

**RESPONSE OF GAZ MÉTRO LIMITED PARTNERSHIP (GAZ MÉTRO) TO
THE REQUEST FOR INFORMATION NO. 2 OF OPTION CONSOMMATEURS
(OC) PRESENTED TO GAZ MÉTRO LIMITED PARTNERSHIP (GM)**

**GAZ METRO'S PROFITABILITY ANALYSES FOR SYSTEM EXPANSION
PROJECTS**

1. Reference: i) Exhibit B-0277, GM-7, Doc 4, page 13, lignes 14-21.

Preamble: Gaz Metro states: "Reinforcement costs are considered globally in the profitability evaluation of the development plan, not on a project-by-project basis."

Questions:

- 1.1. Please provide a detailed calculation showing how the costs of reinforcement of the distribution network are calculated for evaluating the profitability of a development plan, using a recent development plan as an example.

Reponse:

From the 2007 rate case, Gaz Métro integrated a distribution system reinforcement budget to the development plan. Gaz Métro evaluates this overall budget according to an average of historic needs. These needs are generally associated with multiple service lines that depend on sales conditions that are difficult to predict. These needs are identified throughout the year as sales are carried out. Nevertheless, Gaz Métro updates, to the best of its knowledge, the amount for reinforcement work for the year to come when carrying out development plans in the rate case.

Based on the reference in Exhibit B-0264, Gaz Métro-9, Document 6, Page 3, Gaz Métro has carried out distribution reinforcement work in the amount of approximately \$16 million over the last 13 years, making for an average annual amount of approximately \$1.2 million in distribution reinforcement work.

Please refer to Exhibit R-3976-2016, B-0196, Gaz Métro-7, Document 2, column 15 to see how reinforcements have been integrated to the 2017-2018 rate case development plan.

Certain large-scale reinforcement work is also presented to the Régie on a case-by-case basis when investments exceed \$1.5 million and generally consist of projects targeting supply and transmission systems such as Pétromont (R-3833-2013 and R-3941-2015), Jacques-Cartier Bridge (R-3763-2011) and Saguenay (R-3919-2015).

- 1.2. Please explain how reinforcement costs are estimated and calculated on a regional or service area basis for any given development plan. Explain how specific projects are identified, if at all, and explain how costs per unit of increased demand are developed, if they are developed. Provide work papers showing sample calculations.

Response:

Please refer to the response to question 1.1.

- 1.3. For how many years out (i.e. until what year in the future) is the potential for reinforcement cost calculated, and how is the cost apportioned between current and future development?

Response:

Please refer to the response to question 1.1.

- 1.4. Please identify specific near-term or intermediate-term reinforcements and their respective costs for individual very large projects at the time of their initial development, rather than including those costs in the development plan for all projects? If so, please explain how those reinforcements could be identified. If not, why not?

Response:

Please refer to the response to question 1.6 in Exhibit B-0264, Gaz Métro-9, Document 6.

- 1.5. How are operations and maintenance costs associated with the reinforcement (for main inspection and main maintenance, as well as operations and maintenance of new regulating stations and compressor stations) included, if at all, in the profitability of the development plan?

Response:

Considering that the evidence for Phase 3A is complete, was submitted to the Régie, and is now under advisement, Gaz Métro respectfully submits that questions relating to operating expenses already addressed in Phase 3A are not relevant in the analysis of this Phase 3B.

1.5.1. If operations and maintenance costs are included, provide work papers showing sample calculations that demonstrate how those costs are calculated and included.

Reponse:

Considering that the evidence for Phase 3A is complete, was submitted to the Régie, and is now under advisement, Gaz Métro respectfully submits that questions relating to operating expenses already addressed in Phase 3A are not relevant in the analysis of this Phase 3B.

1.5.2. If operations and maintenance costs are not included, please explain why it is reasonable not to include them.

Reponse:

Considering that the evidence for Phase 3A is complete, was submitted to the Régie, and is now under advisement, Gaz Métro respectfully submits that questions relating to operating expenses already addressed in Phase 3A are not relevant in the analysis of this Phase 3B.

