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

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

Joanne Richardson
Director, Major Projects and Partnerships
Regulatory Affairs

BY EMAIL, RESS AND COURIER

December 20, 2019

Ms. Christine E. Long
Board Secretary
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 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, the OEB sent a letter to Hydro One outlining further reporting requirements.

In accordance with the aforementioned filing requirements, this Quarterly Report captures activities up to November 30, 2019.

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

Sincerely,

ORIGINAL SIGNED BY JOANNE RICHARDSON

Joanne Richardson

Hydro One - East-West Tie Station Project
OEB File Number EB-2017-0194
Quarterly Report
Period Ending November 30, 2019

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. This report addresses all reporting requirements.

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1. Summary of Quarterly Activities

Construction has progressed well at all three stations being Lakehead TS, Marathon TS, and Wawa TS. Hydro One can confirm that the Project is currently on time and on budget. All material has been ordered to support construction and future commissioning activities. All EA approvals and municipal permits have now been received allowing for Marathon TS and Wawa TS activities to proceed on time.

The first phase of constructing the control buildings at all three stations, are well under way. Once complete, the second phase of installing protection racks and DC distribution equipment will follow. Phase one construction activities for the Lakehead & Marathon control buildings will be complete by Q1 of 2020 with the Wawa control building completed by Q2 of 2020.

Station connection and readiness timelines are on track. All stations will be ready to accept and be able to connect tower cables, in line with NextBridge's schedule. A Staging Plan, which outlines various lines and station activities in conjunction with planned outage requirements, was created and coordinated with NextBridge. The station schedules are aligned with the Staging Plan with all three stations and lines going into service at the same time.

In regards to project costs, the Project is on budget. With respect to reporting on project costs, Hydro One is proposing a modified Project Cost table, including the additional column as per the latest OEB request, which Hydro One believes more accurately represents the project status. For comparison purposes of the two tables, Hydro One has provided both the version as requested per the filing requirements (Section 4.a) and the new proposed version (Section 4.b). The total forecast budget of the Project remains unchanged. Going forward, the budget looks healthy aligning with the costs spent.

Overall the risk impact has been reduced and is lower than the previous report. Environmental issues have been resolved with the EA (Environmental Assessment) being completed. An additional risk of having commissioning resources available, has been added and is being managed. To date, risks have been mitigated by either a re-alignment of the schedule or by altering construction methods.

A. Lakehead TS - Construction Activities

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

- **Work Completed between Sept 01 – Nov 30, 2019**
  - Footings/Piers installed
    - 4 - Circuit Breaker Pier Foundations in Bays 9 & 10
    - 8 – Bus Support Structure Pier Foundations in Bays 9 & 10
    - 8 – Insulated Bus Support Pier Structures in Bays 9 & 10
    - 2 – Station Service Transformer Panel Pier Foundation in Bays 9 & 10
    - 6 – Single Pole Ground Switch Structure Pier Foundation in Bays 9 & 10
    - 16 – Bus Disconnect Switch Stand Pier Structures in Bays 9 & 10
    - 9 – C.V.T (Current Voltage Transformer) Support Structure Pier Foundations in Bays 9 & 10
  - Cable trench - 240m installed in Bays 9 & 10
  - Grounding Grid - Partial grounding grid installed in Bays 9 & 10
  - Structures
    - All the lattice steel installed exception for line entrance lattice structures
    - Installed all switch and bus steel in south and middle sections of bays 9 & 10 including 4 sets of breaker disconnect switches
  - Strain Bus – 127m installed between lattice structures in Bays 9 & 10
  - Breakers - Installed 2 breakers on pads
  - AC Station Service – Installed 2 station service transformers on pads
  - Brought 60 % 0f the yard expansion to underside of yard stoning grade

- **Anticipated work to be completed between Dec 2019 - Feb 2020**
  - Foundations - Begin installation of Oil Water Separator & Spill pit for Reactor
  - Footings/Piers - All to be completed in Bays 9 & 10. Complete overhead cable pan footings
  - Cable trench – Continue with cable trench installation in Bays 9 & 10
  - Grounding Grid – Complete installation in Bays 9 & 10
  - Structures - Install Line Entrance lattice steel structures.
  - Protection Racks - Begin PCT (Protection/Control/Telecom) rack building
  - PCT building – Complete building construction including civil, electrical distribution & HVAC installation.
  - Asbestos removals in existing building

