EB-2017-0182
EB-2017-0194
EB-2017-0364

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

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COMPENDIUM OF THE SCHOOL ENERGY COALITION
(Nextbridge Panel)

Shepherd Rubenstein P.C.
2200 Yonge Street, Suite 1302
Toronto, Ontario M4S 2C6

Mark Rubenstein

Tel: 416-483-3300
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Counsel for the School Energy Coalition

OEB Staff Summary of the Evidence on Costs

Development Costs of NextBridge-EWT and Hydro One-LSL Proposals

	NextBridge	Hydro One
Development Costs	**$40,127,000**[1]	**$16,972,000**[2]

Construction Costs of NextBridge-EWT and Hydro One-LSL Proposals

	Category	NextBridge	HONI – Through the Park[3]	HONI- Around the Park[4]
	Route Length	443 km	403 km	443 km
1	Engineering, Design & Procurement	$19,342,245	$16,304,000	$18,289,939
2	Materials & Equipment	$89,408,231	$58,713,000	$64,584,000
3	Environmental Approval/Monitoring/Mitigation	$13,030,561	$2,423,000	$2,422,851
4	Land Rights	$23,830,512	$10,558,000	$10,558,054
5	Indigenous Participation	$7,000,000	Included in 8 – Site Clearing, Access	Included in 8 – Site Clearing, Access
6	Indigenous Consultation	$13,211,000	$3,615,000	$3,614,637
7	Other Stakeholder Engagement	$2,530,194	$30,000	$30,000
8	Site Clearing, Access	$107,463,339	104,339,000	$116,860,000
9	Construction	$356,547,573	$355,530,000	$373,232,000
10	Site Remediation	$13,898,699	Included in 8 - Site Clearing, Access	Included in 8 – Site Clearing
11	Interest During Construction	$31,003,000	$43,845,000	$46,388,481
12	Contingency	$49,339,445	$5,401,000	$5,401,254
13	Regulatory	$5,405,078	Included in 15 - Overhead	Included in 15 - Overhead
14	Project Management	$4,900,644	$6,085,000	$6,085,000
15	Overhead		$8,506,000	$8,887,658
16	Other Costs		$9,451,000	$9,481,000
	Total Cost – Construction	**$736,970,521**	**$624,800,000**	**$665,834,874**

Annual OM&A Cost of NextBridge-EWT and Hydro One-LSL Proposals

	Category	NextBridge	HONI – Through the Park	HONI- Around the Park
17	NextBridge: Maintenance	$1,218,147		
18	NextBridge: Operations	$54,000		
19	NextBridge: Regulatory	$205,000		
20	NextBridge: Compliance, including administration	$2,449,000[5]		
21	Hydro One: Vegetation Maintenance		$340,000	
22	Hydro One: Overhead Lines Maintenance		$277,000	
23	Hydro One: Operations		$647,000	
24	Hydro One: Administration		$235,000	
	Average Total Annual OM&A Costs	**$3,926,147**	**$1,499,000**	

[1] Based on information provided in response to VECC Interrogatory 1 at Exhibit I, NextBridgeVECC.1, Page 1 of 2, filed on September 24, 2018.
[2] Based on updated information provided in response to OEB Staff Interrogatory 11 at Exhibit I, Tab 1, Schedule 11, Page 2 of 8, filed on September 24, 2018.
[3] Based on updated information provided in response to OEB Staff Interrogatory 11 at Exhibit I, Tab 1, Schedule 11, Page 6 of 8, filed on September 24, 2018.
[4] Based on information provided in response to Undertaking JT.2.20 at Exhibit JT2.20, filed on May 25, 2018, updated to reflect changes in response to OEB Staff Interrogatory 11 at Exhibit I, Tab 1, Schedule 11 filed September 24, 2018.
[5] Based on updated information provided in response to OEB Staff Interrogatory 54(g) at Exhibit I, NextBridge.STAFF.54, Page 4 of 5, filed on September 24, 2018.

UPPER CANADA TRANSMISSION, INC.

Response to Board Interrogatory 26
to all Applicants

Please complete the following three tables to enhance cost comparability between applications. Applicants should provide the cost estimates based on their preferred option for the line. Where the preferred option is not the reference option, the tables should also be provided for the reference option.
In completing the tables, please assume the following:

- All figures should be stated in 2012 dollars, without escalation in labour, materials or other costs.
- The development phase ends with the filing of a leave to construct application with the Board.
- Taxes and duties should be excluded.

Development Activity	**Estimated Cost**	**Reference in filed application**
Engineering, design, and procurement activity		
Materials and equipment		
Permitting and licensing		
Environmental and regulatory approvals		
Land rights (acquisition or options), including consultation and negotiation with landowners		
First Nation and Métis participation (direct and indirect costs, including impact mitigation if applicable)		
First Nation and Métis consultation		
Other consultation (community, stakeholder)		

Development Activity	**Estimated Cost**	**Reference in filed application**
IDC or AFUDC (if included in estimates)		
Contingency		
Other (explain in detail)		
Total		

Construction Activity	**Estimated Cost**	**Reference in filed application**
Engineering, design, and procurement activity		
Materials and equipment		
Permitting and licensing		
Environmental and regulatory approvals		
Land rights (acquisition or options), including consultation and negotiation with landowners		
First Nation and Métis participation (direct and indirect costs, including impact mitigation if applicable)		
First Nation and Métis consultation		
Other consultation (community, stakeholder)		
Site clearing and preparation		
Construction		
Site remediation		
IDC or AFUDC (if included in estimates)		

Construction Activity	Estimated Cost	Reference in filed application
Contingency		
Other (explain in detail) e.g. CWIP		
Total		

Operations and Maintenance Activity	Estimated Cost	Reference in filed application
Major activities (please list, but cost estimate may be bundled)		
Administration and general costs related to O&M		
Regulatory costs		
Contingency		

Response:

See Attachment 1.

Development Activity	Recommended Plan Estimated Cost	Reference Plan Estimated Cost	Reference in filed application
Engineering, Design, and Procurement Activity	10,553,085	10,553,085	Section 8.2 - Figure 21 - *Engineering & Design*
Materials and Equipment	-	-	Section 8.2 - Figure 21 - *Materials & Procurement*
Permitting and Licensing	46,667	46,667	Section 8.2 - Figure 21 - *Permitting, Licensing, Environmental*
Environmental and Regulatory Approvals	3,593,500	3,593,500	Section 8.2 - Figure 21 - *Permitting, Licensing, Environmental*
Land Rights (acquisitions or options), including consultation and negotiation with landowners	1,990,805	1,990,805	Section 8.2 - Figure 21 - *Land Acquisition & Aboriginal Affairs* *
First Nation and Metis participation (direct and indirect costs, including impact mitigation if applicable)	-	-	Not Included *
First Nation and Metis consultation	1,723,375	1,723,375	Section 8.2 - Figure 21 - *Land Acquisition & Aboriginal Affairs*
Other Consultation (community, stakeholder)	496,240	496,240	Section 8.2 - Figure 21 - *Land Acquisition & Aboriginal Affairs*
IDC or AFUDC	-	-	Not Included
Contingency	1,319,136	1,319,136	Section 8.2 - Figure 21 - *Engineering & Design*
Other (explain in detail)			
Regulatory (Legal Support, Rate Case Filing, LTC Filing)	985,240	985,240	Section 8.2 - Figure 21 - *Other Significant Expenditures*
Interconnection Studies	179,210	179,210	Section 8.2 - Figure 21 - *Other Significant Expenditures*
Project Management	1,299,764	1,299,764	Section 8.2 - Figure 21 - *Other Significant Expenditures*
TOTAL (2012 Dollars)	**22,187,022**	**22,187,022**	**Total Removing Escalation**
Escalation (To Bring back to 2012 Dollars)	211,062	211,062	Section 8.2 - Figure 21 - *Engineering & Design*
TOTAL (Including Escalation)	**22,398,084**	**22,398,084**	**Total Including Escalation - Matches Application**

Construction Activity	Recommended Plan Estimated Cost	Reference Plan Estimated Cost	Reference in filed application
Engineering, Design, and Procurement Activity	13,235,907	13,243,117	Section 8.7 - Figure 23 - *Engineering & Design*
Materials and Equipment	52,168,975	69,423,822	Section 8.7 - Figure 23 - *Materials & Procurement*
Permitting and Licensing	193,333	193,333	Section 8.7 - Figure 23 - *Permitting, Licensing, Environmental*
Environmental and Regulatory Approvals	3,027,770	3,027,770	Section 8.7 - Figure 23 - *Permitting, Licensing, Environmental*
Land Rights (acquisitions or options), including consultation and negotiation with landowners	17,135,214	17,135,214	Section 8.7 - Figure 23 - *Land Acquisition and Aboriginal Affairs* *
First Nation and Metis participation (direct and indirect costs, including impact mitigation if applicable)	-	-	Not Included *
First Nation and Metis consultation	5,526,345	5,526,345	Section 8.7 - Figure 23 - *Land Acquisition and Aboriginal Affairs*
Other Consultation (community, stakeholder)	841,040	841,040	Section 8.7 - Figure 23 - *Land Acquisition and Aboriginal Affairs*
Site clearing and preparation (including Roads)	52,293,201	50,610,924	Section 8.7 - Figure 23 - *Construction*
Construction	180,234,437	193,123,999	Section 8.7 - Figure 23 - *Construction*
Site remediation (Neutral Footprint)	10,307,996	9,690,100	Section 8.7 - Figure 23 - *Permitting, Licensing, Environmental* Section 8.7 - Figure 23 - *Construction*
IDC or AFUDC	-	-	Not Included
Contingency	35,708,360	38,990,910	Section 8.7 - Figure 23 - *Construction* Section 8.7 - Figure 23 - *Materials & Procurement* Section 8.7 - Figure 23 - *Engineering & Design*
Other (explain in detail)			
Regulatory (Legal Support, Rate Case Filing, LTC Filing)	3,642,806	3,642,806	Section 8.7 - Figure 23 - *Other Significant Expenditures*
Project Management	3,197,888	3,197,888	Section 8.7 - Figure 23 - *Other Significant Expenditures*
TOTAL (2012 Dollars)	**377,513,272**	**408,647,268**	**Total Removing Escalation**
Escalation (To Bring back to 2012 Dollars)	19,148,348	20,918,600	Section 8.7 - Figure 23 - *Construction* Section 8.7 - Figure 23 - *Materials & Procurement* Section 8.7 - Figure 23 - *Engineering & Design*
TOTAL (Including Escalation)	**396,661,620**	**429,565,868**	**Total Including Escalation - Matches Application**

Operations and Maintenance Activity	Recommended Plan Estimated Cost	Reference Plan Estimated Cost	Reference in filed application
Major activities (please list but cost estimate may be bundled)			
Inspection (air & ground), Patrols, Vegetation & Right of Way Management	740,000	740,000	Section 8.12 - Figure 25 - *Operations and Maintenance*
O&M Staffing, Field Office, Technical Support services	511,000	511,000	Section 8.12 - Figure 25 - *Operations and Maintenance*
Administration and general costs related to O&M	1,346,000	1,346,000	Section 8.12 - Figure 25 - *Administration and General*
Regulatory costs	1,850,000	1,850,000	Section 8.12 - Figure 25 - *Regulatory Compliance*
Contingency	-	-	Not Included
TOTAL (2012 Dollars)	**4,447,000**	**4,447,000**	**Matches Application**

* As stated in the UCT Application, an estimate for First Nation and Métis land acquisition is not included as this will be determined at a later date after engagement and consultation have advanced.

SEC INTERROGATORY #6

INTERROGATORY

[B-9, p.1] Please add two columns to Table 2 to show the cost estimate at the time of the designation application, and the cost estimate at the time of the designation application in 2020 dollars (i.e. on the same basis as the current forecast construction cost estimate).

RESPONSE

Following is a revised Table 2 including the cost estimate at the time of the designation application, and the cost estimate at the time of the designation application in nominal dollars.

At the time of the designation application, the construction cost estimate was not prepared in 2020 dollars and therefore such amounts are not available. However, to provide information in the context of this interrogatory, each line item cost from the designation application has been converted to nominal dollars by assuming an escalation rate of 3% per year for an additional 3 years. By converting the designation application cost estimate to nominal dollars, it brings the designation cost estimate on the same basis as the current forecast construction cost estimate which is also in nominal dollars.

Construction Cost Estimate ($'000)

	Leave to Construct Application (nominal$)	Designation Application (2012$)	Designation Application (nominal$)	% variance of LTC (nominal$) and designation application (nominal$)
Engineering, Design & Procurement	$ 19,342	$ 13,236	$ 14,463	34%
Materials & Equipment	89,408	52,169	57,007	57%
Permitting & Licensing	-	193	211	N/A
Environmental and Regulatory Approvals	13,031	3,027	3,308	294%
Land Rights (acquisitions or options), including consultation and negotiation with landowners	23,831	17,135	18,724	27%
First Nation and Metis Participation	7,000	-	-	- N/A
First Nation and Metis Consultation	13,211	5,526	6,039	119%
Other Consultation	2,530	841	919	175%
Site Clearing and Preparation	107,463	52,293	57,142	88%
Construction	356,548	180,234	196,947	81%
Site Remediation	13,899	10,308	11,264	23%
IDC	31,003	-	-	N/A
Contingency	49,399	35,708	39,019	27%
Regulatory	5,405	3,642	3,980	36%
Project Management	4,901	3,198	3,495	40%
Escalation	-	19,148	20,924	N/A
Total Construction Cost	$ 736,971	$ 396,662	$433,442	70%

Note: The line item cost estimates in the Leave to Construct Application included escalation, whereas the Designation Application included a separate escalation line item.

