

**RÉGIE DE L'ÉNERGIE'S (THE RÉGIE) REQUEST FOR INFORMATION NO. 9 RELATING TO THE APPLICATION  
CONCERNING THE ALLOCATION OF COSTS AND RATE STRUCTURE  
METHODOLOGY FOR EVALUATING PROFITABILITY OF SYSTEM EXTENSION PROJECTS**

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**The application**

1. **Reference Information:** (i) Exhibit [B-0178](#), p. 3;  
(ii) Exhibit [B-0178](#), p. 5;  
(iii) Exhibit [B-0178](#), p. 14 and 15;  
(iv) Exhibit [B-0220](#), p. 12.

**Preamble:**

- (i) *“Gaz Métro therefore has a methodology for evaluating the profitability of system extension projects (the “methodology”).”*
- (ii) *“Gaz Métro therefore presents a profitability criterion that is, a priori, lower than the PCC, known as the acceptable minimum threshold. This acceptable minimum threshold establishes the minimum profitability required for extension projects where the elements known at the time of their evaluation, such as the number of customers and volumes associated with the projects, fall short of the PCC but whose anticipated densification would push these projects to an overall level of profitability greater than or equal to the PCC.”*
- (iii) *“More specifically, Gaz Métro set a profitability objective for the different markets. Consequently, the combination of densification sales and extension projects must achieve the profitability objective that was set. Obviously, extension projects include projects whose profitability exceeds the PCC, projects with a profitability somewhere between the acceptable minimum threshold and the PCC, as well as exceptional cases (industrial parks and road repaving activities). All of Gaz Métro's different markets are profitable and generate tariff reductions for the customers. The acceptance of extension projects with an anticipated densification will have a downward impact on the profitability of the different short-term markets, but will allow to generate more important rate reductions for long-term customers, while giving more customer access to natural gas.”*
- (iv) *“The changes will generate a reduction in customer contributions. Gaz Métro does not require customers to make contributions for AMT extension projects, seeing as the potential for the future densification of authorized extension projects should allow the PCC to be achieved. However, Gaz Métro continues to require customer contributions for extension projects deemed to be unprofitable.”*

**Requests:**

- 1.1 Please indicate if the “methodology” referred to in reference (i) essentially consists of proposing a profitability criterion that is *a priori* lower than the PCC, known as the acceptable minimum threshold (AMT), described in reference (ii).
- 1.2 Please indicate to which category of project value at less than \$1.5 million the proposed AMT criterion would apply:
  - Each of the projects individually;
  - The portfolio of projects per market category such as, residential, business and large corporations;
  - The global portfolio of all of the projects;
  - Other. Please elaborate.
- 1.3 Please present the different profitability objectives that were set for the residential, business and large corporation markets referred to in reference (iii).
- 1.4 Please indicate how these different profitability objectives interact (reference (iii)) with the AMT and the PCC.
- 1.5 Please elaborate on the advisability of setting an AMT per market.
- 1.6 Please elaborate on the advisability of setting an AMT per project.
- 1.7 Inasmuch as the AMT would be targeted for part of the development plan projects, please indicate which proportion of the global portfolio of the development plan, in number of projects and in dollars, could be made up of projects attaining the AMT. In such a context, please comment on the advisability of setting an AMT for the global profitability of the development plan.
- 1.8 Please indicate if the proposed AMT criterion would also apply to projects greater than \$1.5 million.
- 1.9 Please indicate if Gaz Métro proposes that the densification expectation be taken into account for targeting the AMT or if such an expectation is instead taken into account from the AMT to reach a profitability equal to or greater than the PCC.
- 1.10 Please indicate if, according to the actual method, Gaz Métro requires a contribution for all of the extension projects deemed not profitable on the basis of the difference between the PCC and the *a priori* profitability.
- 1.11 Where the anticipated profitability is lower than the PCC, please indicate if according to the proposed method, Gaz Métro will require a contribution for all of the extension projects deemed not profitable on the basis of the difference between the PCC and the anticipated profitability.

- 1.12 Please explain how the profitability objective of development plans is currently determined. On the basis of the new methodology, would the profitability objective of future development plans be modified? If yes, please elaborate on the profitability objective that would be targeted.
- 1.13 Taking into account all of the responses to the preceding sub-questions, please add details to the application of the Distributor relating to the proposed *methodology*.

### **The profitability calculation model**

2. **Reference Information:** (i) Exhibit [B-0220](#), p. 3 and 4;  
(ii) Exhibit [B-0019](#), R-3991-2016 p. 1 to 3 / Excel File  
Exhibit [B-0020](#), R-3991-2016, Schedule 1, Tab DaQ  
model.

#### **Preamble:**

(i) *“The model for evaluating the profitability of system extension projects is not in an Excel file, but was generated by a software that calculates project profitability used by Gaz Métro to analyze all of its system extension projects. The software is an internal tool that was developed by the business. That is why, in order to respond to the Régie’s request, Gaz Métro refers to the Excel file that allowed it to evaluate the profitability of the system extension project in Drummondville, which was filed in the context of responses to the Régie’s requests for information. That file reproduces the calculations that are performed by the internal software, and presents the inputs that were used to calculate the profitability of all system extension projects.”*

- (ii) Profitability model of the Drummondville system extension project.

