Hydro One Networks Inc.

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Joanne Richardson Director, Major Projects and Partnerships Regulatory Affairs

BY EMAIL AND RESS

March 21, 2022

Ms. Nancy Marconi Registrar Ontario Energy Board Suite 2700, 2300 Yonge Street P.O. Box 2319 Toronto, ON M4P 1E4

Dear Ms. Marconi,

EB-2017-0194 – Hydro One Networks Inc.'s Section 92 – East West Tie Station Project – Quarterly Report

On December 20, 2018, Hydro One Networks Inc. ("Hydro One") received approval from the Ontario Energy Board (OEB) to construct the EWT Station Project to upgrade existing transmission station facilities in the Districts of Thunder Bay and Algoma. On July 29, 2019, the OEB issued reporting requirements to Hydro One to monitor the progress of Hydro One's EWT Station Project. On October 11, 2019 and subsequently on January 5, 2021, the OEB sent letters to Hydro One outlining further reporting requirements.

In accordance with the aforementioned filing requirements, this Quarterly Report captures activities for the quarter ending February 28, 2022.

An electronic copy of the complete Quarterly Report has been filed using the Board's Regulatory Electronic Submission System (RESS).

Sincerely,

Joanne Richardson



Hydro One - East-West Tie Station Project OEB File Number EB-2017-0194 Quarterly Report Period Ending February 28, 2022

Introduction

On December 20, 2018, Hydro One Networks Inc. (Hydro One or HONI) received approval from the Ontario Energy Board (OEB) to construct the EWT Station Project. The EWT Station project involves upgrades to Hydro One's Wawa Transmission Station, Marathon Transmission Station, and Lakehead Transmission Station located near the cities of Wawa, Marathon and Thunder Bay and is required to connect a new 230 kV transmission line (EWT Line) being constructed by NextBridge. The combined EWT projects have been identified as a priority in both the Ontario government's 2010 and 2013 Long-Term Energy Plans and the 2016 Order-in-Council.

In order to complete the connections at the three stations, Hydro One needs to modify some station facilities and install required station upgrades. On July 29, 2019, the OEB issued reporting requirements to Hydro One to monitor the progress of Hydro One's EWT Station Project. On October 11, 2019, the OEB sent a letter to Hydro One outlining further reporting requirements. Specifically, the additional reporting requirements requested that Hydro One (a) provide a status update on co-ordination efforts with NextBridge, (b) enhance the level of detail provided in the summary of the Status Upgrades Project progress to date, and (c) make a modification to the Project Cost table. On September 24, 2020, in response to a delay to the NextBridge schedule to construct the EWT line, the OEB asked that an up-to-date estimate and detailed schedule for the stations upgrades be provided in Hydro One's next quarterly report to be filed in December 2020.



Hydro One - East-West Tie Station Project OEB File Number EB-2017-0194 Quarterly Report Period Ending November 30, 2021

Introduction - continued

Consequently, on January 5, 2021, OEB Staff requested that Hydro One provide further specifics on the forecast cost increases referenced in the December Progress Report. This includes providing details on the quantum of the forecast cost increases due to COVID-19 and other costs, as well as clarifying what specifically comprises and is driving the other costs referenced in the December Progress Report. If the forecast cost increases are derived from high-level estimates, Hydro One should still provide such information, but indicate that the forecast costs are high-level estimates.

This report addresses all aforementioned reporting requirements.

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1. Summary of Quarterly Activities

Station commissioning activities are complete at all three stations and are ready for the inservicing of the new circuits. All stations are ready to accept final connection of the lines and fiber from the NextBridge towers, into the three stations. Conductors, Overhead Shield Wire (OHSW) and Optical Ground wire (OPGW) cables have been connected into the Lakehead station from the NextBridge tower just outside the fence line.

Recent storm-like weather has delayed the completion of NextBridge's tower to tower connections resulting in a delay in the connection of conductors, OHSW and OPGW cabling into the Marathon and Wawa stations. The commissioning plan was adjusted to use up a portion of the schedule buffer to be able to maintain a timely in-servicing of the new circuits.

