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**VIA RESS, EMAIL and COURIER**

Ms. Kirsten Walli  
Ontario Energy Board  
2300 Yonge Street  
Suite 2700  
Toronto, Ontario  
M4P 1E4

**Re: EB-2012-0459 - Enbridge Gas Distribution Inc. ("Enbridge")  
2014 – 2018 Rate Application  
Undertaking Responses**

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Further to Enbridge Gas Distribution's filing of March 13, 2014, enclosed please find the following undertaking responses:

Exhibits J1.6, J5.2, J5.9, J5.19, J6.6, J8.1, J9.1, J9.5, and J10.2

This submission was filed through the Board's RESS and is available on the Company's website at [www.enbridgegas.com/ratecase](http://www.enbridgegas.com/ratecase).

Yours truly,

(Original Signed)

Lorraine Chiasson  
Regulatory Coordinator

cc: Mr. F. Cass, Aird & Berlis  
EB-2012-0459 Intervenors

## UNDERTAKING J1.6

### UNDERTAKING

TR 108

To confirm whether there is at least \$130 million in productivity savings in the forecast.

### RESPONSE

EGD has made specific cost commitments to the Board, stakeholders, and ultimately EGD's ratepayers along a variety of dimensions, both for O&M and for Capital expenditures. The balance of this response will set about quantifying those commitments, and indeed it can be seen that the productivity commitments do in fact sum to an amount greater than the \$130 million referenced in cross examination. As discussed throughout the body of evidence and the testimony of EGD's witnesses, EGD has not specifically identified all of the productivity initiatives that will aid the Company in the management of its costs for the duration of its Customized IR term.

Before proceeding with an examination of the productivity commitments made as part of its Customized IR application, the concept of productivity commitments should be put into the proper context. As the Board and stakeholders are well aware, within an 'I-X' construct, the X-Factor represents a productivity commitment by the utility to its ratepayers. It is a guarantee to hold the revenue or rate increase to an amount less than inflation (however the inflation is measured). Under this formula, the utility is not required to provide a delineated list of initiatives that will generate those productivity savings. For one, the utility will often not know at the time of plan creation what productivity opportunities may be available as technologies, processes, and incentives evolve. What is important is that the productivity commitment is made to ratepayers, and the utility has to manage within the confines of that commitment if it is to succeed in IR. In this way, the utility is required to act in ways that are aligned with the behaviour of firms in a competitive industry. That is, if the firm is successful in managing its costs, then it stands to be rewarded.

Similarly, EGD's productivity commitment is made to the Board and stakeholders in advance of knowing specifically all of the initiatives that will produce enhanced productivity 5 years hence. Through this plan, EGD has provided not only a guarantee as to productivity commitments, but also to the inflation amounts (namely the 'I' Factor) to produce 5 years of essentially fixed revenues. In EGD's view, this creates the very same incentives to manage costs as exists within an 'I-X' plan construct, particularly

Witness: M. Lister

given that the inflation rate under EGD's Customized IR Plan is essentially fixed, regardless of what actual inflation rates become.

The information provided below has been culled from various references throughout the evidentiary record. Of particular note, please see the following sources and references:

- Exhibit A2, Tab 1, Schedule 1
- Exhibit A2, Tab 1, Schedule 2
- Exhibit B2, Tab 1, Schedule 1
- Exhibit D1, Tab 3, Schedule 1
- Exhibit I.A2.EGDI.STAFF.19
- Exhibit I.B18.EGDI.STAFF.55
- Exhibit I.B18.EGDI.SEC.93
- TCU3.14

### Productivity Commitments

Within the evidence, the productivity commitments are addressed in a number of ways.

First, there are embedded savings reflected within aspects of the capital and O&M budgets, where the forecast costs to be included within Allowed Revenues are lower than what Enbridge believes will be the actual costs. The gap will have to be addressed through productivity savings. Within the 2014 to 2018 Capital Budget, these embedded savings total \$162 million. Within the 2014 to 2018 O&M Budget, these embedded savings total \$172 million. If the Company is not able to manage its costs accordingly, then it will be at risk for under earning relative to the Allowed ROE, and thus, the utility is incentivized to manage its costs within the total revenue envelope.

Second, Enbridge has identified that there are additional "variable" costs that may arise during the Customized IR term, which are not included within the forecast budget amounts. The reason why the costs are not included is that they are not certain. However, it is very likely that at least some and potentially many of these variable costs will arise. The variable costs identified and excluded from the 2014 to 2018 Capital Budget total \$264 million. The decision to exclude the variable costs from the budgets used for the Customized IR plan is different from what would often occur through a cost of service filing.

Witness: M. Lister

Details of the items described above are set out below.

