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September 13, 2018

VIA RESS, EMAIL, and COURIER

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Dear Ms. Walli,

Re: Enbridge Gas Distribution Inc. ("Enbridge") – GTA Project
Ontario Energy Board ("OEB") EB-2012-0451 and EB-2016-0034
Conditions of Approval – Post Construction Financial Report

On February 18, 2016, the OEB issued the Decision and Order in the EB-2016-0034 proceeding. As per the OEB's Decision, Enbridge was required to complete and file with the OEB a Post Construction Financial Report within fifteen months of the in-service date. The in-service date for the Ashtonbee Station was June 13, 2017.

Enclosed please find the Post Construction Financial Report for the Ashtonbee Station.

Please contact me if you have any questions.

Sincerely,

(Original Signed)

Bonnie Jean Adams
Regulatory Affairs Coordinator

cc: Zora Crnojacki (Chair, OPCC) via email

EB-2016-0034

Ashtonbee Station

Post-Construction Financial Report on Costs and Variances – September 13, 2018

1.0 INTRODUCTION

On February 5, 2016, Enbridge Gas Distribution Inc. (Enbridge) filed a Request to Vary for file number EB-2012-0451 (GTA Project) to relocate the proposed Jonesville Station from the original planned site at the corner of Jonesville Crescent and Eglinton Avenue to a new site at the northeast corner of Pharmacy Avenue and Ashtonbee Road ("Ashtonbee Station"). The Ontario Energy Board (the Board) assigned file number EB-2016-0034 to the Request to Vary. On February 18, 2016 the Board approved Enbridge's Request to Vary and granted leave to construct the proposed Ashtonbee station and associated facilities.

An Interim Monitoring Report for the Ashtonbee Station was filed with the Board on December 13, 2017.

Enbridge is filing this Post-Construction Financial Report Pursuant to the Conditions of Approval set out in the GTA Project Decision. This Post-Construction Financial Report summarizes the actual capital costs of the project and provides an explanation of variances from the original estimate.

2.0 PROJECT SUMMARY

Station construction activities began in July 2016. On June13, 2017, Enbridge informed the Board that Ashtonbee Station had been energized. Monitoring was completed during construction work to ensure measures were implemented to mitigate any environmental impacts. Final restoration was completed in November 2017 following completion of the paved walking path repairs. A commitment was made to the City of Toronto to assist with reconditioning the Wexford Park Car Lot. Construction of the parking lot was completed in 2018. No residual or cumulative effects on environmental or socio-economic features are anticipated from this project. No further monitoring is required.

3.0 COST AND VARIANCE REPORTING

The total original cost estimate for Jonesville Station was $10.9M including escalation, as reported in EB-2012-0451 Exhibit C Tab 2 Schedule 1. The estimated incremental cost due to the site change from Jonesville Station to Ashtonbee Station was reported in the Request to Vary under file EB-2016-0034 as $3.5M. The updated cost estimate for Ashtonbee Station was $14.4M. The actual project cost is $22.4M.

A detailed comparison of actual versus estimated project costs is shown in Table 1 below.

Table 1 – Total Project Costs

Ashtonbee Station Project

Item No.	Breakdown	Costs filed with OEB (Jonesville Station)[1]	Incremental Costs (Request to Vary)[2]	Updated Cost Estimate	Actual	Variance
1.0	Land	$22,089	$1,500,000	$1,522,089	$850,341[3]	$(671,748)
2.0	Engineering	$694,339	$500,000	$1,194,339	$1,747,281	$552,942
3.0	Procurement	$3,390,109	$700,000	$4,090,109	$3,969,402	$(120,707)
4.0	Construction Contractor Costs	$6,026,974	$800,000	$6,826,974	$11,493,051	$4,666,077
5.0	Construction Management and Project Management	$565,832	--	$565,832	$3,499,050	$2,933,218
6.0	Commissioning and Start Up	$179,255	--	$179,255	$154,370	$(24,885)
SUBTOTAL			--	--	$21,713,495	--
7.0	Contingency	--	--	--	--	--
8.0	Interest During Construction	--	--	--	$702,771	$702,771
TOTAL		**$10,878,598**	**$3,500,000**	**$14,378,598**	**$22,416,266**	**$8,037,668**

Reasons for the cost variances are set out below:

1. The final land cost is approximately $0.84M and the final variance from the original estimate to ($0.68M). The land lease costs for a twenty year lease are $0.74M, approximately $0.78M less than the original estimate submitted to the Board. In order to receive permanent easement rights for the station lands, an additional estimated $0.1M will be required to complete the Official Plan Amendment process.

2. The final costs for engineering are $1.7M, approximately $0.6M more than the original updated estimate. The difference between the estimated and actual costs can be attributed to design scope changes encountered throughout the project as a result of permitting processes/conditions and unanticipated site conditions including:

[1] Costs in this column include escalation
[2] Costs in this column were estimated to be directly attributable to the site location change as per Request to Vary under case number EB-2016-0034
[3] This cost includes an estimate of $95,000 to complete an Official Plan Amendment application. The land costs to date are $745,341.

- The need to relocate the proposed hydro service for the station due to future expansion plans for a nearby Toronto Water substation impacting the station design
- Additional design work for a deeper foundation and on-site verification of work completed for the building for City building/occupancy permit requirements
- Engineering assessment work to create a settlement monitoring plan for the Ministry of Environment and Climate Change Permit to Take Water
- Additional design work to increase clearances beyond the minimum required distances between proposed piping in the hydro corridor and existing infrastructure
- Additional design work due to the required relocation of the station outlet piping to account for unanticipated ground conditions

3. The final costs for procurement are $4.0M, marginally less than the updated cost estimate.

4. The final costs for construction contractor costs, construction management and project management are $15M, approximately $7.6M more than the original updated estimate.

