

EB-2020-0150

Upper Canada Transmission, Inc. (operating as NextBridge Infrastructure LP)

**Application for approval of electricity transmission
revenue requirements for the period from
April 1, 2022 to December 31, 2031**

AMPCO Compendium

March 29, 2021

PHASE SHIFT COSTS

1. A total of \$5.3 million in costs (as shown in Table 1 below) were also deemed eligible for consideration as construction costs in the Decision and Order dated December 20, 2018 (EB-2017-0182). These costs were incurred during the development period and are needed to construct the East-West Tie line. They were spent during the development period because these activities take longer periods of time and by working on them as early as possible it mitigated risk to the project schedule. These costs are included in opening rate base balance.

Table 1. Summary of Phase Shift Costs

Phase Shift Costs	\$ Millions
EA Review Participation	\$0.46
Land Optioning Negotiations	\$1.44
Land Acquisition Negotiations	\$0.02
Economic Participation	\$3.41
Total	\$5.33

Phase Shift: EA Review Participation

2. These costs were required for NextBridge to participate in the EA review process that was scheduled to begin in advance of the LTC filing. A draft EA Report was prepared and submitted in December 2016, with a comment period from December 2016 to March 2017. NextBridge received approximately 1,000 comments on the draft EA Report. The comments were reviewed and responded to by NextBridge, with a response to each comment set forth in Appendix 1-III in the final EA Report. The final EA Report was updated in response to many of the comments and these changes are noted in the responses provided in Appendix 1-III and in the final EA Report change log. Project

FORECAST CONSTRUCTION COSTS

1. A total of \$737.1 million in construction costs is forecasted to complete the East-West Tie line, of which 57% have already been incurred as of October 31, 2020. The cost categories in table below follow the format and order used in NextBridge's quarterly reports to the OEB. As evidenced in Exhibit B and in the CRA report attached at Exhibit B, Tab 1, Schedule 7, Attachment 1, NextBridge's construction costs are in line when benchmarked with other constructed transmission lines. The table below shows the total construction costs per category, for the estimated completion of the line assuming an in-service date of March 31, 2022.

	Engineering & Construction	614.3
1	Engineering, Design and Procurement	8.5
2	Materials and Equipment	66.9
8	Site Clearing, Access	140.6
9	Construction	398.2
	Environmental & Remediation Activities	31.6
3	Environmental and Regulatory Approvals	19.1
10	Site Remediation	12.5
	Indigenous Activities	23.7
5	Indigenous Economic Participation	9.7
6	Indigenous Consultation	13.9
4	Land Rights (excludes Aboriginal)	23.8
7	Other Consultation	2.5
11	Contingency	n/a
12	Regulatory	5.4
13	East-West Tie Project Management	4.9
	Total Project Spend	706.1
14	Interest During Construction (IDC)	31.0
	Total Construction Cost	737.1

Table 3. Overall Capital Plan (\$ Millions)

Capital Plan (\$ Millions)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
General Plant - Office & Vehicles	-	0.16	0.11	0.01	0.15	-	-	0.20	-	-
Storage Yard	-	-	-	0.30	-	-	-	-	-	-
Reliability - Bird Deterrents, ROW Cameras	0.23	0.43	0.63	0.33	0.13	0.20	0.40	0.60	0.30	0.10
Total	0.23	0.59	0.74	0.64	0.28	0.20	0.40	0.80	0.30	0.10

28. This plan provides for increased reliability by taking advantage of new technology and equipment to reduce potential outages and gain additional situational awareness of real-time conditions at various critical crossings in the line. The capital expenditures for the project to be spent over the IR Term can be divided into three areas: general plant; storage yard; and reliability. This is further explained in Exhibit B.

E. Rate Base

29. The requested rate base for the Test Year (April 1, 2022 to March 31, 2023) is presented in Table 4 below, and further details on the rate base are presented in Exhibit C, Tab 1, Schedule 1.

AMPCO INTERROGATORY #4

INTERROGATORY

Reference: Ex A T3 S1 P3

The evidence indicates NextBridge has identified capital projects in accordance with its 10-year capital plan in its TSP following the March 31, 2022 in-service date but is not requesting these capital expenditures be included in a deferral account or added to the revenue requirement during the currently requested IR Term.

Please provide NextBridge's proposal regarding recovery of these costs beyond the requested IR Term.

RESPONSE

The depreciated book value of the capital expenditures would be added to rate base at NextBridge's next rebasing of revenue requirement, at the end of the IR term.

SUMMARY OF OM&A EXPENDITURES

1. The proposed OM&A expenses represent the work required to meet public and personnel safety objectives, maintain transmission reliability, and to comply with regulatory and environmental requirements. Key components of OM&A requirements include:
 - Operations & Maintenance Services;
 - Regulatory (such as annual/periodic filings, OEB/IESO proceedings monitoring, general support);
 - Compliance & Administration (such as land filings/matters, audit/tax filing fees, hourly personnel support charges, stakeholder relations, insurance);
 - Indigenous Participation;
 - Indigenous Compliance (such as compliance with conditions of Species at Risk permits); and
 - Property Taxes & Land Rights Payments.

2. Table 1 below presents the required funding for OM&A in the Test Year (April 1, 2022 to March 31, 2023) for each of these key components. Overall, NextBridge's OM&A spending on a per asset basis is low in comparison to other transmitters in Ontario, as detailed in the CRA benchmarking study attached as Exhibit B, Tab 1, Schedule 7, Attachment 1. This relates primarily to the characteristics of the assets that it owns. NextBridge's East-West Tie line is a 230 kV double-circuit transmission line that requires periodic vegetation management expenses and operating services costs, but otherwise very little additional operation given that NextBridge owns no station assets. Additionally, this type of asset is extremely reliable and has a low probability of fault or other incident requiring corrective maintenance or repair expenditures. As explained in Exhibit 3 (Rate Base), NextBridge does not capitalize overheads and therefore there is zero OM&A expense for capitalized overheads.

Table 1. NextBridge OM&A Expense (\$ Millions)

Cost Category	2022
Operations & Maintenance	1.27
Regulatory	0.07
Compliance & Administration	1.67
Indigenous Participation	0.89
Indigenous Compliance	0.44
Property Taxes & Rights Payments	0.60
Total OM&A	4.94

More details on the future spending on each of these components are included below.

STAFF INTERROGATORY #54

INTERROGATORY

In its response to an undertaking provided at the May 7, 2018 technical conference, NextBridge provided the following breakdown of its annual OM&A charges forecast:

	In CADs
Operations & Maintenance	\$1,272,147
Regulatory	\$205,000
Compliance, including administration	\$3,248,463
Total	\$4,725,610

Questions:

- a) Please explain what costs are included in the Operations & Maintenance category. To the extent that there are any costs included in this category beyond overhead line maintenance and vegetation maintenance, please explain what those costs are.
- b) Please provide a detailed explanation as to how NextBridge calculated the approximately \$1.27 million costs for Operations & Maintenance.
- c) Please explain how much of this is attributable to overhead line maintenance, vegetation maintenance and other costs.
- d) Please explain what costs are included in the Regulatory category.
- e) Please provide a detailed explanation as to how NextBridge calculated the \$205,000 costs for the Regulatory category.
- f) Please explain what costs are included in the Compliance category and the amounts attributable to each cost sub-category.
- g) Please provide a detailed explanation as to how NextBridge calculated the approximately \$3.25 million costs for the Compliance category.
- h) Please explain the difference between the Regulatory and Compliance categories.
- i) In its Lake Superior Link application, Hydro One forecasts OM&A costs of approximately \$1.5 million.
 - i. Has NextBridge reviewed its proposed OM&A costs to see whether it could find further efficiencies to reduce its proposed OM&A costs? If so, please describe what steps NextBridge has taken and whether NextBridge is able to lower its forecasted OM&A costs.

