Justin Egan
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Regulatory Applications
Regulatory Affairs

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EGIRegulatoryProceedings@enbridge.com

Enbridge Gas Inc.
P.O. Box 2001
50 Keil Drive North
Chatham ON N7M 5M1

VIA RESS and EMAIL

March 27, 2025

Nancy Marconi
Registrar
Ontario Energy Board
2300 Yonge Street, 27th Floor
Toronto, Ontario M4P 1E4

Dear Nancy Marconi:

Re: EB-2025-0078 – Enbridge Gas Inc. (Enbridge Gas) – April 1, 2025 Quarterly Rate Adjustment Mechanism (QRAM) Application

On March 11, 2025, Enbridge Gas filed its application and evidence in the above noted proceeding (Original Application). On March 18, 2025, Enbridge Gas filed an amended application.

On March 19, 2025, Enbridge Gas filed responses to questions received from the Federation of Rental-housing Providers (FRPO) on the Original Application. On March 21, 2025, FRPO requested additional information with regards to the response provided by Enbridge Gas in Exhibit I.FPRO.1.

Please find an updated response for Exhibit I.FPRO.1 enclosed.

Should you have any questions on this matter, please contact the undersigned.

Sincerely,

Justin Egan

Justin Egan
Technical Manager, Regulatory Applications

cc: All Interested Parties EB-2008-0106, EB-2019-0137, EB-2024-0067, EB-2022-0200, and EB-2024-0111

ENBRIDGE GAS INC.

Answer to Interrogatory from
Federation of Rental-housing Providers of Ontario (FRPO)

Interrogatory

Question(s):

Our specific concerns relate to Exhibit C, Tab 4, Schedule 4, page 2 in which EGD determines the Calculation of Gas Supply Load Balancing & Transportation Charges by Rate Classes. The table provides numeric figures for the derivation of load balancing less WARP and transportation charges. The table provides numeric figures under the two categories but does not reference the source of the data used nor can we find a description of the methodology including how cost variances are determined and allocated.

We respectfully request that EGI provide a description of the methodology including assumption regarding allocators and the process used to determine and allocate cost variances from those used in ratemaking. We believe it would be helpful to provide the appropriate references and sources as footnotes to the schedule to allow understanding and/or the Excel spreadsheets including worksheets to inform the reader.

Response:

As described in Enbridge Gas's response to FRPO in the September 2022 QRAM interrogatory (EB-2022-0219, Exhibit I.FRPO.1)

> the OEB-approved methodology to recover load-balancing and transportation costs has been in place for the EGD rate zone prior to EB-2008-0106 (QRAM Generic Proceeding). This methodology reflects the service attributes and underlying gas supply portfolio in the EGD rate zone.

The Empress and PGVA reference prices are determined based on future market prices over a 21-day period as per the OEB approved methodology. The Empress reference price, inclusive of fuel, is used to design/set the gas supply charge. The cost of gas supply commodity is recovered from system gas customers. As per the OEB-approved methodologies, any price premium or discount for gas supplies purchased at other supply hubs over the Empress reference price are classified as transportation (i.e. deemed transportation costs) and, in the case of delivered supplies, to load balancing as peaking and seasonal. The proposed quarterly Load Balancing and Transportation

adjustments are allocated to the rate classes at the EGD rate zone based on 2018 Board approved cost allocation study.

The allocator for the allocation of Load Balancing – Peak charges is “Deliverability” (EB-2025-0078, Exhibit C, Tab 3, Schedule 2, page 1, Line 3.1). The allocator for the allocation of Load Balancing – Seasonal charges is “Space” (EB-2025-0078, Exhibit C, Tab 3, Schedule 2, page 1, Line 3.2). The allocator for the allocation of Annual Transportation charges is “Bundled Transportation Deliveries” (EB-2025-0078, Exhibit C, Tab 3, Schedule 2, page 1, Line 1.2).

The proposed April 2025 QRAM Annual Peaking charge for Rate 1 of $14.575 million (EB-2025-0078, Exhibit C, Tab 4, Schedule 4, page 2, Line 4.1, Col.2) is determined by summing the January 2025 QRAM Peaking charge of $ 9.488 (EB-2024-0326, Exhibit C, Tab 4, Schedule 4, page 2, Line 4.1, Col. 2) with the Proposed April 2025 QRAM adjustment of $5.087 million (EB-2025-0078, Exhibit C, Tab 3, Schedule 1, page 1, Line 2.2, Col.2). The determination of the Annual Peaking charges for the other rate classes follows the same approach.

The proposed April 2025 QRAM Annual Seasonal charge for Rate 1 of $115.827 million (EB-2025-0078, Exhibit C, Tab 4, Schedule 4, page 2, Line 4.2, Col.2) is determined by summing the January 2025 QRAM Annual Seasoning charge of $ 79.596 (EB-2024-0326, Exhibit C, Tab 4, Schedule 4, page 2, Line 4.2, Col. 2) with the Proposed April 2025 QRAM adjustment of $36.23M (EB-2025-0078, Exhibit C, Tab 3, Schedule 1, page 1, Line 2.3, Col.2). The determination of the Annual Seasonal charges for the other rate classes follows the same approach.

The proposed April 2025 QRAM Annual Transportation charge for Rate 1 of $357.341 million (EB-2025-0078, Exhibit C, Tab 4, Schedule 4, page 2, Line 7.3, Col.2) is determined by summing the January 2025 QRAM Annual Transportation charge of $272.454 (EB-2024-0326, Exhibit C, Tab 4, Schedule 4, page 2, Line 7.3, Col. 2) with the Proposed April 2025 QRAM adjustment of $84.89 million (EB-2025-0078, Exhibit C, Tab 3, Schedule 1, page 1, Line 2.4, Col.2). The determination of the Annual Transportation charges for the other rate classes follows the same approach.

Additional Response – FRPO’s Request for Evidentiary References

The OEB approved the Enbridge Gas Inc. QRAM methodology to recover commodity, load balancing, and transportation costs from EGD rate zone customers in the 2005 rate case (RP-2003-0203). This methodology reflects the service attributes and the underlying gas supply portfolio in the EGD rate zone.

The methodology and its outcomes were then reviewed and approved annually up to and including the 2018 rate case (EB-2017-0086).

Aside from the rate case proceedings, the OEB and interested parties conducted an in-depth review as part of the QRAM Generic Proceeding (EB-2008-0106) and also more recently as part of the stakeholder consultation on Ontario Landed Reference Price for Gas Supply (EB-2017-0086).

With respect to the stakeholder consultation, evidentiary references are as follows:

Under Commitment 4 of the 2017 Rate Adjustment proceeding settlement proposal, dated November 28, 2016 (EB 2016-0215, Exhibit N1, Tab 1 Schedule 1, page 7). Enbridge agreed to make reasonable efforts to convene and complete a stakeholder consultation process whether and/or how to move to an Ontario Landed Reference Price, instead of an Empress Reference Price.

Subsequently, a stakeholder consultation was held on June 15, 2017 at the OEB. The June 17 Stakeholder Consultation presentation has been provided at Attachment 1 (EB-2017-0086, Exhibit H1, Tab 2, Schedule 2, Appendix 1) as well as the written evidence provided at Attachment 2 (EB-2017-0086, Exhibit H1, Tab 2, Schedule 2) for reference. Please refer to paragraphs 5 through 27 of Attachment 2 for an explanation of Enbridge's current methodology of setting the gas supply charges, including load balancing and transportation charges. In addition, slide #9 of Attachment 1 lays out the OEB-approved QRAM process for the EGD rate zone as presented at the QRAM generic proceeding. The company has since made changes to the QRAM process such as the implementation of weighted average reference price (WARP) for certain elements of gas costs as approved in EB-2022-0200, however, slide #9 of Attachment 1 is representative of the majority of the QRAM process today.

The OEB approved methodology in the April 2025 QRAM is underpinned by the gas cost model filed for the 2018 rate case (EB-2017-0086). The relevant cost model schedules (the classification of gas costs to commodity, annual transportation and load balancing charges) and the related written evidence can be found in Attachment 3 (EB-2017-0086, Exhibit G2, Tab 6, Schedule 2, page 1) and Attachment 4 (EB-2017-0086, Exhibit G2, Tab 1, Schedule 1) respectively. In all subsequent QRAM filings, only the Empress reference price, including fuel, total purchased cost at various supply points, and tolls are updated and there have been no changes to the underpinning model.

Stakeholder Consultation: Ontario Landed Reference Price for Gas Supply

June 15, 2017

Anton Kacicnik
Manager, Rates
Enbridge Gas Distribution

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Stakeholder Consultation: Commitment from 2017 Settlement Proposal

Commitment #4:

Consultation to consider moving to an Ontario Landed Reference Price

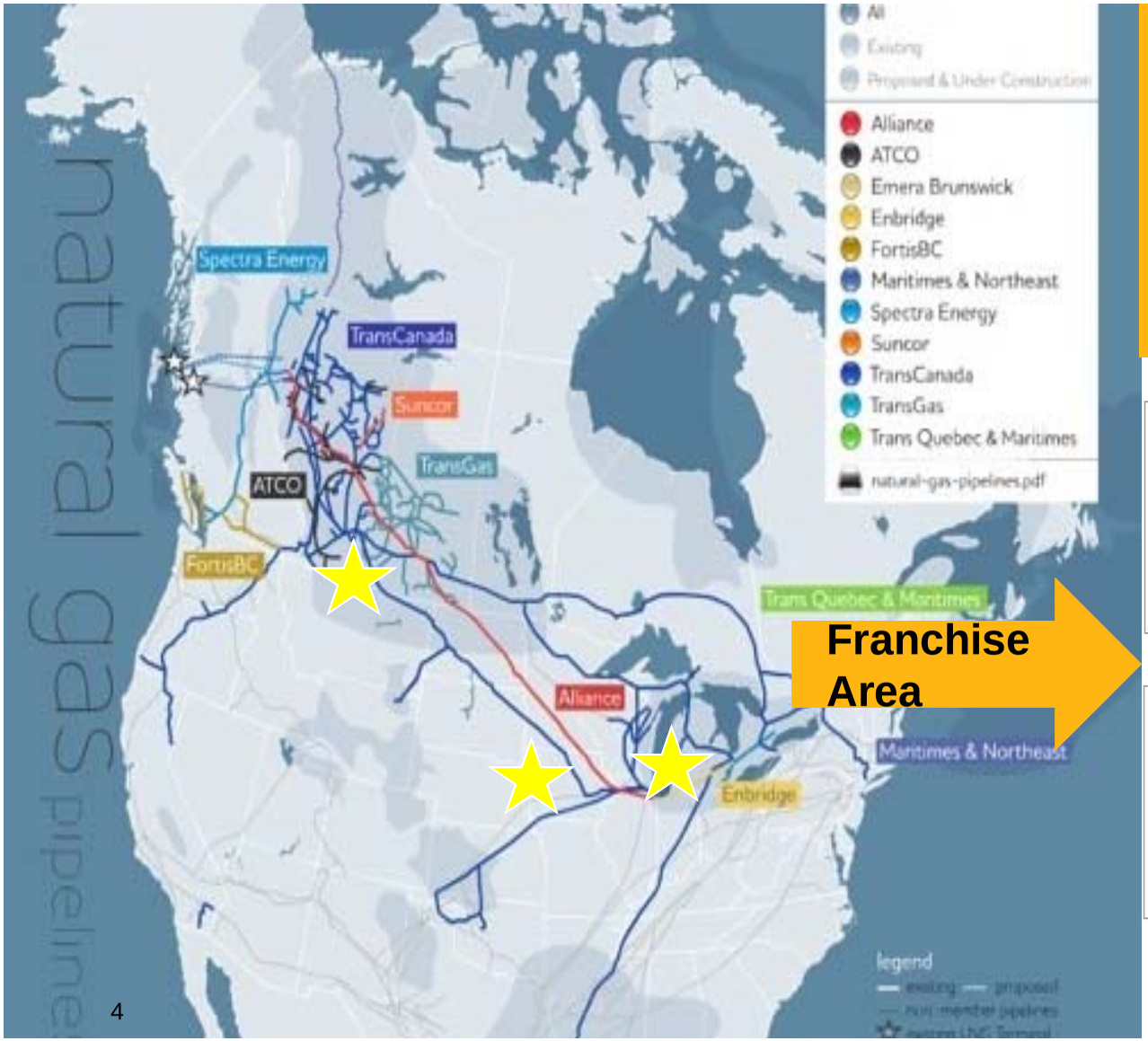
Enbridge agrees to make reasonable efforts to convene and complete a stakeholder consultation process before the 2018 Rate Adjustment Application to consider whether and/or how to move to an Ontario Landed Reference Price, instead of an Empress Reference Price, for the setting of gas supply charges. Enbridge agrees to report on its position and any proposal as part of the 2018 Rate Adjustment Application.

Stakeholder Consultation:

– Agenda:

- Enbridge's current methodology
  - Gas supply plan
  - Cost allocation
  - Rate design
  - Purchased Gas Variance Account (PGVA)
- Union Gas' past and current (Dawn Reference Price) methodology
- Considerations
  - Impacts of moving to another approach
- Roundtable

Gas Supply Plan



Franchise Area

Determines how natural gas will be supplied to customers and associated costs.

