

**RESPONSE OF GAZ MÉTRO LIMITED PARTNERSHIP (GAZ MÉTRO) TO THE IGUA'S
REQUEST FOR INFORMATION NO. 1 PRESENTED TO GAZ MÉTRO LIMITED PARTNERSHIP**

R-3867-2013, PHASE 3

Gaz Métro - Application regarding the generic matter relating to the allocation of costs and Gaz Métro's rate structure

1. Notion of marginal cost

References:

- (i) R-3879-2014, Gaz Metro 17, document 4, page 5
- (ii) O'Sullivan, Arthur; Sheffrin, Steven M. (2003). *Economics: Principles in Action*. Upper Saddle River, New Jersey 07458: Pearson Prentice Hall. p. 111. ISBN 0-13-063085-3
- (iii) B-0145, page 4

Preamble

- (i) ***"The marginal cost of service delivery is defined as being all costs that may be associated with the customer, once the latter agrees to become a Gaz Métro customer. It consists of the marginal costs the customer will generate and the internal costs associated with maintaining its facilities and the services that will be provided directly thereto."***
- (ii) *"In economics, marginal cost is the change in the total cost that arises when the quantity produced is incremented by one unit, that is, it is the cost of producing one more unit of a good."*
- (iii) *"Black and Veatch has used its economic, planning and operating experience to evaluate and review the O&M costs as required by the Regie for reasonableness despite our reservations that such costs are not properly considered part of the extension line policy as discussed above." (emphasis added)*

Questions:

- 1.1. Please confirm that the definition for the notion of marginal cost used in the context of the profitability assessment of the system expansion projects is the one produced in reference (i). Please correct if necessary.

Response:

Gaz Métro confirms it.

- 1.2. Please confirm that the marginal cost used in the profitability assessment of the system expansion projects refers only to operating costs associated with the addition of a customer and excludes capital costs. If not, please correct.

Response:

Gaz Métro confirms it.

- 1.3. Please explain how the term "marginal cost" used by Gaz Métro in this matter differs from the notion of marginal cost used for the purposes of rates, and a definition of which can be found in reference (ii).

Response:

In this case, the marginal cost of one additional unit is almost always zero because of lumpy costs and the absence of continuous cost functions. Please remember that in economic theory marginal cost is the first

derivative of a continuous total cost function with respect to output. Utility cost functions are not continuous because of lumpy additions, technological changes and sunk costs that render the long-run cost of market models impossible since no period is long enough to make all costs variable when plant is added discreetly over time to provide capacity. We have used a reasonable process to address these constraints but also recognize inadequacies of long-run marginal cost estimates of O&M.

- 1.4. Please explain exactly what reservations are referred to in the Black & Veatch study in the citation in reference (iii). Please elaborate.

Response:

As noted in the quoted section, B&V discusses its reservations related to including all O&M within the line extension policy simply because most of the costs are fixed over wide ranges of customer additions and hence are not relevant to the added costs of attaching new customers. Most line extension policies focus on the levelized cost of capital including an amount for the O&M on that capital cost simply because the other costs are typically not marginal costs over the expected range of customer additions. Further, those costs would be recovered in average cost based rates when the customer charge is properly cost based.

2. Method for estimating marginal costs.

References:

- (i) R-3879 -2014, B-0154, page 5
- (ii) B-0145, page 7
- (iii) Report to Ergon Energy Estimating the Average Incremental cost of Ergon Energy's distribution network, Harry Colebourn Pty Ltd, mars 2015, page 2
- (iv) B-0145, page 7
- (v) B-0145, page 11

Preamble:

- (i) *"The methodology consists in identifying then analyzing the departments whose activities and costs are directly linked with the customer. A series of interviews with the cost centre managers was conducted in order to identify, per market, the activities generated by a new customer or the addition of a load with an existing customer.*
- (ii) *"Black & Veatch has reviewed the methodology and analysis used to develop its proposed marginal costs and we find the approach more appropriate for future use than the current \$157 value."*
- (iii)

Ergon Energy is seeking to estimate the Long Run Marginal Cost (LRMC) of supply from its distribution network. This is being done to ensure compliance with the requirements of clause of the Rules, in setting network tariffs[^].