The fiber to fiber splicing activities connecting the NextBridge fiber to the Hydro One fiber has begun upon receiving positive results of end to end testing from NextBridge and a verification of acceptable attenuation characteristics. Hydro One will then perform station to station testing which will allow for final commissioning to take place and the energization of all new circuits in late March to fulfill requirements of achieving a transfer capability of 450MW across all stations.

Winter work has kept civil construction resources busy at all three stations with snow removal and supporting outdoor electrical activities in the yard. Excavations for grounding grid, yard lighting and fiber optic cable runs have been completed. Much of the fence installation has been completed with the remaining sections being installed near the end of the project. The focus of electrical construction work is in supporting commissioning efforts for the energization of the new circuits and the remaining station reconfiguration work. This includes cable terminations, bus reconfigurations, grid grounding and supporting outage preparation activities for the implementation of planned activities.

Work associated with station reconfiguration required to the meet the North American Electrical Reliability Corporation (NERC) and Ontario Resource and Transmission Assessment Criteria (ORTAC) criteria will continue throughout most of this year with the use of various outage windows. A majority of equipment and protections associated with the station reconfiguration have already been installed and tested in tandem with preparing for the energization of the new circuits so this will consist of the remaining work.

All reactors at Lakehead and Marathon stations have been commissioned and are ready for use. The R1 reactor at Lakehead and the R3 reactor at Marathon, have been energized and inserviced. The R4 reactor at Marathon is ready and will be energized and inserviced as part of the energization of the new circuits. The SC1 capacitor bank at Lakehead will be ready in April 2022.

1. Summary of Quarterly Activities (continued)

Monthly meetings with the IESO continue, for discussing progress and implementation of the North-West Remedial Action Schemes (NW RAS) as well as future planned activities in regards to completing the station reconfigurations. The B-Scheme of the NW RAS will be completed and ready to go by the end of March 2022 although it is not required for the in-servicing of the new circuits. Implementation of the NW RAS relies on NPCC approval being obtained so a delay in receiving the NPCC approval will delay the implementation of the NW RAS accordingly. This should should not have an impact on further station reconfiguration activities in the short term.

In preparation of the new line connections in March 2022, all critical outages required to finish the station work at Lakehead, Marathon and Wawa have all been completed. The availability of outages remains a critical part in the sequencing of further station reconfiguration work according to the Staging Plan.

In preparation of the final connections, Hydro One and NextBridge project teams have increased the frequency of discussions. Demarcation points and the formalities of handing-off cables from one party to another, have been defined. As mentioned before, delays in the connection of conductors and in-servicing OHSW and OPGW cabling into the Marathon and Wawa stations, have been mitigated by adjusting Hydro One's line construction activity schedule. The Connection and Cost Recovery Agreement (CCRA) has been filed with the OEB. The Connection Facility Agreement (CFA) between Hydro One and NextBridge will be finalized by the middle of March 2022.

Risks remain for a timely delivery of cables and fiber test results from NextBridge to Hydro One even though a mitigation plan has been implemented. As there are no further outages required to energize the new circuits, outage availability is no longer a risk. Tower compatibility remains a low risk in affecting energization.

A. Lakehead TS - Construction Activities

i. Summary of Activities from last Reporting Period to Next Reporting Period

• Work completed between Dec 01, 2021 – Feb 28, 2022

• Civil Construction

- Completed installation of 12 Road Crossing Guard Rails
- Removed 6 Piers to 6" below finished grade
- Provided support for electrical activities
- Provided snow removal throughout winter months

• Electrical Construction

 \bullet Shunt capacitor bank installed with associated breakers CB-SC21A and CB-SC21B

• Begun wiring SC21 capacitor bank, associated breakers, surge caps, ground switch CSC21, neutral PT and CVT's

• Welded W2 rigid bus connection to capacitor bank

• Buildings

- New PCT building
 - Support commissioning activities

• Commissioning

- R1 reactor was in-serviced along with its protections for main (A) & alternate (B)
- In serviced the M23L & L22L23 A&B protections and 2 new CVTs, new disc switch and ground switch
- Fully commissioned DFR
- Commissioned 90% of the NW RAS special protections system
- Tested M24L A&B line protections and prepared for upcoming M24L outage activities