RESPONSE

- a) There are four major components in the Operations & Maintenance category that total the approximate \$1.27 million. These components include:
- a. Third party conducting vegetation inspections and maintenance - \$463k
 - b. Third party conducting overhead transmission line inspections and maintenance - \$365k
 - c. NextBridge personnel who will supervise contractors and conduct the vegetation and overhead transmission line maintenance activities – \$390k
 - i. Payroll - \$260k
 - ii. Office - \$44k
 - iii. Vehicles - \$72k
 - iv. Tools, communications and miscellaneous - \$14k
 - d. System Operations - \$54k: Personnel who will monitor the performance of the overhead transmission line and coordinate outages with HONI and IESO.
 - i. Energy Management System and System Operations personnel for monitoring - \$14k
 - ii. Training of personnel and technical support for monitoring systems - \$40k
- b) NextBridge calculated the approximately \$1.27 million costs for Operations & Maintenance as follows:
- a. NextBridge estimated the vegetation and overhead transmission line maintenance costs based on line mileage and terrain. These estimates included annual aerial or ground inspections and associated follow-up activities identified through the inspections.
 - b. NextBridge estimated the costs associated with establishing a local presence comprised of two fulltime personnel, office, vehicles, communications, and miscellaneous tools and supplies. The personnel would have direct management of contract personnel required to inspect and maintain the ROW vegetation and the overhead transmission line.
 - c. NextBridge estimated the costs associated with monitoring the overhead transmission line remotely through an Inter-Control Center Communications link and coordinating any outages required between NextBridge and HONI.
- c) Please see NextBridge's response to part a) of this interrogatory.
- d) Costs included in the Regulatory category of the OM&A budget relate to anticipated annual activity in support of the EWT Line Project. The following table sets forth the expected annual regulatory activities and the associated estimated costs.

Annual Activity	Estimated Time	Estimated Cost (Rounded to nearest thousand)
Annual Filings (licence fees/renewal, RRR filings, affiliate declaration)	60 hrs	\$15,000
Periodic Filings (quarterly deferral account balances)	100 hrs	\$23,000
Limited OEB/IESO activity monitoring	100 hrs	\$23,000
General support	300 hrs	\$69,000
External counsel support	100 hrs	\$75,000
Total:		\$205,000

General support represents approximately 15 hrs/month for an in-house lawyer, and approximately 10 hours/month for one regulatory staff (non-lawyer). External counsel support represents approximately 8 hours/month of external counsel time.

- e) Please see NextBridge's response to part d) of this interrogatory.
- f) Please see NextBridge's response to part g) of this interrogatory.
- g) The annual budget estimate for Compliance, updated for further efficiencies, is \$2.45 million as outlined below:

Annual Activity	Estimated Cost (Rounded to nearest thousand)
Updating Line List	\$7,000
Annual filings for Land Matters	\$2,000
Legal counsel for Land Matters	\$7,000
Audit/Tax Filing Fees	\$61,000
Office Charges	\$115,000
Internal/External Labour & Expenses	\$1,003,000
Stakeholder Relations Program	\$254,000
Indigenous costs (land, participation)	\$1,000,000
Total	\$2,449,000

Updating Line Lists costs reflect the estimated effort associated with the refresh of the landowner line list to capture any changes in land ownership, address changes or encumbrances on title.

Annual filings for Land Matters are estimated labour costs associated with reporting for the Ontario Energy Board and support activities associated with compliance undertakings by the various Ministries to support NextBridge Environment work.

Legal counsel for Land Matters are estimates of the legal support required for land matters.

Audit/Tax Filing Fees are based on what is currently being incurred during the development period/post LTC submission period.

Office Charges reflect an estimate of the office space requirements for the post in-service date.

Internal/External Labour & Expenses reflect the back office requirements, i.e. support staff and work requirements necessary to administer a utility in Ontario. This forecast is based on the hours and charge-out rates that are currently incurred in the development period/post LTC submission period as a basis to estimate post in-service date expenses.

Stakeholder Relations Program costs such as labour and newsletter/mailings are based on historical spending on the project and adjusted to reflect the anticipated effort for the post in-service period.

Indigenous costs (land, participation) are costs based on already negotiated permits to cross reserves.

- h) Costs included in the Compliance category of the OM&A budget relate to anticipated annual activity in support of ongoing operation of the EWT Line Project for land, legal (outside of regulatory), project management, stakeholder relations, and indigenous expenses. Costs included in the Regulatory category of the OM&A budget relate to anticipated annual activity in support of ongoing operation of the EWT Line Project for annual filings, periodic filings and regulatory legal support.
- i) NextBridge has reviewed its proposed OM&A costs and identified further efficiencies that reduce its proposed OM&A. These efficiencies are reflected in NextBridge's response to part g) of this interrogatory and are primarily the result of a reduction to certain environmental program expenses, office costs and in the Labour & Expenses forecast.

3. Construction Cost Update

A. Project Cost Update Summary

Construction costs for the EWT Project are forecasted to be on budget when compared to the budget in the LTC application. While increases have been identified in certain budget areas, the use of the previously-budgeted value for Contingency allows for sufficient allocation of funds to address areas where budget increases were identified.

After the issuance of the LTC, NextBridge undertook a re-budgeting effort based on the in-service date change from Q4 2020 to Q4 2021. The re-budgeting effort incorporated the timing of Indigenous and stakeholder consultation, environmental studies, permits, approvals, and authorizations to support the new in-service date.

As a result of the re-budgeting effort, NextBridge identified that many of the cost breakdowns contained within the originally filed LTC application budget from July 31, 2017, could be more efficiently tracked during the construction phase of the Project. For example, Indigenous consultation and participation activities in communities were combined to better reflect the nature of engagement on a community-by-community basis, instead of by activity. The combination of categories is expected to provide increased clarity on the tracking of the forecasted costs.

B. Project Cost Update Table

Cost Categories For Nextbridge's Construction Costs Reporting		Actuals Spent		Budget			Forecast Budget Variance		
		A Spent This Reporting Period \$	B Total Spent To Date \$	C Budget Per Ltc Application \$	D=C-B Budget Remaining	E=D/C*100 Budget Remaining %	F Forecast Budget Change \$	G Forecast Budget Change %	Reasons For Change
Engineering & Construction		22,634,270	42,463,456	572,761,388	530,297,932	93%	614,267,289	7%	Revised based on in-service date
1	Engineering, Design and Procurement			19,342,245					
2	Materials and Equipment			89,408,231					
8	Site Clearing, Access			107,463,339					
9	Construction			356,547,573					
Environmental & Remediation Activities		149,233	6,175,783	26,929,260	20,753,477	77%	31,277,866	16%	Revised based on in-service date
3	Environmental and Regulatory Approvals			13,030,561					
10	Site Remediation			13,898,699					
Indigenous Activities		4,113,085	7,739,100	20,211,000	12,471,900	62%	23,653,555	17%	Revised based on in-service date
5	Indigenous Economic Participation			7,000,000					
6	Indigenous Consultation			13,211,000					
4	Land Rights (excludes Aboriginal)	2,051,478	5,295,676	23,830,512	18,534,836	78%	23,830,512	0%	Allocation of Contingency
7	Other Consultation	98,087	398,337	2,530,194	2,131,857	84%	2,530,194	0%	
11	Contingency	-	-	49,399,445	49,399,445	100%	102,382	-100%	
12	Regulatory	16,922	2,307,694	5,405,078	3,097,384	57%	5,405,078	0%	
13	EWT Management	328,575	2,947,504	4,900,644	1,953,140	40%	4,900,644	0%	
Total Project Spend		29,391,650	67,327,550	705,967,521	638,639,971	90%	705,967,521	0%	
14	Interest During Construction (IDC)¹	715,917	3,729,748	31,003,000	27,273,252	88%	31,003,000	0%	
Total Construction Costs^{2 3}		30,107,568	71,057,298	736,970,521	665,913,223	90%	736,970,521	0%	