#### **Requests:**

- 2.1 Please explain how the book depreciation of the service lines and connections evaluated respectively over 44.4 years and 21 years was determined (reference (ii)). Please indicate if these values correspond to those used in the calculation of the depreciation of the revenue required. Please elaborate your response.
- 2.2 Please indicate if the depreciation period for the meters is the same as the depreciation period for the connections. If it is different, please explain why the depreciation rate of the meters is the same as that of the connections (reference (ii)).
- 2.3 Please provide a list of assets having a depreciation period that is less than the project lifespan.
- 2.4 For assets having a depreciation period that is less than the project lifespan, please indicate if reinvestments are provided in the model at the end of the depreciation term of those assets. As an example, if a meter has a 5-year depreciation period, please indicate if

- the model provides for meter reinvestment expenses every 5 years. Please explain your answer.
- 2.5 If no reinvestment is provided for in the preceding sub-question, please indicate if it would be advisable for the model to take such reinvestments into account.
- 2.6 Please indicate how payments made to customer contemplated by the project under the PRC/CRP, PRRC/CRRP, PGEE/GEEP and CASEP/AASPES programs are taken into consideration in the model (references (i) and (ii)). Please explain, as the case may be, why such payments were not taken into account in the calculation of the profitability of the project.
- 2.7 For projects contemplating several customers, please indicate how the unit rates of the distribution revenues are calculated. Please specify, among other things, if they are evaluated with the average rate or instead based on projected unit rates for each of these customers. Please explain your answer.
- 2.8 For each of the supply, transmission and balancing services, please indicate if the marginal costs associated with a project can be different from the average cost of the Distributor's supply portfolio. Please explain your answer.
- 2.9 Please indicate if the supply, transmission and balancing marginal costs are taken into consideration in the model. If not, please explain why.
- 2.10 Please comment on the advisability of taking into consideration the supply, transmission and balancing components in the profitability analysis.
- 2.11 Please indicate if the model used (references (i) and (ii)) as well as the assumptions made for a systems extension are the same as those for the addition of a load.
- 2.12 Please explain how the model (references (i) and (ii)) applies to projects valued at less than \$1.5 million. Is the model applied to each of these projects or does the Distributor use groups of projects instead? Please elaborate your response.
- 2.13 Please comment on the advisability of writing an explanatory guide on the evaluation methodology of the profitability of system extension projects and the assumptions applied to the model, which guide to be updated following changes.
3. **Reference Information:** Exhibit [B-0178](#), p. 3.

**Preamble:**

*“In the context of its development plan, Gaz Métro presents its sales to the Régie de l'énergie (the “Régie”) for “new customers” and “load additions”, separately, for the residential, commercial and large corporation markets.*

*Some of these sales require that the system be expanded (extension project), while others allow for the densification of the existing distribution system (densification sales)."*

**Request:**

- 3.1 Please explain the difference between a densification sale and a load addition. Please specify how they are taken into account in the anticipated profitability evaluation.
4. **Reference Information:** (i) Exhibit [B-0018](#), R-3941-2015, p. 6 et 7;  
(ii) Exhibit [B-0018](#), R-3941-2015, p. 5;  
(iii) Exhibit [B-0015](#), R-3825-2012, p. 7 et 8.

**Preamble:**

- (i) *"1.7 Please detail the various steps of the front-end engineering and the detailed engineering [...]."*

**Response:**

*The front-end engineering consist of making a visual examination of the premises where the service line could be installed and to identify the summary design parameters, such as the type of line, the operating pressure, the depth of cover of the line and any required accessory installations. A research in the archives of immovable plans or transactions may also be made to collect information on the nature of the soil and the prior uses of the immovable. This may give indications on the orientation of the environmental study and soil characterization to be prepared in the detailed engineering.*

*The detailed engineering lists all the installation conditions of the service line for purposes of elaborating the final concept. At this stage, Gaz Métro incurs expenses with external firms or contractors for the following activities:*

- *environmental study;*
- *soil characterization;*
- *location of foreign lines;*
- *survey report; and*
- *search of locations for the acquisition of land, servitudes and work areas.*  
[emphasis added]

*In addition, Gaz Métro will make inquiries with managers of public right-of-ways and authorities issuing permits to agree upon a specific location for the line and be apprised of any particular requirements to be taken into account in the elaboration of the project. A reconciliation of all the data allows for the preparation of drawings and specifications for invitations to tender and the implementation of the works."*[Emphasis added]

(ii) “1.5 Please indicate if a Monte-Carlo analysis with the @RISK software or another similar tool was prepared during the estimation phase of the project [...]. In such a case, please provide the results as well as the precision range obtained.

**Response:**

*A Monte-Carlo analysis was prepared [...] The estimation of the cost [...] was equal to \$3.8 million before the application of the contingency. The report of the Monte-Carlo analysis indicates a project cost of \$4.3 million with a probability of no cost overruns equal to 85%.” [Emphasis added]*

(iii) “3.2 Please explain how this contingency has been determined, is there a general rule, or is it established case-by-case?