A. Lakehead TS - Construction Activities - continued

i. Summary of Activities from last Reporting Period to Next Reporting Period

• Anticipated work to be completed between Mar - May 2022

• Civil Construction

- Provide support for electrical activities
- Snow removal throughout winter months
- Remove remaining 3 Piers to 6" below finished grade
- Bring access road up to finished grade

• Electrical Construction

• Re-cabling activities of CVT's, line switch and breakers to support A21L terminal outage

• Continue with shunt capacitor bank installation and associated breakers CB-SC21A and CB-SC21B

- Install yard lighting and upgrade lighting in 'A' building
- Mount and wire ATS on existing breakers
- H bus re-stringing and install new insulators in area
- A22L terminal re-cabling & upgrade strain bus to 3640
- Cable removals
- Buildings
 - New PCT building
 - Support commissioning activities

• Commissioning

- In-service new circuits and JMUX commissioning
- A21L, HL21 & L21L24 A&B protection upgrades
- M24L outage, replace M24L A&B protections, 2 new CVTs, replace disc switch and ground switch

 \bullet Extend diameter to include new W2 Bus, and new W2 protections, set of W2 CVTs

- New Breaker (W2L24) to be part of W2 bus, new W2L24 A&B protections
- Cut over HL21, L21L24 (W2L21) and PL24 to new PSR/RTU, start work on DDR
- Decommission NWSPS A and start commissioning NWRAS A

ii. Life-to-Date Status of Major Items

Lakehead TS

Approvals	<u>Rec'd</u>	<u>% Comp</u>
ECA drainage	Yes	100

Civil / Electrica	<u>Project</u> <u>Total</u>	<u>Unit of</u> <u>Measure</u>	Installed	<u>% Comp</u>	
	Civil / Electrical Installati	on - On	Track		
Foundations		2	ea	2	100.0%
Footings - Piers		223	ea	223	100.0%
Cable Trench		1500	m	1500	100.0%
Grounding Grid		3330	m	2910	87.4%
Structures		101	ea	95	94.1%
Rigid bus		390	m	382	97.9%
Strain bus		2210	m	1910	86.4%

Equipment Installation		Project <u>Total</u>	<u>Unit of</u> <u>Measure</u>	<u>Rec'd/</u> <u>Built</u>	Installed	<u>Wired</u>	<u>Comm'd</u>	<u>% Comp</u>
	Equipment Installation -	On Tra	ck					
Breakers		8	ea	8	8	8	5	85.0%
Reactors/Cap Ba	anks	2	ea	2	1	1	1	55.0%
Switches - Line,	Disc & Grnd	20	ea	20	19	16	15	83.0%
CVT (Current Vo	ltage Transformer)	25	ea	25	22	22	22	89.2%
AC Station Servi	ce	4	ea	4	4	4	4	100.0%
DC Station Servi	ce	2	ea	2	2	2	2	100.0%
Protection racks	(IED modules)	116	ea	116	116	116	60	80.7%
Control equipme	ent	13	ea	13	13	13	13	100.0%
Telecom/Telepr	otion racks (IED modules)	71	ea	71	71	71	35	79.7%

Definition of terms used:

Rec'd/Built - represents either inventory delivered and sitting at site/warehouse or racks built for building

Installed - represents equipment being installed on a structure, foundation, floor or in a rack

Wired - represents having all wiring and terminations completed to the equipment

Comm'd - represents 'Commissioned' being able to function as designed, for it's intended purpose

% Compl - represents % complete weighting: 10% for rec;d, 20% for Installed, 30% for wired, 40% for commissioned

Building Install	ation	<u>Project</u> <u>Total</u>	<u>Unit of</u> <u>Measure</u>	<u>Found'n</u>	<u>Walls</u> /Roof	<u>Mech/</u> <u>Elect</u>	<u>Comm'd</u>	<u>% Comp</u>
	Building Installation - On Tr	ack						
PCT (Protection/	'Control/Telecom) Building	1	%	100.0%	100.0%	100.0%	100.0%	100.0%

Definition of terms used:

