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Joanne Richardson Director, Major Projects and Partnerships Regulatory Affairs

BY EMAIL AND RESS

December 21, 2021

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

Dear Ms. Long:

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 November 2021.

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 November 30, 2021

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.

Table of Contents

- 1. Summary of Quarterly Activities
 - A. Lakehead TS
 - i. Summary of Activities Within Reporting Period & Beyond
 - ii. Life-to-Date Status of Major Items
 - iii. Progress Photos Civil & Electrical
 - iv. Progress Photos Equipment & Building
 - B. Marathon TS
 - i. Summary of Activities Within Reporting Period & Beyond
 - ii. Life-to-Date Status of Major Items
 - iii. Progress Photos Civil & Electrical
 - iv. Progress Photos Equipment & Building
 - C. Wawa TS
 - i. Summary of Activities Within Reporting Period & Beyond
 - ii. Life-to-Date Status of Major Items
 - iii. Progress Photos Civil & Electrical
 - iv. Progress Photos Equipment & Building
- 2. Co-ordination efforts with Upper Canada Transmission Inc., operating as NextBridge Infrastructure, LP (NextBridge)
- 3. Project Schedule Update
- 4. Project Cost Update
- 5. Explanation for Cost Variances
- 6. Risk Management Update

1. Summary of Quarterly Activities

This past quarter has seen an intense effort in finalizing the commissioning of all equipment associated with, and in preparation for, the connection of the new circuits being delivered by NextBridge in March 2022 which will meet the requirements for achieving a transfer capability of 450MW across all stations. The work associated with the station reconfiguration required to the meet NERC and ORTAC criteria, has been progressing in parallel and will continue throughout an extended period of time spread out amongst various available future outage windows. A majority of equipment and protections associated with the station reconfiguration have already been installed and tested.

Civil work at all three stations consists primarily of supporting electrical activities in the yard along with snow removal. Excavation for yard lighting and fiber optic cable runs are some of the current activities required for installation. Electrical work across all three stations continues to be the termination of cables to equipment, grid grounding and supporting commissioning efforts in the form of outage preparation and implementation of planned activities.

The LAN (local area network) is now locally operational at Wawa TS enabling communications among all devices in the PCT building. The RTU (remote terminal unit) is also fully functional to collect status information and alarms from equipment in the station such as transformers and breakers and to provide control to them as well. With the RTU up and running, end-to-end point testing between the protections devices and the equipment have been completed allowing for function testing using jumpers to simulate devices.

Various old protections in the old PCT building at Wawa TS are being cutover to the new protections in the new PCT building. In conjunction with this, various monitoring devices are also being cutover such as breaker current and bus instrument, transformers. Most of the tele-protection equipment that provides communication between stations have been commissioned. Line protections and tele-protections associated with the new circuits being installed by NextBridge, are commissioned and ready to be used. The AC/DC station service equipment and one third of the protections at Wawa TS are complete.

The R1 reactor has been installed and commissioned at Lakehead TS which is ready for use. Fire alarm, heating and air conditioning upgrades have been completed at Lakehead TS in the old 115 kV Control building. Four lightning spikes, various rigid and strain bus work has been completed and the M23L line switch and associated ground switch were replaced.

1. Summary of Quarterly Activities (continued)

Both R3 and R4 reactors have been completely installed and are ready for commissioning at Marathon TS. Various rigid and strain bus work have been completed. The M23L line switch and associated ground switch were replaced.

Monthly meetings with the IESO have been scheduled to discuss progress and implementation of the SPS (Special Protections Scheme) as well as future planned activities in regards to completing the project. For the SPS, the intent is to initially have the 'B' scheme implemented at the same time the line connections go in-service in March 2022, followed by the 'A' scheme a few months later. Due to multiple project requests for SPS implementation requiring NPCC approval, both parties are in discussions as to how to prioritize these requests.

Most of the critical outages in regards to having station work complete at Lakehead, Marathon and Wawa for the preparation of the line connections in March 2022, are complete with only one left at Wawa for bus work in January. The availability of outages, and maintaining approved outages based on system needs, remains the critical part in the sequence of work according to the Staging Plan. Outages are being reviewed by all parties involved and are integral to the completion of the EWT project.

