October 31, 2018

VIA COURIER, RESS and EMAIL

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

Dear Ms. Walli:

Re: Upper Canada Transmission, Inc. ("NextBridge") and Hydro One Networks Inc. ("Hydro One")
East-West Tie Line Project and Lake Superior Link Project
Combined Hearing
EB-2017-0182/EB-2017-0194/EB-2017-0364
NextBridge Response to Hydro One Argument in Chief

In accordance with Procedural Order No. 1 and email correspondence from Board Staff dated October 15, 2018 communicating the Panel's instructions that Hydro One and NextBridge file responding submissions to each other's applications on October 31, 2018, enclosed please find the NextBridge Response to Hydro One Argument in Chief in the above noted proceeding.

Yours truly,

(Original Signed)

Krista Hughes
Senior Legal Counsel
Enbridge Employee Services Canada Inc.

ONTARIO ENERGY BOARD

Upper Canada Transmission Inc. (on behalf of
NextBridge Infrastructure)
Application for leave to construct an electricity
transmission line between Thunder Bay and Wawa, Ontario

- and –

Hydro One Networks Inc.
Application to upgrade existing transmission station facilities
In the Districts of Thunder Bay and Algoma, Ontario

- and –

Hydro One Networks Inc.
Application for leave to construct an electricity transmission line
between Thunder Bay and Wawa, Ontario.

NEXTBRIDGE RESPONSE TO HYDRO ONE ARGUMENT IN CHIEF

I. Introduction and Overview

1. This is NextBridge's Response to Hydro One's October 22, 2018 Argument in Chief ("Hydro One AIC").[1]

2. This Response generally follows the format of Hydro One's AIC, and addresses the material points raised in that document. The lack of addressing a particular position should not be interpreted as NextBridge's agreement with that positon.

3. As will be described in more detail below, there are several common themes that apply to NextBridge's responses to Hydro One's AIC:
    a. Hydro One's case is not about protecting ratepayer and public interest – instead, it is about preserving its position as Ontario's main electricity transmitter;

[1] NextBridge will continue to use the same defined terms as set out in its own October 22, 2018 Argument in Chief ("NextBridge AIC").

b. In an effort to advance its position, Hydro One has overstated the evidence (or alleged lack of evidence), and makes many unsubstantiated claims;

c. Claims of unfairness against NextBridge ring hollow when one fairly considers the approach taken by Hydro One in its application, evidence and argument; and

d. Hydro One's LSL Project is very uncertain both as to timing and cost. Although costs issues can be re-addressed after the LTC is approved (through a prudence review), timing issues cannot. If Hydro One achieves LTC approval, but then is unable to deliver the project until after the "drop dead" date of the end of 2022, it will be too late to do anything and consumers will the brunt of this.

4. In the balance of this Response, NextBridge sets out its response to each of the subject areas discussed in the Hydro One AIC. As explained in NextBridge's AIC, and further supported in this Response, it is clear that NextBridge's EWT Line Project best meets the interests of consumers with respect to price and the reliability and quality of electricity service, while Hydro One's LSL Project does not.

II. The Designation Process

5. Hydro One refers to the Board's EB-2010-0059 Framework for Transmission Project Development Plans ("Transmission Framework"), as well as a letter written by the Minister of Energy, in support of the proposition that a policy objective in Ontario is to support competition in transmission.[2] But Hydro One's assertions about competition must be put into the context of the other policy objectives set out in the Transmission Framework that Hydro One did not mention in its submissions. The Transmission Framework sets out three policy objectives and the two objectives not mentioned in the Hydro One AIC are as follows:

- allow transmitters to move ahead on development in a timely manner; and
- encourage new entrants to transmission in Ontario bringing additional resources for project development.[3]

6. Hydro One's arguments about competition give no consideration to the policy objective of encouraging new entrants to electricity transmission in Ontario. Far from recognizing any benefit associated with new entrants, the Hydro One AIC suggests that a number of issues

[2] Hydro One AIC, page 4, paragraphs 14-15.
[3] Transmission Framework, page 1.

in this case should be determined in its favour due to its position and experience as an existing transmitter in Ontario.[4] Rather than fully addressing all of the uncertainties and concerns associated with its LSL Project on their merits, Hydro One essentially argues that, given its experience with transmission projects in Ontario, the Board should simply assume that Hydro One will overcome these significant uncertainties and concerns.[5]

7. Hydro One says that NextBridge had an "unfair advantage" as the designated transmitter given that NextBridge had five years in which to build relationships.[6] But NextBridge did not ask for, nor did it cause, the five-year period that extended from its selection as the designated transmitter to the hearing of its LTC application.

8. While Hydro One tries to depict the five-year period from designation to the LTC hearing as an unfair benefit for NextBridge, the facts are entirely to the contrary. Rather than gaining an unfair benefit from the five-year period, NextBridge was faced with significant unexpected challenges during the development period, such as the extension of the development period and the denial of access to study a route through the Park - and of course NextBridge managed the project prudently and effectively through the course of these changing circumstances.

9. Hydro One argues that NextBridge's construction costs are higher than forecast during the EB-2011-0140 designation proceeding,[7] but, of course, Hydro One's cost estimate is also higher than that provided by the Hydro One partnership, EWT LP, in the designation case.[8] Hydro One notes that the selection of NextBridge as the designated transmitter for the EWT

[4] See, for example, Hydro One's submissions with regard to outages and response times (Hydro One AIC, page 8, paragraph 29 and pages 18-19, paragraph 63), Indigenous consultation (Hydro One AIC, page 8, paragraph 31 and page 23, paragraph 80), OM&A costs (Hydro One AIC, page 17, paragraph 56), uniform transmission rates (Hydro One AIC, pages 17-18, paragraph 58), routing and right of way (Hydro One AIC, page 28, paragraph 109), and the status of development of Hydro One's proposal (Hydro One AIC, page 40, paragraph 156).
[5] In addition to the references at the footnote immediately, above, see Hydro One AIC, page 7, paragraphs 27 (iii) and (iv). As to the significant uncertainties and concerns, see NextBridge's AIC at paras 62 and 68-72, and associated references.
[6] Hydro One AIC, page 6, paragraph 22.
[7] Hydro One AIC, page 4, paragraph 17.
[8] As set out at page 33 of the EB-2011-0140 Phase 2 Designation Decision, EWT LP's application estimated construction costs at $427 million for the double circuit option (later increased to $490 million in an interrogatory response).

Line Project did not give NextBridge the right to build the line,[9] but NextBridge has never asserted that the designation decision gave it the right to construct the project.[10]

10. Hydro One's purported reason for beginning its AIC with "a review of the Designation Process" was to identify "the ways in which NB would have the Designation Process used in a manner that would distort consideration of the issues in the Leave to Construct Applications".[11] Apparently, Hydro One sees any perspective on the facts of this case that differs from its own as a "distortion",[12] but NextBridge has done nothing to "distort" consideration of the issues before the Board and Hydro One's arguments about the designation process have failed to provide any basis for Hydro One's allegation about distortion.

III. Price of Electricity Service

11. Hydro One's AIC provides a high-level summary of its costs, mostly without citing supporting evidence.[13] Rather than explaining and justifying its own uncertain and unconfirmed cost estimates, Hydro One focuses its attention on attacking NextBridge's forecast costs. No comfort is provided as to why Hydro One's uncertain cost forecasts should be accepted.

12. NextBridge's AIC explains at length why its forecast costs for the EWT Line Project are "reliable and reasonable", providing extensive evidentiary references in support.[14]

[9] Hydro One AIC, page 4, paragraph 18.
[10] Note that, in the Transmission Framework, at page 17, it is said that, under normal circumstances, the Board would expect that the designated transmitter would construct and operate the facilities, but the Board refers to two instances where this might not be the case.
[11] Hydro One AIC, page 3, paragraph 9.
[12] See Hearing Transcript Volume 6, page 206, where counsel for Hydro One interrupted cross-examination of the NextBridge witnesses by Mr. Garner and made an allegation about "distortions" and see Hearing Transcript Volume 7, pages 92-95, where the NextBridge witnesses explained in detail how the testimony they were giving at the time of the interruption is grounded in the evidence in this case.
[13] More than half (14 of 22) of the paragraphs in Hydro One's "Cost to Construct the Line" section do not even mention Hydro One's own costs. Hydro One only includes one evidentiary reference to its own costs evidence in this section of its AIC (footnote 13).
[14] NextBridge AIC, paragraphs 21 to 41 (with associated footnotes 29 to 66).

NextBridge's AIC also explains, with supporting evidentiary references, why its forecast costs are more certain than Hydro One's forecast.[15]

(a) Cost to Construct the Line

13. Hydro One's description of its forecasted costs starts by misstating the gap between its LSL Project and NextBridge's EWT Line Project. Hydro One's forecast costs are actually $642 million, which includes the "development costs" that Hydro One plans to recover from ratepayers.[16] Therefore, the difference between the as-filed forecasts of each party is $95 million, not $112 million.[17] The record shows that Hydro One's actual costs will be higher because of all of the uncertainties associated with Hydro One's proposal.[18]

14. Further, Hydro One is no longer offering a "not to exceed price" of $683 million that would be approved by the Hydro One Board of Directors.[19] Instead, Hydro One now says that it has "effectively provided" a not-to-exceed price of $642 million.[20] In support, Hydro One states that recovery of amounts in excess of $642 million would be "at risk". In further support, Hydro One points to tests that would have to be met to justify costs above the forecast amount, stating that additional costs would have to be prudently incurred and unforeseeable.[21] As described below, the assurance provided by Hydro One is largely meaningless, because their baseline costs are uncertain, and amounts that are "unforeseeable" will be sought for incremental recovery.

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[15] NextBridge AIC, paragraphs 55 to 65 (with associated footnotes 103-130).
[16] See Hearing Transcript Volume 4, pages 40 to 41 and 70.
[17] As set out in the table at paragraph 60 of the NextBridge AIC, the difference between NextBridge's and Hydro One's as-filed cost estimates is $95 million for the "through the Park" route ($737 million versus $642 million), and $55 million for the "around the Park" route ($737 million versus $682 million).
[18] As discussed in NextBridge's AIC, under the heading "NextBridge's Costs are More Certain than Hydro One's Costs", paragraphs 55-65. Additionally, as discussed below, consideration of Hydro One's costs must take account of the IESO's costs to procure incremental capacity for 2021 and 2022 ($40 million).
[19] The amount of the "not-to-exceed" price that Hydro One had been offering is identified as $683 million – Hydro One Response to Staff Interrogatory #18 in EB-2017-0364 (filed as Exhibit I.1.18) and Hearing Transcript Volume 3, page 185. In Examination in Chief, Mr. Spencer indicated that "should Hydro One be chosen as the preferred alternative, we would seek board approval [of the not-to-exceed price]. …. I can provide an update in that we in fact have scheduled agenda time with our board on October 16th, where we'll provide them additional information on the status of the project and we are anticipating we will be seeking approval of their endorsement of the not-to-exceed price, should we -- should the board decide to proceed down that route in November of 2018.": Hearing Transcript Volume 1, page 53.
[20] Hydro One AIC, paragraph 34.
[21] Hydro One AIC, paragraph 34.

15. Hydro One's AIC indicates that unforeseeable means items not included in the risk register.[22] This is not at all consistent with Hydro One's testimony. A review of Hydro One's testimony on the subject of a "not-to-exceed" price reveals that Hydro One believes that there is a long list of eventualities that could result in higher costs above $642 million (or $683 million, which was the number first cited as the "not-to-exceed" price[23]). Hydro One is clear that it would seek to recover these additional costs from ratepayers. Examples include:

    a. Conditions imposed by regulatory and governmental agencies.[24]

    b. EA costs where Hydro One cannot rely on the NextBridge EA.[25]

    c. Additional costs where Hydro One's EA is not approved on the expected timeline.[26]

    d. Higher than expected consultation costs.[27]

    e. Significant changes in materials costs.[28]

    f. "Around the Park" costs where Parks Canada does not approve Hydro One's proposal.[29]

16. In addition, HONI's current forecast of $642 million does not include ratepayer costs of the IESO acquiring incremental capacity to try to maintain system reliability beyond 2020.[30]

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[22] *Ibid*.
[23] See Hydro One response to Staff Interrogatory #18 in EB-2017-0364 (filed as Exhibit I.1.18), and discussion at Hearing Transcript Volume 4, pages 40-41.
[24] Hydro One pre-filed evidence in EB-2017-0364, at Exhibit B, Tab 7, Schedule 1, page 10. See also Hearing Transcript Volume 1, page 63.
[25] If Hydro One is not able to rely on an approved NextBridge EA, Hydro One anticipates additional EA related costs of $20 million, a minimum two year schedule delay, as well as additional non-EA costs that it is not able to estimate. These additional costs are not included in the LSL Project cost estimate or accounted for in Hydro One's contingency. See paragraph 62(a) of NextBridge's AIC, and associated references.
[26] Hearing Transcript Volume 4, page 44.
[27] Hydro One has stated that if consultation costs are higher than expected, they may be recovered as an increment to any "not to exceed" price. See paragraph 62(c) of NextBridge's AIC, and associated references.
[28] Hydro One pre-filed evidence in EB-2017-0364, at Exhibit B, Tab 7, Schedule 1, page 10. See also Hearing Transcript Volume 4, pages 50-52.
[29] See Hearing Transcript Volume 4, page 41. Failure to receive Parks Canada approval would add at least $40 million to Hydro One's costs. See paragraph 62(b) of NextBridge's AIC, and associated references.
[30] IESO's projected cost for this incremental capacity is $18 million for 2021 and $22 million for 2022 (and $38 million for 2023, if the EWT expansion is delayed to that time, notwithstanding the "unacceptable

17. It is clear that Hydro One is not offering any type of price guarantee. The real question is whether Hydro One's forecast costs of $642 million can actually be achieved. The evidence is clear that Hydro One's actual costs will be higher, likely substantially higher, if and when all the uncertainties in their project are resolved.

18. As explained in NextBridge's AIC, Hydro One's forecast costs are based on an AACE Class 3 estimate.[31] This implies that the costs could be understated by as much as 30% (or 50% in the case of the Class 4 estimate for the "around the Park" route).

19. A determination that Hydro One's costs are understated can be made by considering all of the uncertainties around the LSL Project.[32] There are potential additional costs associated with such items as the failure to obtain Parks Canada approval to traverse the Park; the failure to obtain a Declaration Order instead of an individual EA approval; the failure to be permitted to rely on an approved NextBridge EA; the failure to reach agreement with FNM communities; and the failure to obtain necessary land rights. Even if all of these approvals are ultimately obtained, delays will add to costs.

20. Hydro One's assertion that its "baseline cost estimate has a 6% upper bound"[33] is not supported by the evidence. No industry accepted practice or standard is provided to support the use of this 6% upper bound approach; essentially parties are simply being asked to trust Hydro One's estimate. Hydro One's response to Undertaking JT 2.25 is clear that the cost estimate for its EPC contract (even with its built-in contingency amounts) does not include impacts from many uncertainties.[34] It is not credible to conclude that the Hydro One project, which is at an AACE Class 3 level and remains subject to substantial

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risks to system reliability and the associated cost uncertainties)". See paragraph 62(f) of NextBridge's AIC, and associated references.

