Evidence of Paul Chernick

President, Resource Insight, Inc.

R-3867-2013 PHASE 3A

20 APRIL 2017

Issues for R-3867-2013 Phase 3

Rules and approaches for evaluating long-term profitability of service territory expansion, not revenue requirements or annual rate design.

- The Régie split this Phase into two parts:
  - Phase 3A: Only long-term marginal O&M, especially standard values.
  - Phase 3B: Treatment of all other inputs and evaluation framework.
- Phase 3A sets values and methods for O&M, but may also establish important principles for the treatment of capital costs in Phase 3B.

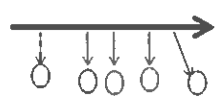
Differences in Regulatory Approach between Gaz Métro and ROEÉ

- **Scope of the Analysis**
- **Granularity**
- **Time Frame**

3

Scope of the Analysis

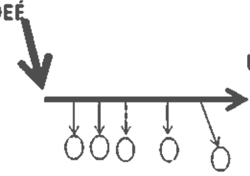
Gaz Métro



Main Extension
Service Drops
Meters

Excludes several cost categories
(bad debt, collection, customer retention)

Chernick / ROEÉ



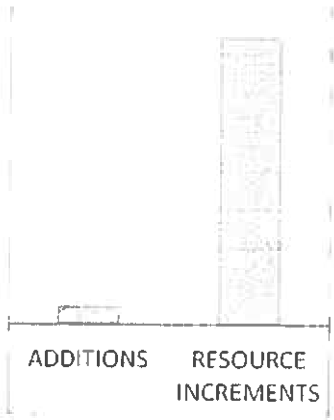
Upstream supply
Main Extension
Service Drops
Meters

Includes all costs resulting from adding revenues

4

Granularity of the Analysis

Gaz Métro/Overcast:

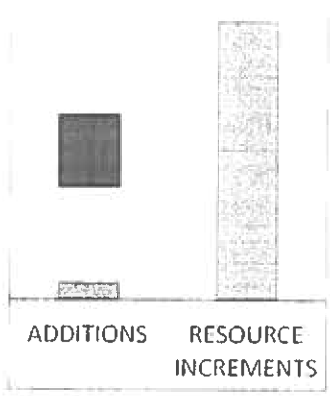


- Small additions (one or a few customers)
- Large increments of resources (meter readers, customer service reps, supply lines...)
- No need to add resources

5

Granularity of the Analysis

ROEÉ/Chernick:



- Multiple additions, some small, some larger
- Undertaking those additions will eventually require more resources
- Adding resources for new customers is fine, but only if the resulting revenues cover the costs

6

Time Frame for Analysis

Gaz Métro/Overcast:

- Expenses:

40

1

- Revenues

1 40

- Year 1: Set up account, process CRP
- Continuing: billing and payment cashing, maintenance

Time Frame for Analysis

ROEÉ/Chernick:

Expenses:

1 40*

Revenues

1 40*

*or expected life (an issue for Ph 3B)

- Year 1: Set up account, process CRP
- Continuing expenses: billing, payment, meter reading, customer service
- Occasional expenses: Set up new account, write off bad debt
- When Gaz Métro commits to a new customer, it accepts the risks of turnover, vacancy, bad debt, collection costs
- Cannot expect every new customer to last forever and always pay its bills

Comparing Costs to Revenues

- **Objective:**
  - Invest now in extension and connections, incur initial expenses
  - Get revenues minus continuing expenses over long period
  - Continuing revenues require continuing expenses
  - Requires comparison of capital costs to future net revenues

9

Comparing Costs to Revenues

Gaz Métro/Overcast:

- Invest now in connection
- Assume revenues over long period
- Ignore many future expenses

ROEÉ/Chernick:

- Invest now in connection
- Assume *net* revenues over long period = Revenues net of *all expected* expenses
- Annual, periodic, and occasional expenses

10

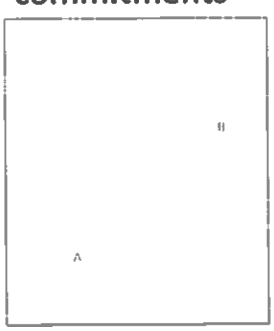
Responses to Overcast Oral Direct

- SRMC versus expected long-term cost
- Cost per customer versus time trends
- What is the long term?
- Average versus marginal costs
- Look only at tiny increment
- Realistic future average costs
- Gas-supply expense analysis

11

SRMC versus Expected Long-term Cost

Using SRMC is not feasible in evaluating long-term commitments



- Gaz Métro can evaluate a line extension only once.
  - If the cost is A today, cannot reevaluate the extension when the cost rises to B.
- The cost of the extension will be sunk.
  - The decision to commit must use the costs resulting from the extension, reflecting expectations of future technology, loads, environmental constraints...

