

ENBRIDGE GAS DISTRIBUTION INC. RESPONSE TO  
BOARD STAFF INTERROGATORY #13

INTERROGATORY

Issue: A-3

***Are the costs of the facilities and the rate impacts to customers appropriate?***

REF: EB-2012-0451, Overall Proposal  
EB-2012-0433, Overall Proposal  
EB-2013-0074, Overall Proposal

Preamble

Where applicable, the following questions are to be answered by both Companies separately.

Questions

- a) Please summarize the rate and bill impacts of the GTA Project on Enbridge's rate classes. Please separately summarize the rate and bill impacts of the two Union Projects on Enbridge's rate classes. Please provide a 5-year projection that shows the impacts of the GTA and Union Projects on the overall customer bill, and the delivery rates, transportation rates and load balancing rates.
- b) Please provide an assessment of the impact on Enbridge's and Union's transactional services business of the subject applications.
- c) Please provide an overview of the procurement and tendering process at Enbridge and Union for the services and assets required for the GTA Project and the Union projects. Please explain how gas customers, stakeholders and shareholders can be assured that they are getting the best possible value for money from the procurement process.
- d) Please describe how the projects are financed to completion. Please include a discussion of financial support timing and any interim financing, debt issuances, relevant interest rates, debt servicing costs and interest during construction. How and when will the projects close to Rate Base for each company?

Witnesses: K. Culbert  
C. Fernandes  
T. Horton  
A. Kacicnik  
B. Madrid  
S. Murray

- e) With respect to the volume forecast underpinning Enbridge's need, to what extent is the downtown Toronto residential condominium development, current and proposed, driving the need? Please discuss.
- f) For large capital projects \$50 million and over, what is Enbridge and Union's 10-year track record on estimated vs. actual project costs? Were they over or under budget? Were they completed per planned date, or not? Please list each project \$50 million and over. What are the main areas of divergence in the actual vs. estimated costs and what are the main areas of risk in estimating costs?

**RESPONSE**

- a) Please see the response to Environmental Defence IR#21, at Exhibit I.A4.EGD.ED.21, which depicts the rate impacts of the GTA Project and the rate impacts of the GTA project inclusive of gas cost savings. The following table provides the rate impacts of the GTA project (inclusive of gas costs savings) and the impact of the two Union projects on Enbridge's rate classes. The impacts are based on 2016 and are relative to the April 2013 QRAM rates.

		<b>BUNDLED RATES</b>	
<b>Rate Class</b>		<b>Sales Service</b>	
1		-1.5%	
6		-2.5%	
9		-3.9%	
100		-5.1%	
110		-5.1%	
115		-5.8%	
135		-6.4%	
145		-5.6%	
170		-6.7%	
200		-3.8%	
		<b>UNBUNDLED RATES</b>	
125		23.9%	
300		8.7%	

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- b) The GTA Project has been developed to meet load growth, enhance safety and reliability in the system, and reduce supply chain risks. The GTA Project is being undertaken without regard for EGD's ability to generate Transactional Services revenue. Enbridge cannot speculate whether there is a positive or negative impact on Transactional Services. Enbridge's Transactional Services are based upon surplus assets and transportation at times of the year when it is not needed. Transactional Service opportunities do not form a part of the Company's gas supply plan. Enbridge is not able to speculate if, in the future, excess assets will be available for Transactional Services and what value may be placed upon those assets.
- c) Enbridge intends to add value for money from the procurement process by applying procurement best practices, which includes prequalification of the industry standard contractors with adequate capacity, credibility, safe work practices, and quality. This will be followed by sourcing through the RFP process comprising Independent technical and commercial evaluation with appropriate weightage to both evaluations.
- d) The GTA project assumes a forecast overall mix and average cost of debt of 5.75% during the construction period, and is assumed to be closed to Rate Base on October 15th, 2015, where it is assumed to be financed within the Enbridge required overall capital structure ratios.
- e) The total peak hourly load forecast from apartment/condo's in 2025 is 14.9% of the total daily peak hourly load forecast for the GTA project influence area. The total historical hourly load forecast from apartment/condo's in 2012 was 14.7% of the total historical peak hourly load. Please note this uses the same methodology to derive peak hourly volumes on historical volumes as described in response to Environmental Defence IR#3, at Exhibit I.A4.EGD.ED.3.
- f) Enbridge has only had one project at or in excess of \$50 million during the 2003 to 2012 periods. This is described below.

