

ENBRIDGE GAS DISTRIBUTION INC. AND UNION GAS LIMITED

Undertaking of Mr. Kitchen  
To Mr. Richler

REF: Tr.2, p.89

To provide a revised version of OEB Staff's chart at tab 3 of Exhibit K1.6.

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In responding to this Undertaking the determination of a payback period for Amalco should include the contribution of savings that Amalco needs to meet each years allowed ROE (Shortfall). The sum of the Shortfall and the outlay of integration capital represent the total amount of savings that Amalco will have to achieve in order to meet the OEB allowed ROE over the deferred rebasing period (Cumulative Shortfall). Over the deferred rebasing period, Amalco forecasts that its costs to operate the business will exceed the revenues it receives under the Price Cap Index (PCI), including ICM rate adjustments and meeting the allowed ROE each year will be dependent on its achievement of forecasted integration related savings.

The following graphs show when Amalco has achieved sufficient savings to offset the Cumulative Shortfall (Crossover Point). The Crossover Point is where the Cumulative Shortfall and the forecasted Net O&M savings lines cross. The first graph shows the information provided in Exhibit K1.6, Tab 3 and adds a line to show the Applicants' perspective.

Two cases are provided to show a possible range of Crossover Points that Amalco may encounter over the ten year deferred rebasing period.

**Case A: Base Case of \$150 million capital investment and \$680 million Net O&M savings**

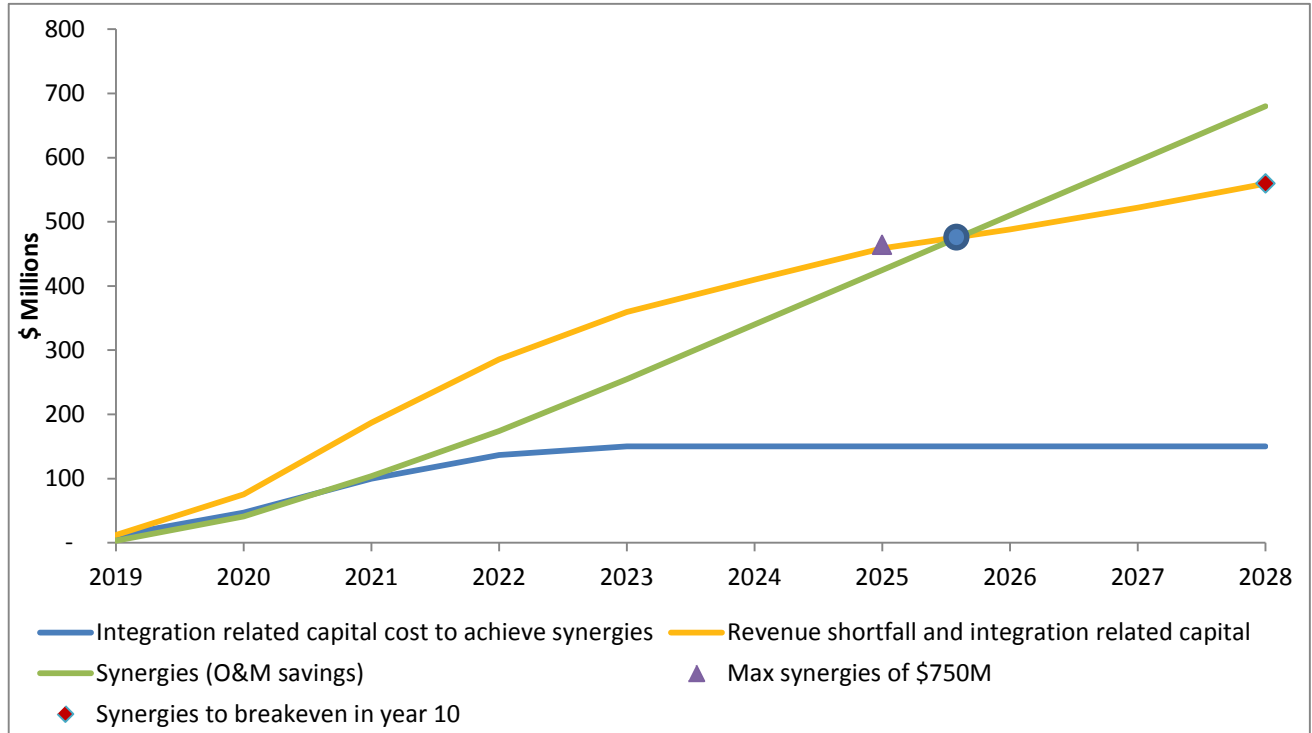
The yellow line shown in Graph 1 represents the Cumulative Shortfall for Amalco over the ten year term. The data for the Cumulative Shortfall line is located in row A.3 of Table 1.

