Hydro One Networks Inc.
7th Floor, South Tower
483 Bay Street
Toronto, Ontario M5G 2P5
www.HydroOne.com

Tel: (416) 345-5393
Cell: (416) 902-4326
Fax: (416) 345-6833
Joanne.Richardson@HydroOne.com

Joanne Richardson
Director, Major Projects and Partnerships
Regulatory Affairs

BY EMAIL AND RESS

June 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 – Final 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.

On June 6, 2022, the OEB informed Hydro One that it expected that Hydro One will file a final quarterly report, in accordance with the requirements previously established by the OEB, for the period of March 1 to March 31, 2022.

In accordance with the aforementioned filing requirements, this final Quarterly Report captures activities for the period ending March 31, 2022.

An electronic copy of this Final 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 March 31, 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 station 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 March 31, 2022

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.

Most recently, on June 6, 2022, the OEB informed Hydro One through correspondence that it expects that Hydro One will file a final quarterly report as the EWT Line is now in-service, in accordance with the requirements previously established by the OEB, for the period of March 1 to March 31, 2022. As part of this final quarterly report, Hydro One should include a table, using the same cost categories as all other quarterly reports, that sets out the final construction costs of stations upgrades for the East-West Tie Project. The OEB informed Hydro One that Hydro One should also provide detailed descriptions for any variances from the budget filed in the leave to construct application to actual costs incurred, including any additional costs incurred (e.g., costs due to the COVID-19 pandemic).

This final quarterly report addresses all aforementioned reporting requirements.

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1. Summary of Quarterly Activities

On March 29, 2022, circuits M37L and M38L from Lakehead TS to Marathon TS were put into service. On the same day, circuits W35M and W36M from Marathon TS to Wawa TS were also put into service. All the equipment and protections associated with these circuits have been in-serviced. Telecommunications over fiber media between stations, has been commissioned and is currently being used for protections. These circuits are available and have been used already.

Various outage windows have been staged to facilitate the remaining work. A majority of equipment and protections associated with the future work, have already been installed and tested.

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 with respect to completing the station reconfigurations. The B-Scheme of the NW RAS that was scheduled to go in-service in March 2022 but has been delayed and is forecasted to be implemented in July 2022. Various requirements are being finalized such as NPCC approval, timing test verification, system impact study and documentation cleanup.

The Connection Facility Agreement (CFA) between Hydro One and NextBridge has been finalized in time for the in-servicing of the new circuits in March 2022. Regular meetings between Hydro One and NextBridge have been replaced with periodic meetings limited to facilitating the telemetry connection (for status information) between the two parties.

Although critical outages no longer have an impact for the new line connections, the availability of outages remains a critical part in the sequencing of further station reconfiguration work according to the Staging Plan.

A. Lakehead TS - Construction Activities

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

- **Work completed between Mar 01, 2022 – Mar 31, 2022**
  - **Civil Construction**
    - Removed 3 Piers to 6" below finished grade
    - Provided support for electrical activities
    - Provided snow removal throughout winter months
  - **Electrical Construction**
    - Completed re-cabling of CVT's, line switches and breakers to support the A21L terminal outage
    - Welded W2 rigid bus connection to capacitor bank
    - Continued with cable removals
  - **Buildings**
    - New PCT building
      - Supported commissioning activities
  - **Commissioning**
    - In-service new M37L and M38L circuits and commissioned JMUX
    - Completed A21L, HL21 & L21L24 A&B protection upgrades
    - Replaced the M24L A&B protections using 2 new CVTs
    - Replace and commissioned disconnect switch and ground switch at M24L terminal
    - Extended diameter to include new W2 Bus, new W2 protections, set of W2 CVTs
    - New Breaker W2L24 made to be a part of W2 bus with new W2L24 A&B protections
    - Cut over HL21, L21L24 (W2L21) and PL24 to new PSR/RTU
    - Work on DDR is complete