Capital Budget

\$ Millions	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	Comments
Customer Attachments	\$25.9	\$25.5	\$24.4	\$24.6	\$26.5	The Company is committed to holding its capital costs per customer to pre-2012 levels throughout the forecast period, representing a significant and immediate productivity challenge for Enbridge. The estimated value of this commitment is \$127 million over the term of the plan.
Departmental Labour	\$0.3	\$3.2	\$2.7	\$4.2	\$5.8	The Company's commitment to keep its departmental labour costs relatively flat over the forecast period demonstrates a productivity commitment in the order of \$16 million.
2017 and 2018 inflation challenges				\$6.4	\$13.0	The Company's commitment to hold its 2017 and 2018 capital spend to the 2016 level demonstrates further productivity commitments. In the context of continued growth of customer additions of about 40,000 per year and an expected inflation rate of about 2% per year, the Company will have to manage an additional \$19M (excluding overheads).
<b>Total</b>	<b>\$26.2</b>	<b>\$28.7</b>	<b>\$27.0</b>	<b>\$35.3</b>	<b>\$45.3</b>	<b>\$162.6 Million</b>

O&M Budget

\$ Millions	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	Comments
Merit Increase	\$1.2	\$2.0	\$2.5	\$3.5	\$4.6	Holding the budget for merit increases to lower than expected amounts creates a \$14 million cost pressure to be managed by the Company through the term of the plan.
Employee Benefits	\$2.1	\$2.2	\$2.3	\$3.3	\$4.4	Employee benefits costs are expected to increase 6.1% annually, resulting in an additional productivity commitment of \$14 million.

Witness: M. Lister

\$ Millions	2014	2015	2016	2017	2018	Comments
Incremental Cost to Service new customers	\$1.5	\$1.6	\$1.7	\$1.8	\$1.8	The service work associated with adding new customers has not been included in the O&M budget. Excluding these incremental costs will result in additional budget challenges of \$1.5 to \$1.7M per year, or an estimated \$8 million over the term of the plan.
Incremental Safety & Integrity work	\$8.9	\$9.1	\$9.3	\$9.5	\$9.7	The costs related to safety and integrity work are expected to grow at a rate much faster than inflation. This will result in a need to find efficiencies in order to offset these incremental cost increases, which are expected to total \$46 million over the 2014-2018 period.
External Contractor rate increases	\$0.3	\$1.4	\$1.7	\$2.0	\$2.3	External contractors for Operations are expected to increase their rates between 3% and 6% during the IR term. This creates an additional incremental productivity commitment of \$8M.
Increased volume of locates	\$2.6	\$3.2	\$3.8	4.5	5.3	The Company has experienced a substantial increase for locates requests since the new legislation Bill 8 took effect. The volume of locates are anticipated to grow at a rate of 6% which creates a productivity commitment of \$19 million.
FTEs	\$2.8	\$5.7	\$8.7	\$8.8	\$8.9	The budget assumes no cost for additional FTEs through the IR term. Assuming an actual modest increase each year (2%) and a 75/25 capital/O&M split the O&M impacts would total incremental cost pressures of \$35M.
Bad Debt Expense	\$4.7	\$5.0	\$5.6	\$5.9	\$6.3	Bad debt expense is forecast to stay flat, but in reality bad debt expense is expected to increase significantly along with external factors such as gas prices, weather, and economy, resulting in an additional cost pressure of \$27 million.
<b>Total</b>	<b>\$24.1</b>	<b>\$30.2</b>	<b>\$35.6</b>	<b>\$39.3</b>	<b>\$43.3</b>	<b>\$172.5 Million</b>

Witness: M. Lister

### Variable Cost Risks

In addition to the productivity commitments within the budget levels, there are also costs which are known will occur; however the quantification of the amounts is less certain. EGD refers to these amounts as 'variable' costs. None of these costs have been included in the budget.

### Capital

The Company has identified \$164 million in uncertain or "variable" capital costs over the period 2014-2016 that have not been included in the capital budget. This represents 12% of the Company's core capital budget that Enbridge expects to have to cover to some degree over the forecast period. These are just the items that Enbridge knows about at this time. There will be other capital challenges that arise through the normal course of business that have not been anticipated, which will have to be managed through the five-year IR term.

Below is a list of the identified variable costs that were excluded from the final Capital Budgets filed in this proceeding.