Found'n - represents the concrete foundation slab

Walls/Roof - represents the pre-cast walls and roof being erected

Mech/Elect - represents having all HVAC, fire alarm, lighting and distribution panels completed in building **Comm'd** - represents 'Commissioned' being substantially complete as designed, for it's intended purpose **% Compl** - % complete weighting: 20% foundations, 40% Walls/Roof, 30% Mech/Elect, 10% commission

iii. Progress Photos - Civil & Electrical



Lakehead TS – Capacitor Bank installation





Lakehead TS – installed fiber splice box on tower

Lakehead TS – – M37L and M38L tower connections

iv. Progress Photos - Commissioning/Protections



Lakehead – various protection and telecom racks – JMUX controls



Lakehead – protection racks commissioned in aisles



Lakehead – LAN network

B. Marathon TS - Construction Activities

i. Summary of Activities from last Reporting Period to Next Reporting Period

• Work Completed between Dec 01, 2021 – Feb 28, 2022

• Civil Construction

- Quenching Stone was placed in the Reactor Spill Pits
- Install most of the Road Crossing Guard Rails
- Provided support for electrical activities
- Provided snow removal throughout winter months
- Provided support to EMD in the form of hoarding, heating for Breakers and CVT maintenance

• Electrical Construction

- All interior fibers for OPGW cables are complete
- Completed 28 out of 96 yard lights
- All connections to M37L, M38L, W35M, and W36M line and ground switches are complete

• Buildings

- New PCT building
 - Supported commissioning activities
- Existing Control building –work performed
 - All removals of old racks and cables are complete

• Commissioning

• The following protections were commissioned for main (A) and alternate (B): T11, A Bus, M23L, AL22, W2L35, W2L37, W1L38, W1L36, AL37 AL36, AL23, and L21L23

• The following breaker and disconnect switch equipment were commissioned: W2L35, W2L37, W1L38, W1L36, AL37, AL36, AL23, L21L23

- The following breaker equipment were commissioned: R3W1, R4W2
- The following reactor and breaker equipment were commissioned: R3, R4
- The following switches were commissioned: 15-M23L, 15M23L-G, 15-W35M, 15-W36M, 15-M37L, and 15-M38L
- The following instrument transformers were commissioned: ACVT's, W1CVT's, and W2CVT's
- Continued with commissioning of SPS (Special Protections System)

B. Marathon TS - Construction Activities - continued

i. Summary of Activities from last Reporting Period to Next Reporting Period

Anticipated work to be completed between Mar - May 2022

• Civil Construction

- Install 8 Raised Cable Pan Support Foundations
- Install remaining Road Crossing Guard Rails
- Remove 6 FND's to 6" below Finished Grade
- Provide support for electrical activities
- Snow removal throughout winter months

• Electrical Construction

- Complete all 4 sets of line drop connections from station structures to new circuits
- Build and install M24L switch
- W21M Switch replacements of W22M, W21M and M24L
- HBUS outage rebuilding last sections of 5" Bus work
- Complete fence grounding, remaining yard lighting and removals
- Build/ assemble breaker and reactor platforms
- o **Buildings**
 - New PCT building
 - Continue to support commissioning activities

• Commissioning

• Commission the following protections in March for main (A) and alternate (B): R3, R4

• Commission the following protections in March for main (A) and alternate (B): M24L A and B Protections, W22M A and B Protections, L22L24 A and B Protections

• Commission the following switches: 15-M24L, 15M24L-G, 15-W22M, 15W22M-G Switches

• Complete commissioning of SPS (Special Protections System)

ii. Life-to-Date Status of Major Items

Marathon TS

Approvals	<u>Rec'd</u>	<u>% Comp</u>
EA approvals	Yes	100.0%
ECA drainage	Yes	100.0%

Civil / Electrica	l Installation	<u>Project</u> <u>Total</u>	<u>Unit of</u> <u>Measure</u>	<u>Installed</u>	<u>% Comp</u>
	Civil / Electrical Installati	ion - On	Track		
Foundations		3	ea	3	100.0%
Footings - Piers		376	ea	376	100.0%
Cable Trench		1663	m	1663	100.0%
Grounding Grid		4220	m	4023	95.3%
Structures		97	ea	96	99.0%
Rigid bus		1247	m	1131	90.7%
Strain bus		3090	m	2814	91.1%