A. Lakehead TS - Construction Activities - continued

i. Summary of Activities for Remaining Work to be Done

- **Activities for Remaining Work**
  - Commission shunt capacitor bank
  - Commission NWSPS B and NWRAS A special protections
  - Install yard lighting and upgrade lighting in 'A' building
  - Complete grounding in lower portion of SW yard
  - Begin cable removals from old panels, removing old panels, clean up prints and send in for update
  - Bring access road up to finished grade
  - Install remaining fence

ii. Life-to-Date Status of Major Items

Lakehead TS

Approvals	Rec'd	% Comp
ECA drainage	Yes	100

Civil / Electrical Installation	Project Total	Unit of Measure	Installed	% Comp
Civil / Electrical Installation - 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	**100**	**99.0%**
Rigid bus	390	m	**390**	**100.0%**
Strain bus	2210	m	1910	86.4%

Equipment Installation	Project Total	Unit of Measure	Rec'd/ Built	Installed	Wired	Comm'd	% Comp
Equipment Installation - On Track							
Breakers	8	ea	8	8	8	**8**	**100.0%**
Reactors/Cap Banks	2	ea	2	1	1	1	55.0%
Switches - Line, Disc & Grnd	20	ea	20	**20**	16	**19**	**92.0%**
CVT (Current Voltage Transformer)	25	ea	25	**25**	**25**	22	**95.2%**
AC Station Service	4	ea	4	4	4	4	100.0%
DC Station Service	2	ea	2	2	2	2	100.0%
Protection racks (IED modules)	116	ea	116	116	116	**106**	**96.6%**
Control equipment	13	ea	13	13	13	13	100.0%
Telecom/Teleprotion racks (IED modules)	71	ea	71	71	71	**64**	**96.1%**

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 Installation	Project Total	Unit of Measure	Found'n	Walls /Roof	Mech/ Elect	Comm'd	% Comp
Building Installation - On Track							
PCT (Protection/Control/Telecom) Building	1	%	100.0%	100.0%	100.0%	100.0%	100.0%

Note: All remaining work at the station is to execute the 650MW transfer capability related to future need

iii. Progress Photos – Civil & Electrical

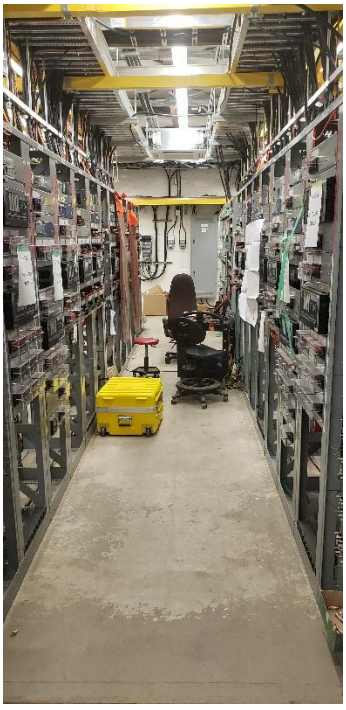
Lakehead TS – Capacitor Bank installation

Lakehead TS – breaker install and bus upgrades

Lakehead TS – CVT installation and 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 Mar 01, 2022 – Mar 31, 2022**

  - **Civil Construction**
    - Installed 8 raised cable pan support foundations
    - Installed remaining Road Crossing Guard Rails
    - Removed 6 foundations to 6" below finished grade
    - 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**
    - Completed 4 sets of line drops from station structures to new circuits
    - Built and installed M24L switch
    - Switch replacements complete for W22M and M24L
    - Last section of 5" H-bus work completed
    - Built and assembled breaker and reactor platforms
  - **Buildings**
    - New PCT building
      - Continued to support commissioning activities
  - **Commissioning**
    - In-serviced new M37L and M38L circuits
    - In-serviced new W35M and W36M circuits
    - Completed commissioning for main (A) and alternate (B) protections of R3 and R4
    - Completed commission for main (A) and alternate (B) protections for M24L, W22M and L22L24 breakers
    - Completed commission for switches: 15-M24L, 5-W22M, 15W22M-G Switches

