

CANADA

PROVINCE OF QUÉBEC
DISTRICT OF MONTRÉAL

R-3867-2013
PHASE 3 Subject A

RÉGIE DE L'ÉNERGIE

GENERIC MATTER BEARING ON THE
ALLOCATION OF COSTS AND RATE
STRUCTURE OF GAZ MÉTRO

GAZ MÉTRO

Plaintiff

-and-

STRATÉGIES ÉNERGÉTIQUES (S.É.)
-and-
ASSOCIATION QUÉBÉCOISE DE LUTTE
CONTRE LA POLLUTION ATMOSPHÉRIQUE
(AQLPA)

Intervenors

**METHOD USED BY GAZ MÉTRO TO DETERMINE THE MARGINAL COSTS OF LONG-TERM SERVICE
DELIVERY**

REPORT

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Prepared for:

Stratégies Énergétiques (S.É.)

Association Québécoise de lutte contre la pollution atmosphérique (AQLPA)

March 17, 2017

SUMMARY OF RECOMMENDATIONS

Recommendation No. 2-1:

We recommend that the Régie de l'énergie set aside the approach of Gaz Métro's consultant, Edwin Overcast, that is based on short-term marginal costs, and instead continue using long-term marginal costs when making decisions regarding the profitability of the growth additions made to Gaz Métro's system.

Recommendation No. 2-2:

Gaz Métro has informed us that the amounts indicated in its initial proposal result from a systematic procedure of consulting its personnel. Consequently, we have no reason to believe at this stage that the information is incorrect. Quite the contrary, the fact that the amounts Gaz Métro indicated in its initial proposal result from a consultation of its own personnel only enhances the value of those amounts and further weakens the marginal cost reductions proposed by its consultant.

This being said, we recommend that the Régie de l'énergie ask Gaz Métro to refine this initial proposal in such a way as to reduce the considerable discrepancy between the minimum and maximum marginal costs. This would require defining a more specific method for determining the marginal costs applicable in each case. Any minimum and maximum marginal costs that still differ at this point would indeed be of little methodological use to the Régie for the purposes of this generic case.

Recommendation No. 2-3:

We recommend that the Régie de l'énergie establish, for the residential sector, the long-term marginal costs of adding a customer basing itself on Gaz Métro's initial proposal, subject to our recommendation 2-2 above, and this in the same manner for all consumption sectors in chapter 3 of this report.

We recommend that the Régie de l'énergie not establish these costs based on the report prepared by the consultant Black & Veatch, which underestimates the marginal costs, as appears at greater length in chapter 4 of this report, notably the methodological reasons elaborated in chapter 2 of this report.

Recommendation No. 2-4:

We recommend that the Régie de l'énergie establish, for the CII sector, the long-term marginal costs of adding a customer basing itself on Gaz Métro's initial proposal, subject to our recommendation 2-2 above, in the same manner as it is applied to all consumption sectors in chapter 3 of this report.

We recommend that the Régie de l'énergie not establish these costs based on the report prepared by the consultant Black & Veatch, which underestimates the marginal costs, as appears at greater length in chapter 5 of this report, notably the methodological reasons elaborated in chapter 2 of this report.

Recommendation No. 2-5:

We recommend that the Régie de l'énergie establish, for the Major Industries sector, the long-term marginal costs of adding a customer basing itself on Gaz Métro's initial proposal, subject to our recommendation 2-2 above, in the same manner as it is applied to all consumption sectors in chapter 3 of this report.

We recommend that the Régie de l'énergie not establish these costs based on the report prepared by the consultant Black & Veatch, which underestimates the marginal costs, as appears at greater length in chapter 6 of this report, notably the methodological reasons elaborated in chapter 2 of this report.

Moreover, we recommend adding bad debts and recovery costs (lines 9 and 10) to the major costs of Major Industries customers.

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1

THE MANDATE

Stratégies Énergétiques (S.É.) and *Association Québécoise de lutte contre la pollution atmosphérique (AQLPA)* retained our services to draft a report on the method used by Gaz Métro for determining the marginal costs of long-term service delivery (hereinafter the “Distributor”) for the purposes of R-3867-2013 Phase 3, Subject A, before Québec’s Régie de l’énergie.

This report is the fruit of our labour and is submitted to *Stratégies Énergétiques (S.É.)* and *Association Québécoise de lutte contre la pollution atmosphérique (AQLPA)* in order that they may file it before the Régie de l’énergie as part of their evidence.

2

THE GENERALLY ACCEPTED REGULATORY PRINCIPLE OF USING LONG- RATHER THAN SHORT-TERM MARGINAL COSTS

Natural gas has been regulated for several decades in Québec using the cost of service methodology.

The generally accepted regulatory principles on the subject in this province are the same as those recognized by a number of North American energy boards, and nowadays has even spread to all continents.

James C. Bonbright¹ is but one of those who has codified these principles.

Based on the generally accepted regulatory principles, the marginal cost of adding a customer is used to help decide whether making additions to a system with a view to customer growth will be profitable.

The calculation of the marginal costs of adding a customer is interrelated with the specific act of allocating costs, which is governed by the principle of reflecting true costs.

This principle is internationally recognized for economic, environmental and sustainable development reasons. This is why the Brundtland Commission (World Commission on Environment and Development) contended, among other things, that:

[ORIGINAL ENGLISH]

*Energy pricing policies play a critical role in stimulating efficiency. [...] The **true economic pricing of energy** – with safeguards for the very poor – need to be extended in all countries.²*

What is the “real cost” of service? Is it the average cost of an identical service delivered to a category of comparable consumers? Or is it the (short- or long-term) marginal cost of adding a new customer or a new load?

James C. Bonbright emphasized, and rightly so, that it is impossible to set rates that simultaneously respect both the average costs and marginal costs of a service.

¹ **James C. BONBRIGHT**, Principles of Public Utility Rates, New York, Columbia University Press, 1961, http://media.terry.uga.edu/documents/exec_ed/bonbright/principles_of_public_utility_rates.pdf.