¹ IDC has not been re-forecasted as interest rates will vary based on the OEB prescribed rates

² On the record (EB-2017-0182)

³ Development Costs eligible for consideration as construction costs of \$5.3 MM not reflected in column B. (OEB Decision, December 20, 2018)

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Engineering & Construction		32,561,784	75,025,240	572,761,388	497,736,148	87%	41,505,901	7%	614,267,289	Revised based on in-service date
1	Engineering, Design and Procurement	1,184,829	5,190,984	19,342,245	14,151,261	73%				
2	Materials and Equipment	4,367,708	4,367,708	89,408,231	85,040,523	95%				
8	Site Clearing, Access	20,159,761	22,279,561	107,463,339	85,183,778	79%				
9	Construction	6,849,687	43,186,987	356,547,573	313,360,586	88%				
Environmental & Remediation Activities		2,446,630	8,622,413	26,929,260	18,306,847	68%	4,348,606	16%	31,277,866	Revised based on in-service date
3	Environmental and Regulatory Approvals	2,446,630	8,622,413	13,030,561	4,408,148	34%				
10	Site Remediation	-	-	13,898,699	13,898,699	100%				
Indigenous Activities		1,002,050	8,741,151	20,211,000	11,469,849	57%	3,442,555	17%	23,653,555	Revised based on in-service date
5	Indigenous Economic Participation	529,235	4,275,107	7,000,000	2,724,893	39%				
6	Indigenous Consultation	472,815	4,466,044	13,211,000	8,744,956	66%				
4	Land Rights (excludes Aboriginal)	3,359,701	8,655,376	23,830,512	15,175,136	64%	-	0%	23,830,512	
7	Other Consultation	58,617	456,954	2,530,194	2,073,240	82%	-	0%	2,530,194	
11	Contingency	-	-	49,399,445	49,399,445	100%	(49,297,063)	-100%	102,382	Allocation of Contingency
12	Regulatory	407,328	2,715,022	5,405,078	2,690,056	50%	-	0%	5,405,078	
13	EWT Management	312,449	3,259,953	4,900,644	1,640,691	33%	-	0%	4,900,644	
Total Project Spend		40,148,559	107,476,110	705,967,521	598,491,412	85%	-	0%	705,967,521	
14	Interest During Construction (IDC) ¹	868,906	4,598,654	31,003,000	26,404,346	85%	-	0%	31,003,000	
Total Construction Costs^{2 3}		41,017,466	112,074,763	736,970,521	624,895,758	85%	-	0%	736,970,521	

¹ IDC has not been reforecasted as interest rates will vary based on the OEB prescribed rates

² On the record (EB-2017-0182)

³ Development Costs eligible for consideration as construction costs of \$5.3 MM not reflected in column B. (OEB Decision, December 20, 2018)

3. Construction Cost Update

A. Project Cost Update Summary

Construction costs for the EWT Project are forecasted to be on budget when compared to the LTC application budget. While increases have been identified in certain budget areas, the use of the previously-budgeted value for contingency allows for sufficient allocation of funds to address areas where budget increases were identified. However, at this point in time the costs related to the COVID-19 Global Pandemic are unknown.

B. Project Cost Update Table

Cost Categories for NextBridge's Construction Costs Reporting		Actuals Spent		Budget			Forecast Budget Variance		
		A Spent This Reporting Period \$	B Total Spent To Date \$	C Budget Per LTC Application \$	D=C-B Budget Remaining	E=D/C*100 Budget Remaining %	F Forecast Budget Change \$	G Forecast Budget Change %	H Revised Total Budget
Engineering & Construction		95,084,019	305,996,709	572,761,388	266,764,679	47%	41,505,901	7%	614,267,289
1	Engineering, Design and Procurement	843,824	6,718,158	19,342,245	12,624,087	65%	(10,808,892)	-56%	8,533,353
2	Materials and Equipment	8,756,688	42,361,934	89,408,231	47,046,297	53%	(22,538,717)	-25%	66,869,514
8	Site Clearing, Access	28,339,917	83,664,617	107,463,339	23,798,722	22%	33,169,524	31%	140,632,863
9	Construction	57,143,589	173,252,000	356,547,573	183,295,573	51%	41,683,986	12%	398,231,559
Environmental & Remediation Activities		1,884,778	16,318,987	26,929,260	10,610,273	39%	4,620,902	17%	31,550,162
3	Environmental and Regulatory Approvals	1,302,033	15,702,526	13,030,561	(2,671,965)	-21%	6,066,463	47%	19,097,024
10	Site Remediation	582,745	616,461	13,898,699	13,282,238	96%	(1,445,561)	-10%	12,453,138
Indigenous Activities		2,350,239	15,606,953	20,211,000	4,604,047	23%	3,442,555	17%	23,653,555
5	Indigenous Economic Participation	935,148	6,667,201	7,000,000	332,799	5%	2,730,452	39%	9,730,452
6	Indigenous Consultation	1,415,091	8,939,752	13,211,000	4,271,248	32%	712,103	5%	13,923,103
4	Land Rights (excludes Aboriginal)	1,128,845	16,778,207	23,830,512	7,052,305	30%	0	0%	23,830,512
7	Other Consultation	114,639	1,136,677	2,530,194	1,393,517	55%	0	0%	2,530,194
11	Contingency	-	-	49,399,445	49,399,445	100%	(49,399,445)	-100%	-
12	Regulatory	262,697	3,875,667	5,405,078	1,529,411	28%	(0)	0%	5,405,078
13	EWT Management	248,836	4,081,786	4,900,644	818,858	17%	(0)	0%	4,900,644
Total Project Spend		101,074,053	363,794,985	705,967,521	342,172,536	48%	169,913	0%	706,137,434
14	Interest During Construction (IDC) ¹	2,062,290	10,832,030	31,003,000	20,170,970	65%	-	0%	31,003,000
Total Construction Costs^{2,3,4}		103,136,344	374,627,015	736,970,521	362,343,506	49%	169,913	0%	737,140,434

1 IDC has not been reforecasted as interest rates will vary based on the OEB prescribed rates

2 On the record (EB-2017-0182)

3 Development Costs eligible for consideration as construction costs of \$5.3 MM not reflected in column B. (OEB Decision, December 20, 2018)

4 Construction related costs due to COVID-19 are not included in the table above; as of Q3 2020, less than \$100 CAD have been incurred

C. Project Cost Update Summary by Department

Engineering & Construction (E&C)

- The Project cost forecast for this department has not changed since the last reporting period.
- However, there was a cost shift from category #8 Site Clearing, Access to #9 Construction to reflect updated work scope.
- The recently revised construction schedule allowed for a reduction in funds allocated to bridges (in category #8 Site Clearing, Access), which was used to offset a scope refinement in #9 Construction.

Environment & Remediation Activities

- The Project cost forecast for this department has slightly increased since the last reporting period, and was mostly funded by the remaining contingency.
 - Category #3 Environmental and Regulatory Approvals is due to incremental stage 2 archaeology required at White Lake.
 - Category #10 Site Remediation has increased as the requirements of the OBP have been finalized, as well as the timing of the activities that will be part of the construction stage.