**Response:**

*The contingency does not result from the application of a percentage on the total costs of the project. It is determined case-by-case. Not only can it differ from one project to the other, it can also differ from one activity to another within a same project.*

*Each activity of a project (excavation, installation, etc.) is analyzed individually in order to estimate its degree of contingency. To do so, an evaluation of an optimistic scenario and a pessimistic scenario is prepared for each of the activities according to the degree of knowledge acquired by Gaz Métro, at that time, of the components of the project and according to the experience acquired on similar projects realized in the past. As an example, the excavation cost of a trench for a line installed at the bottom of a ditch may vary considerably according to the presence or absence of rocks or boulders. [Emphasis added]*

*After having established an optimistic scenario and a pessimistic scenario for each of the activities included in the project cost estimate, Gaz Métro evaluates the probability that each of these scenarios will occur in order to determine the amount of contingency to apply to a project.”*

**Requests:**

- 4.1 Please explain if Gaz Métro classifies the system extension projects greater than or less than \$1.5 million according to the level of precision of the cost estimate and/or according to the advancement of the engineering study. If so, please present and explain this classification. If not, please propose a classification of the projects that allows the evaluation of the uncertainty associated with the cost estimate or the risk of cost overruns.
- 4.2 Please specify if a risk analysis of a Monte-Carlo type (reference (ii)) or other is systematically prepared for all the system extension projects. If that is not the case, please indicate for which projects such an analysis is undertaken and why. Please explain if the

contingency of the project to which Gaz Métro referred (reference (iii)) is obtained from such a risk analysis.

- 4.3 Please explain how Gaz Métro determines the contingency for system extension projects valued at less than \$1.5 million.
- 4.4 Please explain if there is a correlation between the global contingency of a system extension project (reference (iii)) and the precision range of the cost estimate (in percentage) and between the contingency and the probability of cost overruns. If so, please present this correlation. If not, please comment on the advisability of establishing a calculation rule for the contingency relating to the precision range of cost estimates.
5. **Reference Information:** (i) Exhibit [B-0018](#), R-3941-2015, p. 4;  
(ii) Exhibit [B-0129](#), R-3831-2012, p. 18;  
(iii) Exhibit [B-0092](#), R-3871-2013, p. 3.

**Preamble:**

(i) *“1.1 Please specify what research was done relating to the presence of underground infrastructures. Please also specify the information that allowed Gaz Métro to assume that the difficulty level was similar to that of extension projects currently being prepared on the Island of Montreal [...].”*

**Response:**

*The research relating to the presence of underground infrastructures consisted of visual inspections on Broadway Street made by Gaz Métro's project technicians. These inspections allowed to reveal the location of the valves, sewers, manholes and other infrastructures. [...] This research gave similar results to that of other research being done in Montreal and did not allow to assume that the level of difficulty would be greater than that of other extension projects currently being realized on the Island of Montreal.” [Emphasis added]*

(ii) “(2) Increase of contractor costs by \$4,983.9 K.

- *The difference between the costs of the contractor's tender (including its overhead costs) and the cost estimate is equal to \$3,390 K. [...] The amount of the estimate was based on historical costs for similar projects realized in the past, but of a smaller size.*  
[...]

*Indeed, the instability of the soil and the high level of the groundwater required deeper and larger trenches than anticipated for the installation of the system line.*

- *A supplementary cost of \$332 K for rock crushing resulted from a bigger quantity of rock than expected as well as the hardness of the rock.” [Emphasis added]*

(iii) *“The projection of the final cost of the project indicates cost overruns of \$1,423 million compared to the initial budget. The study of an alternative route resulted in the displacement of*

the line which also resulted in an additional 5.4 km to the original route. [...] Indeed, the nature of the soil where the segment of line that avoids the eroding shoreline is being installed contains significant differences from the initial route [...]. [Emphasis added]

**Requests:**

5.1 Considering the situations shown in references (i) to (iii) for system extension projects that are greater than \$1.5 million, please explain, when Gaz Métro presents authorization requests for these types of project before the Régie, what stage the following evaluations have reached:

- engineering;
- the range of uncertainty of the cost estimate (percentage);
- the level of contingency.

5.2 For a system extension project that is valued at less than \$1.5 million, when Gaz Métro decides to proceed, please explain what stage the following evaluations have reached:

- engineering;
- the range of uncertainty of the cost estimate (percentage);
- the level of contingency.

Please consider, in your response, the projects that represent a window of opportunity for the Distributor (industrial parks and repaving activities).

5.3 Please comment on the advisability of presenting, during authorization applications for projects greater than \$1.5 million:

- the engineering analysis stage;
- the range of uncertainty of the cost estimate (percentage);
- the justification of the advisability of realizing a project representing a cost overrun risk greater than 15%.

Where Gaz Métro opposes such a practice, please justify.

5.4 Please elaborate on the financial follow-up process applied to system extension projects (greater than or less than \$1.5 million). Please explain, *inter alia*, the frequency and the duration of the follow-ups as well as the financial parameters being revised.

5.5 Considering your response to the preceding sub-question, please specify how Gas Métro treats cost overruns for projects valued at less than \$1.5 million.