<b>Listing of Variable or Uncertain Projects/programs Excluded from the Final Capital</b>					
<b>(\$Ks)</b>					
<b>EXH REF</b>	<b>EXHIBIT DESCRIPTION</b>	<b>V2014</b>	<b>V2015</b>	<b>V2016</b>	<b>Sum 14-16</b>
B2-3-1	Sombra Redundancy	2,000		17,850	19,850
B2-5-2-1	Plastic Mains (Incl Services) Study	-	11,143	10,925	22,068
B2-5-2-2	COMPR COUPLING PRGM		1,061	1,041	2,102
B2-5-2-3	LOAD SHED PLANNING		1,194	1,170	2,364
B2-5-2-4	MOP VERIFICATION	5,304	4,881	4,786	14,971
B2-5-2-5	ILI AND ASSESSMENT PRGM	6,200	6,450	6,324	18,974
B2-5-2-7	MAINS REPL LT \$2M		467	458	925
B2-5-3-2	AMP FITTING REPL	-	13,814	13,694	27,508
B2-5-3-3	Failure of Bonnet Bolts on Valves Study		212		212
B2-5-3-5	SVC REPL LT \$2M	2,254	5,147	5,254	12,655
B2-5-4-3	COMM IND LOW PRESSURE REG STN	1,530	2,387	2,341	6,258
B2-5-4-5	STN REPL LT \$2M		3,979	3,901	7,880
B2-5-6	Load Research Prgm	548	572	560	1,680
B2-6-1	STORAGE OVERVIEW	275	25	375	675
B2-6-1	MCC#1 Generator and Boiler	500			500
B2-6-1	meter boxes	179	186	182	547
B2-6-1	Misc Structures	50	100	100	250
B2-6-1	Engine Compressor Analyzer Automatic	50	50	50	150
B2-6-1	Misc. Wells	50	125	125	300
B2-6-1	Misc Field Lines	50	50	50	150
B2-6-1	Misc. Meas and Reg	50	200	100	350
B2-6-1	Roads	50	50	50	150
B2-6-1	Crowland Plant Automation	20	20	20	60
B2-6-1	SCADA Upgrade and Automation	20	20	20	60
B2-6-1	Farm Purchase (C of A)		100		100
B2-6-1	DSA Boundary changes (purchase leases)			750	750
B2-6-1	Horizontal Well replacement program		5,000		5,000
B2-6-1	High Deliverability Well Erosion		35		35
B2-6-1	Plant Roadways and Culverts		50		50
B2-6-1	Replacement Lines to Horizontal Wells		500		500
B2-6-1-3	WELL INTEGRITY PRGM			400	400
B2-7-1	BUS DEV & CUST STRATEGY	2,612	2,612	2,612	7,836
B2-8-1-7	IT PROJ LT \$2M	900	100	300	1,300
B2-9-1	FAC/GENL PL OVERVIEW	2,500	2,500	2,500	7,500
<b>Grand Total</b>		<b>25,142</b>	<b>63,030</b>	<b>75,938</b>	<b>164,110</b>

Witness: M. Lister

Assuming additional uncertainties for each of 2017 and 2018 of \$50M per year, roughly the average of 2014 to 2016, results in total variable costs of \$264M over the IR term. If just half of these costs materialize, that is an additional \$130M in capital costs that will have to be managed through productivity and prioritization over the IR term.

### O&M

In addition to the O&M cost pressures quantified above, EGD also carries the associated inflation risk. That is to say that if benefits costs, labour rates, contractor rates, or materials prices increase at a rate faster than expected then EGD would be 100% at risk to manage these associated additional cost increases.

For example, with 2014 already underway, EGD can say with a high degree of certainty that the costs associated with contractor rates will be materially higher than the costs which have been built into the 2014-2018 budget.

### Operationalizing the Productivity Commitments & Risks

As stated throughout the evidence and testimony of EGD witnesses, EGD has made these budget commitments for the purposes of presenting to the Board a five year forward budget to be included within Allowed Revenues. For the most part, EGD does not have a suite of identified productivity initiatives which will allow it to operate at these budget levels (see Undertaking J5.9), and hence, the filed budget represents a significant risk to the Company. From EGD's perspective, this budget represents a strong commitment to finding productivities, and managing efficiently for the duration of the IR term. Of course, the alternative would have been for the Company to produce its budgets according to the full forecast of costs as laid out above. EGD believes that its chosen approach represents excellent value for money for ratepayers.

Witness: M. Lister

## UNDERTAKING J5.2

### UNDERTAKING

TR 27

To make best efforts to identify productivity improvements.

### RESPONSE

The preamble to this undertaking in the transcript for EB-2012-0459, Volume 5, February 27, 2014 (pp 21 – 27) indicates that the undertaking is meant to provide examples of where the Company has been able to reduce its capital budget through the budget review process from a higher number to a lower number through productivity enhancements.

The response to undertaking J5.12 presents a list of programs/projects that had a minimum \$5 million change in budget over the six budget review stages. Several of these programs/projects resulted in a reduction in budget (denoted by a negative sum for 2014-2016). Of these, items 1 and 7 reflect reductions expected as a result of increased efficiency and/or productivity enhancements.

There are other reductions that are evident in the detailed project lists provided in response to SEC interrogatory #11 (I.A1.EGDI.SEC.11) and SEC interrogatory #91 (I.A1.EGDI.SEC.91). These lists are not limited by a \$5 million materiality threshold. The reasons for these reductions in budget may include productivity, re-prioritization, change in scope, and others.

Other productivity opportunities that have been identified by the company are outlined in the response to undertaking J5.9.

At this time, the Company does not have a comprehensive list of productivity improvements identified to address the full extent of the cost pressures identified in evidence and during the hearing, as summarized in undertaking J1.6.

Witness: J. Sanders

UNDERTAKING J5.9

UNDERTAKING

TR 60

To provide a generic list of areas where the Company hopes to find productivity improvements, and their potential impact, if known.