Indigenous Activities

- The Project cost forecast for this department has not changed since the last reporting period.

Land Rights (Excludes Aboriginal Engagement)

- The Project cost forecast for this department has not changed since the last reporting period.

Other Consultation

- The Project cost forecast for this department has not changed since the last reporting period.

Regulatory

- The Project cost forecast for this department has not changed since the last reporting period.

EWT Management

- The Project cost forecast for this department has not changed since the last reporting period.

3. Construction Cost Update

A. Project Cost Update Summary

Construction costs for the EWT Project are forecasted to be on budget when compared to the LTC application budget. While increases have been identified in certain budget areas, the use of the previously-budgeted value for contingency allows for sufficient allocation of funds to address areas where budget increases were identified. However, at this point in time the total costs related to the COVID-19 Global Pandemic are unknown.

B. Project Cost Update Table

Cost Categories for NextBridge's Construction Costs Reporting		Actuals Spent		Budget			Forecast Budget Variance		
		A Spent This Reporting Period \$	B Total Spent To Date \$	C Budget Per LTC Application \$	D=C-B Budget Remaining	E=D/C*100 Budget Remaining %	F Forecast Budget Change \$	G Forecast Budget Change %	H Revised Total Budget
Engineering & Construction		89,396,704	395,393,413	572,761,388	177,367,975	31%	41,505,901	7%	614,267,289
1	Engineering, Design and Procurement	566,597	7,284,755	19,342,245	12,057,490	62%	(10,808,892)	-56%	8,533,353
2	Materials and Equipment	15,610,865	57,972,799	89,408,231	31,435,432	35%	(22,538,717)	-25%	66,869,514
8	Site Clearing, Access	32,542,786	116,207,404	107,463,339	(8,744,065)	-8%	33,169,524	31%	140,632,863
9	Construction	40,676,455	213,928,455	356,547,573	142,619,118	40%	41,683,986	12%	398,231,559
Environmental & Remediation Activities		887,757	17,206,744	26,929,260	9,722,516	36%	4,620,902	17%	31,550,162
3	Environmental and Regulatory Approvals	849,566	16,552,092	13,030,561	(3,521,531)	-27%	6,066,463	47%	19,097,024
10	Site Remediation	38,191	654,652	13,898,699	13,244,047	95%	(1,445,561)	-10%	12,453,138
Indigenous Activities		1,942,368	17,549,321	20,211,000	2,661,679	13%	3,442,555	17%	23,653,555
5	Indigenous Economic Participation	961,902	7,629,102	7,000,000	(629,102)	-9%	2,730,452	39%	9,730,452
6	Indigenous Consultation	980,466	9,920,218	13,211,000	3,290,782	25%	712,103	5%	13,923,103
4	Land Rights (excludes Aboriginal)	1,153,176	17,931,382	23,830,512	5,899,130	25%	0	0%	23,830,512
7	Other Consultation	75,403	1,212,080	2,530,194	1,318,114	52%	0	0%	2,530,194
11	Contingency	-	-	49,399,445	49,399,445	100%	(49,399,445)	-100%	-
12	Regulatory	229,820	4,105,487	5,405,078	1,299,591	24%	(0)	0%	5,405,078
13	EWT Management	156,602	4,238,388	4,900,644	662,256	14%	(0)	0%	4,900,644
Total Project Spend		93,841,829	457,636,814	705,967,521	248,330,707	35%	169,913	0%	706,137,434
14	Interest During Construction (IDC) ¹	2,218,412	13,050,442	31,003,000	17,952,558	58%	-	0%	31,003,000
Total Construction Costs^{2,3,4}		96,060,241	470,687,256	736,970,521	266,283,265	36%	169,913	0%	737,140,434

1 IDC has not been reforecasted as interest rates will vary based on the OEB prescribed rates

2 On the record (EB-2017-0182)

3 Development Costs eligible for consideration as construction costs of \$5.3 MM not reflected in column B. (OEB Decision, December 20, 2018)

4 Construction related costs due to COVID-19 are not included in the table above; as of Q4 2020, \$0.4M has been incurred

3. From the time of its selection as the designated transmitter to develop the EWT Line Project in August of 2013, NextBridge has been working to advance its proposal for the construction of the project. As a result of this effort, NextBridge's EWT Line Project is an extensively studied, carefully planned, well defined, and highly advanced project.
4. More specifically, as was explained during the oral testimony of the NextBridge witnesses, the EWT Line Project is a "shovel-ready project".³ Engineering design has been completed to a level of greater than 90 per cent;⁴ more than 250 people from Indigenous communities have been trained and are ready to work;⁵ NextBridge has received confirmation that the review of its Environmental Assessment ("EA") by the Ministry of Environment, Conservation and Parks ("MECP") is complete;⁶ NextBridge's extensive consultation with local municipalities and communities over the past four years has given it a unique and comprehensive understanding of the needs of the region;⁷ and NextBridge's proposal has the support of numerous area municipalities and First Nation and Métis communities.⁸
5. The extraordinarily well-developed nature of NextBridge's proposal provides the Board with a high level of certainty in applying the statutory criteria for an LTC application. That is to say, NextBridge's highly advanced project provides the Board with a strong evidentiary foundation to support cost certainty and demonstrate NextBridge's sustained focus on the reliability and quality of electricity service in Ontario.
6. In their oral testimony, the NextBridge witnesses elaborated on the extent to which the highly advanced NextBridge proposal supports cost certainty. As explained in this testimony, NextBridge's cost estimate reflects a mature AACE International (formerly the Association for the Advancement of Cost Engineering) Class 2 estimate within a narrow accuracy band of plus or minus 10% and, further, NextBridge's estimate is on the cusp of

³ Hearing Transcript Volume 4, pages 166-172.

⁴ Hearing Transcript Volume 4, page 168.

⁵ Hearing Transcript Volume 4, page 167.

⁶ Hearing Transcript Volume 4, pages 166-167; Hearing Transcript Volume 7, pages 98-99.

⁷ Hearing Transcript Volume 4, pages 167-168.

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

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

- a. NextBridge's construction cost estimate is market-based, in that NextBridge has a fully executed Engineering Procurement and Construction ("EPC") contract that resulted from a formal competitive bidding process. The form of EPC contract executed reduces schedule and cost risks and impacts;¹⁰
- b. NextBridge has already issued Requests for Proposals ("RFPs") to tower vendors and will issue additional RFPs for the remaining materials to global sources and these competitively-sourced procurement activities can be executed shortly after receiving LTC approval;¹¹
- c. NextBridge has recently reviewed costs of materials other than the towers and this review has confirmed that costs remain well within the expectations reflected in NextBridge's cost estimate;¹²
- d. NextBridge and its EPC contractor, Valard Construction ("Valard"), have a complete and well-thought-out access plan that minimizes environmental impacts and incorporates an extensive field reconnaissance program that has been undertaken by NextBridge;¹³
- e. NextBridge's proposal is based on a family of ten towers that are fully designed, independently verified, load tested and ready for fabrication;¹⁴
- f. As a result of spending a considerable amount of time consulting with First Nations and Métis communities, NextBridge has built strong and trusting relationships and has reached economic participation agreements, the costs of which are reflected in NextBridge's Indigenous participation costs;¹⁵
- g. NextBridge recently completed its 2018 field program for wildlife surveys and archaeological assessments and aquatic surveys are expected to be completed in October 2018;¹⁶

⁹ Hearing Transcript Volume 4, pages 168-169.