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	0	0.0%
Footings - Piers	223	ea	128	57.4%
Cable Trench	1500	m	573	38.2%
Grounding Grid	3330	m	486	14.6%
Structures	101	ea	12	11.9%
Rigid bus	390	m	0	0.0%
Strain bus	2210	m	127	5.7%

Equipment Installation	Project Total	Unit of Measure	Rec'd/ Built	Installed	Wired	Comm'd	% Comp
Equipment Installation - On Track							
Breakers	8	ea	2	0	0	0	2.5%
Reactors/Cap Banks	2	ea	0	0	0	0	0.0%
Switches - Line, Disc & Grnd	20	ea	14	0	0	0	7.0%
CVT (Current Voltage Transformer)	25	ea	25	0	0	0	10.0%
AC Station Service	4	ea	2	1	0	0	10.0%
DC Station Service	2	ea	0	0	0	0	0.0%
Protection racks	116	ea	2	0	0	0	0.2%
Control equipment	13	ea	0	0	0	0	0.0%
Telecom/Teleprotion racks	71	ea	0	0	0	0	0.0%

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, 15% 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%	0.0%	0.0%	0.0%	20.0%

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, ligting and distribution panels completed in building*

Comm'd - *represents 'Commissioned' being substantially complete as designed, for it's intended purpose*

% Compl - *represents % complete weighting: 20% for foundations, 40% for Walls/Roof, 30% for Mech/Elect, 10% for commissioned*

iii. Progress Photos – Civil & Electrical

Lakehead - Bay 9 & 10 new lattice steel structures and towers

Lakehead - Bay 9 and 10 new bus support structures/switch structure

Lakehead - Side view of Bay 9 and 10 with new cable trench

iv. Progress Photos – Equipment & Building

AC TF-SS installed and cables pulled to new AC panel board and safety switch location

Lakehead - ABB breakers

Lakehead - New PCT Building

B. Marathon TS - Construction Activities

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

- **Work Completed between Sept 01 – Nov 30, 2019**
  - Footings/Piers installed
    - 5 - Circuit Breaker Pier Foundations – Bay 4, 5, 6, 7 & 8
    - 16 – Bus Disc. Switch Stand Pier Structures – Bay 4, 5, 6, 7 & 8
    - 12 – C.V.T (Current Voltage Transformer) Support Structure Pier Foundations – Bay 4, 5, 6, 7 & 8
    - 2 – Station Service Transformer Panel Pier Foundation
    - 37 – Bus Support Structure Pier Foundations - Bay 1, 4, 5, 6, 7 & 8
    - 8 – Insulated Bus Support Pier Structures - Bay 1, 4, 5, 6, 7 & 8
    - 8 – Lattice Tower Pier Structures - Bay 5, 6, 7
    - 6 – Ground Interrupter Support Pier Foundations - Bay 5, & 8
  - Cable Trench – 110m of Cable trench installed in Bay 5 through 8
  - Grounding Grid - Completed grounding in Bay 1 & 4 and 50% grounding in Bay 5
  - Existing Control Building – relocated walls in preparation for new protection racks and batteries

- **Anticipated work to be completed between Dec 2019 - Feb 2020**
  - Footings/Piers – Continue with installation of piers in east side of yard. Complete installation of Lattice Tower Pier Structure footings along west side of yard along Grid line C
  - Cable Trench – Complete installation of A&B Cable trench runs in west side of yard running through all Bays
  - Grounding Grid – Continue with grounding grid in Bays 5 to 7
  - Structures - Install tower and lattice structures which will accept new circuits, M37L & M38L, coming from Lakehead TS
  - Strain Bus – Begin installation of strain bus in west side of yard
  - Switches – install line switches for M37L & M38L circuits
  - PCT building – Complete building construction including civil, electrical distribution & HVAC installation

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	0	0.0%
Footings - Piers	376	ea	146	38.8%
Cable Trench	1663	m	251	15.1%
Grounding Grid	4220	m	200	4.7%
Structures	97	ea	0	0.0%
Rigid bus	1247	m	0	0.0%
Strain bus	3090	m	0	0.0%