RESPONSE

The Company plans to identify productivity opportunities and benefits wherever it can through the IR term, as highlighted in evidence and testimony from witnesses in the hearing to date. At this stage, the Company has only a short list of projects which may result in future benefits, and work continues to understand the cost / benefit analysis for each of the programs listed below. As outlined in the response to Exhibit J1.6, the Company will have to manage significant cost pressures, in part through productivity initiatives, over the term of the plan, however, as detailed throughout the evidence and oral testimony, precisely how that will be accomplished is uncertain.

The Company's Business Analytics group has been tasked with facilitating the identification and reporting of productivity opportunities, to ensure the right focus and attention is brought to this significant challenge for the Company.

Some areas where the Company has identified productivity opportunities are outlined below:

Project Name	Description	Potential Benefits
Global Positioning System (GPS) Technology	Development of the systems, processes and standards to capture and process GPS data for new asset installations and operations crews.	<ul style="list-style-type: none"><li>• Will enable dispatcher to contact the closest crew to respond to emergencies, resulting in improved emergency response time and minimized travel costs</li><li>• Will enable more precise and timely identification of assets in the ground in the event of an emergency</li><li>• More detail can be found in Exhibit J5.19</li></ul>
Alternate Locate Agreements (ALA's)	Agreements with excavators certifying that their work is in accordance with pre-defined excavation criteria to ensure that their work is non-intrusive to the buried gas plant.	<ul style="list-style-type: none"><li>• Potential to result in reduced locate costs</li><li>• Reduced waiting time for excavators and customers for field locates</li><li>• More detail can be found in Exhibit K7.1.</li></ul>

Witness: P. Squires

Project Name	Description	Potential Benefits
Station Upgrades	Synchronization of project elements during Station Rebuild Projects	<ul style="list-style-type: none"> <li>• Efficient project planning has the potential to lead to approximately \$15,000 of cost savings for Cambellford Gate Station by completing additional program projects at the same time as the station rebuild</li> <li>• This represents 11% of the cost associated with these additional projects. Table 1 and Table 7 of Exhibit B2, Tab 5, Schedule 4, Attachment 1 include 18 such projects</li> <li>• More details can also be found in Exhibit J5.18</li> </ul>
Electronic Recorder Program	Replacement of chart recorders with electronic recorders over 5 years	<ul style="list-style-type: none"> <li>• This program has the potential to reduce annual maintenance costs of \$141,255 (by the end of IR term)</li> <li>• More detail can be found in Exhibit J5.17</li> </ul>
WAMS	Replacement of Work and Asset Management System (WAMS) – core utility services flow through this system	<ul style="list-style-type: none"> <li>• The primary driver of this project is technology obsolescence, and productivity outcomes are not anticipated from the technology solution alone.</li> <li>• Business processes may be improved as a result of WAMS implementation, but since detailed design of the system is not complete, and full implementation is not expected until 2016, it is not possible at this time to identify and/or quantify productivity outcomes.</li> <li>• Alternatively, the Company would incur significantly higher costs and negative business impacts if it does not replace its existing Work and Asset Management System. More detail on this can be found in EB-2012-0459, Exhibit I.B18.EGDI.SEC.104.</li> </ul>

Witness: P. Squires

## UNDERTAKING J5.19

### UNDERTAKING

TR 226

To provide a three-year estimate of savings from an annual investment of \$3 million in GPS.

### RESPONSE

As described in Exhibit B2, Tab 5, Schedule 5 Attachment 2, Enbridge has been investing in processes, standards, governance, and technology to support the creation and management of verifiable, traceable, and complete records that are accurate and accessible in a timely manner. Provided appropriate standards, governance, and training is in place, GPS is a technology that is sufficiently mature such that it can be cost-effectively deployed within the utility.

As noted by the witnesses during cross, there are operational benefits which will result from the GPS initiative which should result in efficiencies and savings over time. There are also the benefits and avoided costs which will be realized by damage prevention and fewer incidents. While some of the operational benefits can be more particularly described as this response does below, it is much more difficult to put a value on damages which are avoided and incidents which never occur. The fact is that the GPS technology is available and will allow the Company to more quickly and more accurately locate its assets at times of concern and in response to locate requests, thereby reducing the likelihood of incidents and damage. The Company believes that the avoided costs associated with these issues alone justify the forecast annual expenditure on the GPS program.

As described at page 19 of 21 of this evidence, the \$3M annual spend that is proposed is made up of two components. The first relates to the development of the systems, processes, and standards to capture and process GPS data for new asset installations. The second are the field costs associated with the capture of GPS data for existing installations on an opportunistic (during maintenance) and a priority (vital mains and critical valves) basis.

With a significant amount of the development (technology, standards, etc.) completed in 2013, the processes for capturing information related to mains are relatively stable and will require only minimal enhancement going forward. Work is still required to extend the GPS data capture to services and it will be some time before sufficient data has

Witness: C. McCowan

been captured on existing assets to realize all of the benefits that we believe can be delivered through the use of this technology. The following are some examples.