2. Reference: i) Exhibit B-0264, GM-9, Doc 6, GM Response to ROEE Expert Paul Chernick's No. 2 IRs in Phase 3, Question 1.6, pp. 3-5.

Question:

2.1 Please identify the length of each reinforcement project listed in this response in metres.

Response:

Pressure Class	Number of projects	Project Definition	Number of linear meters of service lines
Distribution	1	Looping of the 640, Terrebonne	1,956
Distribution	2	Looping Croissant des Iles, Laval	52
Distribution	3	Looping Repentigny - Residential	5,207
Distribution	4	Looping Syst. Polymère Structural, Magog	314
Distribution	5	Looping Beloeil - St-Jean-Baptiste	4,120
Distribution	6	Looping Bromont - Rue des Carrières	1,182
Distribution	7	Looping Montcalm, Candiac	1,189

Pressure Class	Number of projects	Project Definition	Number of linear meters of service lines
Distribution	8	Reinforcement St-Sébastien	2,204
Distribution	9	Reinforcement St-Valérien	2,975
Distribution	10	Looping system cl 400 de St-Jérôme	72
Distribution	11	Looping Boisbriand, 3825 Alfred-Laliberté	508
Distribution	12	Véolia, rue Pion, St-Hyacinthe	1,902
Distribution	13	Meubles Ashley, Sherbrooke	69
Distribution	14	Reinforcement - Asphalte générale	2,300
Distribution	15	System reinforcement, Pierrefonds	1,712
Distribution	16	550 McArthur, St-Laurent	89
Distribution	17	Émile Giroux Reinforcement, Qc	2,992
Distribution	18	UDM Outremont campus	282
Distribution	19	Rang St-Paul, St-Rémi	2,862
Distribution	20	Groupe Robin, Trois-Rivières	1,897
Distribution	21	Sani Estrie, 405 Rudolphe Racine, Sherbrooke	419
Distribution	22	System reinforcement - Regional dev. Bedford	900
Distribution	23	2911, Marie-Curie Ave., St-Laurent	310
Distribution	24	Delivery point, St-Jérôme	N/A
Distribution	25	Looping - Fruit D'Or	4,260
Distribution	26	Looping boul. Mercure, St-Nicéphore	3,175
Distribution	27	99999 rue du parc industriel, Lanoraie	236
Distribution	28	Looping Petites Soeurs Ste-Famille	45
Distribution	29	Serres Marian Vinet St-Rémi	184
Distribution	30	Boul. de Portland, Sherbrooke	930
Distribution	31	Outremont campus UDM	348
Distribution	32	Marché aux puces / Faubourg Carignan	542
Distribution	33	NRC St-Paul d'Abbotsford	1,196
Distribution	34	Reinforcement & Development Budget	N/A
Distribution	35	Sherbrooke est / Georges V	N/A
Distribution	36	Looping system, town of Labaie	470
Distribution	37	Looping auto 13 & boul. Ste-Rose	1,223
Distribution	38	Qc - Looping rue St-Jean	235