[31] See NextBridge AIC, at paragraphs 57-61, and associated references.

[32] See NextBridge AIC, at paragraphs 62-63, and associated references.

[33] Hydro One AIC, at paragraph 40.

[34] Undertaking JT 2.25 filed in EB-2017-0364 indicates that "The fixed-price EPC contract is based upon the current scope of work as defined at the time of s92 filing. Should there be no authorized changes due to things outside the control of SNC-Lavalin, the EPC portion of the project will be delivered for $546 million. However changes to the scope of work, schedule, etc. due to things beyond SNC-Lavalin's control may be subject to contract changes for review and potential approval by Hydro One (i.e., adaptations to account for unforeseen imposed conditions on environmental assessment approvals)."

uncertainties, has a smaller accuracy band around its costs than NextBridge's "shovel ready" project.

21. Similarly, Hydro One's assertion that its cost forecast is more reliable than NextBridge's because Hydro One has used a "Monte Carlo simulation" and risk registers does not withstand scrutiny.[35] The description of the Monte Carlo simulations undertaken reveals that Hydro One understated the number and impact of the risks associated with the timing and cost of the LSL Project. Hydro One's pre-filed evidence indicates that 8 "key risks" were taken into account for the Monte Carlo simulation.[36] That is substantially fewer than the 50 risks identified in Hydro One's September 2018 risk register.[37] Hydro One has confirmed that its most recent Monte Carlo analysis does not include the risk that Hydro One will not be able to use the NextBridge EA.[38] Hydro One has also testified that its risk register does not include risks associated with items included in the unsigned EPC with SNC Lavalin.[39] It is not clear what other uncertainties are excluded from the Monte Carlo analysis.

22. Most of Hydro One's discussion under the "Costs to Construct the Line" heading is focused on NextBridge's cost estimates. The allegations made are not supported by the record of this case.

23. Hydro One implausibly argues that its not-yet-signed EPC is somehow more certain than NextBridge's executed EPC.[40] That is not so. Hydro One does not yet have a definitive signed EPC, and there may be changes before the document is completed and signed.[41] SNC Lavalin conceded that they will not sign an EPC unless they are comfortable with the schedule, because of the risk of liquidated damages claims for delays from the stated

[35] Although not referenced in the Hydro One AIC, the Monte Carlo simulation evidence is found in EB-2017-0364 at Exhibit B, Tab 7, Schedule 1, pages 8-10, and in the responses to Undertaking JT2.30 and Staff Interrogatory #13 (filed as Exhibit I.1.13) and SEC Interrogatory #15 (filed as Exhibit I.5.15) and NextBridge Interrogatory #64 (filed as Exhibit I.2.64). The Hydro One risk register is found as Attachment 1 to Hydro One's response to Staff Interrogatory #13 (filed as Exhibit I.1.13, Attachment 1).
[36] EB-2017-0364, Exhibit B, Tab 7, Schedule 1, pages 8-10.
[37] EB-2017-0364, Attachment 1 to the response to Staff Interrogatory #13 (filed as Exhibit I.1.13, Attachment 1).
[38] Hearing Transcript Volume 3, pages 172-173.
[39] Hearing Transcript Volume 3, pages 163-164.
[40] Hydro One AIC, at paragraph 35.
[41] See paragraph 62(e) of NextBridge's AIC, and associated references. See also paragraph 112, below.

timeline.[42] NextBridge's EPC is signed[43], and the parties are ready to proceed. Contrary to Hydro One's assertion[44], NextBridge's EPC[45] is priced for 2020 costs.[46]

24. NextBridge's signed EPC is superior to Hydro One's, and includes many attributes not found in the draft Hydro One EPC.[47] Unlike Hydro One, NextBridge does not shift all responsibility for design and construction oversight to the contractor.[48] That is a particular concern for Hydro One, because its design and planning are not as far advanced as NextBridge. Hydro One's design continues to evolve[49], and its contractor has not yet completed the required geotechnical work to review the planned LSL Project route and structure placement[50]. This means that there is real risk as to the reliability and timing and ultimate cost for the LSL Project. Hydro One refused to answer questions about SNC Lavalin's track record for completing significant transmission projects, indicating that the information is confidential and proprietary.[51] When asked about whether there are lawsuits against SNC Lavalin related to cost overruns, Hydro One pointed NextBridge to SNC Lavalin's public filings on SEDAR.[52] As discussed with the SNC Lavalin witness, the SEDAR filings confirm that SNC

[42] Hearing Transcript Volume 1, pages 114-115.
[43] NextBridge's EPC is produced in response to Staff Interrogatory #7, filed as Exhibit I.NextBridge.Staff.7.Attachment 3.
[44] Hydro One AIC, at paragraph 42.
[45] Filed in response to Staff Interrogatory #7, filed as Exhibit I.B.NextBridge.Staff.7.Attachment 3.
[46] As explained in response to SEC Interrogatory #24, NextBridge's EPC includes escalation of costs for a 2020 in-service date. See also NextBridge response to Hydro One Interrogatory #8, filed at Exhibit I.B.NextBridge.HONI.8.
[47] These include narrow definition of force majeure, a presumption against change orders, very narrow ability for Valard to seek schedule relief for differing site conditions or owner-caused delay, and predetermined unit rates arising from "move around events. See NextBridge AIC, at paras. 29 and 30, and associated references.
[48] Discussed at paragraph 30 of NextBridge's AIC (with associated references). The relative roles of each owner and its contractor are depicted in the table set out at pages 56-58 of the SEC Compendium for the Hydro One cross-examination (Exhibit K2.2). The suggestion at paragraph 38 of Hydro One's AIC that Hydro One will supervise SNC Lavalin's activities is not accompanied by any evidentiary reference, and is not supported by the record.
[49] Hearing Transcript Volume 1, pages 64-70.
[50] Hearing Transcript Volume 1, pages 103-104.
[51] NextBridge Interrogatory #42(b) in EB-2017-0364 (filed as Exhibit I.2.42) asked: "For the last 10 years, provide specified information for any transmission project over 50 kilometers and at least 100 kV and above worked on by SNC-Lavalin" The response provided was that "the information requested is confidential and in some cases, proprietary information and SNC-Lavalin has strict contractual and confidentiality undertakings with our respective clients and therefore SNC-Lavalin cannot share any such information listed above."
[52] Hydro One response to NextBridge Interrogatory #42(a) in EB-2017-0364 (filed as Exhibit I.2.42).

Lavalin is subject to ongoing proceedings regarding alleged corruption and bribery that may impact its ability to enter into some government contracts.[53]

25. NextBridge's clear testimony at the hearing is that it plans to deliver the EWT Line Project by December 2020, within its stated cost estimate of $737 million (which includes a $50 million contingency amount).[54] NextBridge acknowledges that it is at risk for expenditures beyond its cost estimate.[55] NextBridge's 10% accuracy band above its estimate is for additional costs that are not currently foreseeable.[56] This 10% amount is not part of NextBridge's budget.[57] Instead, it is NextBridge's mature estimate of the additional or reduced costs that could result from currently unknown items not included in the risk register.[58]

26. The OEB can be confident in NextBridge's cost estimate for all the reasons explained in NextBridge's AIC and testimony.[59] As described, NextBridge has undertaken very detailed and complete design and investigation work to be ready to proceed with the EWT Line Project. NextBridge has a signed EPC contract that properly apportions accountability and oversight for project work between the owner and the contractor. That stands in contrast with the Hydro One approach to leave all of the design, construction and oversight to SNC Lavalin. As NextBridge witness Mr. Brott testified: "[F]rom an engineering point of view, when you have the engineering under the contractor's purview as well, on a fixed-price contract that could be, you know, underestimated margins and no oversight, it could be a recipe for disaster."[60]

27. NextBridge's partner NextEra has a long and successful track record in completing major projects on-schedule and on-budget.[61] NextEra is motivated and committed to completing

[53] Hearing Transcript Volume 1, pages 106-107 and Exhibit K1.3. SNC Lavalin's Interim Consolidated Statements discuss, among other things, a World Bank Settlement and RCMP investigations/charges and impacts of Canada's Integrity Regime (see pages 34-35, under the heading "Contingent Liabilities").
[54] Hearing Transcript Volume 7, pages 5-8 and 95.
[55] Hearing Transcript Volume 7, pages 58-59 and 77-78.
[56] Hearing Transcript Volume 7, pages 5-8.
[57] Hydro One alleges that the 10% accuracy band is actually part of NextBridge's budget, but provides no evidentiary reference for this allegation: see Hydro One AIC, para. 41.
[58] Hearing Transcript Volume 7, pages 7-8 and 61.
[59] NextBridge AIC, paragraphs 21 to 41 (with associated references).
[60] Hearing Transcript Volume 6, page 206.
[61] See response to SEC Interrogatory #16 (filed at Exhibit I.NextBridge.SEC.16). See also response to SEC Interrogatory #26 for a discussion of Valard projects (filed at Exhibit I.NextBridge.SEC.26).

the EWT Line Project within the forecast cost and timing parameters. As NextBridge's witness Ms. Walding explained, NextEra participates in competitive transmission projects across North America, and where NextEra does not come in on budget then this is a "reputational risk for us winning other projects in the future and being able to grow our business".[62]

(b) Income Tax

28. Hydro One asks the OEB to consider purported tax savings for its project arising from potential future ownership by BLP First Nations in the LSL Project.[63] No credence should be given to this speculative assertion. No numbers are provided to indicate the magnitude of any future savings. More importantly, Hydro One's position is premised on an anticipated commercial arrangement for which discussions and negotiations have not even begun, let alone concluded.[64] It took five years for NextBridge to conclude its equity participation with BLP.[65] Previously, it took three years for Hydro One to negotiate arrangements with BLP, in advance of the designation proceeding.[66] Therefore, any argument that Hydro One's plans may result in lower income taxes is entirely speculative at this time.

(c) OM&A Costs

29. While acknowledging that OM&A costs are not within the purview of this panel, Hydro One argues nonetheless that the relative OM&A cost estimates presented by each party are something that should be taken into account at this stage.[67]

30. It is not clear to NextBridge that future OM&A costs fit within the LTC determination that the OEB must make under sections 92 and 96 of the *OEB Act*. These costs will be in scope in the subsequent revenue requirement proceeding for the successful transmitter.

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[62] Hearing Transcript Volume 7, page 81.
[63] Hydro One AIC, paragraph 55.
[64] Hydro One has confirmed that it has not yet commenced any negotiations with BLP: see Hearing Transcript Volume 3, pages 5-6.
[65] Hearing Transcript Volume 3, pages 3-7.
[66] *Ibid*.
[67] Hydro One AIC, paragraph 57.

31. Hydro One's position that there is a gap between the forecast OM&A costs of Hydro One and NextBridge has not been tested. NextBridge is confident in its own forecast, having spent substantial time seeking ways to reduce it to the lowest feasible level.[68] Hydro One's forecast of $1.5 million per year for OM&A costs appears to be understated, as seen by the fact that this amount is substantially lower than the $7.1 million of OM&A costs per year that Hydro One indicated in its proposal at the designation phase of this process.[69]

32. The main difference between the OM&A costs of the two parties is that Hydro One's costs are incremental to its existing Ontario transmission operations, whereas NextBridge does not have the same level of local operations from which to draw resources. This is a reality of encouraging competition and new entrants in the Ontario transmission market.[70] While it may appear that Hydro One has certain advantages for lower OM&A costs, NextBridge is committed to seeking efficiencies in its own costs.[71] To the extent there are more opportunities for NextBridge to construct and operate additional transmission projects in the region, that will also facilitate NextBridge's ability to find additional efficiencies of scope in OM&A.

33. Further, even if one accepts the untested gap between the Hydro One and NextBridge as-filed OM&A cost forecasts, the impact on ratepayers is quite modest especially when considered in the context of transmission rates. The difference between the NextBridge and Hydro One O&MA cost forecasts is $2.4 million. The overall revenue requirement recovered from Ontario transmission ratepayers through the Uniform Transmission Rate is $1,603 million in 2018.[72]

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[68] This can be seen in NextBridge's OM&A forecasts that have developed over time, culminating in the $3.9 million per year forecast set out in response to Staff Interrogatory #54, filed at Exhibit I.NextBridge.Staff.54.

[69] As set out at page 34 of the EB-2011-0140 Phase 2 Designation Decision: "EWT LP's estimated annual operation and maintenance cost is $7.1 million. EWT LP explained in its application that this estimate includes $1.9 million for "Administration and General" which, if excluded with its share of the contingency, would bring their estimate down to $4.9 million/year."

[70] As confirmed in the Hydro One AIC (para. 14), one of the stated objectives of the OEB's "Framework for Transmission Project Development Plans" (EB-2010-0059) was to "support competition in transmission in Ontario to drive economic efficiency for the benefit of ratepayers".

[71] See, for example, the continued effort by NextBridge to reduce its forecast costs - response to Staff Interrogatory #54, filed at Exhibit I.NextBridge.Staff.54.

[72] EB-2017-0359 Decision and Rate Order, 2018 Uniform Transmission Rates, at page 1.

34. As a final point on the topic of OM&A costs, NextBridge strongly disputes Hydro One's allegation that NextBridge's approach is "unrealistic".[73] NextBridge will have appropriate operational support to ensure the safe and reliable operation of the EWT Line Project at all times.[74] NextBridge's partner NextEra has a long history in the electric utility industry, owning and operating many high-voltage transmission lines throughout North America.[75] NextBridge operations will be headquartered in Thunder Bay.[76] Local staff will be augmented by local emergency response contractor crews, local vegetation contractor crews and local overhead transmission line contractor crews.[77]

(d) Overall Uniform Transmission Rates

35. A clear indication that Hydro One seeks to restrict other parties from sharing in the Ontario transmission market is in the argument that ratepayers are already paying for Hydro One's fixed sunk costs (such as equipment, facilities and fleet), and the LSL Project will allocate those costs over more assets.[78] Hydro One says this is a reason to favour its project. That is not consistent with OEB policy to encourage competition in transmission. Hydro One's argument would limit competitors for new transmission, because they don't have the same existing assets and operating infrastructure.

IV. Reliability

36. Hydro One shares NextBridge's view that the OEB's review of quality/reliability of service under sections 92 and 96 of the *OEB Act* has two dimensions – technical matters as to the design and construction of the project, as well as the date when the new EWT line will be in service.[79] On each of these items, NextBridge's project is preferred to Hydro One's. Concerns about Hydro One's design raise technical reliability issues. The uncertainty around when Hydro One's project will be in-service leads to strong doubt about whether the LSL Project will meet the reliability requirements for consumers in northwest Ontario.

[73] Hydro One AIC, paragraph 56.
[74] Exhibit D, Tab 1, Schedule 1.
[75] Hearing Transcript Volume 7, page 38-39.
[76] Hearing Transcript Volume 6, page 56.
[77] Hearing Transcript Volume 6, page 57-59.
[78] Hydro One AIC, paragraph 58.
[79] Hydro One AIC, paragraph 60 and NextBridge AIC, paragraph 54.