The Cumulative Shortfall value is the sum of row A.1 and row A.2 in Table 1. These two rows represent Amalco's annual deficiency required to achieve that year's allowed ROE and that year's integration capital cost. For each of these items their source or calculation method is stated in the far right column of Table 1.

For Case A, the Crossover Point for Amalco is 7.5 years into the ten year term. The 7.5 year mark is when Amalco is forecasted to recover the cost to operate its base business and recover its integration capital outlay.

Graph 1 also shows two sensitivities for Case A. The triangle mark found at year 2025 on the yellow line identifies a payback period of 7 years should Amalco outlay \$150 million in capital investment and achieve the maximum forecasted savings of \$750 million.

The diamond mark found at year 2028 of the yellow line identifies that if Amalco spends \$150 million in capital investment and achieves savings of \$560 million, the payback period would be 10 years.



Graph 1: Case A with \$150 million capital investment and \$680 million Net O&M savings

A Base Case: \$150M/\$680M (capex/synergies)

Payback Net cash flow approach (\$ Millions)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Source/Calculation
A.1 Revenue shortfall to meet allowed ROE	1	28	59	62	60	50	49	30	34	38	Exhibit B, Tab 1, Table 3
Cumulative	1	29	87	149	209	260	309	338	372	410	
A.2 Integration related capital cost to achieve synergies	11	36	53	37	13	-	-	-	-	-	Exhibit B, Tab 1, Attachment 12
Cumulative	11	47	100	137	150	150	150	150	150	150	
A.3 Revenue shortfall and integration related capital	12	64	112	99	73	50	49	30	34	38	Line A.1 plus Line A.2
Cumulative Shortfall	12	76	187	286	359	410	459	488	522	560	
A.4 Synergies (O&M savings)	3	38	63	70	81	85	85	85	85	85	Exhibit B, Tab 1, Attachment 12
Cumulative	3	41	104	174	255	340	425	510	595	680	
A.5 Gap - synergies vs revenue shortfall and integration related capital	(9)	(35)	(83)	(112)	(104)	(70)	(34)	22	73	120	Cumulative A.4 less Cumulative Shortfall (A.3)