Project Schedule

Activity	**Target Date**
Submit Section 92 Application to OEB	Q3 2017
Begin Stage 2 Archaeological Assessments	Q2 2017
Begin environmental field work for environmental permitting activity	Q2 2017
Submit Environmental Assessment to MOECC	Q3 2017
Projected Decision and Order for Section 92	Q1 2018
Obtain Environmental Assessment approval	Q2 2018
Obtaining majority of environmental permits for construction	Q3 2018
Begin follow up Geotechnical Investigations	Q4 2018
Construction Start	Q4 2018
Property Rights Acquisition Completed	Q2 2019
In Service Date	Q4 2020

Detailed Project Schedule for East West Tie in Response to OEB Procedural Order #3		
Activity	**Critical Milestone**	**Target Date**
Regulatory		
Submit Responses to OEB Procedural Order #3, dated April 27, 2018		3-May-2018
OEB Technical Conference		7-May-2018
Oral Hearing Start		4-Jun-2018
OEB LTC Decision and Order	Yes	July 2018
OEB approval of authority to expropriate	Yes	August 2019
Register approved Plan of Expropriation and issue relevant Expropriation Act Notices/Offers	Yes	October 2019
Obtain possession of expropriated lands for construction purposes	Yes	Q1 2020
Environmental		
Approval of the Amended EA	Yes	October 2018
Approval by MOECC of Permit to Take Water	Yes	October 2018
Approval by MOECC of Permit to Take Water - Camp Wells		October 2018
Approval by MOECC of ECA - Camp Wastewater		October 2018
Approval by MNRF of Water Crossing Permits	Yes	October 2018
Approval by MNRF of Endangered Species Permits (Bats)	Yes	October 2018
Approval by MNRF of Endangered Species Permits (Caribou)	Yes	October 2018
Approval by MNRF of Endangered Species Permits (Whip-poor-will)	Yes	October 2018
Approval of ECCC SARA Bat permits	Yes	October 2018
Approval of ECCC SARA Caribou permits	Yes	October 2018
Approval of MNRF Provincial Park & Conservation Reserve Amendments	Yes	October 2018

Detailed Project Schedule for East West Tie in Response to OEB Procedural Order #3		
Activity	**Critical Milestone**	**Target Date**
Lakehead Region Conservation Authority Permit	Yes	October 2018
Transport Canada Section 67 for Transport Canada Lands	Yes	October 2018
Transport Canada Navigation Protection Act Canada permit	Yes	October 2018
Fisheries and Oceans Canada Navigable Waters Permit	Yes	October 2018
Indigenous Service Canada Section 67 for Reserve Lands	Yes	October 2018
Infrastructure Ontario Class Environmental Assessment	Yes	October 2018
MTCS - Historical and Cultural Resources acceptance	Yes	October 2018
Land Acquisition		
Substantial completion of signing of option agreements		Q4 2018
Crown Land Disposition Application filed		Q2 2018
Third party Crossing agreements complete	Yes	October 2018
MNRF approval of Crown Lease/Land Use Permits	Yes	October 2018
MNRF approval of Crown Land Work Permits	Yes	October 2018
MTO approval of Land Use and Building Permits	Yes	October 2018
MTO approval of Entrance Permits	Yes	October 2018
MTO approval of Encroachment Permits	Yes	October 2018
Indigenous Relations		
INAC approval of Land Related Permits	Yes	October 2018
HONI - Related		
Submit HONI Longitudinal Access Application Version 3	Yes	18-May-2018
HONI approves Longitudinal Access	Yes	20-Jul-2018

Detailed Project Schedule for East West Tie in Response to OEB Procedural Order #3		
Activity	**Critical Milestone**	**Target Date**
HONI Approves Transmission Crossing Application	Yes	22-Jun-2018
HONI Substations commissioned (1)	Yes	November 2020
Engineering & Construction		
Segment A - Commence clearing & access		Q4 2018
Segment A - Commence Geotech and Foundations		Q3 2020
Segment A - Commence Towers Assembly		Q3 2020
Segment A - Commence Towers Erection		Q3 2020
Segment A - Commence Conductor Stringing	Yes	Q4 2020
Segment B - Commence clearing & access		Q4 2018
Segment B - Commence Geotech and Foundations	Yes	Q1 2020
Segment B - Commence Towers Assembly	Yes	Q1 2020
Segment B - Commence Towers Erection	Yes	Q2 2020
Segment B - Commence Conductor Stringing	Yes	Q3 2020
Note: Segment C contains caribou habitat - all activities are critical		
Segment C - Commence clearing & access	Yes	Q4 2018
Segment C - Commence Geotech and Foundations	Yes	Q1 2019
Segment C - Commence Towers Assembly	Yes	Q1 2019
Segment C - Commence Towers Erection	Yes	Q1 2019
Segment C - Commence Conductor Stringing	Yes	Q3 2019
Segment D - Commence clearing & access		Q2 2019
Segment D - Commence Geotech and Foundations		Q4 2019
Segment D - Commence Towers Assembly		Q4 2019
Segment D - Commence Towers Erection		Q4 2019
Segment D - Commence Conductor Stringing		Q1 2020

Detailed Project Schedule for East West Tie in Response to OEB Procedural Order #3		
Activity	**Critical Milestone**	**Target Date**
Segment E - Commence clearing & access		Q4 2018
Segment E - Commence Geotech and Foundations		Q1 2019
Segment E - Commence Towers Assembly		Q1 2019
Segment E - Commence Towers Erection		Q2 2019
Segment E - Commence Conductor Stringing		Q4 2019
Segment F - Commence clearing & access		Q4 2018
Segment F - Commence Geotech and Foundations		Q1 2019
Segment F - Commence Towers Assembly		Q1 2019
Segment F - Commence Towers Erection		Q1 2019
Segment F - Commence Conductor Stringing		Q3 2019
Project Construction Substantially Complete(2)	Yes	30-Nov-2020
Project Commissioning Commences	Yes	Q4 2020
Project Commissioning Complete - In Service	Yes	Q4 2020
Final acceptance and release of General Contractor		Q2 2021

(1) Per Exhibit B, Tab 11, Schedule 1 of Hydro One Station work LTC application
(2) Schedule Contingency for Project Substantial Completion (one month)

NEXTBRIDGE INFRASTRUCTURE

390 Bay Street, Suite 1720
Toronto•ON•M5H 2Y2•Canada

July 24, 2018

The Honourable Greg Rickford
Minister of Energy, Northern Development and Mines, and Minister of Indigenous Affairs
5th Floor, Whitney Block
99 Wellesley Street West
Toronto, Ontario
M7A 1W1

The Honourable Rod Phillips
Minister of the Environment, Conservation and Parks
11th Floor, Ferguson Block
77 Wellesley Street West
Toronto, Ontario
M7A 2T5

Dear Minister Rickford and Minister Phillips:

Congratulations on your recent election success and for your respective appointments to Cabinet. We are excited to have the opportunity to work with you over the coming months and years and know that, under the leadership of Premier Ford, your team will do well in representing the people of Ontario and in helping to build a more affordable, reliable electricity system for families and businesses.

NextBridge Infrastructure (NextBridge) is the licensed transmission company designated by the Ontario Energy Board (OEB) in 2013 to undertake development of the East-West Tie (EWT) Transmission Project in Northwestern Ontario. The EWT has been recognized as a priority transmission project in the 2013 and 2017 Ontario Long-Term Energy Plans, and in 2016, through an Order-in-Council, was designated as a priority project by the Executive Council of the previous government. Among other things, the Order-in-Council recognized the need for the transmission line to remove barriers to resource development in the region. Last December, the Independent Electricity System Operator (IESO) confirmed the necessity of the EWT Project and reaffirmed a recommended in-service date of 2020.

Over twelve months ago, NextBridge submitted a Leave to Construct application with the OEB and an Environmental Assessment with the Ministry of the Environment and Climate Change. Importantly, NextBridge has also entered into a critical economic partnership agreement with Bamkushwada LP, a group of six Northern Superior Anishinabek First Nations whose traditional lands are host to the Project. These include Fort William First Nation, Red Rock Indian Band, Pays Plat First Nation, Biigtigong Nishnaabeg (Ojibways of the Pic River), Pic Mobert First Nation, and Michipicoten First Nation. These communities have collectively formed an economic development organization which has trained almost 300 individuals from their communities and other surrounding Indigenous communities. They have entered into partnership with NextBridge's general contractor to prepare for contracting and employment opportunities, as well as received approximately $9 million in provincial and federal grants to support these efforts. In addition, NextBridge has signed an economic participation agreement with the Métis Nation of Ontario to provide economic benefits, as well as contracting and employment opportunities with NextBridge's general contractor. NextBridge and its Indigenous partners are eager and ready to start construction of the EWT Project.

NEXTBRIDGE INFRASTRUCTURE

390 Bay Street, Suite 1720
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Years of hard work and engagement have taken place and we remain committed to meeting the 2020 in-service date as has been identified by the IESO and the Ministry of Energy. However, we are still awaiting a decision from the OEB to grant us authority to proceed. NextBridge has repeatedly and publically noted that NextBridge needs a decision from the OEB by the end of July 2018 to ensure a 2020 in-service date.

To complicate matters further, seven months after our Application was filed, Hydro One submitted to the OEB an alternative Leave to Construct with a targeted in-service date of 2021. Hydro One's project is far less advanced than the NextBridge project from an engineering, environmental or Indigenous relationship perspective. Nonetheless, the OEB continues to process the Hydro One application, despite its inability to make a 2020 in-service date, its reliance on questionable routing assumptions, and its complete lack of indigenous support.

NextBridge and the EWT are at a critical juncture. NextBridge developed this project in good faith and relied on the 2020 in-service date as stated in the Order-in-Council by the previous government and in the IESO Needs Assessments. NextBridge currently has its general contractor in the field preparing for construction and completing sub-contractor arrangements. The construction plan has tower fabrication beginning in September 2018, access roads and clearing beginning in November 2018, and tower foundation installation and tower assembly beginning in January 2019 – all necessary to make the 2020 in-service date. NextBridge has spent more than $60 million on this project through the end of June 2018, and costs are continuing to mount. Large financial commitments will need to be made in September to progress to a November 2018 construction start date. With no certainty regarding the timing and ultimate outcome of an OEB decision, NextBridge may be forced to cease work in advance of incurring those commitments, thus preventing timely completion of the project. This would be a regrettable outcome for Ontario. Absent a clear path forward, NextBridge would be compelled to seek recovery of the costs it has incurred to date without seeing a single shovel in the ground. More importantly, it would be a setback for the municipalities, mining companies, and Indigenous communities of Northwestern Ontario that are counting on project completion in 2020 to ensure a reliable electricity system and to promote economic growth in the region.

The Ford government has the opportunity to end the delays, and move the EWT project forward. To assist in maintaining the schedule and in serving the reliability needs of Northwestern Ontario, while securing transmission as the lowest cost option as identified by the IESO, NextBridge respectfully requests you 1) urge the OEB to make a decision on our application by the end of August 2018, and 2) consider designating NextBridge as the licensed transmitter to undertake the project. This authority exists and has been used to both prioritize and expedite transmission connections to remote communities. In our case, an Order-in-Council designating the project would align with the earlier decision to prioritize the EWT.

NEXTBRIDGE INFRASTRUCTURE

390 Bay Street, Suite 1720
Toronto•ON•M5H 2Y2•Canada

We are committed to working with you and your officials to deliver this major infrastructure project, and appeal for your government to use the tools at its disposal to bring this project to fruition.

We hope to be able to meet with you in the near future to discuss our project and commitment to the North in further detail. In the meantime, if you have any questions at all, please do not hesitate to contact me directly. You can be assured of my cooperation and enthusiasm for supporting solutions on this important issue for Northwestern Ontario.

Sincerely,

Jennifer Tidmarsh
Project Director, NextBridge
(President, Transmission – Canada, NextEra Energy)

cc: Mr. Stephen Rhodes, Deputy Minister of Energy
Mr. David de Launey, Deputy Minister of Northern Development and Mines
Mr. Serge Imbrogno, Deputy Minister of the Environment, Conservation and Parks

STAFF INTERROGATORY #49

INTERROGATORY

Questions:

a) Please provide an update on NextBridge's construction cost estimate.
   i. If there has been any change in NextBridge's construction cost estimate, please provide a detailed explanation of the change and the reason for the change.

b) Please provide an update of NextBridge's projected in-service date for the EWT line?
   ii. To be able to maintain the December 2020 completion date, when must construction work begin by?

RESPONSE

a) NextBridge has provided a construction budget that is an AACE Class 2 cost estimate (EB-2017-0182, Exhibit B, Tab 9, Schedule 1, page 2). NextBridge continues to believe it can bring the East West Tie Line into service in December 2020 within this AACE International (formerly the Association for the Advancement of Cost Engineering) Class 2 cost estimate. This estimate has a +5% to +20% cost estimate accuracy.

   Any increase in the cost of construction would be a function of (1) additional environmental conditions that may need to be in place to start construction in the Spring of 2019 versus the Fall of 2018 as originally planned; (2) increasing equipment and crews and/or shifts to achieve a December 2020 in-service date or as close to 2020 as possible based on receiving a decision on its Leave to Construct ; (3) adjustment to equipment, materials, and labor as may be impacted by the schedule consistent with Article IV of the EPC agreement; and (4) increased oversight of additional construction crew and/or shifts. NextBridge expects that the construction costs will remain within the AACE Class 2 construction cost estimate provided.

b) NextBridge for nearly the last four years has worked towards a December 2020 in-service date, and, continues to work to bring the East-West Tie Line into service by December 2020. If the OEB approves NextBridge's leave to construct by December 31, 2018, NextBridge may still be able to meet a 2020 in service date, assuming approval of the Environmental Assessment not later than February 2019 and a construction start date on, or before, June 2019.

NextBridge has completed an updated schedule based on NextBridge's response to Procedural Order #3 (EB-2017-0182) filed on May 3, 2018, attached to this response as Attachment 1.