B. Marathon TS - Construction Activities - continued

i. Summary of Activities for Remaining Work to be Done

- **Activities Remaining**
  - Commission NWSPS B and NWRAS A special protections
  - Install yard lighting
  - Complete grounding in yard
  - Removal of old racks and wiring, and submitting FMP drawings, and general site cleanup
  - Bring access road up to finished grade
  - Install remaining fence

ii. Life-to-Date Status of Major Items

Marathon TS

Approvals	Rec'd	% Comp
EA approvals	Yes	100.0%
ECA drainage	Yes	100.0%

Civil / Electrical Installation	Project Total	Unit of Measure	Installed	% Comp
Civil / Electrical Installation - 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	**4073**	**96.5%**
Structures	97	ea	**97**	**100.0%**
Rigid bus	1247	m	**1172**	**94.0%**
Strain bus	3090	m	**2956**	**95.7%**

Equipment Installation	Project Total	Unit of Measure	Rec'd/ Built	Installed	Wired	Comm'd	% Comp
Equipment Installation - On Track							
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	**34**	**34**	**34**	**95.0%**
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	**132**	**100.0%**
Control equipment	15	ea	15	15	15	15	100.0%
Telecom/Teleprotion racks (IED's)	83	ea	83	83	**83**	**83**	**100.0%**

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 Installation	Project Total	Unit of Measure	Found'n	Walls /Roof	Mech/ Elect	Comm'd	% Comp
Building Installation - On Track							
PCT (Protection/Control/Telecom) Building	1	%	100.0%	100.0%	100.0%	100.0%	100.0%

Note: All remaining work at the station is to execute the 650MW transfer capability related to future need

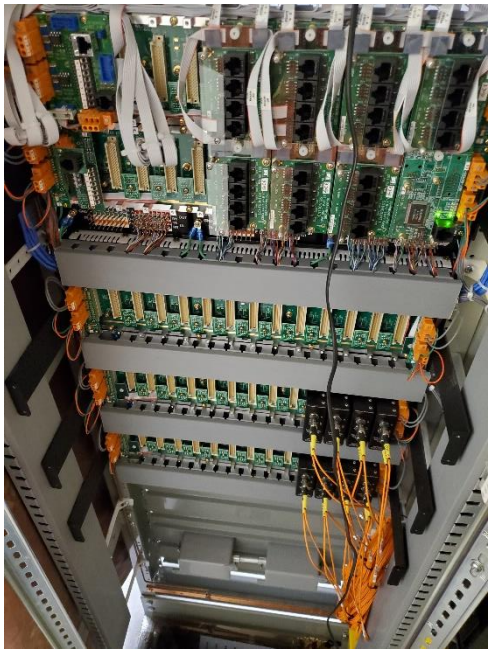
iii. Progress Photos – Civil & Electrical

Marathon TS – line entrance

Marathon TS – grid grounding installation

Marathon TS – switch and CVT installation

iv. Progress Photos – Equipment & Building



Marathon TS –generic rack installation

Marathon TS – back side of JMUX communications racks

Marathon TS – JMUX tele-protections

C. Wawa TS - Construction Activities

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

- **Work Completed between Mar 01, 2022 – Mar 31, 2022**
  - **Civil Construction**
    - Provided support for electrical activities
    - Provided snow removal throughout winter months
    - Continued with grid grounding, cable trenching, yard stoning and fence
  - **Electrical Construction**
    - Cable drops installed for new W35M/W36M circuits
    - Completed cable pulling for the CVT's at W21M terminal
    - Completed W22M replacement
  - **Buildings**
    - New PCT building
      - Supported commissioning activities
    - Existing Control building
      - Supported commissioning activities
  - **Commissioning**
    - In-serviced new W35M and W36M circuits
    - W22M protections complete
    - JMUX tele-protections had been in-serviced
    - NW RAS special protections 'B' scheme has been finalized ready for implementation