Equipment Installation	Project Total	Unit of Measure	Rec'd/ Built	Installed	Wired	Comm'd	% Comp
Equipment Installation - On Track							
Breakers	12	ea	0	0	0	0	0.0%
Reactors	2	ea	0	0	0	0	0.0%
Switches - Line, Disc & Grnd	36	ea	28	0	0	0	7.8%
CVT (Current Voltage Transformer)	24	ea	24	0	0	0	10.0%
AC Station Service	2	ea	0	0	0	0	0.0%
DC Station Service	2	ea	0	0	0	0	0.0%
Protection racks	132	ea	55	0	0	0	4.2%
Control equipment	15	ea	0	0	0	0	0.0%
Telecom/Teleprotion racks	83	ea	80	0	0	0	9.6%

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, 15% 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%	0.0%	0.0%	0.0%	20.0%

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, ligting and distribution panels completed in building*

Comm'd - *represents 'Commissioned' being substantially complete as designed, for it's intended purpose*

% Compl - *represents % complete weighting: 20% for foundations, 40% for Walls/Roof, 30% for Mech/Elect, 10% for commissioned*

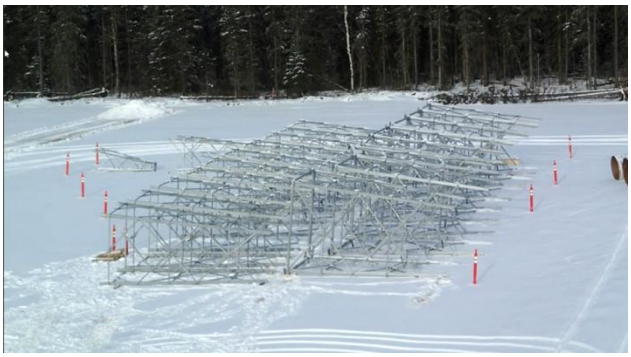
iii. Progress Photos – Civil & Electrical

Marathon - Material Laydown area and Bay 6 & 8 foundations

Marathon - Bay 4, 5, 6, & 8 foundations

Marathon - Bay 8 foundations

iv. Progress Photos – Equipment & Building



Marathon - Assembled Lattice steel sections

Marathon - Bays 4, 5, 6 ground grid

Marathon - New PCT building

C. Wawa TS - Construction Activities

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

- **Work Completed between Sept 01 – Nov 30, 2019**
  - Footings/Piers - All piers have been installed prior Sept 01
  - Cable trench – Partially installed in Bays 3 & 4
  - Grounding Grid - Partial grounding in Bay 3 & 4
  - Structures – Tower and lattice structures installed at east side of yard
  - Strain Bus – 60m installed between lattice structures in Bays 3 & 4
  - Switches – Line switches installed for W35M & W36M circuits
  - Protection Racks – 22 racks built at panel shop
  - CVT (Current Voltage Transformer) – installed 3 below lattice structures
  - PCT Building – Started construction on PCT building upon EA approval

- **Anticipated work to be completed between Dec 2019 - Feb 2020**
  - Footings/Piers – Install footings for bus supports, lattice structures, switch structure supports & bus disconnect supports in Bays 3 & 4
  - Cable Trench – Install various road crossings
  - Structures – continue with bus, switch and equipment structures
  - Strain Bus – continue to install strain bus among lattice structures
  - Protection Racks – complete rack building
  - PCT building – continue with civil, electrical distribution & HVAC installation

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	680	70.7%
Grounding Grid	2320	m	580	25.0%
Structures	88	ea	18	20.5%
Rigid bus	384	m	0	0.0%
Strain bus	1310	m	60	4.6%
Lines intermediate structures	3	ea	0	0.0%

Equipment Installation	Project Total	Unit of Measure	Rec'd/ Built	Installed	Wired	Comm'd	% Comp
Equipment Installation - On Track							
Breakers	6	ea	0	0	0	0	0.0%
Reactors/Cap Banks	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Switches - Line, Disc & Grnd	19	ea	6	2	0	0	5.3%
CVT (Current Voltage Transformer)	15	ea	15	3	0	0	14.0%
AC Station Service	2	ea	2	0	0	0	10.0%
DC Station Service	2	ea	0	0	0	0	0.0%
Protection racks	104	ea	22	0	0	0	2.1%
Control equipment	15	ea	0	0	0	0	0.0%
Telecom/Teleprotion racks	64	ea	0	0	0	0	0.0%