Equipment Installation	<u>Project</u> <u>Total</u>	<u>Unit of</u> <u>Measure</u>	<u>Rec'd/</u> <u>Built</u>	<u>Installed</u>	<u>Wired</u>	<u>Comm'd</u>	<u>% Comp</u>
Equipment Installation	- On Tra	ck					
Breakers	12	ea	12	12	12	12	100.0%
Reactors	2	ea	2	2	2	2	100.0%
Switches - Line, Disc & Grnd	36	ea	36	32	32	32	90.0%
CVT (Current Voltage Transformer)	24	ea	24	24	24	24	100.0%
AC Station Service	2	ea	2	2	2	2	100.0%
DC Station Service	2	ea	2	2	2	2	100.0%
Protection racks (IED's)	132	ea	132	132	132	100	90.3%
Control equipment	15	ea	15	15	15	15	100.0%
Telecom/Teleprotion racks (IED's)	83	ea	83	83	82	72	94.3%

Definition of terms used:

Rec'd/Built - represents either inventory delivered and sitting at site/warehouse or racks built for building Installed - represents equipment being installed on a structure, foundation, floor or in a rack

Wired - represents having all wiring and terminations completed to the equipment

Comm'd - represents 'Commissioned' being able to function as designed, for it's intended purpose

% Compl - represents % complete weighting: 10% for rec;d, 20% for Installed, 30% for wired, 40% commission

Building Instal	lation	<u>Project</u> <u>Total</u>	<u>Unit of</u> <u>Measure</u>	<u>Found'n</u>	<u>Walls</u> /Roof	<u>Mech/</u> <u>Elect</u>	<u>Comm'd</u>	<u>% Comp</u>
	Building Installation - On Tr	ack						
PCT (Protection	/Control/Telecom) Building	1	%	100.0%	100.0%	100.0%	100.0%	100.0%

Definition of terms used:

Found'n - represents the concrete foundation slab

Walls/Roof - represents the pre-cast walls and roof being erected

Mech/Elect - represents having all HVAC, fire alarm, lighting and distribution panels completed in building Comm'd - represents 'Commissioned' being substantially complete as designed, for it's intended purpose % Compl - % complete weighting: 20% foundations, 40% Walls/Roof, 30% Mech/Elect, 10% commission

iii. Progress Photos - Civil & Electrical



Marathon TS - R4 reactor connection





Marathon TS - installed fiber splice box on tower

Marathon TS – W35M and W36M tower connections

iv. Progress Photos - Equipment & Building



Marathon TS – JMUX tele-protections racks



Marathon TS – LAN communication system to Lakehead and Wawa



Marathon TS – completed protections rack installation

C. Wawa TS - Construction Activities

i. Summary of Activities from last Reporting Period to Next Reporting Period

• Work Completed between Dec 01, 2021 – Feb 28, 2022

• Civil Construction

- Provided support for electrical activities
- Provided snow removal throughout winter months
- Electrical Construction
 - Pull cables to the W22M switch and CVT's
 - Completed grid grounding for the BPEX line structures for new circuits
 - Completed removals of old AC equipment
 - Support P&C commissioning activities in yard
 - Installation of one remaining breaker platform was completed
 - Completed fiber splicing
- o **Buildings**
 - New PCT building
 - Supported commissioning activities
 - Existing Control building
 - Supported commissioning activities

• Commissioning

 \bullet Complete function testing of new protections for new circuits W35M and W36M

- Commissioned DFR, PSR, and 50% of NW RAS protections
- Completed pre-commissioning of J-Mux in preparation for fiber connection
- Installed temporary wiring in preparation for in servicing new equipment for station reconfiguration
- Primary Injection on new bus/breakers in Bay 4 has been completed

 \bullet Continued with commissioning of NW RAS special protections 'B' scheme for end of March

C. Wawa TS - Construction Activities - continued

i. Summary of Activities from last Reporting Period to Next Reporting Period

• Anticipated work to be completed between Mar - May 2022

• Civil Construction

- Provide support for electrical activities
- Snow removal throughout winter months
- Grid grounding, cable trenching, yard stoning, partial fencing

