October 22, 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. ("HONI")
East-West Tie Line Project and Lake Superior Link Project
Combined Hearing
EB-2017-0182/EB-2017-0194/EB-2017-0364
Argument-in-Chief of NextBridge

In accordance with Procedural Order No. 1, enclosed please find the Argument-in-Chief by NextBridge 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 ARGUMENT IN CHIEF

NextBridge's Proposal

1. In its EB-2011-0140 Phase 2 Decision and Order issued on August 7, 2013, the Ontario Energy Board (the "OEB", or the "Board") designated Upper Canada Transmission, Inc., operating as NextBridge Infrastructure LP ("NextBridge") as the electricity transmitter to complete development work for the East-West Tie Line expansion ("EWT Line Project").

2. NextBridge filed an application for leave to construct ("LTC") the EWT Line Project on July 31, 2017.[1] In its application, NextBridge seeks, under Section 92 of the *Ontario Energy Board Act, 1998* ("*OEB Act*"), LTC the EWT Line Project, comprised of approximately 450 kilometres of new double circuit 230 kilovolt ("kV") overhead electricity transmission line on a new right of way ("ROW") between Thunder Bay and Wawa in northwestern Ontario (the "Application"). NextBridge plans to have its facilities in service by December 31, 2020.[2]

[1] Unless otherwise noted, all evidence references in this Argument in Chief are to EB-2017-0182.
[2] Exhibit B, Tab 1, Schedule 1, Attachment 1. Since that time, the schedule has changed, but NextBridge still aims to achieve a December 2020 in-service date: the current schedule is found in the response to Staff Interrogatory #49, filed as Exhibit I.NextBridge.STAFF.49. Attachment.

3. From the time of its selection as the designated transmitter to develop the EWT Line Project in August of 2013, NextBridge has been working to advance its proposal for the construction of the project. As a result of this effort, NextBridge's EWT Line Project is an extensively studied, carefully planned, well defined, and highly advanced project.

4. More specifically, as was explained during the oral testimony of the NextBridge witnesses, the EWT Line Project is a "shovel-ready project".[3] Engineering design has been completed to a level of greater than 90 per cent;[4] more than 250 people from Indigenous communities have been trained and are ready to work;[5] NextBridge has received confirmation that the review of its Environmental Assessment ("EA") by the Ministry of Environment, Conservation and Parks ("MECP") is complete;[6] NextBridge's extensive consultation with local municipalities and communities over the past four years has given it a unique and comprehensive understanding of the needs of the region;[7] and NextBridge's proposal has the support of numerous area municipalities and First Nation and Métis communities.[8]

5. The extraordinarily well-developed nature of NextBridge's proposal provides the Board with a high level of certainty in applying the statutory criteria for an LTC application. That is to say, NextBridge's highly advanced project provides the Board with a strong evidentiary foundation to support cost certainty and demonstrate NextBridge's sustained focus on the reliability and quality of electricity service in Ontario.

6. In their oral testimony, the NextBridge witnesses elaborated on the extent to which the highly advanced NextBridge proposal supports cost certainty. As explained in this testimony, NextBridge's cost estimate reflects a mature AACE International (formerly the Association for the Advancement of Cost Engineering) Class 2 estimate within a narrow accuracy band of plus or minus 10% and, further, NextBridge's estimate is on the cusp of

[3] Hearing Transcript Volume 4, pages 166-172.
[4] Hearing Transcript Volume 4, page 168.
[5] Hearing Transcript Volume 4, page 167.
[6] Hearing Transcript Volume 4, pages 166-167; Hearing Transcript Volume 7, pages 98-99.
[7] Hearing Transcript Volume 4, pages 167-168.
[8] As indicated by one stakeholder: "Rare is the time when a project enjoys such strong, positive and widespread support as does the NextBridge project." See Hearing Transcript Volume 4, pages 167-168, referring to Common Voice Northwest letter to The Honourable Greg Rickford, Minister of Energy, Northern Development and Mines and Indigenous Relations dated September 23, 2018 at p.1, found at Exhibit I.NextBridge.STAFF.53, Attachment 1, pages 32-34.

becoming an AACE Class 1 estimate, which will occur upon approval of NextBridge's EA.[9] In addition, the oral testimony highlighted the following aspects of NextBridge's proposal that support cost certainty:

a. NextBridge's construction cost estimate is market-based, in that NextBridge has a fully executed Engineering Procurement and Construction ("EPC") contract that resulted from a formal competitive bidding process. The form of EPC contract executed reduces schedule and cost risks and impacts;[10]

b. NextBridge has already issued Requests for Proposals ("RFPs") to tower vendors and will issue additional RFPs for the remaining materials to global sources and these competitively-sourced procurement activities can be executed shortly after receiving LTC approval;[11]

c. NextBridge has recently reviewed costs of materials other than the towers and this review has confirmed that costs remain well within the expectations reflected in NextBridge's cost estimate;[12]

d. NextBridge and its EPC contractor, Valard Construction ("Valard"), have a complete and well-thought-out access plan that minimizes environmental impacts and incorporates an extensive field reconnaissance program that has been undertaken by NextBridge;[13]

e. NextBridge's proposal is based on a family of ten towers that are fully designed, independently verified, load tested and ready for fabrication;[14]

f. As a result of spending a considerable amount of time consulting with First Nations and Métis communities, NextBridge has built strong and trusting relationships and has reached economic participation agreements, the costs of which are reflected in NextBridge's Indigenous participation costs;[15]

g. NextBridge recently completed its 2018 field program for wildlife surveys and archaeological assessments and aquatic surveys are expected to be completed in October 2018;[16]

[9] Hearing Transcript Volume 4, pages 168-169.
[10] Hearing Transcript Volume 4, page 169.
[11] *Ibid*.
[12] *Ibid*.
[13] Hearing Transcript Volume 6, pages 22-23: "In the summer of this year and through the fall, we have undertaken a giant reconnaissance program and we have been out on most of the right of way. So we have gained a lot more certainty about what was there over the summer." See also, for example, Hearing Transcript Volume 5, pages 36 and 42.
[14] Hearing Transcript Volume 4, page 169.
[15] Hearing Transcript Volume 4, pages 169-170.
[16] Hearing Transcript Volume 4, page 170.

h. NextBridge's proposal is based on an in-depth knowledge of permit requirements, because NextBridge has been working collaboratively with the Ministry of Natural Resources and Forestry on draft permits and applications;[17] and

i. NextBridge has advanced the EWT Line Project to a mature stage of the land acquisition process, which will support the start of construction in June of 2019, and which also provides cost certainty with respect to land acquisition.[18]

7. As far as the reliability of electricity service is concerned, NextBridge has maintained its focus on advancing the EWT Line Project in order to meet the expected December 2020 in-service date,[19] thereby avoiding reliability risks and additional costly interim measures to manage the need associated with a later in-service date. Further, NextBridge's proposal meets all of the Board's minimum technical requirements for the project; it has no single point of failure or bottleneck on the existing and new transmission corridor; it requires no outages of the existing East-West Tie; and it includes a cohesive failure containment and restoration strategy that takes into account the critical nature of the project and the importance of timely restoration of the transmission line.[20]

8. On the basis of the extensive evidence provided in support of its proposal, NextBridge seeks the following relief:

   a. Pursuant to Section 92 of the *OEB Act*, an Order granting LTC the EWT Line Project as described herein;

   b. Pursuant to section 97 of the *OEB Act*, an Order approving the forms of land agreements; and

   c. Pursuant to section 78 of the *OEB Act*, an Order establishing a Construction Work in Progress ("CWIP") deferral account and declaring the final balance of the Development Cost Deferral Account ("DCDA") as the opening balance of such CWIP account.

9. NextBridge submits that the requested relief should be granted for the reasons that are set out above and elaborated on below under the headings "LTC Approval Test" and "Approval of NextBridge's Proposal".

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[17] *Ibid*. See also Hearing Transcript Volume 5, page 36 and Hearing Transcript Volume 6, page 89.
[18] Hearing Transcript Volume 4, pages 170-171.
[19] See, for example, NextBridge response to Staff Interrogatory #49(a), filed at Exhibit I.NextBridge.STAFF.49, and Hearing Transcript Volume 6, pages 16, 21, 23-24, 33, 59-60, 65-66 and 92.
[20] Hearing Transcript Volume 4, page 171. NextBridge confirmed in cross-examination that it is prepared to seek necessary permissions to cross Hydro One lines without "having to take an outage": Hearing Transcript Volume 6, pages 69-70.