6. **Reference Information:** (i) Exhibit [B-0011](#) R-3931-2015, p. 14;  
 (ii) Exhibit [B-0005](#), R-3767-2011, p. 18.

**Preamble:**

(i)

Costs	Effect of rate 5 years	Effect of rate 10 years	Effect of rate 20 years	Effect of rate 40 years
100%	401,253	682,185	1,017,726	1,237,524
+10%	441,166	750,031	1,118,914	1,360,500
-10%	361,339	614,339	916,539	1,114,549

(ii)

Sensitivity	IRR (%)	BER*	Effect of rate 5 years	Effect of rate 10 Years	Effect of rate 20 years	Effect of rate 40 years
<b>Volumes</b>						
80%	6.32%	29.33	672,758	870,995	457,496	450,658
100%**	8.37%	5.11	6,001	(326,755)	(1,409,349)	(2,861,766)
120%	10.31%	1	(660,775)	(1,524,505)	(3,276,194)	(5,272,873)
<b>Costs</b>						
-10%	13.37%,5.80	1	(1,063,307)	[2,112,565]	(3,988,097)	(5,876,052)
+10%	%	0	1,075,310	1,459,055	1,169,400	152,521
<b>Costs</b> <b>+10%</b> <b>Volumes</b> <b>-20%</b>	4.12%	0	1,742,067	2,656,805	3,036,245	2,563,628

\*= Break-even rate

\*\*= Base case filed for project approval.

**Requests:**

- 6.1 Considering the range of uncertainty in the estimation of project costs, please elaborate on the relevance and use of presenting, for project greater than \$1.5 million, a sensitivity analysis of the effect on rates of a 10% variation of costs (reference (i)) without elaborating on the risks associated to cost overruns. Please comment on the advisability of putting in place a sensitivity analysis allowing to take into account the risk associated with costs estimates.
- 6.2 Please explain in which cases the sensitivity analyses for projects greater than \$1.5 million include an analysis of the variation of volumes (m<sup>3</sup>) (reference (ii)).
- 6.3 Please explain if a sensitivity analysis is being prepared by Gaz Métro for an approval of projects valued at less than \$1.5 million. If so, please explain what it consists of and elaborate on the manner in which Gaz Métro uses the conclusions resulting from such an exercise.
7. **Reference Information:** (i) Exhibit [B-0023](#), R-3958-2015, p. 2 and 3.

**Preamble:**

*"[...] In the same file (B-0132, Gaz Métro-52, Document 3, page 9), Gaz Métro explained that as the importance of an investment project increases, the linear correlation between dollars invested and capitalized overhead rates decreases. Gaz Métro has therefore established limits*

reflecting this principle. Therefore, from the overhead rate calculated annually, Gaz Métro deducts 2% to that base rate for each \$5 million of investment.

In the 2016 Rate Case (R-3879-2014, B-0465, Gaz Métro-107, Document 10), following Decision D-2014-165, Gaz Métro presented a detailed justification of the application of a 2% decrease of the overhead rate for each supplemental \$5 million of investment.

The following limits were applied for investment projects filed in 2015 up to the final decision on the 2015 and 2016 Rate Cases (D-2015-214).” [emphasis added]

Investments	Applicable overhead rates
\$0 M - \$5 M	14.75%
\$5 M - \$10 M	12.75%
\$10 M - \$15 M	10.75%
\$15 M - \$20 M	8.75%
\$20 M - \$25 M	6.75%
\$25 M - \$30 M	4.75%
\$30 M or more	2.75%

#### Requests:

- 7.1 Please indicate if the current methodology applied for determining overhead costs of system extension projects (greater than \$1.5 million) continues to be the methodology presented in reference (i). If this is not the case, please explain the methodology being applied.
- 7.2 Please confirm if the overhead costs of projects valued at less than \$1.5 million are calculated from a linear correlation (reference (i)). If so, please present this correlation. If that is not the case, please explain.
8. **Reference Information:** (i) Exhibit [B-0076](#) R-3992-2016, p. 3;  
(ii) Exhibit [B-0075](#), R-3992-2016, p. 1, footnote 2.

#### Preamble:

(i) **“1.2. ABANDONMENT COSTS**

*The abandonment costs included in the a posteriori analysis of the 2013 development plan totaled \$51,436 on a posteriori capital investments of \$40.3 million, representing 0.13%.”*

(ii) *“Capital assets and total investments for the 2016 Rate Case include \$1,167,500 relating to the system reinforcement envelope.”*

#### Requests:

- 8.1 Please explain what consists of abandonment costs in the development plan and how Gaz Métro evaluates these costs (reference (i)).

- 8.2 Please explain how these abandonment costs are taken into account in the methodology.
- 8.3 Please explain what constitutes the system reinforcement costs for which Gaz Métro sets aside a budgetary envelope in its development plan (reference (ii)). Please explain if this reinforcement is related to “densification sales” to which Gaz Métro refers to in this file (reference (ii)).
- 8.4 Please explain how these reinforcement costs are taken into consideration in the methodology.
- 8.5 Please specify if the analysis for establishing the AMT includes abandonment costs and system reinforcement costs (references (i) and (ii)).