² **WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT (BRUNDTLAND COMMISSION)**, Our Common Future, Oslo, 1987, republished, notably in Québec: 2nd Ed. Montréal, Éditions du fleuve et Publications du Québec, 1989, https://fr.wikisource.org/wiki/Notre_avenir_%C3%A0_tous_-_Rapport_Brundtland and https://tools.wmflabs.org/wsexport/tool/book.php?lang=fr&format=pdf-a5&page=Notre_avenir_%C3%A0_tous_-_Rapport_Brundtland. Emphasis added.

[ORIGINAL ENGLISH]

*Among these conflicts of rate-making objectives, one of the most serious is that between the usually accepted principle that the rates of any public utility, in the aggregate, should cover its total cost of service, including fixed charges or a “fair return”, and the also widely approved principle that specific rates should be based on the costs of specific amounts and types of service. For reasons stated in Chapter XVI, **these two goals of rate-making policy are incompatible** except under a somewhat rare coincidence in corporate operation and finance. In the absence of such a coincidence, any attempt to attain them both completely would be as hopeless as would be the attempt to draw a square circle.³*

Bonbright prefers rates based on average cost, and would perhaps even accept a few rating elements based on long-term marginal costs (which are somewhat similar to average cost):

[ORIGINAL ENGLISH]

*How has rate-making practice undertaken to face this dilemma? In the main, except when circumstances have made the gap between the two objectives too wide to jump, it has done so by **a somewhat qualified grant of priority to the first goal** – that of a level of rates adequate for financial self-sufficiency.⁴*

*Where the objective of rate regulation is that of securing the lowest level of rates consistent with the avoidance of a public subsidy – and this is the primary objective of regulated private ownership in America – the major emphasis of the cost criterion is **on total cost rather than on specific cost**. In consequence, the design of the rate structure is based only in part on specific costs or cost differentials. But some modern economists, who lay great stress on the consumer-rationing function of utility rate making, would chose the other horn of the dilemma. That is to say, they would base utility rates on those costs that can be specifically assigned definite types and amounts of service by a process of **differential or incremental cost analysis**.⁵*

He is openly averse to “marginalist” economists, who favour rates that are based entirely on marginal costs, preferably short-term ones:

[ORIGINAL ENGLISH]

*[...] the **marginal costs** of public utility services, as distinct from average total costs, are of such significance for sound rate determination **that some economists have gone so far as to propose their acceptance as measures of rates even when, in consequence, the resulting revenues will fail to cover total costs and must therefore be supplemented by a tax-financed subsidy**.⁶*

³ James C. BONBRIGHT, Principles of Public Utility Rates, New York, Columbia University Press, 1961, http://media.terry.uga.edu/documents/exec_ed/bonbright/principles_of_public_utility_rates.pdf, pages 386-387. Emphasis added.

⁴ James C. BONBRIGHT, Principles of Public Utility Rates, New York, Columbia University Press, 1961, http://media.terry.uga.edu/documents/exec_ed/bonbright/principles_of_public_utility_rates.pdf, pages 386-387. Emphasis added.

⁵ James C. BONBRIGHT, Principles of Public Utility Rates, New York, Columbia University Press, 1961, http://media.terry.uga.edu/documents/exec_ed/bonbright/principles_of_public_utility_rates.pdf, page 75. Emphasis added.

⁶ James C. BONBRIGHT, Principles of Public Utility Rates, New York, Columbia University Press, 1961, http://media.terry.uga.edu/documents/exec_ed/bonbright/principles_of_public_utility_rates.pdf, chap. 17, page 317. Emphasis added.

Like Bonbright, we believe that under the modern regulatory approach, a service's "real cost" usually means its average cost, and long-term marginal costs may be used when deciding whether or not to make additions to allow for growth.

This approach is strongly favoured by the Régie as well as the distributors that are subject thereto.

Hydro-Québec Distribution has retained a similar approach:

[TRANSLATION]

*Although the base rate level must be established using **average costs**, it is important when defining rates to take into consideration the signal given by the marginal cost structure. For example, the weighting attributed to energy and capacity costs in the **long-term marginal costs** can serve as an indicator of how to develop rate structures that include capacity and energy components.⁷*

From 2004 to 2007, even the Régie de l'énergie encouraged a rate structure that favoured a price signal based on **long-term marginal cost**:

[TRANSLATION]

The Régie has on a number of occasions mentioned the importance of price signals for inciting the Distributor's customers to adopt a rational and efficient power consumption behaviour. In its decision D-2006-34, it maintains that it is both crucial and in the public interest that the Distributor's rate structures better reflect the long-term marginal cost. According to the Régie, changes to the rate structures proposed by the Distributor would help "start a gradual and prudent reform of rate structures, resulting in a better price signal".⁸

*In decision D-2007-12, the Régie insisted that changing the rate structures in such a manner was a priority. It asked the Distributor to present rate reform proposals in the 2008 rate case **that reflect the importance of long-term marginal costs and of implementing the government's energy strategy.**^{9 10}*

*A price signal favouring energy efficiency should use **long-term marginal costs** when determining the upcoming evolution of general rate components. Incidentally, invoicing power delivery costs ensures that the marginal costs of longer term delivery are reflected in the rate's more flexible component. Changing the rate structures by attributing these increases to energy, which is the more elastic element of the customer's invoice, would give that customer an opportunity to decrease the impact of rate increases on his or her*

⁷ HYDRO-QUÉBEC DISTRIBUTION, R-3972-2016 of the Régie de l'énergie, Exhibit C-HQD-0004, HQD-1, Document 1, http://publicsde.regie-energie.qc.ca/projets/374/DocPri/R-3972-2016- C-HQD-0004-Rapports-Dec-2016_12_20.pdf, page 21, lines 8-12. Emphasis added.

⁸ Intrapaginal note in citation: [RÉGIE DE L'ÉNERGIE, R-3579-2005, Decision D-2006-34, February 28, 2006, <http://www.regie-energie.qc.ca/audiences/decisions/D-2006-34.pdf>, page 73].