C. Wawa TS - Construction Activities - continued

i. Summary of Activities for Remaining Work to be Done

- **Activities Remaining**
  - Commission NWSPS B and NWRAS A special protections
  - Complete grounding in yard
  - Removal of old racks and wiring, and Provide for As-Left settings and cleanup
  - Bring access road up to finished grade
  - Install remaining fence

ii. Life-to-Date Status of Major Items

Wawa TS

Approvals	Rec'd	% Comp
EA approvals	Yes	100.0%

Civil / Electrical Installation	Project Total	Unit of Measure	Installed	% Comp
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	Project Total	Unit of Measure	Rec'd/ Built	Installed	Wired	Comm'd	% Comp
Equipment Installation - On Track							
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 Installation	Project Total	Unit of Measure	Found'n	Walls /Roof	Mech/ Elect	Comm'd	% Comp
Building Installation - On Track							
PCT (Protection/Control/Telecom) Building	1	%	100.0%	100.0%	100.0%	100.0%	100.0%

Note: All remaining work at the station is to execute the 650MW transfer capability related to future need

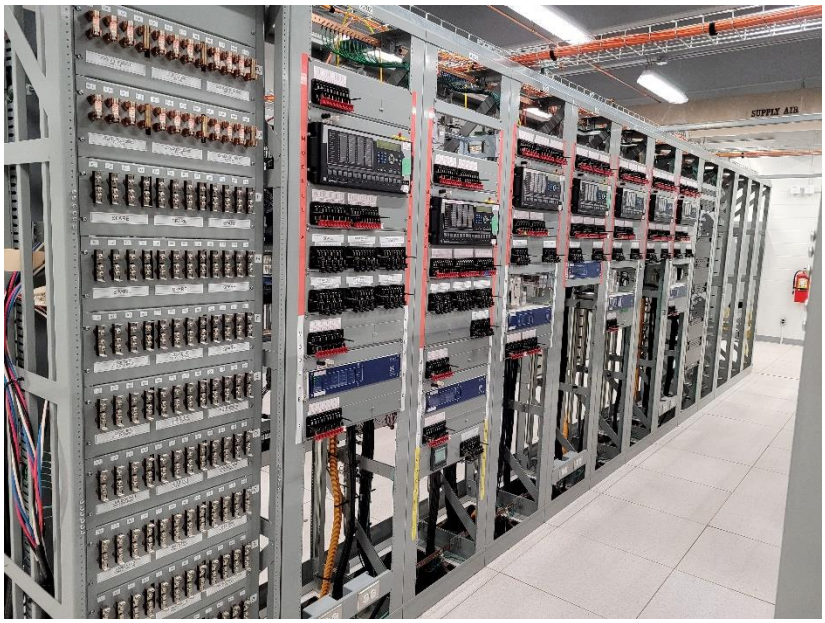
iii. Progress Photos – Civil & Electrical