Detailed Project Schedule for East West Tie in Response to OEB Procedural Order #3 - **REVISED**

Activity	Critical Milestone	Target Date
Regulatory		
Oral Hearing Start		October 2 2018
OEB LTC Decision and Order	Yes	December 31 2018
OEB approval of authority to expropriate**[1]**	Yes	October 2019
Register approved Plan of Expropriation and issue relevant Expropriation Act Notices/Offers	Yes	December 2019
Obtain possession of expropriated lands for construction purposes	Yes	March 2020
Environmental[2]		
Approval of the Amended EA	Yes	February 2019
Approval by MOECC of Permit to Take Water	Yes	1Q 2019
Approval by MOECC of Permit to Take Water - Camp Wells		1Q 2019
Approval by MOECC of ECA - Camp Wastewater		1Q 2019
Approval by MNRF of Water Crossing Permits	Yes	1Q 2019
Approval by MNRF of Endangered Species Permits (Bats)	Yes	1Q 2019
Approval by MNRF of Endangered Species Permits (Caribou)	Yes	1Q 2019
Approval by MNRF of Endangered Species Permits (Whip poor-will)	Yes	1Q 2019
Approval of ECCC SARA Bat permits	Yes	1Q 2019
Approval of ECCC SARA Caribou permits	Yes	1Q 2019
Approval of MNRF Provincial Park & Conservation Reserve Amendments	Yes	1Q 2019

Detailed Project Schedule for East West Tie in Response to OEB Procedural Order #3 - **REVISED**

Activity	Critical Milestone	Target Date
Lakehead Region Conservation Authority Permit	Yes	1Q 2019
Transport Canada Section 67 for Transport Canada Lands	Yes	1Q 2019
Transport Canada Navigation Protection Act Canada permit	Yes	1Q 2019
Fisheries and Oceans Canada Navigable Waters Permit	Yes	1Q 2019
Indigenous Service Canada Section 67 for Reserve Lands	Yes	1Q 2019
Infrastructure Ontario Class Environmental Assessment	Yes	1Q 2019
MTCS - Historical and Cultural Resources acceptance	Yes	1Q 2019
Land Acquisition		
Substantial completion of signing of option agreements		2Q 2019
Crown Land Disposition Application filed		1Q 2019
Third party Crossing agreements complete	Yes	1Q 2019
MNRF approval of Crown Lease/Land Use Permits	Yes	1Q 2019
MNRF approval of Crown Land Work Permits	Yes	1Q 2019
MTO approval of Land Use and Building Permits	Yes	1Q 2019
MTO approval of Entrance Permits	Yes	1Q 2019
MTO approval of Encroachment Permits	Yes	1Q 2019
Indigenous Relations		
INAC approval of Land Related Permits	Yes	1Q 2019
HONI - Related		
HONI approves Longitudinal Access	Yes	1Q 2019

Detailed Project Schedule for East West Tie in Response to OEB Procedural Order #3 - **REVISED**		
Activity	**Critical Milestone**	**Target Date**
HONI Approves Transmission Crossing Application	Yes	1Q 2019
NextBridge files Sec 101 Application (If not approved by HONI)	Yes	1Q 2019
HONI Substations commissioned **[3]**	Yes	November 2020
Engineering & Construction [4]		
Commence Clearing & Access	Yes	June 2019**[5]**
Commence Geotech and Foundations	Yes	3Q 2019
Commence Towers Assembly	Yes	3Q 2019
Commence Towers Erection	Yes	4Q 2020
Commence Conductor Stringing	Yes	1Q 2020
Note: Segment C contains caribou habitat - all activities are critical		
Segment C - Commence clearing & access	Yes	4Q 2019
Segment C - Commence Geotech and Foundations	Yes	4Q 2019
Segment C - Commence Towers Assembly	Yes	4Q 2019
Segment C - Commence Towers Erection	Yes	1Q 2020
Segment C - Commence Conductor Stringing	Yes	3Q 2020
Project Construction Substantially Complete	Yes	4Q 2020
Project Commissioning Commences	Yes	4Q 2020
Project Commissioning Complete - In Service	Yes	**December 31 2020**
Final acceptance and release of General Contractor		2Q 2021

[1] Based on expedited OEB process to review and approve limited expropriation application
[2] Apart from the Environmental Assessment, based on the segmented approach to construction not all permits are needed at start of construction
[3] Per Exhibit B, Tab 11, Schedule 1 of Hydro One Station work LTC application.
[4] Construction milestones by segment are subject to renegotiation with EPC on approval of LTC and can be provided to OEB prior to construction commencement.
[5] Proposed June 2019 commencement of construction is weather dependent for access given the spring thaw conditions. NextBridge intends to mobilize EPC contractor as soon as reasonable conditions allow.

IESO INTERROGATORY #1

INTERROGATORY

Reference: EB-2017-0182 - NextBridge letter of May 3, 2018, page 1 responding to OEB Procedural Order No. 3 dated April 27, 2018; EB-2017-0364 - Transcript Volume: Motion Hearing, dated June 5, 2018, page 92.

Preamble: In the references above, NextBridge states that an OEB decision on the Leave to Construct application is needed by July 2018. In the referenced transcript, NextBridge states "*that there's a one-month float within that schedule. So that's the timeframe by which NextBridge is looking for approval in order to meet a 2020 in-service date"*. It is now past that decision date and the "one-month float" date and the OEB's schedule outlined in Procedural Order No. 1 on the combined hearing shows that the proceeding will not completed until well after NextBridge's requested date. Given this new schedule, please answer the following questions:

a) If the OEB approves NextBridge's leave to construct application by the end of 2018, will NextBridge still able to meet its 2020 in-service date? If not, what is NextBridge's proposed new in-service date for the East-West Tie Project?
b) If the OEB does not approve NextBridge's leave to construct application until Q1 2019, or not until the end of Q1 2019, will NextBridge still able to meet its 2020 in-service date? If not, what is NextBridge's proposed new in-service date for the East-West Tie Project?
c) What is the impact to the in-service date if the OEB decision is later than Q1 2019?

RESPONSE

a) Unclear as of the date of this response. If the OEB approves NextBridge's leave to construct by December 31, 2018, NextBridge may still be able to meet its 2020 in service date.

b) If the OEB does not approve NextBridge's leave to construct until the end of Q1 2019, NextBridge will not be able to make a 2020 in-service date. NextBridge believes it can make an in-service date of Q1 2021, if a decision is made at the end of Q1 2019.

c) Without knowing the time beyond the 1st quarter of 2019 that the OEB approval is provided, it is not possible for NextBridge to forecast the impact to the in-service date at this time.

REDACTED
PUBLIC

ONTARIO ENERGY BOARD

FILE NO.: **EB-2017-0182**
EB-2017-0194

Upper Canada Transmission Inc. (on behalf of NextBridge Infrastructure) and Hydro One Networks Inc.

VOLUME: **Technical Conference**

DATE: **May 7, 2018**

THE CONSTRUCTION COSTS THAT VALARD WILL INCUR UP UNTIL THE POINT OF THE EXPECTED DATE OF THE LEAVE-TO-CONSTRUCT DECISION

MR. RUBENSTEIN: In response to some questions about Staff 10, this was the contingency -- you were asked about the contingency and how you forecasted the amount of contingency, and I was a bit confused.

You were originally -- at the beginning of questioning, you were asked about this and I understood that really what you had done -- you were asked to quantify it or provide the actual numbers. And I understood your response at a high level to be, well, what actually you did was you had broken down the percentage that usually you would require for contingency into sort of smaller sub areas, and that aggregates -- you may make adjustments to that, and that aggregates to the larger amount. Did I understand that correctly?

MR. GILL: Yes, that is correct.

MR. RUBENSTEIN: All right. So can I ask is there -- can you provide that information? What are those areas that you've aggregated and what those amounts -- obviously if you made adjustments based on what I understood would be more qualitative adjustments to those, so we can actually see how you built up a contingency amount?

MR. GILL: Subject to check with counsel, but I believe some of that work product we consider to be confidential in that it was competitive. But subject to check with counsel.

MR. RUBENSTEIN: You request confidentiality?

MR. CASS: Yes. So we'll take that away, Mark, and we'll respond with whatever confidentiality concern there may be in the answer.

MS. CRNOJACKI: That's undertaking JT1.21. It's NextBridge to provide areas that were aggregated to arrive at the contingency amount provided in the evidence.

UNDERTAKING NO. JT1.21: TO PROVIDE AREAS THAT WERE AGGREGATED TO ARRIVED AT THE CONTINGENCY AMOUNT PROVIDED IN THE EVIDENCE

MR. RUBENSTEIN: So do I understand that by the way you've determined the contingency amount, have you done -- I guess you didn't do this, and maybe the question is why not. You didn't do sort of a probabilistic assessment of different risk factors that might occur based on the actual risk factors that you may have identified that came to a contingency?

MR. GILL: No, not specifically. You're referring to some of the conventional estimating tools for risk assessment and as a general practice, that is not the process that we use. It is more of an experience based on the level of scope that has been defined and the perceived risk with the individual parts that we may look at.

And just to expand on that a little, take for example a project that may or may not -- let's say it had, there's a labour component that you're looking at and for some reason, you had reason to be concerned about a fluctuating labour rate, whether it was project-related agreements or

of a delay and it goes out, there are references to tie it back to some of their labour agreements, so that their adjustment for cost is somewhat bound to a demonstrated change in those labour rates.

MR. RUBENSTEIN: And I would -- and correct me if I'm wrong, but your project schedule has built in contingency time?

MS. TIDMARSH: It does. The filing that we made last week in May, the May 3rd filing, talks about contingency in our schedule.

MR. RUBENSTEIN: So if you include that contingency, what is the, in your view, the date where an end of 2020 in-service date simply becomes not feasible?

MS. TIDMARSH: We haven't done that analysis.

MR. RUBENSTEIN: Are you able to provide a date or that's just simply, you're not able to do that?

MS. TIDMARSH: I think there are multiple factors in the schedule that talk about critical path, critical milestones. And so each one of those would have an impact, potential impact, on schedule. And so without running the scenarios, I don't -- I don't think that we -- without being specific about what it is that caused the schedule delay, we couldn't provide you with that.

MR. RUBENSTEIN: So help me understand how you wouldn't have done that for your own sake in determining when we would need to have -- when the drop-dead date to begin the project or after the leave-to-construct decision so you can do certain things would be -- to meet the in-

service date. If it has all these consequences such as escalation rates will now be included in the project, and obviously the importance of having the line in-service by then.

MS. TIDMARSH: So we've -- I mean, as I mentioned, we took the 2020 in-service date, December 2020 in-service date, worked backwards from there, knowing that we needed to have it in-service from the Order-in-Council and the IESO's needs assessment, and created our schedule to meet that date with about a one-month contingency float.

And so as we come up to milestones, critical milestones that we need to meet, those are the ones that would impact -- potentially impact schedule.

MR. RUBENSTEIN: Thank you very much.

If I -- I want you to turn up Staff 9 on page 2, and part of this response at a high level you're asked about ensuring looking at the costs to ensure that they're reasonable, and you point to, that you've undertaken the Charles River Associates -- has done an analysis and has benchmarked those costs. I think this is in response to a CCC undertaking that's been provided.

MS. TIDMARSH: Correct.

MR. RUBENSTEIN: Am I correct that that was undertaken for the purposes of the regulatory process or was this undertaken for the purposes of your own internal, you know, gut check to make sure that the bids that we got looked reasonable?

MS. TIDMARSH: It was done for regulatory purposes.

ONTARIO ENERGY BOARD

FILE NO.:	**EB-2017-0182** **EB-2017-0194** **EB-2017-0364**	**Upper Canada Transmission Inc. (on behalf of NextBridge Infrastructure) and Hydro One Networks Inc.**

VOLUME:	**2**	
DATE:	**October 3, 2018**	
BEFORE:	**Christine Long**	**Presiding Member**
	Allison Duff	**Member**
	Michael Janigan	**Member**

not allowed to proceed, any proponent.

MR. RUBENSTEIN: So my only clarification then would be to that is that you have submitted all the EA documents, you think everything is fine, except they just -- they are waiting for the approval until the approval of the NextBridge EA.

MS. CROLL: That's exactly right.

MR. RUBENSTEIN: Okay. But my understanding is now the position is Hydro One will just not be able to bring the stations in line for December 2020; correct?

MS. CROLL: That's correct. Because construction needed to begin in July of this year, 2018, in order -- following the schedule as planned and costs to be completed by end 2020, and elsewhere in our evidence we state that there was a bit of play in the schedule but August 15th of this year was the last possible date when approval would have allowed us to meet that 2020 in-service date.

MR. RUBENSTEIN: So what's the new best estimate of when the stations project will be able to be completed?

MS. CROLL: Right, so our current schedule is based on the assumption that the NextBridge individual EA would have been approved by end of Q4 of this year, and that would allow us to begin the station work in January of 2019. That was the basis for our new schedule. Now we are now aware that it's a February 2019 completion date, anticipated completion date, for the individual EA for the line from NextBridge. So that would be the earliest start.

And Robert, you can comment on how that affects the

station work schedule.

MR. REINMULLER: So I can confirm that basically initially the schedule was to start in January, but because of the specific conditions of the area in the north being minus 35 in January, we wouldn't have started the construction until about March, the critical construction, and that would still allow us to complete the station work by the end of 2021.

So even if we suffered another month delay, we could still finish the work by the end of 2021.

MR. RUBENSTEIN: I understand you're saying you can have it by 2021, I am just asking what month is the best estimate of you are going to be able to complete the station work?

MR. REINMULLER: Currently we are forecasting by December 2021.

MR. RUBENSTEIN: So the earliest now, I guess, based on your current projections is December 2021.

MR. REINMULLER: That is the high-level estimate. We are working to refine that, but what I can tell you today based on what we know is December 2021.

MR. SPENCER: And I might just elaborate on Mr. Reinmuller's comments. Of course we are looking for ways to compress that schedule, so we are exploring opportunities by which we can -- you know, subject to the start of construction when can we compress construction activities and crash schedule to be able to finish the project sooner. December is our strong forecast, but I am

also challenging the project team to see if they can shave some time off of that.

MR. RUBENSTEIN: All right. I will ask some follow-ups later.

With respect to the environmental assessment work that you are doing now, either to supplement the work that NextBridge has done or to work with respect to the -- to do your own individual environmental assessment, what percentage of the total costs would you say that you're expending with respect to environmental assessment work, is work essentially that is duplicative of stuff that NextBridge has already done?

MS. CROLL: Sorry, could you ask that again? What percentage? Are you asking what percentage of the total EA work is duplicative of NextBridge's?

MR. RUBENSTEIN: Well, I am trying to understand -- my understanding from the motion hearing and the technical conference is, you are going to do some duplicative work to -- I believe there were studies that you needed to -- you were going to have the raw data, and you'd have to do some work underneath, there may be some other work that you're doing with respect to the environmental assessment process. I'm trying to. I am trying to understand as part of your development budget you have environmental assessment costs. I want to understand what percentage of those costs are really for things that NextBridge has already done that are duplicative?

MS. CROLL: I don't think I could give you an exact

Ministry of the Environment, Conservation and Parks

Environmental Assessment and Permissions Division
135 St. Clair Avenue West
1st Floor
Toronto ON M4V 1P5

Ministère de l'Environnement, de la Protection de la nature et des Parcs

Direction des évaluations et des permissions environnementales
135, avenue St. Clair Ouest
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Ontario

September 28, 2018

Ms. Jennifer Tidmarsh
President, NextEra Energy Transmission – Canada
390 Bay Street
Toronto, ON M5H 1W2

Ms. Tidmarsh,

As a follow up to your September 25, 2018 email requesting a status update on the ministry review for the amended East-West Tie project environmental assessment, please accept this letter.

With the ministry's assessment of the amended environmental assessment now complete, the review has been finalized and is in the process of being prepared for publication. As the proposed undertaking is located in a designated French language service area, the review must be translated prior to printing. It is anticipated that following translation, formatting for accessibility and printing, the review should be ready to be made public by the end of October for a five-week public inspection period. The commencement of the inspection period will be signalled by the ministry with the issuance of a 'Notice of Completion'.