There are three generally accepted methods of estimating the LRMC for network businesses. These are:

- The Perturbation or "Turvey" approach, in which the incremental capital and operating costs associated with a hypothetical permanent increment in demand provide the basis for the cost estimate;
- The Average Incremental Cost (AIC) approach, in which the growth related components of the current capital and operating expenditure forecasts and the current demand forecast provide the cost estimate; and

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- The Long Run Incremental (LRIC) approach calculates the annualised cost of the next proposed investment measured relative to an increment in demand. An example of this approach is the Common Distribution Charging Methodology (CDCM), which [has formed the basis for distribution tariffs in the United Kingdom for many years². This model is based upon the creation of a hypothetical network for the supply of a demand of 500 MW, using the spatial characteristics and standardised equipment typical for the distributor.
- (iv) *“Gaz metro has identified a minimum and maximum value for each component and market to make the best approximation of marginal costs in the profitability analysis.”*
- (v) *On page 11 of reference B-0145, it is written that the marginal cost for one industrial client varies from \$390.70 to \$735.21.*

Questions:

- 2.1. Please confirm that the methodology used to estimate the marginal operating cost applied to the profitability assessment of the investment projects is the one described in preamble (i). If necessary, please complete this description or produce the reference that contains a full description of the methodology.

Response:

Gaz Métro confirms it.

- 2.2. Please specify to which methodology the Black & Veatch report is referring in the citation in preamble (ii).

Response:

The methodology is the Gaz Metro review process.

- 2.3. The citation in preamble (iii) identifies the three methods that are commonly recognized for establishing a long-term marginal cost. In the opinion of Black & Veatch, could one of these three methods have been used to estimate the marginal operating cost applicable to the profitability assessment of the investment project? Please elaborate.

Response:

No. In the first place these methods are concerned with capacity additions not customers. Second, customer connections under line extension policies are dictated by the adopted regulatory policy that may or may not be economic. This makes some costs such as subsidies (essentially transfer payments) not marginal social costs at all. These costs should not be considered in marginal O&M costs. Third, where appropriate it is reasonable to calculate marginal cost for decision making based on average cost as the best prediction of future marginal cost even though such costs may not impact revenue requirements until a sufficient number of additional customers is added to reach a level where new expense is incurred. This is the phenomenon of lumpy costs. Finally, certain O&M expenses are sunk cost in nature because the resources used to provide the service are also lumpy in nature.

- 2.4. Please explain how the minimum and maximum limits (ref (iv)) for the marginal cost of each cost item was determined?

Response:

The marginal cost will differ depending on the customer's reality within a single market. The values between the minimum and maximum levels represent the scale of possibilities. Please refer to the response to question 1.1 of the Régie's request for information no. 5, Exhibit Gaz Métro-8, Document 1, for more details.

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- 2.5 Please explain the approach that will be used to determine the exact level of the marginal cost, somewhere between the minimum and maximum levels, to be used in the profitability assessment of an investment project (ref (v)).

Response:

The specific value used is based on the activity level required. Please refer to the response to question 1.1 of the Régie's request for information no. 5, Exhibit Gaz Métro-8, Document 1, for more details.

3. Evaluation of the proposed marginal cost's impact on project profitability

Reference:

- (i) R-3991-2016, B-0010, page 1
- (ii) R-3970-2016, B-0143, page 10

Preamble

- (i) *As indicated in reference (i), the operating cost used in the profitability assessment of the Drummondville system extension project is \$157 per customer.*

The internal rate of return (IRR) for this project is evaluated at 6.01%.
- (ii) *On line 38 of reference (ii), the IRR for investment projects in the "large corporation" market is evaluated at 168.9% for projects involving new customers, and 17.65% for projects involving additional loads. Overall, the IRR is 69.70%.*

Questions:

- 3.1. Please calculate what the IRR of the project cited in reference (i) would be if the approach proposed by Gaz Métro regarding the marginal operating cost were to be retained. Please produce all of the data used for the calculation. More specifically, please indicate the exact value of the marginal cost that would have been used for this project and explain this choice.

Response:

The IRR would be 5.89%. A new version of the revenues required, along with the parameters and hypotheses used, are filed in Schedule 1. The value of the marginal cost used (presented as being the operating cost for the revenue required) is that which corresponds to Gaz Métro's proposal.

- 3.2. Please indicate whether the profitability of the project cited in reference (i) would have been sufficient to meet the profitability criterion currently approved by the Régie.

Response:

The Project's profitability satisfies the criterion approved by the Régie. Indeed, as can be seen from the results of the revenue required in Schedule 1, the IRR would have been 5.89%, greater than the prospective capital cost of 5.28% authorized by the Régie in its decision D-2016-156.

- 3.3. In the opinion of Gaz Métro, what would the IRRs have been for all three investment projects affecting the "large corporation" segment of customers contemplated in the 2017 development plan (ref(ii)), if the approach proposed by Gaz Métro had been applied.

Response:

The following table presents the IRRs for all three investment projects affecting the segment of "Large corporations" customers in the 2017 development plan, if the approach proposed by Gaz Métro had been applied.