37. NextBridge's AIC sets out concerns with Hydro One's technical design, including the decision to use 87 quad circuit towers through the Park.[80]

38. In its AIC, Hydro One cites the IESO's response to a NextBridge interrogatory about the four-circuit line through the Park and asserts that this response confirms that there are no reliability concerns.[81] Importantly, though, Hydro One fails to quote the IESO's entire response. The omitted passage from the IESO's response indicates that: "[f]rom an operating perspective, based on the IESO's limited experience with four circuit towers in the Northwest, it is difficult to assess whether, and to what extent, it may be less reliable than the two separate double-circuit line alternative."[82]

39. In contrast to NextBridge's careful approach to design[83], Hydro One is trying a never-been-done approach (87 quad towers in remote northwest Ontario in the middle of otherwise double circuit line) in the hopes that it will reduce construction costs. Hydro One's quad towers are inferior to NextBridge's double circuit EWT Line design from a reliability and quality perspective. Hydro One's plan to use 87 quad circuit towers through the Park with no failure containment increases reliability risks.[84] Compounding this increased reliability and quality risk, is Hydro One's history of tower failures.[85] Also, Hydro One refused or declined to provide detailed answers to questions about technical aspects of the design, construction and placement of the quad circuit towers in the Park.[86] As a result, the record shows an inferior design that, coupled with a history of tower failures, leads to the conclusion that Hydro One has failed to show its quad tower experiment in the remote

[80] NextBridge AIC, paragraphs 75-77, and associated references.
[81] Hydro One AIC, paragraph 61.
[82] IESO Response to NextBridge Interrogatory #22.
[83] As summarized in the NextBridge AIC, paragraphs 43 and 44, and associated references.
[84] See NextBridge AIC, paragraphs 75-76, and associated references.
[85] See NextBridge AIC, paragraph 77, and associated references.
[86] As described in the letter from NextBridge's counsel (David Stevens) to the OEB dated September 26, 2018, Hydro One refused or declined to answer part or all of 28 different interrogatory requests. Many of these related to tower design. Examples include NextBridge Interrogatory 24(a) (Provide copies of workpapers associated with the all-in costs for the four circuit and double circuit transmission towers); NextBridge Interrogatory 24(g) (For the last 3 years, provide copies of documentation, analyses and studies related to the design, testing etc. for the proposed four circuit transmission line); NextBridge Interrogatory 27(a) (Explain in detail the process and status of the full scale testing of the tower designs for the four circuit transmission line).

northwest Ontario as reasonable, especially given the alternative which is NextBridge's double circuit EWT Line that provides redundancy, and, therefore, a more reliable design.

40. Hydro One has also failed to provide certainty about its required two week outage of the existing EWT line to put the new quad circuit configuration into service. In cross-examination, the Hydro One witnesses confirmed that the date for the outage could shift for weather-related reasons, and this could in some circumstances move the outage dates by an entire year (from summer 2020 to summer 2021).[87] This would have negative implications from both a cost and reliability perspective. Hydro One's risk register indicates this delay would cost an additional $5 million[88], and the delay would use most if not all of Hydro One's one year window between its forecast in-service date and the "drop dead" date of the end of 2022.

41. On the issue of timing for the LSL Project, Hydro One largely misses the point. NextBridge does not say that an in-service date of December 2020 is mandatory because of the OIC. Instead, NextBridge's proposal to have its EWT Line Project in-service on December 31, 2020 responds to all of the evidence from the IESO which makes clear that there are reliability concerns where the new EWT line is delayed beyond 2020 and the repeated confirmation from the IESO that it recommends a 2020 in-service date.[89] That is consistent with the OIC, which indicates an expected 2020 in-service date.

42. In testimony at the hearing, the IESO witness Mr. Maria indicated that the new EWT line is "needed in 2020".[90] The IESO witnesses explained that while the capacity shortfall to northwest Ontario can potentially be managed until 2022 (which was referred to as a "drop dead date"), the IESO has a strong preference for meeting the consistently-stated 2020 in-service date.[91] This position is supported by the previous and current Ministers of Energy.[92]

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[87] Hearing Transcript Volume 1, pages 89-92.
[88] See item #42 in Hydro One's risk register, found as Attachment 1 to the Hydro One response to Staff Interrogatory #13 (Exhibit I-1-13).
[89] This issue is described in detail at paragraph 45 of the NextBridge AIC and associated references.
[90] Hearing Transcript Volume 4, page 135.
[91] Hearing Transcript Volume 4, pages 135, 136, 152 and 155.
[92] See NextBridge AIC, paragraphs 45(c) and (e), and associated references.

43. Hydro One's AIC seeks to downplay the IESO's cost estimates to procure incremental capacity for the years when the new EWT line is not in service, stating that IESO has been overly conservative in its forecasts to date.[93] There is no basis in the record for this assertion. The IESO is the independent agency that will procure the required incremental capacity. No evidence is presented by Hydro One to support the OEB discounting the IESO's forecast that delaying the EWT line in-service date to the end of 2022 would cost ratepayers an additional $40 million.[94]

44. There is no debate over the IESO's conclusion that the end of 2022 is the "drop dead" date for the new EWT line.[95] Beyond that time, the reliability concerns identified by the IESO can no longer be managed without the new EWT line. This means that the project that is granted LTC approval by the OEB must be in service by January 2023.

45. As explained in NextBridge's AIC, all of the uncertainties around Hydro One's LSL Project lead to real concerns about whether it can have the project in service by January 2023.[96] This raises the prospect of unacceptable reliability risks, according to the IESO.[97]

46. If OEB grants LTC approval to Hydro One in December 2018, it will not know until much later how the uncertainties around the LSL Project will resolve, and what impact they will have on timing. It may be that by the time all the uncertainties are resolved it is no longer possible for Hydro One to meet a December 2022 in-service date. At that point, it will be too late to revert to NextBridge, and customers in northwest Ontario will face very meaningful reliability issues.

47. The timing (reliability) issue stands in stark contrast to the cost concerns that have been raised about the two projects. If there is overspending of forecast amounts, the OEB can address that item later, when it reviews actual expenditures and sets the revenue

[93] Hydro One AIC, paragraph 69.
[94] See NextBridge AIC, paragraph 62(f), discussing the IESO Addendum dated June 29, 2018 (filed at Exhibit K4.4).
[95] Hearing Transcript Volume 4, page 136.
[96] See NextBridge AIC, paragraphs 68 – 73, and associated references.
[97] This issue is described in detail at paragraph 45 of the NextBridge AIC and associated references, most particularly at paragraph 45(d).

requirement associated with the new EWT line. If the LSL Project is delayed beyond the end of 2022, there is no corresponding ability for the OEB to take steps to protect consumers and ensure reliability.

V. Indigenous Communities

48. Hydro One begins its discussion under this heading by suggesting that it has made "significant progress" with regards to Indigenous consultation. Hydro One's testimony that it will proceed with construction even before agreements with FNM communities are concluded[98] is unlikely to be looked upon favourably by impacted communities. Presumably, FNM communities will provide their perspective in their October 31st submissions.

49. As explained in NextBridge's AIC, the evidence in this proceeding is that Hydro One has underdeveloped relationships with affected communities, including FNM community members, and has completed very little consultation and engagement with area stakeholders.[99] No participation agreements are in place. No agreements have been reached with the First Nations who have outstanding land claims in the Park. This raises serious concerns about whether and how Hydro One can meet its forecast timing and costs for the LSL Project, given that it only has a one-year window between its forecast in-service date and the "drop dead" date indicated by the IESO.

50. Given the foregoing, it is certainly not the case that Hydro One's challenges with achieving First Nations and Métis support for its project "effectively disappear" where the project is not brought into service until 2021.[100] There is no evidence to support such a bold assertion. Even where Hydro One's project is delayed for other reasons beyond 2021, there is strong reason to doubt whether the necessary and appropriate agreements and support from FNM communities will be achieved by that time.

[98] Hearing Transcript Volume 3, at pages 9-10.
[99] NextBridge AIC, paragraph 69(d), and associated references.
[100] Hydro One AIC, paragraph 82.

51. Hydro One's complaint that exclusivity arrangements between NextBridge and BLP and MNO prevent Hydro One from negotiating with those parties[101] ignores the reality of the current circumstances. The fact is that BLP and MNO have freely and willingly partnered with NextBridge to support the completion of the EWT Line Project.[102] It is not surprising that they will not be willing or able to concurrently negotiate with NextBridge's competitor for the same project.[103] Indeed, Hydro One itself had an exclusivity agreement with BLP at the time of designation that prevented any other party from negotiating for a participation agreement with BLP until after the designation decision.[104] That confirms that Hydro One does not actually view exclusivity arrangements as being improper.

VI. The EA Process

52. In its submissions with respect to the EA process, Hydro One says that it "accepts" the Board's "long-held position" that the Board has no jurisdiction over environmental matters except to the extent that such matters affect the in-service date of a project or otherwise relate to the public interest.[105] Hydro One argues that the only issue for the OEB with respect to the EA process is whether there is evidence that Hydro One cannot complete the EA process so as to permit an in-service date of 2021.[106] In fact, the evidence is clear that the schedule within which Hydro One can complete the EA process bears on both of the key criteria for the granting of LTC approval in this case, namely, price/cost and reliability.

[101] Hydro One AIC, paragraph 80.
[102] Affidavit of Chief Collins filed on May 7, 2018 in relation to the NextBridge motion for the dismissal of Hydro One's Lake Superior Link Application (EB-2017-0364), at paragraphs 29, 30 and 34; and NextBridge response to MNO Interrogatory #1 (filed as Exhibit I.NextBridge.MNO.1).
[103] See June 1, 2018 BLP Argument on NextBridge motion for the dismissal of Hydro One's Lake Superior Link Application (EB-2017-0364), at para. 10.
[104] EB-2017-0364 May 17, 2018 Technical Conference Transcript, at pages 56-57 and Undertaking JT2.10.
[105] Hydro One AIC, page 25, paragraph 87. See also Hydro One AIC, page 2, paragraph 7, where it is said that considerations relating to "the process for obtaining the required environmental approvals" are outside the Board's jurisdiction.
[106] Hydro One AIC, page 25, paragraph 88.

53. According to Hydro One's evidence, the cost impact of a one-year delay in the EA process is almost $15 million.[107] During his cross-examination of the Hydro One witnesses, Board counsel sought further information about the cost impact of delays in Hydro One's EA process, particularly should Hydro One be required to carry out its own studies rather than relying on studies done by NextBridge. It was confirmed by Hydro One that, in the event of EA approval being delayed for two years, this would certainly "add other construction delays" to the cost impact on the EA process.[108] Board counsel asked about the total cost impact of a two-year delay in the EA process and suggested amounts in the range of $40 million.[109]

54. The response from Hydro One to Board counsel's questions was that his suggestion was "a little bit of an extrapolation" and that Hydro One "can certainly do a rough scenario".[110] After further questioning by Board counsel, Mr. Spencer said that he did not think the amount would be as high as suggested by Board counsel and that "it appears to be this could be a critical piece of information" which Hydro One "would be happy to provide".[111] The Hydro One witnesses were given the opportunity to come back with an answer to Board counsel's question.[112]

55. When, on a subsequent hearing day, the Hydro One witnesses came back to this subject, they did not have the apparently "critical piece of information" that they were to provide. Board counsel suggested that the cost of a two-year delay in the EA process would be $50 million and he asked if there is anything else that Hydro One can provide.[113] Ms. Croll said that Hydro One has not done the full calculations for a two-year delay, in that there are a number of impacts to the project and Hydro One has not been able to quantify everything.[114] When Board counsel suggested that the amount would be "north of $35 million", Ms. Croll again said that Hydro One hasn't done the calculations.[115]

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[107] EB-2017-0364 Exhibit I-1-7, page 2, Table 1.
[108] Hearing Transcript Volume 2, page 110, lines 13-18.
[109] Hearing Transcript Volume 2, page 111, lines 13-22 and page 112, lines 12-15.
[110] Hearing Transcript Volume 2, page 111, lines 23-26.
[111] Hearing Transcript Volume 2, page 112, lines 16-19.
[112] Hearing Transcript Volume 2, page 112, lines 20-23.
[113] Hearing Transcript Volume 4, page 31, line 23 to page 32, line 15.
[114] Hearing Transcript Volume 4, page 32, lines 16-24
[115] Hearing Transcript Volume 4, page 32, line 25 to page 33, line 3.

56. Clearly, there are significant cost implications associated with delays in the Hydro One EA process. Despite Hydro One's indication that it would be happy to provide this apparently critical information, Hydro One offered no calculation or estimation to refute the proposition that the cost of a two-year delay would be $50 million or "north of $35 million".

57. The schedule within which Hydro One can complete the EA process also bears on reliability. In its June 29, 2018 updated need assessment for the EWT Line Project, the IESO said unequivocally that relying on interim measures beyond the recommended in-service date of 2020 will result in additional risks to reliability and increased costs.[116] Thus, delay beyond December of 2020 has reliability implications, in addition to the increased costs of interim measures.

58. Further, the IESO's updated need assessment makes clear that the increased risks to system reliability of any delay beyond the end of 2022 are unacceptable.[117] In response to an interrogatory from OEB Staff, Hydro One said that it is cognizant of the fact that there could potentially be delays to the LSL Project outside of its control.[118] Hydro One went on to offer an example of the potential for delays: it said that "a delay in obtaining EA Approval after August 2020 could result in the in-service date being delayed past the end of 2022".