#### Capture of location information

The preparation of a quality as-built drawing takes time. Information is recorded in the field in a “rough copy” form, scanned regularly so that current information is made available to all personnel, and finally transposed to a Final As-Built which is submitted and processed in the Records Department. It can take several weeks from the time the work is completed in the field to the time the final information is available through GIS and other systems to field personnel. When this information is captured using GPS, it is sent automatically to the GIS system every hour and is immediately available through GIS. The time saved in transposing and scanning is used by the inspector to observe the installation of the asset more closely, improving quality. There are expected to be savings in the processing of scanned documents and ultimately in the final update of systems. However, in the short term there is still a need to update assets and clear materials in the asset management system. The GPS provides the data to do this but the systems are not fully integrated at this point.

#### Locates

EGD requires accurate and persistent information with respect to the location of an asset in order to provide a locate in a timely manner. In the case of new construction, there can be confusion as to how much of the project has been constructed (if any), and in older areas, the landmarks that are supposed to identify the location of the asset may be missing or altered. Further, EGD must provide Ontario One Call with large buffer-areas around mains to ensure that a locate is requested anywhere that there could be a gas main. When an area has been deemed GPS accurate (10-cm accurate in GIS), it is expected that these buffers will be smaller, reducing the number of locates that must be performed each year.

#### Emergency Response

At times it has been necessary for EGD field staff to spend a good deal of time looking for a particular asset like a valve in order to make-safe during an emergency situation. For the reasons described above, the existing records can be outdated and misleading. The issue can be compounded if things such as snow or parked cars are obscuring the location of some features or the valve itself. Knowing the exact location of a valve or other asset during emergency response can be critical to public safety and, at a minimum, reduces the time commitment of field staff.

Witness: C. McCowan

### Maintenance Work

For the reasons described above, time can also be wasted during planned maintenance work looking for assets. Determining the accurate location of the asset in a timely manner allows work to proceed without delay, reducing the associated cost.

### Resurvey

Each year, EGD undertakes Resurveys, either because the record has deteriorated, or because the record has become outdated due to the movement of landmarks or road realignment. The annual amount shown for resurveys in Table 3 during the period requested is \$750K and this is expected to continue into 2017-2018. As more of the gas distribution system has GPS accurate and persistent location information, the need for Resurveys will be eliminated.

The majority of the incremental costs related to the capture of GPS data for new assets occurred in 2013 and will continue to some extent in 2014. These costs then stabilize and the program costs are related to the prioritized capture of existing assets. Clearly this will drop off at some point, but with 36,000km of mains it is difficult to forecast when that will be and to value the financial benefits that will occur. However, benefits resulting from the improvement to the accuracy and availability of the information start immediately.

Briefly stated, the GPS initiative will immediately generate savings by reducing the time spent searching for assets in some situations and reducing the number of requests for locates to which the Company must respond. The initiative will allow EGD's existing field staff to do more than would otherwise be the case. These productivity savings not only recur in each subsequent year, as the GPS initiative expands, the annual savings will increase.

Another area that the GPS initiative is expected to provide productivity is in terms of the number of locates that must be provided. As described above, the Ontario One Call buffers around gas mains can be much smaller when they are very accurately placed in the GIS system using the GPS coordinates. With the introduction of Bill 8, overall Locate volumes are expected to increase but the use of the smaller buffers described here can offset that to some extent.

### Conclusion

In addition to the costs of damage to the Company's assets or arising from an emergency situation being avoided, there will be savings associated with the above-noted activities from an O&M perspective. In its evidence in chief, Panel 9, which dealt

Witness: C. McCowan

with operation and maintenance costs, specifically referred to some of the practical benefits that will arise as a result of the GPS initiative. At 7 TR, pages 29 to 35, Mr. Lapp advised that in a situation of an emergency in winter time, the availability of GPS could result in savings in the order of \$300 to \$400 per call during regular hours and double this amount in an afterhours response. Obviously, the aggregate of the savings that will be realized in any year will depend upon the location of the emergencies and the conditions encountered at the time, but the GPS initiative will result in O&M savings.

In addition, Mr. Lapp also referenced the increase in locate requests, due in part to Bill 8, the *Ontario Underground Infrastructure Notification System Act*, which is at least in part responsible for the increase in locate volumes. More specifically, Mr. Lapp confirmed that while the locate volume actuals were 6.5% higher than the 2013 budget estimate and that volumes are expected to most likely increase beyond what is forecast in EGD's O&M budget, O&M costs in respect of locates have been held at or near inflation. These are O&M savings which are embedded for the duration of the term of the IR Plan.

UNDERTAKING J6.6

UNDERTAKING

TR 62

To provide a breakdown of the 2013 actuals on a per-kilometer basis, and explain how that translates into the forecast spending increases.

RESPONSE

As noted at Exhibit B2, Tab 5, Schedule 2, Attachment 4, capital spending on the MOP Verification Program in 2013 encompass two categories, Project Resources and Infrastructure and Fieldwork.