   The construction contractor cost variance is explained as follows:

Sub-Category	**Variance**	**Comments**
Contractor Bid Updates for Location Change	$2.7M	The original contractor cost estimate for completing Jonesville Station was approximately $6.0 M. At the time the Request to Vary was submitted, the additional cost to construct what was essentially the same station design, but with longer tie-in piping connections at the Ashtonbee Station site, was estimated at $0.8M for total $6.8M in costs for the relocated station. At this time, estimates were based on preliminary designs. At the start of construction when the project scope was more clearly defined, the revised contractor costs for relocating the station site from the Jonesville site to the Ashtonbee site resulted in an initial contract target price of $9.5M. This variance of $2.7M includes costs for: - Relocating the Jonesville site to the Ashtonbee site, resulted in more difficult tie-ins due to greater depth of the existing pipeline. In addition,

		the existing piping system could not be taken offline and required additional piping configuration to remain online. These additional requirements resulted in extra contractor cost to support this work. - Carrying a contractor project team dedicated to Ashtonbee Station beyond the timelines of the GTA Project - Additional requirements for working around site specific constraints at the Ashtonbee location including: o Temporary working space site constraints such as low hanging Toronto Hydro wires and a large Toronto Water reservoir in vicinity of the tie-in piping o Access/egress and working hour restrictions to minimize impacts on nearby Toronto Water and City Parks lands and on an Emergency Medical Services building in close proximity to the site
Permit Delays	$0.4M	The original anticipated construction start period that initial contractor estimates were based on was early May 2016 in order to have Ashtonbee Station in-service for the Winter 2016/2017 heating season. Due to delays in securing a land lease for the Ashtonbee Station land, construction on the station site could not begin until mid-July 2016. In addition, delays were experienced in receiving the Building Permit for the site. Due to the later construction start date and time lost from permitting delays, weekend work at an additional cost was implemented with the goal of maintaining the original in-service date prior to the 2016/2017 heating season. The weekend work aided greatly in expediting the construction schedule but this measure was not enough to overcome the late construction start. Work was extended into the winter season, decreasing efficiency and therefore increasing construction costs. The schedule delays placed the anticipated timeframe to complete complex work to connect the station into

		existing vital infrastructure during the unpredictable, cold temperatures of the winter season.[4] Additional costs for maintaining the construction site were incurred due to the need to delay this work to the warmer spring months to mitigate risks to gas supply and to ensure safe, reliable system operations in the Greater Toronto Area.
Scope Changes	$1.6M	This consisted of: - Implementing construction field changes due to permitting conditions as previously outlined in the engineering design revisions - Implementing measures as required by stakeholders in proximity to the project site to minimize the impact of construction (e.g. restoring condition of nearby parking lot, completing pre- and post-construction surveys on infrastructure in the vicinity of the site, additional security measures, laying of sod to restore park lands) - Due to limited working space, the tie in excavation could not be fully excavated in advance. Upon excavation, there were unsafe and unfavorable ground conditions, resulting in relocating the tie in point. This relocation required in an amendment to the existing easement agreement. This amendment had a turnaround time of approximately 3 months.
TOTAL	$4.7M	

The construction management and project management variance is explained as follows:

Sub-Category	**Variance**	**Comments**
Project Management	$1.1M	Project management costs are related to project delivery timelines for Ashtonbee Station that were not concurrent with the remainder of the GTA Project work. Had Ashtonbee Station been completed at the same time that other stations on the GTA Project were constructed, there would have been cost efficiencies for having the same project team personnel manage all of the station work simultaneously (e.g. construction managers, project managers, project controls staff,

[4] Ontario Energy Board advised of this schedule update through a letter under case number EB-2016-0034 dated January 13, 2017

		quality control staff). As Ashtonbee Station was completed separately at a later date, a project team was assembled solely for the purpose of executing the work for this one station. In addition, schedule delays caused by permitting and unanticipated scope changes in the tie-in work lengthened the construction schedule and led to additional project management costs for timelines that extended beyond the original anticipated schedule.
Construction Support	$1.8M	Similar to project management costs, construction support costs were related to project delivery timelines for Ashtonbee Station that began after the conclusion of the remaining GTA Project work. This included costs for items such as permitting support, environmental support, radiographic inspection and internal labour for tie-in activities. These were all resources that would have been readily available during the GTA Project at minimal additional costs but with delayed timelines, needed to be sourced at a later date at full cost specifically for Ashtonbee Station work. The schedule delays mentioned above also led to additional construction costs for requiring construction support such as third party inspection for extended timelines. As well, scope definition that identified the need for hot tie-in work to take place added construction management costs for equipment and labour to perform this specialized task.
TOTAL	$2.9M	

5. The final costs for commissioning and start up are $0.2M, marginally less than estimated at the time of filing the Request to Vary.

6. The costs for interest during construction are $0.7M. Costs were incurred for interest due to the delays associated with the relocation from the Jonesville site to the Ashtonbee site and due to permit delays as outlined above.

4.0 CONCLUSION

The Ashtonbee Station Project was completed with a total project cost of $22.4 million, approximately $8 million over the revised cost estimate for the project. The primary reasons for the variances are additional construction and construction support costs related to the change in location of this station, permitting delays, and scope changes.