59. The interrogatory from OEB Staff did not ask specifically about delays in the EA process for the LSL Project; it asked generally about potential issues that could result in Hydro One's in-service date being delayed past the end of 2022.[119] In responding to this question, Hydro One chose to cite a delay in obtaining EA approval as a potential reason for the in-service date slipping beyond 2022. The reference by Hydro One to EA approval in the context of a potential delay of the in-service date beyond the end of 2022 is a stark confirmation that the timing of EA approval for the LSL Project bears directly on reliability While later in the interrogatory response Hydro One gave its view that there is a low probability of such a delay in EA approval, the prospect of delay is indeed a real one: to note just one potential

[116] IESO Addendum dated June 29, 2018, at page 6, filed at Exhibit K4.4. Discussed in NextBridge AIC, at para. 45(d), and associated references, and in this Response, at paras. 41 and 44.
[117] *Ibid*.
[118] EB-2017-0364 Exhibit I-1-7, part (b).
[119] Part b) question of OEB Staff Interrogatory #7, EB-2017-0364 Exhibit I-1-7.

cause of delay, the evidence is that Hydro One would likely have to submit detailed project plans as part of the EA process, which "are very onerous and time-consuming and take lots of field work".[120]

(a) Hydro One EA Approval

60. The Hydro One AIC includes submissions with regard to Hydro One's position that it has "two options" for EA Approval. According to Hydro One, one "track" involves awaiting the issuance of the EA approval for NextBridge's project and then submitting a request for a declaration order[121] and the other "track" involves continuing with an individual EA and utilizing available information and studies to "fast-track" the EA approval process.[122]

61. With respect to the "track" involving approval of an individual EA, the Hydro One AIC relies on evidence from Mr. Evers of the MECP to the effect that Hydro One's proposed scheduling took into account the regulated timelines.[123] Unfortunately, though, the Hydro One AIC did not provide the entire evidence given by Mr. Evers when he made the statement about regulated timelines. Immediately before the statement relied on by Hydro One, Mr. Evers described Hydro One's schedule as "ambitious" and immediately after the statement, Mr. Evers said:

> However, we don't know what comments are going to be received, specifically through the EA process and what the issues resolution process is going to look like, which may impact … the timeline that Hydro One has proposed. …one other factor is that it is the Minister's decision with Cabinet concurrence. So ultimately, we cannot speculate when that decision is going to happen and when Cabinet concurrence is going to occur. So that could play a role in the schedule as well.[124]

62. With respect to the "track" involving a declaration order, Hydro One asserts that the MECP confirmed that a declaration order, based on NextBridge's EA work, is possible notwithstanding the withdrawal or lack of approval of the NextBridge EA.[125] Hydro One

[120] Hearing Transcript Volume 6, page 81.
[121] Hydro One AIC, page 25, paragraph 89.
[122] Hydro One AIC, page 25, paragraph 90.
[123] Hydro One AIC, page 26, paragraph 95.
[124] Hearing Transcript Volume 7, pages 120-121.
[125] Hydro One AIC, page 30, paragraph 122.

provides a transcript reference in support of this assertion,[126] but the evidence of the MECP at the transcript reference provided by Hydro One was as follows:

- the witnesses couldn't speculate about whether it is possible for another party to step into the original proponent's shoes and almost take over their EA;
- as to whether the Minister would still consider granting a declaratory order to Hydro One in the event that the NextBridge EA ultimately is not approved, it would depend on the request that is submitted by Hydro One and what Hydro One indicated in that request in terms of its rationale and how it would meet environmental requirements;
- in relation to using the information from NextBridge's EA, the witnesses can't speculate; and
- the only path that the Ministry is involved in at this point is with the regular EA process – there has not been a request for a declaration order or any exemptions submitted to the Ministry.[127]

63. Hydro One makes the somewhat astonishing assertion that its evidence about securing EA approval or a declaration order in time to make a 2021 in-service date for the LSL Project is "uncontradicted".[128] To the contrary, there is considerable evidence in this case that casts doubt on whether Hydro One can achieve EA approval or a declaration order in time for a 2021 in-service date, including Hydro One's own risk register.[129] As NextBridge pointed out in its AIC, if Hydro One's LSL Project is approved by the Board, then, on Hydro One's own schedule, the earliest that the Marathon TS (and therefore the LSL Project) can be in service is December 2022.[130]

(b) Hydro One's Proposed Use of NextBridge's EA

64. Hydro One contends that there is "no doubt" it will be able to and is entitled to rely on the underlying studies and development EA work completed by NextBridge.[131] In support of this unequivocal proposition, Hydro One relies on evidence from Mr. Evers to the effect that

[126] Hearing Transcript Volume 7, pages 115-116.
[127] *Ibid*.
[128] Hydro One AIC, page 25, paragraph 91.
[129] Hydro One's most recent risk register is found in EB-2017-0364 as Attachment 1 to the response to Staff Interrogatory #13 (Exhibit I-1-13). It shows that many risks around the EA process are "Active", and that many of these would have schedule implications.
[130] NextBridge AIC, page 28, paragraph 72.
[131] Hydro One AIC, page 28, paragraph 106.

"whether [Hydro One is] meeting the requirements of the *Environmental Assessment Act* and our technical requirements, that is what we're looking for."[132]

65. Unfortunately, though, the Hydro One AIC did not include the entirety of the evidence given by Mr. Evers when he made this statement about what the Ministry is "looking for". Immediately prior to the evidence relied on by Hydro One, Mr. Evers said, in respect of the notion that information from one EA would be used to supplement information for another EA, that the MECP witnesses could not comment on this notion, nor could they indicate that it would be allowed.

66. Further, Mr. Evers went on to say it is the Ministry's position that the LSL Project is a new project and Hydro One would have to fulfill the requirements under the *Environmental Assessment Act* and whatever Hydro One submits would be reviewed in that context at that time.[133] Enbridge submits that it is illogical to expect that Hydro One's proposal to rely on publicly available information for the EA of the LSL Project[134] could possibly be an acceptable substitute for the lengthy period of detailed EA work that was required in respect of the EWT Line Project and, indeed, there is no evidentiary basis in this case to sustain a conclusion that Hydro One's proposal will be, or is likely to be, successful.

67. Hydro One argues that an issue of regulatory policy arises in respect of whether a party which has been allowed to recover the cost of its EA development work from ratepayers should be permitted "to deny ratepayers access to, and the use of, that EA work".[135] Yet Hydro One unabashedly trumpets its access to resources in respect of which it has been allowed to recover costs from ratepayers (including its "fleet" of helicopters,[136] its "vast operating and maintenance network"[137] and its existing right of way[138]) , even though Hydro One clearly has no intention of allowing NextBridge access to, or use of, any of those resources.

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[132] Hydro One AIC, page 27, paragraph 104.
[133] Hearing Transcript Volume 7, pages 111-112.
[134] Hearing Transcript Volume 2, pages 42-43 and 77.
[135] Hydro One AIC, page 25, paragraph 86.
[136] Hydro One AIC, pages 17-18, paragraph 58.
[137] Hydro One AIC, page 40, paragraph 156.
[138] Hydro One AIC, page 28, paragraph 109.

68. Further, in spite of the arguments made by Hydro One in opposition to NextBridge's proposal to recover costs for the Extended Development Period of the EWT Line Project,[139] it became clear during the hearing of the LTC applications that Hydro One's proposal includes significant cost savings that it expects to achieve by leveraging off of the work completed by NextBridge.[140] These costs have not been included in Hydro One's cost estimate for the LSL Project due to Hydro One's assumption that it can rely on NextBridge's work.

69. Hydro One's risk register reveals the EA costs that Hydro One expects to save based on its assumption that it can rely on EA work completed by NextBridge. The order of magnitude of these costs is shown in the risk register as $20 million.[141] In addition, Hydro One's assumption of reliance on EA work completed by NextBridge is given as the basis for avoiding a schedule impact which, by order of magnitude, Hydro One says is greater than two years.[142]

70. Of course, avoiding a schedule impact of greater than two years by relying on work completed by NextBridge would mean other significant cost savings for Hydro One in addition to reduced costs for the EA process itself. As discussed above, this issue was pursued by Board counsel during cross-examination of the Hydro One witnesses. Hydro

[139] In the Submissions of Hydro One Networks Inc. (NextBridge Development Costs) filed 2018-09-19, Hydro One argued (at page 5, paragraph 19), for example, that NextBridge filed no evidence upon which the Board can conclude that additional development costs (above those approved in the EB-2011-0140 designation proceeding) have been prudently incurred.

[140] In relation to First Nations and Métis consultation, Hydro One acknowledges that its costs are lower than NextBridge's by more than 90% due to "the substantial amount of consultation completed to-date on the existing route" – see Hydro One response to Undertaking JT 2.21 at Exhibit JT2.21, at page 2. Further, the evidence is that NextBridge fostered an initiative with First Nations communities (Hearing Transcript Volume 6, pages 180-181), which evolved into a training program in coordination with NextBridge's general contractor, Valard (Hearing Transcript Volume 4, page 167), and that Hydro One will be looking at opportunities for meaningful employment for graduates of the program and to enhance the skills that it is "hoping to be able to leverage on this particular project" (Hearing Transcript Volume 3, pages 38-39). See also Technical Conference Transcript dated May 17, 2018 at page 245 in EB-2017-0364 where Hydro One suggested that it may offer employment to workers trained through the program supported by NextBridge and its EPC contractor.

[141] Exhibit K1.2, Tab 30, Risk Counter 1, "Additional Comments on Cost and Schedule".

[142] Exhibit K1.2, Tab 30, Risk Counter 1, "Schedule Impact".

One's witness confirmed that $20 million is "just the EA portion" and that: "Certainly the two years would add other construction delays".[143]

71. Board counsel repeatedly attempted to get an answer from the Hydro One witnesses about the total cost implications of Hydro One's assumption that it will rely on EA work completed by NextBridge.[144] Unfortunately, even though the Hydro One witnesses were given an opportunity to think about the answer to Board counsel's question, they were not able to provide calculations and they were not able to provide any specific information to refute Board counsel's suggestion of amounts in the range of $30 million to $50 million.[145]

72. Despite the efforts of Board counsel, Hydro One has not quantified the costs excluded from the cost estimate for the LSL Project due to Hydro One's assumption that it will take advantage of EA work and other work completed by NextBridge. There is no doubt, though, that there is a substantial amount of costs excluded from Hydro One's estimate on this basis and that the amount is not limited to the $20 million for EA work referred to by Hydro One.

(c) Parks Canada Approval

73. Hydro One contends that there is "no basis to doubt" that Parks Canada will approve Hydro One's proposal to construct new quad-circuit towers through the Park.[146] But even Hydro One's own submissions indicate that Parks Canada has merely confirmed that the proposal for "replacement towers installed away from the current towers" is "an option that can be considered".[147]

74. The confirmation from Parks Canada that Hydro One's proposal "is an option that can be considered" is anything but a firm conclusion that the proposal will be approved. Indeed, the detailed impact assessment under the federal *Environmental Assessment Act*[148] required by Parks Canada would be a hollow exercise if Parks Canada were to conclude before the conclusion of the assessment that Hydro One's proposal will be approved.

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[143] Hearing Transcript Volume 2, page 110.
[144] See the discussion of this subject under the heading "The EA Process", above.
[145] Hearing Transcript Volume 4, pages 32-33.
[146] Hydro One AIC, page 28, heading, "No Basis to Doubt Parks Canada Approval".
[147] Hydro One AIC, page 28, paragraph 111.
[148] Hearing Transcript Volume 1, page 122.

75. Hydro One submits that "it is unreasonable to hypothesize" that Parks Canada would "suddenly adopt a completely different position"[149], but at this point the position taken by Parks Canada is simply that Hydro One's proposal can be considered. An ultimate disapproval of Hydro One's proposal by Parks Canada would not be a "completely different position" than the indication that the proposal is an option that can be considered.

76. Hydro One submits that, other than the decision of Parks Canada to deny NextBridge's request for access to the Park, there has been no evidence presented to explain why Hydro One's proposal would be denied by Parks Canada.[150] To the contrary, there is evidence in this proceeding that Hydro One's proposal is opposed by stakeholders including the Wildlands League[151] and Pic Mobert First Nation and Biigtigong Nishnaabeg.[152] Further, the evidence is that the Park is seen as a designated protected area by at least one First Nation[153] and that asserted Aboriginal/Treaty rights and a related comprehensive land claim have put into question claimed federal jurisdiction over the Park.[154] There is also evidence of a concern that, directionally, it is wrong to increase the reliance of the Northwestern Ontario electricity transmission system on a route through the Park.[155]

77. As confirmed by Hydro One's witness, it is clear that the Board does not know and will not know when it issues its decision in this proceeding whether Parks Canada will approve Hydro One's proposed work in the Park.[156] Hydro One's witness argued that "it is typical for leave-to-construct permissions to be given contingent on EA approvals".[157] By no stretch of the imagination, though, is the issue of Parks Canada approval in this case analogous to a matter that might be suitable for treatment as a condition in a "typical" LTC case.

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[149] Hydro One AIC, page 29, paragraph 113.
[150] Hydro One AIC, page 28, paragraph 108.
[151] Exhibit K1.2, Tab 6.
[152] BLP First Nations Evidence filed 2018-05-07 in EB-2017-0364, Affidavit of Chief Peter Collins at para 18.
[153] Hearing Transcript Volume 1, pages 128-129.
[154] Exhibit K1.2, Tab 18, Hydro One Lake Superior Link Transmission Project Environmental Technical Review of the Draft Terms of Reference for an Environmental Assessment, Shared Value Solutions, page 17.
[155] Hearing Transcript Volume 1, page 120.
[156] Hearing Transcript Volume 1, pages 133-134.
[157] Hearing Transcript Volume 1, page 134.

78. Of course, this case is not a typical one due to the competing LTC applications now before the Board. In the evidence filed in support of its competing LTC application, Hydro One said that the "most notable deviation between the two routes is that Hydro One will be using its existing ROW and infrastructure to avoid any greenfield construction around [the Park]".[158] Thus, Hydro One put forward a competing proposal based on the assumption that it can proceed with its proposal to build new facilities through the Park, but the validity of that assumption has been called into question and will not be known until after the Board has made its decision in this case.

(d) NextBridge's EA

79. Hydro One has offered submissions about the potential for NextBridge to withdraw the EA submitted to the MECP if NextBridge is not granted leave to construct the EWT Line Project.[159] Given the record of evidence in this proceeding, NextBridge submits that Hydro One's comments about withdrawal of an EA do not advance the consideration of the applications before the Board.

80. First, the evidence is that the MECP has repeatedly indicated to Hydro One that the LSL Project is a new undertaking and that Hydro One must fulfill the requirements of the *Environmental Assessment Act* in respect of its project.[160] Second, the evidence is that, if NextBridge is not granted leave to construct the EWT Line Project, permits for the construction of the Marathon TS will not be issued on the basis of NextBridge's EA approval but must await EA approval for the LSL Project.[161] Third, the MECP witnesses explained that, regardless of any withdrawal request, if NextBridge is not granted leave to construct for

[158] EB-2017-0364 Exhibit B-1-1, page 9.
[159] Hydro One AIC, pages 29-30.
[160] See, for example, letter dated April 10, 2018 from the Ministry of the Environment and Climate Change ("MOECC") to Hydro One, MOECC Evidence in EB-2017-0364, Attachment 10, where it is said that: "The ministry would like to emphasize that as outlined in our November 14, 2017 letter to Hydro One and reiterated in the March 16, 2018 correspondence; based on information provided to date, Hydro One's proposed Lake Superior Link project is considered a new undertaking for the purposes of the *Environmental Assessment* Act … ." See also page 8 of the EB-2017-0364 MOECC Evidence, indicating that the MOECC had revised meeting minutes prepared by Hydro One and had reiterated that, based on information provided to date by Hydro One, Hydro One would not be able to use NextBridge's environmental assessment for its project.
[161] Hearing Transcript Volume 7, page 126.

the EWT Line Project, it will be up to the Minister to decide whether or not to proceed with an approval of NextBridge's EA application. The testimony of Mr. Evers in this regard was as follows:

> Would the Minister make a decision on the project? We can't necessarily speculate, but the Minister … doesn't have to make a decision on the application. As well, there is a number of factors that the Minister can consider … when he makes a decision on the Application, and one of those could be the leave-to-construct, or the status of the leave-to-construct.[162]

(e) Hydro One's Stations Work

81. In relation to Hydro One's proposed work on the Marathon TS, Hydro One says that the MECP initially asked Hydro One to refrain from submitting any permit and/or approval applications to MECP and MNRF.[163] Hydro One goes on to say that the MECP has "since reconsidered this position" and has "now indicated" that they will allow Hydro One to submit relevant permit applications for review, with approval held until such time as other conditions have been met.[164] The statement that the MECP has "now indicated" that Hydro One may submit permit applications is, at best, a rather unfortunate choice of words. The evidence of Ms. Cross is that this was clarified by MECP at a meeting in July of 2018 with both NextBridge and Hydro One in attendance.[165]

82. Surprisingly, the Hydro One AIC introduces the notion that NextBridge does not seem to be concerned about, and has not taken any action to address, potential delays in the station approvals. As was reiterated in testimony by Ms. Tidmarsh, NextBridge was aware of a concern that delay in the station work might cause the in-service date for the transmission line to slip beyond 2020, but NextBridge did not become aware of Hydro One's position that this impact on the 2020 in-service date would actually occur until it received answers to interrogatories from Hydro One on September 24, 2018.[166]

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[162] Hearing Transcript Volume 7, page 113.
[163] Hydro One AIC, page 31, paragraph 123.
[164] Hydro One AIC, page 31, paragraph 124.
[165] Hearing Transcript Volume 7, page 136.
[166] Hearing Transcript Volume 6, pages 46-47 and Hearing Transcript Volume 7, pages 88-90.