Hydro One Applications

10. On July 31, 2017, Hydro One Networks Inc. ("Hydro One") filed an application for leave to construct certain transmission facilities (the "EWT Station Project") to connect to the EWT Line Project. On February 15, 2018, Hydro One filed a competing LTC application for a transmission line which it has called the Lake Superior Link Project ("LSL Project"), with a proposed in-service date of December 2021.[21]

11. NextBridge supports the Hydro One application for an LTC of the EWT Station Project; this is addressed below under the heading "Approval of the EWT Station Project". NextBridge opposes Hydro One's application for an LTC for the LSL Project.

12. NextBridge submits that its LTC application should be approved by the Board, and, that the OEB therefore should not approve the Hydro One LTC application for the LSL Project. More particularly, NextBridge submits that, in contrast to NextBridge's shovel-ready project, the LSL Project is plagued by numerous outstanding critical issues, concerns, and uncertainties. These deficiencies were duly exposed during the hearings and are elaborated on below under the heading "NextBridge's EWT Project is Superior to the Hydro One LSL Project".

LTC Approval Test

13. NextBridge's Application seeks OEB approval of the leave to construct request for the EWT Line Project. The test to be met for LTC is set out in the *OEB Act*, and has been discussed in a number of recent OEB Decisions.[22]

14. The OEB's power to grant an applicant permission to build transmission facilities arises from subsection 92(1) of the *OEB Act*.[23] In discharging its duties in a Section 92 proceeding, the OEB is bound by the provisions of Section 96(2) of the *OEB Act*, which states:

[21] Hydro One's LSL Project as-filed project schedule is found at Exhibit B, Tab 11, Schedule 1 of EB-2017-0364. The updated schedule (which still contemplates a December 2021 in-service date) is found in Hydro One's response to Staff Interrogatory #5 at Exhibit I.1.5.
[22] See, for example, May 18, 2017 Decision and Order in EB-2016-0310 (Henvey Inlet Wind LP).

> *(2) In an application under Section 92, the Board shall only consider the following when, under Subsection 1, it considers whether the construction, expansion or reinforcement of the electricity transmission line or electricity distribution line or the making of the interconnection, is in the public interest:*
>
> > *1. The interests of consumers with respect to prices and the reliability and quality of electricity service.*
> >
> > *2. Where applicable and in a manner consistent with the policies of the government of Ontario, the promotion of the use of renewable energy resources.*

15. Section 96.1 of the *OEB Act* permits Cabinet to designate that an electricity transmission line is needed as a "priority project". As seen in the wording of the provisions (below), the OEB is required to accept that such projects are needed, when making their decision under sections 92 and 96 of the *OEB Act*.

> *96.1 (1) The Lieutenant Governor in Council may make an order declaring that the construction, expansion or reinforcement of an electricity transmission line specified in the order is needed as a priority project.*
>
> *(2) When it considers an application under section 92 in respect of the construction, expansion or reinforcement of an electricity transmission line specified in an order under subsection (1), the Board shall accept that the construction, expansion or reinforcement is needed when forming its opinion under section 96.*

16. In March of 2016, the Lieutenant Governor in Council issued an order declaring, pursuant to section 96.1 of the *OEB Act*, that the construction of the "East-West Tie Line Project" is needed as a priority project (the "OIC", or the "Order in Council").[24] The OIC specifically noted an in-service date of 2020 for the project as being a priority. The OIC came into effect on March 4, 2016, and removed any requirement for the OEB to determine "need" for the East-West Tie Line Project.[25]

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[23] Section 92(1) states: "No person shall construct, expand or reinforce an electricity transmission line or an electricity distribution line or make an interconnection without first obtaining from the Board an order granting leave to construct, expand or reinforce such line or interconnection."
[24] Exhibit B, Tab 4, Schedule 1, Attachment 1.
[25] The Minister of Energy wrote to the OEB Chair with regard to the OIC on March 10, 2016. In his letter, the Minister noted that the East-West Tie Line Project had been identified as a priority project in the Province's 2013 Long-Term Energy Plan and stated that the project "…is a cornerstone of the government's policy to support expansion of transmission infrastructure in northwestern Ontario".

17. The combined effect of the relevant provisions of the *OEB Act* is that the OEB will grant LTC approval where it is found that a priority project meets the public interest in respect of price, reliability and quality of service.[26] The assessment of these factors is typically made exclusively in relation to the project presented in the application before the OEB.[27] In this case, however, the OEB is considering two applications for the same project. Although the OEB could find that both applications meet the public interest in terms of price, reliability and quality of service, only one will actually proceed. Therefore, it is expected that the OEB will determine which application better meets the public interest in terms of price, reliability and quality of service.

18. NextBridge submits that all of the factors to be considered by the OEB are important. The wording of subsection 96(2) does not indicate that any one of these factors "trumps" the others. Instead, it is incumbent on the OEB to consider all of the factors together to determine which of the applications to construct the East-West Tie expansion best meets the public interest. As explained below, NextBridge's EWT Line Project best meets the interests of consumers with respect to price and the reliability and quality of electricity service.

Approval of NextBridge's Proposal

19. NextBridge has been committed to the construction of the EWT Line Project for more than five years, in order to provide reliable electricity to northwest Ontario and to promote economic development in the region, working to meet a December 2020 in-service date. Before and since the time of designation, NextBridge has developed strong and lasting relationships with affected communities and area First Nations and Métis ("FNM") communities, including the Métis Nation of Ontario ("MNO"). This necessary community support will permit NextBridge to meet its schedule.

20. As explained in more detail below, NextBridge's "shovel ready" EWT Line Project meets the expectations and requirements for LTC approval in terms of each of the factors that the OEB

[26] It does not appear that the promotion of the use of renewable energy resources is a relevant consideration in this case.
[27] See, for example, the October 8, 2013 Decision and Order in EB-2012-0458 (K2 Wind Ontario LP), at pages 5-6.

must consider in this case – cost, reliability and quality of service. Set out below is a summary of the evidence on each of these topics that puts the NextBridge proposal on a very solid and substantial foundation.[28]

(i) NextBridge's Costs are Reliable and Reasonable

21. NextBridge has completed almost all of the design work for its EWT Line Project. This gives confidence that the project is ready to proceed with construction and that the forecast costs are accurate, reliable, and achievable. Taken together, the evidence is that NextBridge's design for the EWT Line Project is well advanced and is ready to be implemented.

22. NextBridge's detailed cost estimate for the construction phase of its EWT Line Project is set out below[29]:

Line (a)	Description (b)	LTC (c)
1	Engineering	$ 19,342,245
2	Materials & Equipment	89,408,231
3	Environmental	13,030,561
4	Land Rights	23,830,512
5	First Nation and Métis Participation	7,000,000
6	First Nation and Métis Consultation	13,211,000
7	Other Consultation	2,530,194
8	Site Clearing, Access	107,463,339
9	Construction	356,547,573
10	Site Remediation	13,898,699
11	Interest During Construction	31,003,000
12	Contingency	49,399,445
13	Regulatory	5,405,078
14	Project Management	4,900,644
15	**Total Construction Phase**	**$ 736,970,521**

23. To develop the total project cost estimate presented above, NextBridge: a) compared the EWT Line Project against similar projects; b) received external cost estimates from

[28] The evidence filed in support of NextBridge's Application has been thoroughly tested over a period of close to fifteen months. In accordance with Procedural Order No.1, NextBridge responded to written interrogatories on January 25, 2018. Technical Conferences were held on May 7, 16 and 17, 2018, and NextBridge filed responses to undertakings given at the Technical Conferences on June 1 and 20, 2018. NextBridge responded to additional written interrogatories on September 24, 2018 pursuant to Procedural Order No. 2 on Combined Hearing. An oral hearing of evidence was held on October 2, 3, 4, 9, 10, 11 and 12, 2018. Note that the May 16 and 17, 2018 Technical Conference evidence, as well as all other evidence in proceeding EB-2017-0364, was combined with the EB-2017-0182 and EB-2017-0194 proceeding record on August 13, 2018 in Procedural Order No.1 on Combined Hearing.