Hydro One continues to have monthly discussions with NextBridge to discuss the status of both parties and outage requirements. A supplemental meeting was scheduled and occurred between Hydro One lines construction crews and NextBridge's linespersons at all three stations over three days, to review the demarcation points and formalities of handing-off cables from one party to another for when the time comes. Hydro One is on schedule to meet the commissioning plan set forth and agreed to by both parties. One of the critical items for Hydro One, as a part of the plan, is obtaining the fiber cable to be used for communications between stations as well as for the Special Protection Scheme. All issues of constructability have been resolved. Only contractual items between the two parties remain and are being worked on.

Risks remain high for outage availability throughout the project. Although a majority of the critical outages have occurred thus far, outage availability still remains a primary concern in the success of the overall project for the connection of lines and station reconfiguration. Risks due to the pandemic situation and the timely delivery of cables, remain but are lower.

A. Lakehead TS - Construction Activities

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

• Work completed between Sep 01, 2021 – Nov 30, 2021

• Civil Construction

- Completed all remaining yard drainage
- Completed a majority of the access road to finish grading
- Completed installation of all gates of most of the fencing
- Removed reactor scaffolding
- Completed 80% of yard stoning in yard expansion

• Electrical Construction

- Completed reactor R1 installation
- Replaced M23L line switch, associated ground switch and existing M23L CVT's
- Completed most of the remaining grid grounding

• Equipment

• Installed one disconnect in preparation for the shunt capacitor bank install

o **Buildings**

- New PCT building
 - Continued to support commissioning activities
- Existing Control building –work performed
 - Completed heating, air conditioning and fire alarm work
 - Continued to support commissioning activities

• Commissioning

- Replaced the M23L line protections for main (A) & alternate (B)
- Replaced L22L23 breaker protections for main (A) & alternate (B)
- Commissioned RTU & LAN control devices which controls all protections
- Commissioned DFR controls to have up and running

• Commissioned LPU (brain) controls for main (A) & alternate (B) of the SPS (Special Protections System)

- New diameter completed and in service
- Reactor commissioned and ready for use

A. Lakehead TS - Construction Activities - continued

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

• Anticipated work to be completed between Dec 2021 - Feb 2021

• Civil Construction

- Install 12 Road Crossing Guard Rails
- Remove 9 Piers to 6" below finished grade
- Provide support for electrical activities
- Snow removal throughout winter months

• Electrical Construction

- Re-cabling activities of CVT's, line switch and breakers to support A21L terminal outage
- Begin shunt capacitor bank installation and associated breakers CB-SC21A and CB-SC21B
- Begin wiring for SC21 capacitor bank, associated breakers, surge caps, ground switch CSC21, neutral PT, rigid bus W2 Bus, and CVT's

o **Buildings**

- New PCT building
 - Support commissioning activities

• Commissioning

- Commission A21L line protections for main (A) & alternate (B)
- Commission HL21 breaker protections for main (A) & alternate (B)
- Commission L21L24 (W2L21) breaker protections for main (A) & alternate (B)
- Continue with commissioning of SPS (Special Protections System)

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> Measure	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	2851	85.6%
Structures		101	ea	92	91.1%
Rigid bus		390	m	312	80.0%
Strain bus		2210	m	1847	83.6%

Equipment Ins	tallation	<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		8	ea	8	6	5	5	68.8%
Reactors/Cap Ba	inks	2	ea	2	1	1	1	55.0%
Switches - Line, I	Disc & Grnd	20	ea	20	19	16	15	83.0%
CVT (Current Vo	tage Transformer)	25	ea	25	18	18	17	73.2%
AC Station Servio	ce	4	ea	4	4	4	4	100.0%
DC Station Servio	ce	2	ea	2	2	2	2	100.0%
Protection racks	(IED modules)	116	ea	116	116	116	50	77.2%
Control equipme	ent	13	ea	13	13	13	13	100.0%
Telecom/Telepro	otion racks (IED modules)	71	ea	62	71	71	26	73.4%

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 Tre	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 - R1 reactor and lightning spikes complete





