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. (NextBridge)

Reply Argument

INTRODUCTION

1. The Board's task in this proceeding is to select the most qualified and cost effective transmission company to develop the East-West Tie.[1]

2. The Minister of Energy's stated intent in referring this matter to the Board was to engage the Board's *Policy Framework for Transmission Project Development*, and a process that would encourage new entrants to transmission in Ontario, bring additional resources for project development, and support competition to drive economic efficiency for the benefit of ratepayers.[2]

3. NextBridge[3] has demonstrated in its Application and its Argument in Chief that it satisfies all of these criteria.

[1] March 29, 2011 Letter to Chair, Ontario Energy Board from Ontario Minister of Energy, paragraph 2.
[2] March 29, 2011 Letter to Chair, Ontario Energy Board from Ontario Minister of Energy, paragraph 3.
[3] As noted in the second paragraph at page 1 of its Application, UCT, the licencee/applicant, adopted the trade name NextBridge Infrastructure to reflect the considerable strengths of its three large, global energy and infrastructure partners.

4. NextBridge:

   (a) Presents the lowest cost East-West Tie proposal.[4]

   (b) Is the only applicant that proposed a schedule that would bring the East-West Tie into service within the timeframe specified in the OPA's reference option: by the end of 2017.[5]

   (c) Has demonstrated a track record of executing projects within budget and on time.[6]

5. No party has questioned the fact that NextBridge's development and construction cost proposal is the lowest (accounting for the control costs necessarily associated with the two single circuit proposals advanced).

6. No party has challenged NextBridge's track record of executing projects within budget and on time.

7. NextBridge's Application and Argument in Chief also reviewed the various elements supporting NextBridge's ability to develop, design, construct and operate the East-West Tie at the cost and within the timeline put forward in its Application. These elements include:

   (a) Top tier financial metrics, and the ability to either finance on balance sheet or obtain cost effective financing for the project if more advantageous to ratepayers.[7]

   (b) A demonstrated commitment to Ontario[8] through:

      (i) The historical and ongoing investment of its partner organizations in the province's energy system.

      (ii) The benefit of direct participation of the Ontario public in the project through the financial participation in NextBridge of the Ontario Municipal Employees Retirement System (OMERS).

   (c) An efficient and flexible routing proposal for the line.[9]

[4] NextBridge Argument in Chief, paragraph 4 and Figure 1.
[5] NextBridge Argument in Chief, paragraph 6 and Figure 3.
[6] NextBridge Argument in Chief, paragraphs 5 and 7, and Figures 2 and 4.
[7] NextBridge Argument in Chief, paragraphs 187 and 188; NextBridge Application Section 5; SEC Argument, paragraph 2.1.2; PWU Argument, paragraph 56; CCC Argument, page 8, first full paragraph.
[8] NextBridge Argument in Chief, paragraphs 146 to 151; NextBridge Application, page 4, pages 32 to 36.

8. No party has challenged these NextBridge strengths.

9. Despite the lack of challenge to NextBridge's superior track record of achieving project schedule, some parties have challenged the reasonableness of NextBridge's schedule for this project. NextBridge replies to these challenges and in so doing validates that its schedule for the East-West Tie is reasonable and achievable.

10. Parties have also challenged the technical soundness of NextBridge's recommended tower design for the East-West Tie: a Guyed-Y configuration. NextBridge's innovative Guyed-Y structures reduce both project schedule and project cost, while providing superior electrical and structural performance. These challenges are ill-founded, as demonstrated in this Reply Argument.

11. Additional criticisms have been levelled against NextBridge's:

    (a) Plan for First Nation and Métis consultation and participation in the project.

    (b) Project organizational structure, experience, and technical capability in permitting, constructing and operating electricity transmission facilities.

    (c) Plan for risk sharing with ratepayers.

    These criticisms are misplaced, and are also addressed in this Reply Argument.

12. NextBridge has focused its reply submissions on what it considers to be the primary criticisms, or misunderstandings, of its Application. Lack of response to any specific criticism should not be taken as an admission or acknowledgement of such criticism, but rather is the result of NextBridge's assessment that the criticism is either clearly misplaced, lacks evidentiary or logical support, or is simply not salient to the Board's considerations.

13. NextBridge has put forward the best plan for the East-West Tie Line. NextBridge's Recommended Plan is 100% achievable. It thoroughly considers all

[9] NextBridge Argument in Chief, paragraph 59(b); NextBridge Application, page 81.

aspects of the project and its planning, construction and operation. The Board can have full confidence in it, and in NextBridge's ability to execute it.

SCHEDULE

Overall Schedule

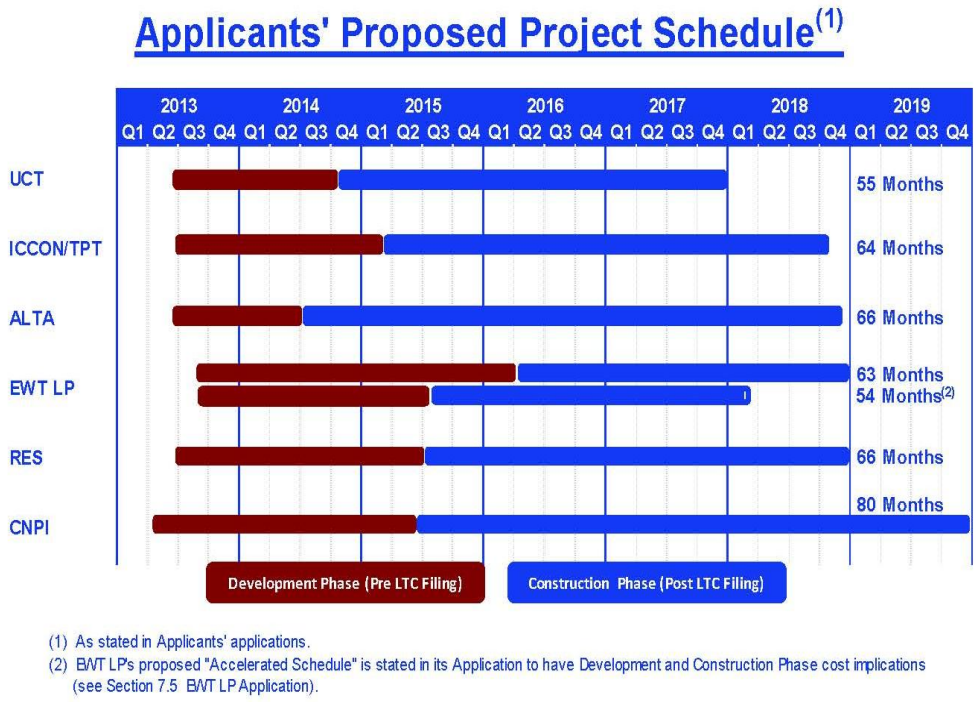
14. The schedule for putting the East-West Tie line into service is important to Northern communities, and to the Ontario government's policy for northern development. Concern has been expressed to the Board regarding the potential "gap" in Northern Ontario power system reliability between the time that Ontario's coal fired generators are to be shuttered and the time that the East-West Tie is to be put into service. Growing power demand from resource industries in the North, and in particular from significant mining activity, is high on the government's and Northern Ontario residents' agendas.[10]

15. At the Board's Northern Ontario sittings on May 2, 2013, representatives of Northern Ontario interests advocated the importance of a designation proponent's track record of completing comparable transmission projects on time and within budget.

16. NextBridge has demonstrated in its Argument in Chief that it is the only applicant that proposed a schedule that would bring the project into service within the timeframe specified in the OPA's reference option; by the end of 2017[11].

[10] May 3, 2013 Oral Sessions transcript, pages 12 through 14, and pages 30 and 31; see also NOMA-NOACC Argument.
[11] NextBridge Argument in Chief, paragraph 6 and Figure 3.

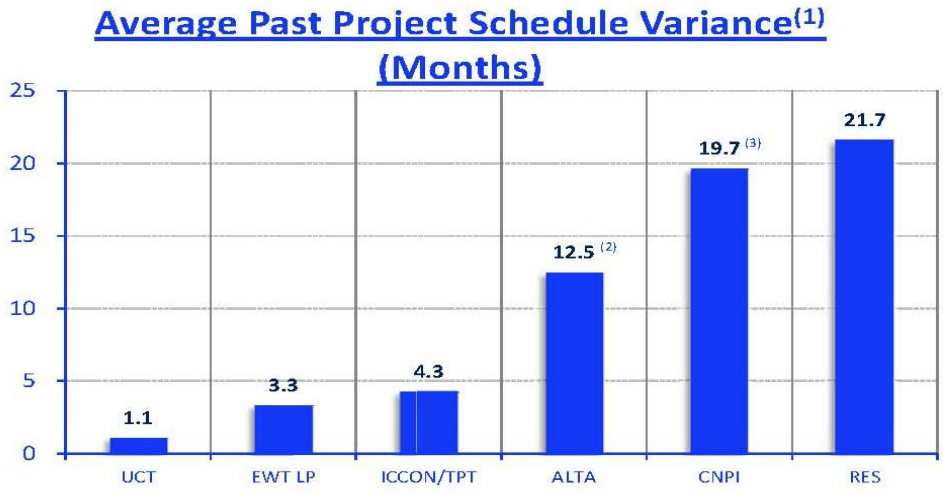
Figure 1 (Figure 3 from NextBridge Argument in Chief)



(1) As stated in Applicants' applications.
(2) EWT LP's proposed "Accelerated Schedule" is stated in its Application to have Development and Construction Phase cost implications (see Section 7.5 EWT LP Application).

17. NextBridge has also demonstrated the best track record of any applicant in executing comparable projects on time.[12]

Figure 2 (Figure 4 from NextBridge Argument in Chief)



(1) As calculated from Applicants' responses to Interrogatory 32.
(2) Includes all four projects listed in AltaLink's response.
(3) CNPI's Newfoundland Project projected to be 12 to 24 months late - 18 months was used for this chart.

[12] NextBridge Argument in Chief, paragraph 7, and Figure 2.

18. No party has challenged NextBridge's superior track record of executing projects on time.

19. While not challenging NextBridge's superior track record of achieving project schedule, some parties have nonetheless sought to challenge the reasonableness of the schedule advanced by NextBridge for this project. Included among these critics are applicants whose track record of achieving schedule are worse than NextBridge's, and who are therefore ill placed to criticize the schedule NextBridge puts forward.

20. These parties essentially criticize NextBridge for its innovative, non-linear thinking in developing a project path that parallels work streams to shorten the overall project schedule. How this "paralleling" approach to project development and execution works is addressed in NextBridge's Argument in Chief (paragraphs 118 through 121), which in turn references back to detailed information provided in NextBridge's Application[13]. None of the critics of NextBridge's East-West Tie schedule have presented analysis of this information. This information explains the planning tools and mechanisms that NextBridge will rely on to realize its project schedule. These tools and mechanisms include:

    (a) Conducting activities in parallel across work streams.

    (b) Preparing requests for proposals for external contractors in advance.

    (c) Planning for contingency route variants.

    (d) Early acquisition of materials and scheduling of equipment.

    (e) Utilizing specialized project software to manage and optimize scheduling.

    (f) Engaging all technical teams during development, to ensure and enhance constructability.

[13] NextBridge Application pages 15-16 and 103-110, Section 7.5, and Appendix 15.

21. NextBridge has prepared and evidenced a detailed risk management matrix[14], which is another tool used by NextBridge's partners to effectively manage their project schedule, and ensure that it is achieved.

22. NextBridge has provided a detailed project execution chart with more than 90 discrete tasks[15].

23. NextBridge has evidenced the familiarity of its partner organizations with energy infrastructure permitting and approvals requirements in Ontario, including environmental assessments and leaves to construct.[16]

24. Consideration of Figure 1, above, indicates that NextBridge is not an "outlier" in either its development phase or its construction phase schedule, relative to other applicants. Examination of the data presented by each applicant, as summarized in the table in Figure 3, following, validates this.

25. The table in Figure 3 is built from the schedules submitted by each of the six applicants. NextBridge identified development start, construction start and project end dates for each applicant, and has thus been able to identify the project timeline, start to finish, and divide the project into development and construction phases.

Figure 3

Applicant	Development		Construction	
	Start	End	Start	End
EWT LP	1-Aug-13	5-Jan-17	6-Jan-17	16-Nov-18
NextBridge	26-Apr-13	25-Jan-16	26-Jan-16	11-Dec-17
AltaLink	30-Apr-13	1-Nov-15	2-Nov-15	8-Nov-18
CNPI	1-Apr-13	30-Nov-17	1-Dec-17	31-Dec-19
Iccon/TransCanada	2-Jul-13	31-Dec-15	1-Jan-16	8-Oct-18
RES	6-Jun-13	31-Aug-16	1-Sep-16	20-Feb-19

[14] NextBridge Application, pages 103 -110.
[15] NextBridge Application, Appendix 15.
[16] NextBridge Application, Appendix 4.

26. A summation of this data to yield total number of days budgeted by each applicant for each of the development and construction phases is presented in Figure 4.

