Memorandum

Gaz Métro - Application regarding the generic matter relating to the allocation of costs and rate structure of Gaz Métro
(R-3867-20013 – Phase 3 subject A)

Marginal Cost of Long-Term Service Delivery

Prepared by
Viviane de Tilly
Analyst for UC

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Table of content

TABLES LIST

Union des consommateurs, *the strength of a network*

Union des consommateurs is a not-for-profit organization regrouping 10 member organizations from the Cooperative Associations of Household Economy (ACEF), the Consumer Association for the Quality of Building Work (ACQC), as well as individual members. Its mission is to represent and protect the rights of consumers, especially by defending more particularly the interests of households of modest means. The interventions of UC revolve around values that are dear to its members: solidarity, equity and social justice, as well as the improvement of consumer living conditions from an economic, social, political and environmental viewpoint.

UC's structure allows it to maintain a large vision of consumer issues while developing a strong expertise in certain sectors of intervention, notably through its research on the new problems to which consumers are confronted; its actions, of a national breath, are fed and legitimized by grassroots actions and through the deep roots of the member associations in their own communities.

Union des consommateurs principally acts on the national scene, representing the interests of consumers before various political or regulatory instances, on the public floor or through class actions. Within its key research, action and representation fields, UC concentrates on issues relating to household budgets and debt, energy, questions relating to cellular phones, television distribution and information highways, health, food and biotechnologies, financial products and services as well as social and fiscal policies.

Finally, in the context of market globalization, UC works in collaboration with several consumer groups in English Canada and abroad. It is a member of *Consumers International* (CI), an organization known by the United Nations.

For more than 50 years, the ACEFs have worked non-stop in Quebec with persons of low income. While requesting better social and fiscal policies, the ACEFs have, since the beginning of their existence, offered direct services to families, including personalized budgetary consultation services.

1 Background

On November 15, 2013, the Distributor filed with the Régie de l'énergie (the Régie) an Application regarding the generic matter relating to the allocation of costs and rate structure of Gaz Métro.

In the context of Phase 3 of this file, the Distributor introduced on October 5, 2016 an application concerning the determination of the marginal cost of long-term service delivery. This marginal cost is a factor of the profitability analyses of the Distributor's projects.

In its request for intervention in this file, UC indicated that it wished to ensure that the method of determining the marginal cost of long-term service delivery and the cost that results therefrom are just and equitable for residential customers. A marginal cost that underestimates the future costs may have the effect of withholding projects that would appear ultimately less profitable than predicted, particularly for the residential market where fixed costs are relatively important. In addition, UC reminds that the marginal cost of service delivery may serve as reference for the determination of tariff structures, which constitutes Phase 4 of this file[1].

UC recommendations will limit themselves to new projects. In doing so, UC relies on the expert report of the expert mandated by the ROEÉ on the subject.[2]

2 Marginal cost of service delivery

2.1 Evaluations used and proposed

In this file, four evaluations of the marginal cost of service delivery are presented in evidence:

<u>Before $157</u>

Until 2013, the Distributor used, in the calculation of the profitability of residential projects, the long-term marginal operating cost updated in 1999. This cost had been set at $43 for the first year and $41 for the subsequent years.[3]

<u>$157</u>

Since 2013 and in accordance with Decision D-2013-106, the long-term marginal operating cost of $157 that the Distributor uniformly applies in its profitability analysis for all markets, results from a study of American businesses filed in the context of the bid to renew the incentive mechanism (R-3693-2009, Phase 2).[4]

[1] D-2016-169, page 10.

[2] C-UC-0029, page 4.

[3] Gaz Métro – 6, Document 1, Schedule A, page 4.

[4] *Idem*.

New approach (CT 2015)

In the context of file R-3879-2014, the Distributor presented a study aimed at establishing the marginal cost of long-term service delivery as applied to a profitability analysis[5]. Table 1 presents the marginal cost obtained per market.