As you are aware, the review itself is not the decision-making mechanism. The Minister considers the conclusions of the review and comments received on the review when making a decision.

I understand that you have ongoing engagement with Indigenous communities regarding the project and are currently discussing the opportunity for communities to participate in the Aboriginal Consultation Advisory Board. I encourage you to continue these important discussions as the ministry moves forward with its review. The ministry will also be reaching out to the communities during the review inspection period.

Should you have any questions regarding the above, please contact me at (416) 314-7967 or by electronic email at Annamaria.Cross@Ontario.ca.

Regards,

A. Cross

Annamaria Cross
Environmental Assessment and Permissions Branch
Ministry of the Environment, Conservation and Parks

HONI INTERROGATORY #11

INTERROGATORY

Reference

I) Technical Conference Transcript, May 7, 2018, p. 95

Ms. Tidmarsh testified that a delay in receiving an OEB decision on NB's leave to construct application would have an impact on the cost of construction. Ms. Tidmarsh testified that NB needed a decision from the OEB on that application by July of 2018

Questions:

a) Given that NB required a July, 2018 approval of its leave to construct application to meet a 2020 in-service date and to do so at the cost set out in its leave to construct application, please advise of the impact on the construction schedule and on the cost of construction of not receiving a decision of the OEB on NB's leave to construct application until December of 2018.
b) Please list the items in the forecast cost of construction that have increased since July 1 of 2018, and indicate the amount of the increase for each item and the reasons for the increase for each item.
c) Please include, in the update of the project cost estimate, all forecast expropriation costs.
d) Please list all of the items, other than the forecast cost of construction, that have increased the overall project costs since July 1, 2018, indicating the amount of the increase and the reasons for the increase for each item.
e) Should NB be unsuccessful in its efforts to cross existing transmission lines, please update the NB cost estimate to include any and all anticipated costs associated with the relocation of T1M. Please include all estimated costs associated with consultation, construction, and a potential OEB application.
f) Please indicate what impact an OEB Act section 101 application would have on the project schedule including the commencement of construction and the in-service date. Please indicate the corresponding effect on the cost estimate to complete the project.
g) Please set out the impact, on the construction costs and schedule, of an application under section 99 of the OEB Act.

RESPONSE

a) If the OEB grants NextBridge the Leave to Construct in December of 2018, NextBridge would start construction in the Spring of 2019. Any increase in the cost of construction would be a function of (1) additional environmental conditions that may need to be in place to start construction in the Spring of 2019 versus the Fall of 2018 as originally planned; (2) increasing equipment and crews and/or shifts to achieve a December 2020 in-service date or as close to 2020 as possible based on receiving a decision on its Leave to Construct and (3) adjustment to equipment, materials, and labor as may be impacted by the schedule consistent with Article IV of the EPC agreement; (4) increased oversight of additional construction crew and/or shifts. NextBridge expects that the construction costs will remain within the AACE Class 2 construction cost estimate provided.
b) See NextBridge's response to part a) to this interrogatory.
c) Expropriation-related costs are forecast to be approximately $1.2 Million. These costs are included in NextBridge's AACE Class 2 construction cost estimate. These costs do not include any costs related to an OEB Act section 101 application, should one be required.
d) See NextBridge's response to part a) to this interrogatory.
e) NextBridge provided a preliminary cost estimate from Hydro One for the relocation of the T1M line in its response to Board Staff Interrogatory #12 (b) found at Exhibit I.C.NextBridge.STAFF.12. NextBridge has not prepared a cost estimate for consultation, regulatory application or other costs related to authorization to relocate T1M line facilities.
f) NextBridge does not consider that an OEB Act section 101 application, should NextBridge be required to submit one, would have an impact on the commencement of construction or the in-service date for the EWT Line Project, currently anticipated to be June 2019 and December 2020 respectively. An OEB Act section 101 application is currently estimated to cost approximately $150,000 (excluding Board costs), and is expected to take approximately 5 months.
g) Costs related to an application under section 99 of the OEB Act involving a small number of landowners are included in NextBridge's current construction cost estimate. If NextBridge obtains leave to construct for the EWT Line Project on or before December 31, 2018, NextBridge does not anticipate any impact to the construction cost or schedule related to the filing of a section 99 application.

Scope of Work - Division of Responsibilites						
			Owner		EPC	
#	Activity	Deliverables	Hydro One	NextBridge	SNC-Lavalin	Valard
1.0	Project Development	All activities to permit the project				
1.01	Environment	Pre-disturbance Assessment (PDA) (Biophysical Survey) - Raptor Nest Surveys - Migratory Bird Surveys - Sensitive Species Survey - Vegetation, Weed, Soil Surveys		X	X	
1.02	Environment	Historical Resource Impact Assessment and Clearance		X	X	
1.03	Environment	Environmental Field Report (EFR) - Crown Land only		NextBridge has not become aware of the need of this requirement through its extensive regulatory consultation Process.	X	
1.04	Environment	Environmental Specifications Requirements (ESR)		NextBridge has not become aware of the need of this requirement through its extensive regulatory consultation Process.	X	
1.05	Environment	Ontario Water Act and Fisheries Approvals		X	X	
1.06	Environment	Caribou Protection Plan		If required. MNRF still to provide directions if needed or not.	X	
1.07	Environment	Traditional Land Use (TLU) Surveys		X	X	
1.08	Environment	Environmental Contamination: Phase I ESA (Haz Mat survey) and Phase II/III ESAs if required.		X	X	
1.09	Environment	Environmental Studies for Permitting		X	X	
1.1	External Engagement	Communications / Public Relations	X	X	Assist	
1.11	External Engagement	Consultation (Indigenous Communities and others)	X	X	X	Assist
1.12	External Engagement	Government Relations	X	X		
1.13	External Engagement	Aboriginal Consultations	X	X	Assist	Assist
1.14	External Engagement	Letter of Adequacy	X			
1.15	External Engagement	Forest Management Agreements and Timber Damage Agreements	X	X		X
1.16	Siting	T Line Spotting		X	X	X
1.17	Siting	Commitments to Landowners / Occupants	X	X		
1.18	Siting	Route or Structure Changes Due to Landowner/Affected Parties Negotiations	X	X		
1.19	Land	Land Easements / Individual Ownership Plans	X	X		
1.2	Land	Land Acquisition - Buy Out	X	X		
1.21	Land	Crown Easement (EZE) Disposition Application Submissions/Approval	X	X		
1.22	Land	Obtain Preconstruction TFAs (Crown only)	X	X		
1.23	Regulatory	EA Preparation and Submission		X	X	
1.24	Regulatory	LTC Preparation and Submission including IRs	X	X	Assist	
1.25	Regulatory	OEB Directed Route Adjustments	X	X		
1.26	Permits	Access Permits (Landowners)	X	X		
1.27	Permits	Water Course Crossing Notifications; Powerline Cable Crossing Form		See NBI's Exhibit H	X	X
1.28	Permits	DFO Permits: Temporary Water Crossing Permit; FOC Operations Statement		X	X	
1.29	Permits	Road Maintenance Agreements - Construction Only			X	X
1.3	Permits	Road Maintenance Agreements - Permanent Only	X	X		
1.31	Permits	Temporary Construction Permits (including Land Use Proposal Submission Form, building permits, camp permits)			X	X
1.32	Permits	Water Use: Temporary Diversion Licence and Temporary Diversion Access			X	See NBI's Exhibit H
1.33	Crossings and Facilities	Facility Mitigation Studies (e.g. pipelines)	X	X	Assist	

1.34	Crossings and Facilities	Existing Facility Agreements (e.g. pipeline, wellhead, rail, road) - Crossing agreements (temporary and permanent) - Alberta Transportation Highway Crossings - Proximity Agreements - Encroachment Agreements	X	X	Assist	
1.35	Construction	Lease Agreements for private land used for yards, temporary facilities, etc.		X	X	
2.0	**General Management**	**All activities in planning and PMPC**				
2.01	Construction	Construction Execution Planning			X	X
2.02	Construction	Identify all Access Requirements and Temporary Worksites (including geotech, access, material yards, pull sites, etc.)			X	X
2.03	Construction	Construction Accommodations			X	X
2.04	Construction	Temporary Facilities for Construction (offices, trailers, etc.)			X	X
2.05	Construction	Temporary Power During Construction			X	X
2.06	Construction	Reclamation Plan			X	X
2.07	Construction	Construction period insurance			X	X
2.08	Environment	Vegetation Management Plan		X	X	
2.09	Environment	Environmental management plans including CEMP		X	X	
2.10	Land	Field Verification of Property Descriptions ("Survey Truthing" for structure location coordinates)		X	X	
2.11	Labour	Project and Commercial Management		X	X	X
2.12	Labour	Project Controls and Reporting		x	X	X
2.13	Labour	Construction Management		x	X	X
3.0	**Engineering**	**All activities to design**				
3.01	Engineering	LiDAR Data and Variation in Topographical Conditions			X	
3.02	Engineering	Geotech Studies and Variation in Ground Conditions			X	X
3.03	Engineering	Tower Spotting		X	X	
3.04	Engineering	Tower Design and Testing		X	X	
3.05	Engineering	Design Requirements Over and Above Functional Specification		X	X	
3.06	Engineering	Design and Engineering - including all drawing packages		X	X	
3.07	Engineering	Design Reviews (intermediate and final)	X	X	X	X
3.08	Engineering	Interface with Owner for Design		X	X	
3.09	Engineering	Design certification for Ontario		X	X	
3.10	Engineering	Constructability Review			X	X
3.11	Crossings and Facilities	Design and Construction of Crossing Structures		X		
4.0	**Procurement**	**All activities to procure material and services**				
4.01	Equipment	Procurement of Material and Major Equipment Required for Construction		X	X	
4.02	Equipment	Procurement of Material and Equipment Required for Construction Consumables			X	X
4.03	Equipment	Equipment Manufacturing, Quality, and Delivery		X	X	X
4.04	Construction	Executing contracts for miscellaneous construction services			X	X
5.0	**Access & Clearing**	**All activities for access and clearing construction**				
5.01	Construction	Construction Labour Availability and Pricing			X	X
5.02	Construction	Contracts for Labour Required for Construction			X	X
5.03	Labour	Field Coordinators and Monitors (Safety, Construction)		X	X	X
5.04	Labour	Field Monitors (Environment, Quality)		X	X	X
5.05	Labour	Field Engineering Construction Support		X	X	X
5.06	Construction	Weather Mitigations			X	X
5.07	Construction	Wildfire Management			X	X

5.08	External Engagement	Construction Coordination with Affected Partiess (Land Coordinators, Public Relations Coordinators)	X	X	X	
5.09	Crossings and Facilities	Facility Mitigation Installation (e.g. pipelines)		X	X	
5.10	Construction	Timber Salvage - Plan, Laydown Areas, Contractor (Construction Only)		X	X	X
6.0	**Foundations**	**All activities for foundation and anchor construction**				
6.01	Construction	Construction Labour Availability and Pricing			X	X
6.02	Construction	Contracts for Labour Required for Construction			X	X
6.03	Labour	Field Coordinators and Monitors (Safety, Construction)		X	X	X
6.04	Labour	Field Monitors (Environment, Quality)		X	X	X
6.05	Labour	Field Engineering Construction Support		X	X	X
6.06	Construction	Weather			X	X
6.07	Construction	Wildfire Management			X	X
6.08	External Engagement	Construction Coordination with Affected Partiess (Land Coordinators, Public Relations Coordinators)	X	X	X	
7.0	**Transmission Line**	**All activities for 230kV and 115kV construction**				
7.01	Construction	Construction Labour Availability and Pricing			X	X
7.02	Construction	Contracts for Labour Required for Construction			X	X
7.03	Construction	Staking - Avoidance Area, RoW, Tower			X	X
7.04	Labour	Field Coordinators and Monitors (Safety, Construction)		X	X	X
7.05	Labour	Field Monitors (Environment, Quality)		X	X	X
7.06	Labour	Field Engineering Construction Support		X	X	X
7.07	Construction	Weather Mitigations			X	X
7.08	External Engagement	Construction Coordination with Affected Partiess (Land Coordinators, Public Relations Coordinators)	X		X	X
7.09	Crossings and Facilities	Coordination of Outages for Transmission Line Crossings / Replacement of structures in park	X		X	X
7.10	Crossings and Facilities	Construction Parallel to Existing Facilities (Safety, Construction Considerations)			X	X
7.11	Crossings and Facilities	Traffic Management for Crossings (e.g. Highway Crossings)			X	X
10.0	**Commissioning**	**All activities for final commissioning of the facilities**				
10.01	Construction	T-Line End to End Testing			X	X
10.02	Construction	T-Line Phaseout			X	X
10.03	Commissioning	Fibre Optic Splicing and Testing			X	X
10.04	Construction	Final acceptance	X	X		
10.05	Construction	In-Service switching	X	X		
11.0	**EPC Closeout**	**All activities to close the constract**				
11.01	Land	Land Survey Post Construction		X	X	
11.02	Engineering	As-Built Drawings			X	X
11.03	Procurement	SubContract Closures			X	X
11.04	Construction	Punch List Items		X	X	X
11.05	Labour	Final Invoice and Reconciliations	X	X	X	X

Source: Motion Hearing JT2.22, Attachment 1, p.94-99; I.Nextbridge.SEC.23, Attachment

Lake Superior Link - Scope of Work - Division of Responsibility

			Owner	EPC
#	**Activity**	**Deliverables**	**Hydro One**	**SNC-Lavalin**
1.0	**Project Development**	**All activities to permit the project**		
1.01	Environment	Pre-disturbance Assessment (PDA) (Biophysical Survey) - Raptor Nest Surveys - Migratory Bird Surveys - Sensitive Species Survey - Vegetation, Weed, Soil Surveys		X
1.02	Environment	Historical Resource Impact Assessment and Clearance		X
1.03	Environment	Environmental Field Report (EFR) - Crown Land only		X
1.04	Environment	Environmental Specifications Requirements (ESR)		X
1.05	Environment	Ontario Water Act and Fisheries Approvals		X
1.06	Environment	Caribou Protection Plan		X
1.07	Environment	Traditional Land Use (TLU) Surveys		X
1.08	Environment	Environmental Contamination: Phase I ESA (Haz Mat survey) and Phase II/III ESAs if required.		X
1.09	Environment	Environmental Studies for Permitting		X
1.1	External Engagement	Communications / Public Relations	X	Assist
1.11	External Engagement	Consultation (Indigenous Communities and others)	X	X
1.12	External Engagement	Government Relations	X	
1.13	External Engagement	Aboriginal Consultations	X	Assist
1.14	External Engagement	Letter of Adequacy	X	
1.15	External Engagement	Forest Management Agreements and Timber Damage Agreements	X	
1.16	Siting	T Line Spotting		X
1.17	Siting	Commitments to Landowners / Occupants	X	
1.18	Siting	Route or Structure Changes Due to Landowner/Affected Parties Negotiations	X	
1.19	Land	Land Easements / Individual Ownership Plans	X	
1.2	Land	Land Acquisition - Buy Out	X	
1.21	Land	Crown Easement (EZE) Disposition Application Submissions/Approval	X	
1.22	Land	Obtain Preconstruction TFAs (Crown only)	X	
1.23	Regulatory	EA Preparation and Submission		X