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	New Customers	Additional Load	Total
Number of Customers	1	2	3
IRR, with the former approach (R-3970-2016, B-0143, page 10)	169.93%	17.65%	69.70%
IRR with the proposed approach	167.94%	17.69%	69.38%

Parameters	
Service life of the assets (years) - service line	44
Service life of the assets (years) - connection	21
Public utility tax	1.50%
Capital tax - Y1	0.00%
Capital tax - Y2	0.00%
Royalty - Régie de l'énergie (¢/103m3)	0.6046
Royalty - Régie du bâtiment (¢/103m3)	0.4560
Taxes - Y1	27.28
Taxes - Y2 and later	26.90
Cost of debt	2.820
Cost of equity	8.168
Proportion of debt	54.00
Proportion of equity	46.00
Weighted prospective capital cost	5.28
Project Hypotheses	
Investments	\$1,620,403
General expenses (14.53%)	\$235,445
Customer contributions	-
Total investments	\$1,855,848
Operating costs (Y1)	\$2,640
Operating costs (Y2)	\$2,560
Depreciation (fiscal)	6%
Revenues and Volumes	
Volume - Y1 (103m3)	2,020
Volume - Y2 and later (103m3)	2,020
Rate - Y1 (¢/m3)	8,2380
Rate - Y2 and later (¢/m3)	8,2380
Rate Contribution	
IRR	5.89%
Break-even rate (years)	22.01
Rate contribution (5 years)	\$104,737
Rate contribution (10 years)	\$124,444
Rate contribution (40 years)	\$ (364,975)

Marginal Cost

Characteristics	Options	Year 1	Year 2 and later
Market type	CII	90.41	10.11
Meter type	Inspection rotary gas meter, radiometry	42.24	42.24
Corrective instruments and telemetry			
RCP application	Commercial		
Meters of service line	4,250 meters at \$0.59/ml	2,507.50	2,507.50
Total marginal costs		2640.15	2559.85

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Serres Demers	Project type Region Customer type Capital cost D-2016-156 Weighted prospective capital costs	Extension - Estimate Montérégie COMM. - Major accounts 6.42% 5.28%	Representative Advisor OTP Municipality Length, in linear meters Drummondville
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	Total	0	1	2	3	4	5
Number of customers			1	1	1	1	1
Volume, in 1000 m ³			2,020.0	2,020.0	2,020.0	2,020.0	2,020.0
Expense of service lines - Base	908,900	908,900	0	0	0	0	0
Expense of service lines - Contractor fees	148,622	148,622	0	0	0	0	0
Expense of service lines	1,057,522	1,057,522	0	0	0	0	0
Expense of connections - Base	471,834	471,834	0	0	0	0	0
Expense of connections - Contractor fees	85,845	85,845	0	0	0	0	0
Expense of connections - Cost of meter(s)	5,202	5,202	0	0	0	0	0
Cost of connections	562,881	562,881	0	0	0	0	0
UMQ fees (0.00%)	0	0	0	0	0	0	0
General corp. fees (14.53%)	235,445	235,445	0	0	0	0	0
RCP - 5 years			0	0	0	0	0
RCP - 10 years			0	0	0	0	0
CASEP - RCP (10 years)			0	0	0	0	0
Non-depreciable assets			0	0	0	0	0
System connection contrib./Deadline/Location	0	0	0	0	0	0	0
CASEP - Capital Property	0	0	0	0	0	0	0
External subsidies	0	0	0	0	0	0	0
Customer contributions	0	0	0	0	0	0	0
Total investment	1,855,848	1,855,848	0	0	0	0	0
Operating cost			2,640	2,560	2,560	2,560	2,560
Book depreciation			57,954	57,954	57,954	57,954	57,954
Public utility tax			56,968	26,099	25,230	24,360	23,491
Royalties			2,142	2,142	2,142	2,142	2,142
Taxes			26,097	6,037	7,621	9,061	10,367
Yield			96,459	93,399	90,339	87,279	84,219
Revenue required			212,261	188,191	185,845	183,357	180,733
Revenues			0	0	0	0	0
Distribution rate (¢/m ³)			8.2380	8.2380	8.2380	8.2380	8.2380
Rate rebate (¢/m ³)			0.0000	0.0000	0.0000	0.0000	0.0000
Distribution revenue (¢/m ³)			8.2380	8.2380	8.2380	8.2380	8.2380
Distribution revenue (\$)			166,408	166,408	166,408	166,408	166,408
Annual rate contribution			45,853	21,784	19,438	16,949	14,326

	6	7	8	9	10
Annual rate contribution	11,576	8,707	5,727	2,641	(543)

Rate contribution (3 years)	79,864	Rate contribution (15 years)	97,866
Rate contribution (5 years)	104,737	Rate contribution (20 years)	41,093
Rate contribution (10 years)	124,444	Rate contribution (40 years)	(364,975)
Break-even rate (years)	22.01	Grid used	→ COM Major Accounts Level 5
Internal rate of return (IRR 40 years)	5.89%	Superior signing officer - Sales	→ President