⁹ Intrapaginal note in citation: [RÉGIE DE L'ÉNERGIE, R-3610-2006, Decision D-2007-12, February 27, 2007, <http://www.regie-energie.qc.ca/audiences/decisions/D-2007-12.pdf>, page 84].

¹⁰ RÉGIE DE L'ÉNERGIE, R-3644-2007, Decision D-2008-024, 2008 02 26, <http://www.regie-energie.qc.ca/audiences/decisions/D-2008-024.pdf>, pages 79-80. Emphasis added.

invoice. This would also help relax the restriction associated with capacity when consumption levels drop.¹¹

* * *

In the report prepared for this case by Gaz Métro's consultant, however, Black and Veatch argues that:

[ORIGINAL ENGLISH]

*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*

This affirmation seems to contradict the generally accepted economic regulatory principles mentioned earlier, which favour the use of long-term marginal costs over short-term ones.

In their application to intervene that was filed in this case, our clients *Stratégies Énergétiques* and AQLPA rightly state that:

- The Black & Veatch report (B-0145, Gaz Métro-6, Doc. 2, page 3) with which Gaz Métro now concurs (B-0144, Gaz Métro-6, Doc. 1, page 2, lines 20-24) does not seem to be adapted to the (main) reason for which Gaz Métro and Régie de l'énergie are required to proceed in this matter with identifying a method for determining the marginal costs of long-term service delivery (emphasis added). Surprisingly, they maintain:

[ORIGINAL ENGLISH]

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. (emphasis added)

- We feel Gaz Métro made a mistake when it overenthusiastically rejected its own prior assessment (a copy of which is attached to B-0144, Gaz Métro-6, Doc. 1), which methodologically-speaking was more adapted than the one used by Black & Veatch for being part of the exercise, subject to our explanations below.

¹¹ RÉGIE DE L'ÉNERGIE, R-3541-2004, Decision D-2005-034, <http://www.regie-energie.qc.ca/audiences/decisions/D-2005-34.pdf>, page 143. Emphasis added. The words "price signal" at the beginning of the citation were already bolded in the text.

¹² GAZ MÉTRO, R-3867-2013, Phase 3, Subject A, Exhibit B-0145, Gaz Métro 6, Document 2, page 3.

- The first principle we posit holds that, in order to determine the profitability of market development and system addition projects, it is necessarily **the long-term marginal costs** (during the estimated period for which the new customer or new load will be maintained) that must be taken into consideration, contrary to Black & Veatch's approach.
- Black & Veatch certainly is correct in considering that some marginal costs of adding a customer or load are nil or low until such time as the "following step" is reached, point at which the marginal cost will suddenly increase (for example, when a threshold is reached after which additional resources will come into play for a given service). Black & Veatch is therefore right to criticize Gaz Métro's prior study, which retained a sort of "average marginal cost" bearing no relation to whether or not this "step" was reached.

The rigorous choice that should apply in this case does not consist in retaining only those minimum marginal costs that would precede the reaching of this "step", as Black & Veatch would argue. **We believe the exercise, in Phase 3 of this matter, should instead consist in identifying, for each market development or system addition project, where this step is specifically located (and what marginal costs apply both before and after that "step" is reached). [...]**

- Using such tools, it would then be possible, whenever such a market development or system addition project arises, to predict a better profitability for additional customers or loads that are under the "step", and a lower or non-existent profitability for additional customers or loads that are so big that the additional service needs will exceed the "step" beyond which cost increases become more significant.
- Such methodological tools would allow Gaz Métro and the Régie to make economically transparent and rational decisions on market development and system addition projects. ***(Note: Far be it from us to claim that any project that is not economically profitable should be systematically refused. The Régie will always have the option, as it has had in the past, to accept projects with little or no profitability that are nonetheless desirable for social or environmental reasons, such as projects that have a structuring effect on a region or that will reduce greenhouse gas emissions. But such a choice must always be an enlightened decision that is made after having first rigorously determined whether or not the project is economically viable. SÉ-AQLPA respectfully submit that the method we propose above should allow for this.)***¹³

We asked Gaz Métro why it suddenly concurred with Black & Veatch's approach based on short-term marginal costs, which we believe runs contrary to the fundamental purpose of this exercise, and even to Gaz Métro's own initial approach. Gaz Métro did not really answer our question on the subject:

¹³ SÉ-AQLPA, R-3867-2013, Phase 3, Exhibit C-SÉ-AQLPA-0029, Application for intervention, pages 2-4. Emphasis added.

REQUEST FOR INFORMATION S.É.-AQLPA-2-5

Reference: GAZ MÉTRO, R-3867-2013, Phase 3, Exhibit B-0145, Gaz Métro-6, Document 2.

Request(s):

The Black & Veatch report (B-0145, Gaz Métro-6, Doc. 2, page 3) with which Gaz Métro now concurs (B-0144, Gaz Métro-6, Doc. 1, page 2, lines 20-24) does not seem to be adapted to the (main) reason for which Gaz Métro and Régie de l'énergie are required to proceed in this matter with identifying a method for determining the marginal costs of long-term service delivery (emphasis added). Surprisingly, they maintain:

[ORIGINAL ENGLISH]

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. (Emphasis added).

Please explain why Gaz Métro now accepts this recommendation of Black & Veatch that short- rather than long-term marginal costs be used.

Response:

Gaz Métro has retained the services of Dr. Overcast, recognized as an expert witness “[TRANSLATION] in the regulation of public utilities and rates” by the Régie in its decision D-2017-009. Gaz Métro does not have any reason that would justify not following the recommendations of that expert with whom it is, moreover, fully in agreement.¹⁴

And yet, Gaz Métro could have drawn inspiration from recent examples in which one of the Régie's participants distanced itself from its expert consultant. This was the case, for example, with Hydro-Québec Distribution in R-3980-2016, cited again in R-3986-2016:

[TRANSLATION]

As regards the marking carried out by ICF International, only the Yukon and the Distributor calculate the avoided capacity costs and use the same method to do so, namely that of generic equipment. The Distributor also notes that it is the only one publishing its avoided costs each year based on the marking.