Within Project Resources and Infrastructure, two subcategories of capital spending exist: variable and static. Variable expenses represent costs associated with the review and analysis of records. These costs vary depending on the length of pipelines reviewed. Static expenses represent project management and infrastructure that is not influenced by the length of pipelines reviewed in that given year.

Table 1: Cost Estimate Detail per Kilometer (\$000 / km) Variable Project Resources and Infrastructure				
	Actual	Forecast		
	2013	2014	2015	2016
Kilometers Verified	425	525	600	600
Engineering Staff Costs	339	380	392	370
Fieldwork Planning & Mgmt Staff	19	305	305	305
MOP Verification Total Costs	358	685	697	675
COST PER KILOMETRE	0.8	1.3	1.2	1.1

Forecasted increases in cost per kilometer in 2014 are due to the assignment of dedicated resources to carry out the verification and fieldwork planning on these pipelines. Additional resources are required due to the increased amount of verifications. As the project continues through 2015 and 2016, efficiencies generated through experience and knowledge gained are expected to reduce the cost per kilometer.

Witnesses: D. Broude  
C. Moore

Table 2: Cost Estimate Detail Static Project Resources and Infrastructure (\$000)				
	Actual	Forecast		
	2013	2014	2015	2016
DESCRIPTION				
Process Mgmt Staff Costs	300	119	90	60
Process Mgmt Consulting Fees		113	84	56
Change Mgmt Consulting Fees		135	100	68
Data Mgmt Consulting Fees	73	113	85	55
Program Mgmt Consulting Fees	339	241	181	121
<b>TOTAL STATIC PROJECT RESOURCES AND INFRASTRUCTURE</b>	<b>712</b>	<b>721</b>	<b>540</b>	<b>360</b>

Forecasted infrastructure development costs in 2014 remain consistent with 2013 actual costs. A reduction of 25% per year over 2014 forecast is anticipated in 2015 and 2016 as additional efficiencies are achieved in the program execution.

No actual costs for field verifications on pipeline lengths reviewed in 2012 or 2013 were incurred. In order to appropriately plan and manage costs associated with these verifications, this work is dealt with on a planned basis and typically occurs one or more years later than when the records review was completed. The field verification methodology was developed in 2013. As a result, field verifications are planned for completion in 2014 based on the results of 2012 and 2013. The costs for field verifications increase in 2015 but are held constant thereafter for the years 2016 to 2018.

Witnesses: D. Broude  
 C. Moore

## UNDERTAKING J8.1

### UNDERTAKING

TR 47

To provide a mathematical calculation that provides a proportional allocation of those costs between the utility and non-utility storage operations.

### RESPONSE

Enbridge believes that the allocation of fixed assets in the manner suggested in this Undertaking is inconsistent with its current methodologies and that it would fail to recognize Enbridge's circumstances at the time that it developed its unregulated storage business.

Following the NGEIR Decision, Enbridge planned and executed a series of investments to develop the incremental storage capacities necessary to provide new, non-utility storage services. This program required the addition of many assets to its storage facilities, resulting in the integrated storage facilities envisioned in the NGEIR Decision. One of the requirements of its development of an unregulated storage business was that Enbridge had to create and implement a cost sharing methodology that would recognize cost causality and ensure that there was no cross-subsidization of costs between the two businesses. The resulting methods that Enbridge has employed results in the allocation of its capital costs on an incremental basis, and its O&M on a full allocated cost basis.

In Enbridge's 2010 ESM proceeding, Enbridge agreed to file a study, prepared by an external expert, that would evaluate the appropriateness of the allocation of costs between its regulated and unregulated storage activities and propose any recommendations that it felt necessary. Enbridge subsequently issued a Request for Proposal and engaged a firm, Black and Veatch ("B&V"), to conduct this review. It is worth noting that B&V had previously reviewed and commented on Union Gas' cost allocation methods following the NGEIR Decision.

B&V published its review of Enbridge's proposed plant allocation methods in May of 2012. In their report B&V clearly recognized the differences in the circumstances of Union and Enbridge at the time of the NGEIR Decision and referenced that in their findings. On page 12 of that report B&V acknowledged that

Witness: D. Dalpe

*the various processes established by Enbridge...in our opinion have been greatly influenced by the fact that Enbridge did not have to initially separate by the end of 2007 any of its storage related assets between regulated and unregulated storage operations” and that “on that basis, Enbridge has chosen to utilize an incremental cost approach...for its identification and assignment of new storage assets.*

On page 15 of the report they state that

*In Black and Veatch’s view, it is appropriate for Enbridge to utilize an incremental costing approach for its new storage assets because it best reflects the cost causative factors which drive the level of asset costs incurred by Enbridge to serve its unregulated storage market.*

On page 15 of their Report, B&V also recognized that a fully allocated cost sharing of Enbridge’s storage assets would have resulted in a much smaller share of the total storage asset being borne by the unregulated business; an outcome that would not have properly reflected cost causation.