## Assessment of development plans and determination of AMT

9. **Reference Information:** (i) Decision D-2006-156, p. 93;  
(ii) Exhibit [B-0178](#), p. 8;  
(iii) Exhibit [B-0178](#), p. 6 and 7;  
(iv) File R-3992-2016, exhibit [B-0076](#), Schedule 3 p.1 and Schedule 6, p. 1;  
(v) Exhibit [B-0178](#), p. 7;

### Preamble:

- (i) **“APPROVE** a prospective capital cost of 5.28% for the 2016-2017 rate year.”
- (ii) *“Based on the findings of the a posteriori profitability analysis, Gaz Métro established the acceptable minimum threshold at 2% of the IRR for extension projects associated with an investment level of less than \$1.5 million. The analysis reveals an average IRR increase of 4.48%, which should continue to grow over time. In its analysis, by establishing an acceptable minimum threshold of 2%, Gaz Métro demonstrates that even after a few years, the average IRR increase would be sufficient to achieve or even surpass the PCC. »*
- (iii) *“[...] Some working hypotheses were amended, however, as explained below:*
1. *The actual earnings invoiced in accordance with the rate schedule in force between 2009 and 2016 were taken into consideration. Moreover, in decision D-2012-071, the Régie ordered Gaz Métro to calculate the a posteriori internal rate of return (IRR) using the actual earnings invoiced;*
  2. *All densification sales associated with the initial extension project were included in the a posteriori findings, and this independently of the fiscal year of the development plan to which the sale is associated.”*
- (iv) Schedule 3 – Comparison of the residential development plan – new customers and load additions for 2013 *a priori* versus 2013 *a posteriori*.
- Schedule 6 – Comparison of the business development plan – new customers and load additions 2013 *a priori* versus 2013 *a posteriori*.
- (v) Table 1 – Results of analysis

### Requests:

- 9.1 According to reference (i), the authorized prospective capital cost is presently 5.28% and in reference (ii), Gaz Métro established an acceptable minimum threshold of 2%. Given that the PCC varies each year and that consequently, the difference between the PCC and the AMT will not be constant, please comment on the advisability of maintaining constant the difference between these two rates. Please explain and justify, as the case

may be, why a decrease or an increase of the PCC would not be accompanied by an automatic downward or upward adjustment of the AMT.

- 9.2 From the attachments to the 2012 to 2016 annual reports presenting the *a posteriori* IRR of the 2009 to 2013 development plans, please present in a table, for each of the 5 years, indicating the references, the difference between the *a posteriori* IRR and the *a priori* IRR as well as the *a priori* and *a posteriori* volumes, for both the residential market and the business market. Please present your answer for new customers, load additions and the total, showing the initial rate schedule and the actual rates.
- 9.3 Through this question, the Régie wishes to obtain a complete assessment of the development projects representing less than \$1.5 million shown through the *a posteriori* IRR and the *a priori* IRR filed in the context of the 2012-2016 annual reports. It also wishes to understand the methodology applied by Gaz Métro to obtain the results presented in reference (v).

For each of the 2009-2013 development plans, please present the tables “new customers and load additions” under the same format and with the same information as in reference (iv), for the residential market and the business market according to the initial rate schedule and according to the actual rates for the following situations:

- (a) For all projects, with or without contribution, by using work hypothesis no. 2 in reference (iii). Please present the detail of the calculation of the application of the hypothesis and specify your references.
  - (b) For projects for which a contribution was required, but without using the work hypotheses in reference (iii). Please specify your references.
  - (c) For projects for which a contribution was required using work hypothesis no. 2 in reference (iii). Please present the detail of the calculation of the application of the hypothesis and specify your references.
- 9.4 Please confirm if the sales for the 2012 to 2017 development plans were taken into consideration in the analysis establishing the results in reference (v). If so, please specify.
- 9.5 Please indicate if the densification sales considered in the analysis establishing the results in reference (v) are actual or projected sales, a mix of both, or other types of sales. In all instances, please explain.
- 9.6 Please explain, with precise examples, the incidence of the hypothesis that included all densification sales relating to the initial extension project in the *a posteriori* results independently of the financial year of the development plan to which the sales refer (reference (iii)).

- 9.7 From the responses to sub-questions 9.3 (b) and (c), please itemize the volume differences, for each of the 5 years (2009 to 2013), including, per market, indicating to which development plans the densification sales apply. Please present the itemization of these volumes between the customers who paid a contribution and those relating to the same project who did not pay a contribution.
10. **Reference Information:** (i) Exhibit [B-0178](#), p. 6.

**Preamble:**

*“Gaz Métro conducted an a posteriori profitability analysis to establish the acceptable minimum threshold. To do this, Gaz Métro targeted development plans of the business market for fiscal years 2009, 2010 and 2011. More specifically, Gaz Métro selected all extension projects valued under \$1.5 million for which a contribution was required a priori in order to achieve the anticipated profitability. These extension projects were selected seeing as, without a customer contribution, they never would have been profitable at the time they were accepted. Consequently, the projects selected in the analysis are similar to the extension projects contemplated in the evidence of this Application.”*

**Request:**

- 10.1 Please explain why the analysis was applied only to the business sector.

**Assessment of development plans**

11. **Reference:** Follow-up of projects greater than \$1.5 million presented in the annual reports.