However, the firm of experts propose another method for calculating avoided capacity costs. The proposed method is to carry forward investments made in equipment to a future date. **According to the Distributor, this method meets neither the needs nor the requirements of the Régie, in other words obtaining a stable and coherent signal that would facilitate investment planning over the medium and long terms.**

¹⁴ GAZ METRO, R-3867-2013, Phase 3, Subject A, Exhibit B-0215, Gaz Métro 8, Document 8, reply number 2.5(a) to the request for information number 2 of SÉ-AQLPA, page 4.

What is more, this method is currently not used by other jurisdictions to calculate the avoided capacity costs on an unconnected system.

In fact, using the proposed method, the costs avoided are highly volatile from one year to the next, and the method is no more specific or robust in its application. The Régie has in the past already signalled problems resulting from this volatility.

Additionally, in its decision D-2015-0187, the Régie emphasized its concern over what it believed was an underestimation of the avoided capacity costs on autonomous systems. The method of carrying forward investments, however, yields avoided capacity costs that are systematically lower than those resulting from the Distributor's current method. (Emphasis added)¹⁵

In the case at hand, the approach of Black & Veatch's consultant is to establish the marginal costs per customer over the short term, and does not take into consideration the long-term costs that arise when the accumulation of new customers pushes costs "on to the next step".

This generic problem with the short-term marginal cost approach had already been identified by Bonbright.¹⁶

This fact even seems to have been recognized by Gaz Métro's consultant in this case, Mr. Edwin Overcast; in a report that he filed in another matter on September 14, 2016, Mr. Overcast proposed treating the various costs not taken into consideration in the short-term marginal costs as being fixed costs that can occasionally arise and which, according to him, should not be apportioned to the addition of customers that, together, generate these costs:

[ORIGINAL ENGLISH]

*Marginal costs only reflect cost causation for growth at the margin, and since they are forward looking, costs associated with added customers, kW capacity or kWh. The kW delivery capacity may be added mostly at the fringes of the system, and may occasionally represent an expansion of an existing facility such as a feeder or a circuit, but that does not represent the marginal cost for any more than that one location. **Since marginal costs do not equal embedded costs, any allocation must adjust the marginal cost to match the utility's revenue requirements. Theoretically, the adjustments should be made using the concept of Ramsey Pricing that holds that the extra revenue should be recovered from the least elastic classes and the least elastic rate components.** [...] It is not only that **marginal cost does not equate to the revenue requirement being allocated** but that **marginal cost cannot reflect the causes of those sunk costs that represent the costs to be apportioned.**¹⁷*

As can therefore be seen, the consultant's short-term marginal cost approach would have us stray even further from the generally accepted regulatory principles, in this case the causality of costs.

¹⁵ HYDRO-QUÉBEC DISTRIBUTION, R-3980-2016, Exhibit B-0021, HQD-4, Document 4, page 8, lines 14 to 33.

¹⁶ 16 James C. BONBRIGHT, Principles of Public Utility Rates, New York, Columbia University Press, 1961, http://media.terr.uga.edu/documents/exec_ed/bonbright/principles_of_public_utility_rates.pdf, chap. 20

¹⁷ Edwin OVERCAST, NHPUC Docket No. DE 16-576, Testimony, Sept 14, 2016, http://www.puc.nh.gov/Regulatory/Docketbk/2016/16-576/TESTIMONY/16-576_2016-09-14_UES_ATT_DTESTIMONY_H_OVERCAST.PDF Appendix B, Page 2 of 7.

We invite the Régie not to adopt this approach, but rather to continue using the long-term marginal costs to help in its decision-making process regarding the profitability of making growth additions to Gaz Métro's system.

Recommendation No. 2-1:

We recommend that the Régie de l'énergie set aside the approach of Gaz Métro's consultant, Edwin Overcast, that is based on short-term marginal costs, and instead continue using long-term marginal costs when making decisions regarding the profitability of the growth additions made to Gaz Métro's system.

3

THE DEFICIENCIES OF GAZ MÉTRO COMMON TO THE MARGINAL COSTS OF LONG-TERM SERVICE DELIVERY IN ALL SECTORS

Gaz Métro informs us that the amounts indicated in its initial proposal result from a systematic procedure of consulting its personnel:

[TRANSLATION]

The methodology consists in identifying then analyzing the departments with activities and costs that are directly related to the customer. A series of interviews was conducted with cost centre managers in order to identify, for various markets, the activities resulting in a new customer or in an additional load from an existing customer. Each activity was quantified then assigned a value based on the time devoted to its completion.¹⁸

Here is a list of the individuals from Gaz Métro that were interviewed:¹⁹

Individuals met	Summary of topics discussed
VP - Operations	Costs associated with connecting an immovable Main industry segments in Operations
Head of the measurement engineering department	Maintenance program – Instrumentation Operations and segmentation by customer
Group leader, Instrumentation	Maintenance program – Instrumentation Types of meters and frequency of inspections
Head of system integrity and asset management department	Engineering projects underway Inspection programs for meters installed at the customers' Inspection/verification program for regulators
Head of customer information	Type of customers Work of customer service agents Quality requirements imposed Average cost of a call
Head of invoicing and meter reading department	Meter reading Invoicing Tasks performed by invoicing clerks Invoice production cost Letter of new customer confirmation
Head of accounts receivable management department	Recovery Collection, credit investigation, legal recourses

¹⁸ GAZ MÉTRO, R-3867-2013, Phase 3, Subject A, Exhibit B-0144, Gaz Métro-17, Document 4, page 5, lines 24-28.

¹⁹ GAZ MÉTRO, R-3867-2013, Phase 3, Subject A, Exhibit B-0212, Gaz Métro 8, Document 6, Response 1.1.2 to the request for information Item A, of the ROÉÉ, Schedule, page 1.