[29] See response to CCC Interrogatory #8, filed at Exhibit I.NextBridge.CCC.8. Attachment.

competitive procurements involving RFPs; and c) estimated and revised costs due to new project scope requirements, the extension in the EWT Line Project's in-service date to 2020, and the cost of imported materials.[30]

24. NextBridge retained Charles River Associates ("CRA") to prepare an independent benchmarking study assessment of its proposed project cost estimate. CRA benchmarked the estimated EWT Line Project capital cost against other projects. CRA concludes that NextBridge's estimated costs are competitive and reasonable when compared to other similar transmission projects.[31]

25. NextBridge's EWT Line Project construction cost estimate filed in July of 2017 was initially based on a project definition equivalent to the full Class 2 range under the AACE cost estimate classification system.[32] NextBridge's cost estimate now reflects a mature AACE class 2 estimate within a narrow accuracy band, plus or minus 10 percent. NextBridge is on the cusp of an AACE class 1 estimate upon receipt of its EA approval.[33]

26. In contrast, Hydro One's LSL Project is still a work in progress. It is an AACE class 3 project[34], which has a much wider accuracy band of between minus 20 to plus 30 percent. The evidence shows that Hydro One's LSL Project should be evaluated towards the upper end of the plus 30 percent range.[35]

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[30] Exhibit B, Tab 9, Schedule 1, page 2.
[31] Charles River Associates study titled "Transmission Cost Benchmarking Study", filed in response to CCC Interrogatory #11, at Exhibit I.B.NextBridge.CCC.11, Attachment, at page 11.
[32] AACE International Recommended Practice No. 18R-97. The "Generic Cost Estimate Matrix - AACE Recommended Practice No. 18R-97" is found at page 26 of the SEC Compendium for the Hydro One panel, filed as Exhibit K2.2.
[33] Hearing Transcript Volume 4, page 169. As NextBridge witness Dan Mayers explained in testimony: "We base everything on the amount of scope of work that's done. This kind of tries to summarize that, but even by saying a Class 1 being 50 to 100 percent, it still leaves a little variation there. I am here to tell you that we're well into the 90s percent of our scope. We pretty much know everything that we need to know about this project, and that's why we have the confidence in the number that we provided to this Board.": Hearing Transcript Volume 7, page 57.
[34] Hydro One response to NextBridge Interrogatory #44 at EB-2017-0364 Exhibit I, Tab 2, Schedule 44, page 4.
[35] This point is discussed in more detail below, under the heading "NextBridge's Costs are More Certain than Hydro One's Costs".

27. The impact of NextBridge's EWT Line Project on prices paid by consumers is modest.[36] As explained in evidence[37], an average residential customer will pay around 35¢ more each month once the project is in service (note that this figure is modestly overstated, as it does not take account of NextBridge's reduction in forecast O&M costs, which was determined after the filing of the average impact on residential customers[38]).

28. As detailed below, since the time that the cost estimate was filed in the Application, NextBridge has taken many steps that confirm its reliability.

NextBridge's Construction Costs are reliable

29. NextBridge's construction cost estimate, which comprises the largest part of the overall cost estimate, is market-tested and market-based. NextBridge's EPC contract with Valard[39] was negotiated from a formal competitive bidding process that reduces schedule and cost risks and impacts. The benefits of NextBridge's EPC contract include a 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".[40] Hydro One's unsigned EPC agreement with SNC Lavalin does not contain the same restrictive language that would protect ratepayers.

30. Hydro One would turn over the engineering, construction, and procurement to an EPC contractor,[41] while NextBridge's project management for these activities is driven by the vast experience and expertise of its partner NextEra, as well as NextEra's proven track record of bringing in large capital projects on-schedule and on-budget.[42] NextBridge will not wait for

[36] Exhibit B, Tab 12, Schedule 1.
[37] Response to HONI Interrogatory #10, filed at Exhibit I.B.NextBridge.HONI.10, page 2.
[38] Since the time the Application was filed, NextBridge has had the opportunity to review its forecast annual OM&A costs for its EWT Line Project and has determined that these can be reduced by almost $1 million from the original forecast – see Response to Staff Interrogatory #54, filed at Exhibit I.NextBridge.STAFF.54.
[39] The EPC Contract has been produced as an attachment to Staff Interrogatory #7, filed at Exhibit I.B.NextBridge.STAFF.7 Attachment 2.
[40] Response to SEC Interrogatory #20, filed at Exhibit I.NextBridge.SEC.20.
[41] Hydro One refers to its EPC contract as a "turnkey" EPC – see Hydro One December 8, 2017 Board of Directors Approval to Submit Leave to Construct presentation, at slide 7: filed at EB-2017-0364, Exhibit JT 2.19, Attachment 3.
[42] 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).

its contractor to raise an issue; NextBridge will be on the ground working to mitigate or work around issues as they arise. With more hands-on ownership of the construction project schedule and budget, the risks of poor quality, loose environmental compliance, increased costs and extended schedule are reduced.[43]

31. NextBridge's engineering design has been completed to better than a 90% level, and includes structure spotting, field reconnaissance, geotechnical information, grounding, foundation and anchor designs, and a drawing package nearing release for construction.[44] NextBridge and Valard have a complete, well-thought-out access plan that minimizes environmental impacts and incorporates an extensive field reconnaissance program. NextBridge has a family of ten towers that are fully designed, independently verified, load tested, and ready for fabrication.[45] This high level of diligence provides a high degree of confidence that NextBridge and Valard have identified the project requirements and associated costs.

32. NextBridge has already issued RFPs for tower contracts and will issue additional RFPs for materials to global sources, so a competitive source procurement can be executed shortly after receiving LTC approval.[46] Current indications are that costs will be at or below the budgeted level.[47]

33. Recently, NextBridge has reviewed the other materials besides towers, and current forecast costs are well within line with previous expectations.[48]

34. NextBridge has provided detailed evidence about the risks that its EWT Line Project faces, including timing risks, and how those risks may impact on costs.[49] As explained in testimony, where the OEB grants LTC approval to NextBridge in December 2018, then NextBridge will work diligently with Valard to complete the project on a compressed

[43] Hearing Transcript Volume 5, pages 32-34.
[44] Hearing Transcript Volume 4, page 168.
[45] Hearing Transcript Volume 4, page 169.
[46] Hearing Transcript Volume 4, page 168.
[47] Hearing Transcript Volume 5, page 41.
[48] Hearing Transcript Volume 4, page 169.
[49] Response to Staff Interrogatory #50, filed at Exhibit I.NextBridge.STAFF.50.

schedule so that it can be in service by December 2020.[50] The expected cost implications of compressing the schedule are within plus or minus 10% of the indicated price.[51]

NextBridge's Environmental Approvals, Permits, and Land Acquisitions are well-advanced

35. NextBridge's cost estimate (and schedule) related to environmental and lands approvals, acquisitions, and costs are reliable because NextBridge is close to obtaining most of its required approvals.

36. The EWT Line Project requires approval under the *Environmental Assessment Act*[52]. NextBridge has been working toward this approval for five years, having initiated environmental assessment activities at designation in August of 2013. Terms of Reference ("ToR") for the EWT Line Project EA were approved by the Ministry of Environment and Climate Change, now the MECP, on August 28, 2014.[53] NextBridge's EA was prepared in accordance with the requirements of the approved ToR. Natural environment and socioeconomic data was collected and extensive consultation undertaken with First Nations and Métis communities, landowners, regulatory agencies, and interested parties throughout the EA process. The final EA was submitted to MECP on July 5, 2017.[54] An amended EA was submitted on February 15, 2018.[55]

37. NextBridge's EA has been reviewed by MECP and is considered complete.[56] NextBridge expects approval of the EA in February of 2019.[57] The MECP witness at the oral hearing confirmed this expected timeline is reasonable.[58]

38. NextBridge recently completed its 2018 field program for wildlife surveys and archaeological assessments. NextBridge expects that aquatic surveys will be completed in October 2018.[59]

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[50] Hearing Transcript Volume 5, pages 12-13.
[51] Hearing Transcript Volume 5, pages 16-21. Hearing Transcript Volume 6, pages 16, 22, 25, 36 and 41.
[52] R.S.O. 1990, Chapter E.18
[53] Exhibit J, Tab 1, Schedule 1, page 1.
[54] *Ibid*.
[55] NextBridge Report dated April 20, 2018 at page 7 in EB-2015-0216, imported into EB-2017-0182 through NextBridge response to SEC Interrogatory #2 at Exhibit I.NextBridge.SEC.2.
[56] MECP letter to NextBridge dated September 28, 2018 (filed on the Board's web drawer for EB-2017-0182).
[57] Hearing Transcript Volume 4, pages 166-167.
[58] Hearing Transcript Volume 7, pages 101 and 141.