			Owner	EPC
#	Activity	Deliverables	Hydro One	SNC-Lavalin
1.24	Regulatory	LTC Preparation and Submission including IRs	X	Assist
1.25	Regulatory	OEB Directed Route Adjustments	X	
1.26	Permits	Access Permits (Landowners)	X	
1.27	Permits	Water Course Crossing Notifications; Powerline Cable Crossing Form		X
1.28	Permits	DFO Permits: Temporary Water Crossing Permit; FOC Operations Statement		X
1.29	Permits	Road Maintenance Agreements - Construction Only		X
1.3	Permits	Road Maintenance Agreements - Permanent Only	X	
1.31	Permits	Temporary Construction Permits (including Land Use Proposal Submission Form, building permits, camp permits)		X
1.32	Permits	Water Use: Temporary Diversion Licence and Temporary Diversion Access		X
1.33	Crossings and Facilities	Facility Mitigation Studies (e.g. pipelines)	X	Assist
1.34	Crossings and Facilities	Existing Facility Agreements (e.g. pipeline, wellhead, rail, road) - Crossing agreements (temporary and permanent) - Alberta Transportation Highway Crossings - Proximity Agreements - Encroachment Agreements	X	Assist
1.35	Construction	Lease Agreements for private land used for yards, temporary facilities, etc.		X
2.0	**General Management**	**All activities in planning and PMPC**		
2.01	Construction	Construction Execution Planning		X
2.02	Construction	Identify all Access Requirements and Temporary Worksites (including geotech, access, material yards, pull sites, etc.)		X
2.03	Construction	Construction Accommodations		X
2.04	Construction	Temporary Facilities for Construction (offices, trailers, etc.)		X
2.05	Construction	Temporary Power During Construction		X
2.06	Construction	Reclamation Plan		X
2.07	Construction	Construction period insurance		X
2.08	Environment	Vegetation Management Plan		X
2.09	Environment	Environmental management plans including CEMP		X

			Owner	EPC
#	Activity	Deliverables	Hydro One	SNC-Lavalin
2.10	Land	Field Verification of Property Descriptions ("Survey Truthing" for structure location coordinates)		X
2.11	Labour	Project and Commercial Management		X
2.12	Labour	Project Controls and Reporting		X
2.13	Labour	Construction Management		X
3.0	**Engineering**	**All activities to design**		
3.01	Engineering	LiDAR Data and Variation in Topographical Conditions		X
3.02	Engineering	Geotech Studies and Variation in Ground Conditions		X
3.03	Engineering	Tower Spotting		X
3.04	Engineering	Tower Design and Testing		X
3.05	Engineering	Design Requirements Over and Above Functional Specification		X
3.06	Engineering	Design and Engineering - including all drawing packages		X
3.07	Engineering	Design Reviews (intermediate and final)	X	X
3.08	Engineering	Interface with Owner for Design		X
3.09	Engineering	Design certification for Ontario		X
3.10	Engineering	Constructability Review		X
3.11	Crossings and Facilities	Design and Construction of Crossing Structures		
4.0	**Procurement**	**All activities to procure material and services**		
4.01	Equipment	Procurement of Material and Major Equipment Required for Construction		X
4.02	Equipment	Procurement of Material and Equipment Required for Construction Consumables		X
4.03	Equipment	Equipment Manufacturing, Quality, and Delivery		X
4.04	Construction	Executing contracts for miscellaneous construction services		X
5.0	**Access & Clearing**	**All activities for access and clearing construction**		
5.01	Construction	Construction Labour Availability and Pricing		X
5.02	Construction	Contracts for Labour Required for Construction		X
5.03	Labour	Field Coordinators and Monitors (Safety, Construction)		X
5.04	Labour	Field Monitors (Environment, Quality)		X
5.05	Labour	Field Engineering Construction Support		X

			Owner	EPC
#	Activity	Deliverables	Hydro One	SNC-Lavalin
5.06	Construction	Weather Mitigations		X
5.07	Construction	Wildfire Management		X
5.08	External Engagement	Construction Coordination with Affected Partiess (Land Coordinators, Public Relations Coordinators)	X	X
5.09	Crossings and Facilities	Facility Mitigation Installation (e.g. pipelines)		X
5.10	Construction	Timber Salvage - Plan, Laydown Areas, Contractor (Construction Only)		X
6.0	**Foundations**	**All activities for foundation and anchor construction**		
6.01	Construction	Construction Labour Availability and Pricing		X
6.02	Construction	Contracts for Labour Required for Construction		X
6.03	Labour	Field Coordinators and Monitors (Safety, Construction)		X
6.04	Labour	Field Monitors (Environment, Quality)		X
6.05	Labour	Field Engineering Construction Support		X
6.06	Construction	Weather		X
6.07	Construction	Wildfire Management		X
6.08	External Engagement	Construction Coordination with Affected Partiess (Land Coordinators, Public Relations Coordinators)	X	X
7.0	**Transmission Line**	**All activities for 230kV and 115kV construction**		
7.01	Construction	Construction Labour Availability and Pricing		X
7.02	Construction	Contracts for Labour Required for Construction		X
7.03	Construction	Staking - Avoidance Area, RoW, Tower		X
7.04	Labour	Field Coordinators and Monitors (Safety, Construction)		X
7.05	Labour	Field Monitors (Environment, Quality)		X
7.06	Labour	Field Engineering Construction Support		X
7.07	Construction	Weather Mitigations		X
7.08	External Engagement	Construction Coordination with Affected Partiess (Land Coordinators, Public Relations Coordinators)	X	X
7.09	Crossings and Facilities	Coordination of Outages for Transmission Line Crossings / Replacement of structures in park	X	X
7.10	Crossings and Facilities	Construction Parallel to Existing Facilities (Safety, Construction Considerations)		X

			Owner	EPC
#	**Activity**	**Deliverables**	**Hydro One**	**SNC-Lavalin**
7.11	Crossings and Facilities	Traffic Management for Crossings (e.g. Highway Crossings)		X
10.0	**Commissioning**	**All activities for final commissioning of the facilities**		
10.01	Construction	T-Line End to End Testing		X
10.02	Construction	T-Line Phaseout		X
10.03	Commissioning	Fibre Optic Splicing and Testing		X
10.04	Construction	Final acceptance	X	
10.05	Construction	In-Service switching	X	
11.0	**EPC Closeout**	**All activities to close the constract**		
11.01	Land	Land Survey Post Construction		X
11.02	Engineering	As-Built Drawings		X
11.03	Procurement	SubContract Closures		X
11.04	Construction	Punch List Items		X
11.05	Labour	Final Invoice and Reconciliations	X	X

SEC INTERROGATORY #23

INTERROGATORY

[Motion Hearing JT2.22, Attachment 1, p.94]

Using the same categories as set out in the Lake Superior Link - Scope of Work - Division of Responsibility table, please provide the division of responsibility between Nextbridge and Valard Construction.

RESPONSE

Please see the Attachment to this response where NextBridge has attempted to follow the format as set out in the Lake Superior Link – Scope of Work - Division of Responsibility table at p.94 of Attachment 1 to Hydro One's response to Undertaking JT2.22 to provide the division of responsibility between NextBridge and Valard Construction. The Division of Responsibilities relative to permitting efforts between NextBridge and Valard was previously provided starting at p.97 of Attachment 3 to NextBridge's response to Board Staff Interrogatory #7.b), found at Exhibit I.B.NextBridge.STAFF.7.

Ontario East West Tie - Scope of Work - Division of Responsibility

			Owner	EPC
#	Activity	Deliverables	NextBridge	Valard
1.0	Project Development	All activities to permit the project		
1.01	Environment	Pre-disturbance Assessment (PDA) (Biophysical Survey) - Raptor Nest Surveys - Migratory Bird Surveys - Sensitive Species Survey - Vegetation, Weed, Soil Surveys	X	
1.02	Environment	Historical Resource Impact Assessment and Clearance	X	
1.03	Environment	Environmental Field Report (EFR) - Crown Land only	NextBridge has not become aware of the need of this requirement through its extensive regulatory consultation Process.	
1.04	Environment	Environmental Specifications Requirements (ESR)	NextBridge has not become aware of the need of this requirement through its extensive regulatory consultation Process.	
1.05	Environment	Ontario Water Act and Fisheries Approvals	X	
1.06	Environment	Caribou Protection Plan	If required. MNRF still to provide directions if needed or not.	
1.07	Environment	Traditional Land Use (TLU) Surveys	X	
1.08	Environment	Environmental Contamination: Phase I ESA (Haz Mat survey) and Phase II/III ESAs if required.	X	
1.09	Environment	Environmental Studies for Permitting	X	
1.1	External Engagement	Communications / Public Relations	X	
1.11	External Engagement	Consultation (Indigenous Communities and others)	X	Assist
1.12	External Engagement	Government Relations	X	
1.13	External Engagement	Aboriginal Consultations	X	Assist
1.14	External Engagement	Letter of Adequacy		
1.15	External Engagement	Forest Management Agreements and Timber Damage Agreements	X	X
1.16	Siting	T Line Spotting	X	X
1.17	Siting	Commitments to Landowners / Occupants	X	
1.18	Siting	Route or Structure Changes Due to Landowner/Affected Parties Negotiations	X	

1.19	Land	Land Easements / Individual Ownership Plans	X	
1.2	Land	Land Acquisition - Buy Out	X	
1.21	Land	Crown Land Disposition Application Submissions/Approval	X	
1.22	Land	Obtain Preconstruction TFAs (Crown only)	X	
1.23	Regulatory	EA Preparation and Submission	X	

			Owner	EPC
#	**Activity**	**Deliverables**	**NextBridge**	**Valard**
1.24	Regulatory	LTC Preparation and Submission including IRs	X	
1.25	Regulatory	OEB Directed Route Adjustments	X	
1.26	Permits	Access Permits (Landowners)	X	
1.27	Permits	Water Course Crossing Notifications; Powerline Cable Crossing Form	See NBI's Exhibit H	X
1.28	Permits	DFO Permits: Temporary Water Crossing Permit; FOC Operations Statement	X	
1.29	Permits	Road Maintenance Agreements - Construction Only		X
1.3	Permits	Road Maintenance Agreements - Permanent Only	X	
1.31	Permits	Temporary Construction Permits (including Land Use Proposal Submission Form, building permits, camp permits)		X
1.32	Permits	Water Use: Temporary Diversion Licence and Temporary Diversion Access		See NBI's Exhibit H
1.33	Crossings and Facilities	Facility Mitigation Studies (e.g. pipelines)	X	
1.34	Crossings and Facilities	Existing Facility Agreements (e.g. pipeline, wellhead, rail, road) - Crossing agreements (temporary and permanent) - Ministry of Transportation Ontario Highway Crossings - Proximity Agreements - Encroachment Agreements	X	
1.35	Construction	Lease Agreements for private land used for yards, temporary facilities, etc.	X	
2.0	**General Management**	**All activities in planning and PMPC**		
2.01	Construction	Construction Execution Planning		X
2.02	Construction	Identify all Access Requirements and Temporary Worksites (including geotech, access, material yards, pull sites, etc.)		X
2.03	Construction	Construction Accommodations		X
2.04	Construction	Temporary Facilities for Construction (offices, trailers, etc.)		X
2.05	Construction	Temporary Power During Construction		X
2.06	Construction	Reclamation Plan		X
2.07	Construction	Construction period insurance		X
2.08	Environment	Vegetation Management Plan	X	
2.09	Environment	Environmental management plans including CEPP	X	

			Owner	EPC
#	**Activity**	**Deliverables**	**NextBridge**	**Valard**
2.10	Land	Field Verification of Property Descriptions ("Survey Truthing" for structure location coordinates)	X	
2.11	Labour	Project and Commercial Management	X	X
2.12	Labour	Project Controls and Reporting	x	X
2.13	Labour	Construction Management	x	X
3.0	**Engineering**	**All activities to design**		
3.01	Engineering	LiDAR Data and Variation in Topographical Conditions		
3.02	Engineering	Geotech Studies and Variation in Ground Conditions		X
3.03	Engineering	Tower Spotting	X	
3.04	Engineering	Tower Design and Testing	X	
3.05	Engineering	Design Requirements Over and Above Functional Specification	X	
3.06	Engineering	Design and Engineering - including all drawing packages	X	
3.07	Engineering	Design Reviews (intermediate and final)	X	X
3.08	Engineering	Interface with Owner for Design	X	
3.09	Engineering	Design certification for Ontario	X	
3.10	Engineering	Constructability Review		X
3.11	Crossings and Facilities	Design and Construction of Crossing Structures	X	
4.0	**Procurement**	**All activities to procure material and services**		
4.01	Equipment	Procurement of Material and Major Equipment Required for Construction	X	
4.02	Equipment	Procurement of Material and Equipment Required for Construction Consumables		X
4.03	Equipment	Equipment Manufacturing, Quality, and Delivery	X	X
4.04	Construction	Executing contracts for miscellaneous construction services		X
5.0	**Access & Clearing**	**All activities for access and clearing construction**		
5.01	Construction	Construction Labour Availability and Pricing		X
5.02	Construction	Contracts for Labour Required for Construction		X
5.03	Labour	Field Coordinators and Monitors (Safety, Construction)	X	X
5.04	Labour	Field Monitors (Environment, Quality)	X	X
5.05	Labour	Field Engineering Construction Support	X	X