Team leader, cash receipts	Types of payments received from customers Costs of various types of payment
Assistant director, Major Industries	Customer categories Major industry customers (number and profile) Work and costs of representatives
Head of administrative department	Activities and responsibilities of the administrative department Financial assistance programs Customer retention costs Customer categories Rates Required revenues (operations and use)
Instrumentation and metering advisor	Telemetry (use and costs) Type of customer
Senior advisor – Sales development follow-up	Construction estimate and required revenue
Director – customer service	Annual cost of cash receipts
Senior advisor – Demand forecasting and marketing strategies	Calculation of overall profitability and impact of methods Sales data

Consequently, we have no reason to believe at this stage that the information is incorrect. Quite the contrary, the fact that the amounts Gaz Métro indicated in its initial proposal result from a consultation of its own personnel only enhances the value of those amounts and further weakens the marginal cost reductions proposed by its consultant.

This being said, we believe that Gaz Métro should refine this initial proposal in such a way as to reduce the considerable discrepancy between the minimum and maximum marginal costs. This would require defining a more specific method for determining the marginal costs applicable in each case. Any minimum and maximum marginal costs that still differ at this point would indeed be of little methodological use to the Régie for the purposes of this generic case.

Recommendation No. 2-2:

Gaz Métro has informed us that the amounts indicated in its initial proposal result from a systematic procedure of consulting its personnel. Consequently, we have no reason to believe at this stage that the information is incorrect. Quite the contrary, the fact that the amounts Gaz Métro indicated in its initial proposal result from a consultation of its own personnel only enhances the value of those amounts and further weakens the marginal cost reductions proposed by its consultant.

This being said, we recommend that the Régie de l'énergie ask Gaz Métro to refine this initial proposal in such a way as to reduce the considerable discrepancy between the minimum and maximum marginal costs. This would require defining a more specific method for determining

the marginal costs applicable in each case. Any minimum and maximum marginal costs that still differ at this point would indeed be of little methodological use to the Régie for the purposes of this generic case.

4

MARGINAL COSTS OF LONG-TERM SERVICE DELIVERY IN THE RESIDENTIAL SECTOR

The following table illustrates the discrepancies between the method initially proposed by Gaz Métro and that of its consultant Black & Veatch (with which Gaz Métro now concurs) for the marginal costs of long-term service delivery in the residential sector.²⁰

Ln	Description	Gaz Metro As Proposed				Black & Veatch Revised				Gaz Métro - B&V Discrepancies			
		Residential				Residential				Residential			
		Year 1		Year 2 and +		Year 1		Year 2 and +		Year 1		Year 2 and +	
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1	Mailing of subscription confirmation	\$0.83	\$0.83	\$-	\$-	\$0.83	\$0.83	\$-	\$-	\$-	\$-	\$-	\$-
2	letter Cost of mailing bill Cost of	\$8.36	\$8.36	\$8.36	\$8.36	\$8.36	\$8.36	\$8.36	\$8.36	\$-	\$-	\$-	\$-
3	opening a billing file Cost of	\$9.66	\$9.66	\$-	\$-	\$9.66	\$9.66	\$-	\$-	\$-	\$-	\$-	\$-
4	reading a meter	\$6.71	\$6.71	\$6.71	\$6.71	\$-	\$-	\$-	\$-	\$6.71	\$6.71	\$6.71	\$6.71
5		\$36.29	\$36.29	-	-	\$36.29	\$36.29	-	-	-	-	-	-
6	Input of a new contract Cost of a credit check conducted internally Annual cost	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
7		\$0.74	\$0.74	\$0.74	\$0.74	\$0.74	\$0.74	\$0.74	\$0.74	\$-	\$-	\$-	\$-
8	for cashing a payment Cost of processing a standard customer call	\$12.84	\$12.84	\$12.84	\$12.84	\$-	\$12.84	\$-	\$12.84	\$12.84	\$-	\$12.84	\$-
9	Cost of Bad Debts Collection and	\$0.57	\$0.57	\$0.57	\$0.57	\$-	\$-	\$-	\$-	\$0.57	\$0.57	\$0.57	\$0.57
10	recovery costs Customer retention costs	2.43\$	2.43\$	2.43\$	2.43\$	\$-	\$-	\$-	\$-	\$2.43	\$2.43	\$2.43	\$2.43
11	- Major accounts	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
12	Customer retention costs - Major industries Preventive maintenance -	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
13	Service line Corrective	\$12.88	\$12.88	\$12.88	\$12.88	0\$	\$-	\$-	\$12.88	\$12.88	\$12.88	\$12.88	\$-

²⁰ GAZ MÉTRO, R-3867-2013, Phase 3, Subject A, Exhibit B-0145, Gaz Métro 6, Document 2, Table 2, page 9.

Ln	Description	Gaz Metro As Proposed				Black & Veatch Revised				Gaz Métro - B&V Discrepancies			
		Residential				Residential				Residential			
		Year 1		Year 2 and +		Year 1		Year 2 and +		Year 1		Year 2 and +	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
14	maintenance - Service line Processing of CRP	\$17.99	\$17.99	\$17.99	\$17.99	0\$	\$-	\$-	\$17.99	\$17.99	\$17.99	\$17.99	\$-
15	application Preventive	\$-	\$23.83	\$-	\$-	\$-	\$23.83	\$-	\$-	\$-	\$-	\$-	\$-
16	maintenance - Mains ²¹ Corrective	\$0.22\$ /m					Unspecified				Unspecified		
17	maintenance - Mains	\$0.37\$ /m					Unspecified				Unspecified		
18	Meters inspection and maintenance costs												
19	Type of meters												
20	Turbine Spin test for turbine (less than 12 in)	\$-	\$31.68	\$-	\$31.68	\$-	\$31.68	\$-	\$31.68	\$-	\$-	\$-	\$-
21	Telemetry Corrective	\$-	\$79.20	\$-	\$79.20	\$-	\$79.20	\$-	\$79.20	\$-	\$-	\$-	\$-
22	instruments Spin test for turbine (12 in and more)	\$-	\$87.11	\$-	\$87.11	\$-	\$87.11	\$-	\$87.11	\$-	\$-	\$-	\$-
23	Cost of a cellular line - telemetry	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
24	Cost of a cellular line - telemetry	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
25	Total	\$109.30	\$449.91	\$62.52	\$379.30	\$55.88	\$409.33	\$9.10	\$369.59	\$53.42	\$40.58	\$53.42	\$9.71

A reading of this table reveals major discrepancies between the marginal costs per residential customer initially proposed by Gas Métro and that of Black & Veatch. For the first year of a customer's addition, Black & Veatch halves the minimum marginal cost to be considered! For subsequent years, it suggests considering as a minimum no more than 14% of the cost initially proposed by Gaz Métro!

