Hydro One Networks Inc.

7<sup>th</sup> 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

March 20, 2020

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 for month-end February 2020.

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 February 29, 2020

### 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.

### **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. Risk Management Update

### 1. Summary of Quarterly Activities

Construction is continuing to progress 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. The remaining material to be received, is arriving in a timely manner to allow construction and commissioning activities to continue as planned. All approvals and permits have now been received allowing for Lakehead TS, Marathon TS and Wawa TS activities to proceed on time. Each of the stations have steel structure and bus installation activities going on with civil work mostly complete. More breakers and switches are being installed.

As a part of the first phase of constructing the control buildings at all three stations, Lakehead TS has its building complete with the protection racks starting to be installed. Installation of DC distribution equipment and terminal racks will follow after. The building at Marathon TS is complete ready for occupancy with the Wawa TS control building completed by Q2 of 2020. It will take Construction 2-3 months to have equipment installed in each building at which point commissioning can begin.

Station connection and readiness timelines are on track. All stations are already prepared to accept and be able to connect tower cables, in line with NextBridge's schedule. The Staging Plan is continuously being reviewed with the coordination efforts of NextBridge, which outlines various lines and station activities in conjunction with planned outage requirements. The Staging Plan has been shared with NextBridge to ensure station schedules are aligned with the line schedules allowing all three stations and lines to be able to go into service at the same time. For ease of legibility and comparability with the last report, any changes since the last report in the Life to Date Status of Major Items submissions for each of the stations have been **bolded**.

In regards to project costs, the Project is on budget. The overall total forecast budget of the Project remains unchanged as per the previous report.

The overall risk impact remains the same. Risk impact is low with material risks diminishing as time goes by and outages being managed by the Staging Plan. The commissioning resource availability risk is being managed by accelerating testing and preparation activities prior to commissioning itself. The schedule is continuously being re-aligned and some construction activities are being accelerated in an effort to mitigate risks even further however the Project schedule at this point remains unchanged and Hydro One remains on target for Project completion..

### A. Lakehead TS - Construction Activities

## Summary of Activities from last Reporting Period to Next Reporting Period

- Work Completed between Dec 01, 2019 Feb 29, 2020
  - o Footings/Piers & Foundations
    - All footings/piers have been completed in Bays 9 & 10
    - Installed 39m of road crossing, 14 raised pan footings
    - 1 bus disconnect switch, 1 breaker foundation complete
    - Oil Water Separator & Spill pit for Reactor has been started
  - o Cable trench & Grid Grounding installed Bays 9 & 10 complete
  - Structures
    - Line Entrance & various lattice steel structures installed
  - o Bus
- completed strain bus for H/P, W1, L37/38
- rigid bus installation south end of Bays 9&10
- o CVT's installed H/P bus CVT's
- o Breakers installed & grounded W1L37 & W1L38
- Switches
  - Installed switches W1L37-L37/38-38
  - grounded/installed drive pipe assembly on switches W1L37-L37/L38-L38, PL37-L37/L38-L38, PL37-P/PL38-H
- PCT building
  - · Assembled 'B' protection racks
- o Asbestos removals in existing building has started

### Anticipated work to be completed between Mar - May 2020

- o Foundations continue with Oil Water Separator & Spill pit for reactor
- o Install remainder of raised cable pan foundations
- Complete asbestos ceiling tile removals
- o Strain Bus Install A bus & H bus strain bus
- Switches Install M37L & M38L Line disconnect switches
- Install M37L & M38L CVT's
- o Install rigid bus supports in Bay 5,6,7,8 to mid portion of yard
- New 230kV building
  - Install all(130) relay racks
  - · Install 6 terminal racks in new building
  - Install 8 DC monitoring cabinets
  - Install "A", "B" DC panels
  - Install "A"," B" Battery banks

### ii. Life-to-Date Status of Major Items

#### Lakehead TS

Approvals	Rec'd	% Comp
ECA drainage	Yes	100

Civil / Electrica	l Installation	Project Total	<u>Unit of</u> <u>Measure</u>	Installed	% Comp
	Civil / Electrical Installati	ion - On	Track		
Foundations		2	ea	0	0.0%
Footings - Piers		223	ea	153	68.6%
Cable Trench		1500	m	819	54.6%
Grounding Grid		3330	m	858	25.8%
Structures		101	ea	38	37.6%
Rigid bus		390	m	65	16.7%
Strain bus		2210	m	706	31.9%