• Electrical Construction

- Install cable drops and in-servicing for new W35M/W36M circuits
- Completion of cable pulling for the W21M switches and CVT's
- Complete W22M replacement
- Complete yard lighting, SF6 receptacle and grid grounding installation
- Existing cabling for switches

o **Buildings**

- New PCT building
 - Support commissioning activities
- Existing Control building
 - Support commissioning activities

• Commissioning

- In-servicing of new W35M and W36M circuits
- Completion of the remaining NW RAS special protections 'B' scheme
- W22M protections
- JMUX tele-protections in-service

ii. Life-to-Date Status of Major Items

Wawa TS

Approvals	<u>Rec'd</u>	<u>% Comp</u>
EA approvals	Yes	100.0%
	Project	Linit of

Civil / Electrical Installation	Total	<u>Measure</u>	Installed	<u>% Comp</u>					
Civil / Electrical Installation - On Track									
Foundations	n/a	n/a	n/a	n/a					
Footings - Piers	163	ea	163	100.0%					
Cable Trench	962	m	962	100.0%					
Grounding Grid	2320	m	2170	93.5%					
Structures	88	ea	88	100.0%					
Rigid bus	384	m	384	100.0%					
Strain bus	1310	m	1270	96.9%					
Lines intermediate structures	3	ea	3	100.0%					

Equipment Installation	<u>Project</u> <u>Total</u>	<u>Unit of</u> <u>Measure</u>	<u>Rec'd/</u> <u>Built</u>	<u>Installed</u>	<u>Wired</u>	<u>Comm'd</u>	<u>% Comp</u>
Equipment Installation -	On Trac	k					
Breakers	6	ea	6	6	6	3	80.0%
Reactors/Cap Banks	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Switches - Line, Disc & Grnd	19	ea	19	16	16	16	85.8%
CVT (Current Voltage Transformer)	15	ea	15	12	12	12	82.0%
AC Station Service	2	ea	2	2	2	2	100.0%
DC Station Service	2	ea	2	2	2	2	100.0%
Protection racks	64	ea	64	64	64	20	72.5%
Control equipment	15	ea	15	15	15	12	92.0%
Telecom/Teleprotion racks	64	ea	64	64	64	32	80.0%

Definition of terms used:

Rec'd/Built - represents either inventory delivered and sitting at site/warehouse or racks built for bulidng

Installed - represents equipment being installed on a structure, foundation, floor or in a rack

Wired - represents having all wiring and terminations completed to the equipment

Comm'd - represents 'Commissioned' being able to function as designed, for it's intended purpose

% Compl - represents % complete weighting: 10% for rec;d, 20% for Installed, 30% for wired, 40% commission

Building Instal	lation	<u>Project</u> <u>Total</u>	<u>Unit of</u> <u>Measure</u>	<u>Found'n</u>	<u>Walls</u> /Roof	<u>Mech/</u> <u>Elect</u>	<u>Comm'd</u>	<u>% Comp</u>
	Building Installation - On Tro	ick						
PCT (Protection	/Control/Telecom) Building	1	%	100.0%	100.0%	100.0%	100.0%	100.0%

Definition of terms used:

Found'n - represents the concrete foundation slab

Walls/Roof - represents the pre-cast walls and roof being erected

Mech/Elect - represents having all HVAC, fire alarm, lighting and distribution panels completed in building Comm'd - represents 'Commissioned' being substantially complete as designed, for it's intended purpose % Compl - % complete weighting: 20% foundations, 40% Walls/Roof, 30% Mech/Elect, 10% commission

iii. Progress Photos - Civil & Electrical



Wawa – OPGW splice box on station tower



Wawa – Completed PCT building with NextBridge pole in background on the left



Wawa – New BPEX towers with new circuit strung

iv. Progress Photos - Equipment & Building



Wawa – Protection, Control & Telecom racks



Wawa –Various commissioned racks



Wawa – JMUX racks

2. Co-ordination efforts with Upper Canada Transmission Inc., operating as NextBridge Infrastructure, LP (NextBridge)

- A. Station Connection:
 - i. Hydro One and NextBridge project teams have increased the frequency of discussions in preparation for final commissioning. Demarcation points and the formalities of handing-off cables from one party to another, have been defined. Hydro One has received positive attenuation test results from NextBridge and is splicing in preparation for final commissioning.
 - ii. The Connection and Cost Recovery Agreement (CCRA) has been filed with the OEB. The Connection Facility Agreement (CFA) between Hydro One and NextBridge will be finalized by the middle of March 2022.
- B. Staging Plan and Support
 - i. All planned outages have been completed for final connections of new circuits.
 - ii. The commissioning plan between Hydro One and NextBridge for conductor, overhead ground wire and OPGW fiber cabling installation is being executed.