**Requests:**

- 11.1 With the assistance of the follow-ups filed in the annual reports, please prepare an assessment for the system extension projects greater than \$1.5 million between 2009 and 2016 including, *inter alia*:
- volumes (m<sup>3</sup>);
  - CRP grants;
  - customer contributions;
  - investments;
  - IRR;
  - break-even rate.

### Exceptions to the application of the acceptable minimum threshold

12. **Reference Information:** Exhibit B-0178, p. 8 and 9.

#### **Preamble:**

*“[...] In addition to the rules for applying the acceptable minimum threshold, Gaz Métro has identified two exceptions where a profitability level that does not meet the acceptable minimum threshold would be accepted for an extension project. There are two specific contexts that afford a window of opportunity that should be taken advantage of: the development of an industrial park and the repaving of a road. These two types of infrastructure work can be carried out in tandem with extension project work, such that both can progress while disturbing and interfering as little as possible with the infrastructure already in place. This coordination can also yield cost savings that will benefit all customers. Indeed, a number of elements (such as sawing activities and the removal and replacement of asphalt) allow Gaz Métro to generate savings by taking advantage of this optimal window of opportunity.*

*Furthermore, some factors (such as the refusal of a number of municipalities to proceed with interventions in recently paved surfaces) adversely affect the potential for development and optimization of the gas system and customer base due to a missed window of opportunity. Indeed, it is difficult to reach customers who are established along recently paved surfaces, and they will probably turn instead to a less economical and potentially more polluting energy solution. Coordinating the installation of the system in a sector with densification prospects when the municipality engages in repaving activities, for example, will eventually allow to maximize the number of customers and revenues, to the benefit of all customers.” [emphasis added]*

#### **Requests:**

- 12.1 Please specify whether the exceptions to the application of an acceptable minimum threshold are part of a practice already in existence at Gaz Métro.
- 12.2 Considering that Gaz Métro can benefit from cost savings as well as the acceptance of several municipalities when it benefits from a window of opportunity resulting from development projects for an industrial park or the repaving of roads, please explain why the profitability of such a type of project would be less than the PCC and even, less than the AMT of 2%.
- 12.3 Please present a brief description of potential development projects in industrial parks and repaving of roads that have been identified or are expected.
- 12.4 Please explain the criteria on which Gaz Métro relies when taking the decision to proceed with system extension projects relating to industrial parks and the repaving of roads. Please explain, *inter alia*, whether there other triggering factors or minimum thresholds or acceptable criteria, for example, in terms of number of customers, volume, densification potential, IRR, etc.

### Governance Process

13. **Reference Information:** Exhibit B-0220, pp. 9 to 12.

**Preamble:**

*As presented in the section entitled “Internal Governance Process” of the evidence bearing on the methodology for evaluating the profitability of system extension projects, the first phase of the internal governance process is to evaluate the extension project’s potential for future densification. Gaz Métro has improved on the information presented in Exhibit B-0178. [emphasis added]*

**Requests:**

- 13.1 Please describe the current governance process.
- 13.2 Please explain the differences between the current governance process and the one proposed.
- 13.3 Please describe the current acceptance criteria.
- 13.4 Please explain the differences between the current acceptance criteria and those proposed.
14. **Reference Information:**
- (i) Exhibit B-0220, p. 9;
  - (ii) Exhibit B-0220, p. 10;
  - (ii) Exhibit B-0220, p. 11;
  - (ii) Exhibit B-0178, p. 11.

**Preamble:**

(i) *“Site visits can also be used to take a census of other potential customers that use an alternative energy source. Gaz Métro assesses the conversion possibilities presented by these potential customers and estimates a consumption that is based on the consumption calculation rules. This potential for conversion is also taken into consideration in the potential for future densification.” [emphasis added]*

(ii) *“The site visits, discussions with various players in regional development, the consultation of the developer’s location diagram and the land use and development plan for the territory help identify the vacant lots where potential customers might set up. For these vacant lots, Gaz Métro estimates consumption based on the municipal requirements which, in turn, rely on the percentage of square feet that are to be built using the rules in force. To be conservative, Gaz Métro only takes heating of the air into consideration, presumes that the building will have only one floor and includes only a proportion of the vacant lots when determining the potential for consumption. The potential of vacant lots is also included in the potential for future densification.”*



(iii) “When an extension project is more likely than not to achieve the PCC over time, a formal investment request is filled out and sent by the development advisor to the senior development advisor.”

(iv) “Once an extension project — including those with anticipated profitability — is authorized, the fifth phase begins (known as the operationalization of the densification phase). All information gathered in phase one regarding future potential development is therefore sent to the sales force responsible for the system's densification.”