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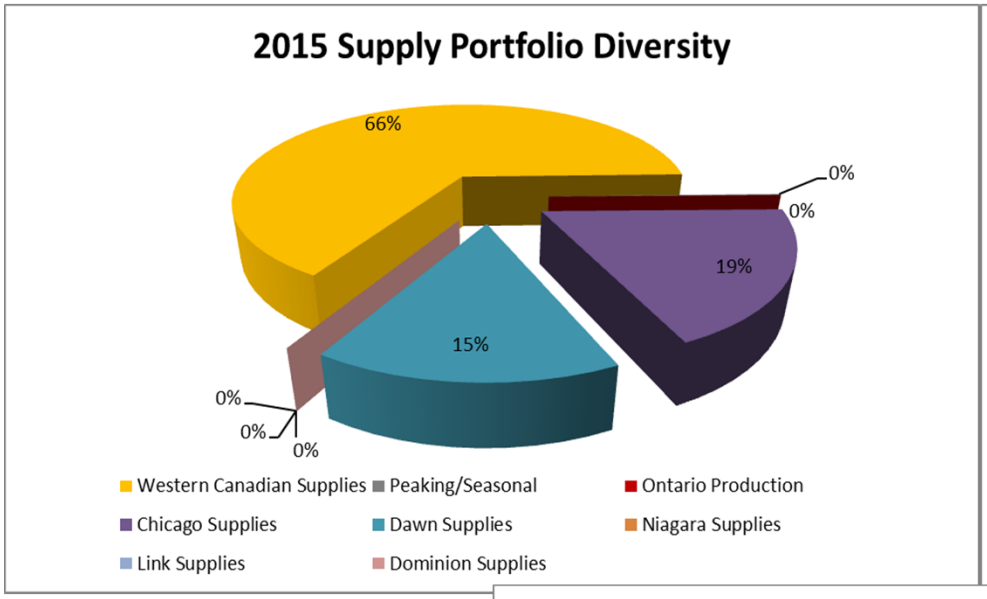
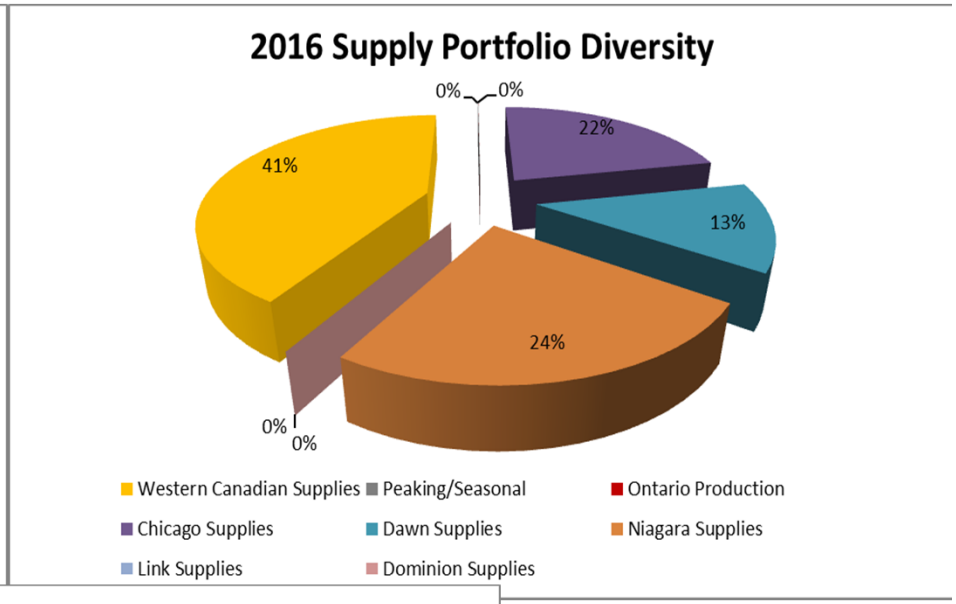
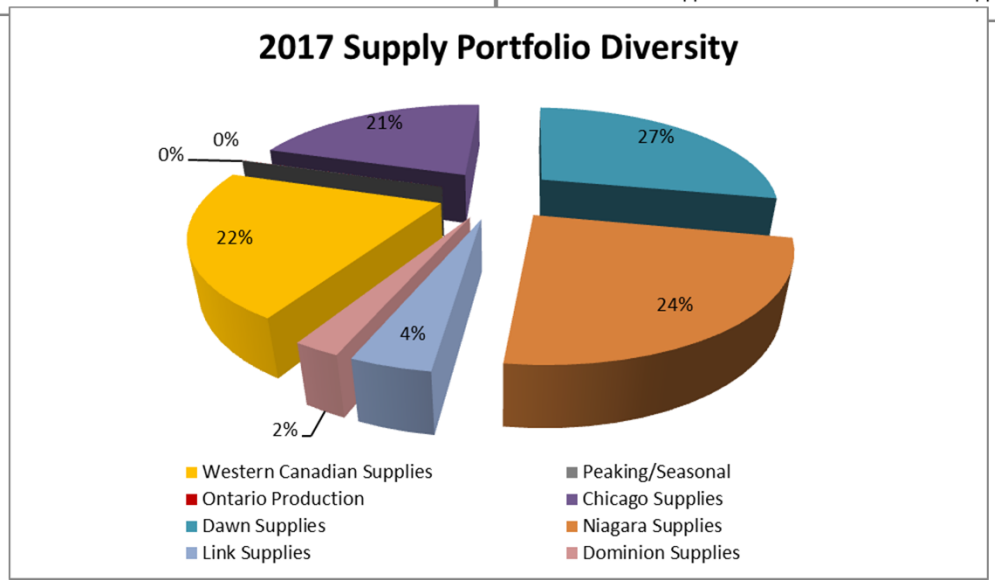
EGD Gas Supply Plan: 2015, 2016 and 2017







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EGD Gas Supply Portfolio Cost: April 2017 QRAM

Summary of Gas Cost to Operations
Year ended March 31, 2018

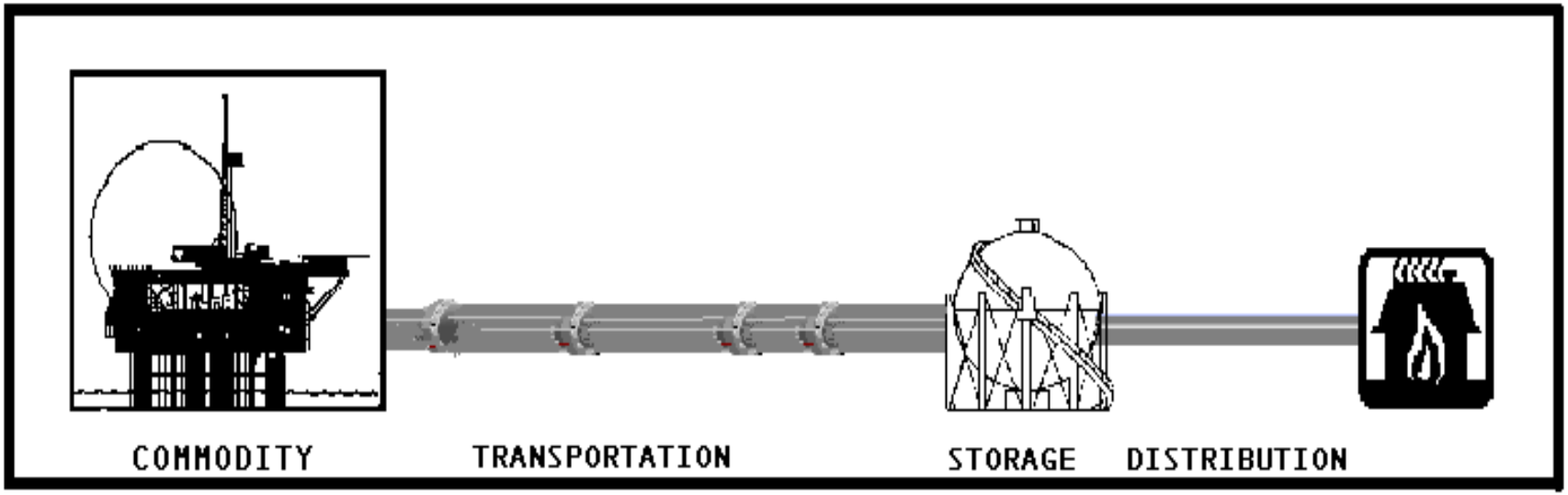
Item #		Col. 1 10^3m^3	Col. 2 $(000)	Col. 3 $/$10^3m^3$ (Col.2 / Col.1)	Col. 4 $/GJ (Col.3 / 37.69)
	Western Canadian Supplies				
1.1	Alberta Production	0.0	0.0	0.000	0.000
1.2	Western - @ Empress - TCPL	859,509.9	89,365.8	103.973	2.759
1.3	Western - @ Nova - TCPL	960,657.6	97,064.7	101.040	2.681
1.4	Western Buy/Sell - with Fuel	387.4	43.0	110.884	2.942
1.5	Western - @ Alliance	-	-	0.000	-
1.6	Less TCPL Fuel Requirement	(73,778.8)	0.0		
1.	Total Western Canadian Supplies	1,746,776.0	186,473.5	106.753	2.832
2.	Peaking Supplies	4,192.1	1,467.9	350.154	9.290
3.	Ontario Production	365.0	66.8	183.050	4.857
4.	Chicago Supplies	1,682,897.7	254,658.8	151.322	4.015
5.	Delivered Supplies	2,229,769.2	358,261.9	160.672	4.263
6.	Niagara Supplies	1,936,853.3	268,270.0	138.508	3.675
7.	Link Supplies	322,632.0	48,597.6	150.628	3.997
8.	Dominion Supplies	187,833.0	22,476.3	119.661	3.175
9.	Total Supply Costs	8,111,318.2	1,140,272.6	140.578	3.730
	Transportation Costs				
10.1	TCPL - FT - Demand		137,974.4		
10.2	- FT - Commodity		0.0		
10.3	- Parkway to CDA		6,426.5		
10.4	- STS - CDA		21,371.4		
10.5	- STS - EDA		15,607.1		
10.6	- Dawn to CDA		7,636.9		
10.7	- Dawn to EDA		78,366.5		
10.8	- Dawn to Iroquois		10,233.9		
10.9	Other Charges		0.0		
10.10	Nova Transmission		7,464.6		
10.11	Alliance Pipeline		0.0		
10.12	Vector Pipeline		20,567.4		
10.13	Nexus Pipeline		6,118.7		
10.14	Niagara Link Pipeline		2,321.5		
10.15	Niagara Falls to Enbridge Parkway CDA		18,221.4		
10.	Total Transportation Costs		332,310.3		
11.	Total Before PGVA Adjustment	8,111,318.2	1,472,582.9	181.547	4.817
12.	PGVA Adjustment		0.0		
13.	Total Purchases & Receipt	8,111,318.2	1,472,582.9	181.547	4.817
14.	January 1, 2017 PGVA Reference Price			181.199	4.808
15.	Upstream Increase/Decrease on 2017 PGVA Reference Price			0.348	0.009
16.	Updated T-Service Transportation Costs	1,365,529.8	104,072.1	76.214	2.022

Witnesses: J. Collier, A. Kacicnik, B. So

Filed: 2017-09-25, EB-2017-0086, Exhibit H1, Tab 2, Schedule 2, Appendix 1, Page 6 of 33

Filed: 2025-03-27, EB-2025-0078, Exhibit I.FRPO.1, Attachment 1, Page 6 of 33

EGD:
Service Provided to Customers



SERVICE TYPES:

UNBUNDLED

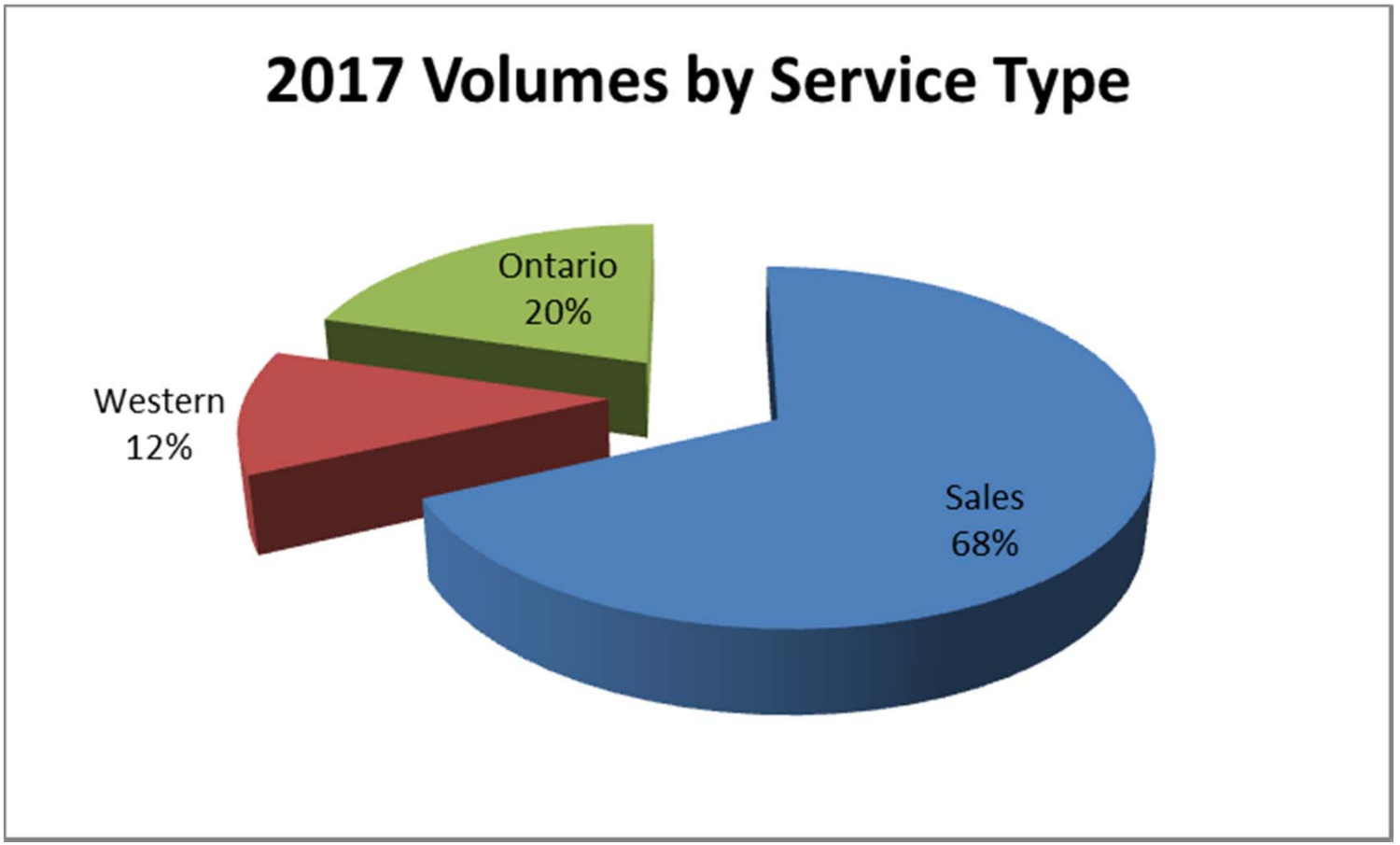
Dawn Bundled T (Nov. 1 / 2017)