Wawa – Rigid Bus upgrades

Wawa – CVT installation

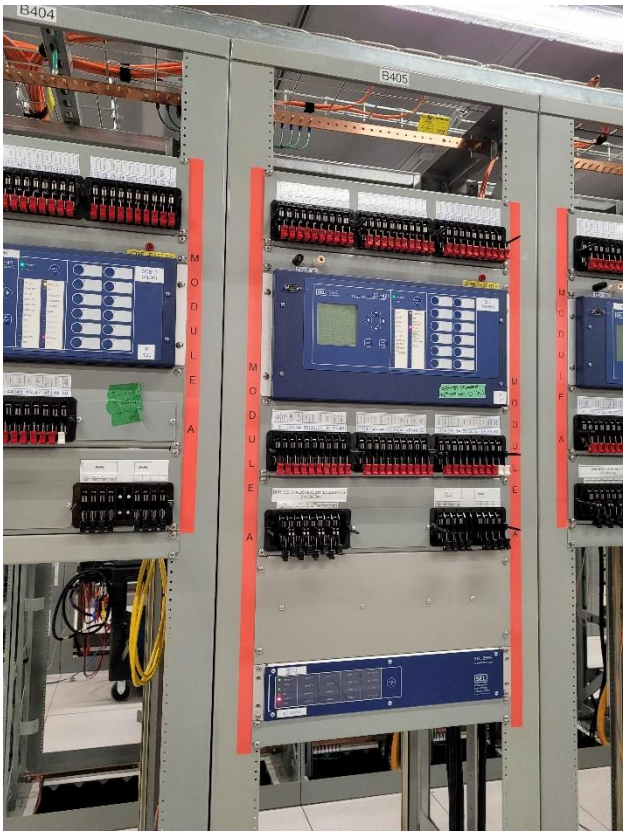
Wawa – Strain bus upgrades

iv. Progress Photos – Equipment & Building



Wawa – Protection, Control & Telecom racks

Wawa –RTU and LAN



Wawa – JMUX racks

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

A. Station Connection:

i. Regular meetings between Hydro One and NextBridge have been replaced with periodic meetings limited to facilitating the telemetry connection (for status information) between the two parties.

ii. The Connection and Cost Recovery Agreement (CCRA) has been filed with the OEB. The Connection Facility Agreement (CFA) between Hydro One and NextBridge is finalized.

B. Staging Plan and Support

i. All planned activities and commissioning for the new circuits are complete.

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*	Complete

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*	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*	Complete

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*	Complete

Nextbridge Related Interface Work	Baseline Forecast	Current 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										
		ACTUALS SPENT		ORIGINAL BUDGET	FORECAST BUDGET VARIANCE					
	COST CATEGORIES FOR HYDRO ONE'S STATION UPGRADES PROJECT REPORTING	**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**	5,722	65,374,772	51,337,000	0	0.00%	64,840,000	-534,772	-0.82%	none
2	**Labour**	9,991,918	62,276,344	56,895,000	0	0.00%	54,194,000	-8,082,344	-14.91%	none
3	**Equipment Rental and Contractor Costs**	686,939	18,405,372	8,920,000	0	0.00%	23,072,000	4,666,628	20.23%	none
4	**Sundry**	82,626	976,088	1,305,000	0	0.00%	5,263,000	4,286,912	81.45%	none
5	**Contingencies**	0	0	19,227,000	0	0.00%	3,750,000	3,750,000	100.00%	none
6	**Overhead**	312,226	15,878,970	13,367,000	0	0.00%	16,577,000	698,030	4.21%	none
7	**Allowance for Funds During Construction**	448,754	11,306,860	6,264,000	0	0.00%	13,504,000	2,197,140	16.27%	none
8	**Other Costs**									
	TOTAL CONSTRUCTION COSTS	**11,528,186**	**174,218,406**	**157,315,000**	**0**	**0%**	**181,200,000**	**6,981,594**	**3.85%**	

For clarification, this table captures all costs incurred up to March 31, 2022.

5. Explanation for Cost Variances

Overall costs did remain well-within the AACE Class 3 estimate originally provided but over the budget filed in the leave to construct application. Variances are identified below which are predominantly driven by external factors including:

- COVID-19 pandemic related impacts;
- Increased AFUDC carrying costs associated with in-service delays due to NextBridge's 5 month delay,
- Additional environmental approval requirement attributed to the MECP (Ministry of Environment, Conservation and Parks) elevation of the Environmental Assessment to a full Class EA, that was received after a Screen-Out EA had been completed. As a result, tree cutting was delayed causing the civil work that was scheduled for summer months to be performed in the winter instead which added snow removal, heating and hoarding being under-estimated; and
- Increased risks associated with outage and weather constraints as previously described in this report.

These uncontrollable costs combined, account for approximately $**11.2**M of the $16.9M actual costs incurred.

The remainder of the cost variances are predominantly attributed to inclement weather, and unforeseen subsurface and bedrock issues that impacted the relay building construction. The bedrock discoveries and extensive soil remediation around the yard expansion and laydown area also increased rental equipment standby charges. As well there was redesign and rework associated with line parameter, staging plan, foundation, cable trench vendor selection and reactor commissioning changes. These drivers have had an impact on all categories of the budget.

These costs could not have been captured in the original desktop estimating exercise. These costs could only be unearthed once the project matured significantly from the original 2017 estimate to the point where it now has a more defined project execution plan.

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	**No risk - complete**	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