39. NextBridge's proposal is based on an in-depth knowledge of permit requirements and NextBridge has been working collaboratively with the Ministry of Natural Resources and Forestry on draft permits and applications.[60] NextBridge is aware that many of the Ministry offices in northwestern Ontario are very resource-constrained, and has been working on a project plan with the Ministry to ensure they are aware of what type of permits will be required and when.[61]

40. The NextBridge EWT Line Project is at a mature stage of the land acquisition and permitting programs, ensuring that land will be available to start construction in June of 2019.[62] NextBridge land agents have been working in the area since November 2013 in support of the EWT Line Project. NextBridge's land optioning and permitting program was initiated in March 2016 to secure the necessary land rights, using the forms of agreement attached to the Application.[63]

41. NextBridge is at an advanced stage with its completed land agreements[64] and land permitting[65]. This provides cost certainty by continuing to reduce the number of potential expropriations that may be required.[66]

(ii) NextBridge's Proposal Offers High Reliability and Quality of Service

42. NextBridge has received a System Impact Assessment Report ("SIA Report") from the Independent Electricity System Operator ("IESO"), concluding that the proposed facilities will not have a material adverse impact on the reliability of the integrated power system.[67] NextBridge has also received a Customer Impact Assessment Report ("CIA Report") from

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[59] Hearing Transcript Volume 4, page 170.
[60] Hearing Transcript Volume 4, page 170 and Hearing Transcript Volume 5, page 36.
[61] Hearing Transcript Volume 6, page 89.
[62] Hearing Transcript Volume 4, page 170.
[63] Exhibit E, Tab 4, Schedule 1, page 2; Exhibit E, Tab 5, Schedule 1, Attachments 1-8.
[64] NextBridge has signed 140 option agreements, representing 76 percent of affected private landowners and 70 consents, representing 33 percent of affected interest holders on provincial Crown lands in support of NextBridge's Crown land disposition approvals: Hearing Transcript Volume 4, page 170.
[65] NextBridge received approvals from third-party agencies in August and September of 2018 for the overhead transmission line and access crossings: Hearing Transcript Volume 4, page 170.
[66] Hearing Transcript Volume 4, pages 170-171.
[67] Exhibit F, Tab 1, Schedule 1.

Hydro One, indicating that the EWT Line Project has relatively small impact on short-circuit levels and voltage performance in the area, and will improve the area's customer power supply reliability.[68]

43. As explained in pre-filed evidence[69] and testimony[70], NextBridge can confidently say that its Application addresses all of the OEB's minimum technical requirements.[71] These requirements were issued in 2011 specifically for the EWT line and are in place to ensure reliability. The requirements include addressing galloping, electrical clearances, including conductor blowout to the edge of the right-of-way, live line work requirements, and lightning outage requirements.[72]

44. In terms of reliability, NextBridge has a cohesive failure containment strategy that considers the critical nature of the project and the importance of timely restoration of the EWT Line Project. NextBridge's design has no single point of failure or bottleneck on the existing and new EWT corridor, there are no crossings of the existing EWT line, there are no required outages of the existing EWT line, and there are no quad-circuit towers in NextBridge's design.[73] NextBridge's tower design was fully load tested and confirmed as reliable by an independent expert, Robert E. Nickerson.[74]

45. The planned December 2020 in-service date for NextBridge's EWT Line Project meets the timing requirements to maintain reliable electricity supply to northwestern Ontario, and eliminates the need for ongoing incremental firm capacity purchase by the IESO. The fact that the EWT Line expansion is needed by that date is demonstrated by the following:

    a. The March 2016 OIC declared that the construction of the "East-West Tie Line Project" with an in-service date of 2020 is needed as a priority project.[75]

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[68] Exhibit G, Tab 1, Schedule 1.
[69] Exhibit C, Tab 2, Schedule 1, page 1.
[70] Hearing Transcript Volume 4, page 171.
[71] OEB Minimum Technical Requirements for the Reference Option of the E-W Tie Line dated November 9, 2011 (EB-2011-0140).
[72] Hearing Transcript Volume 4, page 171.
[73] *Ibid*.
[74] March 16, 2017 Memorandum from Robert E. Nickerson, P.E. to NextBridge titled "Summary Review of Ontario East-West Tie Line Project; Project No. 78290-78311", filed as Attachment 10 to Exhibit JD1.2.
[75] Exhibit B, Tab 4, Schedule 1, Attachment 1, page 2.

b. The IESO's December 1, 2017 Updated Assessment of the Need for the East-West Tie Expansion, indicates that "[t]his project continues to be the IESO's recommended option to maintain a reliable and cost-effective supply of electricity to the Northwest for the long term."[76] Consistent with that finding, the IESO states that it "continues to recommend an in-service date of 2020 for the E-W Tie Expansion project".[77]

c. In response to the IESO's Updated Needs Assessment, the Minister of Energy wrote to the IESO and the OEB and indicated, among other things, that the IESO's report "clearly explains the need to pursue the completion of the EWT with a 2020 in-service date".[78]

d. On June 29, 2018, the IESO provided a further update to its Needs Assessment, in response to a request from the OEB.[79] In that Addendum to the 2017 Updated Assessment for the Need for the East-West Tie Expansion, the IESO confirmed that it "continues to recommend an in-service date of 2020 for the E-W Tie Expansion."[80] Additionally, the IESO noted that "[i]f the in-service date is delayed beyond 2020, using interim measures to manage the need will result in additional costs and increased risks to system reliability."[81] This means that the risk caused by delay is not one of cost alone; there are reliability risks that will arise where the EWT expansion is not in service until after 2020. Further, the IESO identified "the end of 2022 as the in-service date beyond which these risks to system reliability and the associated cost uncertainties are unacceptable."[82]

e. The Minister of Energy, Northern Development and Mines recently wrote to the OEB to emphasize that the matter should be decided promptly. In his October 2, 2018 letter, the Minister highlighted that the IESO continues to recommend a 2020 in-service date, and that a delay past 2020 introduces increased risks to system reliability.[83]

f. In testimony at the oral hearing, IESO witnesses reiterated that the EWT Line is needed in 2020. While the capacity shortfall can *potentially* be managed until 2022 (which was referred to as a "drop dead date")[84], IESO has a strong preference for meeting the previously-stated 2020 in-service date.[85] That timing is required "to meet planning standards."[86]

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[76] EB-2017-0364, Exhibit B-02-01, Attachment 2, page 1.
[77] EB-2017-0364, Exhibit B-02-01, Attachment 2, page 2.
[78] EB-2017-0364, Exhibit B-03-01, Attachment 2, pages 1 and 20.
[79] IESO Addendum dated June 29, 2018, filed at Exhibit K4.4.
[80] IESO Addendum dated June 29, 2018, at pages 1, 5 and 6.
[81] IESO Addendum dated June 29, 2018, at page 1.
[82] IESO Addendum dated June 29, 2018, at pages 1, 4 and 6.
[83] October 2, 2018 Letter from Minister of Energy, Northern Development and Mines to OEB Chair (Rosemarie Leclair) – filed on the OEB's "WebDrawer" for EB-2017-0182.
[84] Hearing Transcript Volume 4, page 136.
[85] Hearing Transcript Volume 4, pages 135, 152 and 155.
[86] Hearing Transcript Volume 4, page 135.

46. NextBridge's Application proposes a December 2020 in-service date for the EWT Line Project. Since the time that NextBridge filed its Application, it has updated the project schedule to take account of the later than forecast EA and LTC approvals. However, because of the fact that its engineering and planning activities are well-advanced at this point, NextBridge has been able to compress other parts of its schedule in order that it can maintain its planned December 2020 in-service date for the EWT Line Project.[87]

47. NextBridge has completed many of the key preliminary requirements for the EWT Line Project, and is ready to proceed with construction activities as soon as approvals are received. NextBridge's general contractor Valard has worked closely with Supercom, an economic development corporation in northwest Ontario, to promote local participation in the project. Those parties have worked together to train over 250 individuals from 18 Indigenous communities. These individuals are ready to work on the East-West Tie and bring it into service in December 2020.[88]

48. The following table sets out NextBridge's current project schedule, using the same format as included in pre-filed evidence, but with current target dates.[89] A more detailed current project schedule was filed as an interrogatory response.[90]

Project Schedule

Activity	Target Date
Submit Section 92 Application to OEB	Completed
Begin Stage 2 Archaeological Assessments	Completed
Begin environmental field work for environmental permitting activity	Completed
Submit Environmental Assessment to MOECC	Completed
Projected Decision and Order for Section 92	Q4 2018

[87] Hearing Transcript Volume 5, pages 11-13.
[88] Hearing Transcript Volume 4, page 167.
[89] Original schedule filed at Exhibit B, Tab 1, Schedule 1, Attachment 1. Target Dates updated using information from response to Staff Interrogatory #49 and Attachment, filed at Exhibit I.NextBridge.STAFF.49.
[90] Response to Staff #49, filed at Exhibit I.NextBridge.STAFF.49, Attachment.