Table 1
Marginal cost of service delivery – New approach (CT 2015)[6]

Market	Year 1		Year 2 and following	
	Minimum 2014 cost	Maximum 2014 cost	Minimum 2014 cost	Maximum 2014 cost
Residential	$109.30	$449.91	$62.52	$379.30
CII	$181.91	$626.89	$101.61	$457.44
Major industries	$1,625.44	$1,969.95	$1,561.47	$1,905.98

Note: See details of the costs per market presented in Schedule 1.

The Distributor indicates that, beyond the maximum limit, additional maintenance costs are also to be taken into consideration when connections or additional meters of pipeline are part of the project.[7] In other terms, the maximum values established in Table 1 are a basis upon which costs may be added.

New approach (Black & Veatch)

At the request of the Distributor, Black & Veatch undertook its own evaluation of the marginal cost to be applied to profitability analyses, from the study of the Distributor filed in the context of application R-3879-2014.[8]

Table 2 presents the marginal cost of service delivery per market as calculated by the Distributor's expert. The evaluation prepared by the expert is clearly lower than the evaluation of the Distributor. This difference is essentially due to the timeline considered in the analysis as well as to the exclusion of numerous activities which did not apply, according to the expert, to all of the new customers.

Table 2
Marginal cost of service delivery – New approach (Black & Veatch)[9]

Market	Year 1		Year 2 and following	
	Minimum 2014 cost	Maximum 2014 cost	Minimum 2014 cost	Maximum 2014 cost
Residential	$55.88	$409.33	$9.10	$369.60
CII	$90.41	$452.93	$10.11	$370.61
Major industries	$390.70	$735.21	$326.74	$702.12

5 R-3879-2014, Gaz Métro 17, document 4, presented as Schedule A of Gaz Métro - 6, Document 1.

6 Gaz Métro – 6, Document 1, Schedule A, page 7.

7 *Idem*.

8 New approach (Black & Veatch). Gaz Métro – 6, Document 2.

9 Gaz Métro – 8, Document 3, revised: 2017.02.03, page 2.

2.2 Timeline of the marginal cost of service delivery

In its Decision D-2013-106, the Régie ruled on the use of the marginal cost of long-term service delivery to realize profitability analyses of the Distributor's development plan.

> *[26] [TRANSLATION] The Régie agrees with the opinion of the CFIB on the use of long-term marginal costs. As the profitability analysis of the development plan is for a terms exceeding 40 years, it therefore appears logical to use long-term costs. The Régie considers that failing such a precise evaluation of the long-term marginal operating costs, the value of $157 proposed by the CFIB will be used.*[10]

Consequently, in 2014, the definition of the marginal cost of service delivery proposed by the Distributor in 2014 adopted a long-term timeline.

> *The marginal cost of service delivery is defined as being the set of costs that can be linked to a customer once he or she has agreed to become a Gaz Métro customer. It includes the marginal costs the customer generates and the associated internal costs for the maintenance of its facilities and the services that are directly supplied.*
>
> *The items included in the marginal costs are the additional costs to issue an invoice, cash a payment and, for a telemetry customer, to use a cell line. The internal costs associated with maintaining facilities at a customer's premises primarily consist of the salaries and fringe benefits of the employees who perform the tasks to which can be added, in the case of employees assigned to maintenance and meter reading, the cost of clothing. Maintenance activities relate to the meters, the connection, and the pipeline installed at the customer's premises, and the services provided relate to credit checks, the processing of financial assistance or the consumer Rebate Consumption Program ("RCP"), telephone calls to customers, meter reading, bad debts, collection, customer retention, and the drawing up of contracts.*
>
> *It is important to clarify the concept of "associated internal costs" in the aforementioned definition. The arrival of a new customer or the addition of a load for an existing customer will take time away from the employees who deliver the services, without inasmuch requiring, in the short term, that an additional staff member be assigned to each of the departments concerned. Therefore, these associated internal costs, which are established according to various parameters, were included in the calculation of the marginal cost of service delivery in order to take into account <u>any impact</u> that adding customers (or loads) <u>might have</u> on the labour costs of Gaz Métro over the medium and long term.*[11] *(Emphasis added)*

UC understands that this new approach proposed by the Distributor included all of the cost of delivery, whether real, direct or eventual, that a new customer may generate over the short and long term.

