of NextBridge's monthly report provides a summary of risks and issues that have arisen during development work, including discussion on potential impact of any such developments on schedule, cost or scope, and of options for mitigating or eliminating the risk or issue.

21. There are no risks or issues that have arisen during development work to date in respect of which NextBridge has identified an impact on its development schedule, cost or scope of work.

Attachments to NextBridge Monthly Report

Schedule A

Milestone 4: Complete conductor optimization study – proof of completion

Conductor Optimization Study, March 7, 2014

Conductor Optimization Study

NextBridge Infrastructure LP

Ontario East-West Tie Project
Project No. 76120

Issued March 7, 2014

RECORD OF REVISION

This Conductor Optimization Study is a reference for the criteria and design decisions associated with this project. This document will be revised as project specifics develop or change.

Revision History

Revision	Date	By	Description	Checked	Approved	Approved Date
0	3/7/2014	J. Cannon	Issued	P. Williams	Aziz Brott	3/7/2014
1	3/11/2014	J. Cannon	Issued	P. Williams	Aziz Brott	3/11/2014
2	3/18/2014	J. Cannon	Issued	P. Williams	Aziz Brott	3/18/2014

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LIST OF ABBREVIATIONS

Abbreviation	Term/Phrase/Name
/TW	Trapezoidal Wire (i.e. ACSR/TW)
ACSR	Aluminum Conductor, Steel Reinforced
ACSS	Aluminum Conductor, Steel Supported
OEB	Ontario Energy Board
OEWTL	Ontario East-West Tie Line
RBS	Rated Breaking Strength
TS	Transformer Station

1.0 EXECUTIVE SUMMARY

1.1 Background

The Ontario Energy Board (OEB) has selected NextBridge Infrastructure LP, through its general partner Upper Canada Transmission, Inc., to complete the development phase of the Ontario East-West Tie Line Project. The Project consists of a new dual-circuit transmission line that originates at Wawa TS in Wawa, Ontario, extends northwest to Marathon TS in Marathon, Ontario, and then traverses westward to Lakehead TS located near Thunder Bay, Ontario. The proposed circuits will traverse a total distance of approximately 400 km, and will be capable of transmitting a combined total of up to 932 MVA when operating continuously at 240 kV, per OEB Minimum Technical Requirements[1] Appendix A, Table 2.

1.2 Purpose

The OEB Minimum Technical Requirements Section 3.2.3, requires completion of an optimization study for all transmission lines developed in Ontario with operating voltages at or above 230 kV and having a length greater than 50 km. Such studies are used to evaluate various conductor sizes and types in order to determine the most economical conductor configuration for a specific project. This is achieved by completing an examination of the costs of the line due to installation (structures, foundations, conductors, etc.), electrical losses, ownership, and operation associated with various configurations for a specific time frame. The OEB Minimum Technical Requirements, Appendix A Table 2 requests this analysis be performed for a study period of 25 years.

1.3 Results

A number of conductors were evaluated as presented below, and it was determined that the OEB reference conductor, 1192.5 kcmil Grackle ACSR, had the lowest evaluated cost for conductors assessed for the Ontario East-West Tie Line.

2.0 ANALYSIS

2.1 Methodology

This study seeks to quantitatively select the appropriate conductor for the transmission line that will meet all project functional requirements, while also resulting in the lowest total cost of ownership. The initial step in development of this analysis is to determine what available conductor types and sizes are capable of meeting the functional requirements of the project. Once those conductors have been identified, an economic assessment of transmission line life cycle costs is performed by analyzing installation, maintenance, and operating costs associated with a line constructed with each of those conductors. The net present value of the life cycle costs for the various conductor options are then calculated and compared. The conductor which yields the lowest estimated present value of life cycle costs, based on a given study period, is selected as the "optimal" conductor. For this evaluation, a study period of 25 years was chosen assuming energization in the year 2015 per OEB Minimum Technical Requirements, Appendix A Table 2.

2.1.1 Installation Costs

The installed cost of the transmission line used in the formulation of this study includes NextBridge estimated costs for material and installation of various conductors and associated towers and foundations. The reference installation costs used in this evaluation are based on detailed construction estimates for construction of the line using 1192.5 kcmil Grackle ACSR. Construction estimates for alternative conductor, structure, and foundation costs were developed by adjusting the reference case costs. These adjustments were made through comparison of estimated structure weights and overturning moments derived through calculations consistent with methods presented by Ryle.[2] Conductor material costs were based on direct vendor quotes, and installation pricing was based on indicative pricing provided by various contractors.