Figure 4

(Green highlight signifies the shortest duration.)

Applicant	Development	Construction	Development + Construction
EWT LP	1,253	679	1,932
NextBridge	1,004	685	1,689
AltaLink	915	1,102	2,017
CNPI	1,704	760	2,464
Iccon/TransCanada	912	1,011	1,923
RES	1,182	902	2,084

27. This summation confirms that NextBridge has neither the shortest development schedule, nor the shortest construction schedule. It can therefore be concluded that as compared to the other applicants NextBridge is clearly realistic in each of its development phase and its construction phase schedules. NextBridge's partners simply know how to manage a project from start to finish in such a way as to maximize overall schedule efficiency and minimize, to the extent reasonably possible, the overall project timeline.

28. That NextBridge's schedule is realistic is further validated by the recent claims by other applicants that they too can expedite their project schedules. EWT LP has indicated that it can significantly shorten its project schedule, with a guyed tower design, some project management tools and approaches similar to those engaged by NextBridge, and some luck.[17] Iccon/TransCanada indicates that an accelerated schedule is possible, again utilizing tools similar to those engaged by NextBridge.[18] RES has indicated that a 2017 in service date is achievable, at a cost and with paralleling of activities in a manner such as engaged by

[17] EWT LP Argument in Chief, pages 27-28.
[18] Iccon/TransCanada Argument in Chief, page 68.

NextBridge.[19] Despite their respective criticisms of NextBridge's schedule, these others applicants are striving to match it, with similar, though less effectively executed, strategies. NextBridge's partners simply know how to do it better, and more cost effectively.

29. NextBridge is confident in the proven ability of its partners to plan and execute projects the East-West Tie project in such a way as to ensure successful achievement of schedule, even if delay in particular elements is encountered. By paralleling schedule components, ensuring robust contingency and risk planning, and building into its schedule an appropriate amount of 'float' (additional usable time), even some slippage in individual schedule components can be tolerated without affecting the overall critical path for the project.

30. NextBridge's partners' track records, as evidenced by NextBridge's Application and interrogatory responses, and addressed in NextBridge's Argument In Chief, validate that NextBridge can be counted on to execute the East-West Tie project in a time frame as presented in its proposal.

Impact of Q3 Designation Decision

31. NextBridge's project schedule (Application Appendix 15), as developed in 2012 and filed in early January 2013, assumes a late April 2013 designation decision. Events now indicate a later designation decision.

32. EWT LP asserts in argument[20] that NextBridge did not identify the accuracy of its designation decision date assumption as a development risk. EWT LP is wrong. NextBridge specifically cited *"Regulatory Delay beyond the timelines stated"* as both a development and a construction risk.[21] NextBridge anticipated that such delays would be managed in co-operation with regulator staff.

[19] RES Argument in Chief, page 72, first full paragraph.
[20] EWT LP Argument in Chief, page 72, lines 15-17.
[21] NextBridge Application, page 110, Risk Item #28.

33. Board Staff has proposed that the Board require the designated transmitter to file an updated project schedule, which reflects the project schedule initially advanced in the transmitter's designation application, but reflects the actual designation date. NextBridge has agreed with Staff's proposal, and will file a fully updated schedule following designation, as contemplated in NextBridge's Consolidated Risk Matrix at Risk Item #28.[22]

34. In the interim, in response to assertions that its designation decision date assumption somehow undermines the credibility of its overall schedule[23], NextBridge can assure the Board that:

    (a) There is no reason why its schedule would lengthen in light of a third quarter designation date. NextBridge's project planning approach, and in particular its ability to parallel project tasks across work streams and advance preparatory tasks, precludes linear timing dependencies that might be apparent in other scheduling approaches.

    (b) If anything, a third quarter designation decision would better enable NextBridge's planning activities, as Environmental Assessment Terms of Reference (TOR) approval would most likely be obtained prior to, or earlier in, the critical spring and early summer seasons for field studies.

35. NextBridge's overall planning and construction schedule will remain intact, and should remain the shortest of the 6 applicants. A third quarter designation will result in a revised projected in-service date for NextBridge's East-West Tie line in the first half of 2018. NextBridge notes that this in-service date is consistent with the updated advice provided by the OPA in its May 9, 2013 Phase 2 Submission.

Environmental Assessment Schedule

36. Criticisms of NextBridge's schedule have focused particularly on the Environmental Assessment process schedule. This schedule is detailed graphically in Appendix 15, page 1 of NextBridge's Application.

[22] NextBridge Application, page 110.
[23] EWT LP Argument in Chief, page 29.

37. In particular, other applicants allege that NextBridge's proposal:

(a) fails to allow sufficient time for preparation of a TOR document, in that it:

(i) fails to allow for a complete annual study cycle as a basis for an approved TOR; and

(ii) fails to allow for sufficient consultation in support of preparation of a TOR;

(b) fails to allow sufficient time for preparation of an Environmental Assessment (EA) Report, in that it;

(i) fails to allow for the study and preparation time suggested in the Ministry of Environment's guidelines; and

(ii) fails to allow for sufficient consultation between the TOR approval and the EA Report submission stage of the process;

(c) fails to allow sufficient time for review and approval of a completed EA Report by the Minister of Environment.

38. The critics have either misread NextBridge's schedule, or ignored the mechanisms which NextBridge has explained it will use to expedite development work on the East-West Tie project.

39. As highlighted by a number of applicant transmitters in their Arguments in Chief, the Ontario Ministry of Environment, Environmental Assessment and Approvals Branch, has issued guidelines regarding the EA process.[24] These are guidelines only, for the information of EA proponents, and do not dictate the timelines for preparation and prosecution of any particular environmental assessment. Nonetheless, they are instructive.

40. The Ministry's guidelines indicate expected timeframes for each of the main stages of the EA process: i) preparation of the TOR; ii) Ministry approval of the TOR; iii) preparation of the EA; and iv) approval of the EA.

[24] *Code of Practice – Preparing and Reviewing Terms of Reference for Environmental Assessments in Ontario* (October, 2009).

41. NextBridge's application (Schedule 15) also provided durations for each of these four main stages of the EA process. The following table maps the Ministry's expected durations against NextBridge's:

Figure 5

Step	**NextBridge Schedule 15 Dates**	**NextBridge Duration**	**Ministry Guideline Duration**	**Variance: NextBridge to Guideline**
Preparation of TOR	Start: 26 Apr 2013 Finalized: 6 Nov 2013	28 weeks	24 – 36 weeks (6-9 months)	4 weeks longer than the low end of range
Approval of TOR	Submit: 6 Nov 2013 Approval: 31 March 2014	16 weeks	12 weeks (3 months)	4 weeks longer than anticipated by the Ministry
Preparation of EA	Start: 26 April 2013 Finalized: 15 Oct 2014	76 weeks	48 to 96 weeks (24 months)	28 weeks longer than the low end of the range
Approval of EA	Submit: 15 Oct 2014 Approval: 28 Aug 2015	45 weeks	30 weeks (7.5 months)	15 weeks longer than anticipated by the Ministry
TOTAL		**165 weeks**	**114 – 174 weeks**	**51 weeks longer than the low end of the range**

42. As can be seen from the foregoing table, NextBridge's duration for each of the 4 main EA stages is well within the Ministry's suggested duration, and in fact in each case is longer than the Ministry indicates in its guidelines.

43. Considered linearly (that is, adding the time allocated for each of the 4 main EA stages), NextBridge's overall time estimates are conservative. Linearly, NextBridge's EA schedule is 51 weeks (approximately 12 months) longer than the low end of the Ministry's expected range, and only 9 weeks (approximately 2 months) shorter than the upper boundary of that range.

44. As it will be executed, however, the duration of NextBridge's EA schedule is only 121 weeks, taken from a start date of April 26, 2013 and running through to EA approval targeted for 28 August, 2015. While still within the Ministry's expected overall range, this schedule duration is closer to the shorter end of that range.

45. As detailed in its Application, summarized in its Argument in Chief, and reiterated earlier in this Reply Argument in direct response to criticisms from others,

NextBridge's very time effective schedule is achieved by close management of concurrent development activities and the use of other advance preparation and schedule management tools and mechanisms. This approach has been successfully used by NextBridge partners, and will be successfully used by NextBridge for the East-West Tie project.

46. For example, as indicated in the schedule filed with NextBridge's Application (Appendix 15):

    (a) Stage 1 (desktop) archeological studies and socio-economic studies are commenced immediately upon designation, in parallel to preparation of the TOR.

    (b) Natural heritage field studies and stage 2 archeological studies are commenced thereafter, still parallel to the TOR preparation.

    (c) This allows work on the EA submission to proceed while awaiting TOR approval, though finalization of the EA does not occur until about 8 months (32 weeks) following approval of the TOR.

47. In proposing to begin field studies prior to finalization of its TOR, NextBridge was criticized as taking a risk that its approved TOR would require studies, or study approaches, not anticipated when studies were begun.

48. What critics fail to acknowledge is that there are 32 weeks (approximately 7.5 months) in NextBridge's as filed development schedule between TOR approval and EA submission. NextBridge is confident that it can supplement studies, if need be, following receipt of TOR approval and in advance of submission of its EA for review.

49. RES appears to be taking a similar approach in proposing to overlap its EA studies with the end of its TOR process.[25]

50. In any event, as noted at paragraph 34 above, NextBridge anticipates that adjustment of its development schedule upon designation to incorporate the

[25] RES Argument in Chief, page 73, top paragraph.

designation decision date will, if anything, better align EA field study work with TOR approval timing.

51. As further contingency, NextBridge's as filed schedule includes a further 45 weeks (approximately 11 months) for consideration and approval of its EA once submitted. To the extent that there is anything missing from that EA submission, even after the 8 months assumed between approval of its TOR and submission of its EA reports, which submission in turn follows a 5 week scheduling allowance for review by the Ministry (and other stakeholders) of the draft EA, there is sufficient time to address any such gap.

52. NextBridge was also criticized for failing to allow for sufficient time for consultation to inform its TOR submission and its EA submission. EWT LP argues that NextBridge's consultation plan is inadequate, claiming it does not solicit sufficiently broad input on the project or provide enough opportunities through open houses.[26]

53. EWT LP's argument implicitly concedes, however, that NextBridge does in fact satisfy the requirements of the consultation process. EWT derisively states that NextBridge's two rounds of consultation "only just meet the statutory minimum" and asserts that other applicants will provide up to five rounds. In fact, NextBridge has designed and evidenced a stakeholder and community consultation plan that gathers stakeholder input early, often and with openness to allow for changes to the project design as needed to minimize adverse impacts. While the minimum consultation requirements were flagged in NextBridge's timelines, the final consultation program will be shaped with the input of those to be consulted, as part of the process of developing the TOR, as is most appropriate.

[26] EWT LP Argument at page 77.

54. NextBridge has already contacted the following intervenors in this process:[27]

(a) Building Owners and Managers Association Toronto

(b) Canadian Manufacturers and Exporters

(c) City of Thunder Bay

(d) Northwestern Ontario Associated Chambers of Commerce and Northwestern Ontario Municipal Association

(e) Consumers Council of Canada

(f) Energy Probe Research Foundation

(g) Lake Superior Action-Research-Conservation

(h) Bay Niche Conservancy

(i) Municipality of Wawa and the Algoma Coalition

(j) Northwatch

(k) Power Workers' Union

(l) School Energy Coalition

(m) Association of Major Power Consumers of Ontario (AMPCO was contacted but indicated that it had withdrawn as an intervenor in this matter.)

55. NextBridge's objectives for these contacts was to introduce itself, provide a status report on its work on the project, and better understand key areas of interest or concern. NextBridge has already considered and incorporated, and will continue to consider and incorporate, feedback from the resulting meetings in its project development and execution.[28]

56. While NextBridge's EA schedule on page 1 of Appendix 15 of NextBridge's Application includes two specific line items for consultation activities [PROVEA1060 and PROVEA110], NextBridge's detailed Landowner, Municipal

[27] NextBridge Application, page 161.
[28] NextBridge Application, pages 161 and 162.

and Community Consultation Plan[29] details consultations that commence in June, 2013 and continue throughout execution of the project.

57. NextBridge has also provided a detailed issues and mitigation matrix for Landowner, Municipal and Community Consultation.[30] This matrix refers expressly to the various stakeholders that NextBridge plans discussions with in order to validate its expectations of their concerns, and address those concerns.

58. All of this community and stakeholder consultation activity is premised on NextBridge's principles of *"timely, honest and open communication with stakeholders and communities that may be affected by the project"*.[31]

59. As evidenced, NextBridge has already commenced stakeholder consultations, and its detailed plan is to continue to work with an array of stakeholders in an open, honest and bilateral way. Any suggestions otherwise ignore NextBridge's evidence in this area and are misguided.

Leave to Construct Schedule

60. NextBridge has been criticized for allowing insufficient time for review and approval of its LTC application.

61. As reflected on page 2 of Appendix 15 of NextBridge's Application, NextBridge's plan is to submit its LTC Application on October 15, 2014, with a decision anticipated by early April, 2015. NextBridge has allowed 25 weeks, or approximately 6 months, for the LTC process.