Enbridge currently holds about 1,193  $10^6\text{m}^3$  (42.1 Bcf) of Base Gas as part of its total asset makeup. The quantity of Base Gas has increased over time as Enbridge has developed additional storage reservoirs but none has been added since the inception of the unregulated storage business in 2007. Though Enbridge has made a considerable investment in additional assets to create its incremental, unregulated storage capacities, Base Gas was not among them. However, if and when Enbridge acquires and develops a new reservoir to create additional unregulated storage capacity, the incremental Base Gas that is required will likely be allocated to the unregulated business under the incremental cost methodology employed by the company.

Enbridge’s unregulated storage business currently makes up about 12.4% of Enbridge’s total storage capacity and Enbridge has performed the calculation requested by Mr. Quinn simply by multiplying its total Base Gas volume by this unregulated capacity percentage. The result of that calculation is about 5.2 Bcf of Enbridge’s total Base Gas which, on a book value basis, translates to approximately \$5.1 million out of a total \$40.9 million value of its Base Gas.

Enbridge recognizes that this mathematical calculation is only a theoretical exercise but one that is not consistent with the cost allocation methods and principles that it has adopted for its assets. Enbridge believes that, given its circumstance at the time of the NGEIR Decision, an incremental cost methodology is the most appropriate basis for allocating its storage assets and that it has resulted in a significantly larger share of those assets being allocated to the unregulated business than would a fully allocated cost methodology. This belief has been further reinforced by the review and findings of

Witness: D. Dalpe

an independent expert, Black and Veatch. In Enbridge's view, it is clear that the incremental cost methodology is the appropriate approach for the comprehensive allocation of its storage assets and that, in any event, it would not be appropriate to depart from those methods and apply other methods to particular storage assets, such as Base Gas, in isolation, on a piecemeal or unsystematic basis.

UNDERTAKING J9.1

UNDERTAKING

TR 80

To explain why recovery through depreciation goes down between 2012 to 2013 while rate base went up.

RESPONSE

The amount of net salvage being incurred within depreciation rates, as shown in Line 3 within Attachment 1 of Exhibit I.E40.EGDI.Staff.77, decreased in 2013 versus 2012. The decrease occurs as a result of changes/decreases in the net salvage percentage's, included within the depreciation study and evidence filed in the EB-2011-0354 proceeding and approved within depreciation rates for 2013 versus those previously approved within depreciation rates from 2003 until 2013, although rate base increases from 2012 to 2013.

Witness: K. Culbert

UNDERTAKING J9.5

UNDERTAKING

TR 186

To provide each of the updated rates.

RESPONSE

The table on the following page provides the original proposed and ADR settlement agreement depreciation rates for 2013 approved by the Board within EB-2011-0354.

Witness: K. Culbert

<u>Account Number</u>	<u>Account Description</u>	2013 - EB-2011-0354	
		<u>Proposed Depreciation Rate</u>	<u>ADR Depreciation Rate</u>
<u>Storage Plant</u>			
451	Land Rights	1.16%	1.16%
452	Structures & Improvements	1.84%	1.84%
453	Wells	1.49%	1.49%
454	Well Equipment	5.56%	5.56%
455	Gathering Lines	1.46%	1.46%
456	Compressor Equipment	2.56%	2.56%
457	Regulating Equipment	2.94%	2.94%
<u>Distribution Plant</u>			
471	Land Rights	1.18%	1.18%
472	Structures & Improvements		
	472 VPC	9.93%	9.93%
	472 Ottawa (Coventry)	4.81%	4.81%
	472 Thorold	3.61%	3.61%
	472 Other	2.98%	2.98%
	472 Ottawa Depot (SMOC)	7.08%	7.08%
	472 Old Kennedy Rd	23.53%	23.53%
	472 Eastern Ave (Stn B)	6.86%	6.86%
	472 Kelfield	7.54%	7.54%
	472 Annprior	4.42%	4.42%
	472 Brockville	4.89%	4.89%
	472 Tech Training (Markham)	2.18%	2.18%
	472 Casselman/Pembroke	2.98%	2.98%
	472 New Kennedy/Fleet Garage	2.13%	2.13%
473/474	Service/Meter Installations	3.47%	2.98%
475	Mains - Plastic	3.37%	2.74%
	- Coated & Wrapped Steel	3.46%	3.46%
	- Cast Iron	91.75%	91.75%
	- Other	23.27%	23.27%
	- Envision	4.03%	4.03%
476	Company NGV Refueling Stations	5.97%	5.97%
477	Regulating Equipment	2.14%	2.14%
478	Meters	9.22%	9.22%
<u>General Plant</u>			
482.5	Leasehold Improvements	Amortized over the life of the lease	Amortized over the life of the lease
483.01	Office Equipment	0.15%	0.15%
483.02	Office Furniture	10.74%	10.74%
484	Transportation Equipment	10.56%	10.56%
484.01	NGV Conversion Kits	9.00%	9.00%
484.02	NGV Cylinders	2.10%	2.10%
485	Heavy Work Equipment	3.58%	3.58%
486	Small Tools and Work Equipment	4.08%	4.08%
487.7	NGV Rental Refueling Appliances	0.74%	0.74%
487.8	NGV Rental Refueling Stations	8.01%	8.01%
487.9	NGV Rental Cylinders	18.93%	18.93%
488	Communications Equipment	9.71%	9.71%
489	Software Applications - CIS	10.00%	10.00%
490	Computer Equipment		
490	- IT -Hardware	36.63%	36.63%
490	- IT -Software Acquired	26.32%	26.32%
490	- IT -Software Developed	21.24%	21.24%

