

**INFORMATION REQUEST NO. 3 FROM EXPERT PAUL L. CHERNICK ON THE
ADDITIONAL EVIDENCE OF GAZ MÉTRO**

RÉGIE DE L'ÉNERGIE, R-3867-2013, PHASE 3, SUBJECT B

**Gaz Métro Application Regarding the Allocation of Costs and the Rate
Structure of Gaz Métro, phase 3, part B
(Methodology for Evaluating the Profitability of System Extension Projects
– Additional Evidence of Gaz Métro)**

1. Source:

R-3867-2013, B-0278, Review of Methodologies for Evaluating the Profitability of System Extension Projects – Black and Veatch evidence, (Gaz Métro-7, Document 5), p. 2.

Preamble:

- “Acceptability criteria [is] IRR greater than the Prospective WACC.”

Questions:

- 1.1. Please explain why Gaz Métro intends to use the IRR test, rather than the net present value at the WACC or other discount rate.
- 1.2. Since customers will pay the net revenue requirements of the extension project, why does Gaz Métro propose to use the WACC rather than an estimate of the cost of capital to its customers?
 - a. Please provide any available estimate of the cost of capital for any of Gaz Métro’s rate classes.
 - b. Please provide and available estimate of the percentage of Gaz Métro residential customers who carry a credit-card balance.

2. Source:

R-3867-2013, B-0278, Review of Methodologies for Evaluating the Profitability of System Extension Projects – Black and Veatch evidence, (Gaz Métro-7, Document 5), p. 2.

Preamble:

- “[...] the cost of a distribution system project undertaken by a gas utility to replace a segment of its existing distribution mains or the cost to replace a gas service line or gas meter at a particular customer’s location would not constitute an incremental cost. It is simply the cost of maintaining the existing level of output and not an incremental cost to increase the utility’s output.”

- “Current costs should be used to determine the directly attributable, capital-related costs to connect a new customer (e.g., main extension, service line, meter and regulator)”

Questions:

- 2.1. Please explain in detail how Gaz Métro reflects the costs of maintenance capital expenditures for the “directly attributable” additions over the life of the analysis.

- 2.2. Please provide any available data on the retirements and replacements of each of the following by age of the installation:
 - a. Mains;

 - b. Service lines;

 - c. Meters;

 - d. Regulators.

3. Source:

R-3867-2013, B-0278, Review of Methodologies for Evaluating the Profitability of System Extension Projects – Black and Veatch evidence, (Gaz Métro-7, Document 5), pp. 3 and 34.

Preamble:

- “As long as the incremental revenues from a new customer to be served by the gas utility can recover, at a minimum, the directly attributable costs of the proposed new connection to the utility’s gas distribution system, any revenues above that minimum level will provide a positive contribution to the recovery of the gas utility’s fixed costs that are common to the specific activities and functions of the gas utility’s development efforts to add new customers and to continue to serve existing customers.”

Questions:

- 3.1.** Please explain how this statement applies if Gaz Métro needs to add upstream capacity during the analysis period to meet the combined load of this new customer, other new customers on the line extension, new customers on other line extensions, new customers along existing lines, and additional load from existing customers.
- 3.2.** If a new customer would require service-extension investment and expenses (including metering, billing, and the like) with a present value of \$1 million, provide GM with revenues of \$1.3 million and require a \$1 million upgrade in the upstream distribution system about five years after it comes on line, would that customer be profitable to Gaz Métro?

4. Source:

R-3867-2013, B-0278, Review of Methodologies for Evaluating the Profitability of System Extension Projects – Black and Veatch evidence, (Gaz Métro-7, Document 5), pp. 3 and 11.

Preamble:

- “Using LRIC costing concepts to establish *each* cost component in a gas utility’s economic evaluation of system extension projects could violate the “matching principle” of utility ratemaking (i.e., a utility’s revenues derived from rates must match its total cost of service or total revenue requirement approved by the regulator).”

Questions:

- 4.1.** Please define as precisely as possible what is meant by “LRIC” in this context.
- a.** Does “long-run” in this context mean the average expected incremental cost to the system due to this incremental load over the analysis period?
 - b.** Does “long-run” in this context mean the average cost of replacing the entire Gaz Métro system at current prices?
- 4.2.** Please explain whether this statement is intended to suggest that using LRIC concepts in the economic evaluation of system extension projects could result in Gaz Métro receiving revenues exceeding its revenue requirement.
- a.** If so, please explain how this could occur and provide numerical examples of this effect.

b. If not, please explain what this assertion means.