Table 1: Data and sources for Case A and Graph 1

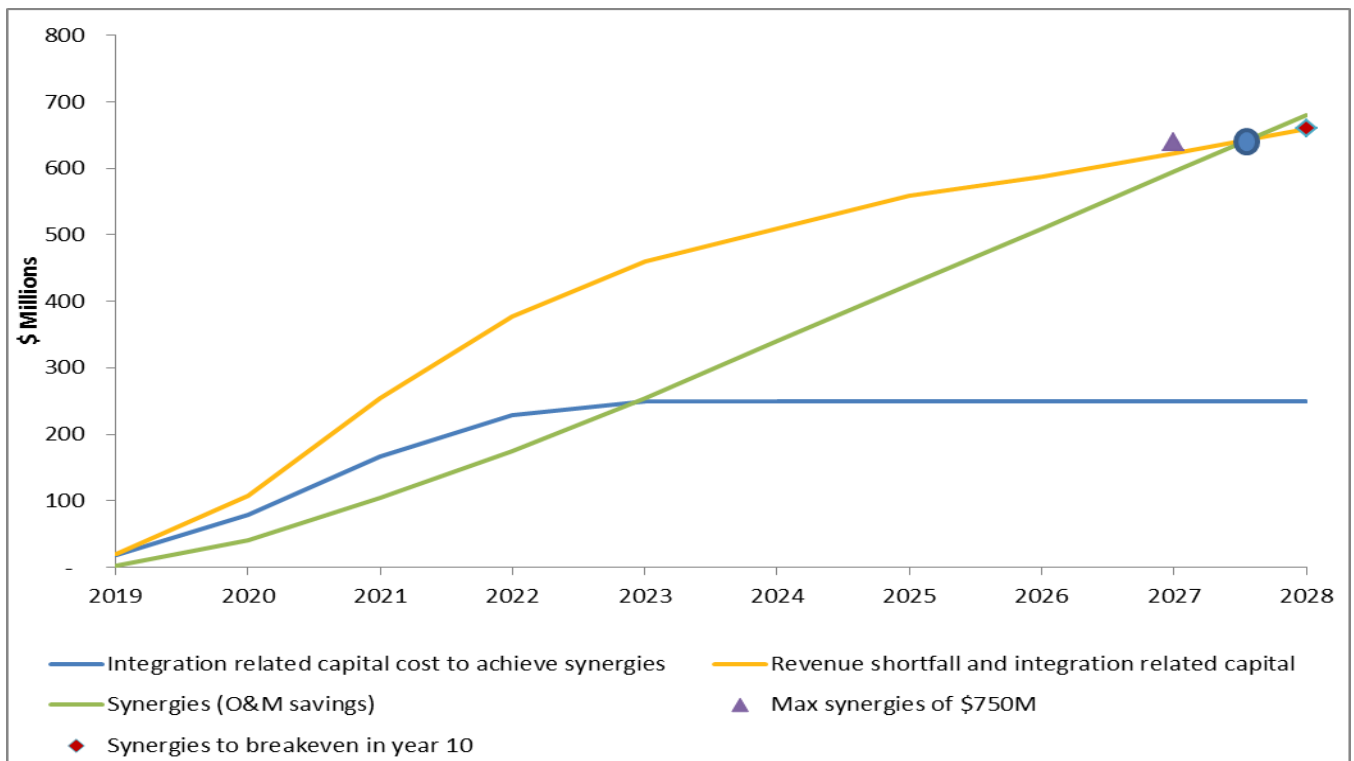
**Case B: Maximum Capital Investment of \$250 million and \$680 million Net O&M savings**

Similar to Case A, the yellow line shown in Graph 2 represents the Cumulative Shortfall for Amalco over the ten year term. The data for the Cumulative Shortfall line is found in row B.3 of Table 2.

For Case B, the Crossover Point for Amalco is 9.5 years into the ten year term. The 9.5 year mark is when Amalco is forecasted to recover the cost to operate its base business and recover its integration capital outlay.

Graph 2 also shows two sensitivities for Case B. The triangle mark found at year 2027 identifies a payback period of 9 years should Amalco outlay \$250 million in capital investment and achieve the maximum forecasted savings of \$750 million.

The diamond mark found at year 2028 identifies that if Amalco spends \$250 million in capital investment and achieves savings of \$660 million, the payback period would be 10 years.



Graph 2: Case B Maximum Capital Investment of \$250 million and \$680 million Net O&M savings

B Scenario: \$250M/\$680M (capex/synergies)

Payback Net cash flow approach (Millions)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
B.1 Revenue shortfall to meet allowed ROE	1	28	59	62	60	50	49	30	34	38	Exhibit B, Tab 1, Table 3
Cumulative	1	29	87	149	209	260	309	338	372	410	
B.2 Integration related capital cost to achieve synergies	18	60	88	62	22	-	-	-	-	-	Exhibit B, Tab 1, Table 4 (profiled the same as the base case)
Cumulative	18	78	167	228	250	250	250	250	250	250	
B.3 Revenue shortfall and integration related capital	19	88	147	123	82	50	49	30	34	38	Line B.1 plus Line B.2
Cumulative Shortfall	19	107	254	377	459	510	559	588	622	660	
B.4 Synergies (O&M savings)	3	38	63	70	81	85	85	85	85	85	Exhibit B, Tab 1, Attachment 12
Cumulative	3	41	104	174	255	340	425	510	595	680	
B.5 Gap - synergies vs revenue shortfall and integration related capital	(16)	(66)	(150)	(203)	(204)	(170)	(134)	(78)	(27)	20	Cumulative B.4 less Cumulative Shortfall (B.3)

Table 2: Data for Case B and Graph 2