2.1.2 Electrical Losses

Electrical losses were estimated for the line using operating currents associated with the estimated median power flow that would be present on the line in the year 2030, based on loading information provided by Ontario Power Authority. Line impedances were calculated using the Aspen electrical modelling program for each conductor alternative being evaluated by the study. The costs of these losses were calculated based on an assumed base energy production cost of $40/MWhr and an energy inflation rate of 3% per annum. The net present value of these estimated losses was calculated using a

discount rate of 7% per annum. The cost of energy, inflation rate, and discount rate were obtained from OEB Minimum Technical Requirements, Appendix A Table 2.

2.1.3 Operating Costs

For the purposes of this study, NextBridge estimated that differences in maintenance and operating costs exclusive of electrical losses would be negligible between conductor alternatives analyzed.

2.2 Conductor Alternatives

Conductor alternatives reviewed were limited to conductors that were capable of meeting the following criteria when operating under the climatic conditions indicated in OEB Minimum Technical Requirements, Appendix A Table 2.

Table 2-1. Key Conductor Selection Criteria

Continuous Loading per Circuit at 240 kV, 93°C	466 MVA
Short Term Emergency Loading per Circuit at 240 kV, 127°C	599 MVA
Maximum Surface Voltage Gradient	18 kV/cm

Several conductor options, including ACSR, ACSR/TW, and ACSS, which met the criteria in Table 2-1 were used in this study. Table 2-2 provides technical information for analyzed conductor alternatives.

Table 2-2. Conductor Characteristics

Description	Diameter (mm)	Weight (N/m)	RBS (kN)
954 kcmil Cardinal (54/7) ACSS	30.4	17.9	115.6
1192.5 kcmil Bunting (45/7) ACSR	33.1	19.6	142.3
1192.5 kcmil Grackle (54/19) ACSR	34.0	22.3	186.3
1192.5 kcmil Grackle (54/19) ACSR/TW	31.1	22.3	186.3
1272 kcmil Bittern (45/7) ACSR	34.2	20.9	151.6
1272 kcmil Pheasant (54/19) ACSR	35.1	23.8	193.9
1272 kcmil Pheasant (54/19) ACSR/TW	32.1	23.8	196.1
1431 kcmil Plover (54/19) ACSR	37.2	26.8	218.4
1590 kcmil Falcon (54/19) ACSR	39.2	29.8	242.4

2.3 Results

Table 2-3 summarizes the estimated cost differentials for various conductor alternatives referenced to the 1192.5 kcmil Grackle ACSR option.

Table 2-3. Net Present Value Cost Differentials for Evaluated Conductors

Conductor	% Cost Increase
954 kcmil Cardinal (54/7) ACSS	12.0%
1192.5 kcmil Bunting (45/7) ACSR	1.4%
1192.5 kcmil Grackle (54/19) ACSR	-
1192.5 kcmil Grackle (54/19) ACSR/TW	0.7%
1272 kcmil Bittern (45/7) ACSR	2.9%
1272 kcmil Pheasant (54/19) ACSR	1.3%
1272 kcmil Pheasant (54/19) ACSR/TW	2.0%
1431 kcmil Plover (54/19) ACSR	3.8%
1590 kcmil Falcon (54/19) ACSR	7.0%

The economic analysis performed resulted in validation that the OEB specified reference conductor, 1192.5 kcmil Grackle ACSR should result in the most cost-effective Project.

3.0 REFERENCES

[1] Minimum Technical Requirements for the Reference Option of the E-W Tie Line (including Appendix A), Ontario Energy Board, November 9, 2011.

[2] Ryle, P. J., "Steel Tower Economics", *Journal of the Institution of Electrical Engineers, Part II: Power Engineering*, vol. 93, pp. 263 – 274, 1946.

Attachments to NextBridge Monthly Report

Schedule B

Milestone 22: File Environmental Assessment ToR – proof of completion

Correspondence from the Ontario Ministry of Environment (MOE) confirming posting of the ToR notice to the MOE website, February 27, 2014

From: "Bell, Dave JR. (ENE)" <Dave.JR.Bell@ontario.ca>
Date: February-27-14 7:08 PM
To: "Carrie Wiklund" <Carrie.Wiklund@enbridge.com>
Cc: <MBuszynski@dillon.ca>; "Michelle McCarthy" <mmccarthy@dillon.ca>
Subject: EWT Tor on MOE website

Hi Carrie:

The ToR notice is now live on the MOE website. If you notice any problems, please let me know.

http://www.ene.gov.on.ca/environment/en/industry/assessment_and_approvals/environmental_assessments/p
http://www.ene.gov.on.ca/environment/fr/industry/assessment_and_approvals/environmental_assessments/pr

Regards,

Dave Bell | Special Project Officer | Environmental Assessment Services | Ontario Ministry of the Environment
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