¹⁰ Hearing Transcript Volume 4, page 169.

¹¹ *Ibid.*

¹² *Ibid.*

¹³ Hearing Transcript Volume 6, pages 22-23: "In the summer of this year and through the fall, we have undertaken a giant reconnaissance program and we have been out on most of the right of way. So we have gained a lot more certainty about what was there over the summer." See also, for example, Hearing Transcript Volume 5, pages 36 and 42.

¹⁴ Hearing Transcript Volume 4, page 169.

¹⁵ Hearing Transcript Volume 4, pages 169-170.

¹⁶ Hearing Transcript Volume 4, page 170.



Ontario Energy Board Commission de l'énergie de l'Ontario

DECISION AND ORDER

EB-2017-0182

UPPER CANADA TRANSMISSION INC. (ON BEHALF OF NEXTBRIDGE INFRASTRUCTURE)

Application for leave to construct an electricity transmission line between
Thunder Bay and Wawa, Ontario

EB-2017-0194

HYDRO ONE NETWORKS INC.

Application to upgrade existing transmission station facilities in the Districts of
Thunder Bay and Algoma, Ontario

EB-2017-0364

HYDRO ONE NETWORKS INC.

Application for leave to construct an electricity transmission line between
Thunder Bay and Wawa, Ontario

BEFORE: Christine Long
Presiding Member

Allison Duff
Member

Michael Janigan
Member

February 11, 2019

3 DECISION ON THE TRANSMISSION LINE APPLICATIONS

Under section 96(1) of the Act, leave to construct is granted if the OEB is of the opinion that the project is in the public interest. In the circumstances of this case, pursuant to section 96(2) of the Act only the interests of consumers with respect to prices and the reliability and quality of electricity service shall be considered by the OEB in assessing whether a project is in the public interest.¹³ As noted earlier, given the Priority Project OIC, the OEB must accept that the transmission line between Wawa and Thunder Bay is needed.

As noted above, in the December Decision, the OEB found that the NextBridge-EWT Project is acceptable from a reliability and quality of electricity service perspective. As a result, the outstanding issue is the interests of consumers with respect to prices. The OEB's concerns in this regard prompted it to allow for the submission of a NTE price by each of the proponents, in order to mitigate ratepayer risk.

Given the Directive, mitigation of ratepayer risk through a comparative analysis of two competing applications based on costs is no longer an option.

The OEB remains concerned with the construction costs put forward by NextBridge. At designation, NextBridge's cost estimate for the construction of the transmission line was \$409 million. By the time it filed its leave to construct application, NextBridge's construction estimate had increased to \$737 million. NextBridge did not provide an updated construction cost estimate since filing its application nor did NextBridge submit a construction cost estimate associated with a 2021 in-service date. During the oral hearing, NextBridge stated that if it did not have to accelerate to ensure a December 2020 in-service date, it could actually bring the construction costs in lower.¹⁴ This Decision and Order should not be taken as accepting the level of costs of the NextBridge-EWT Project for the purposes of recovery from ratepayers. NextBridge will have to demonstrate the prudence of its costs when seeking to recover those costs in the future.

¹³ Section 96(2) of the Act also includes the promotion of the use of renewable energy sources as an issue to be considered, where applicable. As noted in the December Decision, the promotion of the use of renewable energy sources is not relevant in this case.

¹⁴ EB-2017-0182/EB-2017-0194/EB-2017-0364 Oral Hearing Transcript, Volume 7, October 12, 2018, p. 50, lines 4-9.

1 MS. TIDMARSH: I will just confer with my panel.

2 Thank you.

3 [Witness panel confers.]

4 MS. TIDMARSH: So if NextBridge did not have to
5 accelerate to ensure that it was going to meet a December
6 2020 date, and a decision was made and communicated to
7 NextBridge by the Board that the 2021 date was more
8 appropriate, we believe that we could actually bring the
9 costs in lower than what we have.

10 So we have some costs in there that are -- you can see
11 in IR 49 there's four caveats about doubling up on
12 management crews and that type of thing.

13 So we think that we will still be within the plus or
14 minus 10 percent band, but we could be tighter on that.

15 MS. DUFF: Does that change your -- what is it called?
16 -- the AACE Class 2? I mean, does that change you being in
17 that class?

18 MS. TIDMARSH: No. So the AACE Class 2 is about the
19 scope and how much design and work that's done on the
20 project. So the scope is still the same; the scope has
21 always been same. And so it doesn't change that kind of
22 estimate, but it does with the work that we would be able
23 to do -- and then -- but I will say it depends on what
24 timing. So if it is just four months in, so if it is April
25 2021, it would be different than December 2021.

26 So we would actually have to have those conversations,
27 but there would be less cost for compression in our
28 schedule.



Ontario Energy Board Commission de l'énergie de l'Ontario

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Thunder Bay and Wawa, Ontario

BEFORE: Christine Long
Presiding Member

Allison Duff
Member

Michael Janigan
Member

December 20, 2018

employees and contracting services to maintain its line which may be less than optimal from a reliability perspective.

The OEB's findings are in Section 7 of this Chapter.

5 INTERESTS OF CONSUMERS WITH RESPECT TO PRICES – TRANSMISSION LINE APPLICATIONS

In adjudicating Section 92 applications, the OEB examines costs in order to consider the interests of consumers with respect to prices. Generally, OEB approved construction costs are recovered through rates charged to customers – the prices charged to customers.

5.1 Construction Costs for the Line

5.1.1 NextBridge's Construction Costs

NextBridge indicated that its forecast construction costs are \$737 M plus or minus 10% (i.e. \$810.7 M at the upper end and \$663.3 M at the lower end of the cost range). The \$737 M does not include NextBridge's development costs of \$40.2 M for which NextBridge sought full recovery, as discussed in Chapter D. NextBridge has signed an Engineering, Procurement and Construction (EPC) contract with Valard Construction LP (Valard).

When asked through interrogatories and cross-examination, NextBridge declined to provide a NTE price. In its Argument-in-Chief, NextBridge stated that its construction cost estimate is "a mature AACE International (formerly the Association for the Advancement of Cost Engineering) Class 2 estimate within a narrow accuracy band of plus or minus 10%" and that "NextBridge's estimate is on the cusp of becoming an AACE Class 1 estimate, which will occur upon approval of NextBridge's EA".¹¹⁴

NextBridge indicated that by September 2018, \$34.4 M of its \$737 M budget had been spent, including \$5.4 M on environmental and regulatory approvals with an additional \$4.5 M to be spent by the end of December 2018.¹¹⁵ NextBridge also indicated that it

¹¹⁴ EB-2017-0182/EB-2017-0194/EB-2017-0364, NextBridge Argument-in-Chief, October 22, 2018, pp. 2-3.

¹¹⁵ EB-2017-0182/EB-2017-0194/EB-2017-0364, NextBridge Chart Exhibit K7.1, October 12, 2018.

5.2 Operations, Maintenance and Administration (OM&A) Costs

NextBridge forecast its OM&A costs to be \$3.92 M per year.¹²¹ Hydro One forecast its OM&A costs at \$1.5 M per year.

Hydro One took the position that the OM&A cost estimates presented by each party are something that should be taken into account. NextBridge questioned if the OEB must consider OM&A costs in a leave to construct under Sections 92 and 96 of the Act. NextBridge stated that these costs would be in scope in the subsequent revenue requirement proceeding for the successful transmitter.

VECC argued that the OM&A cost differential between NextBridge and Hydro One's forecasts would have a modest impact on ratepayers when considered in the context of transmission rates.