However, the expert retained by the Distributor in this file recommends instead the use of a marginal cost of short-term service delivery.

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[10] D-2013-106, page 15. The $157 value is drawn from R-3693-2009, Gaz Métro – 5, Document 5

Page 11, "The mean estimates of the marginal costs of customers for the utilities in our sample with respect O&M and capex are, in 2008 dollars, $157 and $62."

[11] Gaz Métro – 6, Document 1, Annexe A, page 5.

> *Economic theory holds that efficient prices equal short-run marginal cost not long-run marginal costs. The use of long-run marginal cost to evaluate line extension creates a timing mismatch between costs for ratemaking (the first year carrying costs that will be in revenue requirements) and the levelized costs over the life of the assets used in calculating long-run marginal costs. This timing mismatch raises revenue requirements in the short-run but over time reduces the revenue requirement for economic connections of new customers.*[12]

According to Black & Veatch, the definition of the marginal cost of long-term service delivery used by the Distributor exaggerates or overestimates the marginal cost to the detriment of its existing customers.

> *Essentially B&V concludes that the Gaz Metro exercise of estimating these O&M marginal costs to comply with the regulatory requirements overstates the actual long-run marginal costs and unduly burdens line extension policies to the detriment of all existing customers.*[13]

The Distributor endorses the recommendation of Black & Veatch on the basis that there is no reason justifying not following the recommendations of its expert, recognized as an expert witness in the field of “regulation of public utilities and tariffs” by the Régie in its Decision D-2017-009, to which it is also entirely in agreement.[14]

UC does not share Black & Veatch's point of view. UC fears that the exclusion of certain long-term costs associated with the growth of the number of customers will result in a underestimation of the future costs and therefore an increase of the projected profitability of individual projects. UC recommends that the Régie reiterate its decision regarding the use of the marginal cost of long-term service delivery.

2.3 Particular costs

2.3.1 METER READING

Black and Veatch recommend the exclusion from the calculation of the marginal cost certain activities whose cost increases per level, for example the cost of reading meters.

> *Since new customers have zero marginal cost for a number of activities such as meter reading and billing and the rates include average costs for these activities, one of two alternatives occurs. First fixed costs are spread over more units reducing the per unit revenue requirement for this activity. The NPV of this effect continues to such time as the added customers require an increase in revenue requirements to add another unit to perform the activity. In that event the average cost is changed only by inflation and the current rates would generate revenue to cover the added costs ignoring the interim benefit for all customers. If we count the interim benefit as reduced rates or avoiding a rate increase, other customers are better off with the addition because of scale economies. Second, the cost of this service is reduced and rates reflect that reduction. All customers benefit immediately. <u>When the threshold is reached new rates are required and the number of customers will absorb the added cost is large enough to</u>*

[12] Gaz Métro – 6, Document 2, page 3.

[13] *Idem*.

[14] Gaz Métro – 8, Document 8, Revised: 2017.02.03 page 4.

> *share those costs at the old average cost adjusted for inflation and the real cost over time remains constant. Either way the added cost is absorbed. In a proper line extension policy the customer charge is deducted from revenue. Thus the line extension policy does not rely on that revenue to determine the profitability of the line extension.*[15]

UC interprets the explanation of the expert as so: for certain activities (for example, meter reading), the fixed unit cost diminishes as the number of customers increases. When a certain level is reached (for example, the addition of a new meter reader), the new cost is spread over a relatively important number of customers so that the new unit cost is equivalent to the ancient unit cost adjusted with inflation.

UC is of the opinion that this reasoning is valid as long as all growth parameters are similarly aligned (growth of the number of customers, inflation rate, magnitude of the cost for the level). For example, if the salary of the meter readers increases more rapidly than the inflation where a new reader must be added because of a very localised slow growth of the number of customers, this reasoning no longer holds.