SALES

Representative	Date ____/____/____	Director, Sales	Date ____/____/____
		Senior Executive, Sales	Date ____/____/____
Vice-President, Sales and Market Dev.	Date ____/____/____	President	Date ____/____/____

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PROJECT Serres Demers	Project type Region Customer type Capital cost D-2016-156 Weighted prospective capital costs	Extension - Estimate Montérégie COMM. - Major accounts 6.42% 5.28%	Representative Advisor OTP Municipality Length, in linear meters	Drummondville
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	5	6	7	8	9	10
Number of customers		1	1	1	1	1
Volume, in 1000 m ³		2,020	2,020	2,020	2,020	2,020
Expense of service lines - Base	0	0	0	0	0	0
Expense of service lines - Contractor fees	0	0	0	0	0	0
Expense of service lines	0	0	0	0	0	0
Expense of connections - Base	0	0	0	0	0	0
Expense of connections - Contractor fees	0	0	0	0	0	0
Expense of connections - Cost of meter(s)	0	0	0	0	0	0
Cost of connections	0	0	0	0	0	0
UMQ fees (0.00%)	0	0	0	0	0	0
General corp. fees (14.53%)	0	0	0	0	0	0
RCP - 5 years	0	0	0	0	0	0
RCP - 10 years	0	0	0	0	0	0
CASEP - RCP (10 years)	0	0	0	0	0	0
Non-depreciable assets	0	0	0	0	0	0
System connection contrib./Deadline/Location	0	0	0	0	0	0
CASEP - Capital Property	0	0	0	0	0	0
External subsidies	0	0	0	0	0	0
Customer contributions	0	0	0	0	0	0
Total investment	0	0	0	0	0	0
Operating cost	2,560	2,560	2,560	2,560	2,560	2,560
Book depreciation	57,954	57,954	57,954	57,954	57,954	57,954
Public utility tax	23,491	22,622	21,753	20,883	20,014	19,145
Royalties	2,142	2,142	2,142	2,142	2,142	2,142
Taxes	10,367	11,546	12,607	13,556	14,400	15,145
Yield	84,219	81,159	78,099	75,039	71,979	68,919
Revenue required	180,733	177,983	175,115	172,134	169,049	165,865
Revenues	0	0	0	0	0	0
Distribution rate (¢/m ³)	8,2380	8,2380	8,2380	8,2380	8,2380	8,2380
Rate rebate (¢/m ³)	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Distribution revenue (¢/m ³)	8,2380	8,2380	8,2380	8,2380	8,2380	8,2380
Distribution revenue (\$)	166,408	166,408	166,408	166,408	166,408	166,408
Annual rate contribution	14,326	11,576	8,707	5,727	2,641	(543)

	11	12	13	14	15
Annual rate contribution	(3 820)	(7 184)	(10 630)	(14 153)	(17 748)

Rate contribution (3 years)	79,864		Rate contribution (15 years)	97,866
Rate contribution (5 years)	104,737		Rate contribution (20 years)	41,093
Rate contribution (10 years)	124,444		Rate contribution (40 years)	(364,975)
Break-even rate (years)	22,01			
Internal rate of return (IRR 40 years)	5,89%			

SALES

Representative	Date ___/___/___	Director, Sales	Date ___/___/___
		Senior Executive, Sales	Date ___/___/___
Vice-President, Sales and Market Dev.	Date ___/___/___	President	Date ___/___/___

CONDITIONS OF COMPLETION

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PROJECT Serres Demers	Project type Region Customer type Capital cost D-2016-156 Weighted prospective capital costs	Extension - Estimate Montérégie COMM. - Major accounts 6.42% 5.28%	Representative Advisor OTP Municipality Length, in linear meters Drummondville
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	10	11	12	13	14	15
Number of customers	1	1	1	1	1	1
Volume, in 1000 m ³	2,020	2,020	2,020	2,020	2,020	2,020
Expense of service lines - Base	0	0	0	0	0	0
Expense of service lines - Contractor fees	0	0	0	0	0	0
Expense of service lines	0	0	0	0	0	0
Expense of connections - Base	0	0	0	0	0	0
Expense of connections - Contractor fees	0	0	0	0	0	0
Expense of connections - Cost of meter(s)	0	0	0	0	0	0
Cost of connections	0	0	0	0	0	0
UMQ fees (0.00%)	0	0	0	0	0	0
General fees (14.53%)	0	0	0	0	0	0
RCP - 5 years	0	0	0	0	0	0
RCP - 10 years	0	0	0	0	0	0
CASEP - RCP (10 years)	0	0	0	0	0	0
Non-depreciable assets	0	0	0	0	0	0
System connection contrib./Deadline/Location	0	0	0	0	0	0
CASEP - Capital Property	0	0	0	0	0	0
External subsidies	0	0	0	0	0	0
Customer contributions	0	0	0	0	0	0
Total investment	0	0	0	0	0	0
Operating cost	2,560	2,560	2,560	2,560	2,560	2,560
Book depreciation	57,954	57,954	57,954	57,954	57,954	57,954
Public utility tax	19,145	18,275	17,406	16,537	15,667	14,798
Royalties	2,142	2,142	2,142	2,142	2,142	2,142
Taxes	15,145	15,798	16,363	16,846	17,252	17,586
Yield	68,919	65,859	62,799	59,739	56,679	53,619
Revenue required	165,865	162,588	159,224	155,778	152,255	148,659
Revenues	0	0	0	0	0	0
Distribution rate (¢/m ³)	8,2380	8,2380	8,2380	8,2380	8,2380	8,2380
Rate rebate (¢/m ³)	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Distribution revenue (¢/m ³)	8,2380	8,2380	8,2380	8,2380	8,2380	8,2380
Distribution revenue (\$)	166,408	166,408	166,408	166,408	166,408	166,408
Annual rate contribution	(543)	(3,820)	(7,184)	(10,630)	(14,153)	(17,748)