Witness: K. Culbert

UNDERTAKING J10.2

UNDERTAKING

TR 42

To provide details of the \$6.2-million difference between line 1 approved and actuals, and advise whether that's likely to continue.

RESPONSE

While the Company is providing details of the variance between approved and actual costs for 2013 below, it is important to emphasize that Enbridge's Customer Care/CIS costs for 2013 to 2018 were examined by Intervenor in great detail in the EB-2011-0226 proceeding. The appropriate level of these costs to be recovered within rates for those years was settled and approved by the Board for 2013 through 2018. The Company is at risk for variances in these costs throughout this period.

Specifically the Board-approved EB-2011-0226 Settlement Agreement states;

*All parties agree that Y-factor treatment of all the subject costs is appropriate in any next generation of IRM ratemaking that applies to Enbridge. While all parties recognize that the nature of a large number of the costs in the Updated 2013 Template are such that they would not normally be considered Y-factors, the fact that the annual levels of these costs have been predetermined by settlement over a number of years means that they should be included in any IRM-based rates for Enbridge in the same manner as traditional Y-Factors. This position is supported by the fact that the cost per Customer set out in the Updated 2013 Template was established using an IRM-type approach, where a base level for all costs was established, and then an annual inflation factor was applied to those base costs to establish costs per Customer for successive years. Given that the annual revenue requirements that will be determined each year are a function of the costs per Customer that were established using an IRM-type approach, it is appropriate that the annual revenue requirement amounts be passed through as a Y-Factor each year of any future IRM term, or as a pass-through amount in any cost of service ratemaking year between 2013 and 2018.*

See EB-2011-0226 Exhibit N1, Tab1, Schedule 1, page 39 (filed at Exhibit D1, Tab 10, Schedule 2 in this proceeding).

As such the Customer Care/CIS costs are amounts that are pass-through amounts under the Customized IR model. As explained at Exhibit D1, Tab 10, Schedule 1, for each year of the Customized IR term Enbridge will include within Allowed Revenues an amount for Customer Care/CIS costs based on the pre-determined cost per customer, multiplied by the forecast number of customers for the subject year (using the agreed

Witness: K. Culbert

definition of “customer”). The customer forecast number to be used will be updated each year within the rate adjustment proceeding.

For 2013, there was a \$6.2M positive variance in Enbridge’s actual Customer Care/CIS costs versus the Board-Approved amount. The major variance drivers are as follows:

1. \$2.27M favourable variance in CIS Hosting and Support costs, due to lower than expected O&M spending and support costs. The Company remains at risk for system support costs related to CIS.
2. \$2.6M favourable variance in Service Provider Fees. 1) Accenture costs were lower than forecast, due to one-time service-level penalty credits of \$1.6M and a \$1.0M for monetization of unused pre-paid labour hours; offset by higher change order costs \$1M related to unanticipated manual work to update customer accounts. The favourable variance is also due to lower than expected number of customers. 2) Postage was favourable \$1.1M due to higher than forecasted e-bills and 3) Meter Reading is unfavourable by (\$0.2M), due to higher number of meter reads. At this time, there is no evidence to indicate that either the direction of the variance (positive or negative) or magnitude therein is sustainable from 2014-2018. Additionally, the Company is at risk for, and will incur increased postage costs beginning in 2014 resulting from significantly higher rates announced by Canada Post in December 2013. The annual impact to EGD is anticipated to be \$1.3-\$1.8M per year. The Company has also set an aggressive target of \$9.5M for bad debt which may result in higher collection costs to in an effort to meet this target.
3. \$1.2M favourable in Customer Care licenses, due to delays in implementation of automated credit status reporting and several upgrades and maintenance. It is not evident that either the direction of the variance (positive or negative) or magnitude therein is sustainable from 2014-2018. The Company is at risk for overall customer care costs and may need to find additional automated solutions to reduce work effort and costs to mitigate at-risk items.
4. Other smaller variances include:
  - a. \$937K favourable in Customer Care back office staffing
  - b. (\$434K) unfavourable variance in CIS back office; and,
  - c. (\$327K) unfavourable variance in SAP licenses

Witness: K. Culbert

In summary, while Enbridge's 2013 Customer Care/CIS costs were lower than the amount approved within the EB-2011-0226 Settlement Agreement, the experience of one historical year in terms of variance to Board Approved costs is not indicative of future trends. The Company remains at risk for overall CIS/Customer Care costs through the 2013 through 2018 period.