Brief

Gaz Métro – Application regarding the generic matter bearing on the allocation of costs and rate structure of Gaz Métro

R-3867-2013 Phase 3B

Union
des consommateurs

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Union des consommateurs: *Strength through networking*

Union des consommateurs is a non-profit organization comprised of nine Associations coopératives d'économie familiale (ACEFs), the Association des consommateurs pour la qualité dans la construction (ACQC), and individual members. UC's mission is to represent and defend consumers, with special emphasis on the interests of low-income households. UC's activities are based on values held dear by its members: solidarity, equity and social justice, and improving consumers' economic, social, political and environmental living conditions.

UC's structure enables it to maintain a broad vision of consumer issues while developing in-depth expertise in certain programming sectors, particularly via its research efforts on the emerging issues confronting consumers. Its activities, which are national in scope, are enriched and legitimated by the field work and deep roots of its member associations in the community.

UC acts mainly at the national level, representing the interests of consumers before political or regulatory authorities, in public forums, or through class action lawsuits. Its priority issues in terms of research, action and advocacy include the following: household finances and money management, energy, issues related to telephone services, radio broadcasting, cable television and the Internet, public health, agri-food and biotechnologies, financial products and services, and social and fiscal policy.

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

For over 40 years now, the ACEFs have been working relentlessly in Québec with low-income individuals. While advocating for political, social and fiscal improvements, the ACEFs have from the outset offered direct services to families, including personalized budget consulting services.

1 Context

Gaz Métro is asking the Régie to note the modified methodology for analyzing profitability and the criteria for accepting its development projects.

In particular, Gaz Métro wants to use a profitability index ("PI") approach to determine if a development project will be carried out. A PI of 1 corresponds to a prospective capital cost of 5.22%.

If a project has a PI greater than 0.8 and a densification potential of attaining a PI greater than 1, Gaz Métro proposes that the project be accepted.

To justify this approach, Gaz Métro will operate on the basis of increasing the PI a posteriori rather than a priori using a sample of the business market for which customers contributed to the project.[1] The following table[2] shows the PI increase observed for the business sector for which the project required a customer contribution:

Questions

a. Please recreate Table 1 cited in the preamble, providing the PI increase rather than the IRR increase, and including year 2012.

Response:

Development plan year	PI variation *(a posteriori* vs. *a priori)*
2009	0.35
2010	0.64
2011	0.27
2012	0.19
Average	**0.36**

Thus, in considering the 2009 to 2011 results,[3] the PI increases by at least 0.27, which means that densification potential projects whose a priori PI stood between 0.8 and 1 are now profitable (PI > 1).

According to Gaz Métro, this decision rule would apply to all development projects valued under $1.5M in the residential market or business market, regardless of customer contributions. This analysis bears discussing.

[1] See arguments within the MAT context: Gaz Métro 7, Document 1, B-0178, sections 4 and 5. [Online]: http://publicsde.regie-energie.qc.ca/projets/235/DocPrj/R-3867-2013-C-FCEI-0084-Trad-Doc-2017_02_14.pdf

[2] Gaz Métro 9, Document 16, B-0297, page 11. [Online]: http://publicsde.regie-energie.qc.ca/projets/235/DocPrj/R-3867-2013-B-0297-DDR-RepDDR-2017_08_10.pdf

[3] The analysis carried out by Gaz Métro uses years 2009 to 2011. The addition of data for 2012 is further to the UC's request for information.

2 Sample selection: impact of customer contributions

Choosing a sample comprising only projects for which customer contributions were made could lead to a selection bias; i.e. the sample considered would have properties different from the population under study (all projects valued at under $1.5M in the business and residential markets, regardless of customer contributions).

In particular, it is reasonable to believe that customers who have paid contributions for an extension project are less likely to abandon their gas consumption project and are more likely to consume the volumes contracted than a customer who has not made contributions for the completion of an extension project.

Thus, using the sub-group chosen by Gaz Métro could overvalue the average PI increase for all the projects under study.

Moreover, when the other sub-groups are taken into consideration, the results of the PI increase may be sensitive to the fact that customer contributions have been made.

For instance, in the residential sector, we note that the PI increase for projects requiring customer contributions is higher than the average PI increase for all residential projects:[4]

c. Please recreate Table 1 cited in the preamble, providing the PI increase rather than the IRR increase, and including year 2012.