Pressure Class	Number of projects	Project Definition	Number of linear meters of service lines
Distribution	39	Looping St-Valérien-de-Milton	1,506
Distribution	40	System Looping - St-Lambert	846
Distribution	41	System reinforcement PL Oka/St-Eustache	1,623
Distribution	42	System reinforcement Guthrie Dorval	105
Distribution	43	Looping Ste-Marie 3 km 6" plastic	2,010
Distribution	44	Looping rue des Châteaux, Blainville	782
Distribution	45	Reinforcement PD3087 - 3090 Lachute	679
Distribution	46	Qc - Looping St-Amable (La Chevrotière-Art)	124
Distribution	47	Qc - Looping system - rue Guimont, Beauport	349
Distribution	48	Qc - Looping Pionnières-de-Beauport	293
Distribution	49	Looping industrial park, Terrebonne	1,413
Distribution	50	Looping des Hêtres, Shawinigan	198
Distribution	51	Reinforcement Ste-Elisabeth Laurentians	2,225
Distribution	52	Looping aut. 15/30 Delson	88
Distribution	53	Estrie-Looping St-Georges Drummondville	125
Alimentation	54	Repl. supports/coating - Pont-Jacques Cartier	397
Distribution	55	Looping systems Vaudreuil	94
Distribution	56	(ES)Sag-Lac-Looping 160m De Monfort	169
Distribution	57	ES/Ph3 System reinforcement Fleury & CN	311
Distribution	58	System reinforcement Clark-Graham	427
Distribution	59	Increase of system pressure, St-Clet	N/A
Distribution	60	Sag-Lac Ab-reconst. reg. line PL4024-Chic	-
Distribution	61	Hydraulic Capacity rue St-Antoine	94
Distribution	62	System Reinforcement, 32nd Avenue Lachine	26
Distribution	63	System Reinforcement, Dagenais blvd.	316
Distribution	64	System reinforcement rue Norman	210
Distribution	65	System reinforcement, Tecumseh blvd.	1,197
Distribution	66	Budget for improvement of hydraulic capacity	N/A
Transmission	67	Compressor station, St-Maurice	1,117
Transmission	68	Compressor station, La Tuque	2,078
Supply	69	Pétromont	1,400

COST OF CAPITAL AND OTHER ECONOMIC PARAMETERS FOR EVALUATION

3. Reference: i) **Exhibit B-0258, GM-9, Doc 4, GM Response to OC No. 1 IRs in Phase 3B, Question 7.2, pp. 24-27.**

Questions:

3.1 Is the cost of debt of 2.82% an embedded cost or an incremental cost?

Response:

The cost of debt of 2.82% is a prospective cost. It consists of the combined cost of the medium and long-term new debt as well as the short-term debt, at a variable rate, that Gaz Métro should issue to finance the project.

3.2 Is the cost of debt net of the income tax deduction on debt interest?

Response:

It is the cost of debt before tax.

3.3 In any case, please provide derivation or substantiation of the cost of debt.

Response:

Please refer to Schedule Q-3.3.

3.4 Is the cost of preferred stock of 4.44% an embedded cost or an incremental cost?

Response:

The cost of preferred shares is a also prospective cost. It consists of the cost of a preferred share issuance in 2016-2017 that Gaz Métro should incur to finance the project.

3.5 In any case, provide derivation or substantiation of the cost of preferred stock.

Response:

The prospective cost of preferred shares at 4.44% is based on the current yield on February 16, 2016 of the most recent issuance of Canadian Utilities, which was selected as it most resembles Gaz Métro among other comparable companies with respect to credit rating and industry. S&P has confirmed that Gaz Métro's preferred shares, were there to be an issuance, would obtain a rating of P-2 (H), the same as Canadian Utilities.

- 3.6 Under item (xi), the volume of sales is identified as an item included in the analysis. Explain how the volume of sales is forecast for new residential customers and for new business customers?

Response:

Please refer to the response to question 14.2 of the Régie's request for information no. 9 (B-0253, Gaz Métro-9, Document 1) and to the response to question 7.6 of the OC's request for information no. 1 (B-0258, Gaz Métro-9, Document 4).

- 3.7 Under item (xi), it appears that the customer charge is missing from the list of specific entries of revenue received from each project. Is this correct? If so, why is it not included?

Response:

The distribution service rate that is applied to anticipated volumes for each customer takes into account basic fees that apply to this rate. Each customer is assigned, according to its estimated volume, a unit rate and basic fees based on service conditions in effect.

Please refer to the response to question 4.2 of the ACIG's request for information no. 3 (Gaz Métro-9, document 10).

LONG-RUN MARGINAL OPERATION COSTS THAT ARE NOT DIRECT COSTS OF CUSTOMER CONNECTION

4. Reference: i) **Exhibit B-0258, GM-9, Doc 4, GM Response to OC No. 1 IRs in Phase 3B, Question 4.4, pp. 12-13.**

Questions:

4.1 Please provide the costs of operating the corporate human resources department in each year from 2012 to 2016 inclusively.