12

SRMC versus Expected Long-term Cost

SRMC works when all decisions are short-term, not when decisions lock in costs long-term

- Gaz Métro can sell spot gas, so long as the seller will pay more than the SRMC on a daily basis
- If Gaz Métro commits to supplying the customer on a firm basis over future years, the contract needs to cover the cost of capacity contracts, as well as the variable costs. Even if the next capacity addition is a couple years away.

13

Cost per customer versus time trend

The cost per customer may fall over time, as technology or organization changes

- Adding a customer in 2018 can impose a cost in 2030, even if the unit cost is lower in 2030 than it was in 2018.
- If you spent $1,800 on gasoline to drive 15,000 km in 2014, and $1,500 to drive 18,000 km in 2016, the cost of driving was 12¢/km in 2014 and 8¢/km in 2016. Not zero.

14

What is the long term?

Dr. Overcast suggests five years

- If the profitability analysis only includes five years of costs, it can only include five years of revenue
- Dr. Overcast does not propose to include even five years for some items
- Dr. Overcast proposes to exclude costs that would occur in year one, so long as any *one* individual customer did not require that cost

The long term is the evaluation period.

- If the revenues from a year are counted, the costs for that year must be counted

15

Average versus marginal costs

- Dr. Overcast asserts that I suggest that average cost be used "regardless of marginal cost." (Presentation B-0241 p. 16)
  - I cannot find an example of my doing that.
- I *would* accept the use of average costs as default values where Gaz Métro has no separate estimate of marginal costs.
- Where values are uncertain, Gaz Métro defaults to zero, which is rarely the best estimate of variable marginal cost.

16

Relevant Increments

Gaz Métro prefers to look at one customer

- For some categories, one customer is not enough to force an increment of Gaz Métro expense.
- Dr. Overcast overstates the increments for some costs
  - Assumes meter readers come in FTE blocks
  - Assumes customer service is fixed until service centre capacity is exhausted

The Régie should look at *all* added customers:

- in whole project
- in multi-year expansion plan
- in period for which revenues are included

17

Realistic costs for an average additional customer

Every year

- Metering
- Billing
- Customer retention

Some years

- Various inspections and maintenance

Some locations, some years

- Bad debt, Collection and recovery
- Customer turnover costs
- Vacancy

18

Are bad debt and collections marginal costs?

- Dr. Overcast says "No, they are results of social policies".

- What social policy encourages bad debt and collection costs?
  - These are costs of almost all businesses.
  - Every customer that Gaz Métro adds has some probability of generating bad debt and collection costs

19

Matching Revenues and Costs

If the profitability analysis includes revenues for future years, it must include the costs of receiving those revenues

- Gaz Métro proposes to credit the project with revenues beyond the first customer at a location, but ignores the costs of replacing that customer.
  - So if the original customer moves in year 10, and a new customer moves in, Gaz Métro would count the revenues from years 10 to 40, but ignore the administrative costs of setting up the new customer.

20

Gas-supply expense analysis

Dr. Overcast (Regie DDR-8, Q 1.2) rejects my analysis on the grounds that:

- I used historical cost data.
  - That is the source of most cost estimates.
  - Gaz Métro can update, if they have any basis for doing so.
- Throughput cannot cause the cost, since the cost is incurred before the gas flows.
  - That is true for most marginal costs; the contracts are signed, the mains are built, before the gas can flow.

21

Gas-supply expense analysis (cont.)

- I did not use all the years of available data.
  - As Dr. Overcast explains, changes in technology and organization can reduce costs; something of the sort appears to have happened around 2006 for this cost.
- I used throughput rather than sales, to improve statistical tests.
  - My evidence explains that a large portion of the gas-supply operation deals with transportation customers and their suppliers and contracts.
- My result "fails the test of common sense" because costs fell while the number of customers grew.
  - Customer number has little relevance to this cost category.

22

Questions