		16	17	18	19	20
Annual rate contribution		(21,412)	(25,140)	(28,928)	(32,772)	(36,670)

Rate contribution (3 years)	79,864	Rate contribution (15 years)	97,866
Rate contribution (5 years)	104,737	Rate contribution (20 years)	41,093
Rate contribution (10 years)	124,444	Rate contribution (40 years)	(364,975)
Break-even rate (years)	22,01		
Internal rate of return (IRR 40 years)	5,89%		

SALES

Representative Date ____/____/____	Director, Sales Date ____/____/____	Senior Executive, Sales Date ____/____/____
Vice-President, Sales and Market Dev. Date ____/____/____	President Date ____/____/____	

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PROJECT Serres Demers	Project type Region Customer type Capital cost D-2016-156 Weighted prospective capital costs	Extension - Estimate Montérégie COMM. - Major accounts 6.42% 5.28%	Representative Advisor OTP Municipality Length, in linear meters	Drummondville
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	15	16	17	18	19	20
Number of customers	1	1	1	1	1	1
Volume, in 1000 m ³	2,020	2,020	2,020	2,020	2,020	2,020
Expense of service lines - Base	0	0	0	0	0	0
Expense of service lines - Contractor fees	0	0	0	0	0	0
Expense of service lines	0	0	0	0	0	0
Expense of connections - Base	0	0	0	0	0	0
Expense of connections - Contractor fees	0	0	0	0	0	0
Expense of connections - Cost of meter(s)	0	0	0	0	0	0
Cost of connections	0	0	0	0	0	0
UMQ fees (0.00%)	0	0	0	0	0	0
General fees (14.53%)	0	0	0	0	0	0
RCP - 5 years	0	0	0	0	0	0
RCP - 10 years	0	0	0	0	0	0
CASEP - RCP (10 years)	0	0	0	0	0	0
Non-depreciable assets	0	0	0	0	0	0
System connection contrib./Deadline/Location	0	0	0	0	0	0
CASEP - Capital Property	0	0	0	0	0	0
External subsidies	0	0	0	0	0	0
Customer contributions	0	0	0	0	0	0
Total investment	0	0	0	0	0	0
Operating cost	2,560	2,560	2,560	2,560	2,560	2,560
Book depreciation	57,954	57,954	57,954	57,954	57,954	57,954
Public utility tax	14,798	13,929	13,059	12,190	11,321	10,451
Royalties	2,142	2,142	2,142	2,142	2,142	2,142
Taxes	17,586	17,851	18,053	18,194	18,279	18,311
Yield	53,619	50,559	47,499	44,439	41,379	38,319
Revenue required	148,659	144,995	141,268	137,480	133,635	129,738
Revenues	0	0	0	0	0	0
Distribution rate (¢/m ³)	8,2380	8,2380	8,2380	8,2380	8,2380	8,2380
Rate rebate (¢/m ³)	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Distribution revenue (¢/m ³)	8,2380	8,2380	8,2380	8,2380	8,2380	8,2380
Distribution revenue (\$)	166,408	166,408	166,408	166,408	166,408	166,408
Annual rate of contribution	(17,748)	(21,412)	(25,140)	(28,928)	(32,772)	(36,670)

	21	22	23	24	25
Annual rate contribution	(40,617)	(83,906)	(86,677)	(88,255)	(89,872)
Rate contribution (3 years)	79,864				
Rate contribution (5 years)	104,737				
Rate contribution (10 years)	124,444				
Break-even rate (years)	22.01				
Internal rate of return (IRR 40 years)	5.89%				
			Rate contribution (15 years)	97,866	
			Rate contribution (20 years)	41,093	
			Rate contribution (40 years)	(364,975)	