**Requests:**

- 14.1 Regarding reference (i), please explain how these possibilities are considered in the future densification potential. Please elaborate, *inter alia*, on the proportion of the identified potential to be considered in a future densification potential.
- 14.2 Regarding reference (i), please file and explain the consumption calculation rules.
- 14.3 Regarding reference (ii), please explain the criteria allowing Gaz Métro to establish a list of vacant lots from the consultation of the developer's location diagram or the land use and development plan for the territory in order to identify the vacant lots where potential customers might set up.
- 14.4 Regarding reference (ii), and from the criteria establishing the list of vacant lots, please explain in detail the establishment of the proportion per type of customer of the vacant lots considered in the future densification potential.
- 14.5 Regarding reference (iii), please illustrate in detail, with numbered examples, the criteria allowing to determine when an extension project is more likely than not to achieve the PCC over time.
- 14.6 Regarding reference (iv), please explain how Gaz Métro would re-evaluate its governance process if it realized, after several years of application, that future densification is not producing the anticipated results.
- 14.7 Please elaborate on the type of *a posteriori* follow-up that could be made for each system extension project (with costs greater or less than \$1.5 million) for which the IRR is less than the PCC in order to evaluate the actual densification level compared to the anticipated level and the effects of such a densification on the IRR. Please comment on the advisability of presenting the results for all of the projects and the necessary explanations in the annual reports for 2018 and following.
- 14.8 Please comment on the advisability of filing a report on the evaluation of results as well as a complete re-evaluation of the governance process and the parameters of the methodology in the 2019-2020 rate file.

14.9 Please comment on the advisability of producing an explanatory and detailed document on the governance process.

15. **Reference Information:** (i) Exhibit B-0220, p. 7;  
(ii) Exhibit B-0178, p. 5.

**Preamble:**

(i) “[...] *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).*”

(ii) “*Indeed, [...], Gaz Métro explains that the extensions sometimes contain only limited short-term quantitative information, thus hampering the eventual assessment of profitability and, by that very fact, placing the entire file at risk of not being carried out.*”

(iii) “*Gaz Métro therefore presents a profitability criterion that is, a priori, lower than the PCC, known as the acceptable minimum threshold. This acceptable minimum threshold establishes the minimum profitability required for extension projects where the elements known at the time of their evaluation, such as the number of customers and volumes associated with the projects, fall short of the PCC but whose anticipated densification would push these projects to an overall level of profitability greater than or equal to the PCC.*” [emphasis added]

**Request:**

15.1 Considering that Gaz Métro does not have a long history of extension projects which, a priori, have a profitability lower than the PCC, please elaborate on the reliability of the data resulting from the application of the evaluation method of the profitability of projects with the potential for densification (references (i) and (ii)).

16. **Reference Information:** Exhibit [B-0178](#), pp. 9 to 11.

**Preamble:**

*“The first phase of the process consists of evaluating the extension project’s future densification potential.*

[...]

*[...] phase 2 of the process consists in conducting sensitivity analyses in order to evaluate how many customers in addition to those identified a priori will be needed to achieve a profitability rate equal to the PCC.*

*Phase three of the process is to reconcile the evaluation of the potential for future densification and the sensitivity analyses conducted in the second phase. When an extension project is more likely than not to achieve the PCC over time, a formal investment request is filled out and sent by*

*the development advisor to the senior development advisor. The file will include, more specifically, a summary of the analyses conducted, the revenue required for the project and the latter's profitability.*

*The fourth phase relates to the projects' authorization process. Once the investment request file is received by the senior development advisor, he or she will review the file to make sure that the profitability has been rigorously estimated based on the technical solutions retained, and that the relevant information allowing to gauge future expectations is present. The file is then sent for authorization to the Senior Executive, Sales.*

*Once an extension project — including those with anticipated profitability — is authorized, the fifth phase begins (known as the operationalization of the densification phase). All information gathered in phase one regarding future potential development is therefore sent to the sales force responsible for the system's densification. [...]" [emphasis added]*

**Requests:**

- 16.1 Please indicate commencing at which probability rate the extension project is considered to be able to achieve the PCC over time.
- 16.2 Please specify how the process regarding the technical definition of solutions relating to system extension projects is in keeping with the internal governance process presented in the third phase of reference (i).

**The Contributions**

17. **Reference Information:** Exhibit [B-0220](#), p. 12.

**Preamble:**

*“The changes will generate a reduction in customer contributions. Gaz Métro does not require customers to make contributions for AMT extension projects, seeing as the potential for the future densification of authorized extension projects should allow the PCC to be achieved. However, Gaz Métro continues to require customer contributions from customer for extension projects deemed to be unprofitable.”*

**Requests:**

- 17.1 Please indicate which rules are actually in place for determining the request for customer contributions. Please indicate if these rules apply to each of the customers or if particular situations may apply, as the case may be.
- 17.2 Please indicate if the Distributor has identified alternatives to a request for contributions to increase the profitability criteria of a project. If so, please elaborate on the advantages and inconveniences of these alternatives. If not, please indicate if Gaz Métro would consider a development tariff.

- 17.3 In the content of the request by the Distributor to take into account densification potential for projects whose IRR is less than the PCC, please indicate if the Distributor intends to maintain the \$300 contribution requested as connection charges for a D<sub>1</sub> rate customer consuming less than 10,950 m<sup>3</sup>/year.
- 17.4 Please indicate if a contribution can be required from a customer who benefits from one or several types of subsidies (CRP/PRC, CRRP/PRRC, AASPES/CASEP or GEEP/PGÉE). Please elaborate on these possible combinations and their impact on the calculation of the profitability criteria for the project.
- 17.5 Please comment on the advisability of describing more amply the rules regarding contribution requests in the text of the *Conditions of Service and Tariff*.
- 17.6 Please explain for which types of projects deemed not profitable, Gaz Métro would continue to require customer contributions. Please explain why these projects would require a contribution as opposed to AMT projects, in light of the fact that the profitability of both types of projects would be less than the PCC.