Obtain Environmental Assessment approval	February 2019
Obtaining majority of environmental permits for construction	Q1 2019
Begin follow up Geotechnical Investigations	Q3/Q4 2019
Construction Start	Q2 2019
Property Rights Acquisition Completed	Q1 2020
In Service Date	December 31, 2020

(iii) *Conclusion*

49. The evidence demonstrates that the EWT Line Project meets the public interest test for LTC under Section 96(2) of the *OEB Act* and that the proposed transmission facility locations and routing are appropriate in the circumstances. On this basis, NextBridge submits that leave to construct its EWT Line Project should be granted for the following reasons:

    a. The need for the facilities has been confirmed by Order in Council[91], demonstrating consistency with the policies of the Government of Ontario.

    b. The interests of consumers with respect to prices are protected as the costs of the facilities are reasonable, based on the results of competitive tendering processes, will have minimal impact on the monthly bill of a typical residential electricity consumer, and are certain within a plus or minus 10% range.[92]

    c. The connection of the EWT Line Project to the IESO controlled grid will not have a material adverse impact on the reliability of the integrated power system.[93]

    d. The connection of the EWT Line Project to the Hydro One transmission system will not have any adverse impact on the Hydro One transmission customers in the area, and will in fact improve the area's customer power supply reliability.[94]

    e. The EWT Line Project has been engineered to be fully compliant with the OEB minimum technical requirements which will ensure a high level of reliability and quality of service, and provides operational flexibility of the Ontario electricity grid while supporting the overall improved capability of the transmission system to transmit electricity.

[91] Exhibit B, Tab 4, Schedule 1, page 1; Exhibit B, Tab 4, Schedule 1, Attachment 1, page 2.
[92] Exhibit B, Tab 2, Schedule 1 at page 4. The narrow range of cost variances is discussed at Hearing Transcript Volume 4, page 169.
[93] Exhibit F, Tab 1, Schedule 1 at page 1; Exhibit F, Tab 1, Schedule 1, Attachment 1, page 10; Exhibit F, Tab 1, Schedule 1, Attachment 2, page 8.
[94] Exhibit G, Tab 1, Schedule 1, page 1; Exhibit B, Tab 1, Schedule 1, Attachment 1, page 5 and 15; Exhibit G, Tab 1, Schedule 1, Attachment 2, pages 5 and 17.

Approval of the EWT Station Project

50. NextBridge supports Hydro One's request for LTC approval of the EWT Station Project. There is no issue as to the need for this project, as it is required to connect the priority new EWT Line. There are also no identified issues as to the reliability or quality of service associated with Hydro One's planned scope of work. Assuming that Hydro One's expenditures on the EWT Station Project meet the prudence standard, then there are no concerns as to price.[95]

51. NextBridge's concerns with the EWT Station Project relate to timing. Hydro One has now indicated that its substation work on the Marathon Transformer Station ("Marathon TS") to accommodate the EWT Line Project will not be complete until 2021.[96] That information was not made clear to NextBridge until just before the oral hearing began.[97] It is not clear that Hydro One has been treating the EWT Station Project in a sufficiently urgent manner to this point - Hydro One witness Mr. Spencer indicated that he is investigating whether the timelines can be compressed.[98] The MECP indicated in testimony that although permits cannot be approved before the EWT Station Project EA is issued, that does not stop Hydro One from submitting the relevant applications at this time.[99] As explained in testimony, NextBridge believes that Hydro One's forecasted construction timelines are longer than what is needed, particularly given the priority requirement to have the EWT Line in service by 2020.[100] The MECP witnesses have confirmed that when NextBridge's EA approval is granted, then the EA approvals for the work on Marathon TS can also be issued at that

[95] Hydro One's Station Project estimated cost is $157.3 million – see Exhibit B, Tab 1, Schedule 1, page 4 in EB-2017-0194. NextBridge notes that the EWT Station Project is not being proposed to be covered by any sort of "not to exceed" price.
[96] Hydro One response to SEC Interrogatory #27 at Exhibit I, Tab 5, Schedule 27, page 2 (EB-2017-0364); see also Hearing Transcript Volume 1, pages 24-25 and 38-39.
[97] Contrary to Hydro One's assertions, NextBridge was not aware of this updated timing during the summer of 2018 – see Hearing Transcript Volume 6, pages 46-47 and Hearing Transcript Volume 7, pages 88-90. The MECP witnesses indicated that the purpose of the meeting held in July 2018 was not to inform the MECP of a delay in the schedule: Hearing Transcript Volume 7, page 138.
[98] Hearing Transcript Volume 2, pages 67-68.
[99] As noted by the MECP witnesses, this information was provided to Hydro One in a July 2018 meeting: Hearing Transcript Volume 7, page 136.
[100] Hearing Transcript Volume 4, page 168.

time.[101] NextBridge sees no reason why the substation work cannot be accelerated by Hydro One to achieve a December 2020 in-service date, or alternatively, why the upgraded substations cannot be in service either one or two or three months thereafter.[102] Indeed, given the priority nature of the EWT Line expansion, NextBridge believes that it would be appropriate for the Board's LTC decision on the EWT Station Project to include requirements for an expedited schedule, along with potentially requiring that Hydro One absorb extra costs incurred by NextBridge or ratepayers from the EWT Line Project in-service date being delayed because of the EWT Station Project.

NextBridge's EWT Project is Superior to the Hydro One LSL Project

52. In terms of both reliability/quality of service and price/cost, NextBridge's EWT Line Project is superior to the Hydro One LSL Project. NextBridge's "shovel ready" EWT Line Project can meet the needed 2020 in-service date to reinforce and increase electricity supply to northwestern Ontario. Hydro One's LSL Project is uncertain and contingent on a number of future approvals that may never be achieved, or may not be achieved in time for it to be in-service prior to the end of 2022, which is the latest date the IESO declared must be met. It is not clear whether, when, and at what cost the Hydro One LSL Project may ultimately be completed. Therefore, it is highly questionable whether the need identified by the IESO to serve growing demand in northwestern Ontario would be met by Hydro One's LSL Project.

53. Approval of NextBridge's Application will support and enable competition in the transmission business in Ontario. This is what the designation process sought to accomplish.

54. As set out below, NextBridge's EWT Line Project is superior to Hydro One's LSL Project on each of the factors that the OEB must consider in this case – cost, reliability, and quality of service. On the topic of reliability/quality of service, the advantages of NextBridge's project are twofold – NextBridge can meet the timeline indicated by the IESO to maintain reliable service to northwest Ontario, and NextBridge's project design is superior to Hydro One's.

[101] Hearing Transcript Volume 7, pages 142-143. This scenario assumes that NextBridge's EWT Line Project obtains LTC approval. If NextBridge's EWT Line Project does not obtain LTC approval, Hydro One Station Project EA approvals will not be issued until Hydro One's LSL Project EA is approved – see Hearing Transcript Volume 7, page 141-142.

[102] Hearing Transcript Volume 4, page 168. Note that Hydro One's detailed schedule for the Marathon TS work was not provided until the end of the hearing (as Undertaking JT4.1), and there was no opportunity to cross-examine or respond to that schedule.

(i) NextBridge's Costs are More Certain than Hydro One's Costs

55. NextBridge's forecast construction phase cost of $737 million is well-developed, reasonable, and achievable. NextBridge's forecast cost is based on a signed EPC contract, a nearly complete engineering design and a ready-to-implement materials procurement plan. Because NextBridge's project is so well advanced, the risk of variances and additional unexpected costs is minimized. These risks are further mitigated by the specific terms negotiated in NextBridge's EPC contract noted above, which limits potential for additional costs. As set out below, Hydro One's yet-to-be-signed EPC includes more risk of cost increases.

56. Although the Hydro One LSL Project application (as amended) suggests a lower overall construction cost than the NextBridge EWT Line Project, this cost is preliminary and subject to change, whereas NextBridge's cost estimate is based on a fully engineered, ready to execute project.

57. A common approach to classification of cost accuracy is through the use of the AACE classification, which looks at the maturity level of a project to evaluate the accuracy range of cost estimates. As the proportion of the project's deliverables that are completed increases, so too does the AACE Estimate Class. As the completed project deliverables and AACE Estimate Class increase, the accuracy range of cost estimates becomes tighter.

58. To qualify as a Class 1 AACE cost estimate, the project must be 65% to 100% in scope.[103] NextBridge is close to this level, having completed 90% of the engineering and route planning. Once the LTC and EA approvals (and any associated conditions) are complete, then NextBridge will be at Class 1.[104] The Hydro One LSL Project is not at that stage.