Response:

Development plan year	PI variation *(a posteriori* vs. *a priori)*
2009	0.39
2010	0.21
2011	0.56
2012	-0.18
Average	**0.25**

[4] Gaz Métro 9, Document 16 Exhibit B-0297, pages 12 and 13. [Online]: http://publicsde.regie-energie.qc.ca/projets/235/DocPrj/R-3867-2013-B-0297-DDR-RepDDR-2017_08_10.pdf

d. Please recreate Table 1 cited in the preamble for all residential market projects, providing the PI increase rather than the IRR increase, and including year 2012.

Response:

Development plan year	PI variation *(a posteriori* vs. *a priori)*
2009	0.10
2010	0.14
2011	0.10
2012	-0.34
Average	**0.00**

Given that the PI increase for all residential projects is nil for 2009–2012 compared with 0.25 for projects that required customer contributions, as a consequence there is a *negative* increase for projects that did not require customer contributions.

It therefore appears that the presence or absence of customer contributions may certainly have an impact on the results presented.

UC concludes that the results presented for business sector projects with customer contributions do not necessarily translate to residential sector projects with customer contributions.

3 Densification in the business sector and residential sector

Although Gaz Métro admits "that it does conclude that the residential market has the same densification potential as the business market,"[5] it does nevertheless state "that as a general rule, the residential market is also densifying with sales that were not included in the a priori profitability test."[6]

Thus, UC verified Gaz Métro's statements using data from Schedule Q-9.3a).1.[7] For all residential and business sector projects (i.e. regardless of customer contributions), UC compared the a priori planned volumes against the a posteriori completed densification volumes.[8] This helped calculate the projected volume percentage of an extension project that will be completed through densification sales.

[5] Gaz Métro 9, Document 9, Exhibit B-0281, page 17. [Online]: http://publicsde.regie-energie.qc.ca/projets/235/DocPrj/R-3867-2013-B-0281-DDR-RepDDR-2017_08_10.pdf
[6] Gaz Métro 9, Document 9, Exhibit B-0281, page 17. [Online]: http://publicsde.regie-energie.qc.ca/projets/235/DocPrj/R-3867-2013-B-0281-DDR-RepDDR-2017_08_10.pdf
[7] Gaz Métro 9, Document 1, Exhibit B-0298, Schedule Q-9.3a).1. [Online]: http://publicsde.regie-energie.qc.ca/projets/235/DocPrj/R-3867-2013-B-0298-DDR-RepDDR-2017_08_10.pdf
[8] UC used data for year 10 of the project.

Table 1: Residential sector. Projected volume percentage of extension projects completed through densification sales.

Residential	A priori new customers	Total densification	Percentage
	(10^3m^3)	(10^3m^3)	
2009	3638	112	3.1%
2010	6274	710	11.3%
2011	4385	935	21.3%
2012	6112	427	7.0%
2013	3484	449	12.9%
Average	4778.6	526.6	11.1%

Table 2: Business sector. Projected volume percentage of extension projects completed through densification sales.

Business	A priori new customers	Total densification	Percentage
	(10^3m^3)	(10^3m^3)	
2009	6738	1554	23.1%
2010	9454	1651	17.5%
2011	18014	1618	9.0%
2012	17283	2900	16.8%
2013	13893	1063	7.7%
Average	13076.4	1757.2	14.8%

Given the above results, it appears that Gaz Métro's affirmation is borne out—that the residential market also densifies with additional sales, albeit to a lesser degree.

4 Realization of projected volumes

When comparing the a priori PI with the a posteriori PI (or the a priori IRR with the a posteriori IRR), the sources of this variation must be identified to be able to interpret the results correctly. In fact, it is possible that the variation comes from revenues, with higher or lower volumes than anticipated (original rates), or from costs, with higher or lower investments than anticipated.

UC studied the variations in terms of IRR, volumes, investments, and the number of customers in the residential sector using the data[9] from Schedule Q-9.3a).1 for 2009 to 2013. The results are as follows:

Table 3: Residential sector – all projects. Variations.