### **Risk Management**

18. **Reference Information:** Exhibit [B-0220](#), p. 12.

#### **Preamble:**

*“The changes will generate a reduction in customer contributions. Gaz Métro does not require customers to make contributions for AMT extension projects, seeing as the potential for the future densification of authorized extension projects should allow the PCC to be achieved. However, Gaz Métro continues to require customer contributions from customers for extension projects deemed to be unprofitable.”*

#### **Requests:**

- 18.1 Please indicate if the new evaluation methodology for the profitability of system extension projects reduces, increases or is neutral on the global risk of Gaz Métro. Please explain in detail your respond.
- 18.2 Please explain the rate impact of not reaching the PCC *a posteriori*, for projects that have a profitability equal to the AMT or for projects deemed “exceptions” to the application of the AMT.
- 18.3 Please present the possible gains and losses for Gaz Métro customers and for Gaz Métro partners resulting from the application of the new methodology for evaluating the profitability of system extension projects.
- 18.4 Where there is uncertainty as to the possibility of attaining the PCC for projects whose *a priori* profitability is equal to 2% and more, but less than the PCC, please comment on

the advisability of putting in place a rule for accessing subsidies and contribution requests in order to modulate the risk for all of the customers. For example, such modulations could be contemplated for:

- Customers that would not be admissible to the CRP/PRC and the AASPES/CASEP;
- Customers that would be admissible to the CRP/PRC and the AASPES/CASEP but would be required to pay a contribution on the basis of the PCC.

18.5 If there is a greater uncertainty of attaining the PCC for exceptions where no *a priori* profitability is required, please comment on the advisability of putting in place a rule for accessing subsidies and contribution requests in order to modulate the risk for all of the customers. For example, the contemplated customers would not be admissible to the CRP/PRC and the AASPES/CASEP.

18.6 Please indicate how Gaz Métro manages its cost overrun risks for investment projects with its subcontractors in order to minimize the risk for its customers. Please explain.

18.7 Has Gaz Métro compared its risk management practice with its subcontractors regarding cost overruns for investment projects with best practices in place. If so, please file the results of such a comparison. If not, please explain if Gaz Métro is considering doing so.

19. **Reference information:** File R-3825-2012, exhibit [B-0021](#), pp. 4 to 6.

**Preamble:**

*“Gaz Métro does not use tables to classify the level of risk of a project. However, all of the tools at its disposal by the text of the Conditions of Service and Tariffs are used to mitigate the risk that may result from a new connection agreement.”*

**Requests:**

19.1 In managing the risks of a connection agreement with new customers, please explain the changes to be made, as the case may be, to the customer risk evaluation process mentioned in the reference.

19.2 From the reference explaining risk management when entering into connection agreements with new customers, please comment on the advisability of putting in place tables to classify the risk level per customer that Gaz Métro could apply when requiring guarantees.

## Comparables

20. **Reference Information:** Exhibit [B-0178](#), p. 12.

### **Preamble:**

*“In Ontario, the Ontario Energy Board allows Union Gas Limited and Enbridge Gas Distribution to use a portfolio approach for extension projects in which projects with an IRR below the PCC can be accepted. With the help of a formula, the profitability index (P.I.) of each extension project may be evaluated. For individual projects, the profitability index must be greater than or equal to 0.8, which corresponds to an IRR of approximately 3.70%. Moreover, the portfolio of projects must achieve a profitability index greater than or equal to 1.1, which corresponds to an IRR of approximately 6.02%.”*

### **Request:**

20.1 Please explain your calculations that allow to establish the comparables mentioned between the profitability index and the IRR (0.8=3.7%; 1.1=6.02%).

21. **Reference Information:** Exhibit [B-0178](#), p. 13.

### **Preamble:**

#### “Creation of an extension fund

*In decision G-147-16 rendered on September 16, 2016, Fortis BC obtained approval for a pilot project to create a \$1 million extension fund designed to level the playing field between new residential customers in lower density areas and those in urban ones. In order to be eligible, new residential customers must present a profitability index lower than 0.8, but greater than 0.2.*

*Requesting customers wanting access to natural gas need to fill out the necessary forms and submit them to Fortis BC, which analyzes and selects the extension projects presenting the highest potential for customer connection.”*

### **Requests:**

21.1 Please comment on the advisability of putting in place an extension fund similar to that mentioned in the reference, with an allotment value of \$1 million or \$2 million and that would be accessible for projects where the AMT is lower than the PCC but greater than a certain minimum threshold to be defined.

21.2 Please comment on the advisability that such a fund have maximum allotment limits per customer and per project.

21.3 Please comment on the advisability of feeding such fund from the revenues generated by those projects having an *a posteriori* AMT greater than the PCC.

- 21.4 Please establish the comparables in terms of AMT of the profitability indices retained by Fortis BC indicated in the reference and please comment.