These major discrepancies stem in part from their radically different methodological approaches to allocating long-term costs, discussed in chapter 2 of this report. Moreover, Black & Veatch underestimates some costs even though these had been established by Gaz Métro following a systematic consultation of its personnel, as seen in chapter 3 of this report. Consequently, Black & Veatch does not take the following costs into consideration in its proposed marginal cost:

- Line 4 on the cost of reading a meter;
- Line 8 on the minimum cost of a standard call;
- Line 9 on the bad debt costs;

²¹ On lines 16 and 17 on the costs of preventive and corrective maintenance of main lines, see: **GAZ MÉTRO**, R-3867-2013, Phase 3, Subject A, Exhibit B-0144, Gaz Métro-17, Document 4, Schedule 1, page 1. **GAZ MÉTRO**, R-3867-2013, Phase 3, Subject A, Exhibit B-0145 Gaz Métro 6, Document 2, report of Black & Veatch, page 8.

- Line 10 on customer retention costs;
- Lines 13 and 14 on the cost of the preventive and corrective maintenance of distribution lines for the first year and the minimum value for other years.
- The application of a minimum that would be used for lines 16-17 regarding the costs of preventive and corrective maintenance of the main lines.

We believe that Gaz Métro's initial proposal better reflects the long-term marginal costs than that of its consultant, and we recommend that the Régie establish, for the residential sector, those marginal costs that were initially elaborated by Gaz Métro, subject to our recommendation 2-2 above, and this in the same manner for all consumption sectors in chapter 3 of this report.

Recommendation No. 2-3:

We recommend that the Régie de l'énergie establish, for the residential sector, the long-term marginal costs of adding a customer basing itself on Gaz Métro's initial proposal, subject to our recommendation 2-2 above, and this in the same manner for all consumption sectors in chapter 3 of this report.

We recommend that the Régie de l'énergie not establish these costs based on the report prepared by the consultant Black & Veatch, which underestimates the marginal costs, as appears at greater length in chapter 4 of this report, notably the methodological reasons elaborated in chapter 2 of this report.

5

MARGINAL COSTS OF LONG-TERM SERVICE DELIVERY IN THE COMMERCIAL, INSTITUTIONAL AND INDUSTRIAL (CII) SECTOR

The following table illustrates the discrepancies between the method initially proposed by Gaz Métro and that of its consultant Black & Veatch (with which Gaz Métro now concurs) for the marginal costs of long-term service delivery in the Commercial, Institutional and Industrial (CII) sector.²²

Ln	Description	Gaz Metro As Proposed				Black & Veatch Revised				Gaz Métro - B&V Discrepancies			
		CII		CII		CII		CII		CII		CII	
		Year 1	Year 2 and +	Year 1	Year 2 and +	Year 1	Year 2 and +	Year 1	Year 2 and +	Year 1	Year 2 and +	Year 1	Year 2 and +
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1	Mailing of subscription confirmation letter	\$0.83	\$0.83	\$-	\$-	\$0.83	\$0.83	\$-	\$-	\$-	\$-	\$-	\$-
2	Cost of mailing bill	\$8.36	\$8.36	\$8.36	\$8.36	\$8.36	\$8.36	\$8.36	\$8.36	\$-	\$-	\$-	\$-
3	Cost of opening a billing file	\$9.66	\$9.66	\$-	\$-	\$9.66	\$9.66	\$-	\$-	\$-	\$-	\$-	\$-
4	Cost of reading a meter	\$6.71	\$6.71	\$6.71	\$6.71	\$-	\$-	\$-	\$-	\$6.71	\$6.71	\$6.71	\$6.71
5	Input of a new contract	\$52.62	\$52.62	\$-	\$-	\$52.62	\$52.62	\$-	\$-	\$-	\$-	\$-	\$-
6	Cost of a credit check conducted internally	\$17.19	\$17.19	\$-	\$-	\$17.19	\$17.19	\$-	\$-	\$-	\$-	\$-	\$-
7	Annual cost for cashing a payment	\$1.75	\$1.75	\$1.75	\$1.75	\$1.75	\$1.75	\$1.75	\$1.75	\$-	\$-	\$-	\$-
8	Cost of processing a standard customer call	\$12.84	\$12.84	\$12.84	\$12.84	\$-	\$12.84	\$-	\$12.84	\$12.84	\$-	\$12.84	\$-

²² GAZ MÉTRO, R-3867-2013, Phase 3, Subject A, Exhibit B-0145, Gaz Métro 6, Document 2, Table 3, page 10.