Response:

The operating costs of the human resources department, including salaries, fringe benefits and other expenses for years 2012 to 2016 are presented in the following table.

	2012	2013	2014	2015	2016
Operating costs	\$8,060,533	\$8,477,995	\$8,295,062	\$8,749,968	\$8,430,851

4.2 What percentage of these costs is capitalized and what percentage is expensed?

Response:

	2012	2013	2014	2015	2016
Capitalized percentage	0%	0%	0%	0%	0%

5 PROFITABILITY OF NETWORK ADDITIONS IN RECENT YEARS

References: i) **Exhibit B-0258, GM-9, Doc 4, GM Response to OC No. 1 IRs in Phase 3B, Question 6.2, p. 21.**

Question:

5.1 Please provide the direct cost in total for each type of project for which cumulative customers and revenues are estimated.

Response:

Direct costs consist of the investment costs excluding general corporate and contractor expenses.

Anticipated direct costs of approved extensions in 2016						
<i>Per type</i>						
	Direct Costs (\$000)					
	Y0	Y1	Y2	Y3	Y4	Y5
Residential projects	2,984	420	329	175	119	53
Profitable	1,406	214	124	38	57	0
AMT	1,579	206	205	137	62	53
Business projects	13,663	229	48	9	21	0
Profitable	6,792	175	40	1	0	0
AMT	3,448	54	7	8	21	0
AMT Industrial Park	3,185	0	0	0	0	0
AMT Road Repaving	237	0	0	0	0	0

MARKETING AND ADMINISTRATION OF NEW CUSTOMER CONNECTIONS

- 6 Reference:**
- i) **Exhibit B-0258, GM-9, Doc 4, GM Response to OC No. 1 IRs in Phase 3B, Question 4.2, pp. 11-12.**
 - ii) **Exhibit B-0264, GM-9, Doc 6, GM Response to ROEE Expert Paul Chernick's No. 2 IRs in Phase 3, Question 11.11, p. 25.**
 - iii) **Hearing Exhibit C-OC-0032 (Phase 3A)**

Preamble: In Document C-OC-0032 presented in the Phase 3A hearing, on item 19 “line extension administration (pre-commitment)”, the position of OC is shown as “not included but should be part of profitability analysis (Regie IR 1.3)” and the position of ROEE is shown as “figure not developed yet but should be included.” These intervenors indicated that the information was relevant to a determination of profitability in Phase 3A but was not available.

Questions:

- 6.1 Please provide an organization chart showing those employees who are involved with the planning and marketing of new customer connections, and where they fit in the overall Gaz Metro organization. If there are separate groups serving new residential and new business connections, please identify them.

Response:

Considering that the evidence for Phase 3A is complete, was submitted to the Régie, and is now under advisement, Gaz Métro respectfully submits that questions relating to operating expenses already addressed in Phase 3A are not relevant in the analysis of this Phase 3B.

- 6.2 Please identify the cost of the planning and marketing of new customer connections by these employees (ie. those involved in the planning and marketing of new customer connections) in 2015 and 2016.

Response:

Considering that the evidence for Phase 3A is complete, was submitted to the Régie, and is now under advisement, Gaz Métro respectfully submits that questions relating to operating expenses already addressed in Phase 3A are not relevant in the analysis of this Phase 3B.

METHODOLOGY FOR PROFITABILITY IN OTHER PROVINCES

7 Reference: i) **Exhibit B-0278, GM-7, Doc 5, pp. 29-31**

Questions:

7.1 Please provide a copy of the E.B.O. 188 Final Report of the Board and the Ontario Energy Board Guidelines for Assessing and Reporting on Natural Gas System Expansion in Ontario, Dated January 30, 1998.

Response:

Please refer to Schedules Q-7.1a) *Final report of the Board* and Q-7.1b) *Appendix B – Guidelines for assessing and reporting on natural gas system expansion in Ontario*.

7.2 Please describe any differences in methodology of determining profitability and/or the components included in a profitability analysis between the Ontario Energy Board's report and Gaz Metro's proposal in this case, including but not limited to the concept of "tax savings" identified by the OEB.