	2009	2010	2011	2012	2013
A posteriori IRR	9.65%	11.64%	10.65%	5.99%	5.09%
A priori IRR	8.30%	9.15%	8.78%	9.28%	6.91%
Variation	1.35%	2.49%	1.87%	-3.29%	-1.82%
A posteriori volumes (10^3m^3)	2534	5893	4128	3304	2126
A priori volumes (10^3m^3)	3638	6274	4385	6112	3484
Variation	-30.3%	-6.1%	-5.9%	-45.9%	-39.0%
A posteriori investments ($000)	7542	13,368	10546	11583	6639
A priori investments ($000)	8920	14642	11277	13905	9810
Variation	-15.4%	-8.7%	-6.5%	-16.7%	-32.3%
A posteriori customers (year 3)	1829	2769	2435	2052	1188
A priori customers (year 3)	2231	3499	3008	3827	2228
Variation	-18.0%	-20.9%	-19.0%	-46.4%	-46.7%
A posteriori customers (year 10)	2070	3320	2786	2455	1285
A priori customers (year 10)	2301	3666	3090	3962	2596
Variation	-10.0%	-9.4%	-9.8%	-38.0%	-50.5%

Despite the increase in the a posteriori IRR from 2009 to 2011, we note that the projected volumes have not all been achieved, resulting in a decrease in a posteriori investments. Overall, these results compare with Gaz Métro's observations in its 2013 development plan analysis[10] on the decrease in volumes and investments:

[9] Gaz Métro 9, Document 1, Exhibit B-0298, Schedule Q-9.3a).1. [Online]: http://publicsde.regie-energie.qc.ca/projets/235/DocPrj/R-3867-2013-B-0298-DDR-RepDDR-2017_08_10.pdf.
[10] R-3992-2016. Gaz Métro 14, Document 4, Exhibit B-0076, page 3. [Online]: http://publicsde.regie-energie.qc.ca/projets/395/DocPrj/R-3992-2016-B-0076-Demande-Piece-2016_12_22.pdf

> The negative variation in volumes of 2,477.10^{3}m^3 and the $2.2M decrease in investments is mainly due to the new customer segment, which presents consumption below 2,417.10^{3}m^3 and lower-than-anticipated investments of $2.3M.[11]

Gaz Métro indicated that the economic context was likely a factor:

> Gaz Métro points out that the economic context in Québec with which customers were confronted during the 2013–2016 period compared unfavourably with forecasts. Indeed, as seen in the table below, real gross domestic product (GDP) growth over four years shows significantly lower growth than forecast. This economic downturn may have impacted the behaviour of Gaz Métro's customers and could explain, in part, the unfavourable variations in volume and in the number of customers.[12]

The data in connection with the IRRs in **Table 3** above are identical to that indicated in **Table 1** of Gaz Métro 9, Document 1 (B-0298), page 33:[13]

> The following table shows the number of projects considered in each of the markets in the 2009 to 2013 development plans, as well as the variation between the a posteriori IRR (including densification, original rates) and the a priori IRR.
>
> **Table 1**

	RESIDENTIAL		BUSINESS	
Development plan year	Number of extension projects	A posteriori IRR variation[4] (including densification, original rates) vs. a priori IRR variation	Number of extension projects	A posteriori IRR[5] (including densification, original rates) vs. a priori IRR variation
2009	46	+ 1.35 %	58	+ 5.57 %
2010	72	+ 2.49 %	57	+ 6.70 %
2011	59	+ 1.87%	120	+ 1.68%
2012	61	- 3.29%	160	+ 2.08%
2013	40	- 1.82%	132	- 1.33%
	Total: 278	**Average: +0.12%**	**Total: 527**	**Average: + 2.94%**

In this context, UC considers it dangerous to come to the conclusion made by Gaz Métro in this application:

> For the 2009 to 2011 development plans, the a posteriori IRR is higher than the a priori IRR, and the average variation is +1.90% for these three years. Thus, Gaz Métro notes

[11] R-3992-2016, Gaz Métro 14, Document 4, Exhibit B-0076, page 4. [Online]: http://publicsde.regie-energie.qc.ca/projets/395/DocPrj/R-3992-2016-B-0076-Demande-Piece-2016_12_22.pdf
[12] R-3992-2016, Gaz Métro 14, Document 4, Exhibit B-0076, page 3. [Online]: http://publicsde.regie-energie.qc.ca/projets/395/DocPrj/R-3992-2016-B-0076-Demande-Piece-2016_12_22.pdf
[13] [Online]: http://publicsde.regie-energie.qc.ca/projets/235/DocPrj/R-3867-2013-B-0298-DDR-RepDDR-2017_08_10.pdf

> that for residential extension projects, profitability expectations materialize after five years.[14] (footnote omitted)

Profitability that appears a posteriori is not only due to the realization of projected volumes or customers, but is a consequence of the simultaneous reduction in volumes (and customers) as well as associated investments.