Ln	Description	Gaz Metro As Proposed				Black & Veatch Revised				Gaz Métro - B&V Discrepancies			
		CII		CII		CII		CII		CII		CII	
		Year 1	Year 2 and +	Year 1	Year 2 and +	Year 1	Year 2 and +	Year 1	Year 2 and +	Year 1	Year 2 and +	Year 1	Year 2 and +
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
9	Cost of Bad Debts	\$7.77	\$7.77	\$7.77	\$7.77	\$-	\$-	\$-	\$-	\$7.77	\$7.77	\$7.77	\$7.77
10	Collection and recovery costs	\$33.31	\$33.31	\$33.31	\$33.31	\$-	\$-	\$-	\$-	\$33.31	\$33.31	\$33.31	\$33.31
11	Customer retention costs - Major accounts	\$-	\$39.05	\$-	\$39.05	\$-	\$-	\$-	\$-	\$-	\$39.05	\$-	\$39.05
12	Customer retention costs - Major industries	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
13	Preventive maintenance - Service line	\$12.88	\$12.88	\$12.88	\$12.88	\$-	\$-	\$-	\$12.88	\$12.88	\$12.88	\$12.88	\$-
14	Corrective maintenance - Service line	17.99\$	17.99\$	17.99\$	17.99\$	\$-	\$-	\$-	\$17.99	17.99\$	17.99\$	17.99\$	\$-
15	Processing of CRP application Preventive	\$-	\$32.90	\$-	\$-	\$-	\$32.90	\$-	\$-	\$-	\$-	\$-	\$-
16	1 maintenance - Mains ²³	\$0.22 /m					Unspecified				Unspecified		
17	1 Corrective maintenance - Mains	\$0.37 /m					Unspecified				Unspecified		
18	Meters inspection and maintenance costs												
19	Type of meters												
20	Turbine Spin test for turbine (less than 12 in)	\$-	\$31.68	\$-	\$31.68	\$-	\$31.68	\$-	\$31.68	\$-	\$-	\$-	\$
21	Telemetry	\$-	\$79.20	\$-	\$79.20	\$-	\$79.20	\$-	\$79.20	\$-	\$-	\$-	\$
22	Corrective instruments Spin test for turbine (12 in and more)	\$-	\$118.79	\$-	\$118.79	\$-	\$118.79	\$-	\$118.79	\$-	\$-	\$-	\$
23	Telemetry	\$-	\$	\$-	\$	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$
24	Corrective instruments Spin test for turbine (12 in and more)	\$-	87,11\$	\$-	87,11\$	\$-	87,11\$	\$-	87,11\$	\$-	\$-	\$-	\$

²³ For lines 16 and 17 on the cost of preventive and corrective maintenance of main lines, see: **GAZ MÉTRO**, R-3867-2013, Phase 3, Subject A, Exhibit B-0144, Gaz Métro-17, Document 4, Schedule 1, page 1. **GAZ MÉTRO**, R-3867-2013, Phase 3, Subject A, Exhibit B-0145 Gaz Métro 6, Document 2, report of Black & Veatch, page 8.

Cost of a cellular line - telemetry												
25	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
26 Total	\$181,91	\$570,64	\$101,61	\$457,44	\$90,41	\$452,93	\$10,11	\$370,60	\$91,50	\$117,71	\$91,50	\$86,84

Once again, a reading of this table reveals major discrepancies between the marginal costs per CII customer initially proposed by Gas Métro and that of Black & Veatch. For the first year of a customer's addition, Black & Veatch halves the minimum marginal cost to be considered! For subsequent years, it suggests considering as a minimum no more than 10% of the cost initially proposed by Gaz Métro!

These major discrepancies stem in part from their radically different methodological approaches to allocating long-term costs, discussed in chapter 2 of this report. Moreover, Black & Veatch underestimates some costs even though these had been established by Gaz Métro following a systematic consultation of its personnel, as seen in chapter 3 of this report. Consequently, Black & Veatch does not take the following costs into consideration in its proposed marginal cost:

- Line 4 on the cost of reading a meter;
- Line 8 on the minimum cost of a standard call;
- Line 9 on the bad debt costs;
- Line 10 on customer retention costs;
- Lines 13 and 14 on the cost of the preventive and corrective maintenance of distribution lines for the first year and the minimum value for other years.
- The application of a minimum that would be used for lines 16-17 regarding the costs of preventive and corrective maintenance of the main lines.

We believe that Gaz Métro's initial proposal better reflects the long-term marginal costs than that of its consultant, and we recommend that the Régie establish, for the residential sector, those marginal costs that were initially elaborated by Gaz Métro, subject to our recommendation 2-2 above, and this in the same manner for all consumption sectors in chapter 3 of this report.

Recommendation No. 2-4:

We recommend that the Régie de l'énergie establish, for the CII sector, the long-term marginal costs of adding a customer basing itself on Gaz Métro's initial proposal, subject to our recommendation 2-2 above, in the same manner as it is applied to all consumption sectors in chapter 3 of this report.

We recommend that the Régie de l'énergie not establish these costs based on the report prepared by the consultant Black & Veatch, which underestimates the marginal costs, as appears at greater length in chapter 5 of this report, notably the methodological reasons elaborated in chapter 2 of this report.

6

MARGINAL COSTS OF LONG-TERM SERVICE DELIVERY OF THE MAJOR INDUSTRIES SECTOR

The following table illustrates the discrepancies between the method initially proposed by Gaz Métro and that of its consultant Black & Veatch (with which Gaz Métro now concurs) for the marginal costs of long-term service delivery in the Major Industries sector.²⁴

L n	Description	Gaz Metro As Proposed				Black & Veatch Revised				Écart Gaz Métro \$- B&V			
		Major Industries Year 1 Year				Major Industries Year 1 Year				Major Industries Year 1 Year			
		2 and +		2 and +		2 and +		2 and +		2 and +		2 and +	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
1	Mailing of subscription confirmation letter	\$0.83	\$0.83	\$-	\$-	\$0.83	\$0.83	\$-	\$-	\$-	\$-	\$-	\$-
2	Cost of mailing bill	\$8.36	\$8.36	\$8.36	\$8.36	\$8.36	\$8.36	\$8.36	\$8.36	\$-	\$-	\$-	\$-
3	Cost of opening a billing file	\$9.66	\$9.66	\$-	\$-	\$9.66	\$9.66	\$-	\$-	\$-	\$-	\$-	\$-
4	Cost of reading a meter	\$6.71	\$6.71	\$6.71	\$6.71	\$-	\$-	\$-	\$-	\$6.71	\$6.71	\$6.71	\$6.71
5	Input of a new contract	\$36.29	\$36.29	\$-	\$-	\$36.29	\$36.29	\$-	\$-	\$-	\$-	\$-	\$-
6	Cost of a credit check conducted internally	\$17.19	\$17.19	\$-	\$-	\$17.19	\$17.19	\$-	\$-	\$-	\$-	\$-	\$-
7	Annual cost for cashing a payment	\$1.59	\$1.59	\$1.59	\$1.59	\$1.59	\$1.59	\$1.59	\$1.59	\$-	\$-	\$-	\$-
8	Cost of processing a standard customer call	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
9	Cost of Bad Debts	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
10	Collection and recovery costs	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
11	Customer retention costs - Major accounts	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
12	Customer retention costs - Major industries	\$1197.16	\$1197.16	\$1197.16	\$1197.16					\$1197.16	\$1197.16	\$1197.16	\$1197.16
	Preventive maintenance												

²⁴ GAZ MÉTRO, R-3867-2013, Phase 3, Subject A, Exhibit B-0145, Gaz Métro 6, Document 2, Table 4, page 11.