83. Ms. Tidmarsh's testimony that NextBridge was not previously aware of Hydro One's position with respect to a delay of the in-service date was supported by the testimony of Ms. Cross. At the meeting with the MECP in July of 2018, a schedule was presented that showed the in-service date of Hydro One's Transformer Station Project as December 11, 2020.[167] During cross-examination by counsel for Hydro One, it was suggested to Ms. Cross that the purpose of the meeting in July 2018 was to inform the Ministry "of a delay in terms of the schedule". The response by Ms. Cross to this suggestion was as follows:

> No. The purpose of the meeting was to understand the schedule for the transformer stations that Hydro One has responsibility for in terms of upgrades that would support the East-West Tie, and how they related to the NextBridge EA.[168]

84. Given that Hydro One first made NextBridge aware of the conclusion that there would be a delay in the in-service date beyond 2020 when answering interrogatories on September 24, 2018, Hydro One's suggestion that NextBridge was unconcerned about the delay and took no action to address it is disingenuous and unhelpful.

85. The Hydro One AIC refers to evidence of the MECP that, if the NextBridge EA is approved, but leave to construct is granted to Hydro One for the LSL Project, the issuance of permits for the construction of the Marathon TS must await EA approval for the LSL Project (that is, either approval of Hydro One's individual EA or a declaration order).[169] Hydro One then proceeds in argument to challenge the credibility of this evidence from the MECP.[170]

86. Hydro One's challenge to the credibility of the MECP witnesses is inappropriate for a number of reasons. First, Hydro One itself relies on a "rule" that, if counsel seeks to challenge the credibility of a witness in argument, the witness must be given the opportunity to address the argument in cross-examination.[171] Hydro One never gave the MECP

[167] Exhibit I. NextBridge.STAFF.51, Attachment 3, page 42.
[168] Hearing Transcript Volume 7, page 138.
[169] Hydro One AIC, page 31, paragraph 126.
[170] Hydro One AIC, page 31, paragraph 127.
[171] Hydro One AIC, page 33, paragraph 134.

witnesses an opportunity in cross-examination to address the argument that Hydro One has made to challenge the credibility of the witnesses.[172]

87. Second, Hydro One argues that the evidence of the MECP witnesses is inconsistent with other evidence,[173] but it does not trouble itself to provide a single transcript or exhibit reference to specific evidence, as would be expected if the credibility of the evidence of the MECP witnesses is to be measured up against some other evidence in this proceeding.

88. Third, Hydro One's argument that the evidence of the MECP witnesses "has not been subject to verification within MECP" is in direct contradiction to the evidence of Mr. Evers, which was explicitly stated as a position of the Ministry, rather than a personal opinion of the witness. Specifically, Mr. Evers said that: "It is the Ministry's position that … Hydro One would have to fulfill their EA requirements for the Lake Superior Link before the Marathon transformer station permits could be issued."[174]

89. Fourth, the evidence of the MECP witnesses was given in a manner that was both neutral and credible and the content of their evidence was entirely credible: it is illogical to think that, if the Board were to grant leave to construct for the LSL Project in preference to NextBridge's EWT Line Project, construction permits for the Marathon TS would be issued on the basis of EA approval for a project that will not proceed (the EWT Line Project), rather than on the basis of EA approval for the project that is approved to proceed (the LSL Project).

(f) NextBridge's Construction Schedule

90. Hydro One asserts that NextBridge's construction schedule "will" be delayed.[175] While this categorical assertion seems to be based primarily on the need for NextBridge to obtain permits and approvals in order to proceed with construction (which of course Hydro One itself would have to do), Hydro One makes no attempt to address the evidence about the

[172] For example, the assertions in paragraph 127 at page 31 of the Hydro One AIC were not put to the MECP witnesses by Hydro One.
[173] Hydro One AIC, page 31, paragraph 127.
[174] Hearing Transcript Volume 7, page 126.
[175] Hydro One AIC, page 32, heading "NB's Construction Schedule Will be Delayed"

extensive[176] work carried out by NextBridge to ensure that there will be no delay to construction by reason of the need for permits and approvals.

91. NextBridge's evidence with regard to permits and approvals for construction includes the following:

- NextBridge has a comprehensive[177] multi-page permitting list that addresses when each permit is needed for particular construction segments;[178]
- NextBridge has built the prescribed turnaround times for permits into its schedule;[179]
- NextBridge realizes that several ministry offices in Northwestern Ontario are resource-constrained and it has been working on a project plan with them to ensure that they know what they will be receiving and when and what that will look like;[180]
- NextBridge does not need all permits at once and will be receiving permits in a steady steam as it proceeds with construction;[181]
- NextBridge has been working on the detailed project plans that lay out what goes into the first "batch" of permits and it expects to have those permits in hand for a June 2019 construction start;[182]
- NextBridge has been working with the Ministry of Natural Resources and Forestry for the past six to eight months putting together draft permits with detailed project information by segment;[183]
- NextBridge has been submitting draft permits to the regulatory bodies for any of the permits that it will need to construct the project;[184] and
- so far, NextBridge has not received anything that looks like it would be a problem.[185]

92. In its submissions about the permits and approvals that NextBridge needs in order to begin construction, Hydro One does not address any of the evidence set out above. Moreover, given the extensive work carried out by NextBridge in order to ensure that it will receive

[176] Hearing Transcript Volume 6, page 73.
[177] Hearing Transcript Volume 6, pages 86-87.
[178] Hearing Transcript Volume 6, page 95.
[179] Hearing Transcript Volume 6, pages 90-91
[180] Hearing Transcript Volume 6, page 89.
[181] Hearing Transcript Volume 6, page 75.
[182] Hearing Transcript Volume 6, page 89.
[183] Hearing Transcript Volume 6, page 75.
[184] Hearing Transcript Volume 6, page 73.
[185] *Ibid*.

permits and approvals in a timely manner, it is abundantly clear that the concerns raised by Hydro One about the time required to obtain permits are likely to mean delays for Hydro One's project, not NextBridge's project.

93. Hydro One argues that there is no evidence from NextBridge about certain matters that Hydro One relates to NextBridge's "detailed construction plans".[186] The NextBridge witnesses were not asked about these matters in cross-examination, but NextBridge's evidence is that the construction milestones to meet the 2020 in-service date will work.[187]

94. Shortly after making arguments about NextBridge's "detailed construction plans", Hydro One submits that a witness must be given the opportunity in cross-examination to address a contradictory argument or evidence.[188] However, Hydro One did not give the NextBridge witnesses an opportunity to address Hydro One's attempt, in argument, to contradict the evidence that the construction milestones to meet the 2020 in-service date will work.

VII. NextBridge's Criticisms of Hydro One's Proposal

95. Hydro One says that the NextBridge witnesses "made a number of criticisms" of the LSL proposal and, as noted above, Hydro One refers to a "rule" that "if counsel seeks to challenge the credibility of a witness in argument or by calling contradictory evidence", the witness must be given the opportunity to address the evidence or argument in cross-examination.[189]

96. Of course, it stands to reason that, in a case involving competing applications before the Board, each party will have comments on the proposal of the opposing party. There is no legal "rule", "ancient"[190] or otherwise, that says, in a case of competing applications before the Board, every comment about the opposing party's proposal must be put to the opposing party's witnesses in cross-examination. In fact, the Hydro One AIC includes many

[186] Hydro One AIC, page 32, paragraph 132.
[187] Hearing Transcript Volume 6, pages 32-33.
[188] Hydro One AIC, page 33, paragraph 134.
[189] Hydro One AIC, page 33, paragraph 134.
[190] Hearing Transcript Volume 6, page 51.

comments on, and "criticisms" of, NextBridge's proposal that were not put to the NextBridge witnesses during cross-examination.[191]

(a) Status of Hydro One's Work on Stations

97. Hydro One's arguments about the status of its stations work do not include a single transcript or exhibit reference back to the evidence on the record in this proceeding and it is apparent that these submissions were prepared without any regard for the evidence.

98. Hydro One draws support for its arguments from the testimony of the witnesses from the MECP,[192] but it makes no mention of the following evidence from Ms. Cross about her reaction to Hydro One's Transformer Station Project Schedule:

> …I do recall asking questions about the concrete footings, the amount of time between October and August and why it would take that long for concrete footings to be established, and is that typical.
>
> I asked questions around timing to order materials, if Hydro One would need to wait until leave to construct was granted for this particular station.
>
> So I did ask questions around some of these timelines.[193]

99. Hydro One refers to NextBridge's suggestions about speeding up the work on the stations as an example of NextBridge's "attitude to burdening ratepayers with added costs"[194], although in fact the evidence of NextBridge was as follows:

> …when I look at the amount of money that is available to rebuild three substations and $157 million, I would have thought that they had already covered – more than covered any type of acceleration work or any type of expensive work that would be required to complete the substation work, yes, the substation foundation work, no matter what time of year.[195]

[191] These comments or criticisms include, for example, much of paragraphs 14 to 18 on page 4 of the Hydro One AIC, paragraph 21 on page 5, much of paragraphs 24 to 26 on pages 6 and 7 and paragraph 132 on page 32.
[192] Hydro One AIC, page 34, paragraph 139.
[193] Hearing Transcript Volume 7, page 138.
[194] Hydro One AIC, page 34, paragraph 141.
[195] Hearing Transcript Volume 6, pages 171-172

Far from suggesting that ratepayers be burdened with additional costs, these comments indicate that Hydro One's costs are already more than sufficient to cover the cost of any type of accelerated work.

100. Hydro One argues that the suggestions by NextBridge about expediting the stations work are "nonsensical".[196] Yet the suggestions that Hydro One cavalierly labels as "nonsensical" were made by Mr. Mayers, who has about 20 years' experience with stations and substations and has been involved in the building of approximately 200 stations in 15 states, Ontario and Alberta.[197] It is clear from the record that the evidence of Mr. Mayers with regard to the stations work is anything but nonsensical.[198]

101. NextBridge submits that the Board should give no weight to Hydro One's arguments about the status of its stations work because Hydro One has made no attempt to connect its arguments with the evidence on the record in this proceeding.

(b) Hydro One's Costs

102. It is not clear why Hydro One has reproduced a large portion of its evidence in chief in the part of its AIC that purports to detail alleged violations of the rule in *Browne v Dunn*.[199] The quoted section of Hydro One's evidence in chief, which responded to earlier information from NextBridge, was presented a week before the NextBridge witnesses were empaneled. This has nothing to do with NextBridge's testimony at the hearing. There can be no alleged process unfairness associated with this item.

103. Hydro One asserts that it needed to reproduce the three pages of prepared testimony from Mr. Spencer in AIC in order to respond to the emphasis that NextBridge places on a

[196] Hydro One AIC, page 34, paragraph 142.
[197] Hearing Transcript Volume 6, page 169. Mr. Mayers' CV is filed at Exhibit A, Tab 3, Schedule 1, pages 7-8.
[198] Hearing Transcript Volume 6, pages 168-173.
[199] At page 33, paragraph 137 of the Hydro One AIC, it is said that the purpose of Section VII of its argument is to address (alleged) "violations" of the "rule".

presentation to MECP that compared the two projects.[200] Curiously, no references are provided to where NextBridge has emphasized or relied upon that presentation.

104. Once again, the argument in this section of Hydro One's AIC does exactly what Hydro One complains about – it presents allegations against NextBridge that Hydro One's counsel did not put to NextBridge's witnesses in cross-examination.[201]

105. In any event, the allegations in Mr. Spencer's speech that NextBridge has presented misleading evidence are unfair. NextBridge's witness Ms. Walding explained in response to questions from counsel to VECC why the information presented is accurate (subject to updates for recent events).[202]

106. The accusation that NextBridge did anything to "deliberately mislead the Government"[203] is baseless and another example of Hydro One's exaggerated and overstated claims. Hydro One may prefer to ignore that the IESO[204] and the old and new Ministers of Energy[205] support having the new EWT line to be in service for 2020, but that does not change the facts.

(c) Hydro One's Technical Compliance

107. In its submissions under the heading "Technical Compliance", Hydro One addresses the issue of "galloping" and it refers to two documents provided as Attachments 1 and 2 to the Hydro One AIC. Evidently, since it chose to provide these two technical documents as attachments to its argument, Hydro One considered that its approach to galloping was in need of further technical support and justification. However, looking beyond the selective

[200] Hydro One AIC, page 34, paragraph 143. The document in question is titled "Comparison of NextBridge's East-West Tie Project to Hydro One's Lake Superior Link Project", and it is found at page 55 of Attachment 3 to the NextBridge's response to Staff Interrogatory #51 (filed as Exhibit I.NextBridge.Staff.51).
[201] Although Hydro One included the "Comparison of NextBridge's East-West Tie Project to Hydro One's Lake Superior Link Project" in their Compendium for Cross-Examination of NextBridge (behind Tab 14B of Exhibit K6.1), this document was never referenced by Hydro One's counsel in their questions asked of NextBridge. The same can be said about the other documents noted by Hydro One in this section of the AIC – see Hydro One AIC, page 37, paragraph 144.
[202] Hearing Transcript Volume 6, pages 190-194.
[203] Hydro One AIC, page 37, paragraph 147.
[204] This issue is described in detail at paragraph 45 of the NextBridge AIC and associated references.
[205] See NextBridge AIC, paragraphs 45(c) and (e), and associated references.

quotes from Attachments 1 and 2 relied upon in the Hydro One AIC, and reading the two documents in their entirety, reveals that Attachments 1 and 2 support the Board's minimum technical requirements with regard to galloping and do not support the approach proposed by Hydro One.