SALES

Representative	Date ____/____/____	Director, Sales	Date ____/____/____
		Senior Executive, Sales	Date ____/____/____
Vice-President, Sales and Market Dev.	Date ____/____/____	President	Date ____/____/____

CONDITIONS OF COMPLETION

Gaz Métro Limited Partnership
Application relating to the marginal costs of long-term service delivery
applied to the profitability analysis, R-3867-2013

	GAZ MÉTRO LIMITED PARTNERSHIP CALCULATION OF REVENUE REQUIRED BUDGET	REVENUE REQUIRED SRR-VERSION 17.0
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PROJECT Serres Demers	Project type Region Customer type Capital cost D-2016-156 Weighted prospective capital costs	Extension - Estimate Montérégie COMM. - Major accounts 6.42% 5.28%	Representative Advisor OTP Municipality Length, in linear meters Drummondville
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	20	21	22	23	24	25
Number of customers		1	1	1	1	1
Volume, in 1000 m ³		2,020.0	2,020.0	2,020.0	2,020.0	2,020.0
Expense of service lines - Base	0	0	0	0	0	0
Expense of service lines - Contractor fees	0	0	0	0	0	0
Expense of service lines	0	0	0	0	0	0
Expense of connections - Base	0	0	0	0	0	0
Expense of connections - Contractor fees	0	0	0	0	0	0
Expense of connections - Cost of meter(s)	0	0	0	0	0	0
Cost of connections	0	0	0	0	0	0
UMQ fees (0.00%)	0	0	0	0	0	0
General fees (14.53%)	0	0	0	0	0	0
RCP - 5 years	0	0	0	0	0	0
RCP - 10 years	0	0	0	0	0	0
CASEP - RCP (10 years)	0	0	0	0	0	0
Non-depreciable assets	0	0	0	0	0	0
System connection contrib./Deadline/Location	0	0	0	0	0	0
CASEP - Capital Property	0	0	0	0	0	0
External subsidies	0	0	0	0	0	0
Customer contributions	0	0	0	0	0	0
Total investment	0	0	0	0	0	0
Operating cost	2,560	2,560	2,560	2,560	2,560	2,560
Book depreciation	57,954	57,954	28,178	27,298	27,298	27,298
Public utility tax	10,451	9,582	9,159	8,750	8,341	7,931
Royalties	2,142	2,142	2,142	2,142	2,142	2,142
Taxes	18,311	18,293	7,476	7,460	7,733	7,967
Yield	38,319	35,259	32,985	31,521	30,079	28,638
Revenue required	129,738	125,790	82,501	79,731	78,153	76,536
Revenues	0	0	0	0	0	0
Distribution rate (¢/m ³)	8,2380	8,2380	8,2380	8,2380	8,2380	8,2380
Rate rebate (¢/m ³)	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Distribution revenue (¢/m ³)	8,2380	8,2380	8,2380	8,2380	8,2380	8,2380
Distribution revenue (\$)	166,408	166,408	166,408	166,408	166,408	166,408
Annual rate contribution	(36,670)	(40,617)	(83,906)	(86,677)	(88,255)	(89,872)

	26	27	28	29	30
Annual rate contribution	(91,525)	(93,213)	(94,934)	(96,684)	(98,464)

Rate contribution (3 years)	79,864		Rate contribution (15 years)	97,866
Rate contribution (5 years)	104,737		Rate contribution (20 years)	41,093
Rate contribution (10 years)	124,444		Rate contribution (40 years)	(364,975)
Break-even rate (years)	22.01			
Internal rate of return (IRR 40 years)	5.89%			

SALES

Representative	Date ____/____/____	Director, Sales	Date ____/____/____
		Senior Executive, Sales	Date ____/____/____
Vice-President, Sales and Market Dev.	Date ____/____/____	President	Date ____/____/____

CONDITIONS OF COMPLETION

Gaz Métro Limited Partnership
Application relating to the marginal costs of long-term service delivery
applied to the profitability analysis, R-3867-2013