			Owner	EPC
#	**Activity**	**Deliverables**	**NextBridge**	**Valard**
5.06	Construction	Weather Mitigations		X
5.07	Construction	Wildfire Management		X
5.08	External Engagement	Construction Coordination with Affected Partiess (Land Coordinators, Public Relations Coordinators)	X	
5.09	Crossings and Facilities	Facility Mitigation Installation (e.g. pipelines)	X	
5.10	Construction	Timber Salvage - Plan, Laydown Areas, Contractor (Construction Only)	X	X
6.0	**Foundations**	**All activities for foundation and anchor construction**		
6.01	Construction	Construction Labour Availability and Pricing		X
6.02	Construction	Contracts for Labour Required for Construction		X
6.03	Labour	Field Coordinators and Monitors (Safety, Construction)	X	X
6.04	Labour	Field Monitors (Environment, Quality)	X	X
6.05	Labour	Field Engineering Construction Support	X	X
6.06	Construction	Weather		X
6.07	Construction	Wildfire Management		X
6.08	External Engagement	Construction Coordination with Affected Partiess (Land Coordinators, Public Relations Coordinators)	X	
7.0	**Transmission Line**	**All activities for 230kV and 115kV construction**		
7.01	Construction	Construction Labour Availability and Pricing		X
7.02	Construction	Contracts for Labour Required for Construction		X
7.03	Construction	Staking - Avoidance Area, RoW, Tower		X
7.04	Labour	Field Coordinators and Monitors (Safety, Construction)	X	X
7.05	Labour	Field Monitors (Environment, Quality)	X	X
7.06	Labour	Field Engineering Construction Support	X	X
7.07	Construction	Weather Mitigations		X
7.08	External Engagement	Construction Coordination with Affected Partiess (Land Coordinators, Public Relations Coordinators)		X
7.09	Crossings and Facilities	Coordination of Outages for Transmission Line Crossings / Replacement of structures in park		X
7.10	Crossings and Facilities	Construction Parallel to Existing Facilities (Safety, Construction Considerations)		X

			Owner	EPC
#	**Activity**	**Deliverables**	**NextBridge**	**Valard**
7.11	Crossings and Facilities	Traffic Management for Crossings (e.g. Highway Crossings)		X
10.0	**Commissioning**	**All activities for final commissioning of the facilities**		
10.01	Construction	T-Line End to End Testing		X
10.02	Construction	T-Line Phaseout		X
10.03	Commissioning	Fibre Optic Splicing and Testing		X
10.04	Construction	Final acceptance	X	
10.05	Construction	In-Service switching	X	
11.0	**EPC Closeout**	**All activities to close the constract**		
11.01	Land	Land Survey Post Construction	X	
11.02	Engineering	As-Built Drawings		X
11.03	Procurement	SubContract Closures		X
11.04	Construction	Punch List Items	X	X
11.05	Labour	Final Invoice and Reconciliations	X	X

Chart 1

Generic Cost Estimate Matrix - AACE Recommended Practice No. 18R-97

	Primary Characteristic	*Secondary Characteristic*		
ESTIMATE CLASS	**MATURITY LEVEL OF PROJECT DEFINITION DELIVERABLES** Expressed as % of complete definition	**END USAGE** Typical purpose of estimate	**METHODOLOGY** Typical estimating method	**EXPECTED ACCURACY RANGE** Typical variation in low and high ranges
Class 5	0% to 2%	Concept screening	Capacity factored, parametric models, judgment, or analogy	L: -20% to -50% H: +30% to +100%
Class 4	1% to 15%	Study or feasibility	Equipment factored or parametric models	L: -15% to -30% H: +20% to +50%
Class 3	10% to 40%	Budget authorization or control	Semi-detailed unit costs with assembly level line items	L: -10% to -20% H: +10% to +30%
Class 2	30% to 75%	Control or bid/tender	Detailed unit cost with forced detailed take-off	L: -5% to -15% H: +5% to +20%
Class 1	65% to 100%	Check estimate or bid/tender	Detailed unit cost with detailed take-off	L: -3% to -10% H: +3% to +15%

The RQE is a Class 3 estimate and is being used as the control budget for the Program. Ninety per cent of the estimated costs of completion meet or exceed the level of estimate accuracy corresponding to Class 3. The largest component of the work bundle estimate, the Retube and Feeder Replacement ("RFR") estimate, is a Class 2 estimate. Chart 2 provides the estimate class for each of the major work bundles.

UNDERTAKING – JT 2.21

Undertaking

Hydro One to provide construction cost estimates for the route proposed by NextBridge in EB-2017-0182, using the same cost categories as in Table 2 in Hydro One's response to CCC8, both NextBridge route and preferred route. Also, to provide variance explanations for substantial differences.

Response

Hydro One would like to clarify that the reference Table is Nextbridge's response to CCC8 not Hydro One's response as the undertaking request currently reads. Hydro One notes that portions of the NextBridge response to CCC Interrogatory 8 in EB-2017-0182, filed March 21, 2018, were filed in confidence, specifically Table 3. Therefore, Hydro One has no line of sight to what detailed values NextBridge utilized to develop the costs provided in Table 2 of CCC Interrogatory 8. Consequently, a number of cost allocation assumptions have been made to align Hydro One's estimate, provided at Exhibit B, Tab 7, Schedule 1, Table 3 with the categories provided in CCC Interrogatory 8 Table 2.

Variance explanations have been provided for substantial differences between the NextBridge and Hydro One s.92 applications.

As requested, Hydro One has also provided the cost breakdown for the expected costs of the alternative of Hydro One following NextBridge's route in its entirety. Although the numbers vary, the variances explanations would not significantly differ for this alternative.

Category as per Exhibit I.B.NextBridge.CCC.8 - Table 2	NxB S.92	HONI S.92	Variance Explanation	HONI - NextBridge "Bypass" Route
Route length	443 km	403 km	Shorter route through Pukaskwa National Park	443 km
Engineering	$19,342,245	$17,828,000		$18,719,400
Materials & Equipment	$89,408,231	$58,713,000	34% cost reduction driven by optimized tower designs, shorter overall length and global purchasing power	$64,584,300
Environmental	$13,030,561	$9,819,000 (1)		$10,819,000
Land Rights	$23,830,512	$9,798,000	Hydro One is considering a number of instruments, including land use permits and believes it will reach voluntary settlements with the vast majority of property owners.	$9,798,000
First Nation and Métis Participation	$7,000,000	$18,450,000 (2)	Substantial economic participation included in Construction costs in the form of employment and FN&M contracting opportunities.	$20,664,000
First Nation and Métis Consultation	$13,211,000	$1,133,000	Lower due to the substantial amount of consultation completed to-date on the existing route	$1,627,000
Other Consultation	$2,530,194	$160,000		$160,000
Site Clearing, Access	$107,463,339	$66,339,000 (3)	The 38% variance is the result of a much smaller environmental footprint (50% less).	$75,379,680
Construction	$356,547,573	$363,481,000 (4)	Comparable total costs on a per unit basis.	$381,212,500
Site Remediation	$13,898,699	$10,550,000 (5)		$11,816,000

Interest During Construction	$31,003,000	$42,596,000	Consistent with the Board's decision in EB-2008-0408, interest during Construction is based upon the forecast of the embedded cost of debt used to finance the capital expenditures. It is impossible for Hydro One to compute NB's IDC without the monthly information to ascertain how a more expensive project has a lower IDC.	$44,838,161
Contingency	$49,339,445	$10,775,000	$10.8M of contingency is exclusive of the $54M of risk & contingency included within the fixed-price EPC contract.	$10,775,000
Regulatory	$5,405,078		All Hydro one regulatory costs are included in the development phase	
Project Management	$4,900,644	$5,802,000		$5,802,000
Overhead (new)		$8,502,000	Overheads shown separately as required by OEB Chapter 4 Filing Requirements Section 4.3.2.9.	$8,502,000
Total Construction Phase	**$736,970,521**	**$623,946,000**		**$664,697,041**

Notes:

1. This value differs from the $819k value depicted in Exhibit B, Tab 7, Schedule 1, Table 3 under Environmental Approval because environmental monitoring, permitting and mitigations costs which were included in Site Clearing, Preparation, & Site Remediation have been redistributed for the purposes of this comparison.
2. Though not explicitly identified in Exhibit B, Tab 7, Schedule 1, Table 3, First Nation and Metis Participation funding was accounted for in Site Clearing, Preparation, & Site Remediation. These funds have been redistributed for the purposes of this comparison.
3. This value has been reduced by $38M from what has been reflected in Exhibit B, Tab 7, Schedule 1 under Site Clearing, Preparation and Site Remediation to redistribute funds to Environmental, FN&M participation, and Site Remediation for the purposes of this comparison
4. This value is a combination of the Construction costs and Other costs identified in Exhibit B, Tab 7, Schedule 1.
5. Though not explicitly identified in Exhibit B, Tab 7, Schedule 1, Table 3, Site Remediation funding was accounted for in Site Clearing, Preparation, & Site Remediation. These funds have been redistributed for the purposes of this comparison.

SEC INTERROGATORY #24

INTERROGATORY

[Motion Hearing - JT 2.21]

Please provide a similar comparison table as provided by Hydro One with Nextbridge's views on the rationale for the cost variance in each category.

RESPONSE

NextBridge provides below a comparable table to the one provided by Hydro One (HONI) from Hydro One's response to Undertaking JT2.21. NextBridge has used Hydro One's table and substituted NextBridge variance explanations. NextBridge has further modified the table to incorporate additional cost categories anticipated to impact Hydro One's Lake Superior Link (LSL) cost estimate. Detailed variance analyses and explanations are provided below the table.

Category as per Exhibit I.B.NextBridge. CCC.8 - Table 2	NextBridge S.92	HONI S.92	Variance Explanation	HONI -[1] NextBridge "Bypass" Route
Route length	446 km	403 km	NextBridge's route is longer due to NextBridge's inability to obtain Parks Canada consent to study a route through Pukaskwa National Park (Park). HONI has not yet received approval to route the LSL Project through the Park.	443 km
Engineering	$19,342,245	$17,828,000	NextBridge's detailed engineering is fully contracted, 90% complete, and the cost provided has a high level of confidence (Class 2 AACE, compared to HONI's Class 3 AACE, which is less accurate). In HONI's response to Undertaking JT 2.9, HONI stated that detailed LSL project engineering started in March of 2018 and would run through July 2019, which shows that HONI is far from showing the actual cost for detailed engineering.	$18,719,400
Materials & Equipment	$89,408,231	$58,713,000	It is not clear what materials HONI has included in this category so it is difficult to make a comparison, but if the list of materials and equipment is comparable to NextBridge's, then the HONI costs appear to be generally understated. (See narrative that follows for additional consideration)	$64,584,300
Environmental	$13,030,561	$9,819,000	NextBridge does not know the assumptions that HONI has made to arrive at this estimate, but NextBridge has more cost certainty than HONI due to	$10,819,000

[1] To date, there is insufficient information on the cost figures provided by HONI related to its by-pass route to provide a variance explanation.

Category as per Exhibit I.B.NextBridge. CCC.8 - Table 2	NextBridge S.92	HONI S.92	Variance Explanation	HONI -[1] NextBridge "Bypass" Route
			further progress made in activities such as the Environmental Assessment (EA) process, completing Stage 2 archeological assessments, undertaking Species at Risk field work, and completing fish surveys to inform waterbody crossings for construction access.	
Land Rights	$23,830,512	$9,798,000	NextBridge included in its cost estimate use of an easement tenure that requires Crown land legal surveys be completed, per the recommendation of the MNRF. Additionally, since there is no increase in the land expenses in the "bypass" route, NextBridge assumes HONI may not have considered compensation to Crown interest holders in arriving at its estimate.	$9,798,000
First Nation and Métis Participation	$7,000,000	$18,450,000	NextBridge has executed agreements with Indigenous communities who sought economic participation. This provides a better informed price that is targeted and efficient, which in turn provides more cost certainty. NextBridge has a comprehensive employment, training and procurement plan, which it has already implemented, in coordination with its general contractor.	$20,664,000

Category as per Exhibit I.B.NextBridge. CCC.8 - Table 2	NextBridge S.92	HONI S.92	Variance Explanation	HONI -[1] NextBridge "Bypass" Route
First Nation and Métis Consultation	$13,211,000	$1,133,000	NextBridge has had extensive consultation with the 18 communities from its delegated Duty to Consult since 2013, which provides more cost certainty. It appears that HONI believes Indigenous communities will require limited consultation efforts.	$1,627,000
Other Consultation	$2,530,194	$160,000	NextBridge has based its stakeholder consultation activities on almost 4 years of communication and interaction with highly engaged communities along the route. HONI appears to believe it will conduct significantly less stakeholder consultation and still obtain support for its project.	$160,000
Site Clearing, Access	$107,463,339	$66,339,000	NextBridge has not seen a HONI detailed access plan so it is unclear what is included in HONI's cost. NextBridge has undergone years of due diligence of stakeholder consultation, a competitive review by multiple contractors in the RFP process and verification on the ground by NextBridge's general contractor. There is also limited risk for NextBridge that these costs increase given the terms of the general contractor agreement. There is no evidence that HONI has completed any of the work that NextBridge has completed to inform the estimate on this issue.	$75,379,680
Construction	$356,547,573	$363,481,000	NextBridge does not know how HONI calculated its estimate without knowing the inputs that were used. NextBridge assumes	$381,212,500

Category as per Exhibit I.B.NextBridge. CCC.8 - Table 2	NextBridge S.92	HONI S.92	Variance Explanation	HONI -[1] NextBridge "Bypass" Route
			those inputs would include consideration for a construction access plan that was provided to the MNRF/MECP for consultation similar to the process NextBridge completed. NextBridge has also provided costs in 2020 dollars and therefore escalation was included to show actual in-service costs. From HONI's application, it is unclear what year dollars are included in their construction estimate.	
Site Remediation	$13,898,699	$10,550,000	A large portion of the NextBridge reclamation efforts are already captured in its access plan. It is unclear what requirements are captured in the HONI site remediation cost given their detailed access plan has not been made available for review.	$11,816,000
Interest During Constr uction	$31,003,000	$42,596,000	Consistent with the Board's recommendation in the November 28, 2006 Approval of Accounting Interest Rates Methodology for Regulatory Accounts (Board File No. EB-2006-0117), NextBridge used as an estimate interest rate based on the Scotia Capital Inc. All Corporates Mid-Term Average Weighted Yield, as published on the Bank of Canada's website.	$44,838,161
Contingency	$49,339,445	$10,775,000	NextBridge has a high level of confidence in regards to the contingency (7%) it has estimated given the final stage of design and execution of the general contractor agreement as further characterized as AACE Class 2 estimate. Conversely, HONI has	$10,775,000

Category as per Exhibit I.B.NextBridge. CCC.8 - Table 2	**NextBridge S.92**	**HONI S.92**	**Variance Explanation**	**HONI -[1] NextBridge "Bypass" Route**
			presented an AACE Class 3 estimate based on preliminary engineering and a contingency of $10.8M (1.7%). HONI's general contractor will also carry approximately $55 million in contingency. Tr. page 184, lines 4-8 of EB-2017-0364 (May 17, 2018).	
Regulatory	$5,405,078		HONI 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.	
Project Management	$4,900,644	$5,802,000	NextBridge does not know what HONI has included in project management to arrive at its estimate.	$5,802,000
Overhead (new)		$8,502,000	NextBridge overheads are included in the above totals.	$8,502,000
IESO delay costs (new)	$0	$21,000,000	The IESO estimated $19 MM for delay costs related to a December 2021 in-service date in 2017 dollars, which have been escalated to 2021 dollars by 2.5%. The delay cost figure could increase based on the IESO's response to the party's interrogatories on September 24, 2018.	$21,000,000
Outage cost (new)		TBD	It is expected the IESO will provide the estimated cost of a HONI two-week outage of the existing EWT Line if it routes through the Park in response to interrogatories on September 24, 2018.	
Escalation costs	$0	Unknown	NextBridge has assumed escalation costs to bring its	Unknown

Category as per Exhibit I.B.NextBridge. CCC.8 - Table 2	NextBridge S.92	HONI S.92	Variance Explanation	HONI - [1] NextBridge "Bypass" Route
			project to 2020 dollars. It is not clear that HONI has included escalation or what dollars their estimate is in.	
Total Constructi on Phase	**$736,970,521**	**$644,946,000**		**$685,697,041**

Additional Information on Variances:

Route length: NextBridge's route is longer due to the denial of Parks Canada to allow NextBridge to add additional parallel transmission infrastructure in Pukaskwa National Park. At this time, HONI is seeking Parks Canada to allow them to construct 87 new quad circuit transmission towers with up to 12 guy anchors per tower in the Park and stay within its existing right-of-way and do little harm to the environment in the Park during construction. NextBridge has yet to see substantial evidence that shows what HONI believes will in actuality be possible when it comes to the quad circuit tower construction and operation. Further, to date, there is no evidence that Parks Canada has approved HONI's request. Even if Parks Canada approves HONI's request, NextBridge also disagrees that the use of quad circuit towers in this instance is as reliable as NextBridge's transmission design that does not combine the existing new East-West Tie Line into a single point of failure for 87 towers. Thus, even though HONI has theoretically proposed a shorter route, NextBridge believes there are more disadvantages than advantages to the proposal and it should not be adopted.