ONTARIO BUNDLED T

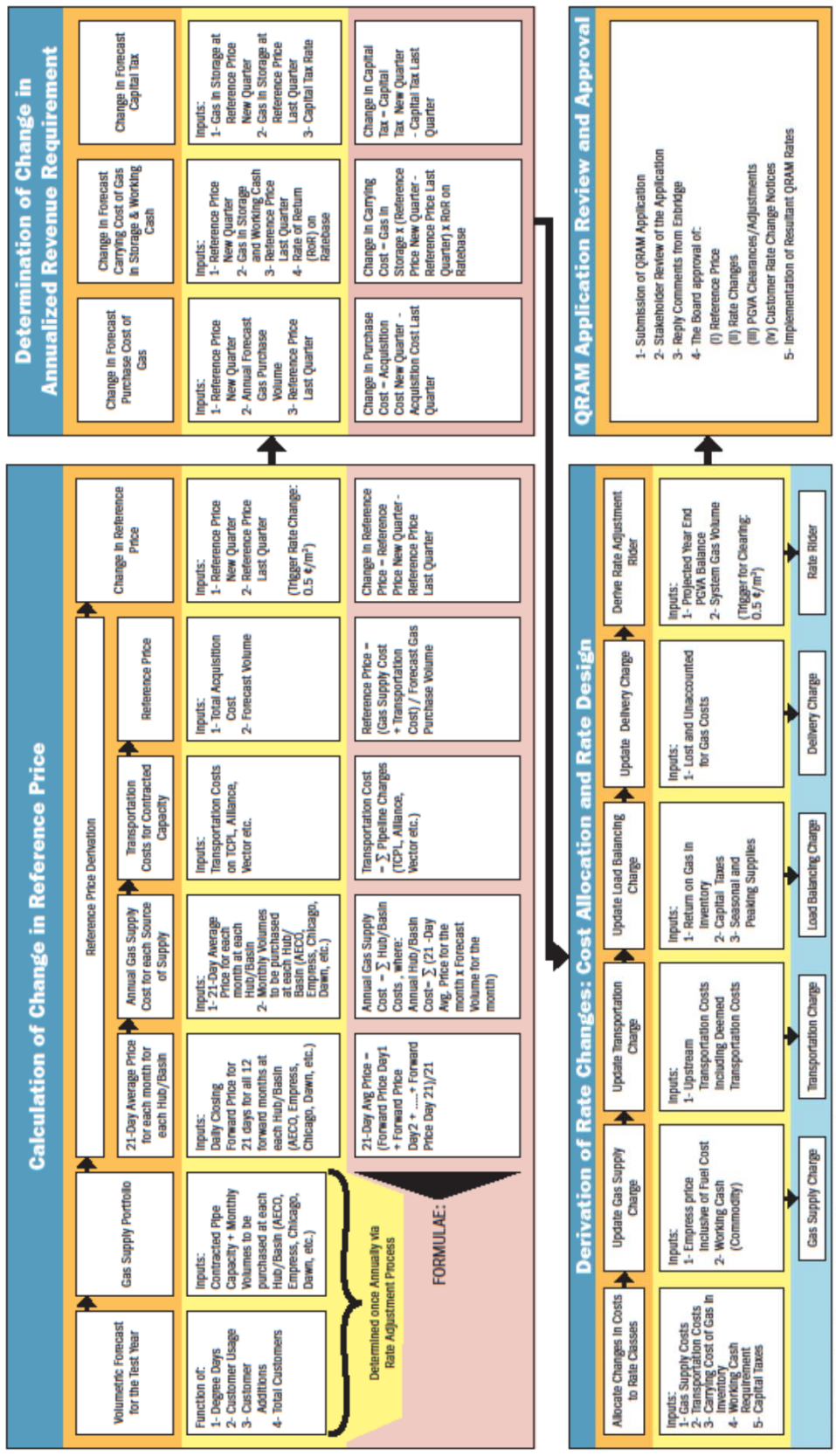
WESTERN BUNDLED T

SALES

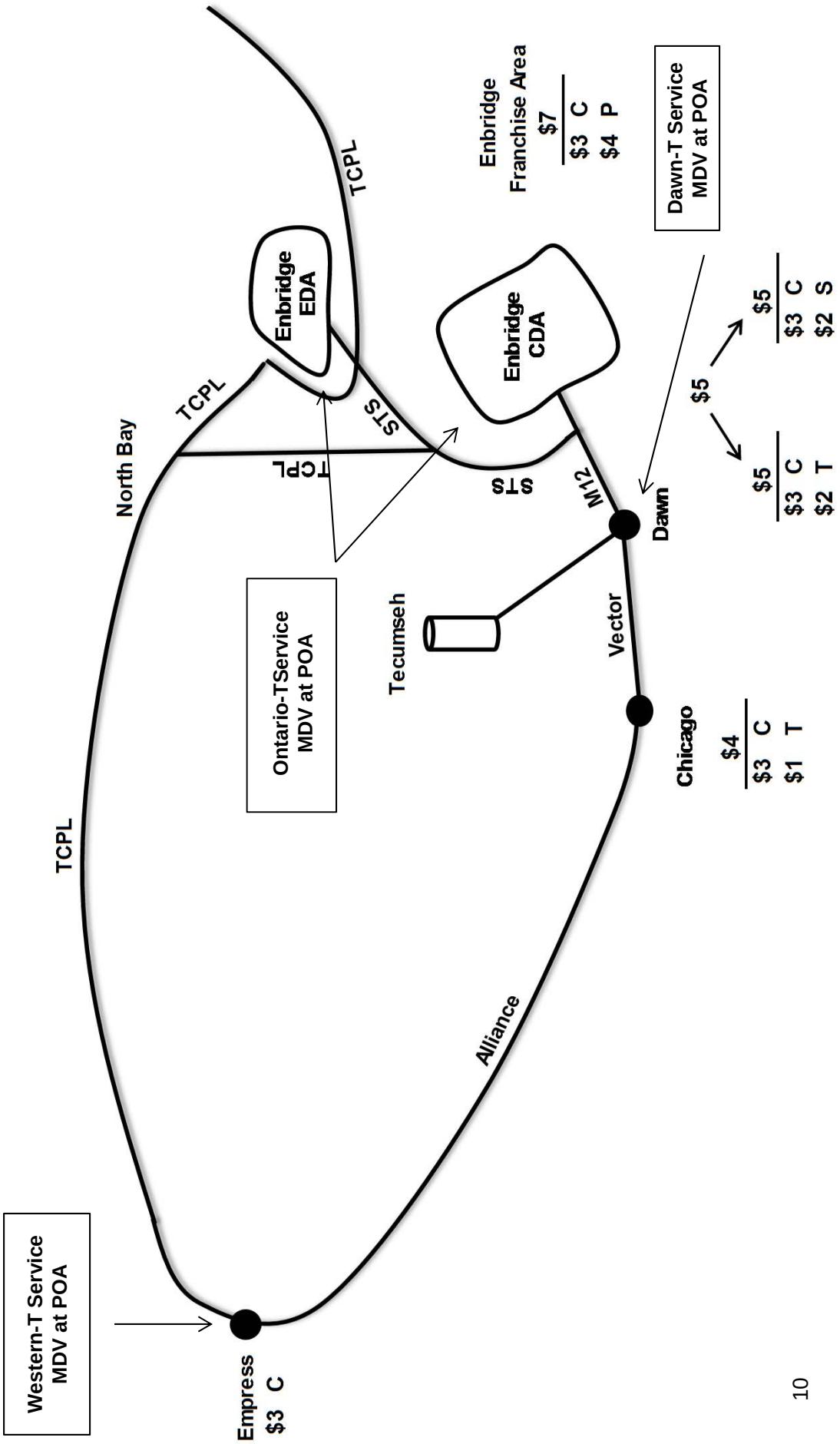
EGD Volumes by Service Type



EGD QRAM Process and Derivation of QRAM Rates



EGD Gas Supply Plan: Cost Allocation & Rate Design



April 2017 QRAM: Residential Rates

Monthly Charges	Monthly Rates April 1, 2017	Annualized Change Increase/(Decrease)
Customer Charge	$20 Monthly fee	No Change
Delivery to You Amount of gas used per month in cubic metres (m³)		($0.28)
First 30 m³	10.1291 ¢/m³	
Next 55 m³	9.5803 ¢/m³	
Next 85 m³	9.1504 ¢/m³	
Over 170 m³	8.8300 ¢/m³	
Cap and Trade (included in Delivery to You on the bill)	3.3518 ¢/m³	No Change
Transportation to Enbridge	5.4313 ¢/m³	$2.49
Gas Supply Charge	11.3759 ¢/m³	($1.69)
Cost Adjustment	(0.4762) ¢/m³	$7.48
Components		
Gas Supply	(0.4014) ¢/m³	
Transportation	(0.0623) ¢/m³	
Delivery	(0.0125) ¢/m³	
Site Restoration Clearance	(1.1277) ¢/m³	No Change
Total Annual Change		**$8.00**

The Company's rates are determined based on forecast

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Gas Costs Charges and Purchased Gas Variance Account (PGVA)

Forecast

Forecast Price = $3 / Unit of Volume

Rate Design:
$300 / 100 = $3 / Unit of Volume

Forecast Volume & Cost:

Volume x Price = Cost:
100 x $3 = $300 ⟷ Forecast Revenue:
100 x $3 = $300

Actual

(1) Supply Cost: 150 x $3 = $450
Revenue: 150 x $3 = $450
} PGVA = $0

Price Variance = $1

(2) Supply Cost: 100 x $4 = $400
Revenue: 100 x $3 = $300
} PGVA = $100 = 100 x $1

Price Variance = $1

(3) Supply Cost: 50 x $4 = $200
Revenue: 50 x $3 = $150
} PGVA = $50 = 50 x $1

Gas Costs Charges and Purchased Gas Variance Account (PGVA)

Forecast

Multiple Supply Sources:

Supply A = Forecast Price = $2 / Unit of Volume
Supply B = Forecast Price = $3 / Unit of Volume

Forecast Volume and Cost:

Supply A = 100 x $2 = $200
Supply B = 100 x $3 = $300
} = $500

PGVA Reference Price = $500 / 200 = **$2.5**

Rate Design:
$500 / 200 = $2.5 / Unit of Volume

Forecast Volume & Cost:

Volume x Price = Cost:
200 x **$2.5** = $500

Forecast Revenue:
200 x $2.5 = $500

Actual

Actual Supply Cost:

Supply A = 50 x $2 = $100
Supply B = 150 x $3 = $450
} = $550

Actual Revenue:

200 x $2.5 = $500

Price Variance = $0.25

Actual PGVA Reference Price = $550 / 200 = $2.75

PGVA = $50 = 200 x $0.25

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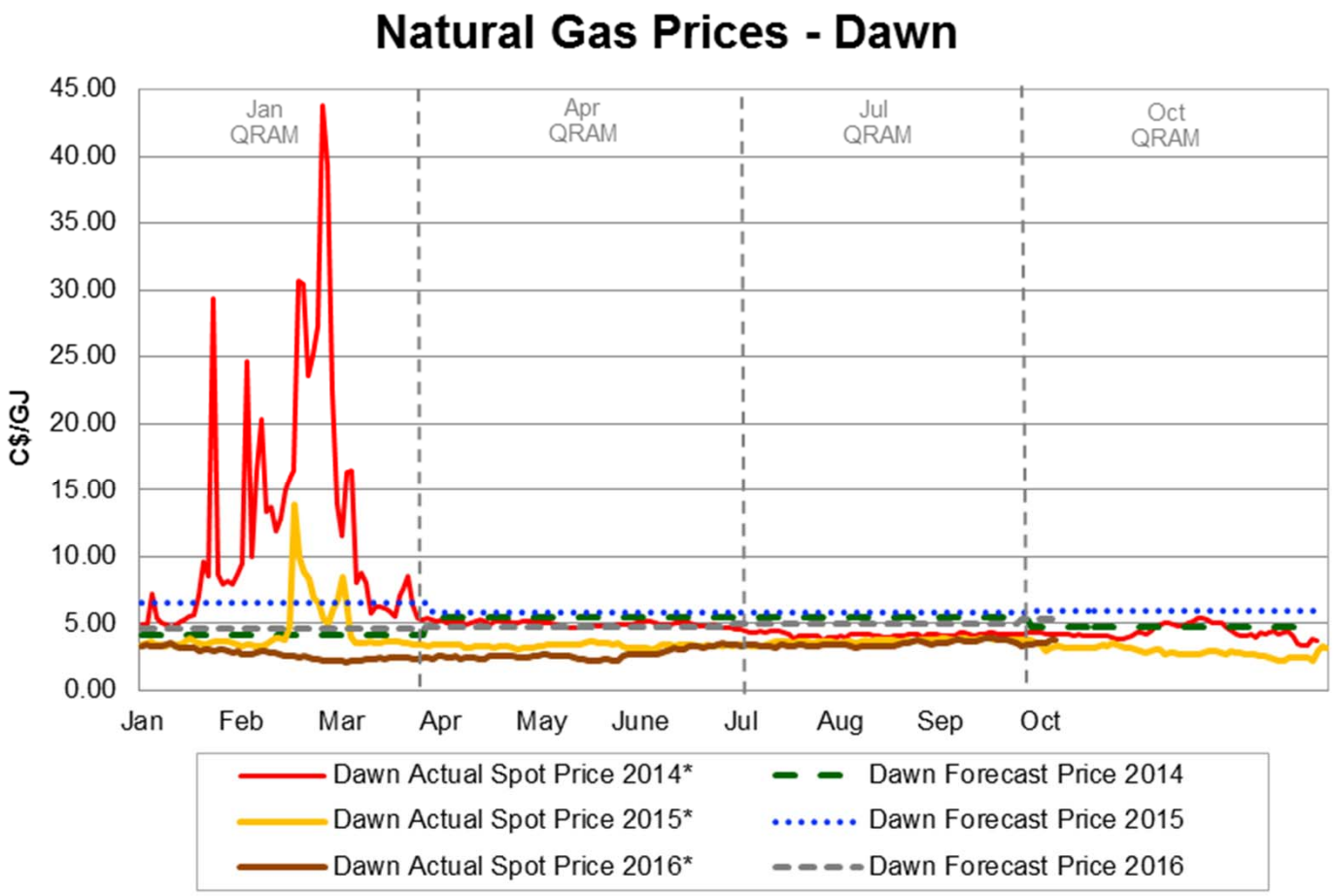
Natural Gas Spot Price – Dawn Hub

[redacted]



Note: *Daily Dawn spot price at midpoint from Gas Daily
Daily exchange rate (U.S. Dollar Noon) conversion from the Bank of Canada