	GAZ MÉTRO LIMITED PARTNERSHIP CALCULATION OF REVENUE REQUIRED BUDGET	REVENUE REQUIRED SRR-VERSION 17.0
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PROJECT Serres Demers	Project type Region Customer type Capital cost D-2016-156 Weighted prospective capital costs	Extension - Estimate Montérégie COMM. - Major accounts 6.42% 5.28%	Representative Advisor OTP Municipality Length, in linear meters	Drummondville
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	25	26	27	28	29	30
Number of customers		1	1	1	1	1
Volume, in 1000 m ³		2,020	2,020	2,020	2,020	2,020
Expense of service lines - Base	0	0	0	0	0	0
Expense of service lines - Contractor fees	0	0	0	0	0	0
Expense of service lines	0	0	0	0	0	0
Expense of connections - Base	0	0	0	0	0	0
Expense of connections - Contractor fees	0	0	0	0	0	0
Expense of connections - Cost of meter(s)	0	0	0	0	0	0
Cost of connections	0	0	0	0	0	0
UMQ fees (0.00%)	0	0	0	0	0	0
General fees (14.53%)	0	0	0	0	0	0
RCP - 5 years	0	0	0	0	0	0
RCP - 10 years	0	0	0	0	0	0
CASEP - RCP (10 years)	0	0	0	0	0	0
Non-depreciable assets	0	0	0	0	0	0
System connection contrib./Deadline/Location	0	0	0	0	0	0
CASEP - Capital Property	0	0	0	0	0	0
External subsidies	0	0	0	0	0	0
Customer contributions	0	0	0	0	0	0
Total investment	0	0	0	0	0	0
Operating cost	2,560	2,560	2,560	2,560	2,560	2,560
Book depreciation	27,298	27,298	27,298	27,298	27,298	27,298
Public utility tax	7,931	7,522	7,112	6,703	6,293	5,884
Royalties	2,142	2,142	2,142	2,142	2,142	2,142
Taxes	7,967	8,164	8,327	8,457	8,557	8,628
Yield	28,638	27,197	25,756	24,314	22,873	21,432
Revenue required	76,536	74,883	73,194	71,474	69,723	67,944
Revenues	0	0	0	0	0	0
Distribution rate (¢/m ³)	8,2380	8,2380	8,2380	8,2380	8,2380	8,2380
Rate rebate (¢/m ³)	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Distribution revenue (¢/m ³)	8,2380	8,2380	8,2380	8,2380	8,2380	8,2380
Distribution revenue (\$)	166,408	166,408	166,408	166,408	166,408	166,408
Annual rate contribution	(89,872)	(91,525)	(93,213)	(94,934)	(96,684)	(98,464)

	31	32	33	34	35
Annual rate contribution	(100,270)	(102,102)	(103,958)	(105,836)	(107,735)

Rate contribution (3 years)	79,864		Rate contribution (15 years)	97,866
Rate contribution (5 years)	104,737		Rate contribution (20 years)	41,093
Rate contribution (10 years)	124,444		Rate contribution (40 years)	(364,975)
Break-even rate (years)	22.01			
Internal rate of return (IRR 40 years)	5.89%			

SALES

Representative	Date ___/___/___	Director, Sales	Date ___/___/___	Senior Executive, Sales
				Date ___/___/___
Vice-President, Sales and Market Dev.	Date ___/___/___	President	Date ___/___/___	

CONDITIONS OF COMPLETION

Gaz Métro Limited Partnership
Application relating to the marginal costs of long-term service delivery
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	GAZ MÉTRO LIMITED PARTNERSHIP CALCULATION OF REVENUE REQUIRED BUDGET	REVENUE REQUIRED SRR-VERSION 17.0
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PROJECT Serres Demers	Project type Region Customer type Capital cost D-2016-156 Weighted prospective capital costs	Extension - Estimate Montérégie COMM. - Major accounts 6.42% 5.28%	Representative Advisor OTP Municipality Length, in linear meters	Drummondville
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	30	31	32	33	34	35
Number of customers		1	1	1	1	1
Volume, in 1000 m ³		2,020	2,020	2,020	2,020	2,020
Expense of service lines - Base	0	0	0	0	0	0
Expense of service lines - Contractor fees	0	0	0	0	0	0
Expense of service lines	0	0	0	0	0	0
Expense of connections - Base	0	0	0	0	0	0
Expense of connections - Contractor fees	0	0	0	0	0	0
Expense of connections - Cost of meter(s)	0	0	0	0	0	0
Cost of connections	0	0	0	0	0	0
UMQ fees (0.00%)	0	0	0	0	0	0
General fees (14.53%)	0	0	0	0	0	0
RCP - 5 years	0	0	0	0	0	0
RCP - 10 years	0	0	0	0	0	0
CASEP - RCP (10 years)	0	0	0	0	0	0
Non-depreciable assets	0	0	0	0	0	0
System connection contrib./Deadline/Location	0	0	0	0	0	0
CASEP - Capital Property	0	0	0	0	0	0
External subsidies	0	0	0	0	0	0
Customer contributions	0	0	0	0	0	0
Total investment	0	0	0	0	0	0
Operating cost	2,560	2,560	2,560	2,560	2,560	2,560
Book depreciation	27,298	27,298	27,298	27,298	27,298	27,298
Public utility tax	5,884	5,474	5,065	4,655	4,246	3,836
Royalties	2,142	2,142	2,142	2,142	2,142	2,142
Taxes	8,628	8,673	8,692	8,687	8,660	8,612
Yield	21,432	19,990	18,549	17,108	15,666	14,225
Revenue required	67,944	66,137	64,305	62,450	60,572	58,673
Revenues	0	0	0	0	0	0
Distribution rate (¢/m ³)	8,2380	8,2380	8,2380	8,2380	8,2380	8,2380
Rate rebate (¢/m ³)	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Distribution revenue (¢/m ³)	8,2380	8,2380	8,2380	8,2380	8,2380	8,2380
Distribution revenue (\$)	166,408	166,408	166,408	166,408	166,408	166,408
Annual rate contribution	(98,464)	(100,270)	(102,102)	(103,958)	(105,836)	(107,735)