4.3. Please explain why the word “each” is italicized in this passage on page 3.

5. Source:

R-3867-2013, B-0278, Review of Methodologies for Evaluating the Profitability of System Extension Projects – Black and Veatch evidence, (Gaz Métro-7, Document 5), p. 11.

Preamble:

- “[C]aution must be exercised in order to prevent a mismatch between the embedded costs used to set rates for the utility’s existing customers (which are the same rates used to derive the revenues expected from new customers) and the LRIC used to derive the profitability of serving new customers, and the level of any customer contribution required of new customers.”

Questions:

5.1. Please define the “mismatch” and provide numerical examples of the problems that B&V anticipates could arise from this mismatch.

5.2. Please explain whether this statement implies that the Régie cannot require that Gaz Métro charge new customers more than it charges existing customers, since that would result in a “mismatch” between the costs used in setting charges for existing customers and the costs used in setting charges for new customers.

5.3. Please provide citations to any legal or other authority that B&V or Gaz Métro believe indicate that Gaz Métro cannot impose different charges on existing and new customers.

6. Source:

R-3867-2013, B-0278, Review of Methodologies for Evaluating the Profitability of System Extension Projects – Black and Veatch evidence, (Gaz Métro-7, Document 5), p. 3 and 34.

Preamble:

- “If LRIC is used as the cost basis in a gas utility’s economic evaluation of system extension projects, new customers could subsidize existing customers because the gas utility’s revenue requirement and current rates are based on historical, embedded costs while the costs in the profitability model would be based on LRIC – which could be higher than the level of embedded costs underlying the gas utility’s current rates.”

Questions:

- 6.1. Please explain how this subsidization would happen.
- 6.2. Please explain whether this subsidization would only occur if the incremental costs due to the system extension project were less than the upstream LRIC assumed in the economic evaluation.
 - a. If this subsidization would only occur in other situations, please describe those situations.
- 6.3. Please explain whether the incremental costs due to the system extension project could be higher than the average upstream LRIC assumed in the economic evaluation.
 - a. If so, would those circumstances result in existing customers subsidizing the new customers on the service extension?

7. Source:

R-3867-2013, B-0278, Review of Methodologies for Evaluating the Profitability of System Extension Projects – Black and Veatch evidence, (Gaz Métro-7, Document 5), p. 3 and 34.

Preamble:

- “Under this approach, the common fixed costs of providing utility service to a particular rate class are attributed to all customers within the class – not to any one customer.”

Questions:

- 7.1. Does this statement also apply to :
 - a. all the new customers on a service extension?

9. Source:

R-3867-2013, B-0278, Review of Methodologies for Evaluating the Profitability of System Extension Projects – Black and Veatch evidence, (Gaz Métro-7, Document 5), p. 3 and 34.

Preamble:

- (i) “The evaluation of the profitability of system extension projects to serve new customers provides the gas utility with the flexibility needed to add new customers to the gas distribution system who can recover through rates their direct incremental costs of connection (i.e., the main extension, service, meter and regulator) and to recognize that all new customers as a group contribute to the recovery of the gas utility’s common fixed costs as part of an overall project portfolio.”

Questions:

9.1. To the extent that a new customer, or a group of new customers, requires additional common fixed costs exceeding the average cost of service, does B&V believe that the existing customers should subsidize these new customers?

- a.** If so, please explain why.
- b.** If not, please explain how B&V and Gaz Métro would avoid that outcome.

10. Source:

R-3867-2013, B-0278, Review of Methodologies for Evaluating the Profitability of System Extension Projects – Black and Veatch evidence, (Gaz Métro-7, Document 5), p. 4, 35 and Table 3.

Preamble:

- “Black & Veatch recommends that Gaz Métro continue using its current valuation period of forty (40) years, which is the most common valuation period utilized by the Peer Group utilities and reflects the average life of the capital placed into service during a system extension project.”

Questions:

10.1. Please provide all the data, analysis and other sources on which B&V reviewed in making this recommendation, other than the Table 3 at p. 18 and 19.

- 10.2.** Please provide any evidence available to B&V regarding the probability that a customer will continue to take service from Gaz Métro at an existing location for 40 years.
- 10.3.** Please provide any evidence available to B&V regarding the likelihood of customers reducing their energy consumption or abandoning a location over the next 40 years.
- 10.4.** Please provide any analysis that B&V has conducted regarding the amount of natural gas that Québec can utilize and still meet its obligation under Canada's and Quebec's plans for greenhouse-gas reductions.

11. Source:

R-3867-2013, B-0278, Review of Methodologies for Evaluating the Profitability of System Extension Projects – Black and Veatch evidence, (Gaz Métro-7, Document 5), p. 4, 35 and 36.