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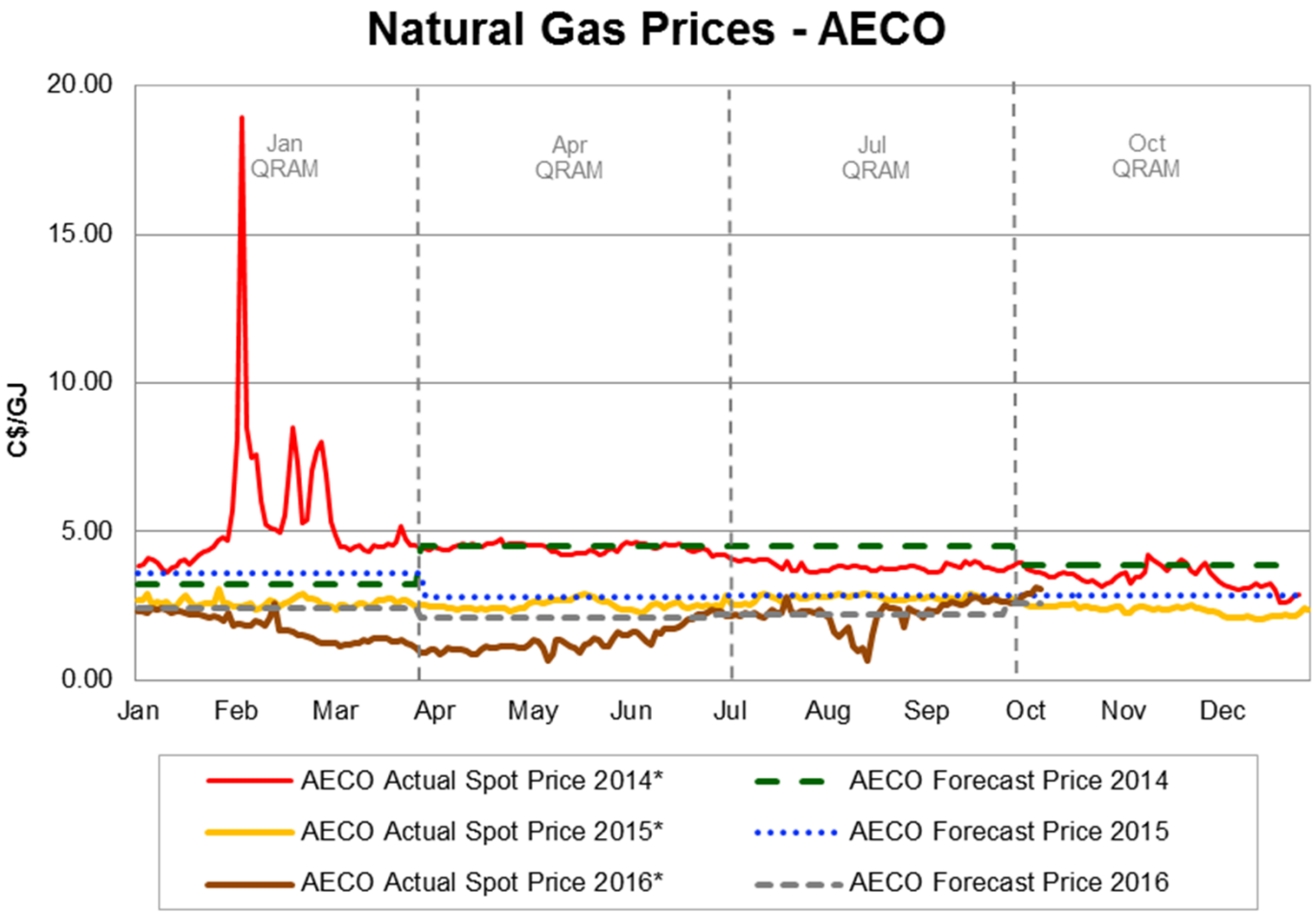
Natural Gas Spot Price – AECO Hub

[redacted]



Note: *Daily AECO spot price at midpoint from Gas Daily

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EGD Gas Supply Portfolio Cost: April 2017 QRAM PGVA Balance

ENBRIDGE GAS DISTRIBUTION INC.
Component of the Purchased Gas Variance Account
Gas Acquisition Costs

		Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10	Col. 11	Col. 12
				Unit	Reference	Unit Rate	Monthly	Forecast Clearance	Col. 6 minus	Commodity	Transportation	Load Balancing Component	
Item #	Particulars	Purchase Cost		Cost	Price	Difference	Variance	January 1, 2017 QRAM	Col. 7	Component	Component	Delivered Supplies	Peaking Supplies
		$(000)	10^3m^3	$/10^3m^3$	$/10^3m^3$	$/10^3m^3$	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)
1	Apr-16	73,231.6	540,345.6	135.527	157.800	(22.273)	(12,035.1)	12,035.1	-	-	-	-	-
2	May-16	72,846.9	590,443.9	123.377	157.800	(34.423)	(20,324.8)	20,324.8	-	-	-	-	-
3	Jun-16	80,721.7	568,139.9	142.081	157.800	(15.719)	(8,930.6)	8,930.6	-	-	-	-	-
4	Jul-16	95,770.1	594,184.5	161.179	166.527	(5.348)	(3,177.7)	3,177.7	-	-	-	-	-
5	Aug-16	88,287.0	554,548.7	159.205	166.527	(7.322)	(4,060.4)	4,060.4	-	-	-	-	-
6	Sep-16	92,815.9	521,205.7	178.079	166.527	11.552	6,021.0	(6,021.0)	-	-	-	-	-
7	Oct-16	92,225.8	480,217.4	192.050	181.866	10.184	4,890.5	(4,890.5)	-	-	-	-	-
8	Nov-16	112,309.6	616,950.1	182.040	181.866	0.174	107.3	78.1	185.4	(473.5)	(18.0)	677.1	-
9	Dec-16	186,110.7	946,934.1	196.540	181.866	14.674	13,895.3	(1,319.3)	12,576.0	18,305.8	1,390.9	(7,120.1)	-
10	Jan-17	199,966.2	914,019.5	218.777	181.199	37.578	34,347.0	-	34,347.0	24,673.8	(826.9)	10,749.4	(249.6)
11	Feb-17	133,361.5	681,431.6	195.708	181.199	14.509	9,886.9	-	9,886.9	4,634.0	(814.7)	6,386.7	(319.1)
12	Mar-17	100,600.7	562,559.0	178.827	181.199	(2.372)	(1,334.4)	-	(1,334.4)	(412.2)	(611.1)	(298.9)	(12.1)
13	Total (Lines 1 t	**1,328,247.8**	**7,570,979.8**	**175.439**			**19,285.0**	**36,375.9**	**55,660.9**	**46,727.9**	**(879.8)**	**10,394.3**	**(580.8)**

April 2017 QRAM: Residential Rates

Monthly Charges	Monthly Rates April 1, 2017	Annualized Change Increase/(Decrease)
Customer Charge	$20 Monthly fee	No Change
Delivery to You Amount of gas used per month in cubic metres (m³)		($0.28)
First 30 m³	10.1291 ¢/m³	
Next 55 m³	9.5803 ¢/m³	
Next 85 m³	9.1504 ¢/m³	
Over 170 m³	8.8300 ¢/m³	
Cap and Trade (included in Delivery to You on the bill)	3.3518 ¢/m³	No Change
Transportation to Enbridge	5.4313 ¢/m³	$2.49
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Transportation	(0.0623) ¢/m³	
Delivery	(0.0125) ¢/m³	
Site Restoration Clearance	(1.1277) ¢/m³	No Change
Total Annual Change		**$8.00**

The $ balance in the PGVA account is cleared to customers through Cost Adjustment

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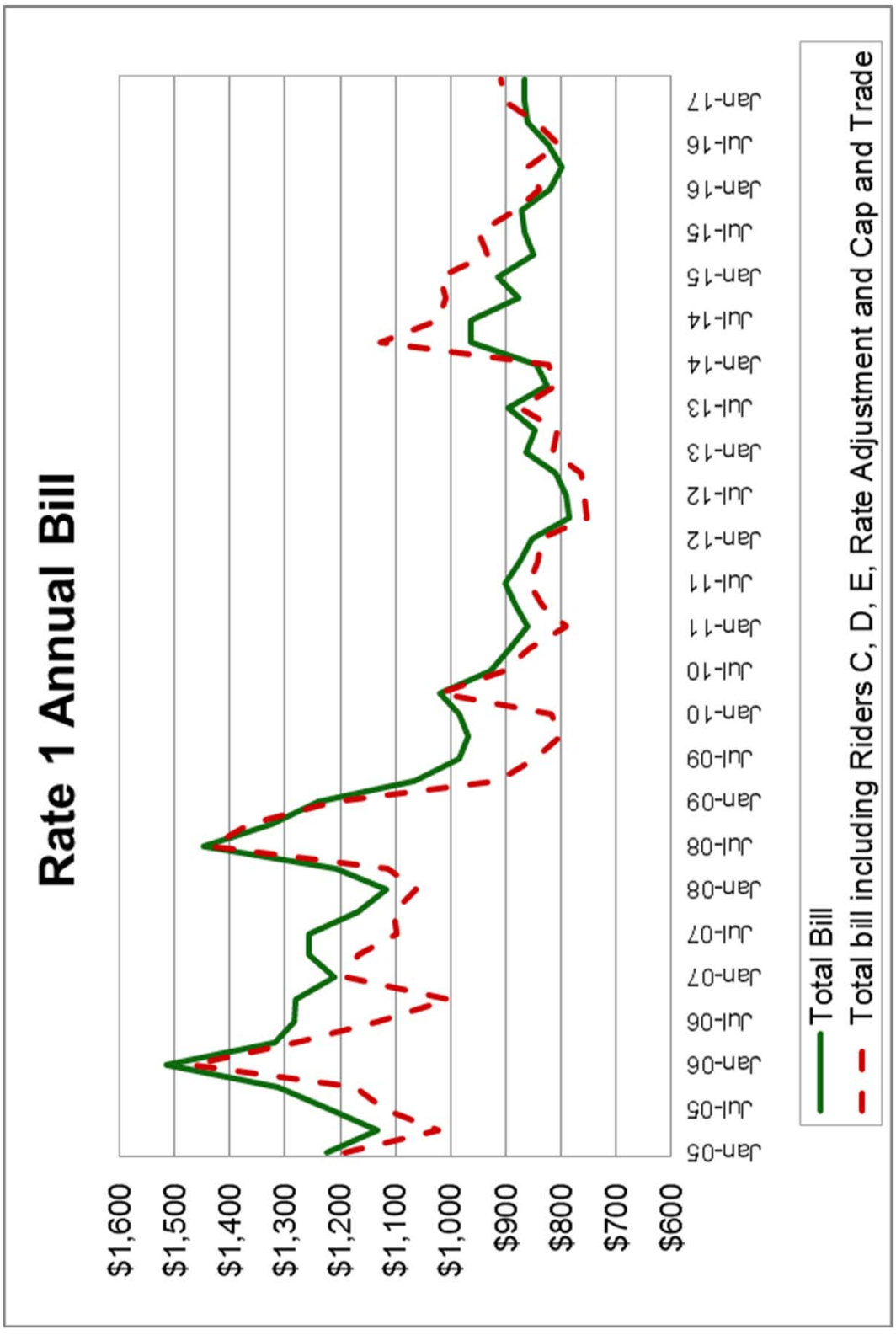
Residential Annual Bill with Riders



Witnesses: J. Collier, A. Kacicnik, B. So

Union Gas

- Union Gas
  - Previous Approach
  - Current Approach

Union Gas: Previous Approach

Union South:

Gas supply and transportation charges were set based on Ontario Landed Reference Price

Ontario Landed Reference Price =

Commodity @ Empress + TCPL LH FT Toll + Fuel

This approach resulted in significant credits for transportation cost (i.e. forecast cost much higher than actual cost) in the Union South PGVA.

Union Gas: Previous Approach

Union managed this variance by (prospectively) reducing the transportation charge by the South Portfolio Cost Differential (SPCD).

This adjustment ensured that Union South transportation charges were reflective of the forecast average cost of the Union South transportation portfolio for the 12-month forecast period.

Union Gas: Move to Dawn Reference Price

Therefore, as a result of Union sourcing less gas supply from Alberta for Union South and more gas supply from Dawn or upstream from Dawn, Union proposed Dawn Reference Price as a more appropriate price indicator for Union South Customers.

Union Gas:
Dawn Reference Price Evidence

EB-2015-0181

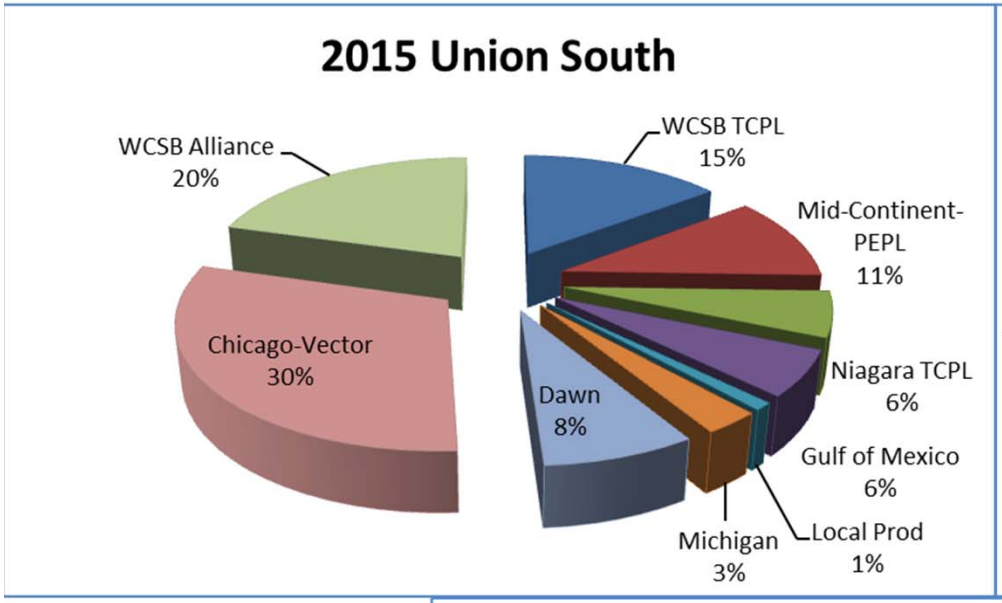
Exhibit A

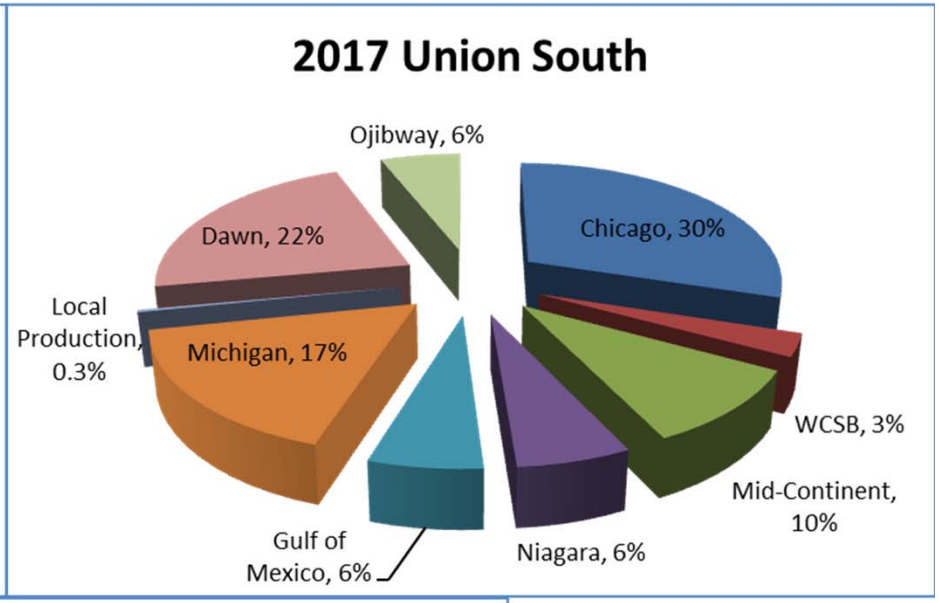
Tab 1

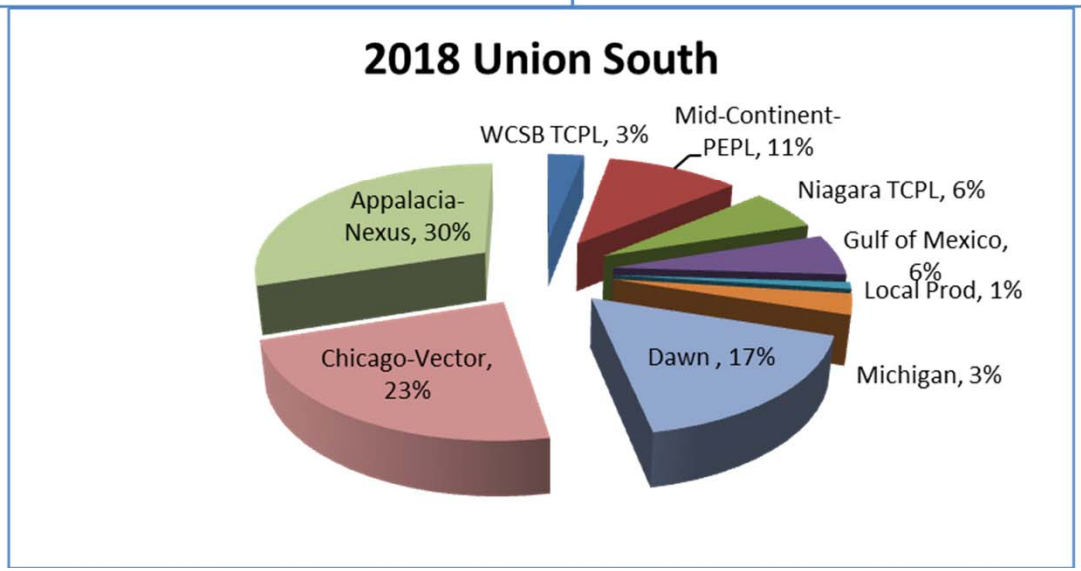
Page 6 of 38:

“By 2017, 85% of Union North customers and 97% of Union South customers will be served predominantly from supply sourced at Dawn or upstream from Dawn.”

Union Gas Supply Mix: 2015, 2017 and 2018







ENBRIDGE

Union Gas: Current Approach
Dawn Reference Price

This approach eliminates:

- The need for a transportation charge; and
  - Union proposed to set transportation charge at zero rather than eliminate it altogether to preserve flexibility in case of future portfolio changes
- The need for the South Portfolio Cost Differential (SPCD).

This approach requires:

- That forecast cost variances between the Union South gas supply portfolio and the Dawn Reference Price be recorded and cleared as a prospective rate adjustment via the PGVA.

Union Gas:
April 2017 QRAM

Union South:

- Dawn Reference Price = 15.95 c/m3
- Transportation Charge = 0 c/m3

Enbridge Gas Distribution
April 2017 QRAM

Considerations: Other potential approaches for setting of gas supply charges

April 1 / 2017 QRAM:			
	Empress Reference Price	Ontario Landed Reference Price	Dawn Reference Price
	c/m^3	c/m^3	c/m^3
Gas Supply Charge	11.4	16.8	15.95
Transportation Charge	5.4	0	0.85
Total	16.8	16.8	16.8

Enbridge Gas Distribution
July 2017 QRAM

Considerations: Con't
Other potential approaches for setting of gas supply charges

July 1 / 2017 QRAM:			
	Empress Reference Price	Ontario Landed Reference Price	Dawn Reference Price
	c/m^3	c/m^3	c/m^3
Gas Supply Charge	12.1	17.5	16.38
Transportation Charge	5.4	0	1.12
Total	17.5	17.5	17.5

Considerations

– Considerations:

- Enbridge's Board-approved cost allocation and rate design are current and reflective of the gas supply plan and with no cross-subsidy between different service types.
- Total gas supply plan costs need to be recovered from customers. A different approach for setting of gas supply charges could be implemented. However, everything else being equal, the gas supply plan costs to be recovered from customers remain the same.
- Enbridge provides three bundled direct purchase service options, unbundled distribution and storage service, and should sufficient market interest arise has the ability to accommodate further delivery points (bundled service options) for direct purchase customers.
- Enbridge's gas supply and transportation charges allow customers to readily compare them with contract prices by energy retailers.

Considerations
Energy Contracts

- OEB's Consumer Protection Rules: Energy Contracts
- If the customer decides to move forward with an energy contract, the energy retailer must give them the following documents:
  - The energy contract
  - A disclosure statement with important information about energy contracts from the Ontario Energy Board
  - A price comparison sheet, in the form approved by the OEB

Price Comparison for Natural Gas Consumers

Valid From April 1, 2017 to June 30, 2017

Enbridge Gas Distribution Inc.

Please enter data into blue-shaded cells only

Residential

Annual m^3 Consumption	Line Item	Monthly m^3 Consumption	Effective Price (Cost +/- Adjustment	Total
	Gas Supply	200	10.9745	$21.95
2,400	Transportation	200	5.3690	$10.74
	Estimated Monthly Gas Supply and Transportation Cost:			$32.69

Considerations

– Considerations (con't):

- Based on comparison of potential approaches and potential value added from a change in methodology, in the Company's view it appears there is no immediate need for Enbridge to change its methodology

- Change in methodology would require stakeholder support to recover implementation costs

ENBRIDGE

Roundtable

– Roundtable discussion

Witnesses: J. Collier, A. Kacicnik, B. So

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EB-2017-0086
Exhibit H1
Tab 2
Schedule 2
Page 1 of 10
Plus Appendix

STAKEHOLDER CONSULTATION: ONTARIO LANDED REFERENCE PRICE

1. In the Settlement Proposal in the 2017 Rate Adjustment proceeding (EB-2016-0215), Enbridge made the following commitment:

> Enbridge agrees to make reasonable efforts to convene and complete a stakeholder consultation process before the 2018 Rate Adjustment Application to consider whether and/or how to move to an Ontario Landed Reference Price, instead of an Empress Reference Price, for the setting of gas supply charges. Enbridge agrees to report on its position and any proposal as part of the 2018 Rate Adjustment Application.

2. In light of this commitment, Enbridge first considered aspects related to the use of an Ontario Landed Reference Price for the setting of gas supply charges and subsequently held a stakeholder consultation on this topic on June 15, 2017 at the Ontario Energy Board ("OEB"). The consultation was attended by stakeholders representing interests of various customer groups, natural gas marketers and agents, and the OEB staff, as referenced in the table below.

Witnesses: J. Collier
A. Kacicnik
B. So

Stakeholder Meeting - RSVP			
Name	Represent	In Person	Call In
Jane Scott	OEB	Y	
Ian Mondrow	IGUA	Y	
Nancy Marconi	OEB	Y	
Mark Rubenstein	SEC	Y	
Val Young	OAPPA	Unable to attended but would like to receive the materials.	
Lisa Jamieson	TransCanada	Y	
Andres Mand	OEB	Y	
Pat McMahon	Union	Unable to attended but would like to receive the materials.	
Julie Girvan	CCC	Y	
Dwayne Quinn	FRPO	Y	
Mark Garner	VECC	Y	
Farzad Rezavand	Just Energy		Y
Tom Brett or Marion Fraser	BOMA	Y	
William Swan		Y	
Nola Ruzycki	Just Energy	Y	
Brady Yauch	Energy Probe	Y	

3. The stakeholder consultation covered review and discussion about:
    - Enbridge's current methodology (for the setting of gas supply and transportation charges);
        - gas supply plan
        - gas supply charges
        - transportation charges
        - purchased gas variance account ("PGVA")
    - Union Gas' past and current ("Dawn Reference Price") methodology:
    - Considerations

Witnesses: J. Collier
A. Kacicnik
B. So

- Impacts of moving to another approach
- Roundtable

4. A copy of the stakeholder presentation is appended to this document.

Enbridge's Current Methodology

5. The Company provided an overview of its current methodology for the setting of gas supply and transportation charges and the functioning of the PGVA whose purpose is to keep the ratepayers and the utility whole with respect to the cost of the gas supply plan.

6. This step ensured that all stakeholders obtained / had common / shared understanding of Enbridge's methodology which then supported the discussion about considerations regarding the use of an Ontario landed reference price or of another approach for the setting of the gas supply and transportation charges.

7. In this section of the consultation, Enbridge first discussed basic information about the Company's gas supply plan, followed by a description of how the gas supply charges are developed using the Empress price as the reference price for the gas supply charge and how transportation costs are classified / split between transportation and load balancing charges.

Gas Supply Plan

8. As per the Board-approved approach, Enbridge's gas supply plan is developed by forecasting the gas supply needs specific to Enbridge's sales (i.e., system) gas customers, Mean Daily Volume ("MDV") deliveries from direct purchase customers, and the amount of gas supply required to balance forecast year round.

Witnesses: J. Collier
A. Kacicnik
B. So

9. The gas supply plan cost is based on a forecast (i.e., 21-day forecast of market prices for 12 month forecast period) of price indices at the various supply basins / market hubs, plus the associated transportation cost to deliver the gas to the franchise area. Through this approach Enbridge develops a PGVA reference price of its forecast upstream acquisition costs, including commodity, transportation and delivered supply costs. This approach also provides the Company with the means to adjust its forecast gas supply plan costs and its rates on a quarterly basis using the Board-approved Quarterly Rate Adjustment Mechanism ("QRAM").

10. Once the forecast has been completed, Board-approved cost allocation and rate design principles are used to allocate those costs between the different types of service and the various customer classes through the establishment of the gas supply, transportation, and load balancing charges.

11. All variances from the forecast costs are captured in the PGVA, which ensures that ratepayers and the Company are held whole with respect to gas supply plan acquisition costs.

12. The disposition of PGVA balances through the cost adjustment rider (Rider C) to sales (i.e., system) gas customers and to direct purchase customers follows the methodology that underpins the cost allocation and rate design principles.

Gas Supply Charges

13. Enbridge provides gas supply service to its residential, commercial, and industrial customers who do not procure their own gas supply either on their own, or through gas marketers or vendors.

Witnesses: J. Collier
A. Kacicnik
B. So

14. The rate Enbridge charges to customers for system gas (i.e., gas supply charge) is subject to regulatory approval and is based on a 21-day forecast of market commodity prices (i.e., “21-day strip”) at Empress for the next 12-month period and is adjusted each quarter through the QRAM process.

15. Empress is a trading hub and a receipt point for the TransCanada Mainline near the Alberta – Saskatchewan border and is also the furthest away supply hub utilized by Enbridge. Its price index is (readily) available through various sources.

16. Empress being so close to the gas supply basin means that the prices for gas supply at Empress reflect the cost of commodity itself, while the prices of gas supplies procured at Chicago or Dawn hubs incorporate the cost of transporting the gas to Chicago or Dawn. In other words, the price premium at Chicago or Dawn over Empress notionally reflects the cost of getting the gas to Chicago or Dawn.

17. Enbridge sources gas supplies from a number of market hubs and transports supplies via a number of transportation paths to achieve diversity and reliability of its gas supply plan.

18. As discussed above, the Company uses the Empress price inclusive of fuel as a reference price to design / set its gas supply charge. Accordingly, the cost of gas supply commodity is recovered from system gas customers through the Company’s gas supply charge.

19. Any price premium for gas supplies purchased at other supply hubs over the Empress reference price is classified as transportation and, in the case of delivered supplies, also to load balancing. Transportation costs are recovered from Sales

20. (i.e., System) gas and Western T-service customers, and load balancing costs are recovered from all bundled customers.

Transportation Charges

21. Enbridge contracts for upstream capacity on pipelines such as TCPL, Vector and Nexus to transport gas supplies from the various market hubs to its franchise area.

22. The cost of upstream capacity that is contracted at 100% load factor to meet annual average demand for Sales (i.e., System) gas, Western T-Service and Dawn T-service customers is recovered through the Company's transportation charges. Ontario T-Service and unbundled customers arrange for their own transportation to the Company's franchise area.

23. The approach of flowing gas on upstream pipelines at 100% load factor (i.e., the same amount of gas is delivered to the franchise area each day year round), is a concept / approach equivalent to the Mean Daily Volume ("MDV") delivery obligation for direct purchase customers and is facilitated by the close proximity of storage to Enbridge's franchise area.

24. Excess supplies in the summer are stored for withdrawal in the winter. To reflect this operating practice of meeting annual average demand, upstream transportation costs (inclusive of the deemed transportation costs as described in the section above) are classified as 100% annual demand and are recovered from customers based on bundled transportation delivery volumes by the type of transportation service and by customer rate class.

Witnesses: J. Collier
A. Kacicnik
B. So

25. The cost of upstream transportation which is utilized only for part of the year to help the Company meet seasonal and peak demands on the system (i.e., demand beyond the demand that is met via 100% LF transportation / MDV delivery by direct purchase customers and storage withdrawals) is recovered through the load balancing charges.

26. In other words, such upstream capacity is used to provide load balancing to all customers. Load balancing charges are recovered from all system gas and direct purchase customers.

27. It should also be noted that the cost of forecast unabsorbed demand charges ("UDC"), if any, is removed from the forecast gas supply plan costs. Any UDC cost is recovered from customers via a deferral account.

Union Gas' Past and Current (Dawn Reference Price) Methodologies

28. Union Gas' past and current methodologies are comprehensively described in EB-2015-0181: Dawn Reference Price and North T-Service Application and EB-2016-0334: January 1, 2017 QRAM Application.

29. Enbridge highlighted key points of Union Gas' past and current methodologies on slides 19 through 26 of the appended stakeholder presentation.

Considerations

30. The Company concluded the stakeholder presentation by discussing considerations related to the use of an Ontario landed reference price or another approach for the setting of gas supply charges.

Witnesses: J. Collier
A. Kacicnik
B. So

31. Key considerations are captured / summarized below:
    - Enbridge's Board-approved cost allocation and rate design are current and reflective of the gas supply plan and with no cross-subsidy between different service types.
    - Total gas supply plan costs need to be recovered from customers. A different approach for setting of gas supply charges could be implemented. However, everything else being equal, the gas supply plan costs to be recovered from customers remain the same.
    - Enbridge provides three bundled direct purchase service options, unbundled distribution and storage service, and should sufficient market interest arise has the ability to accommodate further delivery points (bundled service options) for direct purchase customers.
    - Enbridge's gas supply and transportation charges allow customers to readily compare them with contract prices by energy retailers.
    - Based on comparison of potential approaches and potential value added from a change in methodology, in the Company's view it appears there is no immediate need for Enbridge to change its methodology.
    - Any change in methodology would require stakeholder support to recover implementation costs.