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, 15% 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	%	15.2%	0.0%	0.0%	0.0%	3.0%

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, ligting and distribution panels completed in building*

Comm'd - *represents 'Commissioned' being substantially complete as designed, for it's intended purpose*

% Compl - *represents % complete weighting: 20% for foundations, 40% for Walls/Roof, 30% for Mech/Elect, 10% for commissioned*

iii. Progress Photos – Civil & Electrical

Wawa - Bay 3 and 4 aerial view – looking West

Wawa - Bay 4 new lattice steel structure

Wawa - Crews preparing for Bay 3 and Bay 4 new strain bus installation:

iv. Progress Photos – Equipment & Building

Wawa - W36M CVT's

Wawa - New yard expansion – new 230kV PCT building

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

1. Station Connection:
    a. Hydro One and NextBridge project teams have held monthly meetings (conference calls) to discuss the project status, schedules and milestones, as well as engineering, construction and outage issues related to connection of the NextBridge lines to Hydro One stations.

    b. Hydro One and NextBridge are developing a Construction Cost Recovery Agreement which describes the tasks and milestones/schedules for completing the connection of the NextBridge lines to Hydro One stations.

2. Transmission Line Crossings and NextBridge Temporary Land Use:
    a. T1M Crossings – In discussions with the IESO and NextBridge (Oct.1, 2019), Hydro One emphasized the future impact of four crossings of the EWT line over T1M in a short span and explained that present decisions on crossing versus relocating T1M can have future financial and reliability implications. While it may be possible to meet the minimum clearance and other design criteria at these four crossings, the long-term serviceability and work safety requirements may result in having both circuits of the EWT line as well as T1M out of service during maintenance and replacement work(s). This may result in unnecessary outages and require coordination between the IESO, NextBridge and Hydro One. The outages will impact the East-West power transfer and the system cost for the duration of the outages. The IESO and NextBridge verbally acknowledged Hydro One's concerns. Following the discussions, NextBridge submitted updated design/drawings for the four T1M crossings, aimed at meeting HONI's requirements for operation, maintenance and future upgrade of T1M. These are under review and if accepted, would eliminate the need for relocating T1M.

    b. Other Crossings/Proximities – Revised EWT line crossings of, or proximities to, Hydro One transmission lines outside of Wawa TS lands are being reviewed. The approval of these crossings requires coordination with the final design and placement of the NextBridge towers outside the station fence (i.e. station egress design) as the positioning of these towers could impact vertical clearances required for the two crossings.

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

2. Transmission Line Crossings and NextBridge Temporary Land Use: - continued

    c. Temporary use of Hydro One Access Roads –
        - Hydro One has approved NextBridge request for temporary longitudinal use (as opposed to crossing) of access roads and ROW associated with NextBridge's Work Fronts (WFs) 3, 4, 5, 6, 9, 10 and 11.
        - Hydro One and NextBridge (via CanACRE) are discussing the temporary use and access of station lands to permit preliminary work (such as clearing, material storage, etc.) and additional workspaces that may be needed beyond the boundaries of the proposed station easements. Hydro One will review the application once site plan drawings have been submitted.

3. Occupancy of Hydro One Property

    Easements for EWT line on Hydro One station properties and Bill 58 lands are being reviewed. The easement agreements will be finalized once the NextBridge towers outside the station fences have been finalized and HONI can confirm that Reference Plans matching the design drawings are available.

4. Staging Plan

    The Staging plan, which outlines various lines/station activities along with planned outage requirements, was updated through coordination efforts with NextBridge. The latest Staging plan will allow for the in-servicing of all three stations and lines, at the same time.

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) and connection from towers into station (1)	*19-Apr-21*	*15-Jul-20*	Modified - advanced
Station ready for In-Service	*29-May-21*	*29-May-21*	On Track

Note (1): Date changed to align with NextBridge schedule for readiness

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) and connection from towers into station	*19-Apr-21*	*19-Apr-21*	On Track
Station ready for In-Service	*14-Jun-21*	*14-Jun-21*	On Track

Station Related Work Wawa TS	Baseline Forecast	Current Forecast	Status
Direction from MECP to Hydro One regarding Screening Level EA and 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	*7-Dec-20*	*7-Dec-20*	On Track
Connection from towers into station	*19-Apr-21*	*19-Apr-21*	On Track
Station ready for In-Service	*28-Oct-21*	*28-Oct-21*	On Track