62. More specifically, NextBridge's schedule for the LTC process allows for 176 calendar days to complete the LTC. This is 34 days shorter than the 210 day timeframe suggested on the Board's website for an oral LTC process. This is an admittedly low side LTC schedule.

[29] NextBridge Application, pages 131-135.
[30] NextBridge Application, Appendix 19.
[31] NextBridge Application, page 132, top.

63. However, in keeping with NextBridge's general approach to concurrent task project execution, project steps that follow the LTC in NextBridge's Appendix 15 schedule can be condensed. Given that there are approximately 67 weeks (approximately 15.6 months) in NextBridge's as filed schedule from the date of its LTC filing until the "Release to Construct" milestone at 26 January 2016, in excess of twice the OEB's 210 day guidelines for LTC approval, NextBridge's schedule allows sufficient "slack" to essentially mitigate the risk of a protracted LTC process, even if expropriation activities are required prior to start of construction.

64. The Bruce to Milton LTC took approximately 18 months, though it was subject to interruption arising from issues raised by numerous private landowners, and included debate regarding need. In contrast, the East-West Tie route traverses primarily crown land, and "need" will be established by the provincial electricity planning authority and the Ontario government's energy plan.

65. While not directly comparable to the East-West Tie project LTC, NextBridge has been informed by considering recent OEB LTC applications for significant natural gas facilities, as summarized in the table below. Approval times for these applications ranged from 4 months to 7 months. The last of these projects – the Red Lake project – involves 104 kilometers of pipeline in North West Ontario. The LTC for this project took 5.5 months.

Figure 6

Application	Description	Application	Decision date	Months
EB-2006-0305	**Portlands Energy Centre Pipelines:** Approximately 6.5 kilometers of NPS 36 XHP pipeline parallel to a portion of Enbridge's existing Don Valley Line, and approximately 2.9 kilometers of NPS 20 XHP pipeline that would interconnect the Don Valley Line at Enbridge's station B regulator station and end at Portlands.	December 7, 2006	June 1, 2007	6 months
EB-2009-0187	**York Energy Centre Pipeline:** 16.7 kilometers of NPS 16 Extra High Pressure steel pipeline in York Region	September 3, 2009	April 5, 2010	7 months
EB-2012-0099	**Ottawa reinforcement:** 18.8 kilometers NPS 24 Extra High Pressure steel pipeline to reinforce the existing natural gas delivery system in the Ottawa area.	June 28, 2012	November 29, 2012	5 months
EB-2012-0430	**Owen Sound replacement:** 25 kilometers of NPS 12 of hydrocarbon pipeline to replace a portion of the existing Owen Sound Pipeline located in the Region of Waterloo.	November 13, 2012	March 21, 2013	4 months
EB-2011-0040, 0041, 0042	**Red Lake project:** The first phase is approximately 58 km in length consisting of 8 inch and 4 inch diameter pipelines in the Red lake area. Phase 2 is approximately 46 km in length.	February 8, 2011	July 25, 2011	5.5 months

66. Ongoing stakeholder consultations will also facilitate an efficient LTC process. In addition to its plan to consult with stakeholders and Board staff specifically in respect of its proposed performance based ratemaking approach[32], NextBridge refers above (paragraphs 53 to 59) to the evidence regarding its broader and ongoing stakeholder consultations. These consultations include First Nations and Métis communities, landowners, municipalities, ratepayer, environmental and other public interest groups. NextBridge initiated these dialogues before filing of its designation Application, and will continue them throughout the project, ensuring early and proactive identification and response to issues of concern.

[32] NextBridge Application, pages 72 to 74.

PROPOSED DESIGN

The Guyed-Y Advantage

67. Other applicants have argued that NextBridge's proposed transmission towers are unproven and unsuitable for the East West Tie.[33] Again, NextBridge is criticized for being innovative. These arguments are based on misrepresentations or a lack of understanding.

68. NextBridge has provided evidence of the ongoing use of Guyed tower structures in 7 locations in British Columbia, Manitoba and Quebec, in terrain and climate substantially similar to that of Northern Ontario.[34]

69. RES has listed in its Argument in Chief reasons why it alleges that Guyed transmission towers are not suitable for the East West Tie.[35] The Board chose not to pursue RES' suggested questions on this topic. NextBridge believes that RES' inferences are inaccurate and misleading. As evidenced, guyed tower structures are in use in many applications, in many jurisdictions (including Ontario), safely and effectively, including in a project that RES' partner, Mid-American, owns and operates.[36]

70. NextBridge and EWT LP have both presented evidence of the advantages of guyed tower structures, and their long-time use in Ontario.[37] The advantages are:

    (a) Lower cost.

    (b) Lighter structures and easier construction.

    (c) Less steel.

    (d) Simpler foundations.

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[33] EWT Argument in Chief, pages 66 to 68, AltaLink Argument in Chief, page 122.
[34] NextBridge Response to Board Interrogatory 15 to all Applicants; EWT LP Argument in Chief, page 2, middle.
[35] RES Argument in Chief, pages 36-37.
[36] RES Argument in Chief, page 87
[37] EWT LP Argument in Chief, page 65; NextBridge Application, pages 9 and 92; NextBridge Response to Board Interrogatory 15 to all Applicants.

(e) Inherent resistance to cascade failures.

(f) Better lightning performance.

(g) Economical design that utilizes less steel compared to conventional self-support lattice designs. Fewer components equates to reduced assembly time and lighter weight.

(h) Minimizing the size of construction equipment and associated access roads due to lighter weight.

(i) Facilitation of helicopter construction, and an accelerated construction schedule resulting from fewer required helicopter "lifts" (a latticed Guyed Y structure can be lifted in a single pick).

(j) Elimination of the need for uneven legs customized for each location in rugged terrain.

(k) Flexibility with field shifts of tower siting during construction, reducing costs and avoiding construction delays. Leg lengths associated with conventional box lattice towers have to be modified if shifted to locations with different side slope. A Guyed-Y structure only has to adjust the guy wire lengths.

(l) Reduced foundation requirement compared to a self-supported structure, reducing the size of equipment required for installation and reducing the access and work pad requirements for foundation installations.

(m) Minimization of environmental impacts with smaller foundation foot prints.

71. RES goes on to explain that one of its partners, MidAmerican, has experience with guyed transmission structures in the United States[38]. It thus appears that, in MidAmerican's view at least, guyed transmission structures are perfectly viable and can be constructed and maintained in a way that makes them safe and suitable. Another of the applicants, Iccon (through its affiliate Isolux) references guyed transmission structures for its own a double circuit line in Jauru, Brazil[39], also presumably a safe and suitable transmission line (albeit built in a completely different climate and terrain from that for the East-West Tie).

[38] RES Argument in Chief, page 87.
[39] Iccon/TransCanada Argument in Chief, paragraph 62.

72. RES asserts, however: i) MidAmerican's view that such structures are not suitable for use in areas characterized by hilly, steep terrain that would necessitate a significant amount of vertical traversing during construction; and ii) guyed transmission structures have not been used in North America for a double circuit transmission line.

73. The examples of the use of guyed transmission tower structures illustrated in NextBridge Response to Interrogatory 15 to all Applicants include examples of use of such structures in areas characterized by rough terrain in British Columbia, Manitoba and Quebec. As explained in the body of that interrogatory response, it is precisely in such terrain that guyed towers provide the advantage of reducing foundation requirements and reducing structure weight, which in turn minimizes the equipment required and mitigates the impact of poor access.

74. NextBridge proposes the innovation of using Guyed-Y towers for a double circuit transmission line. That proposed innovation has been well researched and well informed, and will be subject to further testing, all as more fully addressed below.

Engineering Feasibility of the Guyed-Y Tower Design

75. While EWT LP supports the use of guyed transmission towers generally, it criticizes the application of Guyed-Y towers for a double circuit transmission line. In so doing, EWT LP refers to and relies on a preliminary section drawing of a Guyed-Y tower included in the Burns & McDonnell technical study produced for NextBridge and filed as Appendix 13 to NextBridge's Application. EWT LP asserts, based on this preliminary drawing (one of several included in the Burns & McDonnell study), that the "head" of NextBridge's Guyed-Y tower will be too heavy to be supported by the shaft of the tower as supplemented by the wires, connected as indicated in the drawing.[40]

[40] EWT LP Argument in Chief, page 66, lines 7 through 17.

76. EWT LP uses the term *"evaluation"* in reference to its consideration of NextBridge's Guyed-Y structure. NextBridge assumes EWT LP has used this term in its colloquial sense, since no evaluation or study was actually filed, or referred to, by EWT LP. EWT LP also provides a series of little sketches to illustrate the head of a Guyed-Y tower structure essentially waving in the wind.

77. In contrast to the superficial *"evaluation"* by EWT LP of adaptation of Guyed-Y structures for use in double circuit applications, NextBridge commissioned an assessment by Burns & McDonnell[41] to, among other things, study its proposed use of Guyed-Y structures (as specified in figures 2, 3 and 4 of the study) for its East-West Tie Recommended Plan. The resulting analysis confirmed that the Guyed-Y structures are cost-effective and well suited to the project, taking into consideration factors such as structural loading, land and clearing, structure material and labour requirements, climate and terrain, including installation methodology, operations and maintenance.

78. As specified in their report, the seven tower types illustrated by Burns & McDonnell for application to the East-West Tie project were modelled based on the criteria and design standards specified in the Burns & McDonnell report, which criteria and design standards include: i) criteria specified in Appendix A to the OEB's Minimum Design Criteria for the Reference Option; ii) additional climatic load and insulator swing (galloping) standards used by NextEra engineering best practices; iii) Canadian Standards Association (CSA) requirements for electrical infrastructure; and iv) assumptions regarding two basic foundation conditions (rock and all-soils) as specified in the report.

79. The tower type drawings presented include; i) conventional 4 leg lattice towers; ii) single leg Guyed-Y lattice towers; and iii) a double leg H-Frame tower.

80. The purpose of Burns & McDonnell's work was to evaluate design alternatives for the East-West Tie line project, as indicated in the December 18, 2012 letter from Jason McCreary, P. Eng. of Burns & McDonnell included with the report in

[41] NextBridge Argument in Chief, paragraph 57; NextBridge Application, Appendix 13.

Appendix 13 of NextBridge's Application. Mr. McReary is an Ontario certified engineer, and his letter certifies that all design calculations and drawings were completed and reviewed under his supervision.

81. While only baldly asserted, EWT LP has raised particular criticism of the tower design recommended by NextBridge. Though NextBridge filed preliminary engineering support for its proposed tower design, given the specificity of EWT LP's criticism, which is unfounded and thus could not have been foreseen when NextBridge was preparing its Application, NextBridge has obtained and attaches an affidavit from an eminently qualified structural engineer working with NextBridge on this project. The affidavit replies to the specific criticisms raised, without foundation or apparent analysis, by EWT LP.

82. The affiant, Dr. Jerry Wong, is a licensed Professional Engineer qualified and registered in the State of Florida, USA. From 1999 to 2010 Dr. Wong was Chair of the Structural Engineering Institute's task committee which prepared the American Society of Civil Engineers (ASCE) Manual No. 74: Guidelines for Electrical Transmission Line Structure Loading—Third Edition. This manual is cited in NextBridge Response to Board Interrogatory 4 to NextBridge, and is also referenced in the OEB's Minimum Design Criteria for the Reference Option of the E-W Tie Line, listed as one of the design codes pertinent to the design of this line. The ASCE Manual 74 provides the basis for design of transmission lines and structures. For example, Manual 74 provides guidelines for: i) selection of wind and ice loads; ii) failure containment analysis; iii) safety or load factors; iv) reliability criteria (i.e. 50 year versus 100 year events); and v) methods of mitigation to avoid cascade failure. Dr. Wong has been engaged on NextBridge's work developing the Guyed-Y towers proposed for the East-West Tie project since March 19, 2012.

83. As explained in the affidavit, based on the work done by Burns & McDonnell and NextBridge's own work, and in particular on the derivation of preliminary design drawings for Guyed-Y double circuit towers meeting the design criteria specified

in the Burns & McDonnell report, NextBridge identified as its recommended design for the East-West Tie a Guyed-Y latticed tower structure. The reasons for adopting a guyed tower structure as the recommended design are as reiterated at paragraph 70 above.

84. Burns & McDonnell's preliminary tower designs were performed through computer modeling. In particular, Burns & McDonnell modeled stresses, under the OEB specified design criteria as set out in their report, at the foundation and at all components of super-structure for the Guyed-Y tower alternatives illustrated in their report. Burns & McDonnell concluded that the Guyed-Y double circuit tower configurations illustrated will work under the design criteria modeled, and are more structurally and cost efficient than the conventional (4 leg) latticed structures also rendered and modeled.