<u>Roundtable</u>

32. Stakeholders mostly viewed a potential change in the approach to setting of gas supply charges as a bill display issue given that such a change would not affect / impact the total amount a customer would pay on their bill, but would rather regroup (or consolidate / bundle) under which charge the amounts to cover the cost of supply and transportation to the franchise area are paid by the customers (i.e., gas supply charge only vs. gas supply charge + transportation charge).

Witnesses: J. Collier
A. Kacicnik
B. So

33. Stakeholders representing gas marketers indicated they prefer / support Enbridge maintaining its current methodology. Having gas supply and transportation charges identified separately on customers' bills allows customers to readily compare Enbridge's charges with contract prices offered by energy retailers for gas supply and transportation to Enbridge's franchise area.

34. Stakeholders commented that Enbridge (as well as Union Gas and Gaz Metro) committed to a certain transportation capacity on the TransCanada Pipeline between Empress and the franchise area at least until 2020 as part of the Settlement reached between the TCPL and the three utilities. Therefore, supplies from Empress will continue to be a substantial part of the Company's gas supply plan until at least 2020.

35. Enbridge sources gas supplies from a number of market hubs and transports supplies via a number of transportation paths to achieve diversity and reliability of its gas supply plan. While the proportions of gas supplies sourced at the various market hubs will change over time versus the current gas supply plan, the Company will continue to diversify its purchases among the various market hubs. Should the gas supply plan change sufficiently enough where the vast majority of supplies are sourced near the franchise area, the Company is open to further considering the possibility to move to an Ontario landed reference price or another approach for the setting of gas supply charges.

<u>Consultation Conclusion</u>

36. Based on the stakeholder presentation, comparison of potential approaches, considerations related to implementing a different methodology, the discussion

37. points from above, and the costs associated with implementing a change in methodology, stakeholders and Enbridge concluded that changing methodology is not warranted for Enbridge at this time.

Witnesses: J. Collier
A. Kacicnik
B. So

CLASSIFICATION OF
GAS COSTS TO OPERATIONS

Item No.	Description	Col. 1 Annual Volumes (10^3m^3)	Col. 2 System Commodity Variable Unit Rate $/($10^3m^3$)	Col. 3 Variable Cost $(000)	Col. 4 Storage Deliver-ability $(000)	Col. 5 Storage Seasonal Space $(000)	Col. 6 Load Balancing Winter $(000)	Col. 7 Load Balancing Pipeline Peak $(000)	Col. 8 Load Balancing Pipeline Seasonal $(000)	Col. 9 Load Balancing Pipeline Annual $(000)	Col. 10 Load Balancing Pipeline Dist'n. Commodity $(000)	Col. 11 Total $(000)
	Purchases and Receipts											
1.1	Long-Term	358.0	118.2	42.3	0.0	0.0	0.0	0.0	0.0	29.8	0.0	72.1
1.2	Western Buy/Sell	380.0	118.2	44.9	0.0	0.0	0.0	0.0	0.0	0.6	0.0	45.5
1.3	Ontario Buy.Sell	0.0	118.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1.4	Short-Term Annual	0.0	118.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1.5	Short-Term Peak	3,520.5	118.2	416.2	0.0	0.0	0.0	(106.3)	0.0	0.0	0.0	310.0
1.6	Discretionary Western & US	4,316,144.5	118.2	510,306.4	0.0	0.0	0.0	0.0	0.0	55,254.2	0.0	565,560.6
1.7	Discretionary - Ontario	2,613,645.4	118.2	309,016.5	0.0	0.0	0.0	11,011.4	88,091.4	16,564.7	0.0	424,684.1
1.8	Niagara Supplies	1,102,563.7	118.2	130,358.3	0.0	0.0	0.0	0.0	0.0	57,562.7	0.0	187,921.0
1.	Total Purchases & Receipts	8,036,612.1	118.2	950,184.7	0.0	0.0	0.0	10,905.2	88,091.4	129,411.9	0.0	1,178,593.3
	Transportation											
2.1	TCPL FT-Demand System	0.0	0.0	0.0	0.0	0.0	0.0	559.7	4,477.8	183,903.9	0.0	188,941.5
2.2	Dawn	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.3	Dawn to Franchise	0.0	0.0	0.0	0.0	0.0	0.0	2,161.3	17,290.4	118,356.1	0.0	137,807.8
2.4	Vector	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13,192.5	0.0	13,192.5
2.5	Nova	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6,829.3	0.0	6,829.3
2.6	Niagara Falls to Enbridge Parkway DDA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16,670.6	0.0	16,670.6
2.7	Niagara Link Pipeline	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.8	Nexus Pipeline	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34,669.6	0.0	34,669.6
2.	Total Transportation	0.0	0.0	0.0	0.0	0.0	0.0	2,721.0	21,768.2	373,622.0	0.0	398,111.3
	Other Costs											
3.1	Fuel	0.0	0.0	10,519.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10,519.2
3.	Total Other Variable Costs	0.0	0.0	10,519.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10,519.2
4.	**Total Delivered Supply**	8,036,612.1	0.0	960,703.9	0.0	0.0	0.0	13,626.2	109,859.7	503,034.0	0.0	1,587,223.7
5.	**Storage Fluctuation**	56,288.9	118.2	7,961.3	0.0	0.0	0.0	57.8	465.6	2,132.0	0.0	10,616.7
6.	**Gas Costs to Operations**	8,092,901.0	0.0	968,665.2	0.0	0.0	0.0	13,683.9	110,325.3	505,166.0	0.0	1,597,840.5
7.	**Storage and Transportation**	0.0	0.0	0.0	126,884.0	65,774.0	0.0	0.0	0.0	0.0	0.0	192,658.1
8.	**Gas Costs-Storage & Trans.**	8,092,901.0	0.0	968,665.2	126,884.0	65,774.0	0.0	13,683.9	110,325.3	505,166.0	0.0	1,790,498.5
9.1	UUF Adjustment	0.0	0.0	(14,816.7)	0.0	0.0	0.0	(126.8)	(1,022.5)	(4,681.9)	20,647.9	0.0
9.2	LUFAdjustment	0.0	0.0	(2,437.6)	0.0	0.0	0.0	(24.0)	(193.3)	(1,186.3)	0.0	(3,841.1)
9.	**Total Classified Costs**			951,411.0	126,884.0	65,774.0	0.0	13,533.2	109,109.5	499,297.8	20,647.9	1,786,657.4
	GAS COSTS											
10.1	Classification Factors			951,411.0	0.0	0.0	0.0	13,533.2	109,109.5	499,297.8	20,647.9	1,593,999.3
10.2	Classification Percentages			59.69%	0.00%	0.00%	0.00%	0.85%	6.85%	31.32%	1.30%	100.00%
	STORAGE											
11.1	Classification Factors				126,884.0	65,774.0	0.0	0.0	0.0	0.0	0.0	192,658.1
11.2	Classification Percentages				65.86%	34.14%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%

Witnesses: A. Kacicnik
B. So

CLASSIFICATION OF TRANSPORTATION COSTS

($000)

Item No.	Description	Col. 1 Total	Col. 2 Peak	Col. 3 Seasonal	Col. 4 Annual Delivery	Col. 5 Annual Commodity
	FT TCPL					
1.1	TCPL LH	183,061.9	0.0	0.0	183,061.9	0.0
1.2	FTSN (Parkway to CDA)	5,879.6	559.7	4,477.8	842.0	0.0
1.3	Unutilized Transport. Cost	0.0	0.0	0.0	0.0	0.0
2	Dawn to Franchaise	141,373.3	2,161.3	17,290.4	118,356.1	3,565.5
3.	**Vector Pipeline**	13,192.5	0.0	0.0	13,192.5	0.0
4.	**NOVA Pipeline**	6,829.3	0.0	0.0	6,829.3	0.0
5.	Niagara Falls to Enbridge Parkway DDA	16,670.6	0.0	0.0	16,670.6	0.0
6.	Link Pipeline	0.0	0.0	0.0	0.0	0.0
7.	Nexus Pipeline	34,669.6	0.0	0.0	34,669.6	0.0
	OTHER					
8.	Fuel	6,953.7	0.0	0.0	0.0	6,953.7
9.	**Total**	408,630.5	2,721.0	21,768.2	373,622.0	10,519.2

Witnesses: A. Kacicnik
B. So

CLASSIFICATION OF
STORAGE AND TRANSPORTATION

($000)

Item No.	Description	Col. 1 Tecumseh O&M	Col. 2 Annual Cost	Col. 3 Deliver-ability	Col. 4 Seasonal Space	Col. 5 Winter	Col. 6 Annual Commodity
	TECUMSEH						
	TRANSMISSION						
1.1	Annual Demand	6,564.8	6,564.8	0.0	6,564.8	0.0	0.0
1.2	Daily Demand	12,000.1	12,000.1	12,000.1	0.0	0.0	0.0
1.3	In/out	4,513.8	4,513.8	0.0	4,513.8	0.0	0.0
1.4	Fuel	2,906.1	2,906.1	0.0	2,906.1	0.0	0.0
1.5	Transactional Services Revenues	(3,397.5)	(3,397.5)	(2,043.8)	(1,362.6)	0.0	0.0
1.	Total Transmission	22,587.3	22,587.3	9,956.2	12,622.2	0.0	0.0
	STORAGE						
2.1	Annual Demand	6,225.4	6,225.4	0.0	6,225.4	0.0	0.0
2.2	Daily Demand	11,500.8	11,500.8	11,500.8	0.0	0.0	0.0
2.3	In/out	749.8	749.8	0.0	749.8	0.0	0.0
2.4	Transactional Services Revenues	(2,602.5)	(2,602.5)	(1,556.2)	(1,037.4)	0.0	0.0
2.	Total Storage	15,873.5	15,873.5	9,944.6	5,937.7	0.0	0.0
3.	Total Tecumseh	38,460.7	38,460.7	19,900.9	18,559.9	0.0	0.0
	UNION GAS						
	STORAGE						
4.1	Space		9,623.1	0.0	9,623.1	0.0	0.0
4.2	Peak		11,761.5	11,761.5	0.0	0.0	0.0
4.3	Injection		746.1	0.0	746.1	0.0	0.0
4.4	Withdrawal		840.5	0.0	840.5	0.0	0.0
	Chatham D		137.6	0.0	137.6	0.0	0.0
4.	Total Storage		23,108.8	11,761.5	11,347.2	0.0	0.0
	TRANSMISSION						
5.1	Demand with comp.		81,000.4	50,049.1	30,951.3	0.0	0.0
5.2	Fuel		12,017.1	7,425.2	4,591.9	0.0	0.0
5.	Total Transmission		93,017.5	57,474.3	35,543.2	0.0	0.0
	DEHYDRATION						
6.1	Demand		1,045.4	1,045.4	0.0	0.0	0.0
6.2	Commodity		323.8	0.0	323.8	0.0	0.0
6.	Total Dehydration		1,369.2	1,045.4	323.8	0.0	0.0
7.	Total Union		117,495.5	70,281.3	47,214.2	0.0	0.0
	TRANSCANADA						
8.1	STS and Other		36,701.9	36,701.9	0.0	0.0	0.0
8.	Total TransCanada		36,701.9	36,701.9	0.0	0.0	0.0
9.	**TOTAL STORAGE & TRANSP.**		192,658.1	126,884.0	65,774.0	0.0	0.0
10.	**COST TO OPERATIONS**		192,658.1	126,884.0	65,774.0	0.0	0.0

Witnesses: A. Kacicnik
B. So

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FULLY ALLOCATED COST STUDY
ENBRIDGE GAS DISTRIBUTION
2018 TEST YEAR

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FULLY ALLOCATED COST STUDY

1. Summary

The 2018 Fully Allocated Cost Study is found in Exhibit G2, Tabs 2 to 7. The key results, including the cost to serve each rate class, and revenue to cost ratios are summarized in Table 1, and are shown in further detail in Tab 2. Table 1 compares the allocated cost to serve (Col. 2) to the proposed revenue (Col. 1), over / under contribution (Col. 3), and revenue to cost ratio (Col. 4) for all rate classes.

Table 1

FULLY ALLOCATED COST STUDY RESULTS

	Col. 1 Revenue *$Millions*	Col. 2 Cost to Serve *$Millions*	Col. 3 Over/Under Contributions *$Millions*	Col. 4 Revenue to Cost
Rate 1	1,787.66	1,776.52	11.14	1.01
Rate 6	1060.01	1,065.32	(5.31)	1.00
Rate 9	0.00	0.00	0.00	0.00
Rate 100	0.00	0.00	0.00	0.00
Rate 110	46.34	46.83	(0.49)	0.99
Rate 115	12.79	13.09	(0.30)	0.98
Rate 125	11.08	11.57	(0.48)	0.96
Rate 135	2.79	3.10	(0.31)	0.90
Rate 145	3.59	5.73	(2.14)	0.63
Rate 170	8.82	10.91	(2.09)	0.81
Rate 200	29.74	29.70	0.04	1.00
Rate 300	0.06	0.10	(0.04)	0.56
Rate 325 & 330	1.85	1.85	0.00	1.00
Rate 332	17.4	17.4	0.00	1.00
Direct Purchase	1.42	1.42	0.00	1.00
Total	2,983.55	2,983.55	0.00	1.00

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2. Introduction

The Study allocates test year rate base and revenue requirement to the various rate classes.

The Study's results represent the best estimate of the forecast costs to serve each rate class based on the conventions that underpin the study. An approach using different conventions would produce different results. However, it is the consistent year-to-year relationship between costs and revenues that is important for rate impacts, rather than the absolute level of allocated costs.

3. Conventions and Principles

The relative accuracy of any study can only be understood through the examination of the effects of the conventions employed. The major costs the Company incurs for providing service are associated with common facilities, such as gas distribution mains. To identify costs for each rate class for facilities that are shared by all customers, conventions that are based on principles and judgements are employed. These conventions have been reviewed and approved by the Ontario Energy Board, and together, they determine:

- the approach
- the degree of accuracy
- comparability and consistency over time

3.1 Approach

The Study first identifies two distinct cost entities: Enbridge Gas Distribution Inc (“EGDI”) and Tecumseh Gas Storage Division ("Tecumseh Gas"). It is necessary to ensure the proper separation of costs between storage and distribution services so as to remove any potential for cross-subsidization between distinct services. Each entity is pro rated a share of corporate-related overhead costs: administrative and general, fringe benefits, and average return on rate base.

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The Study next allocates the forecasted embedded costs for each entity that collectively form the revenue requirements in the test year. These costs are broken down, or unbundled, into cost components by rate class for each service provided to customers.

Due to the comprehensive nature of utility operations, a three-step process to *functionalize*, *classify*, and *allocate* costs, is necessary to facilitate costing of the variety of services required that are identifiable with each customer class. The consistent application of these steps results in an approach that allocates to each rate class the average costs associated with specific, shared, and common facilities used to provide services required by customers.

The rate classes themselves are set to reflect homogeneity of customer characteristics. Costs by class are more reflective of costs the customers in the class impose on the system if customers have similar characteristics of service. As a result of homogeneous classes, services provided to each class are costed at the customer class average and result in minimal distortions.