Lakehead TS – Completed area for SC21 capacitor bank installation

Lakehead TS - newly installed ground grid area around R1 reactor

iv. Progress Photos - Commissioning/Protections



Lakehead – More protection racks commissioned



Lakehead - HVAC and Fire alarm panels commissioned



Lakehead - Newly installed SC21 and R1 reactor protection racks

B. Marathon TS - Construction Activities

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

• Work Completed between Sep 01, 2021 – Nov 30, 2021

• Civil Construction

- Completed all drainage activities
- Completed installation of all fences & gates
- Completed 75% of backfilling to underside of yard stone
- Completed 75% of all yard grading and stoning
- Formed and poured hatches for OWS complete
- Water test for OWS is complete

• Electrical Construction

- Completed rigid and strain bus upgrades per outage requirements
- Replaced M23L line and ground switch
- Completed bus protection cutovers from old to new supporting commissioning activities
- Installed infrastructure cabling in preparation for new yard lighting
- Completed installation of reactors R3 & R4 (strain bus, surge arrestors)

• Buildings

- New PCT building
 - Supported commissioning activities
- Existing Control building –work performed
 - Provided commissioning support during outages in the form of removal and adding cables

• Commissioning

- Commissioned H Bus protections for main (A) & alternate (B)
- Commissioned Transformer T12 protections for main (A) & alternate (B)
- Commissioned W21M protections for main (A) & alternate (B)
- Commissioned HL35 protections for main (A) & alternate (B)
- Commissioned HL21 protections for main (A) & alternate (B)
- Commissioned HL24 protections for main (A) & alternate (B)
- New Instrument transformer HCVT's (3) placed into service

B. Marathon TS - Construction Activities - continued

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

• Anticipated work to be completed between Dec 2021 - Feb 2022

• Civil Construction

- Place Quenching Stone in Reactor Spill Pits
- Install 8 Raised Cable Pan Support Foundations
- Install 12 Road Crossing Guard Rails
- Remove 6 FND's to 6" below Finished Grade
- Electrical Support and Snow Removal

• Electrical Construction

- Begin fiber splicing for OPGW cabling
- Complete yard lights/ fence grounding
- Connect up M37L,M38L,W35M,W36M to line and ground switches
- Build/ assemble breaker and reactor platforms

Buildings

- New PCT building
 - Support commissioning activities
- Existing Control building –work performed
 - o Removals (Old racks and cables)

• Commissioning

• Commission the following protections for main (A) and alternate (B): T11, A Bus, M23L, AL22, W2L35, W2L37, W1L38, W1L36, AL37 AL36, AL23, L21L23, R3, R4

• Commission the following breaker and disconnect switch equipment: W2L35, W2L37, W1L38, W1L36, AL37, AL36, AL23, L21L23

• Commission the following breaker equipment: R3W1, R4W2

• Commission the following reactor and breaker:

R3, R4

• Commission the following switches:

15-M23L, 15M23L-G, 15-W35M, 15-W36M, 15-M37L, 15-M38L

• Commission the following instrument transformers:

ACVT's, W1CVT's, W2CVT's

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	3988	94.5%
Structures		97	ea	96	99.0%
Rigid bus		1247	m	1091	87.5%
Strain bus		3090	m	2793	90.4%

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	n - On Tra	ck					
Breakers	12	ea	12	12	12	7	83.3%
Reactors	2	ea	2	2	2	0	60.0%
Switches - Line, Disc & Grnd	36	ea	36	32	32	17	73.3%
CVT (Current Voltage Transformer)	24	ea	24	24	24	12	80.0%
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	32	69.7%
Control equipment	15	ea	15	15	15	15	100.0%
Telecom/Teleprotion racks (IED's)	83	ea	83	83	82	20	69.3%

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 Wind - represents building and terminations completed to the equipment

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 - R3, and R4 awaiting commissioning activities