OEB staff submitted that the lack of certainty around OM&A costs is evident from the designation proceeding as current OM&A forecasts are more than double those estimated by NextBridge and EWT LP¹²² at that time. OEB staff further submitted that the OM&A costs will be subject to a detailed prudence review in the subsequent rates proceeding, if applicable.

SEC further submitted that measuring the impact of the OM&A differential over the life of the new transmission line between Wawa and Thunder Bay is very hard as the costs will undoubtedly change over decades. However, SEC stated Hydro One has a cost advantage that the OEB should consider.

5.3 Additional System Costs Associated with In-Service Delays

In the addendum to its Updated Needs Assessment, the IESO maintained that the new transmission line between Wawa and Thunder Bay is a long-term solution to ensure a reliable and cost-effective supply of electricity to Northwest Ontario. Also, the IESO quantified the additional costs associated with a delay to the 2020 in-service date, as per Table 4 below. The IESO submitted that the annual costs associated with a delay to the 2020 in-service date ranges from \$7 M to \$55 M, depending on the interim measure(s) implemented.

¹²¹ NextBridge's initial evidence had stated that OM&A costs were forecast to be \$7.4 M, and later \$4.7 M, before proposing an OM&A cost of \$3.92 M per year.

¹²² A partnership of Hydro One, Great Lakes Power Transmission EWT LP, and BLP at the time of designation.

OEB. As a single asset and newly constructed line, it is expected that the capital expenditures and increases in OM&A will be managed over the IR Term. The information included in the TSP is current as of the filing of this Application.

20. NextBridge's operational needs have been assessed and assumptions are included in the OM&A budget and will be assessed going forward on an annual basis. This is then incorporated into its investment planning process to establish a plan that addresses those operational needs while minimizing rate impacts. This planning process ultimately forms part of the overall asset management process, which is aimed at identifying and scoping the optimal timing of capital investments and asset maintenance throughout the life cycle of assets.

Asset utilization and optimization

21. NextBridge will adhere to applicable national and international standards such as the Canadian Standards Association, the Institute of Electrical and Electronic Engineers, the International Electrotechnical Commission, and NERC Standard FAC-003-04, ("**Transmission Vegetation Management**"). Affiliates of NEET presently develop and operate transmission assets across North America, and are required to comply with NERC Reliability Standards. Collectively, affiliates of NEET own more than 14,000 km of transmission lines and nearly 830 substations in North America as of December 31, 2019 which are delivering reliable electric service throughout North America.
22. Additionally, NextBridge will optimize asset management throughout the East-West Tie line's life cycle. To achieve this goal, NextBridge will work closely with NEET, utilizing NEET's extensive expertise and experience, to monitor its transmission system assets, identify and define needs, and determine the optimal timing for maintenance activities and opportunities to invest that maintain high reliability and reduce maintenance expenses over the long term. In working with NEET and its affiliated companies, NextBridge will deliver a high level of transmission service that is responsive to operational needs, while

also minimizing rate impacts and risks in support of the company's strategic objectives. Additional details are available in Exhibit 2 of this Application.

23. The majority of NextBridge's maintenance services were competitively bid and will be awarded to a partnership between HONI and Supercom, which will result in a service level agreement to plan and organize the operation and maintenance of the assets. Given the proximity of the East-West Tie line to HONI's existing East-West transmission and station assets, maintenance can be optimized when work can be performed on both lines simultaneously (*i.e.*, vegetation maintenance). These gained efficiencies are passed through to ratepayers as a reduced maintenance expense. As of the date of this application, the service level agreement with HONI and their partner, Supercom Industries ("**HONI SLA**") is being finalized and will be filed as an update to the Application when available. An overview of the HONI SLA are described in Exhibit B, Tab 1, Schedule 4.

Asset condition assessment

24. The asset profile utilized by NextBridge tracks the average age of the components and the expected service life ("**ESL**"). The ESL is defined as the average duration in years that an asset can be expected to operate under normal system conditions and is determined by similar useful life data presented in HONI's rate case (EB-2019-0178 and EB-2018-0275). Assets operating beyond ESL generally have a higher likelihood of failing or being in poor condition. The depreciation of the East-West Tie line is aligned with the overall expected life of the assets that comprise the project.
25. Asset condition assessments are conducted for each asset as they reach an individual age threshold, which varies depending on asset type. They are categorized as low, fair, and high risk assets relative to their likelihood of near-term failure. Low risk assets are "like new" or have not yet reached an age where condition assessment is required. Since the East-West Tie line is new, all assets fall in the "like new" category. Fair risk assets have condition test results that indicate minor deterioration but have not yet reached end

Revenue Differential Variance Account

7. This account will track the revenue impact should there be a difference from the currently planned in-service date. Specifically, the account will record the difference between revenue earned by NextBridge as part of its share of the 2022 UTR revenue based on the forecasted in-service date and the revenue requirement that would have been calculated had rates been established based on the actual achieved in-service date (earlier or later).
8. To facilitate the OEB's review of costs and prudence on a timely basis and to allow time to ensure all project construction cost accounting is finalized and an audit has taken place, NextBridge proposes to seek initial disposition of the balance in this account in the second annual update following in-service. This update is expected to be filed in 2023 for inclusion in 2024 UTR rates.
9. See draft accounting order in Attachment 2 in this Exhibit.
10. Construction Cost Variance Account
 - This account will track any difference in revenue requirement resulting from: difference between forecasted construction costs in this Application and the actual final project construction costs, including IDC;
 - COVID-19 related capital costs incurred during construction in excess of forecasted construction costs in this Application. NextBridge has explained its preference for the treatment of these costs to the OEB as part of the current stakeholder process to inform accounting guidance for COVID-19 impacts being included in deferral accounts. This submission can be found at Exhibit H, Tab 1, Schedule 1, Attachment 5. As explained in the submission, it is appropriate to continue to track the incremental construction work in progress and interest costs related to the COVID-19 emergency in a new subaccount of Account 2055;

- Directly related costs associated with construction that extend past the in-service date such as environmental costs that are a result of commitments in the OBP and/or Amended EA for construction monitoring and mitigation programs that are not already accounted for in the construction costs (i.e. environmental mitigation costs of \$1 million that were included in construction costs but occur post in-service date because they were known and quantifiable amounts). NextBridge expects these costs to begin after the March 31, 2022 in-service date and continue for up to the end of the IR Term, as discussed in Exhibit C. The amount of environmental mitigation to be performed during this time period is highly dependent on monitoring activities and in some cases is weather or nature dependent. As an example, the transfer strategy and timing of caribou is dependent upon the results of pre-transfer monitoring. Monitoring will indicate where the caribou will originate from and the gender ratio available to relocate (See OBP Permit and Conditions at Exhibit C. Tab 2, Schedule 4, Attachment 3). As these costs are expected to decline each year after in service and are non-recurring, NextBridge proposes that the variance account method is best for customers instead of including in O&MA costs and potentially overstating O&MA costs for the following nine years of the revenue cap index. To demonstrate this savings, NextBridge provides the following example in Table 1 below as a comparison of including the first year's cost comparing the treatment in the revenue requirement now as an O&MA cost versus including these environmental costs in the construction cost variance account. As shown below in the totals over the five-year period, O&MA could be overstated by \$2.4 million if these costs were included in O&MA as part of this Application. Since the costs reduce over time and are not quantifiable at this time, the appropriate way to account for the costs is in the CCVA.