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### Toronto Portlands Reinforcement Pipeline (EB-2006-0305)

Costs (\$millions, %):

<u>Estimated</u>	<u>Revision</u>	<u>Actual</u>	<u>Variance to Original Estimate</u>	<u>Variance to Revised Estimate</u>
41.7	67.2	61.0	19.3 (46%)	- 6.2 (-9%)

Schedule:

<u>Activity</u>	<u>Original Estimated Date</u>	<u>Actual South NPS 20</u>	<u>Actual North NPS 36</u>
Start	July 2007	August 2007	January 2008
Completion	December 2007	January 2008	October 2008

Revision impacted dates for actuals

The original estimate for the project as filed in December 2006 was \$41.7 million. A revision was made in October 2007 and the revised estimate became \$67.2 million.

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The increase in costs and schedule delays are a result of the following:

- Construction Labour increase was partially the result of additional horizontal directional drilling, but primarily attributed to increased construction costs in 2007 and 2008, a period of intense activity and limited labour supply in the pipeline construction industry.
- Land Costs were higher due to “over the fence” land evaluation from Ontario Realty Corporation.
- The External Costs variance is attributed to additional environmental work, inspection, survey, legal, and insurance expenses.
- Higher Environmental Assessment costs arose from additional open houses and soil assessment.
- Extra inspection services were required to cover multiple construction sites concurrently.
- Additional legal and insurance expenses were the result of the Expropriation Application (EB-2007-0692) to acquire easements for the project.
- Survey expenses were higher due to the extended construction period and additional survey requirements mandated by the Ministry of Transportation Ontario relating to the crossing of Highway 401.

In 2009, the project costs were audited by the Ontario Power Authority (PEC power contract issuer) and found to be reasonable.

### **Project Management Framework**

As filed at Exhibit C, Tab 2, and Schedules 1 and 3, the GTA Project will be executed using the project management framework developed by the Enbridge Group of Companies – Project Life Cycle Gating Control (“PLGC”). Through the use of this risk based project development and execution framework, Enbridge has been able to deliver high cost, technically complex, and strategically important projects.

Through the adaptation of the PLGC framework, the GTA Project will benefit from the rigorous risk management processes and control points along with proprietary tools and assessment frameworks developed by Enbridge Group of Companies.

The Project will leverage the extensive experience gained through the delivery of the projects shown below specifically in the areas of cost and schedule control, construction, and quality assurance.

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Since the Enbridge Group of Companies implemented the PLGC framework, it has executed a number of similarly sized and costed pipeline projects. A summary of the results of similar pipeline projects completed by 2012 are below:

	Estimated Cost	Cost Variance <sup>‡</sup>	Schedule Variance
Project A	Larger	On Budget	On-Time
Project B	Larger	On Budget	On-Time
Project C	Similar	Below Budget	On-Time
Project D	Smaller	Below Budget	On-Time
Project E	Similar	Over Budget	On-Time
Project F	Similar	Over Budget	On-Time
Project G	Similar	Over Budget	On-Time
Project H	Similar	On Budget	Ahead

<sup>‡</sup>All projects were completed within 10% of their estimated cost.

The most significant cost risk is project scope definition, thus rigorous engineering, survey work and planning has been undertaken to mitigate scope risk. The congested urban construction environment adds complexity due to permitting, right of way access and acquisition, restricted workspace, and numerous utility and road crossings. However the impacts of these construction complexities are well understood and included in the estimate and plan.

Market escalation is also a significant source of exposure due to the extended project timeline, since material and labour pricing cannot be locked in until the project is fully approved. Therefore higher than anticipated increases in material costs or labour rates, or market factors that decrease labour productivity or availability can increase costs. The project has included escalation in the estimate to mitigate this risk.

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