[103] "Generic Cost Estimate Matrix - AACE Recommended Practice No. 18R-97" , found at page 26 of the SEC Compendium for the Hydro One panel, filed as Exhibit K2.2. See also discussion at Hearing Transcript Volume 7, pages 55-56.
[104] Hearing Transcript Volume 7, pages 55-56.

59. The degree of project immaturity in Hydro One's LSL Project dictates why its cost forecast is subject to high variability. Hydro One's AACE Class 3 cost forecast[105] (which has an accuracy band of minus 20% to plus 30%) results in costs at the high end of the range that are higher than NextBridge's upper end forecast costs.

60. From a ratepayer perspective, a main concern is that either of the applicants for the EWT expansion could exceed their cost estimates. In this regard, the risk imposed by the Hydro One proposal is higher. The following table sets out the upper end of the cost ranges represented by each cost estimate.

All numbers in $millions	**NextBridge**	**Hydro One – through the Park**	**Hydro One – around the Park**
As-filed cost estimate[106]	$737	$642	$682
Upper End of Cost Range	$811[107]	$835[108]	$894[109]

61. Further evidence of why Hydro One's forecast should be considered at the upper range of a Class 3 AACE is its concession that its forecast does not include all expected LSL Project costs, and, therefore, underestimates LSL Project costs.[110] Hydro One's witness confirmed

[105] Hearing Transcript Volume 1, pages 59-60.
[106] In their Opening Statement, Hydro One presented that their total cost for the "through the Park" route is $641.8 million (Hearing Transcript Volume 1, page 20). The as-filed cost estimates are summarized in the OEB Staff Summary of the Evidence on Costs, filed as Exhibit K4.2. The Hydro One cost estimates indicated in the above Table for the Hydro One routes are inclusive of Hydro One's indicated development costs, because Hydro One has indicated that these will be included with the other construction costs (see Hearing Transcript Volume 4, pages 40 to 41 and 70).
[107] NextBridge's evidence is that its cost estimate is accurate within plus or minus 10%. This puts the high limit of the range at $811 million ($737 million +10%).
[108] Hydro One's Class 3 cost estimate for the "through the Park" route is accurate within an accuracy band of minus 20% to plus 30%. This puts the high limit of the range at $835 million ($642 million +30%).
[109] Hydro One's cost estimate for the "around the Park" route is a Class 4 estimate for the "around the park" portion of the route, and Class 3 for the balance of the route, (Hearing Transcript Volume 1, pages 96-97). If one conservatively assumes that the cost for the "around the Park" part of the route is simply the difference between Hydro One's two cost estimates ($41 million), then this puts the high limit of the range at $894 million ($41 million +50% plus $642 million + 30%).
[110] For example, Hydro One does not appear to have included any regulatory costs related to the approximately three-year period anticipated between LTC approval and in-service of the LSL Project – see NextBridge response to SEC Interrogatory #24 pages 6, 8 and 9, filed at Exhibit I.NextBridge.SEC.24. Also, Hydro One's First Nation and Métis participation budget and Materials and Equipment costs appear to be significantly underestimated based on NextBridge's experience – see comparison table and detailed variance analysis provided at Exhibit I.NextBridge.SEC.24, pages 2 -10, and Hearing Transcript Volume 5, pages 45-46.

that the budget is based on achieving EA approvals in August 2019, notwithstanding the fact that Hydro One now indicates the earliest they will achieve an EA approval is two months later than that date.[111] Hydro One also acknowledged that its price does not include conditions imposed by regulatory and governmental agencies.[112]

62. Hydro One's forecast also does not include the costs associated with all of the uncertainties around its LSL Project. As described in more detail below, there are many approvals required for Hydro One to proceed, and it is quite uncertain as to whether or when many of these will be achieved. There are potential additional costs associated with such items as failure to obtain Parks Canada approval to traverse Pukaskwa National Park (the "Park"), failure to obtain a Declaration Order instead of an individual EA approval, failure to reach agreement with FNM groups and failure to obtain necessary land rights. Moreover, even when these approvals are obtained, delays will also add to costs. Examples of the additional costs that Hydro One may encounter include the following:

    a. EA-related costs: Hydro One in its testimony confirmed that both its Declaration Order and Individual EA processes assume the ability to rely on an approved NextBridge EA.[113] 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.[114] These additional costs are not included in the LSL Project cost estimate or accounted for in Hydro One's contingency.[115] One example of a situation where Hydro One may not be able to rely on NextBridge's EA is if MECP does not approve NextBridge's EWT Line Project EA. If NextBridge is not granted LTC approval for the EWT Line Project, MECP noted that the Minister does not have to make a decision on the EA application, and was not able to confirm whether NextBridge's EA would continue to be processed and ultimately approved.[116] Staff counsel suggested to Hydro One's witnesses that a two year delay arising where a full individual EA is required could add $50 million to Hydro One's costs, and the witnesses were not able to say that figure is wrong.[117]

[111] Hearing Transcript Volume 2, pages 80-81.
[112] 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.
[113] Hearing Transcript Volume 2, pages 77 and 79.
[114] Hearing Transcript Volume 2, pages 82-83, and pages 109-110; See also Exhibit I-1-14, page 5.
[115] Hearing Transcript Volume 4, page 33.
[116] Hearing Transcript Volume 7, pages 113 and 115.
[117] Hearing Transcript Volume 4, pages 31-33.

b. Costs where Hydro One cannot traverse the Park: Failure to receive Parks Canada approval would add at least $40 million to Hydro One's costs.[118] That figure may be understated, because the cost estimate for Hydro One's "around the Park" route is an AACE Class 4 estimate, with an accuracy band of minus 30% to plus 50%.[119] Of course, having to proceed with this alternative route would also cause project delays, and associated increased costs.[120]

c. Costs of consultation and economic participation with First Nation & Métis groups: There is no current indication of whether, when, and at what cost Hydro One may complete negotiations with impacted FNM groups. This may add costs well beyond the budgeted amounts. 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.[121]

d. Costs of land acquisitions: As described below, Hydro One confirmed in testimony that it has not completed any land agreements, and that it is not even aware of the details of many of the land interests it must address in order to proceed with construction. Addressing these items could cause costs and delay beyond Hydro One's forecasts.

e. EPC Contract: Hydro One's EPC contract with SNC Lavalin has still not been completed and signed.[122] Until that happens, its related costs (such as terms and conditions; labour and materials costs) are subject to change.[123] As shown above, Hydro One's EPC contract is not as favourable to ratepayers as the NextBridge EPC contract and, therefore, SNC Lavalin has greater ability to request and obtain change orders, thereby increasing the project price. The record also shows that unlike the NextBridge EPC contract that was based on fully tested tower designs and geotechnical and soil resistivity field surveys, none of this work has been completed by Hydro One or SNC Lavalin.

f. Additional ratepayer costs from delay: Many of the uncertainties described above can be expected to cause delays. Additionally, though, it is currently known that Hydro One cannot meet its own December 2021 in-service date, because the EWT

[118] Hearing Transcript Volume 1, pages 96-97. See also OEB Staff Summary of the Evidence on Costs, filed as Exhibit K4.2.
[119] Hearing Transcript Volume 1, pages 97-98. The "Generic Cost Estimate Matrix - AACE Recommended Practice No. 18R-97" is found at page 26 of the SEC Compendium for the Hydro One panel, filed as Exhibit K2.2.
[120] Note that Hydro One is not seeking approval at this time for the "around the Park" route – the testimony of Hydro One witnesses is that if Hydro One did not get approval from Parks Canada to route through the Park, then Hydro One would come back to the OEB for direction: Hearing Transcript Volume 1, pages 98-99.
[121] Hearing Transcript Volume 4, pages 56-57.
[122] Hearing Transcript Volume 1, page 100.
[123] Hearing Transcript Volume 4, page 52. There is an additional point of uncertainty with SNC-Lavalin: as it faces ongoing investigations, both internal and external, related to alleged misconduct on prior projects it may find that management attention is diverted, and restrictions could be placed on its eligibility to enter into government contracts: Exhibit K1.3 at pages 34 and 36 and Hearing Transcript Volume 1, pages 106-107.

> Station Project will not be completed at that time. As discussed below, the MECP witnesses have confirmed that the EA approval for the EWT Station Project will not be issued until after EA approval for the successful EWT Line expansion project.[124] This means that if Hydro One's EWT project is proceeding, then EA approval for the EWT Station Project cannot issue until October 2019 at the earliest, thereby delaying the completion date for that work until well beyond Hydro One's forecast December 2021 in-service date for its LSL Project.[125] The information from IESO is that there are costs from delay because incremental capacity from other sources will have to be acquired to meet the demand. 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 risks to system reliability and the associated cost uncertainties".[126] Therefore, a delay until the end of 2022 would add $40 million to the costs paid by ratepayers.