Equipment Ins	tallation	Project Total	<u>Unit of</u> <u>Measure</u>	Rec'd/ Built	Installed	Wired	Comm'd	% Comp
	Equipment Installation -	On Trac	ck					
Breakers		8	ea	4	4	0	0	15.0%
Reactors/Cap B	anks	2	ea	0	0	0	0	0.0%
Switches - Line,	Disc & Grnd	20	ea	14	6	0	0	13.0%
CVT (Current Vo	ltage Transformer)	25	ea	25	6	0	0	14.8%
AC Station Servi	ce	4	ea	2	2	0	0	15.0%
DC Station Servi	ce	2	ea	0	0	0	0	0.0%
Protection racks	5	116	ea	2	0	0	0	0.2%
Control equipme	ent	13	ea	0	0	0	0	0.0%
Telecom/Telepr	otion 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, 20% for Installed, 30% for wired, 40% for commissioned

Building Install	ation	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%

#### **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 - 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



New 230kV building rack installation



Lakehead - ABB breakers



**Lakehead - New PCT Building (complete)** 

### B. Marathon TS - Construction Activities

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

### Work Completed between Dec 01, 2019 – Feb 29, 2020

- o Footings/Piers & Foundations
  - Lattice tower pier structures along west side of yard complete
  - Various other footings and piers complete
- $\circ\,$  Cable trench 310m installed with installation of A&B cable trench runs complete in west side of yard
- o Grounding Grid
  - Bays 1 & 4 complete
  - Bays 5, 6, 7,& 8 are 65% complete
- Structures
  - Remaining 36 lattice towers have been assembled
  - Bays 5, 6, 7, 8 all have 12 remaining to be erected with M37L & M38L tower and lattice structures complete
- o Strain Bus L37 & L38 strain bus on west side of yard has been installed
- o Switches line switches for M37L & M38L circuits installed
- o PCT building complete. Ready to install equipment.

### Anticipated work to be completed between Mar - May 2020

- o Footings/Piers & Foundations
  - Bus and switch support footing/piers in Bay 5, Bay 6, Bay 7
  - Breaker foundations in Bay 5
  - Tower foundations in Bay 5, Bay 6 & Bay 7
- o Bus
- install H bus strain bus
- Install rigid bus support s in Bays 5, 6, 7, 8 to mid-portion of yard
- Switches
  - Install M37L Line disconnect switch
  - Install M38L line disconnect switch
- PCT Building
  - Install all(130) relay rack in new 230 KV building
  - Install 6 terminal racks in new building
  - Install 8 DC monitoring cabinets in new 230 KV building
  - Install "A", "B" DC panels
  - Install "A"," B" Battery banks
- o CVT Install M37L & M38L CVT's

### 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 / Electrica	Civil / Electrical Installation			Installed	% Comp
	Civil / Electrical Installat	ion - On	Track		
Foundations		3	ea	0	0.0%
Footings - Piers		376	ea	176	46.8%
Cable Trench		1663	m	561	33.7%
Grounding Grid		4220	m	2300	54.5%
Structures		97	ea	36	37.1%
Rigid bus		1247	m	0	0.0%
Strain bus		3090	m	1548	50.1%

Equipment Installation		Project Total	Unit of Measure	Rec'd/ Built	Installed	Wired	Comm'd	% Comp
Equipment Inst	allation -	On Tra	ck					
Breakers		12	ea	4	2	0	0	6.7%
Reactors		2	ea	0	0	0	0	0.0%
Switches - Line, Disc & Grnd		36	ea	30	0	0	0	8.3%
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	132	0	0	0	10.0%
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, 20% for Installed, 30% for wired, 40% for commissioned

Building Instal	lation	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%

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

## iii. Progress Photos - Civil & Electrical



Marathon - Assembling lattice steel for Bay 7



Marathon - Bay 6 & 7 securing lattice steel



Marathon - Bay 5 & 8 strain bus span install

## iv. Progress Photos - Equipment & Building



Marathon - Cable trench to PCT building



Marathon - inside PCT building



Marathon - New PCT building

### C. Wawa TS - Construction Activities

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

### Work Completed between Dec 01, 2019 - Feb 29, 2020

- Footings/Piers Installed footings for bus supports, lattice structures and switch structures
- Cable trench Installed various road crossings
- Structures
  - 88 received with 75 installed
  - supports & bus disconnect supports in Bays 3 & 4
- o Bus
  - Strain Bus 1000m installed among lattice structures
  - Rigid bus 175m installed
- Ground Grid 650m installed
- Switches 12 switches installed
- o Breakers 4 installed
- Protection Racks 48 racks built at panel shop
- o CVT (Current Voltage Transformer) installed 12 at various locations
- o PCT Building Foundation completed with walls being started