3. Project Schedule Update:

Station Related Work Lakehead TS	Baseline Forecast	Current Forecast Status	
Drainage Environmental Compliance Approval (ECA) received	1-Apr-19	1-Apr-19	Complete
Station Readiness (infrastructure) to accept lines	19-Apr-21	15-Jul-20	Complete
Station ready for In-Service	31-Aug-21	31-Oct-21	Complete
Connection from towers into station	11-Feb-22	11-Feb-22	Complete
M37L/M38L circuits in-Service for 450MW of transfer capability	31-Mar-22	22-Mar-22	On Track

Station Related Work Marathon TS		Current	Status	
		Forecast		
Re-submission of ECA permit application	1-Nov-18	1-Nov-18	Complete	
NextBridge EWT IEA approval obtained	1-Mar-19	1-Mar-19	Complete	
Drainage ECA received	1-Oct-19	1-Oct-19	Complete	
HONI EA approval	15-Oct-19	15-Oct-19	Complete	
Tree cutting commencement	15-Oct-19	15-Oct-19	Complete	
Station Readiness (infrastructure) to accept lines	19-Apr-21	19-Apr-21	Complete	
Station ready for In-Service	30-Sep-21	17-Dec-21	Complete	
Connection from towers into station	4-Feb-22	7-Mar-22	Complete	
M37L/M38L & W35M/W36M circuits in-service for 450MW of transfer capability	31-Mar-22	22-Mar-22	On Track	

Station Related Work Wawa TS	Baseline Forecast	Current Forecast	Status
Direction from MECP to Hydro One regarding Screening Level EA/Part II Order Request	8-Nov-18	8-Nov-18	Complete
NextBridge EWT IEA approval obtained	1-Mar-19	1-Mar-19	Complete
HONI EA approval	30-Sep-19	30-Sep-19	Complete
Tree cutting commencement (no permits required)	1-Oct-19	1-Oct-19	Complete
Station Readiness (infrastructure) to accept lines	7-Dec-20	7-Dec-20	Complete
Station ready for In-Service	28-Oct-21	17-Jan-22	Complete
Connection from towers into station	25-Feb-22	7-Mar-22	Complete
W35M/W36M circuits in-service for 450MW of transfer capability	31-Mar-22	31-Mar-22	On Track

Novthridge Delated Interface Went		Current	rent	
	Forecast	Forecast	Status	
Lines/Grounding Spec deliverables for Lakehead TS	19-Oct-20	19-Oct-20	Complete	
Lines/Grounding Spec deliverables for Marathon TS	19-Oct-20	19-Oct-20	Complete	
Lines/Grounding Spec deliverables for Wawa TS	19-Feb-21	19-Feb-21	Complete	
Connection structures ready outside Lakehead TS	4-Feb-22	4-Feb-22	Complete	
Connection structures ready outside Marathon TS	11-Feb-22	11-Feb-22	Complete	
Connection structures ready outside Wawa TS	25-Feb-22	25-Feb-22	Complete	
Conductor/OPGW/OHGW complete to structure outside Lakehead TS	4-Feb-22	4-Feb-22	Complete	
Conductor/OPGW/OHGW complete to structure outside Marathon TS	11-Feb-22	7-Mar-22	Complete	
Conductor/OPGW/OHGW complete to structure outside Wawa TS	25-Feb-22	7-Mar-22	Complete	