	36	37	38	39	40
Annual rate contribution	(109,653)	(111,591)	(113,545)	(115,516)	(117,503)

Rate contribution (3 years)	79,864	Rate contribution (15 years)	97,866
Rate contribution (5 years)	104,737	Rate contribution (20 years)	41,093
Rate contribution (10 years)	124,444	Rate contribution (40 years)	(364,975)
Break-even rate (years)	22.01		
Internal rate of return (IRR 40 years)	5.89%		

SALES

Representative	Date ____/____/____	Director, Sales	Date ____/____/____	Senior Executive, Sales	Date ____/____/____
Vice-President, Sales and Market Dev.	Date ____/____/____	President	Date ____/____/____		

CONDITIONS OF COMPLETION

Gaz Métro Limited Partnership
Application relating to the marginal costs of long-term service delivery
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	GAZ MÉTRO LIMITED PARTNERSHIP CALCULATION OF REVENUE REQUIRED BUDGET	REVENUE REQUIRED SRR-VERSION 17.0
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PROJECT Serres Demers	Project type Region Customer type Capital cost D-2016-156 Weighted prospective capital costs	Extension - Estimate Montérégie COMM. - Major accounts 6.42% 5.28%	Representative Advisor OTP Municipality Length, in linear meters	Drummondville
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	35	36	37	38	39	40
Number of customers	1	1	1	1	1	1
Volume, in 1000 m ³	2,020	2,020	2,020	2,020	2,020	2,020
Expense of service lines - Base	0	0	0	0	0	0
Expense of service lines - Contractor fees	0	0	0	0	0	0
Expense of service lines	0	0	0	0	0	0
Expense of connections - Base	0	0	0	0	0	0
Expense of connections - Contractor fees	0	0	0	0	0	0
Expense of connections - Cost of meter(s)	0	0	0	0	0	0
Cost of connections	0	0	0	0	0	0
UMQ fees (0.00%)	0	0	0	0	0	0
General fees (14.53%)	0	0	0	0	0	0
RCP - 5 years	0	0	0	0	0	0
RCP - 10 years	0	0	0	0	0	0
CASEP - RCP (10 years)	0	0	0	0	0	0
Non-depreciable assets	0	0	0	0	0	0
System connection contrib./Deadline/Location	0	0	0	0	0	0
CASEP - Capital Property	0	0	0	0	0	0
External subsidies	0	0	0	0	0	0
Customer contributions	0	0	0	0	0	0
Total investment	0	0	0	0	0	0
Operating cost	2,560	2,560	2,560	2,560	2,560	2,560
Book depreciation	27,298	27,298	27,298	27,298	27,298	27,298
Public utility tax	5,884	3,427	3,018	2,608	2,199	1,789
Royalties	2,142	2,142	2,142	2,142	2,142	2,142
Taxes	8,628	8,544	8,457	8,353	8,233	8,097
Yield	21,432	12,784	11,342	9,901	8,460	7,018
Revenue required	58,673	56,754	54,817	52,862	50,891	48,905
Revenues	0	0	0	0	0	0
Distribution rate (¢/m ³)	8,2380	8,2380	8,2380	8,2380	8,2380	8,2380
Rate rebate (¢/m ³)	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Distribution revenue (¢/m ³)	8,2380	8,2380	8,2380	8,2380	8,2380	8,2380
Distribution revenue (\$)	166,408	166,408	166,408	166,408	166,408	166,408
Annual rate contribution	(107,735)	(109,653)	(111,591)	(113,545)	(115,516)	(117,503)

Annual rate contribution	0	0	0	0
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Rate contribution (3 years)	79,864	Rate contribution (15 years)	97,866
Rate contribution (5 years)	104,737	Rate contribution (20 years)	41,093
Rate contribution (10 years)	124,444	Rate contribution (40 years)	(364,975)
Break-even rate (years)	22.01		
Internal rate of return (IRR 40 years)	5.89%		

SALES

Representative	Date ____/____/____	Director, Sales	Date ____/____/____	Senior Executive, Sales	Date ____/____/____
Vice-President, Sales and Market Dev.	Date ____/____/____	President	Date ____/____/____		

CONDITIONS OF COMPLETION