In this context, it would be difficult to argue that the densification hoped for is the cause of the increased a posteriori profitability. For example, less profitable projects may not be carried out in an uncertain economic climate, thus increasing the average IRRs of projects completed a posteriori. Also, a decrease in the investments needed may have been caused by a decrease in the cost of projects, nudging the a posteriori IRR upward.

5 Other factors impacting the profitability analysis

A number of other parameters can influence the profitability analysis carried out, including the length of the evaluation period. UC notes that the ROEÉ experts recommend an evaluation period of 25–30 years,[15] which could reduce the profitability calculated over an evaluation period of 40 years favoured by Gaz Métro.[16] In view of the experts' report once it is submitted, UC reserves the right to formally support this recommendation.

UC also notes that OC and ROEÉ experts question the inclusion of load addition projects when calculating the profitability of the project portfolio.[17] UC reserves the right to formally support this recommendation in view of the reports that will be submitted by said experts.

For the costs to be included in the profitability analysis, UC would like to weigh in at the hearing on the suggestions made by OC and ROEÉ experts on the four cost items[18] cited in the joint experts' report, which would lower the project profitability calculation.

[14]Gaz Métro 9, Document 1, Exhibit B-0298, page 34. [Online]: http://publicsde.regie-energie.qc.ca/projets/235/DocPrj/R-3867-2013-B-0298-DDR-RepDDR-2017_08_10.pdf
[15]C-OC-0047, Attachment A, page 1, row 9. [Online]: http://publicsde.regie-energie.qc.ca/projets/235/DocPrj/R-3867-2013-C-OC-0047-Preuve-RappExp-2017_09_15.pdf
[16]Gaz Métro 9, Document 13, Exhibit B-0294, page 7. [Online]: http://publicsde.regie-energie.qc.ca/projets/235/DocPrj/R-3867-2013-B-0294-DDR-RepDDR-2017_08_10.pdf
[17]C-OC-0047, Attachment A, page 1, row 2. [Online]: http://publicsde.regie-energie.qc.ca/projets/235/DocPrj/R-3867-2013-C-OC-0047-Preuve-RappExp-2017_09_15.pdf
[18]C-OC-0047, Attachment A pages 2 and 3. [Online]: http://publicsde.regie-energie.qc.ca/projets/235/DocPrj/R-3867-2013-C-OC-0047-Preuve-RappExp-2017_09_15.pdf

6 Conclusions and recommendations

Regarding the profitability evaluation of its development projects, Gaz Métro states:

> Indeed, when it comes to such long periods of time, it is difficult to predict with any certainty the nature of the contemplated projects, and consequently the customer categories, volumes, revenues and anticipated profitability rates. Not only is it difficult to make predictions for such lengthy periods of time, Gaz Métro adds that it does not have a long history of extension projects which, a priori, have a profitability lower than the PCC combined with the potential for future densification described below (AMT extension projects).[19]

UC also considers it difficult to evaluate the increase in a posteriori profitability compared with a priori profitability. While there appears to be an effective densification process in the business sector and in the residential sector, the a posteriori IRR and PI variations also seem to be due to downward variations in volumes and associated investments. Other factors, such as a reduction in project costs or the economic situation, may also explain the a posteriori PI or IRR variation.

Given that the IRR variation is caused by multiple influences, and the a posteriori increase for residential projects is lower than that for the business sector, and in light of the numerous factors that may influence the downward trend of IRR or PI variations, **UC recommends that the Régie err on the side of caution and require that the a priori profitability for the project portfolio relating to residential development plans have a PI > 1.3**. Once additional statistical data is available, it may be possible to lower this threshold. However, for the time being, it appears necessary to maintain a positive a priori profitability level given the potential for uncertainties in the actual results.

Moreover, in view of the negligible increase in the a posteriori profitability of residential projects without customer contributions, **UC recommends that the Régie require that these projects demonstrate a PI > 1 in order to be accepted**.

Lastly, UC reserves the right to amend or complete its recommendations during the hearing, once it has read the OC and ROEÉ joint experts' reports.

[19] Gaz-Métro 7, Document 2, Exhibit B-0220, page 7. [Online]: http://publicsde.regie-energie.qc.ca/projets/235/DocPrj/R-3867-2013-C-FCEI-0134-Trad-Doc-2017_07_18.pdf