63. Taking all of this together, it is easy to see the scenario where Hydro One's costs to provide the EWT line expansion will be higher than NextBridge's costs, and why the upper end of the AACE estimates should be used to evaluate Hydro One's price.

64. The introduction of a not-to-exceed price concept by Hydro One[127] does not reduce the development and cost uncertainty that clouds the Hydro One LSL Project, given the highly qualified and narrow "guarantee" being proposed.[128] Importantly, even this limited not-to-exceed price concept has not been approved by the Hydro One Board of Directors, and it will not be put to them for a decision until the first week of November.[129] Moreover, this "guarantee" does not address the risk of whether Hydro One's project will ever proceed, or whether it can meet the IESO's required timelines.

65. The advantage of NextBridge's detailed planning and work to get the EWT Line Project to construction-ready state is that NextBridge and its contractor know what to expect, and are ready for construction. NextBridge is confident in its mature construction phase cost estimate of $737 million. The expected cost variance is within a narrow band of plus or minus 10% from the forecasted amount. As acknowledged in testimony, NextBridge

[124] Hearing Transcript Volume 7, page 126.
[125] Discussed below at paragraph 72.
[126] IESO Addendum dated June 29, 2018, at page 4.
[127] See Hydro One response to Staff Interrogatory #18 in EB-2017-0364, filed as Exhibit I.1.18.
[128] See, for example, Hearing Transcript Volume 3, pages 173-184 and Volume 4 Hearing Transcript, pages 40-58.
[129] Hearing Transcript Volume 3, pages 174-175.

understands and accepts the likelihood of a prudence review if its actual costs exceed its forecast cost.[130]

(ii) NextBridge will meet the timeline required to maintain reliability

66. Most importantly, NextBridge's EWT Line Project can be completed by December 2020, to meet the needs identified by the IESO and the Government's OIC, and the wishes of the communities who will benefit from the project. This will increase the quality and reliability of electricity service for customers in northwest Ontario.

67. The likelihood that NextBridge can meet the scheduled 2020 in-service date is increased by the fact that NextBridge's project enjoys widespread support by the communities it will serve, along with impacted FNM communities.[131] All of these parties are invested in the success of the project.

68. Hydro One's LSL Project is only in the early stages of development, which results in a high level of uncertainty as to whether, when, and in what form the project will actually proceed. The key point here is that, in respect of the LSL Project facilities, Hydro One only has a one year window between its forecast in-service date (December 2021) and the date by which the IESO indicates that the new EWT Line must be in service to avoid unacceptable risks (December 2022).[132] The uncertainty around Hydro One's Application leads to very serious questions about whether its LSL Project can be delivered by the end of that time window. Hydro One's own risk register identifies at least six risks rated "even odds" or "likely" that will cause schedule delays.[133]

69. The uncertainty about Hydro One's LSL Project is seen in each of the following items:

    a. Routing through the Park: Hydro One does not yet have a final confirmed route for the LSL Project because it has not yet received confirmation from Parks Canada that it will be allowed to cross through the Park. Hydro One does not expect to receive Parks Canada approval until August 2019, after completion of area studies in the

[130] Hearing Transcript Volume 7, pages 77-78. See also Hearing Transcript Volume 5, page 52.
[131] Hearing Transcript Volume 4, page 167.
[132] Hearing Transcript Volume 3, pages 162-163.
[133] See response to Staff Interrogatory #13 in EB-2017-0364, Attachment 1, filed at Exhibit I.1.13 – discussed at Hearing Transcript Volume 2, pages 45-53.

spring of 2019 and a detailed Impact Assessment.[134] Hydro One indicated that it currently does not have a complete understanding of what permits are required for construction within the Park.[135] There are multiple open First Nations land claims in relation to Park lands.[136]

b. EA Approval by way of Declaration Order: The ToR for the LSL EA have only recently been submitted for approval to MECP, with approval not expected before December 2018.[137] Hydro One's own forecast is that it cannot achieve EA approval until October 2019.[138] That date is reliant on receiving a Declaration Order from the Minister.[139] However, the Declaration Order is only available where NextBridge's EA is approved.[140] It is not clear whether and when that would happen in the event that NextBridge's Application is not approved.

c. EA Approval by way of Individual EA: If Hydro One is required to complete an individual EA for the LSL Project as MECP has advised[141], Hydro One acknowledges that it cannot meet its proposed December 2021 in-service date.[142] It is questionable whether Hydro One will even be in a position to meet a December 2022 in-service date should it not be allowed to rely heavily on the NextBridge EA.[143] That risk is increased by the fact that the approval of the EWT Station Project EA will not issue until after the LSL Project is approved. As described below, this means that the station work to support the LSL Project will not be available until the end of 2022 or later.

d. Agreements with Affected Communities: Hydro One has undeveloped relationships with affected communities, including FNM community members, and has completed very little consultation and engagement with area stakeholders.[144] This has resulted

[134] Hydro One Response to OEB Staff Interrogatory #14 in EB-2017-0364, filed at Exhibit I, Tab 1, Schedule 14, Attachment 1, page 2. Note that preparation of the draft detailed Impact Assessment is dependent on NextBridge EA Approval per footnote 1 of the Attachment. Given that NextBridge EA approval is now scheduled for February 2019 instead of December 2018 as provided in the Attachment, it follows that Parks Canada Approval would not likely issue until October 2019.
[135] Hearing Transcript Volume 1, pages 124-125.
[136] Hearing Transcript Volume 1, pages 128-132.
[137] EB-2017-0364, Exhibit I, Tab 1, Schedule 14, Attachment 1, Page 1.
[138] Hearing Transcript Volume 2, pages 80 and 107-108.
[139] See Hydro One response to Staff Interrogatory #5 in EB-2017-0364, filed as Exhibit I.1.5.
[140] Hearing Transcript Volume 2, pages 11-12.
[141] November 14, 2017 Letter from MOECC (Kathleen O'Neill) to Hydro One (Elise Croll), filed in EB-2017-0364 as part of the May 7, 2018 MOECC Evidence, Attachment 5.
[142] See Hydro One response to NextBridge Interrogatory #12 in EB-2017-0364, filed as Exhibit I.2.12, where Hydro One indicates it must be able to make use of NextBridge's EA in order to meet the December 2021 in-service date.
[143] Hydro One's evidence is that if EA approval is delayed by 12 months from the current August 2019 forecast, then it may be able to have the LSL Project in service by December 2022 – see HONI response to Staff Interrogatory #7 in EB-2017-0364, filed as Exhibit I.1.7.
[144] To date, Hydro One has undertaken limited community outreach, the first outreach being described as a "tour…undertaken as an initial touchpoint with communities" in March 2018 (see EB-2017-0364 Exhibit JT2.17, Attachment 13, page 7). A description of the limited consultation undertaken is provided in Hydro One's response to Staff Interrogatory #16 at Exhibit I.1.16, pages 1-2.

in at best weak stakeholder support, and in some cases outright opposition.[145] First Nation and Métis communities have consistently stated that the Hydro One project schedule offers an insufficient window of time to complete meaningful consultation and engagement.[146]

e. Project Engineering: Hydro One's detailed project engineering undertaken is in the early stages, and recently it changed its quad circuit tower design for the third time since the LTC application was filed.[147] It is uncertain if further quad circuit tower design changes will be implemented by Hydro One, and what impacts those design changes may have on LSL Project route, right-of-way, cost, or other impacts.

f. Land Rights: Hydro One has made limited progress in relation to land acquisition and land rights required for its LSL Project route. Hydro One has not negotiated any voluntary settlements and does not know what expropriations will be needed.[148] Hydro One does not have any agreements with First Nations over whose reserves parts of the proposed route pass.[149] Hydro One does not know what leasehold interests, land use permits, sustainable forest licences, interests under the *Mining Act*, interests under the *Public Lands Act,* or interests under the *Aggregate Resources Act* are impacted by its proposed route.[150]

70. An LTC approval for Hydro One in December 2018 will not answer the question of whether and when its project will actually proceed. It will be many months, if not years, before it can be known whether Hydro One will get a Ministerial Declaration Order for EA approval based on NextBridge studies and work, or whether Parks Canada will allow a route through the Park, or whether Hydro One will succeed in Indigenous consultations that will permit construction to proceed. Approving Hydro One's application under these circumstances would be putting the priority new EWT line in limbo for the foreseeable future, until all of these uncertainties are resolved. And, of course, there is no guarantee that all of these uncertainties will ever be resolved in Hydro One's favour. If Hydro One does not receive one or more of these approvals then the project may not proceed at all. In any event, it may be several years before this is known – a timeframe within which NextBridge could have