Table 1. Example of Cost Treatment Alternatives for Post Construction Environmental Costs

	Dollars					
	ISD ¹⁴ + 1 Year	ISD + 2 Years	ISD + 3 Years	ISD + 4 Years	ISD + 5 Years	Total
O&MA if in Revenue Requirement	Estimate included in construction costs	\$972,000	\$972,000	\$972,000	\$972,000	\$3,888,000
Variance Account (as incurred)	Estimate included in construction costs	\$972,000	\$198,000	\$106,000	\$143,000	\$1,419,000

- After five years post in-service date, the costs are expected to be less than \$10,000 annually and are not included in this example, which is for illustrative purposes.
- To facilitate the OEB's review of costs and prudence on a timely basis and to allow time to ensure all project construction cost accounting is finalized and an audit has taken place, NextBridge proposes to seek initial disposition of the balance in this account in the second annual update following in-service. This update is expected to be filed in 2023 for inclusion in 2024 UTR rates. NextBridge seeks to leave the CCVA open for the remainder of the IR Term to account for activities that are a direct result of construction, such as environmental costs associated with the Overall Benefits Permit and Amended EA. The final disposition will take place at the end of the IR Term and in the next rebasing application for NextBridge.
- See draft accounting order in Attachment 3 in this Exhibit.

¹⁴ In-Service date ("ISD")

**DRAFT ACCOUNTING ORDER –
CONSTRUCTION COST VARIANCE ACCOUNT**

1. This account will track any difference in revenue requirement and includes:
 - differences between forecasted construction costs in this Application and the actual final project construction costs, including IDC;
 - COVID-19 related capital costs incurred during construction in excess of forecasted construction costs in this Application;
 - directly related costs associated with construction that extend past the in-service date such as environmental costs that are a result of commitments in the OBP and/or Amended EA for construction monitoring and mitigation programs that are not already accounted for in the construction costs (*i.e.*, environmental mitigation costs of \$1 million that were included but occur post in-service date because they were known and quantifiable amounts).
2. To ensure all accounting is finalized, an audit has taken place and alignment with the disposition of the Debt Cost Variance Account, NextBridge proposes the disposition of this account in the second annual update following the in-service date.
3. The following are the proposed accounting entries for this variance account:

USofA # Account Description

Dr/Cr: 1508 Other Regulatory Assets – Sub-account: Construction Cost Revenue Requirement Variance

Dr/Cr: 4110 Transmission Service Revenue

- to record the revenue requirement differential

USofA # Account Description

Dr/Cr: 1508 Other Regulatory Assets – Sub-account: Construction Cost Revenue
Requirement Variance

Dr/Cr: 6035 Other Interest Expense

-to record interest on the principal balance of the variance account.

SERVICE QUALITY AND RELIABILITY PERFORMANCE
AND REPORTING PROPOSED

Proposed Scorecard

1. Given the nature of the East-West Tie line, it does not lend itself to applying the typical performance measures that might be used to evaluate the performance of other transmitters. The East-West Tie line does not include any terminal breakers or other operable assets, as the demarcation point of each of the circuits is at a structure outside of the HONI stations, as noted in Exhibit B, Tab 1, Schedule 2. Also, NextBridge does not have any customer delivery points (or meter assets), which are the basis of interruption-based reliability performance measures like SAIDI and SAIFI. In addition to these operating characteristics, the life-cycle portfolio also detracts from meaningful comparisons. The East-West Tie line is new whereas most other transmitters own a portfolio of assets that traverse the various stages of asset life. Therefore, NextBridge's performance measures do not readily provide meaningful comparisons to those of other transmitters. On this basis, NextBridge is proposing the following measures to best demonstrate its performance and address the performance standards for transmitters as set out in Chapter 4 of the *Transmission System Code*:

Table 1. Performance Measures

RRFE Outcomes	Performance Measure
Safety	0.00 OHSA Recordable Injuries Per Year
Financial Performance	Return on Equity
Public Policy Responsiveness	Applicable NERC Reliability Standards, such as FAC-003-4, Vegetation Compliance for NextBridge owned assets

RRFE Outcomes	Performance Measure
Operational Excellence	OM&A Cost (\$ K) per circuit km
Operational Excellence	Average System Availability (%)

2. The performance measures will be tracked annually, and the results of this tracking will be reported to the OEB at the next proceeding. A description of the performance measures is provided in turn below.

Safety

3. Safety is of the utmost importance in NextBridge's transmission work activities. NextBridge is committed to complying with safety standards and regulations following those established by HONI and the Electrical Safety Authority.
4. Ontario's *Occupational Health and Safety Act* requires NextBridge to comply with industrial design and construction safety regulations, and NextBridge must also comply with the health regulations of the Ministry of Health under the *Health Protection and Promotion Act*.

Financial Performance

5. Return on equity ("**ROE**") compares the profitability of NextBridge over a period compared to the amount of equity invested by the partners. The biggest impact on ROE for NextBridge is related to variances caused generally by potential system impacts resulting from extreme weather events such as rain storms, winter storms, and ice storms. In order to mitigate some of these potential system impacts, NextBridge designed the structural elements of the East-West Tie line to withstand a 1-in-100-year ice storm, exceeding minimum requirements outlined in the relevant codes. Weather cases were applied to the

project design based on design requirements set forth by the OEB's *Minimum Design Criteria for the Reference Option of the E-W Tie Line* (OEB 2011), the Canadian Standards Association documents C22.3 No. 1-15 *Overhead Systems* (CSA 2015a) and C22.3 No. 60826-10 (R2015) *Design Criteria of Overhead Transmission Lines* (CSA 2015b), and severe weather and reliability concerns raised by stakeholders.

6. Using the Audited Statements, the ROE is calculated by dividing the Net Income (less extraordinary non-operating items such as startup cost reimbursement) by the Partners' Equity.

Public Policy Responsiveness

7. NERC Vegetation Compliance is a measure of the extent to which NextBridge is compliant with NERC Standard FAC-003-04. NERC developed a Transmission Vegetation Management Standard with the objective to prevent vegetation-related outages which could contribute to a cascading grid failure, especially under heavy electrical loading conditions. Each transmission owner is required to have a transmission vegetation management program designed to control vegetation on the active transmission line ROW in accordance with the requirements in NERC Standard FAC-003-04. Compliance with this NERC Standard is mandatory and enforceable.

Operational Excellence - OM&A Cost per circuit kilometer

8. Charles River Associates was engaged by NextBridge to prepare a benchmarking study of transmission projects comparable to that of its East-West Tie line. A copy of this report can be found at Exhibit B, Tab 1, Schedule 7, Attachment 1. CRA was asked to review the OM&A benchmarking for Bruce to Milton and Niagara Reinforcement rate case filings.

9. The CRA study concludes that OM&A costs per km for the East-West Tie line remain lower than the benchmarks even under forecasting sensitivity tests. NextBridge's rates were found to be cost competitive to Bruce to Milton and Niagara Reinforcement.

Table 2. OM&A Benchmarking study results

\$ K (CAD)	Niagara 2020	Bruce-Milton 2019	East-West Tie
O&MA Expenses	320	600	1,275
Admin. & Corporate ⁵	510	200	1,665
Regulatory			65
Total OM&A	830	1,600⁶	3,005⁷
Total km	76	180	450
OM&A / km (CAD)	10.92	8.89	6.68
OM&A / km (USD)	8.40	6.84	5.14

As the East-West Tie line continues to operate, NextBridge will report on its costs per kilometer.

Operational Excellence – Average System Availability

10. NextBridge complies with other relevant national and international standards such as the Canadian Standards Association, the Institute of Electrical and Electronic Engineers, and the International Electrotechnical Commission for the design of its transmission system and equipment. Further information on operational excellence can be found in Section B.

⁵ The figure for the Niagara project includes costs associated with the Managing Director's office.