85. Burns & McDonnell's preliminary modeling was based on a tubular steel Guyed-Y, rather than a latticed Guyed-Y, tower structure. Rendering a tubular structure for preliminary modeling is simpler and quicker than detailed design and rendering of a latticed structure. Tubular steel structure modeling is much less involved and time consuming than full latticed structure modeling, though the results of the tubular steel structure modeling validate, on a preliminary basis, the ability to configure the tower to meet design criteria using a given amount of steel. Validation of the potential applicability of a Guyed-Y structure was thus obtained for the purposes of NextBridge's Application, and in particular to support specification by NextBridge of its Recommended Plan for the line.

86. While tubular steel Guyed-Y towers may be used[42], the next step in development of the design for the project will be to design, model, and ultimately physically test lattice structures for Guyed-Y towers, which would use less steel and provide the most cost effective solution for the project.[43] (The costing of NextBridge's Recommended Plan as included in its Application was done on the basis of such lattice structures.)

[42] NextBridge Application, page 90, note 3.
[43] NextBridge Application, pages 88-90.

87. The double circuit Guyed-Y design has also been vetted with independent tower manufacturers Thomas & Betts, SAE Towers, and New Falcon Steel (Falcon Steel/Mitas). All have confirmed that Guyed-Y towers to support a double circuit line can be constructed and installed.

88. EWT LP has raised issues regarding the structural stability of the heads of the Guyed-Y structures, and the potential that they would fail at the points at which the upper portions of the Y are connected to the base element of the tower. EWT LP's sketches have no apparent basis in any modicum of structural analysis.

89. As confirmed by Dr. Wong, NextBridge's studies have shown that structural performance can be drastically improved by altering the guying scheme without changing basic Guyed-Y configuration. The studies include design criteria specified by OEB as well as special considerations such as line cascade events.

90. Dr. Wong also confirms that NextBridge's proposed guying scheme does not impose additional land-use impact (contrary to one of RES' assertions in argument).

91. NextBridge agrees with the evidence presented in Dr. Wong's affidavit, and is confident that the specifications for connection of the Y-arms to the mast of the tower, and the placement of the guy attachment on the tower, can be resolved in such a way as to result in a Guyed-Y tower structure well suited to application for the double circuit East-West Tie line project.

92. EWT LP also suggests that NextBridge's Response to Board Interrogatory 4 to NextBridge indirectly concedes the vulnerability to failure of its Guyed-Y tower design.[44] Such concession, EWT LP asserts, is apparent in that NextBridge includes in its response an allowance for longitudinal failure containment structures spaced every 16 km.

[44] EWT LP Argument in Chief, page 67, first paragraph.

93. No such concession was made in NextBridge's Response to Board Interrogatory 4 to NextBridge. The subject interrogatory response expressly states, with reference to ASCE Manual 74 (section 3.3.2.1);

> *"…longitudinally Guyed-Y structures…are capable of resisting longitudinal loads and providing failure containment at a relatively low cost.*
>
> *NextBridge's proposed Guyed-Y structure will have 4 Guys with a longitudinal offset that inherently provide support of longitudinal loads."*

94. In respect of the dead end structures, NextBridge expressly explains in its Response to Board Interrogatory 4 to NextBridge that:

> *NextBridge included the cost of these dead ends as a way to capture the cost of whichever anti-cascade strategy proved to be most effective.*

95. That NextBridge included in its preliminary construction cost estimate an allowance for costs to achieve failure containment, and estimated those costs on the basis of spaced dead-end structures, is merely a prudent approach to costing the line at this preliminary stage. To suggest that this prudence indicates a lack of confidence in the Guyed-Y tower structure proposal is an unwarranted distortion of NextBridge's express evidence to the contrary.

96. RES in its Argument in Chief in respect of NextBridge's Guyed-Y proposal alleges that the Guyed structure *"will materially vary the electrical performance of the [line], in terms of reactance, resistance, line susceptance and line charging, relative to the IESO feasibility study for the Reference Case"*.[45] RES does not provide any electrical or other analysis to substantiate this assertion. The point of RES's criticism is that an IESO feasibility study is required to support the electrical performance of the proposed line, and in the result NextBridge's application is non-compliant. RES is wrong.

97. NextBridge has provided a.c. resistance (R), reactance (X) and susceptance (B) data associated with its Recommended Plan in its Response to Board

[45] RES Argument in Chief, page 98, last paragraph.

Interrogatory 22 to all Applicants. The IESO suggested this interrogatory, which the Board saw fit to issue to all transmitters. The calculations reported in this interrogatory response show that NextBridge's Recommended Plan Guyed-Y structure configuration slightly improves line impedance by reducing line reactance by approximately 5%, while increasing susceptance by less than 4%. For comparison, alternative alignments that avoid Pukaskwa Park result in an increase in all electrical line parameters by 10% or more, regardless of structure configuration.

98. It is reasonable to assume that if the IESO had a particular concern about NextBridge's Guyed-Y Recommended Plan following its review of this interrogatory response, that concern would have been reflected in the IESO's May 9th Submissions. No concern has been raised.

99. As reflected in Dr. Wong's affidavit, the salient criteria for feasibility review for the East-West Tie line is the conductor configuration. NextBridge's design does not anticipate any material change in conductor configuration (the placement and spacing of the conductors) using a single leg Guyed-Y steel lattice tower as opposed to a 4 leg steel lattice tower. The choice of a supporting structure will not materially impact the electrical performance of the line, and additional feasibility study should not be required (though NextBridge would be happy to obtain one if the OEB and/or the IESO are of the view that one should be obtained).

100. NextBridge also notes that it did obtain an IESO feasibility study, which is included as Appendix 12 to its Application, though for a different reason (to validate applicability of a high voltage direct current solution to for the East-West Tie project, though such a proposal was not, in the end, pursued). NextBridge notes this study in response to RES' mistaken allegation that NextBridge's Application is non-compliant. Had a feasibility study been required for NextBridge's Recommended Plan one would have been obtained. As detailed above, NextBridge is of the view that such study is not required (though, again, it

has no objection to obtaining one if either the Board or the IESO has any residual concerns).

Guyed-Y: Innovation for Ontario's Transmission System

101. Just as single circuit H Frames were the initial foundation from which double circuit H Frames were developed, the double circuit Guyed-Y towers proposed by NextBridge will leverage single circuit guyed tower designs and installations from the last 50 plus years.

102. NextBridge's Recommended Plan will meet line maintenance criteria along with other clearances and loadings specified for the project. It will provide savings to Ontario ratepayers. It will be just as reliable as the existing transmission infrastructure, or more so.

103. At the same time, as warranted by a prudent approach to project planning, NextBridge's pre-development work has included a second basic type of tower design; a conventional four leg lattice tower.[46]

104. NextBridge's Reference Plan design - using conventional four leg lattice structures – is the second lowest cost proposal advanced by any of the applicants (second only to NextBridge's Recommended Plan Guyed-Y design).[47]

105. NextBridge is fully prepared to build its conventional Reference Plan design if ultimately so approved by the Board. However, subject to validation through final testing and full review during the leave to construct application, NextBridge believes that its innovative Recommended Plan would be the better option to realize the Board's objectives in seeking to facilitate new entry and realize attendant advantages for Ontario's electricity ratepayers. The advantages of

[46] Costing information on the alternative self-supporting tower design has been provided in NextBridge's Application. See for example; page 117/Figure 22, page 118/Figure 23. See also NextBridge Argument in Chief, Figure 1.
[47] NextBridge Argument in Chief, page 2, Figure 1.

NextBridge's Recommended Plan include innovation through use of a simple yet reliable and cost effective Guyed-Y transmission tower.

106. NextBridge will continue development of the recommended tower design once designated, will carry out testing, as specified in its Application[48] and as would be required for any tower structure, conventional or otherwise[49]. NextBridge anticipates bringing a Guyed-Y design forward during the leave to construct application for full review against a conventional 4 leg tower structure, and ultimately for endorsement by the OEB.

[48] NextBridge Application, page 88.
[49] NextBridge Response to Board Interrogatory 16 to all Applicants.

PLAN FOR FIRST NATION AND MÉTIS CONSULTATION AND PARTICIPATION

Consultation

107. In respect of consultation with First Nations and Métis communities, NextBridge has been criticized for a lack of resources and experience.[50]

108. In fact, the evidence on the topic of NextBridge's resources and commitment to consultation with First Nations and Métis communities is as follows:

(a) NextBridge has appointed an Aboriginal Advisory Board (AAB) led by three members of the Ontario aboriginal community who are well regarded, highly qualified and experienced in the different, and immediately relevant disciplines of:

(i) Energy: Ed Chilton has directly relevant experience building and managing Five Nations Energy project and subsequent consulting assignments.[51]

(ii) Governance: Judith Moses: knowledge of governance issues and models relevant to developing appropriate, culturally sensitive structures for participation by First Nations and Métis peoples, distinctly and together.[52]

(iii) Métis heritage: Senator Gerry Bedford: broad knowledge of the history, claims, perspectives and people of the Métis Nation of Ontario.[53]

(b) Each of NextBridge's partner organizations has senior individual experienced in aboriginal matters contributing to the AAB: [54]

(i) Brian Hay, Director of Aboriginal Relations for NextEra Energy Canada ULC, who as Director of First Nation and Métis Relations of the Ontario Power Authority (OPA) managed initial outreach for the OPA to Ontario's First Nation and Métis communities.

(ii) Kath Hammond, Vice President Legal at Borealis (who while at Ontario Power Generation (OPG) led the negotiation of OPG's first ever commercial partnership agreement with a First Nation).

[50] EWT LP Argument in Chief, page 81.
[51] NextBridge Application, Appendix 3, page 7.
[52] NextBridge Application, Appendix 3, page 6.
[53] NextBridge Application, Appendix 3, page 8.
[54] NextBridge Application, page 22 and page 31.

(iii) Teresa Homik, Manager of Aboriginal Affairs at Enbridge, who prior to joining Enbridge practiced law with a focus on Treaty and Aboriginal Rights and land claims issues for First Nation, Government (INAC and Indian Claims Commission) and industry clients for 17 years.

(c) NextBridge has also established, as one of 8 defined technical project teams, a First Nation and Métis Affairs team, with Brian Hay as team lead.[55] As lead of this team, Mr. Hay will work in Toronto and at the project site in Northern Ontario, and will have authority to utilize support staff from across the NextBridge partner organizations on a full or part-time basis as needed.

(d) NextBridge has also identified a suite of well-regarded and experienced consultants, each of which has identified an interest in working with NextBridge upon designation, as identified in response to Board Interrogatory 5 to all Applicants.

> EWT LP has criticized NextBridge[56] for including in its Response to Board Interrogatory 5 to all Applicants this list of consultants. NextBridge responded to the Board with the best information that it had at the time. The Board's interrogatories 5 through 14 to all applicants asked for detailed information related to the applicants' plans and positions on a number of aboriginal matters. NextBridge assumed in providing response to these interrogatories that the Board expected applicants to be responsive and, considering the nature of the questions, anticipated that such responses might contain information not initially clearly or completely advanced in the applications.

(e) NextBridge's aboriginal affairs project budget included $7.25 million in its development and construction budgets dedicated specifically to First Nation and Métis consultation.[57] Review of Figure 2 on page 18 of Iccon/TransCanada's Argument in Chief illustrates that NextBridge has in fact committed more financial resources to aboriginal engagement than most of the other applicants.

109. In light of this express and evidenced commitment of resources by NextBridge to First Nations and Métis consultation, it is not clear how NextBridge's critics developed the notion that NextBridge has insufficient resources to effectively engage in consultation activities. What is clear is that those critics are wrong.

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[55] NextBridge Application, pages 22 and 26; NextBridge Response to Board Interrogatory 5 to all Applicants.
[56] EWT LP Argument in Chief, pages 81 to 82.
[57] NextBridge Response to Board Interrogatory 26 to all Applicants, *"First Nation and Métis consultation"* line items.

110. Similarly misplaced is the criticism that the members of NextBridge's AAB lack relevant experience[58]. That direct, relevant and significant experience is summarized above, where it is referenced back to the evidence filed by NextBridge in this proceeding.

111. EWT LP seems to be asserting in its Argument in Chief that only one example of successful aboriginal engagement has been offered by NextBridge. [59] In fact, NextBridge has also detailed in its application six distinct projects by its partners as representative of its First Nation and Métis engagement experience[60], three of which projects are in Ontario, two in Alberta and one in California.

112. EWT LP also asserts that aboriginal engagement experience of the NextBridge partners would not be *"accessible"* to NextBridge in light of affiliate relationships rules.[61] This is a puzzling assertion. The OEB's affiliate relationship rules preclude the sharing of utility customer information with affiliates, and the sharing of utility staff with access to utility customer information with affiliates. EWT LP does not address how these restrictions could prevent NextBridge accessing aboriginal engagement experience of its partners. This assertion by EWT LP appears to be a "red herring".

113. Pic River, an EWT LP partner through BLP LP, criticizes NextBridge for failing to take *"a proactive approach to consultation"*.