108. The Board's *Minimum Technical Requirements for the Reference Option of the E-W Tie Line* ("OEB Minimum Requirements") state that galloping clearances are to be considered in the development of general structure configuration for voltages at or above 230 kV and that this analysis shall consider single loop galloping, "regardless of span length".[206] Hydro One's evidence, however, is that the geometry of its proposed towers was established to mitigate galloping up to 700 feet.[207] Hydro One indicated in evidence its understanding that "the practice of doing single loop galloping up to 700 feet" is different from what is stated in the OEB Minimum Requirements.[208]

109. Hydro One's approach is based on a bulletin[209] referred to in the Hydro One AIC as the Rural Electrification Administration ("REA") guide.[210] Hydro One notes in its argument that the tutorial presentation included as Attachment 1 to the Hydro One AIC refers to the REA guide.[211] Hydro One relies on a statement in the REA guide indicating that: "Single-loop galloping rarely occurs in spans over 600 to 700 feet."[212]

110. However, Attachments 1 and 2 to the Hydro One AIC, when read in their entirety, actually support the requirement, in the OEB Minimum Requirements, that single loop galloping be considered "regardless of span length".[213] More specifically, the data presented in Attachments 1[214] and 2[215] show that single loop galloping and larger ellipse

[206] OEB Minimum Requirements, November 9, 2011, section 3.6.4.
[207] Hearing Transcript Volume 1, page 77.
[208] *Ibid*.
[209] Hearing Transcript Volume 1, page 76.
[210] Hydro One AIC, page 38, paragraph 151.
[211] *Ibid*.
[212] *Ibid*.
[213] Note that Dr. Havard, the presenter of the tutorial at Attachment 1 and the author of the paper at Attachment 2 is also the co-author of the CIGRE task force paper cited in the OEB Minimum Requirements (at page 8, section 3.6.4.)
[214] Hydro One AIC, Attachment 1, pages 50-51.
[215] Hydro One AIC, Attachment 2, page 3, Figure 2.

magnitudes persist beyond the span length cutoff suggested by the REA guide. Further, while Hydro One refers to the use of "interphase spacers",[216] Attachment 1 notes these as a galloping control option, but does not suggest that they be used on typical spans in new construction.[217]

111. Hydro One also argues that Attachment 2 provides the basis for Hydro One's design for the LSL Project.[218] But Hydro One is not following the Application Example set out in Attachment 2.[219] The modified ellipse methodology presented in the Application Example is not based on the span length cutoff suggested by the REA guide that Hydro One proposes to follow. Rather, the Application Example is a variant of the approach prescribed in the OEB Minimum Requirements and thus it is very similar to NextBridge's approach.

(d) Hydro One's EPC Contract

112. While it may be the case that neither Hydro One nor SNC Lavalin are expecting any changes to the EPC contract before it is signed, that does not mean that there is "unchallenged evidence" that the contract will be signed in its existing form.[220] This proposition was put to the Hydro One/SNC Lavalin witnesses.[221] Their responses left the impression that there may still be changes to the EPC contract. These changes may arise from conditions attached to the LTC approval, or they may arise from other unforeseen matters.

(e) The Status of Hydro One's Project

113. Hydro One purports to respond to comments made in evidence to the effect that the LSL Project is not well developed.[222] In doing so, Hydro One does not provide a single transcript or exhibit reference back to the evidence on the record of this case. Largely, Hydro One's submissions on this subject set out its perceptions of how its transmission system resources

[216] Hydro One AIC, page 39, paragraph 152.
[217] Hydro One AIC, Attachment 1, pages 32, 33 and 44.
[218] Hydro One AIC, page 39, paragraph 152.
[219] Hydro One AIC, Attachment 2, page 4.
[220] Hydro One AIC, page 39, paragraph 154.
[221] Hearing Transcript Volume 3, page 157.
[222] Hydro One AIC, page 39, paragraph 155.

(*e.g.*, "vast operating and maintenance network" and "vast employee strength" in Ontario) should be compared to NextBridge's proposal.[223]

114. Obviously, the extent to which Hydro One has existing transmission system resources does not have any direct bearing on whether Hydro One has put forward a well-developed proposal for the LSL Project. The implication of Hydro One falling back on its transmission system resources in the context of whether or not it has presented a well-developed proposal is that the Board should approve Hydro One's proposal, not on its own merits, but on the basis of Hydro One's standing as an existing electricity transmitter in Ontario. Thus, NextBridge submits that the arguments made by Hydro One in this context actually support the conclusion that the LSL Project itself is not a well-developed proposal.

(f) Crossings

115. With respect to proposed crossings of Hydro One's transmission line by the EWT Line Project, Hydro One says that its position "has always been to maintain" a minimum 15 metre buffer around its structures.[224] Hydro One contends that NextBridge has been aware of and has understood these requirements and, in support of this contention, Hydro One has included as Attachment 3 to its argument a NextBridge "Typical Access Road" sketch dating from August of 2016.[225]

116. As its title indicates, Attachment 3 to the Hydro One AIC is an access drawing that shows a buffer around towers for driving access. This is much different from a clearance requirement for transmission lines crossing over Hydro One's circuits. Included as part of the email exchange found at Attachment 1 to this argument is a copy of an email from Hydro One to NextBridge dated August 31, 2018. In the August 31st email, Hydro One provided "clarifications" for crossings proposed by NextBridge. The second bullet point of these clarifications is as follows:

- If NextBridge is proposing to cross over HONI circuits, then NB must maintain a minimum horizontal offset for the crossing of ½ of the HONI right of way width

[223] Hydro One AIC, page 40, paragraph 156.
[224] Hydro One AIC, page 40, paragraph 159.
[225] *Ibid* and Hydro One AIC, Attachment 3.

> (measured from the center of the HONI structure to the closest edge of the NextBridge right of way). See attached sketch for clarification.

Prior to August 31st of 2018, Hydro One had not communicated to NextBridge this clearance requirement for transmission lines crossing over Hydro One's circuits.

117. Hydro One also says that, after Hydro One filed its application for leave to construct the LSL Project, NextBridge "effectively ceased" to collaborate on the matter of crossings.[226] This is simply wrong. Attachment 1 is a copy of one series of emails exchanged between NextBridge and Hydro One on the subject of crossings. As can be seen from Attachment 1, NextBridge re-submitted its permanent crossing proposals to Hydro One on April 9, 2018, Hydro One's response to the April 9th email was sent on July 20th, NextBridge followed up with Hydro One by way of emails on both August 7th and August 23rd and this email exchange ultimately led to a proposal by NextBridge for a technical workshop session at Hydro One's office during the first week of December, 2018.

118. During cross-examination by Mr. Garner, the NextBridge witnesses elaborated on the work that NextBridge has undertaken to meet Hydro One's requirements for crossings. As stated by Mr. Mayers,

> …as part of the requirement of HONI, our towers had to be bigger, taller, heavier because there was concerns that … if we were going to cross, that the towers needed to be …. strong enough to ensure they didn't fail and that the conductor didn't fall.
>
> So as we were going through this process back and forth … one thing I wanted to make clear is that we're going to be higher than the standard that's necessary.
>
> …
>
> But the bottom line for us has been that … it is costing an additional five-and-a-half million dollars to do this work.[227]

NextBridge submits that Hydro One's arguments about "burdening ratepayers with added costs" ring hollow when considered in the light of the evidence about NextBridge's efforts to achieve agreement with Hydro One on crossings.[228]

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[226] Hydro One AIC, page 41, paragraph 161.
[227] Hearing Transcript Volume 6, pages 188-189.

VIII. Conclusion

119. As explained in this Response, approval of leave to construct for Hydro One's LSL Project is not in the public interest. Hydro One's costs are uncertain. Its design is untested. There are strong reasons to expect that Hydro One's project will not be in service by the "drop dead" date of the end of 2022. This will negatively impact system reliability to consumers in northwestern Ontario.

120. In contrast, NextBridge's shovel-ready EWT Line Project offers a more reliable, more timely, lower risk solution to meet the identified need. NextBridge's project will provide cost certainty, a reliable design and can be in service by December 2020. The evidence is clear that NextBridge's project should be approved.

All of which is respectfully submitted this 31st day of October 2018.

(Original Signed)

Fred D. Cass
Counsel for NextBridge

[228] Hydro One AIC, page 34, paragraph 141.

EB-2017-0182/0194/0364
NextBridge Response to Hydro One Argument in Chief

ATTACHMENT 1

Erin Whillans

From: Erin Whillans
Sent: Wednesday, October 24, 2018 1:03 PM
To: 'Roman.Dorfman@HydroOne.com'
Cc: Aziz.Brott@nexteraenergy.com; hamirzada@canacre.com; Matey.MATEV@HydroOne.com; enza.cancilla@HydroOne.com; philip.wu@HydroOne.com; ali.afshar@HydroOne.com; Rebecca Loosley; Jennifer.Tidmarsh@nexteraenergy.com; Darcy Harty
Subject: RE: NextBridge - Permanent Overhead Crossing submission - updated drawing and comment table

Good afternoon Roman,

NextBridge would like to propose a technical workshop meeting with Hydro One for the first week of December at Hydro One's office in downtown Toronto. While we appreciate your offer of an immediate meeting, a December meeting will allow us time to prepare detailed materials in response to your last email and circulate them for your team's review prior to the meeting. NextBridge intends to have an outcome-oriented, detailed meeting and will attend with the specific materials and team members required in order to have a productive discussion. As a result, I would suggest a minimum meeting length of 3 hours. NextBridge will ensure that the right people needed for that discussion will plan to attend, and would ask that the Hydro One personnel that are able to review the technical drawings/requirements and make decisions on these matters are also in attendance at this meeting. To ensure a productive meeting, we would expect members from your line technician, engineering, and operations & maintenance teams to be present.

NextBridge will prepare an agenda and proposal for a communication strategy with Hydro One that I will transmit to you for circulation within Hydro One for review in advance of this meeting.

I look forward to hearing from you shortly with confirmation of a date that works in order to have the appropriate Hydro One personnel in attendance.

Kind Regards,

Erin Whillans
Land & ROW Specialist
LP CAN Land Services, Projects

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enbridge.com
Integrity. Safety. Respect.

From: Roman.Dorfman@HydroOne.com [mailto:Roman.Dorfman@HydroOne.com]
Sent: Wednesday, October 10, 2018 5:53 AM
To: Erin Whillans
Cc: Aziz.Brott@nexteraenergy.com; hamirzada@canacre.com; Matey.MATEV@HydroOne.com; enza.cancilla@HydroOne.com; philip.wu@HydroOne.com; ali.afshar@HydroOne.com; Rebecca Loosley; Jennifer.Tidmarsh@nexteraenergy.com
Subject: [External] RE: NextBridge - Permanent Overhead Crossing submission - updated drawing and comment table

Erin, Hydro One engineering staff are willing to meet as early as next Monday (Oct. 15/18) as requested by you below. Please let me know if this is acceptable and I will make arrangements for a meeting room at our Toronto office.

If that date is unacceptable, please provide a few dates that may work for NextBridge staff later this month and I will find out which date works best for all.

Thanks

Roman Dorfman
Sr. Real Estate Coordinator,
Facilities and Real Estate Services

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From: Erin Whillans [mailto:Erin.Whillans@enbridge.com]
Sent: Friday, September 21, 2018 5:34 PM
To: DORFMAN Roman
Cc: Aziz.Brott@nexteraenergy.com; Christopher James (cjames@canacre.com); hamirzada@canacre.com; MATEV Matey; CANCILLA Enza; O'QUINN Damian; WU Liping (Philip); AFSHAR Ali; Rebecca Loosley; Darcy Harty; Tidmarsh, Jennifer (Jennifer.Tidmarsh@nexteraenergy.com)
Subject: RE: NextBridge - Permanent Overhead Crossing submission - updated drawing and comment table

Good Day Roman,

Thank you for your email of August 31, 2018. NextBridge has reviewed the responses for the requested clarifications known as OP-43, OP-47, OP-48, OP-55, OP-92, OP-100, OP-162, OP-215, OP-216, OP-133 & OP-134. NextBridge has provided feedback to those comments, included below in blue text. Further to these comments, NextBridge kindly requests a technical workshop with the appropriate Hydro One and NextBridge personnel to address any outstanding requirements with Hydro One in order to resolve these matters as soon as possible.

I look forward to hearing from you shortly once Hydro One has had the opportunity to review the feedback provided below by NextBridge.

Hydro One (HONI) engineering have provided the following requested clarifications for the proposed crossings known as OP-43, OP-47, OP-48, OP-55, OP-92, OP-100, OP-162, OP-215, OP-216, OP-133 & OP-134.

- The proposed drawings submitted by NextBridge (NB) to cross over top of HONI Transmission Line **structures** is not acceptable. NB lines crossing near or over HONI structures meet all code, OEB, & HONI required in-span vertical wire clearances. The crossings below do not blowout over existing HONI structures in the listed weather cases.
    - Per note 14 on drawing 1234L-00802sh02 for OP-43, conductors do not blowout over the existing Hydro One structures at the CSA 60826 50-Year wind case or the Hydro One Wind-Only case.
    - Per note 14 on drawing 1234L-00803sh01 for OP-92, conductors do not blowout over the existing Hydro One structures at the CSA 60826 50-Year wind case or the Hydro One Wind-Only case.
    - Per note 14 on drawing 1234L-00805sh01 for OP-162, conductors do not blowout over the existing Hydro One structures at the CSA 60826 50-Year wind case or the Hydro One Wind-Only case.
    - Per note 14 on drawing 1234L-00806sh04 for OP-216, conductors do not blowout over the existing Hydro One structures at the CSA 60826 50-Year wind case or the Hydro One Wind-Only case.

- If NextBridge is proposing to cross over HONI circuits, then NB must maintain a minimum horizontal offset for the crossing of ½ of the HONI right of way width (measured from the center of the HONI structure to the closest edge of the NextBridge right of way). See attached sketch for clarification. This is a previously unidentified requirement that NextBridge does not consider is necessary or appropriate given that there are only 11 crossings in question and most of the maintenance requirements listed below are rare events and can be mitigated with an appropriate communication plan and agreement. As stated previously NB will commit to working with HONI O&M to ensure that HONI can safely maintain structures in proximity to crossing locations. NextBridge would propose a technical workshop with the appropriate NextBridge & HONI O&M staff. Examples of mitigations and proposed communication strategies should be prepared prior to a proposed workshop. The plan can be referenced as a schedule to the agreements and/or technical approvals that will be completed by HONI.

- HONI towers cannot be located within NBs proposed right-of-way (ROW) Concerns with access to HONI structures due to overlapping ROW's can be addressed with an appropriate communication plan and agreement. NextBridge would propose a technical workshop with the appropriate NextBridge & HONI O&M staff.

- HONI requires an area free of overhead lines to provide safe limits of approach when performing maintenance, assessment and restoration activities on HONI assets. If a sufficient horizontal offset is not provided, the following activities cannot be performed: See the responses below in regards to the identified activities.
  - Delivery of staff to top of transmission line structure with helicopter. This is a total of 11 structures most of which are wood H-frames. NB would typically not drop staff off on top of a wood H-Frame. To facilitate HONI maintenance work NB will work with HONI to allow HONI staff to be dropped off on the top of the NB structures which have all of the appropriate safety protocols in place for this type of work. The details of this can be worked through with NB operations.
  - Delivery of replacement hardware (i.e. insulators) to transmission line structure with helicopter. Replacing hardware on a structure should be considered a rare event. If a hardware replacement is required NB operations will work with HONI to perform the work in a timely manner.
  - Delivery and setting of new poles with helicopter. If a new pole/ structure is required NB will work with HONI to obtain an outage. Replacing a pole/ structure is not routine maintenance and should be considered a rare event. Whether the NB line crosses mid-span or over the structure the NB line will likely need to be de-energized and coordination with NB will be required to set a new structure with a helicopter.
  - Setting new poles / structure with crane. If a new pole/ structure is required NB will work with HONI to obtain an outage. Replacing a pole/ structure is not routine maintenance and should be considered a rare event. Whether the NB line crosses mid-span or over the structure the NB line will likely need to be de-energized and coordination with NB will be required to set a new structure with a crane.