[145] Per EB-2017-0364, Exhibit I.1.15 at page 4 and Exhibit I.1.16 at page 2, Hydro One is not in receipt of any letters of support from Indigenous communities or non-Indigenous communities with respect to the LSL project; See also Métis Nation of Ontario letter to Minister of Energy Thibeault dated March 23, 2018 in EB-2017-0364.
[146] MNO Evidence dated May 7, 2018 at page 15 (EB-2017-0364); BLP Evidence dated May 7, 2018 at pdf pages 5, 29 and 53 (EB-2017-0364).
[147] See HONI response to NextBridge Interrogatory #28 in EB-2017-0364, filed as Exhibit I.2.28 (re. change in foundations for four circuit towers).
[148] Hearing Transcript Volume 1, page 137.
[149] Hearing Transcript Volume 2, pages 8-10.
[150] Hearing Transcript Volume 1, pages 140-142.

completed and put the EWT Line Project into service. While LTC orders generally condition the LTC approval on obtaining an EA and other permits prior to starting construction, such conditions are not meaningful here unless time limits are attached – otherwise, Hydro One could eventually receive these approvals, but not in time to bring its project into service prior to the end of 2022 – the IESO outer limit for an in-service date.

71. In a scenario where Hydro One's LSL Project is granted LTC approval, Hydro One incorrectly assumed that the EA for the EWT Station Project would be approved promptly after NextBridge's EA was approved.[151] However, as explained by the MECP witnesses, the EWT Station Project EA will not be approved until after the EA for the successful EWT Line Project proponent is approved.[152] What this means is that Hydro One's EA approval for the EWT Station Project cannot be issued until after Hydro One receives EA approval for the LSL Project, and cannot proceed based on NextBridge's EA approval for the EWT Line Project, should one be issued.

72. Hydro One currently forecasts that the earliest it will achieve EA approval for its LSL Project is October 2019 based on successfully receiving a Declaration Order, or December 2019 if pursing an Individual EA.[153] By Hydro One's own schedule, October 2019 is therefore the earliest date that Hydro One could receive EA approval for the EWT Station Project and begin construction on the Marathon TS. Hydro One's previous evidence was that in order to meet a December 2020 in-service date, it needed to start construction on the Marathon TS by July of 2018. Hydro One indicated that if it missed that date, then the in-service date for the station would be delayed by one year, to December 2021.[154] It is now clear that if Hydro One's LSL Project LTC is approved, then Hydro One will be unable to start construction on the Marathon TS in July 2019. Assuming that the impact of construction delays for the Marathon TS is the same in future years as in 2018 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.

[151] Hearing Transcript Volume 2, pages 101-102.
[152] Hearing Transcript Volume 7, page 126.
[153] Hearing Transcript Volume 2, pages 80 and 107-108.
[154] Hearing Transcript Volume 1, pages 24-25. See also Hydro One response to SEC Interrogatory #5 in EB-2017-0364, filed at Exhibit I.5.27.

73. All of the foregoing combines to raise very substantial concerns about Hydro One's ability to have the LSL Project in service by January 2023, which is the date by which IESO has confirmed that system reliability mitigation is no longer acceptable.[155]

(iii) Hydro One's project design raises reliability concerns

74. NextBridge's well-advanced design for the East-West Tie Project meets or exceeds all applicable engineering standards and design requirements. It provides redundancy of supply along the EWT corridor, with no single points of failure along the EWT corridor that could disrupt service to northwest Ontario. Customers will be well-served by NextBridge's project.

75. The Hydro One LSL Project is less reliable than NextBridge's EWT Line Project, incorporating a quad circuit tower design that will see a reliability bottleneck through the Park, should that route be approved. The result of this design is that failure of a quad circuit tower means that all four circuits will fail – Hydro One's design creates a single point of failure[156] that defeats the purpose of the redundancy envisioned by twinning the existing Hydro One EWT line in the first place.

76. Further technical concerns with Hydro One's design include:

    a. Galloping – Hydro One's tower design does not meet the minimum technical requirements outlined for the EWT Line Expansion in that the LSL Project does not design for single-loop galloping over 700 feet.[157]

    b. No anti-cascade towers - Hydro One's quad circuit proposal may be more likely to be susceptible to a severe longitudinal cascade on the Hydro One system than the current double circuit design[158], and there are no failure containment structures proposed for the 35km within the Park[159].

    c. Blow-out – Hydro One's right-of-way may not be sufficiently wide to contain a LSL Project conductor within the right-of-way under certain wind load conditions.[160]

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[155] Hearing Transcript Volume 4, pages 135-136.
[156] NextBridge Additional Material for Motion, Memorandum of Robert E. Nickerson, at page 7, filed on April 30, 2018 in EB-2017-0364, Attachment B ("Nickerson Memorandum").
[157] Hearing Transcript Volume 7, pages 43-46.
[158] Nickerson Memorandum, page 4.
[159] Nickerson Memorandum, page 5.
[160] Hearing Transcript Volume 6, pages 117-118.

77. The combined effect of the items described above coupled with the multiple tower failures experienced by Hydro One since 2000[161] and Hydro One's allocation of all general management and in-the-field construction oversight activity to its contractor[162] raises real concerns about whether Hydro One's LSL Project will be reliable and provide lasting and dependable quality of service. Addressing the identified concerns will add costs, either in terms of improved design or later remedial work.

Conclusion

78. Both NextBridge and Hydro One want to build the transmission line between Wawa and Thunder Bay.[163] The OEB must decide which applicant will be granted LTC based upon the criteria set out in section 96(2) of the *OEB Act*.

79. NextBridge's EWT Line Project is the best project to meet the current and future needs identified in northwest Ontario in a cost effective and timely manner. NextBridge submits that review of the evidence leads to the conclusion that the EWT Line Project is in the public interest and NextBridge should be granted LTC for the EWT Line Project on the basis that it offers a more reliable, more timely, lower risk solution to meet the identified need than the Hydro One LSL Project.

80. NextBridge further submits that approval of the forms of land agreement submitted pursuant to section 97 of the *OEB Act* is appropriate.[164]

81. As set out in the Application, NextBridge also requests an Order establishing a CWIP account[165] and declaring the final balance of the DCDA as the opening balance of such

[161] Hydro One staff and consultant resumes refer to Hydro One tower failure analyses conducted at least in 2002, 2003, 2006, 2011, 2016 and 2018 – see curriculum vitae for Mr. Ibrahim Hathout at pages 2-3, and Mr. Roman Makuch at page 2 in Hydro One May 7, 2018 Additional evidence in EB-2017-0364, Attachment 16.
[162] Hydro One Response to Undertaking JT2.22, Attachment 1, pages 94-98; Hearing Transcript Volume 5, pages 32-34.
[163] Procedural Order No.1 on Combined Hearing (August 13, 2018), at page 3.
[164] Exhibit E, Tab 5, Schedule 1, Attachments 1-8.
[165] NextBridge acknowledges Staff's advice in the May 7, 2018 Technical Conference (see Transcript at pages 3-4) that approval of the CWIP Account may not be necessary, as this is a generic account available to all utilities. However, NextBridge does seek confirmation and approval to use the CWIP account in the manner described herein.

CWIP account.[166] The CWIP account would then be used to record ongoing capital costs associated with the EWT Line Project. NextBridge requests that the Board's approval of the CWIP account include direction and confirmation that costs and interest at the prescribed CWIP rates recorded in the CWIP account will be considered in a future proceeding, as would be the case if those amounts were recorded in a deferral account. The benefit to ratepayers from this approach is that the CWIP costs incurred are recovered over the life of the asset once it is placed into service instead of being recovered in a shortened disposition window (e.g., the disposition of a deferral account).[167]

82. Finally, in order for NextBridge's EWT Line Project to proceed in a timely manner, NextBridge respectfully requests that LTC approval of both its Application and Hydro One's EWT Station Project application be issued by the end of December 2018. This will support NextBridge's planned December 2020 in-service date.

All of which is respectfully submitted this 22nd day of October 2018.

(Original Signed)

Fred D. Cass
Counsel for NextBridge

[166] NextBridge's evidence about the CWIP account is set out at Exhibit B, Tab 13, Schedule 1.
[167] See NextBridge's response to Staff Interrogatory #17, filed at Exhibit I.NextBridge.STAFF.17.