That is why UC recommends to the Régie that the cost of meter reading (or of any other activity whose cost grows by level) be included in the calculation of the marginal cost of service delivery.

2.3.2 CALLS, COLLECTIONS, BAD DEBTS

According to the Black & Veatch proposal, the margin customer is always a customer without problems. The customer does not communicate with the Distributor, pays all his or her bills and no collection activities are necessary. However, this reality does not exist and an infrastructure and various processes exist to support these activities, all of which represent costs.

UC is of the opinion that the hypothesis of Black & Veatch contributes to underestimating the marginal cost of service delivery and recommends that the Régie maintain the cost of these activities in the evaluation of the marginal cost. The costs related to bad debts and collection seem to us to be less likely in the first year and could be taken into account only from the second year unless the Distributor can provide an average cost for these specific activities in the first year.

2.3.3 TREATMENT OF THE RCP APPLICATION

The Distributor has included in its proposal a cost for treating financial aid linked to the Rebate Consumption Program (RCP), but only in the maximum limit. UC recommends instead to add to the marginal cost of service delivery an average cost that includes in its calculation the probability that a customer requests such program.

2.3.4 PREVENTIVE AND CORRECTIVE MAINTENANCE

Black & Veatch proposes that the cost of preventive and corrective maintenance costs be excluded from the marginal cost. According to UC, this exclusion is likely for the first year. However, from the second year on, some of these costs should be included in the marginal cost of service delivery. The breath of these costs should reflect, among other things, the inspection cycles and the failure probabilities established on the basis of the Distributor's historic data.

[15] Gaz Métro – 8, Document 7, Revised: 2017.03.09, page 9.

2.4 Illustration of UC’s Proposals

Table 3 presents an illustration of UC’s proposals relating to the calculation of the marginal cost of service delivery for the residential market. Only one series of costs per year reflecting an average cost is defined. New cost estimates would however be necessary for activities that are highlighted, on the basis of formulated recommendations.

UC invites the Régie to consider its proposals for establishing the marginal cost of long-term service delivery.

Table 3
Marginal cost of service delivery (residential)

	New approach (CT 2015) R-3879-2014, GM-17, document 4 Schedule 1, p. 3				New approach (Black & Veatch) GM-6, document 2, page 9				Illustration of UC's proposal	
	Year 1		Years 2 and subsequent		Year 1		Years 2 and subsequent		Year 1	Years 2 and subsequent
	Min	Max	Min	Max	Min	Max	Min	Max		
Sending of subscription confirmation letter	0.83	0.83			0.83	0.83			0.83	
Input time for a new contract	36.29	36.29			36.29	36.29			36.29	
Cost of opening a billing file	9.66	9.66			9.66	9.66			9.66	
Cost of sending an invoice	8.36	8.36	8.36	8.36	8.36	8.36	8.36	8.36	8.36	8.36
Annual cost of cashing a payment	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Cost of dealing with a standard call	12.84	12.84	12.84	12.84		12.84		12.84	12.84	12.84
Cost of reading meters	6.71	6.71	6.71	6.71					6.71	6.71
Cost of bad debt - Residential	0.57	0.57	0.57	0.57						0.57
Cost related to collection	2.43	2.43	2.43	2.43						2.43
Preventative maintenance - connections	12.88	12.88	12.88	12.88				12.88		*12.88*
Corrective maintenance - connections	17.99	17.99	17.99	17.99				17.99		*17.99*
Treatment of a RCP application		23.83				23.83			*23.83*	
Inspection of turbine meter		31.68		31.68		31.68		31.68		*31.68*
Inspection Spin test for turbine <12 inches		79.20		79.20		79.20		79.20		*79.20*
Inspection Telemetry instrument		118.79		118.79		118.79		118.79		*118.79*
Inspection Corrective instrument		87.11		87.11		87.11		87.11		*87.11*
Total	109.30	449.91	62.52	379.30	55.88	409.33	9.10	369.59	75.43	31.65

The totals exclude highlighted values