114. NextBridge has explained in its Application, its interrogatory responses, and its Argument in Chief that it will be informed as to the specifics of both consultation and participation by discussions with each aboriginal community, once engaged.[62] Mr. Byron LeClair, speaking for Pic River in this proceeding, has also highlighted the importance of maintaining adaptability in consultation and

[58] RES Argument, page 99.
[59] EWT LP Argument in Chief, page 82.
[60] NextBridge Application, pages 155 through 159.
[61] EWT LP Argument in Chief, page 82.
[62] NextBridge Argument in Chief, paragraphs 159 and 160. See also NextBridge Response to Board Interrogatories 8, 9 and 12 to all Applicants and NextBridge Application, section 3.2 generally and page 40 first two paragraphs in particular.

participation plans so that these plans can be shaped by the communities engaged.[63] The Métis Nation of Ontario (MNO) takes a similar view.[64]

115. NextBridge has also explained that none of the most directly affected First Nations communities have, to date, responded to NextBridge's request for their community specific engagement protocols.[65] The central importance of the community specific engagement protocols as a basis for, and to inform, discussions with aboriginal communities is acknowledged by other parties.[66]

116. Mr. LeClair also confirmed that the six BLP First Nations consider their arrangement with Hydro One and GLPT to be "exclusive"[67], so it is not surprising that there has been no response to NextBridge's overtures. To then criticize others, including NextBridge, for not having advanced discussions to date is inappropriate. The decision of Pic River and the other BLP LP partners to engage in an exclusive commercial arrangement with EWT LP is precisely what has precluded EWT LP's competitors from the "proaction" that they are, regrettably, being criticized for.

117. With all due respect to Mr. LeClair, his assertion that *"every transmitter responding to this designation process had the very same opportunity to reach out to the Aboriginal communities and establish the same forms of partnership represented by EWT LP"*[68] is simply untrue, as he himself has evidenced.

118. The Aboriginal relationships with Hydro One and GLPT were formulated decades ago when, as pointed out by NextBridge in its Argument in Chief, Hydro One and GLPT were the only major transmitters in the province, by design, and supported by monopoly franchises and funding. This incumbent advantage should not be determinative in this proceeding.

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[63] May 2, 2013 Oral Sessions transcripts, page 106, lines 6 through 13.
[64] MNO Argument, page 22, bottom.
[65] NextBridge Argument in Chief, paragraph 170; NextBridge Response to Board Interrogatory 11 to NextBridge.
[66] May 2, 103 Oral Sessions transcript of PIC River's presentation, page 106, lines 14 through 19 and 107, lines 16 through 21; Iccon/TransCanada Argument in Chief, paragraph 53.
[67] May 2, 2013 Oral Sessions transcript, page 111, line 26 through page 112, line 12.
[68] May 2, 2013 Oral Sessions transcripts, page 111, lines 17 to 20.

119. NextBridge has not, however, been idle in the face of these current constraints. As explained in its Application, NextBridge has been preparing for aboriginal engagement.[69]

120. Pending the ability to so engage with affected First Nations communities, NextBridge has been informed in its consultation and participation planning by the valuable input of its AAB. The input of NextBridge's AAB provided to date is detailed in NextBridge's Application[70], and includes: i) providing independent and objective insight and advice on Ontario aboriginal interests and participation options; ii) communication and knowledge sharing advice; iii) advising on specific potentially affected communities; iv) providing commercial, cultural and educational relationship perspectives; v) reviewing NextBridge First Nations and Métis policies and practices and providing constructive challenges to facilitate further development of those policies.

121. The Power Workers Union (PWU) has characterized NextBridge's description of anticipated issues and mitigation strategy with respect to an aboriginal consultation plan as "thorough".[71]

122. Representatives for the Nishnawbe Aski Nation (NAN) speaking at the Board's May 3, 2013 oral sessions in Thunder Bay offered helpful reference to principles for engagement with aboriginal communities that they felt were appropriate. These principles have been previously documented by the OPA, and as cited by NAN[72] include:

(a) Early and continued engagement.

(b) Provision of timely and appropriate information, to enable community consideration of their interests in the project.

(c) Opportunity to identify issues and contribute to identifying potential effects of the project.

[69] NextBridge Application, page 44, re *"Stage 1: Prior to Designation"*.
[70] NextBridge Application, pages 24 and 25.
[71] PWU Argument, paragraph 110.
[72] May 3, 2013 Oral Sessions transcript, pages 34 through 36.

(d) Provision of response to the concerns raised, and indication of how information received had been considered and, where appropriate, taken into account.

(e) Dissemination of the results of the consultation process.

123. Review of NextBridge's published consultation principles illustrates a mirroring of these principles that NAN has advocated as most appropriate. In particular, NextBridge's Application includes the following commitments regarding its approach to aboriginal engagement:

(a) Early and continued engagement.[73]

(b) Sharing of key project information with First Nation and Métis communities, including a Project overview, route options, anticipated timelines, maps and transmission line operational information.[74] A variety of communications methods will be used, emphasizing communication and transparency.[75]

(c) Working with affected communities to determine project-specific impacts.[76]

(d) Working with impacted communities to develop strategies and actions to proactively address impacts identified.[77]

(e) Maintaining ongoing, two way communication throughout the project lifecycle, to determine operational impacts and concerns and work to address them.[78]

Participation

124. NextBridge's aboriginal participation proposal has been criticized for being *"vague and non-committal"*[79], and for failing to specify equity participation[80].

[73] NextBridge Application. See in particular page 151, last paragraph and page 152, under the table heading "Phase 1".
[74] NextBridge Application, page 152, under *"Information Gathering and Sharing"* heading.
[75] NextBridge Application, page 151, second paragraph.
[76] NextBridge Application, page 153, first full bullet.
[77] NextBridge Application, page 153, first full bullet.
[78] NextBridge Application, page 153, under heading *"Phase 5: Operations"*.
[79] AltaLink Argument in Chief, paragraph 120.

125. NextBridge has stated that equity participation is among the various participation options that it will consider and discuss with the affected communities.[81]

126. Nothing in the government's policy for aboriginal participation in energy infrastructure in Ontario requires equity participation *per se*.[82]

127. Nevertheless, some entities have construed this process as an "auction" between applicants who, regardless of other factors, try to impress by offering the highest level of equity participation, while considering little, if at all, other forms of economic participation. A race to offer the appearance of the greatest level of equity participation to Aboriginal interests has distorted this proceeding.

128. NextBridge agrees that aboriginal participation in Ontario transmission projects is important, and consistent with Ontario government policy on energy infrastructure in the province.

129. However, NextBridge also believes that the appropriate form of participation is but one issue in the development of this transmission project. Appropriate aboriginal participation (in the broad sense in which the Ontario government in its *Long Term Energy Plan* and the OEB have used that term) is highly important, but the "auction" approach should not be a determining factor for designation of the most qualified transmitter with the best plan. Bids for the highest levels of aboriginal project equity - particularly when these were proposed without consultations with all affected Aboriginal interests - should not trump other factors more directly related to sound development of cost effective, innovative, reliable and timely transmission infrastructure, supported by a robust plan for aboriginal consultation and participation. The percentage level of equity participation committed to by designation applicants should not be the determining factor in

[80] CNPI Argument in Chief, page 17; RES Argument in Chief, page 99; Pic River Argument, pages 32 to 33; RES Argument in Chief at page 99; AltaLink Argument in Chief at page 39; SEC Argument section 5.2.4.
[81] NextBridge Application, pages 41 (bottom) to 42 (top) and Appendix 5; NextBridge Responses to Board Interrogatories 6 and 9 to all Applicants.
[82] May 2, 103 Oral Sessions transcripts, page 114, lines 7 through 17; Phase 1 Decision, page 8.

choosing the most qualified entity with the most cost effective proposal to develop the East-West Tie.

130. In respect of the appropriate definition of a participation plan more generally, as detailed in both its Application and its Argument in Chief[83], and as in the case of consultation as responded to above, NextBridge has purposefully avoided being prescriptive in respect of these matters, pending the benefit of developing appropriate mechanisms and proposals together with the First Nations and Métis communities directly affected. As NextBridge stated in response to Board Interrogatory 12 to all Applicants, NextBridge does not take a prescriptive approach to First Nation and Métis engagement, but instead plans to engage with each First Nation and Métis community in the manner in which they are most amenable and to work together in devising the appropriate plan for Aboriginal participation.

131. In the interim, NextBridge found very helpful, and validating of its own proposed approach, the submissions of Byron LeClair on behalf of Pic River at the Board's Thunder Bay sittings on May 2, 2013.[84] In particular, Mr. LeClair offered the following points:

(a) Consultation and participation must be considered separately. While consultation must be inclusive, as a matter of law, participation need not be.

(b) Aboriginal participation is meant to promote commerciality for aboriginal people, so that communities can create independent, self-sustaining, non-government sources of revenues, to fund community services and infrastructure. *"Ontario's approach to aboriginal participation has been to establish a general criteria that allows the market to preserve the freedom to contract while promoting aboriginal economic independence and sustainability."*[85]

(c) Aboriginal participation must also be considered in the context of sound commercial practice, freedom to contract[86], and the product of negotiation

[83] NextBridge Application, pages 40-41, for particular example see page 41, first full paragraph.
[84] May 2, 2013 Oral Sessions transcripts, pages 95 through 116.
[85] May 2, 2013 Oral Sessions transcripts, page 102.
[86] May 2, 2013 Oral Sessions transcripts, page 115, lines 1 through 4.

between aboriginal interests and project proponents. *"The alternative is to have corporations and government prescribe what that relationship ought to be between [aboriginal] communities and resource development projects...society has rejected this model for quite some time now."*[87]

(d) Aboriginal participation (and accommodation) must also be considered by the Board in this matter through the lens of impact on cost and reliability of transmission service.[88]

132. Mr. LeClair appears to make these points in support of the EWT LP partnership arrangement involving six First Nations communities. NextBridge applies these principles in developing a plan for Aboriginal participation that is flexible and responsive, rather than rigid and prescriptive.

133. Mr. LeClair offers two other important observations:

(a) He emphasizes the importance of the BLP LP commercial formation, as distinct from the EWT LP commercial formation.

(b) He concedes that BLP LP accepts that sometimes they will win projects that they seek to undertake, and sometimes they won't.[89]

134. As NextBridge stated in its Argument in Chief, it must be recognized, while fully respecting the autonomy and independence of the BLP communities, that given the proximity of these communities to the most likely routes for the new line, there will be an imperative both on the designated transmitter and on these communities to work with each other towards a mutually beneficial arrangement for participation by the communities. Designated EWT LP is <u>not</u> required in order to provide participation opportunities to these six First Nations.

135. NextBridge has been guided by the Board's *Filing Requirements for Designation Applications*, which specify [section 3.2] that, if arrangements for First Nation and Métis participation have not been made but are planned, Applicants should provide a description of:

[87] May 2, 2013 Oral Sessions transcripts, pages 100 to 101.
[88] May 2, 2013 Oral Sessions transcripts, page 109, lines 5 through 10 and lines 10 through 24.
[89] May 2, 103 Oral Sessions transcript, page 103, lines 3 through 13.

- the plan for First Nation and Métis participation in the project, including the method and schedule for seeking participation;
- the nature of the planned participation;
- and the planned benefits to First Nation and Métis communities arising from the participation;

136. NextBridge has, in its Application:

(a) Provided a description of how it will pursue First Nation and Métis participation, as summarized by project phase in Figure 7 (pages 44 and 45) of its Application.

(b) Detailed the options that it foresees for aboriginal participation (pages 41 through 44 and Appendix 5)[90], which options include:

(i) Preferred equity/common equity/partnership participation;

(ii) Lump sum payment;

(iii) A conceptual aboriginal "adder";

(iv) Employment opportunities;

(v) Education and training proposals;

(vi) Procurement and contracting opportunities;

(vii) Strategic community investment; and

(viii) Facilitated access to supporting programs.

137. This menu of starting options was developed in consultation with the NextBridge AAB, and demonstrates NextBridge's openness to participation alternatives that best meet the need of each specific community affected.

138. The applicability of any of these options to a specific community can only be properly evaluated through the engagement that NextBridge has expressly planned and detailed, but that has yet to occur.

[90] See also NextBridge Response to Board Interrogatory 6 to all Applicants.

PROJECT TEAM, EXPERIENCE, AND TECHNICAL CAPABILITY

139. One applicant suggests that NextBridge's team lacks the experience and technical capability required for the project.[91] Another criticism is that NextBridge has not entered into binding contracts with all potential subcontractors.[92] These critiques typically define the necessary experience as that which the applicant making the critique itself possesses, and in many cases simply reflect the position of applicants who have locked themselves into pre-determined sub-contracting relationships, instead of being prepared to procure the most cost-effect assistance if and when they are designated by the Board.

140. With respect to experience, all the NextBridge partners have experience working on projects in various jurisdictions, including in Ontario, and have demonstrated successful execution of those projects, and have the best track record in doing so. The partnership of the three NextBridge partners brings together immense depth of expertise in the transmission and energy industries and access to a knowledge base more significant and relevant than any other applicant.