3.1.1 Average Embedded Costs

The Company operates an integrated system employing pipeline, storage, curtailment, and distribution facilities to deliver gas to customers in three geographical regions of Ontario. Due to this integration, the Board has directed the use of *postage stamp rates*. That is, customers on a given rate in St. Catharines are subject to the same charges as customers using the rate in Ottawa.

The use of postage stamp rates in such an integrated system is supported by the costing of each service at the customer class average. As an example, all customers share in the mix of investment vintages. The administration of an accounting system and setting of rates that are differentiated on the basis of specific investments would not be viable. Therefore, a rate class, such as Rate 1, which has a considerable number of older vintage services, has a delivery rate designed based on the average cost for service lines for all customers served under Rate 1.

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3.1.2 Three-Step Process in the Assignment of Revenue Requirement

The three steps of functionalization, classification and allocation of costs are designed to apportion rate base, net investment costs and operating and maintenance (O&M) costs for each class of customers in a fair and equitable manner.

Functionalization

The first step, functionalization, groups costs into operating functions to facilitate identification of costs associated with a distinct functional aspect of the Company, and allows for similar treatment of like costs.

The O&M costs, net investment costs, and rate base are grouped by the major functional centres of the Company listed in Table 2. Further refinement into sub-functions occurs when needed. Such an extensive list is necessary to: a) be as accurate as possible, and b) identify differences in cost behaviour when viewed at the rate class level.

Table 2
FUNCTIONS

Gas Supply
Storage
Sales Pressure Regulators
Distribution Pressure Regulators
Services
Mains
Meters
Rental Equipment
Sales/Marketing
Customer Accounting
Unidentifiable

For example, costs associated with pressure regulators are broken down to identify costs for regulators used in the distribution system (costs all customers share), separately from costs for pressure regulators used in sales stations, which are specific to large volume customers. The last item in the table, Unidentifiable, collects miscellaneous items too small and numerous to be significant, and those which affect all functions, and cannot be broken out. These costs are spread back over the existing costs, pro rata.

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Separate from the distribution system are Tecumseh Gas' costs. These costs are simply functionalized to either transmission and compression or storage.

A review of cost centres is carried out with every application to ensure continuity in functionalizing budgeted O&M costs, net investments, and rate base.

Classification

In the second step of classification, functionalized costs are grouped into categories that vary between rate classes by an identifiable factor or classifier. The costs are classified into three general cost groups based on whether costs vary with commodity (i.e. – volumes), capacity, or other customer specific factors.

Commodity-related costs are those that directly relate to the usage or consumption of natural gas. They are variable costs associated with each volume of gas sold or delivered in a given period. Capacity-related costs are those which are fixed over a given period and they include the costs of distribution mains, pipeline transportation capacity, and storage facilities. As the distribution system is sized to meet peak demand, capacity related costs are assigned on the basis of the rate class contribution to peak demand. Customer-related costs are investment and operating costs associated with customer meters, pressure regulators, and service lines, as well as customer accounting, billing, marketing and service operations costs.

In order to unbundle the Company's costing of services further, there are a number of sub-classifications within these three broad categories of classification. In total, there are 27 cost classifications and they are described in Appendix A (p. 26-27). New developments in providing customer service, operating practices, capital expansion, and gas supply, for example, are regularly monitored and cost classifications systematically reviewed each year. This ensures that cost classifications reflect cost incurrence and that similar costs are consistently treated.

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The classification of costs for Tecumseh Gas is based on the demand and commodity rationale. Using the demand rationale, costs are borne in relationship to each class' demand on days colder than the average winter day. The commodity rationale assigns costs based on an annual volume. For Tecumseh Gas, costs are identified based on whether they are for peak day (i.e. – deliverability), annual space, or variable. These classifications are referred to as daily demand, annual demand, and commodity.

Allocation

The allocation of classified costs is the process of spreading similarly incurred costs to each rate class on a common factor that can be identified by each class. For example, the costs of issuing a monthly bill to each customer are allocated on the basis of the number of customers in each rate class. Since the activities for printing and mailing the bill are the same for all customers, the allocated unit costs for these activities are equal to all customers.

Appendix B (p. 28) lists the allocators used in the Study. A review of actual customer numbers, profiles, and planned consumption is performed each year to ensure that allocators are reflective of the incurrence of costs.

The classified costs of Tecumseh Gas are not allocated to different rate classes as in the gas distribution study. Rather, the results are used to charge storage service costs to the Company's in-franchise customers and to derive ex-franchise storage rates.

3.2 Accuracy

The overriding principle for proper classification and allocation of costs is to do so based on the causation of costs. Customers should pay the costs incurred by the company to provide service to them. However, for Enbridge Gas Distribution Inc., a large utility providing a multitude of services, sometimes such principles are not easily applied as causation is not easily identifiable.

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In general, the further costs are incurred from the burner tip, the less they can be directly related to a specific customer or class of customers. Where required, methodology is rationalized to explain cost relationships so that costs are apportioned to reflect relative rather than absolute costs.

For commodity costs, since their classification and allocation can be easily determined, the accuracy of the cost and ultimately the rate is largely dependent upon the forecasted cost of gas supply. To mitigate this, the Purchase Gas Variance Account (PGVA) captures actual gas cost variances from the forecast to keep both the Company and customers whole.

Not directly identifiable with the three general classifications are the administration and general costs and return and taxes. Administration and general costs are functionalized on the basis of the proportion of operating and maintenance costs forecast for each operating function. Return and taxes are guided by the allocation of rate base to the different rate classes. These costs are not customer-specific, and considering their relative magnitude, different means for classification and allocation would result in significantly different rate class costs.

The accuracy of the Study is enhanced through cost unbundling, which facilitates specific identification of certain costs as greater detail is required. If sufficiently accurate, these costs can then be considered as cost-based rate components and used to eliminate cross subsidization. The Company treats the commodity component of gas supply in such a manner. This cost, through appropriate classification and allocation, is passed through directly into rates.

Cost unbundling can also better reflect avoided costs of service. Customers that do not need or want gas supply and transportation service can opt for a rate that is designed without gas supply and transportation costs. However, it must be noted that the rates that are cost-based are determined based on conventions that reflect cost causality, but are not in themselves directly measurable.

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3.3 Consistency

In assessing the Study's accuracy, one must keep in mind that the calculated costs are dependent upon the principles and methodologies used in classifying and allocating them. The consistent application of these steps results in an approach that allocates to each rate class the average costs associated with specific, shared, and common facilities used to provide services required by customers. By applying common factors that are identifiable by class and that are related directly to incurrence, accuracy and consistency are optimized each test year.

Further, as cost relationships are maintained among revenues, costs, and net investments, and among customer classes through the consistent application of the methodology, fairness and rate stability are natural outcomes. Because the rate impact occurs relative to an underlying level of historical cost, rate changes can then be explained by drivers that are transparent. This approach provides for appropriate price signals to customers.

4. Classification of Major Common Facilities

The following explains the rationale behind principles affecting the classification and allocation of certain fixed costs, specifically, upstream transportation charges, Union Gas' transmission costs, and gas distribution mains.

4.1 Upstream Transportation Costs

Most upstream transportation costs are driven by the need to meet average annual demand. As a result, the Company contracts for upstream capacity at 100% load factor. In RP-2003-0203, the Company proposed and received approval for the annual demand classification of pipeline transportation charges.

Consequently, the majority of upstream transportation charges are classified as annual demand in the Study and allocated to the rate classes volumetrically. This treatment ensures that all

bundled customers, regardless of their rate class, pay the same unit rate for fixed upstream transportation costs.

4.2 Union Gas Transmission Costs

The Company contracts for service with Union Gas to move gas in and out of storage and to move gas delivered at Dawn. Such costs include Union's transmission demand charges and transmission fuel.

A portion of this transmission capacity is required to move gas from Dawn to the franchise area in order to meet annual demand and load balancing requirements. The costs related to the portion required to meet load balancing needs are classified as peak and seasonal load balancing. The costs associated with the portion required to meet annual demand are classified to upstream transportation charges as annual demand and allocated volumetrically, consistent with the treatment of upstream transportation costs.

The remaining capacity on Union's transmission service is used to move gas from the Company's storage operations at Tecumseh, and from storage that the Company has contracted for with Union Gas. This capacity is further classified between storage space and storage deliverability. As storage space is used to meet average winter requirements in excess of annual average demand, this transmission capacity attributable to storage space equals average daily withdrawals from Tecumseh and Union storage (approx. 40%). The balance (approx. 60%) is attributed to storage deliverability which is used to meet demand on days colder than the average winter day. This is allocated based on the rate class contribution of the excess of peak day requirements over average winter demand.

4.3 Distribution Mains

The mains network is sized to meet peak demand capacity on the distribution system. It is divided into three systems based on operating pressure: transmission pressure, high pressure and low pressure.

The first two groups are facilities for moving gas from upstream transportation facilities to the low pressure distribution grid mains network. It is essentially the grid network that ultimately provides access to gas for the Company's customers. Since the transmission and high pressure systems feed the grid mains, they have a very limited customer component and are classified entirely as capacity-related.

The low pressure grid system (1) provides natural gas access to customers or potential customers on the system, and (2) meets the volumetric demands of various customers. As a result, the low pressure system has both a capacity-related and a customer-related component. These cost components are estimated by isolating the distribution infrastructure that is needed to exist to provide customers access to natural gas service. In this Study, about 44% of the low pressure mains are classified as customer related, resulting in about 30% of total mains classified as customer-related, these proportions have remained fairly consistent over the years since the Board's EBRO 487 Decision with Reasons.

5. The Study

The study can be found in the tabs following this report. They are:

- Tab 2 - Revenue to Cost Comparisons;
- Tab 3 – Functionalization;
- Tab 4 – Classification;
- Tab 5 – Allocation;
- Tab 6 - Classification and Allocation Factors; and,
- Tab 7 - Tecumseh Cost Study.

The costs can be followed as they flow through the study. For example, the input items in the total column in Tab 4, Classification, are the aggregated functionalized items from Tab 3, Functionalization. Similarly, Tab 5, Allocation, flows directly from Tab 4.

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The costs from the Tecumseh Cost Study, Tab 7, flow to four schedules: Tab 3, Schedules 1, 3, and 4, representing functionalization of rate base, net investments and O&M respectively, and Tab 6, Schedule 2, Page 2 , Classification of Storage and Transportation.

The following sections detail the significant aspects of the proposed Fully Allocated Cost Study.

5.1 Functionalization

Functionalization of costs is performed on the four schedules of Tab 3.

Schedule 1: Rate Base

The functionalization of rate base and net investments is aided by the Uniform System of Accounts for Gas Utilities (Ont. Reg. 245/66). For example, in Tab 3, Schedule 1, the net rate base for Item 2.3, Mains, is functionalized to Col. 7, Mains. Other direct costs are similarly functionalized. The following explains the functionalizations that are not immediately obvious.

- Item 2.1, Land, is functionalized based on an analysis of land use.
- Items 2.2 and 3.2, Structures and Improvements, are functionalized based on an analysis of space utilization.
- Item 3.3, Office Furniture and Equipment, is functionalized based on use of the office space.
- Items 3.4 and 3.5, Transportation Equipment and Heavy Work Equipment, are functionalized on the basis of records showing equipment utilization.
- Item 3.6, Tools and Work Equipment, is mostly utilized by the construction and service departments and is, consequently, functionalized 50% to each of the mains and services functions respectively.
- Item 3.8, Communication Equipment, is functionalized based on an analysis of communication equipment.

- Item 3.9, Compressors, is the cost of NGV equipment for Company use and is functionalized based on transportation equipment from above.
- Items 3.10 and 3.11, Computer Equipment and Software Acquired/Developed, are functionalized based on an analysis of computer equipment use.
- Item 3.13, CIS, is functionalized as a separate function because the Board determined the derivation of annual cost for this item over a certain time period through a prior Decision.
- Item 4, Plant Held for Future Use, represents inactive services and is functionalized to services.

Schedule 2: Working Capital Requirement

Working Capital Allowance, Schedule 1, Item 5.1, is functionalized in detail on Tab 3, Schedule 2. On this schedule, Prepaid Expenses, and Materials and Supplies are functionalized on the basis of accounting records. In addition to this:

- Item 3, Mortgages Receivable, arises from employee relocations, and is not a result of any specific function, and is, therefore, unidentifiable.
- Item 4, Rebilled Construction Work, is functionalized to mains, which is the key focus of this work.
- Item 5, Gas In Inventory, is functionalized as gas supply because the carrying cost of gas in inventory is a gas supply related cost.
- Item 6, Customer Security Deposits, is functionalized to Customer Accounting, offsetting the amounts associated with this function.
- Item 7.1, Gas Costs / O&M, is functionalized based on the Company's test year working cash requirement
- Item 7.2, HST, is similarly functionalized based on the Company's test year working case requirement, with the HST associated with revenues functionalized to HST revenues

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Schedules 3: Net Investment Costs + Depreciation

Functionalization of depreciation expense is based on functionalization of the corresponding rate base items. Municipal Taxes, Item 1.2, are functionalized based on an analysis of assessed property.

Rental Revenues are functionalized to Rental Equipment. Revenues associated with Transactional Services are functionalized to Gas Supply and Storage. The Miscellaneous Revenues are not readily identifiable and are functionalized as such. Late Payment Penalties and Open Bill revenues are functionalized to Customer Accounting, offsetting the costs associated with that function. The same approach is applied to Meter and Service Alteration Charges.

Schedule 4: Operating and Maintenance (O&M) Costs

O&M expenses are determined by operating account in the accounting system. As mentioned previously, the accounting system is sufficiently uniform and detailed that O&M costs for each function can be identified. Overheads are costs that cannot be directly assigned or functionalized, and are treated separately.

Fringe Benefits, Item 6, include the costs of employee benefits. In Col. 2, these costs are apportioned to the operating functions based on labour costs in each of the functions.

Supervision costs, Col. 4, are apportioned to the operating functions based on Sub-Totals in Col. 3. Such a treatment recognizes that supervision involves not only management of personnel resources but also integration of all other resources.

Administrative and General (A&G) Overheads, Item 7, are allocated to the operating functions based on Sub-Totals in Col. 5, except for Gas Supply. 3% of the gas supply function costs are used for allocation of A&G overhead costs. Completely functionalized O&M costs are shown in Col. 7.

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5.2 Classification

Classification of functionalized costs is performed in the three schedules in Tab 4.

Schedule 1: Rate Base

The rate base functionalized to Item 1, Gas Supply at Tab 4, Schedule 1, represents gas in inventory, working cash requirement for gas purchases, nominal recognition of land and structures, office furniture and equipment, and computer and communications costs. Working cash, land, structures, office related costs, and computer and communications facilities are required for daily management of the gas supply function and are classified as annual commodity costs. The working capital investment in gas inventory is, as directed by the Board, a winter season cost and is classified as seasonal cost.