Response:

Gaz Métro points out that a benchmarking of the methodologies and practices used for other gas utilities was carried out in the B&V report (Gaz Métro 7, document 5). Gaz Métro also conducted a high level review of the OEB's directives (see reference to the response to question 7.1).

Firstly, it should be noted that the methods are similar, both for the considered revenues and total costs, and the evaluation of the profitability index.

The main differences between the two methodologies are summarized as follows:

- Operational flows and investments (with the exception of the initial investment) are considered as mid-year flows (OEB) versus end-of-year flows (Gaz Métro) for discounting purposes. In this respect, Gaz Métro's approach is more conservative than that of the OEB.
- Tax savings on book depreciation are considered by the OEB to be perpetual whereas Gaz Métro considers them only for the first 40 years. In this respect, Gaz Métro's approach is more conservative than that of the OEB.

Finally, it should be noted that, in accordance with the Régie's Decision D-97-25, Gaz Métro, like the OEB, uses a discount rate in assessing the profitability of projects that corresponds with the weighted average cost of prospective capital after tax.

However, Gaz Métro noted that, for the 2017 rate case and for many years, the calculation of this rate took into account the rate of prospective debt before tax rather than after tax, which leads to a slight overestimation of the weighted average cost of prospective capital. This calculation will be corrected as of the 2019 rate case.

7.3 Please describe any differences in methodology of determining profitability and/or the components included in a profitability analysis between the Fortis BC method and Gaz Metro's proposal in this case.

Response:

Gaz Métro points out that a benchmarking of the methodologies and practices used for other gas utilities was carried out in the B&V report (Gaz Métro 7, document 5). Gaz Métro also conducted a high level review of the document *FortisBC Energy Inc (FEI) 2015 System Extension Application*.

Firstly, it should be noted that the methods are very similar, both for the considered revenues and total costs, and the evaluation of the profitability index.

The main differences between the two methodologies are summarized as follows:

- FEI's "Municipal Tax" and "Property Tax" are replaced, in Gaz Métro's methodology, with the public utilities tax and royalties payable to the Régie de l'énergie and the Régie du bâtiment.
- FEI's capital costs include an allocation for working capital, whereas Gaz Métro's capital costs take into account fees of the Union des municipalités du Québec and commercial incentives (RCP and CASEP).
- FEI's discount rate is the weighted average rate of the capital after tax, whereas Gaz Métro's discount rate is, in accordance with the Régie's Decision D-97-25, the weighted average cost of the prospective capital after tax. However, Gaz Métro noted that, for the 2017 rate case and for many years, the calculation of this rate took into account the rate of prospective debt before tax rather than after tax, which leads to a slight overestimation of the weighted average cost of prospective capital. This calculation will be corrected as of the 2019 rate case.

INDIRECT COSTS

8 Reference: i) **Exhibit B-0278, GM-7, Doc 5, p. 31**

Questions:

8.1 Please confirm that the Capitalized General Contractors fees are paid as a percentage of the cost of each individual project, so that if a project were not completed, the capitalized general contractor's fee would be different. If you cannot confirm this point, please explain in detail.

Response:

In the methodology currently used by Gaz Métro to evaluate a development project's profitability, Gaz Métro allocates 27.1% to general contractor costs in the calculation of a project's cost. This specific allocation is used for the *a priori* evaluation of a development project's profitability in order to determine whether it will be approved or not.

Once the project is approved and carried out, there are no general contractor costs allocated to each of the development projects in Gaz Métro's accounts. The general contractor costs paid by Gaz Métro represent a fixed amount per contractor initially established in the general agreement and are entirely capitalized regardless of the number of projects carried out.

8.2 Please define Capitalized General Overhead Expenses, and in particular, specify if those expenses include costs such as workers' compensation insurance, employee benefits, and other costs that could be directly associated with a given worker.

Response:

Please refer to the response to Question 2.1 of the FCEI's Request for Information no. 3 (Gaz Métro 9 - Document 11) for a description of the general corporate expenses.