4. Project Cost Update:

Hydro One-Stations Upgrades Project Reporting Costs Table										
COST CATEGORIES FOR HYDRO ONE'S STATION UPGRADES PROJECT REPORTING		ACTUAI	LS SPENT	ORIGINAL BUDGET	IGINAL FORECAST BUDGET VARIANCE					
		A SPENT THIS REPORTING PERIOD \$	B TOTAL SPENT TO DATE \$	C BUDGET PER LTC APPLICATION \$ 000S	D FORECAST BUDGET CHANGE FROM LAST REPORT \$	E FORECAST BUDGET CHANGE FROM LAST REPORT %	F REVISED TOTAL BUDGET	G=F-B BUDGET REMAINING \$	H=G/F*100 BUDGET REMAININ G %	REASONS FOR CHANGE
1	Materials	483,992	65,369,050	51,337,000	0	0.00%	64,840,000	-529,050	-0.82%	none
2	Labour	3,039,224	52,284,426	56,895,000	0	0.00%	54,194,000	1,909,574	3.52%	none
3	Equipment Rental and Contractor Costs	811,887	16,603,978	8,920,000	0	0.00%	23,072,000	6,468,022	28.03%	none
4	Sundry	975,012	9,854,909	1,305,000	0	0.00%	5,263,000	-4,591,909	-87.25%	none
5	Contingencies	0	0	19,227,000	0	0.00%	3,750,000	3,750,000	100.00%	none
6	Overhead	692,875	15,566,743	13,367,000	0	0.00%	16,577,000	1,010,257	6.09%	none
7	Allowance for Funds During Construction	429,830	10,858,106	6,264,000	0	0.00%	13,504,000	2,645,894	19.59%	none
8	Other Costs									
TOTAL CONSTRUCTION COSTS		6,432,819	170,537,213	157,315,000	0	0%	181,200,000	10,662,787	5.88%	

For clarification, this table captures all costs incurred up until Feb 28, 2022.

6. Risk Management Update:

Risk Description	Likelihood of Risk Occurring (High, Medium, Low)	Description of Impact of the Risk on the Project	Impact of the Risk on the Project	Mitigation of Risk and/or Impact
NextBridge dead-end structure not designed to Hydro One standards	Low	Project delays/ cost overrun	Medium	Communication with NextBridge and monitoring of design. By not meeting HONI standards could cause re-design and delays to project schedule.
NextBridge not being able to meet Hydro One's deliverable commitments and/or the in-service date	No risk - complete	Project delays/ cost overrun	High	Communication with NextBridge and tracking the Staging Plan. By not meeting HONI standards could cause re-design and delays to project schedule.
Outage Cancellations- North West region has limited transmission resources, long distances and far less lines to transfer the energy to our customers. For these reasons executing outages is more restrictive & challenging while maintaining System Security, Reliability, Voltage and Stability. Furthermore low water levels in 2021 creates further challenges in receiving hydraulic generation/voltage support required for the outage postures and local reliability. Forest fires in 2021 have also made it challenging.	No risk - complete	In-service delay / cost overrun	High	Creation of contingency dates for alternative outage dates. Continous communications with the various stakeholders to provide awareness. Delays could cause activities to slide affecting both schedule and cost.
Outage availability considerations due to COVID-19 pandemic disruption	No risk - complete	Project delays/ cost overrun	High	Coordinate and bundle outage requirements. Delays could cause activities to slide affecting both schedule and possibly cost.
Cost & Schedule impacts due to COVID-19 pandemic disruption.	No risk - complete	Project delays/ cost overrun	High	Looking for efficiency gains in work methods. Monitor affect of working with new social distancing measures and make adjustments as required.
Delays in obtaining required EA approvals for Wawa TS	No risk - complete	Project delays/ cost overrun	High	Complete – approval granted
Delays in construction of 230kV Control building due to EA approval delay	No risk - complete	Project delays/ cost overrun	High	Complete – approval granted
Delays in obtaining required EA approvals for Marathon TS	No risk - complete	No impact	No impact	Complete – approval granted
Delays in obtaining funding for engineering and long-lead material	No risk - complete	No impact	No impact	Complete – funding received
Material delivery delay considerations	No risk - complete	Delay in procurement/delivery	Low	Monitor material status reports and contact vendor on a periodic basis. Delays could cause activities to slide affecting both schedule and possibly cost.
Soil conditions do not match samples in soil report	No risk - complete	No impact	No impact	Complete - risks have been mitigated using alternative construction measures.
Commissioning resource availability due to compressed schedule	No risk - complete	Project delays/ cost overrun	No impact	Complete - resources acquired