### Anticipated work to be completed between Mar - May 2020

- o Footings/Piers civil work complete
- o Cable trench Install 6 road crossings
- Structures install remaining structures
- o Rigid Bus install remaining rigid bus
- o Strain Bus install between switches, breakers and rigid buses
- $\circ\;$  Switches installation and grounding of line & breaker switches
- o Breakers Receive and install last 2 breakers
- CVT's install F1X/F2X boxes and ground CVT's
- o Protection Racks complete remaining racks
- o 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	<u>Unit of</u> <u>Measure</u>	Installed	% Comp
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	680	70.7%
Grounding Grid	2320	m	650	28.0%
Structures	88	ea	75	85.2%
Rigid bus	384	m	175	45.6%
Strain bus	1310	m	1000	76.3%
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 Trac	:k					
Breakers	6	ea	4	4	0	0	20.0%
Reactors/Cap Banks	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Switches - Line, Disc & Grnd	19	ea	13	12	0	0	19.5%
CVT (Current Voltage Transformer)	15	ea	15	12	0	0	26.0%
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	48	0	0	0	4.6%
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, 20% for Installed, 30% for wired, 40% for commissioned

Building Instal	lation	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%	10.0%	0.0%	0.0%	24.0%

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

## iii. Progress Photos - Civil & Electrical



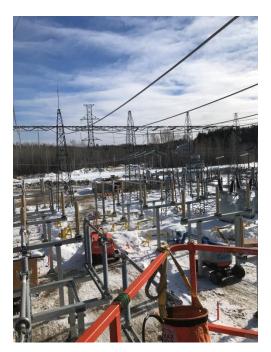
Wawa – Bay 3 & 4 bus support structures



Wawa – Bay 3 & 4 bus & switch support structures



Wawa – Bay 3 & 4 bus support structures



Wawa – Bay 3 & 4 bus support structures

## iv. Progress Photos - Equipment & Building



Wawa - Bay 4 tower C-E



Wawa - Bay 4 to Bay 3



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 are continuing to hold 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 continuing to develop 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 Hydro One reviewed and approved the location and design of the NextBridge towers outside Wawa TS and crossings of circuit T1M.
  - b. Other Crossings/Proximities For now, there are no other EWT line crossings anticipated. Any future crossings will have to be reviewed.
  - c. Temporary use of Hydro One Access Roads Hydro One and NextBridge (via CanACRE) are finalizing the agreement for 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.
- 3. Occupancy of Hydro One Property

The reference plans for Easements for the EWT line on Hydro One station properties and Bill 58 lands are being reviewed and the easement agreements are being finalized

### 4. Staging Plan

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

## 3. Project Schedule Update:

Station Related Work Lakehead TS	Baseline Current Forecast Forecast		Status	
Drainage Environmental Compliance Approval (ECA) received	1-Apr-19	1-Apr-19	Complete	
Station Readiness (infrastructure) and connection from towers into station	19-Apr-21	15-Jul-20	On Track - advanced	
Station ready for In-Service	29-May-21	29-May-21	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	1ar-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	31-Oct-21	17-Oct-21	On Track - 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	

Project Schedule has not changed since the last report with the "modified-advanced" statuses all as outlined in the last report.

## 4. Project Cost Update - As per previous agreed upon Format

	Hydro One-Stations Upgrades Project Reporting Costs Table									
		ACTUALS SPENT		ORIGINAL BUDGET	FORECAST BUDGET VARIANCE					
S	ST CATEGORIES FOR HYDRO ONE'S FATION UPGRADES ROJECT 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	9,098,819	34,943,211	51,337,000	0	0.00%	48,006,000	13,062,789	27.21%	no change
2	Labour	4,680,710	23,732,325	56,895,000	0	0.00%	56,150,000	32,417,675	57.73%	no change
3	Equipment Rental and Contractor Costs	872,318	7,428,553	8,920,000	0	0.00%	12,534,000	5,105,447	40.73%	no change
4	Sundry	145,604	1,791,487	1,305,000	0	0.00%	1,767,000	-24,487	-1.39%	no change
5	Contingencies	0		19,227,000	0	0.00%	19,227,000	19,227,000	100.00%	no change
6	Overhead	1,300,535	7,622,741	13,367,000	0	0.00%	13,367,000	5,744,259	42.97%	no change
7	Allowance for Funds During Construction	483,828	2,587,462	6,264,000	0	0.00%	6,264,000	3,676,538	58.69%	no change
8	Other Costs									
	TOTAL CONSTRUCTION COSTS	16,581,813	78,105,779	157,315,000	0	0%	157,315,000	79,209,221	50.35%	

Please note, for clarification, this table captures all costs incurred up until February 29, 2020.

## 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