Preamble:

- “Black & Veatch finds that the approach utilized by FortisBC, Union Gas Limited and Enbridge Gas Distribution is a reasonable and well-balanced approach. This method utilizes an individual project P.I. of 0.8 and a project portfolio P.I. of 1.1 as the appropriate profitability targets. Black & Veatch recommends that Gaz Métro adopt this type of approach.”
- “[...] adopt a P.I. of 0.8 for individual projects (if further growth is anticipated) [...]”

Questions:

- 11.1.** Please explain whether the 0.8 project P.I. “target” would mean that projects would only be required to provide an IRR equal to 80% of the WACC.
- a.** If not, what does that the 0.8 target mean?
 - b.** If the capital anticipated for a service extension were \$1 million, and the present value of the operating expenses were \$200,000, how much would the present value of revenues need to be for the project to pass the 0.8 P.I. threshold?

- (i) Please explain why it is fair for the existing customers, and profitable new customers, to pay for this unprofitable service extension.

11.2. Please explain how B&V found the 0.8 project P.I. to be appropriate.

11.3. Please provide B&V's estimate of the growth that should be anticipated "if further growth is anticipated."

- a. Please provide the basis for that estimate.
- b. Please explain how that growth rate justifies the 0.8 P.I. threshold.

11.4. Please explain how B&V expects that Gaz Métro would be able to determine whether further growth should be anticipated.

- a. How much further growth should be anticipated to invoke the 0.8 P.I. threshold?
- b. How would the determination of future growth reflect the costs associated with the future growth (service lines, meters, metering, billing and customer service, further main extension, etc.)?

12. Source:

R-3867-2013, B-0278, Review of Methodologies for Evaluating the Profitability of System Extension Projects – Black and Veatch evidence, (Gaz Métro-7, Document 5), p. 32, 34.

Preamble:

- p. 32 (B-0278): "**System Incremental Capital Investment** – includes the capital-related costs incurred to increase the capacity and operating flexibility of the gas distribution system caused by the addition of new customers (i.e., caused by development activities).

These common capital-related investment costs should be assigned to those customers who created the need for the investment. This type of incremental investment could be required to serve new customers, all future customers, and/or existing customers who require additional capacity depending on the purpose of the investment and the timeframe considered in conjunction with the utility's ongoing distribution system planning activities.

Those costs should also be considered for inclusion at the portfolio level when the profitability of all the development activities is evaluated.”

- p. 34 (B-0278): “[...] the utility’s fixed costs that are lumpy in nature and support gas service to both new and existing customers should not be attributed only to new customers in any one particular project, but should be attributed to all new customers on a project portfolio basis.”

Questions:

12.1. Are all System Incremental Capital Investments required equally for load growth on the Gaz Métro system, or are some System Incremental Capital Investments required for load growth on some parts of the system, but not other parts?

12.2. Please provide the System Incremental Capital Investment associated with each system extension and each annual portfolio over the last ten years.

- a. Identify the type, cost and timing of System Incremental Capital Investment assumed.
- b. To the extent possible, provide the derivation of the estimate of the cost of the System Incremental Capital Investment.

12.3. Please explain why the inclusion of the System Incremental Capital Investment only at the portfolio level would be efficient and equitable.

- a. If the portfolio exceeds the target return, would B&V and Gaz Métro propose that existing customers subsidize the new customers who require the System Incremental Capital Investment?
 - (i) If so, please explain why that is equitable.
 - (ii) If so, please explain whether that would be the position of Gaz Métro and B&V, even if the service extension(s) that require the System Incremental Capital Investment would fail the economic test if the cost of the System Incremental Capital Investment were included in the analysis.
- b. How would the costs of the System Incremental Capital Investment be allocated among the new customers on the service extensions in the portfolio?

- (i) If the System Incremental Capital Investment results in the portfolio missing its profitability target, how would Gaz Métro decide which customers must contribute more to finance the service extensions?

12.4. Please explain why B&V believes that new customers whose location does not contribute to the need for a System Incremental Capital Investment should be attributed to those customers as part of the “portfolio” of service extensions.

13. Source:

R-3867-2013, B-0278, Review of Methodologies for Evaluating the Profitability of System Extension Projects – Black and Veatch evidence, (Gaz Métro-7, Document 5), p. 13, 14 (Section 3.2).

Preamble:

- B&V selected a peer group of five Canadian utilities and five US utilities (one of which is a holding company of six utilities).

Questions:

13.1. Please list all Canadian gas utilities.

13.2. Please list all US gas utilities.

13.3. Please explain why B&V selected these peers and not others.

13.4. Please provide the documents on which B&V relied in describing the policies and practices of each of the members of the peer group as regards methodologies for evaluating the profitability of system extension projects.