141. CNPI claims that other applicants "have very loose organizational charts proposed for the East-West Tie Project with functional departments identified but little or no Ontario personnel committed to the project," and specifically for NextBridge indicates *"UCT uses the same team for all three phases, and has not identified operations and maintenance personnel."*[93]

142. NextBridge has identified operations and maintenance personnel. As with each of its 8 technical teams, NextBridge identified in its Application a team lead for operations and maintenance; Ed Devarona.[94] Mr. Devarona's responsibilities are summarized at page 56 of NextBridge's Application. In fact, as noted in the evidence, NextBridge specifically appointed all of its team leads, including its operations and maintenance team lead, early in the process of developing its

[91] EWT LP Argument in Chief, page 70.
[92] EWT Argument in Chief, page 79, SEC Argument, page 21.
[93] CNPI Argument in Chief, page 38.
[94] NextBridge Application, page 22 Figure 4 and page 55 Figure 8.

designation application. NextBridge believes that using the same project team throughout the life of the project will "ensure a seamless transition from phase to phase and continuity in project decision-making."[95] As discussed earlier, NextBridge proposes an aggressive but attainable project development schedule, and this is made possible by the continuity in project personnel. NextBridge's planning is informed by perspectives from each of the technical areas ultimately relevant to the project, including operations.[96]

143. As an incumbent utility in Ontario, it is not surprising that CNPI would seek to focus on existing personnel numbers in Ontario, but the Phase One Order Filing Requirements do not suggest that the previously existing number of employees in Ontario has any bearing on the Board's designation decision. Indeed, such a criterion would be inimical to the underlying objectives of the Board's policy, and the driver for this process, to encourage competition and new entry.

144. In fact, NextBridge has committed Ontario personnel to this project[97]:

(a) Steven Zucchet is a Senior Vice President at Borealis, in Toronto, with Ontario energy sector experience with Bruce Power and Enwave in Ontario.

(b) The Ontario specific experience of NextBridge's aboriginal AAB members is detailed at paragraph 108 of this Reply Argument.

(c) Kath Hammond, Vice President, Legal at Borealis in Toronto, and also an AAB member, has extensive work experience at Ontario Power Generation.

(d) Brian Hay, also an AAB member and team lead for the NextBridge First Nation and Métis technical team, was Director, First Nation and Métis Relations at the Ontario Power Authority during development and launch of the FIT program.

(e) Oliver Romaniuk, Project Manager, NextEra Energy Transmission LLC and a member of NextBridge's Operations Committee, was employed by OZZ Energy Solutions and consulted for Toronto Hydro Energy Services

[95] NextBridge Response to Board Interrogatory 1 to all Applicants.
[96] NextBridge Response to Board Interrogatory 1 to all Applicants, 3rd paragraph.
[97] NextBridge Application, Appendix 3.

in Ontario. Oliver resides in Ontario, and currently divides his time between Ontario and NextEra parent headquarters in the U.S.

(f) Annesley Wallace, a member of NextBridge's Operations Committee and (now) Vice-President Transaction Team with Borealis in the Greater Toronto Area previously worked at SNC-Lavalin in Toronto as Vice-President, Operations, with its Energy and Infrastructure group.

(g) Ryan Farquhar, Director, Green Power & Transmission for Enbridge Inc. and a member of NextBridge's Operations Committee, has worked in Toronto for over 10 years and was recently part of the management team that developed and constructed the Montana-Alberta Tie-Line (MATL).

(h) Robert van Beers, NextBridge's dedicated Project Director, lives and works in Toronto, and has extensive power sector experience in northern Ontario, having been the lead advisor to all 11 municipal distribution utilities in the region in advance of the liberalization of the Ontario power market in the late 1990s.

(i) Tania Persad, Senior Legal Counsel & Gas Distribution Compliance Officer with Enbridge Gas Distribution in Toronto, is lead for NextBridge's regulatory technical team.

145. As further detailed at paragraphs 151 and 157, below, NextBridge has already used the services of Dillon Consulting in Toronto and Northern BioScience in Thunder Bay.

146. Iccon/TransCanada argues that its status as the applicant with most projects completed over 100 km in length shows that it has the best track record, and therefore is the most capable, of any applicant.[98] This arbitrarily chosen metric suits Iccon/TransCanada's purpose in one respect, as it appears to have completed numerous projects over 100 km in length. However, with one exception, all of these projects are either in Brazil or India[99], jurisdictions which have vastly different permitting requirements, environmental regulations, and aboriginal affairs issues. Ultimately, Iccon/TransCanada's record of project development outside North America is of little relevance.

[98] Iccon/TransCanada Argument in Chief, page 4.
[99] Iccon/TransCanada Responses to Board Interrogatories, Appendix C.

147. Iccon's only North American project (through its affiliate Isolux) is the WETT/CREZ project. This is the project referred to in paragraphs 82 through 85 of NextBridge's Argument in Chief, which is still under construction, behind schedule, and decidedly over budget.[100] In its Argument in Chief, NextBridge noted continuing project delays. In a compliance filing dated May 30, 2013 in Public Utility Commission of Texas (PUCT) in Docket #37902, the schedule for this project was updated, again, as follows:

Figure 7

Phase	Previously Revised Completion Date	Updated Completion Date
Phase 1	March 31, 2013	September 30, 2013
Phase 2	May 15, 2013	November 15, 2013

148. Iccon/TransCanada also argues that the number of team members NextBridge has identified for project management and G&A is inconsistent with the cost estimate.[101] This assertion is unfounded. For the record, NextBridge confirms it has included all costs for the proposed Project Management team in its estimate. In fact, NextBridge had a higher forecast for both engineering/design and construction than Iccon/TransCanada and some of the internal engineering management and construction management is included in those categories.

149. EWT LP claims that NextBridge has limited experience in Canada and no qualified consultants. These claims are unsubstantiated.

150. All of the NextBridge partners have significant development and/or investment projects in Ontario, as well as elsewhere in Canada. As noted in NextBridge's

[100] As discussed in NextBridge's Argument in Chief, paragraph 84, in March 2013, WETT made a filing with the Texas Commission (PUC Project No. 37858, filing page 2) stating that it was *"presently experiencing delays in the schedules of these projects due to both material and labor shortages."* On April 15, 2013, WETT submitted in the same docket its One Year Compliance Filing, in which it identified cost increases and stated (at page 2) that the *"summarized costs include increases related to the cost of materials, a tightened labor market and significant rock formation in relevant tower footings and rights-of way."*

[101] Iccon/TransCanada Argument in Chief, page 29.

Argument in Chief[102], NextBridge's partners have the largest non-transmission incumbent presence in the Ontario electricity sector. In Ontario, Enbridge owns wind generation and a gas distribution system founded in 1848 and now serving over 2 million customers. NextEra has developed and is developing wind projects and associated transmission in Ontario. Borealis owns a large share in the Bruce Power nuclear facility and is an investor in Enersource, the electricity distributor serving the City of Mississauga.

151. As to consultants, NextBridge's Application refers to external consulting support in the areas of environmental assessment, engineering, land acquisition, major construction, materials and equipment procurement, and asset operations and maintenance, and details NextBridge's approach to procuring such third party resources.[103] NextBridge has already used the services of a number of top consulting firms in preparation of its Application[104], including: i) Burns & McDonnell, a premier engineering firm with extensive experience delivering successful projects in Canada; ii) Dillon Consulting, an international, Canadian-owned professional consulting organization with Ontario transmission experience including the recently completed Bruce to Milton Line; iii) Northern Bioscience in Thunder Bay, a consulting services company with expertise in ecosystem management, inventory and research with clients including government, industry, First Nations and non-government organizations; iv) PTerra Electric Power Consultants, an independent consulting company specializing in services to the electric power industry; v) Digioia Gray, well recognized experts in foundation design; and vi) Dr. Jerry Wong of DHW Engineering, whose credentials are summarized at paragraph 82, above. NextBridge may work with these consultants through project development and construction, but only if they turn out to be the most qualified and cost-effective subcontractors.

152. Various applicants have proposed partnerships with specific vendors for components of the development and/or construction phase and criticized

[102] NextBridge Argument In Chief, paragraph 147 through 151.
[103] NextBridge Application, pages 27 to 29.
[104] NextBridge Application, page 27, page 48, and Appendices 11 and 13.

NextBridge for not having done the same. NextBridge questions this strategy, which has the appearance of an applicant being well-prepared but in fact involves a premature commitment to a contractual relationship that ultimately may not benefit ratepayers by unnecessarily limiting the number of potential subcontractors.

153. NextBridge bases its strategy on the fact that once designation is completed and a proponent has been selected, the entire field of subcontractors currently identified in the six applications will be free to bid on the development and construction work. An applicant that intends to be sensitive to securing the most cost-effect subcontracts will wait until it is designated and then ask for competing proposals from all the qualified vendors. NextBridge has already engaged the support of some subcontractors that may end up being attached to the project, but has left itself flexibility to find the most cost-effective subcontractors for various other functions.

154. NextBridge expects that when the time comes, it will be able to pick the most qualified and cost-effective subcontractors, as the NextBridge partners possess a wealth of experience in selecting and managing globally respected subcontracting firms. They work closely with their subcontractors to supplement, rather than replace, internal resources. As NextBridge stated in its application, NextBridge engaged certain subcontractors to seek advice regarding: routing analysis, environmental approvals and review of various transmission line route evaluations; the development of design criteria; geotechnical support; as well as the development of structure and foundation alternatives in support of the preparation of its Application.[105]

155. Regardless of which subcontractors are eventually retained, NextBridge will rely on internal resources, including sector professionals who are intimately familiar with Ontario's electricity regulatory, agency and stakeholder landscape, to manage all aspects of the project. Accountability will never be transferred away

[105] NextBridge Application, pages 27-28.

from the NextBridge project team. NextBridge has demonstrated clearly throughout its Application, response to interrogatories and written argument that it has the experience (internal and external), including Ontario specific expertise, necessary to execute this project successfully.

156. EWT LP argues *that "UCT has not engaged external consultants to assist during the development even though neither UCT nor its partners are Canadian electricity transmitters with any experience developing major public electricity transmission lines in Ontario or northern Canada"*[106] specifically referencing the need for engineering, environmental, public consultation and land acquisition support.

157. In fact, as to environmental work, NextBridge has already started to work with Ontario-based firms (Dillon Consulting in Toronto and Northern Bioscience in Thunder Bay) seeking advice regarding the routing analysis and environmental approvals process in support of the preparation of this Application."[107] NextBridge's written argument also references Dillon's involvement and emphasizes its recent work including "Ontario transmission projects in the past, such as the recent Bruce to Milton Line"[108].

158. With respect to engineering, NextBridge has been working with Burns & McDonnell, a leading design and construction firm, to assist with the review of various transmission line route evaluations; the development of design criteria; geotechnical support; as well as the development of structure and foundation alternatives.[109] Burns & McDonnell's involvement is also discussed in NextBridge's Argument in Chief.

159. As to land acquisition support, NextBridge stated in its Application that it *"…will engage local agents under the direction of its Land Acquisition Lead to assist in*

[106] EWT LP Argument in Chief, page 81, bottom.
[107] NextBridge Application, page 27.
[108] NextBridge Argument in Chief, page 17.
[109] NextBridge Application, page 27.

working with affected landowners."[110] NextBridge partners do have experience working with these agents in Ontario. Enbridge, through its affiliates, has over 50 years experience with local land service providers in Ontario, and is currently using agents for ongoing projects in the province. These relationships will further ensure that NextBridge can handle all aspects of land assembly in Ontario.

160. Public consultation will primarily be undertaken by an internal team, supplemented by local consultants where deemed to be appropriate and cost-effective.

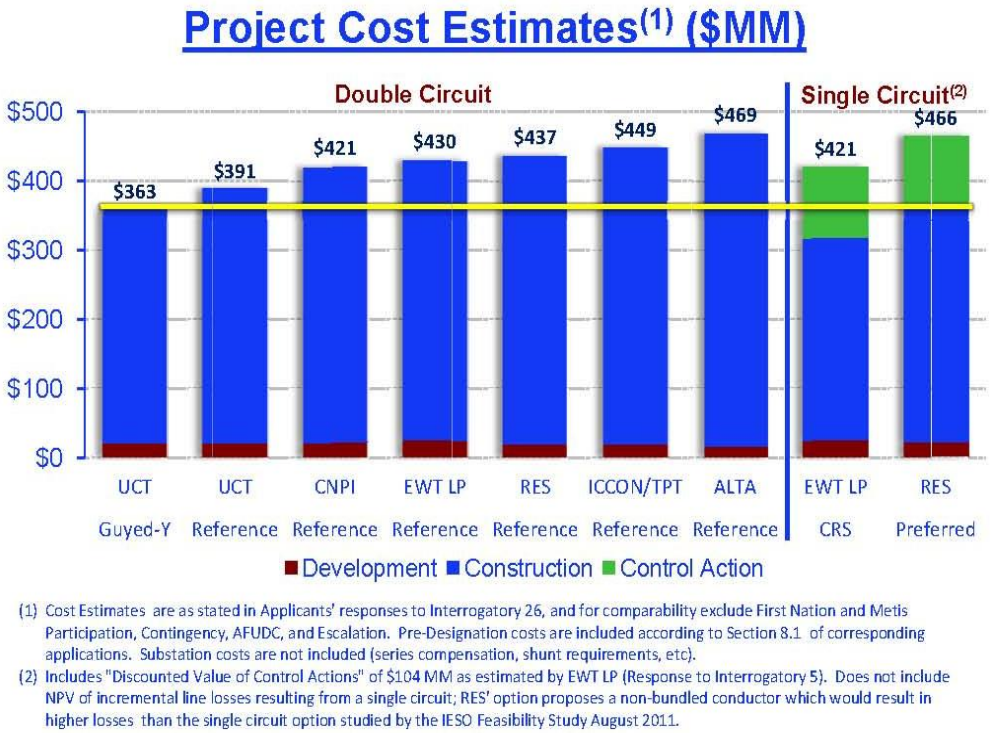
161. Accordingly, NextBridge has throughout this process sought the right balance between procuring resources needed for immediate tasks, while not prematurely locking into consultant relationships in all areas.