For Item 2, Gas Storage, the Company identifies two factors to determine rate class responsibilities for this function. Storage facilities, coupled with other Company contract arrangements, either perform or are capable of performing the following operations:

1. Accepting gas during the summer (surplus to system's summer gas requirements) enabling the Company to contract for its gas requirements at a very high load factor, and receive the most advantageous / cost effective rate from upstream transporters.
2. Delivering gas from storage to the Company's market areas at times when demand exceeds contracted deliveries from pipelines.

Classification of Tecumseh Gas' costs and costs based on contract arrangements between Union Gas and the Company identifies three distinct types of service:

1. an annual component for space (volume) reserved for storage of gas for the Company's account;
2. a variable component for each cubic metre either injected into or withdrawn from storage; and,
3. a peak component for the maximum daily rate (i.e. – deliverability) at which the gas may be withdrawn from storage facilities.

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Charges for space, injection and withdrawal, appear under the "Space" heading in Col. 9. Charges for peak day service, plus the costs of the Company's storage facilities appear under the "Deliverability" heading in Col. 8.

In addition to the storage costs described above, the Company uses Union Gas' transmission system to move gas to and from storage fields. These costs include Union's transmission demand charges and transmission fuel. The classification of these costs is described in Section 4.2 (Page 11) of the Study.

Item 3, Mains, is classified as approximately 30% customer-related and 70% capacity-related. Capacity-related costs are further sub-classified as transmission, high and low pressure capacity based on analysis of investments in each pressure category of mains. In the Decision to EB-2012-0459, the Board found that Rate 125 customers should not be allocated the costs of transmission pressure pipelines less than 6" in diameter. Accordingly, the transmission capacity classification is further split into TP Capacity for mains less than or equal to 4 inch in diameter (TP Capacity <=4") and TP Capacity for mains greater than 4 inches (TP Capacity>4").

Classification of Item 4, Distribution Regulation is based on the classification of mains as this function measures and regulates the flow of gas from upstream pipelines to the Company's gas distribution system and within the system.

Items 5 to 7, Sales Stations, Meters, and Services, respectively, represent customer related investments and are classified directly to sales stations, meters and services.

Item 8, Rental Equipment, is classified to Specific Classes and to Rentals. The NGV component of the rental equipment costs is classified as specific costs and is further analyzed to identify the rate classes for whom NGV-related costs were incurred. The remainder of the costs are classified to Rentals and subsequently allocated to the rate classes based on the Rental Equipment allocation factors.

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Item 9, Sales and Marketing, is classified to Specific Classes, Distribution Costs and Number of Customers. NGV-related sales and marketing costs are classified as specific costs. The remainder is equally classified / split between Distribution Costs and Number of Customers.

Item 10, Customer Accounting, represents costs incurred for customer care, such as call centre, issuing bills to customers, etc. and is classified to Number of Customers.

Schedule 2: Net Investment Costs

Classification of net investment costs follows the classification of the corresponding rate base items on Schedule 1 discussed above.

Schedule 3: Operating and Maintenance (O&M) Costs

Classification of Item 1.1, Gas Purchased, is based on results of the detailed Classification of Gas Costs to Operations found at Exhibit G2, Tab 6, Schedule 2, Page 1, Line 10.2. The following paragraphs discuss the Classification of Gas Costs to Operations schedule.

The variable unit rate for commodity costs is based on a 12 month average of projected AECO/NIT prices inclusive of fuel plus NOVA/Empress transportation tolls and reflects commodity price at Empress. This unit rate is reflective of commodity price in the marketplace and is consistent with direct purchase requirements. The proposed Empress reference price for the test year is $118.2320 per $10^3 m^3$. All Purchases and Receipts are costed at this level as shown in Items 1.1 to 1.8, Col. 3.

Items 2 and 3 on the Classification of Gas Costs to Operations schedule are based on Classification of Transportation Costs found at Exhibit G2, Tab 6, Schedule 2, Page 3.Items1-8, Total Delivered Supply, is the sum of Items 1 to 3.

Item 5, Storage Fluctuation, represents the difference between purchases and sendout, or in other words, inter-year additions or depletions of gas inventory. Accordingly, Storage

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Fluctuation is classified in the same manner as total gas purchases. Item 6, Gas Costs to Operations, is the sum of Total Delivered Supply and Storage Fluctuation.

Item 7, Storage and Transportation, is classified based on Classification of Storage and Transportation, Exhibit G2, Tab 6, Schedule 2, Page 2.

Item 9.1, UUF Adjustment, recognizes that there are commodity losses on the gas distribution system that need to be replaced and is classified based on gas costs in Item 8.

Item 9.2, LUF Adjustment, represents gas losses for storage operations at Tecumseh Gas. This cost is removed from gas costs in Item 8 and placed in Tecumseh Gas Classification of cost to serve, Exhibit G2, Tab 7, Schedule 3, Item 2.1.1 where it is classified to transmission and compression and storage space based on functional allocation of Tecumseh Gas costs.

Item 1.2, Stored Gas, is the next item, on Tab 4, Schedule 3, Classification of O&M Costs. It represents costs associated with storage and transmission activities at Tecumseh and Union Gas. These costs are classified based on forecasted costs for deliverability and space demand as discussed in the description for classification of rate base and are the costs identified in Item 7 of the Classification of Storage and Transmission above.

Item 1.3, A&G, represents apportioned administrative and general overhead costs to the Gas Supply function. These costs do not vary with annual or seasonal throughput, are essentially fixed, and are incurred for the benefit of all customers, irrespective of their type of supply arrangements. Consequently, they are classified to Distribution Costs, TP Capacity <=4" and TP Capacity >4".

Items 1.4, System Gas Management, and 1.5, Direct Purchase Management, are classified to System Gas and Direct Purchase respectively.

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Classification of Distribution related items, specifically Items 2.2, 2.3, and 2.5 to 2.9 follow classification of corresponding rate base items.

Item 2.1, Chart Processing, is classified to Readings Processed, Col. 26.
Item 2.4, Gas Dispatched, is classified to Distribution Costs, TP Capacity <=4", and TP Capacity >4", reflecting costs associated with daily dispatch activities to optimize system operation.

Classification of some Customer Service related items can be directly attributed to specific classifiers. This is true for Item 3.4, Service Lines, which is classified to Customer Related Investments, Services. Cost responsibility for Items 3.1, Appliance Inspections, and 3.2, Locks/Unlocks/Exchanges, cannot be readily determined. Hence, these costs are classified to Total Number of Customers to be shared by all rate classes based on the number of customers in each class.

Classification of many Sales/Marketing related items can also be directly attributed to specific classifiers. Item 4.4, General Promotion, represents marketing and sales costs associated with general promotion of natural gas resulting in increased utilization of the gas distribution system. Accordingly, this expense is classified as capacity related.
Item 4.6, NGV Operation, represents the cost of the NGV program. An analysis based on investments in the various NGV assets is used to determine allocation of these costs to appropriate rate classes.

Classification of Customer Accounting related items is discussed below. Items 5.1, Billing, 5.2, Enquiry, and 5.4, Credit, are classified to Total Number of Customers to be shared by all rate classes based on the number of customers in each class. Item 5.3, Meter Reading, is classified to Readings Processed.

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Uncollectibles in Item 5.6 represent bad debt expense. It is classified as Bad Debt Commodity and Bad Debt Distribution based on the proportion of commodity revenues relative to total revenues.

5.3 Allocation

Allocation of classified costs is performed in the three schedules in Tab 5.

Tab 5 exhibits allocate classified costs to each rate class based on allocation factors that are referenced on the exhibits. On the right hand side of Schedules 1 and 3 is a column titled "Allocation Factors Exhibit G2.6.3". The numbers in this column indicate the allocation factor used as identified by its item number in Exhibit G2, Tab 6, Schedule 3.

Allocation factors are explained in Appendix B. For example, Item 1.1, Annual Commodity, Exhibit G2, Tab 5, Schedule 1 is the Company's rate base investment classified as commodity-related. This amount is allocated to the rate classes based on the Annual Sales allocation factor found at Item 1.1, Exhibit G2, Tab 6, Schedule 3. Appendix B defines this allocation factor as annual volumes of gas sales customers. Therefore, only sales customers are allocated rate base costs of system supply, which mainly consists of working cash requirement for payment of gas purchases prior to receipt of revenues from customers.

Allocation of return and income taxes is pro-rated to rate base. Income earned attracts income tax. The requested return is set by reference to the rate base. Therefore, allocation of both return and income taxes is based on the Rate Base allocation factor found at Item 5, Exhibit G2, Tab 6, Schedule 3.

Item 2.6, Dawn Transportation Service (DTS), is a bundled direct purchase transportation service with Dawn as the delivery point. The transportation costs allocated to DTS include all costs associated with delivering gas from Dawn to Enbridge franchise area, including but not

limited to the costs of transportation acquired by Enbridge from other service providers for the purpose of DTS and the proportionate cost of capacity on Segment A of the GTA Project required for the purpose of DTS (EB 2016-0215, Exhibit G1, Tab 1, Schedule1).

The total costs associated with providing DTS, Item 2.6 is excluded from Item 2.3, Annual – Transportation, and will be recovered over the total volumes of DTS. All DTS customers will be charged the same transportation unit rate, regardless of their physical location within Enbridge's franchise areas.

5.4 Storage and Transportation

Tab 7 is the Fully Allocated Cost Study for Tecumseh Gas.

Schedule 1 shows functionalization and classification of Tecumseh Gas rate base. The detail provided in the accounting system is sufficient to separate costs specific to transmission and compression from storage costs, facilitating functionalization. Classification is based on investment required to meet peak day demand relative to investment required to satisfy annual demand.

Functional Allocation of Tecumseh Gas costs, found on Schedule 2, is also facilitated by the accounting system. Functional allocation of Items 2.1 to 2.3, Operation, Maintenance and Administrative and General (A&G) costs, respectively, is determined based on consultations with Tecumseh Gas management.

Other items are functionalized as follows:

- Item 1.1, Utility Return, follows functionalization of rate base;
- Item 2.4.1, Depreciation, based on functionalization of depreciation expense;
- Item 2.4.2, Amortization, represents amortization of storage rights and is accordingly allocated to Pool Storage ;

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- Item 2.5.1, Municipal Taxes, based on functionalized tax base.

Functionalized transmission and compression costs, Column 4, are classified on Tab 7, Schedule 3, starting in Column 1. Functionalized storage costs, Column 5, are classified beginning in Column 7 of Schedule 3. Classification of return on rate base follows classification of rate base. Classification of other costs is based on cost incurrence or management's judgement.

Column 8 of Schedule 3 represents transfer of costs to Union Gas based on the sharing agreement between the Company and Union Gas for the Dow-Moore Pool. These costs do not form a part of the revenue requirement for Tecumseh Gas.

Classified costs from above are included in Item 1.2, Gas Storage, in Functionalization of Utility O&M, Exhibit G2, Tab 3, Schedule 4, Page 1. They are also reflected in development of Storage Classification Factors found at Exhibit G2, Tab 6, Schedule 2, Page 1, Item 11.1.

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APPENDICES

Witnesses: A. Kacicnik
B. So

FULLY ALLOCATED COST STUDY

Appendix A
DEFINITIONS *of* CLASSIFICATIONS

Classifier	Description
Gas Supply; Product Costs	
Annual Commodity	Costs of annual supply.
System Gas	Costs of system gas management.
Bad Debt Commodity	Costs of bad debt expense classified as commodity related.
Gas Supply; Load Balancing	
Peak Transportation	Costs of gas transportation to the Company on peak.
Seasonal Transportation	Costs for moving seasonal supplies.
Annual Transportation	Costs for transporting annual supply to the Company.
Storage Costs	
Deliverability	Costs of meeting demand on days colder than average winter demand.
Space	Costs of meeting average winter demand in excess of average annual demand.
Distribution Costs	
TP Capacity <=4”	Costs of transmission pressure distribution capacity for mains less than or equal to 4 inches in diameter.
TP Capacity >4”	Costs of transmission pressure distribution capacity for mains greater than 4 inches in diameter.
HP Capacity	Costs of high pressure distribution capacity.
LP Capacity	Costs of low pressure distribution capacity.
Commodity	Cost of supply for UUF.
Bad Debt Distribution	Costs of bad debt expense classified as distribution related.
DSM	Costs associated with DSM program and general costs.

FULLY ALLOCATED COST STUDY

Appendix A cont'd
DEFINITIONS *of* CLASSIFICATIONS

Classifier	Description
Customer Related Investments	
Meters	Costs of customer meters.
Sales Stations	Costs of customer sales stations.
Services	Costs of service lines.
Customer Plant	Costs of customer component of gas distribution mains.
Rentals	Costs of rental equipment.
Number of Customers	
Commercial/Industrial	Costs of sales and marketing for commercial and industrial markets.
Contracts	Costs of contract administration.
Direct Purchase	Costs of direct purchase management.
Total	Costs of customer service and customer accounting that are shared by all customers.
Other	
Specific Classes	Customer class specific costs that are assigned to specific rate classes.
HST Revenue	Reduction in working cash requirement arising from collection of HST.
Readings Processed	Costs for meter reading and processing customer bills.

FULLY ALLOCATED COST STUDY

Appendix B **ALLOCATION FACTORS**		
Allocator	**Col. 1** **Units**	**Col. 2** **Description**
Volumetric Factors:		
Annual Sales	10^6 m^3	Annual volumes of gas sales customers.
Bundled Annual Deliveries	10^6 m^3	Annual throughput of bundled service customers.
Total Annual Deliveries	10^6 m^3	Annual throughput of all customers.
Bundled Transportation Deliveries	10^6 m^3	Annual transportation volume for bundled customers.
Dawn Transportation Service	10^6 m^3	Annual transportation volume for Dawn Transportation Service customers.
Distribution Factors		
TP Demand	10^3 m^3 /d	Peak throughput on the transmission pressure system.
HP Demand	10^3 m^3 /d	Peak throughput on the high pressure system.
LP Demand	10^3 m^3 /d	Peak throughput on the low pressure system.
Customer Related	Customer count	Total number of customers.
Storage Factors		
Deliverability	10^6 m^3 /d	Demand in excess of average winter demand.
Space	10^6 m^3	Average winter requirement in excess of average annual demand.
Customer Factors		
Meters	$millions	Investment in meters.
Sales Stations	$millions	Investment in customer sales stations.
Services	$millions	Investment in services.
Rental Equipment	$millions	Rental equipment revenues.
Total Customer Count	Customer count	Average number of customers.
Comm/Ind Customer Count	Customer count	Average number of comm/industrial customers.
Contracts	Customer count	Number of contracts to be administered.
Chart Readings	Chart reads	Number of charts read each year.
Meter Readings	Meter reads	Number of meter readings per year.
Direct Purchase Customers	Unity	Direct purchase management costs.