The costs included in the general corporate expenses correspond to the operational expenses of the cost centers, which include fringe benefits.

SYSTEM INCREMENTAL CAPITAL INVESTMENT

9 Reference: i) **Exhibit B-0278, GM-7, Doc 5, p. 32**

Question:

9.1 Please explain how Black and Veatch would calculate the System Incremental Capital investment and would determine whether to assign portions of it to specific customers or at the portfolio level.

Response:

Gaz Métro

Gaz Métro did not mandate Black and Veatch to evaluate the forecast of the necessary investments for system reinforcements (first part of the question “would calculate”) and did not intend to do so. Please refer to the response to question 1.1.

Black & Veatch

Black & Veatch would determine the investment-related costs of the facilities needed by Gaz Métro (as part of the reinforcement budget in its development plan) to reinforce its existing gas distribution system to enable the connection of new customers to the existing system and to increase the existing system’s operational capacity and flexibility to the benefit of the new and existing customers.

System Incremental Capital Investments should be assigned to new customers in a manner that best aligns the number of customers to be served and their associated capacity needs with the investment level needed to satisfy those customer requirements. To accomplish this, it is reasonable and appropriate to assign the cost of such facilities to new customers on a portfolio basis to recognize the lumpy nature of these system investments (see also answer to question 7.2b of the ROEÉ Expert (Gaz Métro-9, Document 14). Even though gas load may grow gradually each month, capital expenditures to build upstream gas transmission or distribution projects are typically done less frequently reflecting the fact that economies of scale exist in upstream projects (i.e., it is more cost-effective on a unit basis when larger projects are undertaken compared to smaller projects).

The decision of how much investment, the location, and the timeframe for completing these types of projects is typically made by the gas utility’s distribution system planning area as part of the ongoing review of its future capacity needs. Multiple factors are considered by system design and planning professionals including the current gas loads, estimates of short- term and long-term growth in load, right of ways, material costs, gas supply considerations, and modeling of current system capacity. Importantly, there is not a

direct relationship between adding a single new customer or undertaking a development project and adding a unit of upstream capacity. Therefore, it is not feasible or equitable to assign a portion of the cost of these system facilities to specific customers. Please see also the response to answer to question 12.3 of the ROEÉ Expert (Gaz Métro-9, Document 14).

**Calculation of the prospective capital cost for 2017
in accordance with Decision D-97-25**

DEBT OF: 54.00%

25.00%	VARIABLE RATE	Weighting	Rate	
	Securitization	0.00%	0.00%	0.000%
	Commercial paper	100.00%	1.141%	1.141%
	Money Market	0.00%	0.00%	0.000%
	Annual Return - Variable Rate:			1.14%
				0.29%

10.00%	MEDIUM TERM AT FIXED RATE			
	CDN Obligations - 5 yrs		0.85%	
	CDN Obligations - 10 yrs		1.35%	
	Rate average 5-10 yrs			1.10%
	Average corporate variance:			1.42%
	Coupon rate:			2.52%
	Commission:		0.375%	
	Issuance costs:		0.260%	
	On annual basis:			0.08%
	Annual Return - Medium term:			2.60%
				0.26%

65.00%	LONG TERM AT FIXED RATE			
	CDN Obligations - 10 yrs:		1.35%	
	CDN Obligations - 30 yrs:		1.97%	
	Rate average 10-30 yrs			1.66%
	Average corporate variance:			1.80%
	Coupon rate:			3.46%
	Commission:		0.450%	
	Issuance costs:		0.260%	
	On annual basis:			0.04%
	Annual Return - Long term:			3.50%
				2.27%

PROSPECTIVE RATE OF DEBT: 2.82%

PROSPECTIVE CAPITAL COST:

DEBT:	54.00%	2.82%	1.52%
PREFERRED SHARES:	7.50%	4.44%	0.33%
COMMON SHARES:	38.50%	8.90%	3.43%
	100.00%		

WEIGHTED PROSPECTIVE CAPITAL COST 5.28%

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Original : 2017.08.10

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