⁶ Includes "Incremental expenses of \$800k (CAD).

⁷ The East-West Tie line also includes expenses for Indigenous Participation and Compliance costs. As these are not directly comparable to the other projects, and unique to the East-West Tie line, they have been excluded from this total.

RELIABILITY PERFORMANCE AVERAGE SYSTEM AVAILABILITY⁸

1. Transmission SAIDI and SAIFI (respectively, “**T-SAIDI**” and “**T-SAIFI**”) measure interruptions at delivery points in the system. The number of delivery points is the denominator of the equation. NextBridge has no delivery points and therefore is unable to calculate T-SAIDI or T-SAIFI for its circuits independently.
2. To demonstrate performance, NextBridge will measure Average System Availability (“**ASA**”) where measurement of ASA is not reliant on a delivery point (customer). Rather, this metric focuses on equipment performance, *i.e.*, the availability of NextBridge’s circuits, and is therefore an appropriate indicator given circumstances of the East-West Tie.
3. In the absence of T-SAIDI and T-SAIFI metrics, NextBridge will provide additional information, on a best efforts basis, to demonstrate the performance of NextBridge’s transmission circuits. NextBridge will measure interruptions to HONI delivery points caused by NextBridge’s circuits using two proposed measures. The proposed contribution measures would not be NextBridge’s true T-SAIDI and T-SAIFI measure because NextBridge has no delivery points, but the denominator would be all HONI delivery points. The formulas for the two proposed measures are:

$$T - SAIFI_{NextBridge\ Contribution} = \frac{\sum_{i=1}^k (SF_i + MF_i)}{n}$$

$$T - SAIDI_{NextBridge\ Contribution} = \frac{\sum_{i=1}^k (SD_i)}{n}$$

- n is the total number of HONI delivery points.
- k is the total number of HONI delivery points that may be impacted by NextBridge circuits.

⁸ This metric only includes events and/or time resulting from unplanned (or forced) automatic outages initiated by events directly involving the assets managed by NextBridge.

- SF and MF are the number of sustained and momentary interruptions experienced at Delivery Point i in a given year caused by NextBridge circuits.
- SD is the duration of the sustained interruptions experienced at Delivery Point i in a given year caused by NextBridge circuits.

STAFF INTERROGATORY #59

INTERROGATORY

Reference: Exhibit D / Tab 1 / Schedule 1 / p. 1

Preamble:

At the above noted reference, NextBridge states the following:

Given the nature of the East-West Tie line, it does not lend itself to applying the typical performance measures that might be used to evaluate the performance of other transmitters. The East-West Tie line does not include any terminal breakers or other operable assets, as the demarcation point on each of the circuits is a structure outside of the HONI stations, as noted in Exhibit B, Tab 1, Schedule 2. Also, NextBridge does not have any customer delivery points (or meter assets), which are the basis of interruption-based reliability performance measures like SAIDI and SAIFI. In addition to these operating characteristics, the life-cycle portfolio also detracts from meaningful comparisons. The East-West Tie line is new whereas most other transmitters own a portfolio of assets that traverse the various stages of asset life. Therefore, NextBridge's performance measures do not readily provide meaningful comparisons to those of other transmitters.

Question(s):

- a) Please confirm that NextBridge is proposing the tracking and annual reporting of the following performance measures. If there are any measures not included in the listing below, but that should be added, please provide the necessary update(s) to the listing.
 - 0.00 OSHA Recordable Injuries per Year
 - Return on Equity
 - NERC Vegetation Compliance
 - OM&A Cost per Circuit Kilometer
 - Average System Availability
- b) For each performance measure provided in response to (a), please indicate how in future proceedings, NextBridge will be able to demonstrate achievement against each measure target. For example, will a single metric to demonstrate performance against the Average System Availability measure be established? For NERC Vegetation Compliance, will NextBridge only provide a single statement indicating its compliance with FAC-003-004, or will NextBridge detail the vegetation prevention-related actions it has undertaken?
- c) Please provide the targets for each performance measure provided in response to (a) for the years 2022 to 2031.

RESPONSE

a) Confirmed.

b) A single value will be used to demonstrate performance against each measure.

OHSA Injuries per Year: Listing of number of injuries each year. Injury defined by OHSA which is further explained in Staff Interrogatory #60.

Return on Equity (ROE): NextBridge will utilize audited financial statements to calculate ROE. ROE is calculated by dividing the Net Income (less extraordinary non-operating items such as startup cost reimbursement) by the Partner's equity. NextBridge has proposed an ROE of 8.52% in the application, based on the 2020 OEB Cost of Capital parameters and would therefore use 8.52% as the target to measure against annually.

NERC Vegetation Compliance: NextBridge will report the number of violations as determined by FAC-003-004.

OM&A Cost per Circuit Kilometer: NextBridge's target is to keep its cost of OM&A per kilometer at the number filed in its Application (\$4.94 million (total cost of OM&A in the Application) / 450km = 10,977

Average System Availability: NextBridge will report a single number for this number for this metric which should be greater than the target listed below

c) Targets below:

YEAR	OHSA Recordable Injuries	ROE	NERC Veg Compliance Violations	OM&A \$/km	Ave. System Availability
2022	0	8.52%	0	\$10,977	99%
2023	0	8.52%	0	\$10,977	99%
2024	0	8.52%	0	\$10,977	99%
2025	0	8.52%	0	\$10,977	99%
2026	0	8.52%	0	\$10,977	99%
2027	0	8.52%	0	\$10,977	99%
2028	0	8.52%	0	\$10,977	99%
2029	0	8.52%	0	\$10,977	99%
2030	0	8.52%	0	\$10,977	99%
2031	0	8.52%	0	\$10,977	99%

STAFF INTERROGATORY #62

INTERROGATORY

Reference: Exhibit D / Tab 1 / Schedule 2 / p. 1

Preamble:

At the above noted reference, NextBridge states the following:

In the absence of T-SAIDI and T-SAIFI metrics, NextBridge will provide additional information, on a best efforts basis, to demonstrate the performance of NextBridge's transmission circuits. NextBridge will measure interruptions to HONI delivery points caused by NextBridge's circuits using the two proposed measures. The proposed contribution measures would not be NextBridge's true T-SAIDI and T-SAIFI measure because NextBridge has no delivery points, but the denominator would be all HONI delivery points.

Question(s):

- a) Please explain why NextBridge is only able to provide the above noted information on a best efforts basis.
- b) Please confirm the number, and the specific Hydro One delivery points that NextBridge is referring to in the above statement.
- c) Please confirm if the reporting on T-SAIDI and T-SAIFI, with respect to HONI delivery points, would be additional performance measures to those listed in Staff-59(a)?

RESPONSE

- a) To calculate the T-SAIDI and T-SAIFI metrics, NextBridge would need to have direct visibility into HONI's transmission system and customer delivery points. NextBridge does not currently have such visibility, but it is willing to use best efforts to work with HONI to calculate the T-SAIDI and T-SAIFI metrics if it is desired that such metrics be provided as they indirectly relate to the East-West Tie line.
- b) To clarify, as explained in Energy Probe #24, NextBridge has no customer delivery points, only HONI or other transmitters would have customer delivery points. The purpose of the statement in the Application was made in the spirit of working with HONI, which has customer delivery points, to calculate the T-SAIDI and T-SAIFI metrics as discussed in part a.
- c) NextBridge does not confirm that Transmission Reliability Indicators, such as T-SAIDI and T-SAIFI will be reported as part of the performance metrics. Rather,

NextBridge proposed to report Average System Availability as described in the response to Staff #59.