- The restrictions are required as having conductors installed above HONI structures severely impacts restoration time in the event of a structure failure due to adverse weather conditions and will significantly increase the cost of maintenance and assessment activities. In the case of a structure failure NB is committed to working with HONI to obtain an outage and restore the line in a timely fashion. Replacing a structure is not routine maintenance and should be considered a rare event. Whether the NB line crosses mid-span or over the structure the NB line will likely need to be de-energized and coordination with NB will be required to set a new structure.

- NB must maintain clearances between HONI conductors/skywires and NBs conductors/skywires as per Hydro One clearance requirements. The NB design complies with these requirements.

- NextBridge structure grounding shall be isolated from HYDRO ONE/GLP structure grounding The NB design complies with these requirements.

- OP 202 & OP-203: the structures and all line components of the new EW Tie need to be designed and procured as per Hydro One standards as follows: The NB design complies with these requirements with one exception in relation to hardware suppliers. If NB does not use Slacan hardware NB will commit to submitting the documentation from the chosen supplier to HONI demonstrating that the supplied hardware meets HONI standards.

    - Hardware:
        - § maximum utilization shall be 70%;
        - § Material to be H1 LPS standard (see attached); and
        - § Approved Hardware supplier: Slacan Industries. Insulation:
        - § Ceramic insolation only. Maximum utilization is 70%; and
        - § Approved suppliers: NGK (porcelain insulators from Japan plant only) and Sediver (Glass insulators from Italian plant only).
    - Towers:

§ Maximum utilization for crossing towers is 70%. All welded parts to be WT material.

- Missing existing STR# (7 & 8 of Magpie 115kV and 25 & 26 of Mission 115kV) at crossing;
- NB must maintain the minimum 3.3m crossing clearance at all times. Hydro One has not reviewed NextBridge's design assumptions including but not limited to plan & profile dimensions, structural geometries, conductor modeling, and sag tension analysis etc.

Kind Regards,

Erin Whillans
Land & ROW Specialist
LP CAN Land Services, Projects

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From: Roman.Dorfman@HydroOne.com [mailto:Roman.Dorfman@HydroOne.com]
Sent: Friday, August 31, 2018 12:32 PM
To: Erin Whillans
Cc: Aziz.Brott@nexteraenergy.com; hamirzada@canacre.com; Matey.MATEV@HydroOne.com; enza.cancilla@HydroOne.com; damian.oquinn@HydroOne.com; philip.wu@HydroOne.com; ali.afshar@HydroOne.com; Rebecca Loosley
Subject: [External] RE: NextBridge - Permanent Overhead Crossing submission - updated drawing and comment table

Erin, Hydro One (HONI) engineering have provided the following requested clarifications for the proposed crossings known as OP-43, OP-47, OP-48, OP-55, OP-92, OP-100, OP-162, OP-215, OP-216, OP-133 & OP-134:

- The proposed drawings submitted by NextBridge (NB) to cross over top of HONI Transmission Line **structures** is not acceptable.

- If NextBridge is proposing to cross over HONI circuits, then NB must maintain a minimum horizontal offset for the crossing of ½ of the HONI right of way width (measured from the center of the HONI structure to the closest edge of the NextBridge right of way). See attached sketch for clarification.

- HONI towers cannot be located within NBs proposed right-of-way (ROW)

- HONI requires an area free of overhead lines to provide safe limits of approach when performing maintenance, assessment and restoration activities on HONI assets. If a sufficient horizontal offset is not provided, the following activities cannot be performed:
  - Delivery of staff to top of transmission line structure with helicopter.
  - Delivery of replacement hardware (i.e. insulators) to transmission line structure with helicopter.
  - Delivery and setting of new poles with helicopter.
  - Setting new poles / structure with crane.

- The restrictions are required as having conductors installed above HONI structures severely impacts restoration time in the event of a structure failure due to adverse weather conditions and will significantly increase the cost of maintenance and assessment activities.

- NB must maintain clearances between HONI conductors/skywires and NBs conductors/skywires as per Hydro One clearance requirements.

- NextBridge structure grounding shall be isolated from HYDRO ONE/GLP structure grounding

- OP 202 & OP-203: the structures and all line components of the new EW Tie need to be designed and procured as per Hydro One standards as follows :
  - Hardware:
    - maximum utilization shall be 70%;
    - Material to be H1 LPS standard (see attached); and
    - Approved Hardware supplier: Slacan Industries.
  - Insulation:
    - Ceramic insolation only. Maximum utilization is 70%; and
    - Approved suppliers: NGK (porcelain insulators from Japan plant only) and Sediver (Glass insulators from Italian plant only).
  - Towers:
    - Maximum utilization for crossing towers is 70%. All welded parts to be WT material.

  - Missing existing STR# (7 & 8 of Magpie 115kV and 25 & 26 of Mission 115kV) at crossing;
  - NB must maintain the minimum 3.3m crossing clearance at all times. Hydro One has not reviewed NextBridge's design assumptions including but not limited to plan & profile dimensions, structural geometries, conductor modeling, and sag tension analysis etc.

Thank you

Roman Dorfman
Sr. Real Estate Coordinator,
Facilities and Real Estate Services

Hydro One Networks Inc.

185 Clegg Road
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From: Erin Whillans [mailto:Erin.Whillans@enbridge.com]
Sent: Thursday, August 23, 2018 10:34 AM
To: DORFMAN Roman
Cc: Aziz.Brott@nexteraenergy.com; Jennifer.Tidmarsh@nexteraenergy.com; hamirzada@canacre.com; MATEV Matey; Gian.Minichini@HydroOne.com; CANCILLA Enza; O'QUINN Damian; WU Liping (Philip); HATHOUT Ibrahim; BOLDT John; AFSHAR Ali; SERAVALLE Tony; Rebecca Loosley; Christopher James (cjames@canacre.com)
Subject: RE: NextBridge - Permanent Overhead Crossing submission - updated drawing and comment table

Good morning Roman,

I am following up on my email of August 7, 2018.

As noted in my earlier email, NextBridge kindly requests further written clarification from HONI on the specific nature of issues requiring resolution on the below list of crossings, in order to prepare any resubmissions as required. Per our previous discussions, NextBridge is committed to helping HONI safely maintain their transmission lines, but does not understand HONI's perceived danger of the current design.

- OP-43, OP-47, OP-48 and OP-55 (file Nipigon 635.06-6248 formerly Nipigon 636.3-500);
- OP-92 (file Killrane 636.3-500)
- OP-100 (file Syine 636.3-500)
- OP-162 (file McCron 636.3-500)
- OP-215 & OP-216 (files Nebonaionquet 636-5810 & Nebonaionquet 635.05-6248)
- OP-133 & OP-134 (file McCoy 636.3-500)

I look forward to your response on this matter.

Kind Regards,

Erin Whillans
Land & ROW Specialist
LP CAN Land Services, Projects

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From: Erin Whillans
Sent: Tuesday, August 07, 2018 10:38 AM
To: 'Roman.Dorfman@HydroOne.com'
Cc: Aziz.Brott@nexteraenergy.com; Jennifer.Tidmarsh@nexteraenergy.com; hamirzada@canacre.com; Matey.MATEV@HydroOne.com; Gian.Minichini@HydroOne.com; enza.cancilla@HydroOne.com; damian.oquinn@HydroOne.com; philip.wu@HydroOne.com; Ibrahim.hathout@HydroOne.com; john.boldt@HydroOne.com; ali.afshar@HydroOne.com; a.seravalle@HydroOne.com; Rebecca Loosley; Christopher James (cjames@canacre.com)
Subject: RE: NextBridge - Permanent Overhead Crossing submission - updated drawing and comment table

Good afternoon Roman,

Thank you for your email of July 20, 2018.

Please find attached the resubmission of OP-3 (file Macgregor 636-5807) with the requested information noted in your below email. I trust this is satisfactory to complete the review and approval of this proposed crossing.

Regarding the responses provided by HONI stakeholders to the submissions noted below, NextBridge kindly requests further written clarification from HONI on the specific nature of issues requiring resolution on these crossings in order to prepare any resubmissions as required. Per our previous discussions, NextBridge is committed to helping HONI safely maintain their transmission lines but does not understand HONI's perceived danger of the current design.

- OP-43, OP-47, OP-48 and OP-55 (file Nipigon 635.06-6248 formerly Nipigon 636.3-500);
- OP-92 (file Killrane 636.3-500)
- OP-100 (file Syine 636.3-500)

- OP-162 (file McCron 636.3-500)
- OP-215 & OP-216 (files Nebonaionquet 636-5810 & Nebonaionquet 635.05-6248)
- OP-133 & OP-134 (file McCoy 636.3-500)

I look forward to hearing from you shortly on this.

Kind Regards,

Erin Whillans
Land & ROW Specialist
LP CAN Land Services, Projects

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From: Roman.Dorfman@HydroOne.com [mailto:Roman.Dorfman@HydroOne.com]
Sent: Friday, July 20, 2018 11:21 AM
To: Rebecca Loosley
Cc: Aziz.Brott@nexteraenergy.com; Jennifer.Tidmarsh@nexteraenergy.com; hamirzada@canacre.com; Matey.MATEV@HydroOne.com; Gian.Minichini@HydroOne.com; enza.cancilla@HydroOne.com; damian.oquinn@HydroOne.com; philip.wu@HydroOne.com; Ibrahim.hathout@HydroOne.com; john.boldt@HydroOne.com; ali.afshar@HydroOne.com; Erin Whillans; a.seravalle@HydroOne.com
Subject: [External] RE: NextBridge - Permanent Overhead Crossing submission - updated drawing and comment table

Rebecca, as per your email below of April 9/18 along with amended drawings submitted for proposed EWT Line transmission lines crossings of Hydro One (HONI) facilities, HONI stakeholders have reviewed the submission and have provided the following comments:

OP-3 (file Macgregor 636-5807)

- Resubmission required with information on deflections due to unbalanced ice loads on both sides of the structures which could impair clearances. Minimum clearances to Hydro One conductors/shield wires at proposed crossing location/s need to be checked under the unbalanced loads and confirmation provided.

OP-43, OP-47, OP-48 and OP-55 (file Nipigon 635.06-6248 formerly Nipigon 636.3-500)

- Resubmission required as the proposed transmission line crossings shall not cross over Hydro One structures.

OP-84 (file (Patience 636.3-500)
- This crossing is approved and documentation will be provided for execution to NextBridge once all the other proposed crossings have been reviewed and approved.

OP-92 (file Killrane 636.3-500)
- Resubmission required as the proposed transmission line crossings shall not cross over Hydro One structures.

OP-100 (file Syine 636.3-500)
- Resubmission required as the proposed transmission line crossings shall not cross over Hydro One structures.

OP-162 (file McCron 636.3-500)
- Resubmission required as the proposed transmission line crossings shall not cross over Hydro One structures.

OP-215 & OP-216 (files Nebonaionquet 636-5810 & Nebonaionquet 635.05-6248)
- Resubmission required as the proposed transmission line crossings shall not cross over Hydro One structures.

OP-122a & OP-122 (file Walsh 636.3-500)
- HONI internal stakeholders' review on the proposed EWT crossings of circuit T1M and have determined that in order to accommodate the East West Tie line at the proposed crossing locations of OP-122 and OP-122A, the previously agreed (Nextbridge and Hydro One) line relocation will be the optimal path forward for the reliable operation of HONI's transmission system. Resubmission required. As this is a requirement to accommodate Nextbridges EWT Line project, HONI cannot contribute to the relocation costs.

OP-111 & OP-112 (file Tuuri 636.3-500)
- HONI internal stakeholders' review on the proposed EWT crossings of circuit T1M and have determined that in order to accommodate the East West Tie line at the proposed crossing locations of OP-111 and OP-112, the previously agreed (Nextbridge and Hydro One) line relocation will be the optimal path forward for the reliable operation of HONI's transmission system. Resubmission required. As this is a requirement to accommodate Nextbridges EWT Line project, HONI cannot contribute to the relocation costs.

OP-133 & OP-134 (file McCoy 636.3-500)
- Resubmission required as the plan view submitted by Nextbridge shows the GPS' coordinates of crossings that do not match Hydro One records and LONG. should be corrected as a negative number.
- The proposed Nextbridge transmission line shall not cross over Hydro One structures;
- The relative locations of existing Hydro One structures to the proposed structures/conductors cannot be identified during review due to the mismatch of proposal and existing Hydro One facilities.

OP-202 & OP-203 (file Lendrum 636.3-500) and OP-199 (file Warpula 636.3-500)

- These crossings are for existing Great Lakes Power (GLP) transmission lines and are currently being reviewed by GLP and HONI stakeholders. The line specification information is currently not integrated with the existing HONI Grid and additional review time is needed. The information should be available shortly.

Hoping this is helpful

Thank you

Roman Dorfman
Sr. Real Estate Coordinator,
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From: Rebecca Loosley [mailto:Rebecca.Loosley@enbridge.com]
Sent: Monday, April 09, 2018 4:50 PM
To: DORFMAN Roman
Cc: Aziz.Brott@nexteraenergy.com; Jennifer.Tidmarsh@nexteraenergy.com; hamirzada@canacre.com; D.J.Mayers@nexteraenergy.com; Rafael.Guzman@nexteraenergy.com; MATEV Matey; MINICHINI Gian; CANCILLA Enza; EVANS Don; O'QUINN Damian; WU Liping (Philip); HATHOUT Ibrahim; BOLDT John; AFSHAR Ali; RASOOL Ali; Erin Whillans
Subject: NextBridge - Permanent Overhead Crossing submission - updated drawing and comment table

Hi Roman,

Please find included for your review and distribution the re-submission of the HONI Transmission permanent crossing application revised detailed overhead (permanent) crossing drawings, that can be accessed via the ShareFile link: https://canacre.sharefile.com/d-se173f5f0f804a1d9.

Based on HONI's comments provided on March 16, 2018 with respect to NextBridge's submission of the Permanent Crossings of existing HONI Transmission Line infrastructure on January 12, 2018, NextBridge has reviewed and addressed HONI engineering's comments. These comments have been transferred to the attached spreadsheet with NextBridge's responses added to the "NextBridge COMMENT" column. Where a comment has been addressed, the crossing drawing(s) have been revised to reflect this.

NextBridge views that it has addressed HONI's comments. Please confirm in the next two weeks that NextBridge has addressed HONI's comments or explain any issues that HONI believes are outstanding.

Should you have any questions or require additional information, please do not hesitate to contact me.