[110] NextBridge Application, page 28.

COSTS AND RISK SHARING

162. No party has questioned the fact that NextBridge's development and construction cost proposal is the lowest (accounting for the control costs necessarily associated with the two single circuit proposals advanced).

Figure 8 (Figure 1 from NextBridge Argument in Chief)

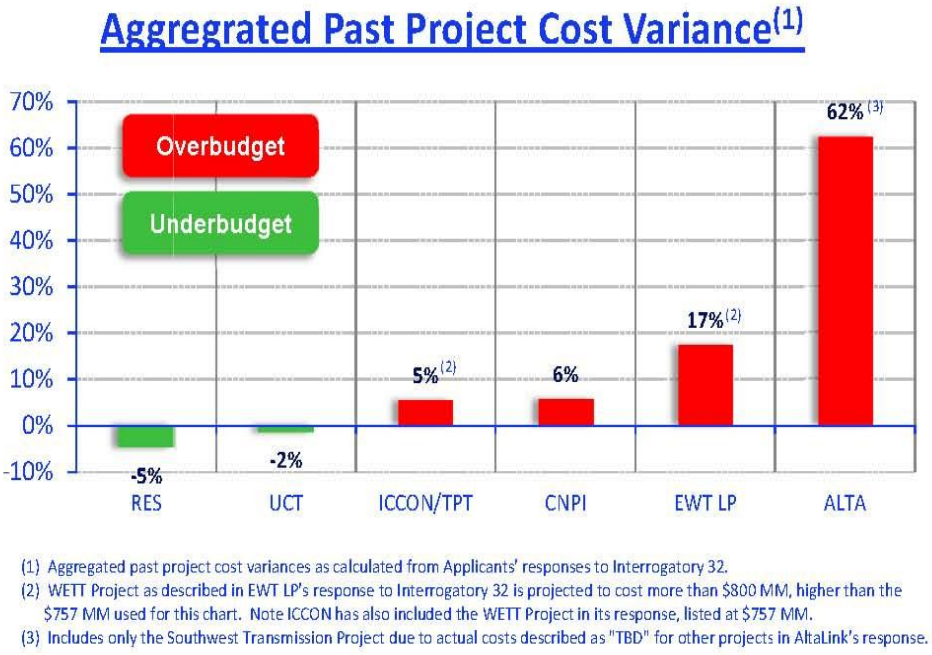


(1) Cost Estimates are as stated in Applicants' responses to Interrogatory 26, and for comparability exclude First Nation and Metis Participation, Contingency, AFUDC, and Escalation. Pre-Designation costs are included according to Section 8.1 of corresponding applications. Substation costs are not included (series compensation, shunt requirements, etc).

(2) Includes "Discounted Value of Control Actions" of $104 MM as estimated by EWT LP (Response to Interrogatory 5). Does not include NPV of incremental line losses resulting from a single circuit; RES' option proposes a non-bundled conductor which would result in higher losses than the single circuit option studied by the IESO Feasibility Study August 2011.

163. No party has challenged NextBridge's track record of executing projects within budget.

Figure 9 (Figure 2 from NextBridge Argument in Chief)



164. In respect of risk sharing, NextBridge has been criticized by other applicants for vagueness in its proposal.[111]

165. In fact, NextBridge has been clear that:

(a) It prefers a performance based ratemaking approach, through which it is willing and able *"to assume construction cost risk"*[112] and through which it is *"is prepared to be held accountable for achieving results, by exposing its potential return to the risk associated with a performance-based ratemaking construct"*.[113] NextBridge thought this clear; this would include a ratemaking construct under which NextBridge would be rewarded with premium returns in the event that it provided superior outcomes and value for the Province's electricity ratepayers.

(b) It is committed to a consultative approach to develop a ratemaking model that strikes an appropriate balance between risk allocation, performance outcomes and return on equity, which model will be presented to the Board for consideration at the leave to construct application stage.[114]

[111] Iccon/TransCanada Argument in Chief, page 30; CNPI Argument in Chief, page 40.
[112] NextBridge Application Transmittal Letter dated January 4, 2013, page 2, bottom.
[113] NextBridge Application, page 73, top, emphasis added.
[114] NextBridge Application, page 73, middle.

(c) It envisages a model under which it would realize a higher return[115]:

(i) To the extent that it assumes risk during the construction period relative to what it proposes in its leave to construction application (e.g. depending on whether it offers a fixed price or a narrow price band at one extreme vs. complete flow through of actual costs at the other extreme);

(ii) and depending on its performance relative to agreed-upon performance metrics (such as operating cost, reliability, and other metrics developed in consultation with stakeholders).

164. NextBridge has also been clear that such a performance-based ratemaking model should result in superior value to Ontario ratepayers.[116]

165. NextBridge illustrated its conceptual approach to incentive rate making in Figure 9 (page 74) and Appendix 10 of its Application. As demonstrated in NextBridge's Response to Board Interrogatory 11 to NextBridge, a significant decrease in capital expenditures in exchange for a modest increase in ROE can provide an attractive value proposition for customers.

166. In the same interrogatory response NextBridge refers to similar models which have been applied to allow Ontario's gas distributors to share earnings above Board approved ROEs between utility owners and ratepayers; increasing shareholder returns while simultaneously lowering ratepayer costs. For example, Union Gas Limited has reported, under its recently concluded incentive regulation plan, Board approved ROE and after earnings sharing actual ROE for its regulated business as indicated in the table below. These earnings were on distribution rates that were relatively flat, year over year, and after sharing excess earnings with their ratepayers.

[115] NextBridge Application, page 73 bottom through page 74 top.
[116] NextBridge Application, page 74, under heading *"Superior value for electric customers of Ontario"*; NextBridge response to Board Interrogatory 11 to UCT.

Figure 10[117]

Year	Board Approved ROE	Actual ROE	Earnings Returned to Ratepayers
2007	8.54	9.99	$0
2008	8.81	11.46	$34.2 million
2009	8.47	10.85	$7.1 million
2010	8.54	10.72	$3.4 million
2011	8.10	10.65	$16.7 million

167. RES and AltaLink characterize NextBridge's risk sharing proposal as one sided, suggesting that NextBridge is not prepared to assume cost overrun risk.[118] NextBridge has said nothing of the sort. What NextBridge has said is that its objective will be to:

> *….develop a ratemaking construct that aligns the interests of both the shareholders and customers of NextBridge, and ultimately delivers a superior value proposition versus the incumbent utility and ratemaking status quo.* [119]

168. Furthermore, NextBridge made clear in its application that the details of any performance-based ratemaking mechanism had not yet been determined. NextBridge would develop such a proposal through discussions with OEB staff and other stakeholders at the leave to construct stage, after which it would be subject to Board review and approval.[120] These discussions are likely to cover the whole range of issues related to potential performance-based rates, which naturally includes both the consequences of surpassing the performance parameters, and failing to meet those parameters. NextBridge fully anticipates that these discussions could lead to binding provisions that would reduce NextBridge's ROE in the event of its failure to meet performance requirements.

169. Accordingly, the form of the performance-based ratemaking construct, and how the risk/reward balance will be set, has yet to be determined, in consultation with affected stakeholders. Considering the variety of possible ranges of outcomes

[117] Sources: EB-2011-0210: Exhibit J.E-2-12-9, Attachment 1, Exhibit J.E-3-5-1
[118] RES Argument In Chief at page 99.
[119] NextBridge Application, page 74, bottom.
[120] NextBridge Application, page 73.

and metrics, prior to engaging in these consultations it would be premature to propose a more specific model. RES' attempt to do so has garnered criticism as illustrative of *"the dangers on settling upon a specific rate mechanism before the project is properly defined through the development process."*[121] NextBridge avoided such restrictions by recognizing the importance of future discussions on the ratemaking construct.

170. Citing NextBridge's Response to Board Interrogatory 10 to NextBridge, AltaLink argues that NextBridge's proposal to recover CWIP during the construction phase will cost ratepayers an additional $22.4 million in cash paid during construction.[122] AltaLink's criticism is disingenuous.

171. This criticism ignores the balance of the evidence on this point provided by NextBridge's Response to Board Interrogatory 10 to NextBridge. That evidence makes clear that the $22.4 million that would be paid during construction under such rate treatment avoids a charge of $23.3 million in additional rate base. NextBridge's interrogatory response further illustrates that the present value of payments under either model is the same for ratepayers, before allowing for potentially lower construction financing costs under the NextBridge proposal, which if realized would result in an overall reduction in customer costs.

172. As cited in its Application[123], NextBridge's proposal for treatment of CWIP arises from the OEB's own infrastructure investment policy, which recognizes this potential lower financing cost benefit:

> *Including CWIP in rate base provides two principal benefits. First, it provides a smoothing, or phased-in, effect on rates and thereby mitigates the rate impact that might otherwise take place when large new plant is placed into service. Second, it can reduce borrowing costs. Permitting a utility to recover CWIP funding can also reduce a project's total net present value cost, although it can raise intergenerational inequity issues.* [Emphasis added.]

[121] Iccon/TransCanada argument at 31.
[122] AltaLink Argument in Chief, page 37.
[123] NextBridge Application, page 77, top.

173. In any event, as stated in NextBridge's Response to Board Interrogatory 10 to NextBridge, while NextBridge believes that a single-project, construction phase utility is a prime candidate for the application of this OEB-endorsed rate making tool, and further believes that such an approach would be innovative and could reduce ratepayer costs, NextBridge is not reliant on construction financing. NextBridge has made clear that it is fully prepared and able to fully finance construction from internal resources[124] and proceed with conventional ratemaking treatment for CWIP, if the Board prefers.

[124] NextBridge Application, page 76, bottom.

REPLY TO OTHER CRITICISMS

174. RES claims that no other applicants have considered and accounted for mining and timber rights.[125] This is inaccurate with respect to NextBridge, which specifically referenced these as issues needing to be addressed as part of project development.[126]

175. AltaLink criticizes NextBridge's development costs as being higher than AltaLink's own development costs.[127] AltaLink illustrates in Table 2 of its Argument in Chief that it has the lowest development cost of all applicants. Accordingly, AltaLink levels a similar criticism against every other applicant.

176. In respect of AltaLink's development budget in particular, NextBridge has been unable to find any budget for land acquisition activities (a deficiency also noted by EWT LP[128]) or for legal costs.

177. AltaLink presents the highest overall project cost of all applicants, as illustrated in Figure 8, above. AltaLink addresses this by positing that construction costs, for which it is the highest and has presented a very broad range, have not been validated at this early stage and are of limited value to the Board's considerations.[129] Later in its Argument, however, AltaLink presents a table comparing its calculations of the present value of operations and maintenance costs[130]. Following this table AltaLink seeks to emphasize its relatively lower operations and maintenance cost forecast, while at the same time discounting the importance of the more immediate in time construction cost forecasts that it and other applicants put forward.

178. AltaLink's attempt to focus on some lifecycle costs, but not others, is overtly self-serving. NextBridge submits that the Board should consider all costs put

[125] RES Argument in Chief, page 86, top.
[126] NextBridge Application, pages 105, 131, 134, 136; Appendix 19, page 2; Appendix 21, page 1.
[127] AltaLink at p 37.
[128] See also EWT LP Argument in Chief, pages 90 and 93, noting the same deficiency.
[129] AltaLink Argument in Chief, paragraph 15.
[130] AltaLink Argument in Chief, page 23.

forward by the Applicants in assessing the cost competitiveness of the respective applications, as the Board has previously indicated it would do.