Marathon TS - newly installed SF6 gas cart receptacles



Marathon TS - M23L line and ground switch and CVT's being worked on under the M23L/A bus outage

iv. Progress Photos - Equipment & Building



Marathon TS – newly installed R3 and R4 relay protection racks



Marathon TS – newly installed M23L line protection rack



Marathon TS – newly installed Terminal rack in B room

C. Wawa TS - Construction Activities

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

• Work Completed between Sep 01, 2021 – Nov 30, 2021

• Civil Construction

- All civil work for this year has been completed
- Electrical Construction
 - Completed remainder of grid grounding in yard expansion
 - Installed remainder of flexible strain bus from breakers to adjacent bus
 - Spliced one end of the optical telecom fiber
 - Pulling of the remaining AC station service cables are complete
 - Completed installation and grounding of breaker disconnect switches
- Equipment
 - Mounted new boxes for existing instrument transformers
 - Completed pulling and termination of all AC station service cables
- Buildings
 - New PCT building
 - Terminated all cables required by P&C
 - Existing Control building
 - Installed all equipment required by P&C including terminal racks
 - Pulled temporary cables, 25pr cable and fiber cable

• Commissioning

- Commissioned 4-Breaker current transformers and 2-Bus instrument transformers
- Jumpers installed and Function Tested protections
- RTU and LAN equipment operational with point testing in progress
- Cutover plans complete for new protections and being reviewed by engineering

• Commissioned W21/22M PLC's as well as WxM Main Tele-protections for W21,22,35,36M circuits

• Completed commissioning of all WxM line protection relays(8) Breaker Fail protections(6) and Battery Ground Detectors

C. Wawa TS - Construction Activities - continued

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

• Anticipated work to be completed between Dec 2021 - Feb 2022

• Civil Construction

- Support electrical work
- Snow removal activities in yard
- Electrical Construction
 - Pull cables to the W22M, P25W, P26W ,W21M switches
 - Pull cables to the existing CVT's for W22M, P25W, P26W, W21M
 - Complete grid grounding and installing cable drops for the lines W35M/W36M as they become ready
 - Removal of old AC equipment
 - Install yard lighting and gas receptacles throughout yard
 - Support P&C commissioning activities
 - Complete 250m of grounding around line entrance BPE structures
 - Install remaining one breaker platform

• Buildings

- New PCT building
 - Support P&C commissioning activities
- Existing Control building
 - Support P&C commissioning activities

• Commissioning

- Complete function testing of new protections
- Commission new DFR, PSR, NWRAS
- Pre commission J-Mux in preparation for OPGW
- Install temporary wiring in preparation for in servicing new equipment in Q1 2022
- Primary Injection on new bus/breakers (bay4)

ii. Life-to-Date Status of Major Items

Wawa TS

Approvals	<u>Rec'd</u>	<u>% Comp</u>		
EA approvals	Yes	100.0%		
Civil / Electrical Installation	<u>Project</u> <u>Total</u>	<u>Unit of</u> <u>Measure</u>	Installed	<u>% Comp</u>
Civil / Electrical Installati	on - 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	2120	91.4%
Structures	88	ea	88	100.0%
Rigid bus	384	m	384	100.0%
Strain bus	1310	m	1205	92.0%
Lines intermediate structures	3	ea	0	0.0%

Equipment Ins	tallation	<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	1	66.7%
Reactors/Cap B	anks	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Switches - Line,	Disc & Grnd	19	ea	19	16	5	10	55.8%
CVT (Current Vo	ltage Transformer)	15	ea	15	12	12	4	60.7%
AC Station Servi	ce	2	ea	2	2	2	2	100.0%
DC Station Servi	ce	2	ea	2	2	2	2	100.0%
Protection racks	5	64	ea	64	64	64	20	72.5%
Control equipm	ent	15	ea	15	15	13	5	69.3%
Telecom/Telepr	otion racks	64	ea	64	64	55	4	58.3%

<u>pmp</u>

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 Tra	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