L n	Description	Gaz Metro As Proposed				Black & Veatch Revised				Écarts Gaz Métro \$- B&V			
		Major Industries Year 1 Year				Major Industries Year 1 Year				Major Industries Year 1 Year			
		2 and +		2 and +		2 and +		2 and +		2 and +		2 and +	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
13	- Service line Corrective maintenance	\$12.88	\$12.88	\$12.88	\$12.88	\$-	\$-	\$-	\$12.88	\$12.88	\$12.88	\$-	\$-
14	- Service line Processing of CRP	\$17.99	\$17.99	\$17.99	\$17.99	\$-	\$-	\$-	\$17.99	\$17.99	\$17.99	\$-	\$-
15	application Preventive maintenance	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
16	- Mains ²⁵ Corrective maintenance	0.22	/m			Unspecified		Unspecified		Unspecified		Unspecified	
17	- Mains Meters inspection and maintenance costs	0.37	/m			Unspecified		Unspecified		Unspecified		Unspecified	
18	Type of meters												
19													
20	Turbine Spin test for turbine (less than 12 in)	\$-	\$31.68	\$-	\$31.68	\$-	\$31.68	\$-	\$31.68	\$-	\$-	\$-	\$-
21	Telemetry Corrective instruments	\$-	\$79.20	\$-	\$79.20	\$-	\$79.20	\$-	\$79.20	\$-	\$-	\$-	\$-
22	Spin test for turbine (12 in and more)	\$-	\$118.79	\$-	\$118.79	\$-	\$118.79	\$-	\$118.79	\$-	\$-	\$-	\$-
23	Cost of a cellular line - telemetry	\$-	\$87.11	\$-	\$87.11	\$-	\$87.11	\$-	\$87.11	\$-	\$-	\$-	\$-
24		\$-	\$237.59	\$-	\$237.59	\$-	\$237.59	\$-	\$237.59	\$-	\$-	\$-	\$-
25		\$-	\$186.12	\$-	\$186.12	\$-	\$186.12	\$-	\$186.12	\$-	\$-	\$-	\$-
26	Total	\$1625.44	\$1969.95	\$1561.47	\$1905.98	\$390.70	\$735.21	\$326.73	\$702.11	\$1234.74	\$1234.74	\$1234.74	\$1203.87

Once again, a reading of this table reveals major discrepancies between the marginal costs per Major Industries customer initially proposed by Gas Métro and that of Black & Veatch. For the first year of a customer's addition, Black & Veatch reduces by three fourths the minimum marginal cost to be considered! For subsequent years, it suggests considering as a minimum no more than 20% of the cost initially proposed by Gaz Métro!

These major discrepancies stem in part from their radically different methodological approaches to allocating long-term costs, discussed in chapter 2 of this report. Moreover, Black & Veatch underestimates some costs even though these had been established by Gaz Métro following a systematic consultation of its personnel, as seen in chapter 3 of this report. Consequently, Black & Veatch does not take the following costs into consideration in its proposed marginal cost:

²⁵ For lines 16 and 17 on the cost of preventive and corrective maintenance of the main lines, see: **GAZ MÉTRO**, R-3867-2013, Phase 3, Subject A, Exhibit B-0144, Gaz Métro-17, Document 4, Schedule 1, page 1. **GAZ MÉTRO**, R-3867-2013, Phase 3, Subject A, Exhibit B-0145 Gaz Métro 6, Document 2, report of Black & Veatch, page 8.

- Line 4 on the cost of reading a meter;
- Line 12 on the customer retention cost;
- Line 10 on the bad debt cost;
- Lines 13 and 14 on the cost of the preventive and corrective maintenance of distribution lines for the first year and the minimum value for other years.
- The application of a minimum that would be used for lines 16-17 regarding the costs of preventive and corrective maintenance of the main lines.

We believe that Gaz Métro's initial proposal better reflects the long-term marginal costs than that of its consultant, and we recommend that the Régie establish, for the residential sector, those marginal costs that were initially elaborated by Gaz Métro, subject to our recommendation 2-2 above, and this in the same manner for all consumption sectors in chapter 3 of this report.

We are also astonished that neither Gaz Métro nor its consultant took bad debts and recovery costs into consideration for major industries (lines 9 and 10). And yet, Hydro-Québec Distribution takes these costs into consideration in R-3708-2009.²⁶

Recommendation No. 2-5:

We recommend that the Régie de l'énergie establish, for the Major Industries sector, the long-term marginal costs of adding a customer basing itself on Gaz Métro's initial proposal, subject to our recommendation 2-2 above, in the same manner as it is applied to all consumption sectors in chapter 3 of this report.

We recommend that the Régie de l'énergie not establish these costs based on the report prepared by the consultant Black & Veatch, which underestimates the marginal costs, as appears at greater length in chapter 6 of this report, notably the methodological reasons elaborated in chapter 2 of this report.

Moreover, we recommend adding bad debts and recovery costs (lines 9 and 10) to the major costs of Major Industries customers.

²⁶ HYDRO-QUÉBEC DISTRIBUTION, R-3708-2009, Exhibit B-1, HQD-1, Document 1, page 12, lines 23 to 25.

7

CONCLUSION

We therefore invite the Régie de l'énergie to accept the recommendations that are expressed in this report, which can also be found in its executive summary.