Materials and Equipment:

HONI contends that one of the reasons it can provide lower material and equipment costs is because it is in the global market and NextEra likely procures from the North American market. Tr. page 184-185, lines 25-27 EB-2017-0364 (May 17, 2018). This is incorrect. NextEra, one of the NextBridge partners, is the third largest builder of infrastructure in the United States of any industry and procures materials and equipment on the global market. Thus, HONI's attempt to downplay NextEra's purchasing power was not accurate. NextEra has transmission, distribution, and substation infrastructure investments, as well as other capital projects in wind, solar, combined cycle plants, gas pipelines, etc. and a global network of suppliers and manufacturers, with an annual deployment of capital in excess of $10B and $40B of planned investments through 2020. In addition to

NextBridge's superior purchasing power on a global scale, approximately 70% of the NextBridge materials for this project have already been competitively sourced and contracted, or at least shortlisted and pending final contract on approval of the LTC. The remaining 30% of this budget is allocated to the procurement of the conductor, optical ground wire, and overhead ground wire that NextEra purchases competitively in high volumes each year. In contrast, it is unclear from HONI's evidence 1) how it derived its material and equipment costs, or 2) how the material and equipment will be procured - competitively or sole sourced.
Given NextBridge's experience and due diligence it appears that there is an inconsistency of the types of materials included in this section or the costs may be understated or not well developed. NextBridge has also provided costs in 2020 dollars, and, therefore, escalation was included to show actual in-service costs. From HONI's application, it is unclear what year dollars are included in their construction estimate.

Land: Hydro One asserts in Exhibit C of its application that it has approximately 50% less area to acquire for their proposed route than NextBridge does (EB-2017-0364, Exhibit B, Tab 5, Schedule 1, page 4). This is reflected in the difference in area requirements for new land rights acquisition in Exhibit E of both applications and has a direct correlation to the overall cost of acquiring land rights for the route. However, it is not possible to verify that Hydro One has achieved 50% less footprint given the length of the line, the unavailability of an access plan, and the OEB Minimum Technical Requirements for width of right-of-way based on blowout conditions.

Furthermore, HONI cites in its application that it intends to add to its existing Multi-Site Land Use Permit with the MNRF to acquire approximately 1050 hectares of new land rights on unpatented provincial Crown land (EB-2017-0364, Exhibit E, Tab 1, Schedule 1, page 7). As outlined in Exhibit E of NextBridge's application and based on recommendation from the MNRF, NextBridge intends to transfer its provincial Crown land tenure from a land use permit to an easement tenure following the completion of post-construction surveying. An easement tenure, unlike a land use permit, requires a Crown land legal survey which NextBridge has budgeted to complete.

Also, HONI states with no substantial evidence in support that the land rights cost is no different for their "Bypass" route, which suggests that Hydro One has not considered compensation payable to Crown interest holders which NextBridge has included in its budget.

Regulatory: HONI's claims in Undertaking JT 2.21 that all its regulatory costs are part of its development costs which ends when the OEB provides a leave to construct, and there are no construction phase regulatory costs. HONI has not explained why it believes there will be no regulatory costs incurred by HONI between an OEB approval of the HONI LSL

LTC application and December 2021, the current proposed in-service date for the LSL Project.

Also, HONI is using a different endpoint in relation to characterization of a regulatory cost as being either development phase or construction phase related, describing "development costs" as those incurred through to OEB LTC approval (EB-2017-0364, Exhibit B, Tab 7, at page 3), which also makes it challenging to make a comparison to NextBridge, which ended development phase and costs at the filing of the Leave to Construct.

First Nations and Métis: NextBridge has engaged and consulted with First Nation and Métis communities since it was first delegated procedural aspects of the Duty to Consult in 2013. During that time, engagement with communities on the development of the line has led to the sharing of information between both parties on traditional values, the development of a comprehensive Indigenous employment, training and procurement plan, and executed agreements with communities who sought economic participation (ex. Bamkushwada LP and the Métis Nation of Ontario). All these mutual efforts have provided NextBridge with more cost certainty on its First Nation and Métis participation and consultation budgets.

The Crown has made clear in their MOU that delegates Duty to Consult to Lake Superior Link that HONI must consult on the project. The LSL Project will have its own impacts, taking up of lands, construction timeframe and methodology. In NextBridge's experience the First Nation and Métis consultation budget proposed by Hydro One is underestimated given the requirement to meaningfully consult with 18 First Nation and Métis groups. The Crown will insist on "deep" consultation with potentially impacted First Nations and Métis and this will require a significant amount of time and resources dedicated to ensure they have met the Crown's Duty to Consult."

While NextBridge does not know what makes up the HONI First Nation and Métis participation budget, it assumes that HONI's budget includes activities that were originally under "Preparation and Site Remediation" from the footnote in the original table, and it is unclear how these activities relate to participation.

Other Consultation: NextBridge has based its stakeholder consultation activities on almost four years of communication and interaction with communities along the route. These interactions have shown an increased interest from communities on this large infrastructure project. During the construction period, NextBridge has budgeted for three open houses, and a communications plan that not only informs communities on construction activity, but also addresses safety and construction awareness.

Site Clearing and Access: HONI has yet to provide an access plan so it is not possible to verify that they have achieved 50% less footprint given the length of the line and the OEB Minimum Technical Requirements for width of right of way based on blowout conditions. It is also unclear what is included in this category especially given HONI's recent reallocation of costs to other categories. However, NextBridge has a high degree of confidence in the East West Tie construction plan and cost estimate, specifically this category as it has been thoroughly investigated through years of onsite due diligence, aerial and ground surveys, multiple contractors have reviewed the plan for constructability, construction rates for these activities have been competitively sourced, the access plan has been completely and thoroughly inspected on the ground during the summer of 2018 by NextBridge's general contractor and there is also limited risk for NextBridge that these costs increase given the terms of its general contractor agreement (see NextBridge's response to SEC Interrogatory #18, at Exhibit I.NextBridge.SEC.18). In contrast, HONI has not explained in detail how its site clearing and access plan and associated costs were or are to be developed.

Interest During Construction (IDC): NextBridge's IDC estimate was based on the cash flow and prescribed OEB rate at the time of the LTC filing. NextBridge acknowledges that as the cash flow and the rate changes the amount of IDC will change. NextBridge cannot determine the reason for the difference in IDC between the NextBridge and HONI application without seeing the calculation of HONI's IDC.

Cost Comparison Table

Category	NB s.92	HO s.92	HO Explanation	NB Explanation	HO - NB Route
Route Length	443 km	403 km	Shorter route through Pukaskwa National Park	NextBridge's route is longer due to NextBridge's inability to obtain Parks Canada consent to study a route through Pukaskwa National Park (Park). HONI has not yet received approval to route the LSL Project through the Park.	443 km
Engineering	$19,342,245	$17,828,000		NextBridge's detailed engineering is fully contracted, 90% complete, and the costprovided has a high level of confidence (Class 2 AACE, compared to HONI's Class 3 AACE, which is less accurate). In HONI's response to Undertaking JT 2.9, HONI stated that detailed LSL project engineering started in March of 2018 and would run through July 2019, which shows that HONI is far from showing the actual cost for detailed engineering.	$18,719,400
Environmental	$13,030,561	$9,819,000		NextBridge does not know the assumptions that HONI has made to arrive at this estimate, but NextBridge has more cost certainty than HONI due to further progress made in activities such as the Environmental Assessment (EA) process, completing Stage 2 archeological assessments, undertaking Species at Risk field work, and completing fish surveys to inform waterbody crossings for construction access.	$10,819,000
Materials & Equipment	$89,408,231	$58,713,000	34% cost reduction driven by optimized tower designs, shorter overall length and global purchasing power	It is not clear what materials HONI has included in this category so it is difficult to make a comparison, but if the list of materials and equipment is comparable to NextBridge's, then the HONI costs appear to be generally understated. (See narrative that follows for additional consideration)	$64,584,300
Land Rights	$23,830,512	$9,798,000	Hydro One is considering a number of instruments, including land use permits and believes it will reach voluntary settlements with the vast majority of property owners.	NextBridge included in its cost estimate use of an easement tenure that requires Crown land legal surveys be completed, per the recommendation of the MNRF. Additionally, since there is no increase in the land expenses in the "bypass" route, NextBridge assumes HONI may not have considered compensation to Crown interest holders in arriving at its estimate.	$9,798,000
First Nation and Métis Participation	$7,000,000	$18,450,000	Substantial economic participation included in Construction costs in the form of employment and FN&M contracting opportunities.	NextBridge has executed agreements with Indigenous communities who sought economic participation. This provides a better informed price that is targeted and efficient, which in turn provides more cost certainty. NextBridge has a comprehensive employment, training and procurement plan, which it has already implemented, in coordination with its general contractor.	$20,664,000
First Nation and Métis Consultation	$13,211,000	$1,133,000	Lower due to the substantial amount of consultation completed to-date on the existing route	NextBridge has had extensive consultation with the 18 communities from its delegated Duty to Consult since 2013, which provides more cost certainty. It appears that HONI believes Indigenous communities will require limited consultation efforts.	$1,627,000
Other Consultation	$2,530,194	$160,000		NextBridge has based its stakeholder consultation activities on almost 4 years of communication and interaction with highly engaged communities along the route. HONI appears to believe it will conduct significantly less stakeholder consultation and still obtain support for its project.	$160,000
Site Clearing, Access	$107,463,339	$66,339,000	The 38% variance is the result of a much smaller environmental footprint (50% less).	NextBridge has not seen a HONI detailed access plan so it is unclear what is included in HONI's cost. NextBridge has undergone years of due diligence of stakeholder consultation, a competitive review by multiple contractors in the RFP process and verification on the ground by NextBridge's general contractor. There is also limited risk for NextBridge that these costs increase given the terms of the general contractor agreement. There is no evidence that HONI has completed any of the work that NextBridge has completed to inform the estimate on this issue.	$75,379,680
Construction	$356,547,573	$363,481,000	Comparable total costs on a per unit basis.	NextBridge does not know how HONI calculated its estimate without knowing the inputs that were used. NextBridge assumes those inputs would include consideration for a construction access plan that was provided to the MNRF/MECP for consultation similar to the process NextBridge completed. NextBridge has also provided costs in 2020 dollars and therefore escalation was included to show actual in-service costs. From HONI's application, it is unclear what year dollars are included in their construction estimate.	$381,212,500
Site Remediation	$13,898,699	$10,550,000		A large portion of the NextBridgere clamation efforts are already captured in its access plan. It is unclear what requirements are captured in the HONI site remediation cost given their detailed access plan has not been made available for review.	$11,816,000
Interest During Construction	$31,003,000	$42,596,000	Consistent with the Board's decision in EB-2008-0408, interest during Construction is based upon the forecast of the embedded cost of debt used to finance the capital expenditures. It is impossible for Hydro One to compute NB's IDC without the monthly information to ascertain how a more expensive project has a lower IDC.	Consistent with the Board's recommendation in the November 28, 2006 Approval of Accounting Interest Rates Methodology for Regulatory Accounts (Board File No. EB-2006-0117), NextBridge used as an estimate interest rate based on the Scotia Capital Inc. All Corporates Mid-Term Average Weighted Yield, as published on the Bank of Canada's website.	$44,838,161
Contingency	$49,339,445	$10,775,000	$10.8M of contingency is exclusive of the $54M of risk & contingency included within the fixed-price EPC contract.	NextBridge has a high level of confidence in regards to the contingency (7%) it has estimated given the final stage of design and execution of the general contractor agreement as further characterized as AACE Class 2 estimate. Conversely, HONI has presented an AACE Class 3 estimate based on preliminary engineering and a contingency of $10.8M (1.7%). HONI's general contractor will also carry approximately $55 million in contingency. Tr. page 184, lines 4-8 of EB-2017-0364 (May 17, 2018).	$10,775,000
Regulatory	$5,405,078		All Hydro one regulatory costs are included in the development phase	HONI does not appear to have included any regulatory costs related to the approximately threeyear period anticipated between LTC approval and in-service of the LSL project.	
Project Management	$4,900,644	$5,802,000		NextBridge does not know what HONI has included in project management to arrive at its estimate.	$5,802,000
Overhead		$8,502,000	Overheads shown separately as required by OEB Chapter 4 Filing Requirements Section 4.3.2.9.	NextBridge overheads are included in the above totals.	$8,502,000
Total Construction Phase	**$736,970,521**	**$623,946,000**			**$664,697,041**

Source: Motion Hearing JT 2.21; I.Nextbridge.SEC.24

SEC INTERROGATORY #21

INTERROGATORY

SEC seeks to understand what protections for ratepayers Nextbridge is willing to include as a condition of being granted leave to construct.

a. Would Nextbridge be willing, as a condition of having its East-West Tie Line project being granted leave to construct, that the final construction costs that can be passed onto ratepayers in rates is capped at the forecast construction budget?
b. If yes, please provide the specific terms of the conditions that it believes are reasonable, including exclusions, if any, it believes must be included. Please provide the rationale for any proposed exclusions.
c. If not, please explain why.