Nextbridge Related Interface Work	Baseline Forecast	Current Forecast	Status
Connection structures ready outside Lakehead TS	*30-Mar-20*	*30-Mar-20*	On Track
Connection structures ready outside Marathon TS	*19-Apr-21*	*19-Apr-21*	On Track
Connection structures ready outside Wawa TS	*31-Aug-21*	*31-Aug-21*	On Track
Conductor/OPGW/OHGW complete to structure outside Lakehead TS	*15-Jul-20*	*15-Jul-20*	On Track
Conductor/OPGW/OHGW complete to structure outside Marathon TS	*15-Jun-21*	*15-Jun-21*	On Track
Conductor/OPGW/OHGW complete to structure outside Wawa TS (2)	*31-Oct-21*	*17-Oct-21*	Modified - advanced
Lines/Grounding Spec deliverables for Lakehead TS	*19-Oct-20*	*19-Oct-20*	On Track
Lines/Grounding Spec deliverables for Marathon TS	*19-Oct-20*	*19-Oct-20*	On Track
Lines/Grounding Spec deliverables for Wawa TS	*19-Feb-21*	*19-Feb-21*	On Track

Note (2): Date changed to align with NextBridge readiness schedule in order to have the entire system in-service

4. a. Project Cost Update – Format as per OEB change request

Hydro One-Stations Upgrades Project Reporting Costs Table- request by OEB										
		ACTUALS SPENT		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=C-B** BUDGET REMAINING $	E=D/C*100 BUDGET REMAINING %	**F** FORECAST BUDGET CHANGE FROM LAST REPORT $	**G** FORECAST BUDGET CHANGE FROM LAST REPORT %	**H** REVISED TOTAL BUDGET	REASONS FOR CHANGE
1	**Materials**	5,738,294	18,946,656	51,337,000	32,390,344	63.09%	-3,331,000	-6.49%	48,006,000	see note 1 below
2	**Labour**	1,814,741	18,400,029	56,895,000	38,494,971	67.66%	-745,000	-1.31%	56,150,000	see note 2 below
3	**Equipment Rental and Contractor Costs**	3,896,643	8,699,453	8,920,000	220,547	2.47%	3,614,000	40.52%	12,534,000	see note 3 below
4	**Sundry**	115,008	1,483,800	1,305,000	-178,800	-13.70%	462,000	35.40%	1,767,000	see note 4 below
5	**Contingencies**	0	0	19,227,000	19,227,000	100.00%	0	0.00%	19,227,000	On-Track
6	**Overhead**	1,360,353	5,105,546	13,367,000	8,261,454	61.80%	0	0.00%	13,367,000	On-Track
7	**Allowance for Funds During Construction**	159,268	1,707,657	6,264,000	4,556,343	72.74%	0	0.00%	6,264,000	On-Track
8	**Other Costs**									
	TOTAL CONSTRUCTION COSTS	**13,084,307**	**54,343,140**	**157,315,000**	**102,971,860**	**65.46%**	**0**	**0%**	**157,315,000**	

Please note, for clarification, this table captures all costs incurred up until November 30, 2019.

Note 1. Materials: **Budget reallocation from 'Materials' to 'Contractor Costs' as a result of Estimate review** - *Engineering & Construction contracts were incorrectly estimated under 'Materials'. The Grounding Study, Geotechnical service & HVAC services under Engineering 'Materials' should have gone to 'Contractor Costs'. Construction tipping fees and toilets/bins under Construction "Materials' should have gone to 'Contractor Costs'.*

Note 2. Labour: **Budget reallocation from 'Labour' to 'Sundry' & 'Contractor Costs' as a result of Estimate review** - *Various Project Management & Engineering sundry costs should have been in 'Sundry' to begin with. Engineering building specification work was originally estimated to be done in-house when in fact it was contracted out.*

Note 3. Equipment Rental & Contractor Costs: **Budget reallocation to 'Equipment Rental & Contractor Costs' from 'Materials' and 'Labour' as a result of Estimate review/ Cost reallocation to 'Equipment Rental & Contractor Costs' from 'Sundry' as a result of Spending review** - *as per Note 1 & 2 above, budgets should have been in '*Equipment Rental & Contractor Costs*' to begin with. Various costs were charged against 'Sundry' when they should have been charged against* 'Equipment Rental & Contractor Costs'.