179. EWT LP, and its ally Pic River, have consistently criticized NextBridge and other applicants as not having the local experience and familiarity possessed by the EWT LP partners; Hydro One, GLPT and the BLP LP member First Nations. EWT LP relies throughout its application and argument on its local knowledge and experience.[131]

180. Lest there be any doubt that EWT LP's bid is an incumbent bid, EWT LP's Argument in Chief specifically states, after identifying the two incumbent transmitters and BLP LP as the partners[132]:

> *Post-designation, the partners of EWT LP and their applicable partner related entities will act as one and employ their collective knowledge and expertise to develop the Project.*

181. The Board should ignore the criticisms levelled by EWT LP against NextBridge and the other applicants that are premised on Hydro One and GLPT's familiarity with Ontario's historical transmission sector. While NextBridge acknowledges that the Board's *Policy Framework for Transmission Project Development* allows incumbent transmitters to participate, designating EWT LP to develop the East-West Tie on the basis of its historical familiarity with transmission in Ontario would compromise the objectives of the Board's, and the Minister's expressly stated intent in referring the East-West Tie project to this process.

182. If new entrants are used simply as a mechanism to get Hydro One to drive better, more cost effective proposals from Hydro One, then any future attempt to engage new entrants in a designation process such as this one will be materially compromised.

[131] EWT LP Argument in Chief, page 8, page 12 line 16, page 14 line 15, page 15 line 16, page 17 lines 17 to 24, page 18 lines 16 to 18.
[132] EWT LP Argument in Chief, page 5, lines 9 – 11.

183. EWT LP also criticizes NextBridge indirectly in asserting at page 20 of its Argument in Chief that:

> *The shortest schedule and the corresponding lower cost do not necessarily equate to the best or most reliable schedule or cost estimate.*

184. Having made this assertion, however, EWT LP's Final Argument is focussed on shifting the emphasis of EWT LP's proposal from that in its application for conventional 4-leg towers and a cost and schedule higher than NextBridge's, to a now accelerated schedule[133], cost reduced[134] cross-rope suspension single circuit proposal (still higher in cost than NextBridge's when attendant control costs are included, but not by as much). While making no express commitment to any one design option among those in its *"innovative and feasible suite of technical design alternatives"*[135], EWT LP now discusses an "accelerated" schedule, facilitated by a guyed-tower design and new tools and mechanisms to optimize schedule[136]. These new tolls and mechanisms are similar to those initially evidenced in NextBridge's Application. EWT LP also lowered its O&M budget from the time of filing interrogatory responses (Response to Board Interrogatory 26 to all Applicants; O&M costs of $7.12 million) to the time of filing Argument in Chief (page 35, figure 5, O&M costs of $4.5 million) by $2.62 million.

185. EWT LP asserts that NextBridge has not considered a range of alternatives.[137] This assertion ignores the evidence in NextBridge's Application and appendices. This evidence includes technology assessments by two engineering firms (PTerra and Burns & McDonnell)[138], a feasibility study prepared for NextBridge by the IESO[139], and discussion of the provision of environmental issues support by Dillon Consulting[140]. NextBridge has evidenced its consideration of alternate

[133] EWT LP Argument in Chief, page 22 schedule comparison diagram.
[134] EWT LP Argument in Chief, page 32 cost comparison diagram.
[135] EWT LP Argument in Chief, page 11, line 6.
[136] EWT LP Argument in Chief, pages 27 – 28.
[137] EWT LP, Argument in Chief, page 23, page 25 line 12, page 38 lines 13 – 19.
[138] NextBridge Application, Appendices 11 and 13.
[139] NextBridge Application, Appendix 12.
[140] NextBridge Application, page 27, second last paragraph.

routes[141], direct versus alternating current transmission[142], and a range of tower structures[143].

186. The real distinction between EWT LP and NextBridge in these areas is that NextBridge made its proposal – NextBridge's Recommended Plan – from the start. Unlike EWT LP, NextBridge is prepared to put forward a design and associated schedule and cost proposal that it stands behind as its recommendation. EWT LP's new plan is to do further study in order to lower its costs and expedite its schedule from those set out in its Application. The Board should reject this approach to competing with new entrants.

187. Iccon/TransCanada has criticized NextBridge (and others) for not including financing costs in its proposed budget.[144] NextBridge notes that the applicants addressed financing costs differently in their Applications. It was for this reason that NextBridge proposed, and the Board adopted in Board Interrogatory 26 to all Applicants, that all applicants provide their cost estimates excluding AFUDC. The costs that NextBridge used for comparison purposes in its arguments are those costs excluding AFUDC that all applicant's provided in response to Board Interrogatory 26 to all Applicants.

188. RES asserts that NextBridge has not included in its proposal description, timelines or costs for permitting activities.[145] RES has not considered Appendix 18 to NextBridge's Application, which details precisely these activities, the costs for which are set out in section 8.2 (Figure 21) of NextBridge's Application, and the main activities for which are included in NextBridge detailed project schedule chart at Appendix 15 of its Application (page 2, top, under the heading *"Other Permits and Approvals"*.

[141] NextBridge Application, pages 82-83.
[142] NextBridge Application, page 81 bottom – 82, and Appendix 11.
[143] NextBridge Application, pages 81, 88-89 and Appendix 13.
[144] Iccon/TransCanada Argument in Chief, paragraph 77.
[145] RES Argument in Chief, pages 99-100.

CONCLUSION

189. NextBridge has addressed in this Reply Argument all of the salient criticisms levelled against its proposal for the East-West Tie transmission project.

190. As demonstrated in NextBridge's Application, its Argument in Chief, and this Reply Argument, in selecting NextBridge, the Board can have confidence that the East-West Tie project will be executed successfully.

191. NextBridge has the best overall record of completing projects on time and on budget, and presents to the Board the lowest cost proposal that meets all applicable requirements for the project.

192. As a new entrant to the Ontario transmission sector, NextBridge will bring more discipline to transmission development in the Province, while working with stakeholders on addressing issues relating to project development.

193. NextBridge's experienced team and flexible approach are well suited to engaging in First Nation and Métis consultation and negotiation of participation arrangements.

194. NextBridge is committed to Ontario for the long-term. NextBridge's vision is to become a significant player in the Ontario transmission space, and participate in further transmission projects as the opportunity arises.[146]

195. Overall, NextBridge provides the best solution for Ontario.

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[146] NextBridge Application, page 3, last paragraph.

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.

Affidavit of C. Jerry Wong, Ph.D.

I, **C. JERRY WONG, Ph.D.**, of the State of Florida, USA, **MAKE OATH AND SAY**:

1. I am principal at DHW Engineering, consultant to NextBridge Infrastructure, a licensed Professional Engineer qualified and registered in the State of Florida, USA. From 1999 to 2010 Dr. Wong was Chair of the Structural Engineering Institute's task committee which prepared the American Society of Civil Engineers (ASCE) Manual No. 74: Guidelines for Electrical Transmission Line Structure Loading—Third Edition. This manual is cited in NextBridge Response to Board Interrogatory 4 to NextBridge, and is also referenced in the OEB's Minimum Design Criteria for the Reference Option of the E-W Tie Line, listed as one of the design codes pertinent to the design of this line. The ASCE Manual 74 provides the basis for design of transmission lines and structures. For example, Manual 74 provides guidelines for: i) selection of wind and ice loads; ii) failure containment analysis; iii) safety or load factors; iv) reliability criteria (i.e. 50 year versus 100 year events); and v) methods of mitigation to avoid cascade failure.

2. I have been engaged on NextBridge's work developing the Guyed-Y towers proposed for the East-West Tie project since March 19, 2012.

3. The purpose of the affidavit is to respond to criticisms leveled by other applicant transmitters to NextBridge's proposed use of latticed Guyed-Y towers for the East-West Tie project, and to clarify the status of NextBridge's work to date on developing and specifying the Guyed-Y structures recommended by NextBridge in its proposal for development of the East-West Tie.

4. Filed as Appendix 13 to NextBridge's Application is a structural analysis report from Burns & McDonnell. That report includes preliminary cross-section drawings for 7 tower types for application to the East-West Tie project. These tower types were developed by Burns & McDonnell for NextBridge based on the criteria and design standards specified in the report, which criteria and design standards include: i) criteria specified in Appendix A to the Ontario Energy Board's (OEB) Minimum Design Criteria for the Reference Option; ii) additional climatic load and insulator swing (galloping) standards used by NextEra engineering best practices; iii) Canadian Standards Association (CSA) requirements for electrical infrastructure; and iv) assumptions regarding two basic foundation types (rock and all-soils) as specified in the Burns & McDonnell report.

5. The tower type drawings presented include: i) conventional 4 leg lattice towers; ii) single leg Guyed-Y latticed towers; and iii) a double leg H-Frame tower.

6. The purpose of Burns & McDonnell's work was to evaluate design alternatives for the East-West Tie line project, as indicated in the December 18, 2012 letter from Jason McCreary, P. Eng. of Burns & McDonnell included with the report in Appendix 13 of NextBridge's Application and certifying that all design calculations and drawings were completed and reviewed under his supervision. Mr. McReary is an Ontario certified engineer.

7. Based on the work done by Burns & McDonnell and our own work, and in particular on the derivation of preliminary design drawings for Guyed-Y double circuit towers meeting the design criteria specified in the Burns & McDonnell report, NextBridge identified as its recommended design for the East-West Tie a Guyed-Y latticed tower structure. The reasons for adopting a guyed tower structure as the recommended design option are specified in NextBridge's

Application (section 6.1 at page 88, and section 6.6 at page 92) and interrogatory responses (NextBridge Response to Board Interrogatories 15, 17 and 18 to all Applicants, and NextBridge Response to Board Interrogatory 4 to NextBridge). NextBridge has also developed an alternative design, utilizing a conventional latticed tower structure (NextBridge Application, section 6.1 at page 80, Figure 11 and section 6.4 at page 92).

8. Burns & McDonnell's preliminary tower designs were performed through computer modeling. In particular, Burns & McDonnell modeled stresses, under the OEB specified design criteria as set out in their report, at the foundation and at all components of super-structure for the Guyed-Y tower alternatives illustrated in their report. Burns & McDonnell concluded that the Guyed-Y double circuit tower configurations illustrated will work under the design criteria modeled, and are more structurally and cost efficient than the conventional (4 leg) latticed structures also rendered and modeled.

9. Burns & McDonnell's preliminary modeling was based on a tubular steel Guyed-Y, rather than a latticed Guyed-Y, tower structure. Rendering a tubular structure for preliminary modeling is simpler and quicker than detailed design and rendering of a latticed structure. Tubular steel structure modeling is much less involved and time consuming than full latticed structure modeling, though the results of the tubular steel structure modeling validate, on a preliminary basis, the ability to configure the tower to meet design criteria using a given amount of steel.

10. Validation of the potential applicability of a Guyed-Y structure was thus obtained for the purposes of NextBridge's Application, and in particular to support specification by NextBridge of its Recommended Plan for the line

11. The next step in development of the design for the project will be to design, model, and ultimately physically test lattice structures for Guyed-Y towers, which would use less steel and provide the most cost effective solution for the project. (The costing of NextBridge's Recommended Plan as included in its Application was done on the basis of such lattice structures.)

12. The double circuit Guyed-Y design has also been vetted with independent tower manufacturers Thomas & Betts, SAE Towers, and New Falcon Steel (Falcon Steel/Mitas). All have confirmed that Guyed-Y towers to support a double circuit line can be constructed and installed.

13. I have reviewed and considered the arguments of other applicant transmitters in respect of the applicability of steel latticed Guyed-Y towers as specified by NextBridge for application to the double circuit East-West Tie line. I understand the issues raised in these arguments.

14. EWT has raised issues regarding the structural stability of the heads of the Guyed-Y structures, and the potential that they would fail at the points at which the upper portions of the Y are connected to the base element of the tower. EWT's sketches have no apparent basis in any modicum of structural analysis.

15. NextBridge's studies have shown that structural performance can be drastically improved by altering the guying scheme without changing basic Guyed-Y configuration. The studies include design criteria specified by OEB as well as special considerations such as line cascade events.

16. NextBridge's proposed guying scheme does not impose additional land-use impact (contrary to one of RES' assertions in argument).

17. Informed by my own experience with, and professional understanding of, steel latticed transmission towers, and by work done by NextBridge to date to design such a structure, I am confident that the specifications for connection of the Y-arms to the mast of the tower, and the placement of the guy attachment on the tower, can be resolved in such a way as to result in a Guyed-Y tower structure well suited to application for the East-West Tie line project. NextBridge continues to work on such a design, and looks forward to presenting it for consideration of the Ontario Energy Board and interested parties as part of its Application for Leave to Construct the East-West Tie Line.

18. RES has raised issues regarding a requirement for an IESO feasibility study for a Guyed-Y double circuit design. The salient criteria for feasibility review for the East-West Tie line is the conductor configuration. NextBridge's design does not anticipate any material change in conductor configuration (the placement and spacing of the conductors) using a single leg Guyed-Y steel lattice tower as opposed to a 4 leg steel lattice tower. The choice of a supporting structure will not materially impact the electrical performance of the line, and additional feasibility study should not be required.

19. I swear this affidavit in support of NextBridge's proposed use of latticed Guyed-Y towers for the East-West Tie project and for no other purpose.

SWORN BEFORE ME at Juno Beach, Florida, on June 3rd, 2013

C. JERRY WONG

BRITTANY BRUCE
Notary Public - State of Florida
My Comm. Expires Jun 19, 2016
Commission # EE 209464

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