RESPONSE

a), b) & c) No, NextBridge is not willing, as a condition of having its East-West Tie Line project being granted leave to construct, that the final construction costs that can be passed onto ratepayers in rates be capped at the forecast construction budget. Please see NextBridge's response to Board Staff Interrogatory #46.a, found at Exhibit I.NextBridge.STAFF.46, for an explanation why.

STAFF INTERROGATORY #46

INTERROGATORY

According to section 96(2) of the *Ontario Energy Board Act*, in an application under section 92, the OEB shall consider the interests of consumers with respect to prices, and the reliability and quality of electricity service, and the promotion of the use of renewable energy sources in a manner consistent with the policies of the Government of Ontario.

Given the public interest mandate that is engaged in LTC applications, OEB staff is interested in exploring potential options with respect to prices and cost certainty. Hydro One stated in its September 22, 2017 letter to the OEB that "Hydro One is prepared to submit a Leave to Construct application, which will include a not-to-exceed price…".

NextBridge indicated in its designation application that it would assume some risk for the construction cost forecast through performance-based ratemaking. At the time of the designation application, NextBridge planned to present this proposal as part of the LTC process.

Questions:

a) Is NextBridge willing to provide the OEB with a not-to-exceed price for the project? If so, what is that price? If not, please explain.
b) Would NextBridge consider providing the OEB with varying capital costs for the project that reflect different risk sharing proposals between itself and ratepayers? For example, would NextBridge consider having certain specific risks shared between ratepayers and the utility, other risks absorbed by the utility, and other risks absorbed by the ratepayers, all of which would result in a specific project cost? If yes, please fill in Table 1 with the scenarios NextBridge is willing to provide. If not, please explain.

Table 1 (Please add or remove rows in the table below, as needed)					
Scenario #	Risks borne by the utility	Risks borne by the ratepayer	Risks shared between the utility and ratepayers	Project Cost ($)	Comments
1	• • •	• • •	• • •	$ M	
2	• • •	• • •	• • •	$ M	
3	• • •	• • •	• • •	$ M	
4	• • •	• • •	• • •	$M	

c) Does NextBridge have any other proposals that the OEB might consider implementing in order to ensure the successful proponent brings its project into service in the timeline and cost established in this proceeding?

RESPONSE

a) No, NextBridge is not willing to provide the OEB with a not-to-exceed price for the project. NextBridge has provided a construction budget that is an AACE Class 2 cost estimate. NextBridge's Engineering, Construction, and Procurement lump sum contract and attachments provide a level of detail on scope of work, materials, and costs that further supports its AACE Class 2 cost estimate. NextBridge believes it can bring the East West Tie Line into service in December 2020 within this AACE Class 2 cost estimate provided. As explained during the designation process, NextBridge was open to taking on incremental risk in return for the reasonable prospect of a premium return. NextBridge did subsequently explore a performance-based ratemaking (PBR) construct as summarized in NextBridge's response to part b) of this interrogatory below, which was subsequently abandoned pursuant to the OEB's adoption of a PBR

construct. At no time did NextBridge intend, nor has NextBridge proposed, a cost cap approach for the EWT Line Project.

b) No, NextBridge would not consider providing the OEB with varying capital costs for the project that reflect different risk sharing proposals between itself and ratepayers.

In the East-West Tie Line Designation Application, NextBridge stated at p.74:

> As compared with what would otherwise be achieved by incumbents under the status-quo regulatory regime, performance-based ratemaking should result in a lower revenue requirement for the citizens of Ontario. For example, as illustrated in the table below a hypothetical 10% decrease in construction cost, in return for a 100 basis point ROE adder, would generate revenue requirement savings for customers of almost 5%. We provide supporting calculations in Appendix 10: Supporting Calculations for Performance Based Rate- Making.

In $millions	Case 1	Case 2
Capital Cost	$600	$540
ROE	9.0%	10.0%
Revenue Requirement (RR)	63.8	60.8
Change in RR		(2.9)
% Change in RR		-4.6%

FIGURE 9: PERFORMANCE-BASED RATEMAKING EXAMPLE

> With the exception of construction work-in-progress, discussed in Section 5.8 below, recovery will occur once the line goes into service, when the evaluation of success can be measured. Our objective will be to develop a ratemaking construct that aligns the interests of both the shareholders and customers of NextBridge, and ultimately delivers a superior value proposition versus the incumbent utility and ratemaking status quo.

In NextBridge's response to Staff Interrogatory #11 in EB-2011-0140, NextBridge also stated:

> Figure 9 of Section 5.4 of the NextBridge Application was provided for illustrative purposes only, to demonstrate that a significant decrease in capital expenditures in exchange for a modest increase in ROE can provide an attractive value proposition for customers. Round numbers were used in the example, with the "Case 1" ROE of 9% being representative of the standard Board approved ROE (currently 8.93%), and 10% illustrating a premium over and above the standard Board approved ROE if superior performance is achieved, to illustrate that the ratepayer is better off in "Case 2". As noted in Section 5.4 of the Application, with respect to the Cost of Equity, NextBridge would seek to develop a ratemaking construct that would be acceptable to the Board

while allowing NextBridge to achieve a higher rate of return in exchange for assumption of risk and/or superior performance. This is similar to the current incentive rate making opportunities afforded to Ontario electricity and gas distributors, which have allowed for the sharing of earnings above Board approved ROE between utility owners and utility ratepayers. NextBridge expects that the range of potential ROE outcomes, together with appropriate metrics, would be developed in consultation with OEB staff and other stakeholders.

After NextBridge was designated as the developer of the East West Tie Line, it consulted with OEB Staff and stakeholders on a performance-based ratemaking construct.

As outlined in NextBridge's response to Staff Interrogatory #6, NextBridge held a stakeholder session for interested parties and presented on potential options for this mechanism on September 10, 2014.

In advance of this session, and as mentioned in NextBridge's response to Undertaking JT1.22, NextBridge hired Concentric to summarize the regulatory environment in Ontario related to performance-based rate-making mechanisms, consider examples of incentives for developers of new transmission infrastructure projects to perform under various criteria in return for enhanced return potential, and develop potential PBR programs for NextBridge consideration. This information was presented at the session.

Representatives from each of the groups listed below attended the session and NextBridge also invited all intervenors involved in the project designation to provide input, which was received verbally during the presentation, but to which there were no written responses subsequently received.

- Brookfield Infrastructure Group
- Canadian Manufacturers & Exporters ("CME")
- City of Thunder Bay, Northwestern Ontario Associated Chambers of Commerce ("NOACC"), and Northwestern Ontario Municipal Association Energy Task Force ("NOMA")
- Energy Probe
- Hydro One Networks Inc.
- Independent Electricity System Operator
- London Property Management Association ("LPMA")
- Métis Nation of Ontario
- Nishnawbe-Aski Nation
- Northwatch
- Ontario Power Generation ("OPG")

- Ontario Power Authority (OGA")
- School Energy Coalition ("SEC")
- The Corporation of the Municipality of Wawa
- Vulnerable Energy Consumers Coalition ("VECC")
- Ontario Energy Board ("OEB")
- NextBridge and partners

A copy of the presentation from this session is attached at Attachment 1 to this response, along with a summary of the consultation and subsequent correspondence. As the minutes from the meeting show[1], there were a number of questions and concerns expressed by the stakeholders, including that the performance-based ratemaking approach should not replace a prudency review of the construction costs. Stakeholders also pointed to exploring a balanced scorecard approach that includes metrics beyond costs.

Consistent with the balanced scorecard approach, the OEB independently adopted performance-based ratemaking related to ongoing costs in its Filing Requirements for Electricity Transmission Applications – Chapter 2 Revenue Requirement Applications released on February 11, 2016 that prescribed a performance ratemaking framework. Given the OEB's adoption of a performance ratemaking approach, NextBridge notified stakeholders in an email on February 17, 2017[2] that NextBridge intended to work within the construct adopted by the OEB rather than develop a different performance ratemaking approach and would further communicate with stakeholders before the revenue requirement application was finalized.

c) The OEB may wish to implement a quarterly reporting requirement to track the completion of significant construction milestones and the spend rate on construction.

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[1] Attachment 1 to this response, starting a p.2.

[2] Ibid., starting at p.5.

UNDERTAKING JT1.25

UNDERTAKING

TR 1, page 114

To provide sunk costs, assuming by the end of July 2018 under the scenario that the approval is not received.

RESPONSE

The below table summarizes NextBridge's estimated sunk costs at the end of July, 2018 related to the East-West Tie Line Project.

	$ (in 000s)
Development Phase costs (August 2013 through July 2017)	$40,250
Post-Leave to Construct Application costs (August 2017 through July 2018)	
1. Actuals to April 30, 2018	$15,020
2. Projected May to July 2018	$8,500
TOTAL	$63,786

In addition to the estimated costs identified in the above table, NextBridge anticipates that it would also incur various wind-up costs under a scenario that Leave to Construct approval for the East-West Tie Line Project is not received and that all work on the EWT project is terminated. Wind-up costs are expected to include such items as demobilization and close-out costs in the areas of engineering & construction ("E&C"), environment and land activity, financial reporting activity costs, and costs associated with an Ontario Energy Board application for recovery of outstanding EWT Line Project costs. NextBridge estimates that wind-up costs unrelated to the E&C work stream alone would be at minimum $1.0 million, but could be significantly higher. NextBridge cannot estimate the termination exposure beyond the forecasted spend for the E&C activities because there are likely other termination costs that are usually negotiated with suppliers in large project cancellation scenarios based on the damages claimed. For example, although a cost or payment for service may not have been completed and claimed, it is likely that the supplier has incurred a cost of progress to date that they would seek recovery in the event of a termination such as the training and resource

building efforts in the communities. Therefore, NextBridge is not in a position to comprehensively estimate termination or all-inclusive wind-up costs at this time

VECC INTERROGATORY #2

INTERROGATORY

Reference: Exhibit I.B.NextBridge.Staff.16

Pre-amble: For the purpose of comparison VECC has asked the same question of Hydro One LSL

a) Please update Table 3 below to show the current estimates of construction costs net of all development costs and in the following format:

	Original Application Estimate	**Current Estimate**	**ACCE Estimate Level**	**Expenditures as at July 31, 2018**
Construction				
Site Clearing Costs				
Site Remediation Costs				
Materials & Equipment				
Project Management				
Construction Management, Engineering, Design & Procurement				
Real Estate & Property Acquisition costs				
First Nations & Métis Consultations				
First Nations & Metis Participation				
Other Consultations				
Interconnection & Other Studies (Describe)				
Environmental Approval				
Regulatory Costs				
Contingency				
Interest During Construction("IDC")				
Overheads and other allocated costs (describe)				
Other Costs (Describe)				
Total Construction Cost				

RESPONSE

The NextBridge estimate is an ACCE Class 2 estimate as a whole. Class 2 is not established by individual cost category but rather for the overall estimate.

	Original Application Estimate (in 000s)	**Current Estimate (in 000s)**	**ACCE Estimate Level**	**Expenditures as at July 31, 2018 (in 000s)**
Construction	356,548	356,548	Class 2	11,555
Site Clearing Costs	107,463	107,463		0
Site Remediation Costs	13,899	13,899		0
Materials & Equipment	89,408	89,408		0
Project Management	4,901	4,901		1,490
Construction Management, Engineering, Design & Procurement	19,342	19,342		1,537
Real Estate & Property Acquisition costs	23,831	23,831		2,540
First Nations & Métis Consultations	13,211	13,211		1,560
First Nations & Métis Participation	7,000	7,000		1,386
Other Consultations	2,530	2,530		251
Interconnection & Other Studies (Describe)				4
Environmental Approval	13,031	13,031		4,619
Regulatory Costs	5,405	5,405		1,519
Contingency	49,399	49,399		0
Interest During Construction("IDC")	31,003	31,003		569
Overheads and other allocated costs (describe)				
Other Costs (Describe)				
Total Construction Cost	736,971	736,971	Class 2	27,030

JT2.5 - Pukaskwa National Park ("PNP") – Park Canada Approval Schedule
UPDATES TO JT2.5 IN BOLD

Task	**Projected Timeline**	**Comment**
Project Overview - Potential Infrastructure Alteration and Renewal	October 2017	***Complete***
Draft Environmental Evaluations Report Updated	January-2018	***Complete. Draft Environmental Evaluation Report that forms part of the License Agreement was updated and sent back to PNP. Comments have been received from PNP and revisions are underway with an expected completion date of October 31, 2018.***
Construction Execution Plan	February-2018	***Complete. Construction Execution Plan, as requested by PNP, provided to PNP.***
PNP review of draft Table of Contents of Environmental Assessment Report	May-2018	***Complete. PNP to provide input into the draft Table of Contents of the Environmental Assessment Report to ensure compliance with CEAA requirements.***
Provide PNP with draft environmental study work plan reports for comment	May-2018	***Complete***
Provide PNP with final Environmental study work plan reports	May-2018	***Complete***
Research and Collection Permit Application for Caribou Study	Mar-2018	***Complete***
Caribou Study	Mar-2018	***Complete***
Research and Collection Permit Applications	May-2018	***Complete***

Other Environmental Studies	May - September	***Studies ongoing until October 2018; some remaining studies to be completed in Spring 2019***
Submit Draft ToR to PNP for comment	June-2018	***PNP requested separate Detailed Impact Assessment (DIA); DIA activity now replaces EA; ToR to be finalized Oct 31, 2018***
Provide PNP with draft Study Reports for comment	October-2018	
Provide PNP with final Study Reports	November-2018	
Provide PNP with draft ***DIA*** for comment	October - December 2018	***Provide PNP with Draft DIA – January, 2019****
Provide PNP with Final ***DIA***	December-2018	***Provide PNP with Final DIA – February 2019***
DIA Approval	July-2019	***August 15, 2019****
Finalize Licence Renewal	July-2019	***August 15, 2019***
PNP Approval	July-2019	***August 15, 2019****

*Assumes NextBridge EA Approval end of December 2018, Hydro One Declaration Order Approval August 15, 2019. It is expected that Parks Canada will not approved the DIA until EA approval by MECP is provided.