Kindest regards,

Rebecca Loosley
Land & Right of Way Specialist, Land Services
—
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From: Roman.Dorfman@HydroOne.com [mailto:Roman.Dorfman@HydroOne.com]
Sent: Friday, March 16, 2018 2:41 PM
To: Rebecca Loosley
Cc: Aziz.Brott@nexteraenergy.com; Jennifer.Tidmarsh@nexteraenergy.com; hamirzada@canacre.com; D.J.Mayers@nexteraenergy.com; Rafael.Guzman@nexteraenergy.com; Matey.MATEV@HydroOne.com; Gian.Minichini@HydroOne.com; enza.cancilla@HydroOne.com; don.evans@HydroOne.com; damian.oquinn@HydroOne.com; philip.wu@HydroOne.com; Ibrahim.hathout@HydroOne.com; john.boldt@HydroOne.com; ali.afshar@HydroOne.com; Ali.Rasool@HydroOne.com
Subject: [External] RE: East West Tie Line - Use of HONI ROW (Access Roads and Staging Areas)

Rebecca, based on Hydro One's (HONIs) preliminary review of the NextBridges (NBs) submission for the new transmission line crossing drawings and NBs proposed use of HONIs right-of-ways (ROWs) for access/staging, the following are comments and required revisions provide by HONI stakeholders to NBs submitted design:

NBs Submission of December 22, 2017: Proposed Use of HONIs ROWs for Access and Staging Areas

- NB is not permitted to use HONIs ROWs for staging, parking, storage, piling of snow or stockpiling of material or equipment as part of its East West Tie (EWT) Line project (all further drawings should reflect this restriction)

- Parking equipment under live conductors is not allowed as induction issues may exist.
- Refer to the attached spreadsheet identifying horizontal access road issues identified by Hydro One stakeholders that need to be corrected on future submissions
- Tower/Pole numbering needs to be verified as numbering discrepancies were found between NBs drawings and those in the field (access roads and transmission line crossings)
- Structure (tower) protection (temporary fencing and collision proof barrier) must include poles and guy wires with appropriate offsets. This must be shown on amended drawings as follows:
    - Structures (poles and towers) and Guy wires > 15m from edge of access road: no protection required
    - Structure (poles and towers) and Guy wire 10-15m from edge of access road: temporary fencing (orange snow fencing) is required 5m from guy wire or structure
    - Structure (poles and towers) and Guy wire 5-10m from edge of access road: collision proof barrier (ie. Jersey barrier) required
    - Structure (poles and towers) and Guy wire <5m from edge of access road: not permitted
- No berming or grading is permitted within the HONI ROW that will obstruct access for HONI staff to HONI facilities or will create negative drainage or pooling of water within the HONI ROW
- As NB has notified HONI that Lidar data will not be provided for overhead line clearance investigations (email from you dated March 12/18) and HONI does not have resources to verify 1000 (approximate number) of overhead transmission line crossings (access roads) proposed by NB, HONI Engineering has advised that a minimum vertical clearance between the lowest live conductor point and the highest equipment point crossing under live wire must be as follows:
    1. **115 kV: 2.1m**
    2. **230 kV: 2.6m**
- Once amended drawings are submitted and approved by HONI stakeholders, NB will be required to sign appropriate agreements (based on land tenure) that will address NBs responsibility for the repair and maintenance of the access roads once all work is completed and NBs liability for damage to HONI facilities during the use of the access roads.

NBs Submission of January 12, 2018 – Permanent Crossings by new EWT Line of existing HONI Transmission Lines (ROWs)

Below are comments received from HONI engineering for the proposed transmission line crossings as submitted for review in January 2018:

Crossing #OP-3: HONI files MacGregor 636-5808 & MacGregor 636-5807

- In the profile view, NB must confirm the minimum 3.6m clearance is above the highest Hydro One wire or shield wire. The "HYDRO ONE CONDUCTOR" in note #9 could be misinterpreted as phase conductor;
- Hydro One recommends STR. #A002 to be steel lattice structures or guyed poles, self-supported monopoles tend to deflect under tensions and incur additional sags;
- STR. #A003 is expressed as self-supported dead-end but illustrated as suspension tower;
- NextBridge structure grounding shall be isolated from Hydro One structure grounding;
- NB must maintain the minimum 3.6m crossing clearance at all times. Hydro One has not reviewed NextBridge's design assumptions including but not limited to plan & profile dimensions, structural geometries, conductor modeling, and sag tension analysis etc.; and
- At this crossing, the structures and all line components of the new EW Tie need to be designed and procured as per Hydro One standards as follows :

- Hardware:
  - maximum utilization shall be 70%;
  - Material to be H1 LPS standard (see attached); and
  - Approved Hardware supplier: Slacan Industries.
- Insulation:
  - Ceramic insolation only. Maximum utilization is 70%; and
  - Approved suppliers: NGK (porcelain insulators from Japan plant only) and Sediver (Glass insulators from Italian plant only).
- Towers:
  - Maximum utilization for crossing towers is 70%. All welded parts to be WT material.

Crossings OP-55, OP-43, OP-47 & OP-48: HONI file Nipigon 635.06-6247

OP-43

- In the profile view, NB must confirm the minimum 3.3m clearance is above the highest Hydro One wire or shield wire. The "HYDRO ONE CONDUCTOR" in note #9 could be misinterpreted as phase conductor;
- STR. #B067 & #B068 are expressed as self-supported dead-end but illustrated as suspension towers;
- NextBridge structure grounding shall be isolated from Hydro One structure grounding;
- NB must maintain the minimum 3.3m crossing clearance at all times. Hydro One has not reviewed NextBridge's design assumptions including but not limited to plan & profile dimensions, structural geometries, conductor modeling, and sag tension analysis etc.; and
- At this crossing, the structures and all line components of the new EW Tie need to be designed and procured as per Hydro One standards as follows :
  - Hardware:
    - maximum utilization shall be 70%;
    - Material to be H1 LPS standard (see attached); and
    - Approved Hardware supplier: Slacan Industries.
  - Insulation:
    - Ceramic insolation only. Maximum utilization is 70%; and
    - Approved suppliers: NGK (porcelain insulators from Japan plant only) and Sediver (Glass insulators from Italian plant only).
  - Towers:
    - Maximum utilization for crossing towers is 70%. All welded parts to be WT material.

OP-43, OP-47 & 48; and OP-55.

- In the profile views in sheets 2, 3 and 4 of 5, NB must confirm the minimum 3.3m clearance is above the highest Hydro One wire or shield wire. The "HYDRO ONE CONDUCTOR" in note #9 could be misinterpreted as phase conductor;
- In sheets 2 and 3 of 5, STR. #B067, #B068, #B084 & #B085 are expressed as self-supported dead-end but illustrated as suspension towers;
- In the plan view in sheet 3 of 5, NBs GPS' of crossing ID OP-47 & 48 do not match Hydro One records;
- In the plan view in sheet 3 of 5, the proposed transmission line shall not cross over Hydro One structures;
- In sheet 4 of 5, NB mislabeled Hydro One 115kV 57M1/56M1 STR. 184 as STR. 183 and STR. 185 as STR. 184;
- In the plan view in sheet 4 of 5, the guy anchor of proposed STR. #B097 shall not encroach onto Hydro One right of way;
- NextBridge structure grounding shall be isolated from Hydro One structure grounding;

- NB must maintain the minimum 3.3m crossing clearance at all times. Hydro One has not reviewed NextBridge's design assumptions including but not limited to plan & profile dimensions, structural geometries, conductor modeling, and sag tension analysis etc.; and
- At these crossings, the structures and all line components of the new EW Tie need to be designed and procured as per Hydro One standards as follows :
  - Hardware:
    - maximum utilization shall be 70%;
    - Material to be H1 LPS standard (see attached); and
    - Approved Hardware supplier: Slacan Industries.
  - Insulation:
    - Ceramic insolation only. Maximum utilization is 70%; and
    - Approved suppliers: NGK (porcelain insulators from Japan plant only) and Sediver (Glass insulators from Italian plant only).
  - Towers:
    - Maximum utilization for crossing towers is 70%. All welded parts to be WT material.

<u>Crossing OP-84: HONI file Patience 636.3-500</u>

- In the profile view, NB must confirm the minimum 3.3m clearance is above the highest Hydro One wire or shield wire. The "HYDRO ONE CONDUCTOR" in note #9 could be misinterpreted as phase conductor;
- In the plan view, NB mislabeled Hydro One 115kV A5A STR. 101 as STR. 100 and STR. 102 as STR. 101;
- NextBridge structure grounding shall be isolated from Hydro One structure grounding;
- NB must maintain the minimum 3.3m crossing clearance at all times. Hydro One has not reviewed NextBridge's design assumptions including but not limited to plan & profile dimensions, structural geometries, conductor modeling, and sag tension analysis etc.; and
- At these crossings, the structures and all line components of the new EW Tie need to be designed and procured as per Hydro One standards as follows :
  - Hardware:
    - maximum utilization shall be 70%;
    - Material to be H1 LPS standard (see attached); and
    - Approved Hardware supplier: Slacan Industries.
  - Insulation:
    - Ceramic insolation only. Maximum utilization is 70%; and
    - Approved suppliers: NGK (porcelain insulators from Japan plant only) and Sediver (Glass insulators from Italian plant only).
  - Towers:
    - Maximum utilization for crossing towers is 70%. All welded parts to be WT material.

<u>Crossing OP-92: HONI file Killraine 636.3-500</u>

- In the profile view, NB must confirm the minimum 3.3m clearance is above the highest Hydro One wire or shield wire. The "HYDRO ONE CONDUCTOR" in note #9 could be misinterpreted as phase conductor;
- STR. #C072 is expressed as self-supported dead-end but illustrated as suspension tower;
- In the plan view, NBs GPS of crossing ID OP-92 does not match Hydro One record;

- In the plan view, the proposed transmission line shall not cross over Hydro One structures;
- In the plan view, NB mislabeled Hydro One 115kV A5A STR. 24 as STR. 25 and STR. 23 as STR. 24;
- NextBridge structure grounding shall be isolated from Hydro One structure grounding;
- NB must maintain the minimum 3.3m crossing clearance at all times. Hydro One has not reviewed NextBridge's design assumptions including but not limited to plan & profile dimensions, structural geometries, conductor modeling, and sag tension analysis etc.; and
- At these crossings, the structures and all line components of the new EW Tie need to be designed and procured as per Hydro One standards as follows :
  - Hardware:
    - maximum utilization shall be 70%;
    - Material to be H1 LPS standard (see attached); and
    - Approved Hardware supplier: Slacan Industries.
  - Insulation:
    - Ceramic insolation only. Maximum utilization is 70%; and
    - Approved suppliers: NGK (porcelain insulators from Japan plant only) and Sediver (Glass insulators from Italian plant only).
  - Towers:
    - Maximum utilization for crossing towers is 70%. All welded parts to be WT material.

<u>Crossing OP-100: HONI file Syine 636.3-500</u>

- In the profile view, NB must confirm the minimum 3.3m clearance is above the highest Hydro One wire or shield wire. The "HYDRO ONE CONDUCTOR" in note #9 could be misinterpreted as phase conductor;
- STR. #C150 and #C151 are expressed as self-supported dead-end but illustrated as suspension towers;
- In the plan view, dimensions between the proposed transmission line and Hydro One structures are missing. The proposed transmission line shall not cross over Hydro One structures, nor shall the conductor blow out impact on Hydro One structures;
- In the plan view, NB mislabeled Hydro One 115kV T1M STR. 69 as STR. 71, STR. 68 as STR. 70 and STR. 67 as STR. 69;
- NextBridge structure grounding shall be isolated from Hydro One structure grounding;
- NB must maintain the minimum 3.3m crossing clearance at all times. Hydro One has not reviewed NextBridge's design assumptions including but not limited to plan & profile dimensions, structural geometries, conductor modeling, and sag tension analysis etc.; and
- At these crossings, the structures and all line components of the new EW Tie need to be designed and procured as per Hydro One standards as follows :
  - Hardware:
    - maximum utilization shall be 70%;
    - Material to be H1 LPS standard (see attached); and
    - Approved Hardware supplier: Slacan Industries.
  - Insulation:
    - Ceramic insolation only. Maximum utilization is 70%; and
    - Approved suppliers: NGK (porcelain insulators from Japan plant only) and Sediver (Glass insulators from Italian plant only).
  - Towers:
    - Maximum utilization for crossing towers is 70%. All welded parts to be WT material.

Crossing OP-162: HONI file Mccron 636.3-500

- In the profile view, NB must confirm the minimum 3.3m clearance is above the highest Hydro One wire or shield wire. The "HYDRO ONE CONDUCTOR" in note #9 could be misinterpreted as phase conductor;
- STR. #E035 and #E036 are expressed as self-supported dead-end but illustrated as suspension towers;
- In the plan view, dimensions between the proposed transmission line and Hydro One structures are missing. The proposed transmission line shall not cross over Hydro One structures, nor shall the conductor blow out impact on Hydro One structures;
- NextBridge structure grounding shall be isolated from Hydro One structure grounding;
- NB must maintain the minimum 3.3m crossing clearance at all times. Hydro One has not reviewed NextBridge's design assumptions including but not limited to plan & profile dimensions, structural geometries, conductor modeling, and sag tension analysis etc.; and
- At these crossings, the structures and all line components of the new EW Tie need to be designed and procured as per Hydro One standards as follows :
  - Hardware:
    - maximum utilization shall be 70%;
    - Material to be H1 LPS standard (see attached); and
    - Approved Hardware supplier: Slacan Industries.
  - Insulation:
    - Ceramic insolation only. Maximum utilization is 70%; and
    - Approved suppliers: NGK (porcelain insulators from Japan plant only) and Sediver (Glass insulators from Italian plant only).
  - Towers:
    - Maximum utilization for crossing towers is 70%. All welded parts to be WT material.

Crossings OP-215 & OP-216: HONI file Nebonaionquet 635.05-6248

- In the profile views in sheets 3 and 4 of 4, NB must confirm the minimum 3.3m clearance is above the highest Hydro One wire or shield wire. The "HYDRO ONE CONDUCTOR" in note #9 could be misinterpreted as phase conductor;
- Hydro One recommends STR. #F231 & #F232 to be steel lattice structures or guyed poles, self-supported monopoles tend to deflect under tensions and incur additional sags;
- Hydro One recommends STR. #F230 to be dead-end steel lattice tower.
- In the plan view in sheet 3 of 4, dimensions between the proposed transmission line and Hydro One structures are missing. The proposed transmission line shall not cross over Hydro One structures, nor shall the conductor blow out impact on Hydro One structures;
- In the plan view in sheet 3 of 4, the proponent's GPS' of crossing ID OP-215 does not match Hydro One records;
- In the plan view in sheet 4 of 4, the proponent's GPS' of crossing ID OP-216 falls into the water body;
- NextBridge structure grounding shall be isolated from Hydro One structure grounding;
- NB must maintain the minimum 3.3m crossing clearance at all times. Hydro One has not reviewed NextBridge's design assumptions including but not limited to plan & profile dimensions, structural geometries, conductor modeling, and sag tension analysis etc.; and
- At these crossings, the structures and all line components of the new EW Tie need to be designed and procured as per Hydro One standards as follows :
  - Hardware:

- maximum utilization shall be 70%;
- Material to be H1 LPS standard (see attached); and
- Approved Hardware supplier: Slacan Industries.
  - Insulation:
- Ceramic insolation only. Maximum utilization is 70%; and
- Approved suppliers: NGK (porcelain insulators from Japan plant only) and Sediver (Glass insulators from Italian plant only).
  - Towers:
- Maximum utilization for crossing towers is 70%. All welded parts to be WT material.

NBs Submission to relocate sections of HONIs circuit T1M (currently shown as OP-111, OP-112, OP-122 and OP-122A)

NB has had the agreement for estimates to relocate the existing Hydro One circuit T1M (spans 196-200 & 107-114) since end of January without a response. Please provide an update.

Thank you

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