Wawa - ATS install for existing breakers

Wawa – AC Station work



Wawa - 1000MCM strain bus installation

iv. Progress Photos - Equipment & Building



Wawa – battery installation



Wawa – new breaker protections



Wawa – wiring 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 continue to hold monthly meetings to discuss the project status, review and update schedules, as well as engineering, construction and outage issues related to connection of the NextBridge lines to Hydro One stations. A supplemental meeting was scheduled and occurred between Hydro One lines construction crews and NextBridge's linespersons to review demarcation points and go over the formalities of handing-off cables from one party to another, for when the time comes.
 - ii. The Construction Cost Recovery Agreement (CCRA) between Hydro One and NextBridge, is close to being completed for the end of 2021. The Connection Facility Agreement (CFA) is also being formulated between both parties which contains more technical and operational details to be completed by the end of Q1 of 2022 just prior to energization of the lines. For the most part, the content has been established for the two agreements with only the legal terms and conditions being reviewed.
- B. Occupancy of Hydro One Property
 - i. All items have been finalized and are complete.
- C. Staging Plan and Support
 - i. Hydro One continues to support NextBridge with their outage requirements. Planned outages continue to be successfully executed according to the Staging Plan.
 - ii. The commissioning plan between Hydro One and NextBridge for scheduling tower placement and lines delivery, has been finalized and agreed to by both parties.
 - iii. Hydro One continues to assist NextBridge in their Work Protection activities related to outages for lines construction, by providing for training and support.

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	On Track
M37L/M38L circuits in-Service for 450MW of transfer capability (2)	31-Mar-22	31-Mar-22	On Track

Station Related Work Marathon TS	Baseline Forecast	Current Forecast	Status
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	On Track
Connection from towers into station	4-Feb-22	4-Feb-22	On Track
M37L/M38L & W35M/W36M circuits in-service for 450MW of transfer capability (2)	31-Mar-22	31-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 (1)	28-Oct-21	17-Jan-22	Delayed
Connection from towers into station	25-Feb-22	25-Feb-22	On Track
W35M/W36M circuits in-service for 450MW of transfer capability (2)	31-Mar-22	31-Mar-22	On Track

Novthridge Polated Interface Work		Current	Statuc	
	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	On Track	
Connection structures ready outside Marathon TS	11-Feb-22	11-Feb-22	On Track	
Connection structures ready outside Wawa TS	25-Feb-22	25-Feb-22	On Track	
Conductor/OPGW/OHGW complete to structure outside Lakehead TS	4-Feb-22	4-Feb-22	On Track	
Conductor/OPGW/OHGW complete to structure outside Marathon TS	11-Feb-22	11-Feb-22	On Track	
Conductor/OPGW/OHGW complete to structure outside Wawa TS	25-Feb-22	25-Feb-22	On Track	

Note (1): Additional time required for commissioning of station Note (2): Planned availability date for 450 MW transfer capability

4. Project Cost Update:

Hydro One-Stations Upgrades Project Reporting Costs Table										
ACTUALS SPENT COST CATEGORIES FOR HYDRO ONE'S STATION UPGRADES PROJECT REPORTING PERIOD \$		S SPENT	ORIGINAL BUDGET	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 REMAINING %	REASONS FOR CHANGE
1	Materials	671,680	64,885,058	51,337,000	0	0.00%	64,840,000	-45,058	-0.07%	none
2	Labour	3,714,763	49,245,202	56,895,000	0	0.00%	54,194,000	4,948,798	9.13%	none
3	Equipment Rental and Contractor Costs	1,044,536	15,792,092	8,920,000	0	0.00%	23,072,000	7,279,908	31.55%	none
4	Sundry	1,707,270	8,879,898	1,305,000	0	0.00%	5,263,000	-3,616,898	-68.72%	none
5	Contingencies	0	0	19,227,000	0	0.00%	3,750,000	3,750,000	100.00%	none
6	Overhead	652,853	14,873,869	13,367,000	0	0.00%	16,577,000	1,703,131	10.27%	none
7	Allowance for Funds During Construction	914,909	10,428,276	6,264,000	0	0.00%	13,504,000	3,075,724	22.78%	none
8	Other Costs									
	TOTAL CONSTRUCTION COSTS	8,706,010	164,104,394	157,315,000	0	0%	181,200,000	17,095,606	9.43%	

For clarification, this table captures all costs incurred up until Nov 30, 2021.

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	
Cutage 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.	High	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	Meduim	Project delays/ cost overrun	High	Coordinate and bundle outage requirements. Delays could cause activities to slide affecting both schedule and possibly cost.	
NextBridge not being able to meet Hydro One's deliverable commitments and/or the in-service date	Meduim	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.	
Cost & Schedule impacts due to COVID- 19 pandemic disruption.	Low	Project delays/ cost overrun	High	Looking for efficiency gains in work methods. Monitor affect of working with new social distancing measures and make adjustmer as required.	
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.	
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	