Note 4. Sundry: **Budget reallocation to 'Sundry' from 'Labour' as a result of Estimate review/ Cost reallocation from 'Sundry' to 'Equipment Rental & Contractor Costs' as a result of Spending review** - *as per Note 2 above, sundry costs should have been in 'Sundry' to begin with. As per Note 3 above, costs should have been charged against* 'Equipment Rental & Contractor Costs'.

4. b. Project Cost Update – Format as proposed by HONI

Hydro One-Stations Upgrades Project Reporting Costs Table - proposed by HONI										
	COST CATEGORIES FOR HYDRO ONE'S STATION UPGRADES PROJECT REPORTING	ACTUALS 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**	5,738,294	19,002,932	51,337,000	-3,331,000	-6.49%	48,006,000	29,003,068	60.42%	see note 1 below
2	**Labour**	1,814,741	18,400,029	56,895,000	-745,000	-1.31%	56,150,000	37,749,971	67.23%	see note 2 below
3	**Equipment Rental and Contractor Costs**	3,896,643	9,276,253	8,920,000	3,614,000	40.52%	12,534,000	3,257,747	25.99%	see note 3 below
4	**Sundry**	115,008	850,724	1,305,000	462,000	35.40%	1,767,000	916,276	51.85%	see note 4 below
5	**Contingencies**			19,227,000	0	0.00%	19,227,000	19,227,000	100.00%	no change
6	**Overhead**	1,360,353	5,105,546	13,367,000	0	0.00%	13,367,000	8,261,454	61.80%	no change
7	**Allowance for Funds During Construction**	159,268	1,707,657	6,264,000	0	0.00%	6,264,000	4,556,343	72.74%	no change
8	**Other Costs**									
	TOTAL CONSTRUCTION COSTS	**13,084,307**	**54,343,140**	**157,315,000**	**0**	**0%**	**157,315,000**	**102,971,860**	**65.46%**	

Please note, for clarification, this table captures all costs incurred up until November 30, 2019.
Hydro One is suggesting this format be used in future reports as it reflects 'Budget Remaining' with respect to the 'Revised Total Budget' as apposed to the original budget.

Note 1. Materials: **Budget reallocation from 'Materials' to 'Contractor Costs' as a result of Estimate review** - *Engineering & Construction contracts were incorrectly estimated under 'Materials'. The Grounding Study, Geotechnical service & HVAC services under Engineering 'Materials' should have gone to 'Contractor Costs'. Construction tipping fees and toilets/bins under Construction "Materials' should have gone to 'Contractor Costs'.*

Note 2. Labour: **Budget reallocation from 'Labour' to 'Sundry' & 'Contractor Costs' as a result of Estimate review** - *Various Project Management & Engineering sundry costs should have been in 'Sundry' to begin with. Engineering building specification work was originally estimated to be done in-house when in fact it was contracted out.*

Note 3. Equipment Rental & Contractor Costs: **Budget reallocation to 'Equipment Rental & Contractor Costs' from 'Materials' and 'Labour' as a result of Estimate review/ Cost reallocation to 'Equipment Rental & Contractor Costs' from 'Sundry' as a result of Spending review** - *as per Note 1 & 2 above, budgets should have been in '*Equipment Rental & Contractor Costs*' to begin with. Various costs were charged against 'Sundry' when they should have been charged against* 'Equipment Rental & Contractor Costs'.

Note 4. Sundry: **Budget reallocation to 'Sundry' from 'Labour' as a result of Estimate review/ Cost reallocation from 'Sundry' to 'Equipment Rental & Contractor Costs' as a result of Spending review** - *as per Note 2 above, sundry costs should have been in 'Sundry' to begin with. As per Note 3 above, costs should have been charged against* 'Equipment Rental & Contractor Costs'.

5. 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
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
Outage availability considerations	Low	Project delays/ cost overrun	Medium	Minimize outage requirements. Delays could cause activities to slide affecting both schedule and possibly cost.
Material delivery delay considerations	Low	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.
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.
Commissioning resource availability due to compressed schedule	Low	Project delays/ cost overrun	Medium	Commissioning looking at efficiency gains for pre-commissioning racks. Assessing whether construction/commissioning activities can occur in tandem in an efficient manner