

CANADA
PROVINCE DE QUÉBEC
DISTRICT DE MONTRÉAL

RÉGIE DE L'ÉNERGIE

No: R- 4167-2021 Volet 2

Demande du Transporteur de modification des
tarifs et conditions des services de transport pour
les années 2021 et 2022

HYDRO-QUÉBEC
Demanderesse

- et -

OPTION CONSOMMATEURS
Intervenante

MÉMOIRE D'OPTION CONSOMMATEURS
Deferral and Variance Account for Capital

By Dr. Roger Higgin

March 28, 2022

Table of Contents

1. Introduction	3
2. Regulatory Deferral and Variance Accounts	3
3. Regulatory Lag	4
4. NERA Comments on Positions of FCEI and AQCIE-CIFQ.....	5
5. Options for Implementing a HQT DVA	7
6. Conclusions & Recommendations.....	8
6.1 Conclusions	8
6.2 Recommendations.....	10

Revised Version 7/07/2022

Added References to OC review of NERA Evidence

Page 4 : Following title Regulatory Lag- Dr. Makholm states (**page 10**) :

Footnote 6 B-0196 Question 7a)

Page 5 : Following the title NERA Comments on Positions of FCEI and AQCIE-CIFQ, NERA cites (**on p.12**) the following extracts from a prior Régie decision:

Page 6: Following Title NERA Comments on Omissions in the Régie's Framing of the DVA Issue
Dr. Makholm states (**on p. 13 and 14**):

Page 7 Dr. Makholm concludes as follows (**Page 15**) :

Footnote 14 NERA report, p.13

Errata

Page 9 delete ~~The Régie has established a \$15-million materiality threshold~~

Page 10 delete ~~“taking into account the Régie approved materiality threshold of \$15 million”.~~

1. Introduction

In Docket R-4167-2021 Volet 2, Hydro Quebec (HQ) filed an expert report by National Energy Regulation Association (NERA) of Boston Massachusetts (B-0159) on the issue of a capital Deferral Variance Account (DVA).

This is in response to concerns expressed by AQCIE-CIFQ and FCEI in D-2018-067 (HQD)¹ and D-2019-060 (HQT)².

The NERA Report is authored by Dr. Makhholm.

He concludes for various reasons that a HQT DVA is not required and would violate certain regulatory principles, including *Regulatory Lag*.

The NERA report reviews the use of regulatory deferral accounts in general and makes several conclusions about the use of these by regulators.

Dr. Makhholm provides no precedents in other jurisdictions related to regulatory Capital Deferral Variance Accounts or Capital In-Service Variance Accounts.

Option consommateurs (OC) is an intervenor in this case and filed interrogatories to HQ and NERA³.

This Mémoire is authored by OC Analyst Dr. Roger Higgin⁴.

It addresses the following Issues relevant to HQT :

- *Regulatory Deferral and Variance Accounts*
- *Regulatory Lag*
- *NERA Comments on positions of FCEI and AQCIE-CIFQ*
- *Options for Implementing a HQT DVA*
- *Conclusions and Recommendations.*

2. Regulatory Deferral and Variance Accounts

Dr. Makhholm notes that the Régie has authorized several deferral and variance accounts for HQT in the past. On p. 22, he states:

“The purposes of these accounts fit the criteria that the cost is beyond the provider’s control and can have a significant impact on revenues. These criteria established by the Régie and used by HQT are no exception to the rule that is widely employed by North American regulators, which limits expense deferral accounting to cases where: (1) the cost is material and extraordinary in nature, and (2) the cost was incremental to what was allowed in rates”.

¹ D-2018-067 Paragraphs 280-285

² D-2019-060 Paragraph 218

³ C-OC-0041

⁴ Principal, Sustainable Planning Associates Inc.

On p. 23, Dr. Makhholm further states:

“Deferral and variance accounts are not intended to be used for costs that are routine, nor those that are expected and easy to forecast.

Rather, these accounts are used for those costs *that cannot reasonably be expected or may be out of the utilities control* as the above examples (Table 2) show”⁵.

Dr. Makhholm/NERA was apparently not aware that Hydro One Networks Transmission has a Capital In-Service Variation Account (CISVA).^{6 7}

The Hydro One Transmission CISVA currently measures the revenue requirement impact associated with the difference between actual in-service additions in relation to OEB-approved in-service additions. It excludes verifiable productivity savings to ensure that true productivity savings are incented through the custom IR term. In addition, the account includes a 2% dead-band.

3. Regulatory Lag⁸

Dr. Makhholm states (page 10) :

“The source of the incentive on HQT to be efficient in pursuing needed new capital projects is *regulatory lag*. Such regulatory lag permits regulated companies to earn returns against a pre-determined trajectory of rate control—driving those companies’ incentives to keep costs down.

Regulatory lag is a subject integral to Canadian PBR generally. For example, from 2010 to 2012, the Alberta Utilities Commission (the AUC) held North America’s largest generic proceeding on how to re-implement *RPI minus X* regulation for its electric and gas utilities. The AUC confirmed that its PBR regime was all about regulatory lag:

As NERA emphasized, this concept [of regulatory lag] corresponds to the underlying theory behind PBR plans in Canada and the United States: to permit regulated prices to change to reflect general price changes and industry productivity movements without the need for a base rate case. The effect is to lengthen regulatory lag and better expose regulated utilities to the type of incentives faced by competitive firms”.

Dr. Makhholm cites regulatory lag as a major consideration for deferral accounts; he cites specifically the late Dr. Alfred Kahn⁹.

⁵ NERA Report Pages 22-23 and Table 2

⁶ B-0196 Question 7a)

⁷ EB-2021-0110 Exhibit G Tab 1 Schedule 2 Section 4.3 pages 20-22

⁸ NERA Report Section IV

⁹ Alfred E. Kahn, *Economics of Regulation, Vol. 2* (New York: John Wiley & Sons, 1971), p. 48

Dr. Makhholm concludes the following on regulatory lag:

“There is a sharp contrast between these longstanding opinions on the usefulness of regulatory lag (from Kahn in 1971 to the AUC in 2012) and the motivations for supporting a DVA on planned capital additions (on the part of the FCEI and AQCIE-CIFQ). Those motivations are based on what those intervenors see as “excessive returns.” Kahn’s statement that “attempts to make regulation ‘more efficient’ in limiting the rate of return are likely to be on balance harmful” bears repeating before I turn to those intervenor positions”¹⁰.

4. NERA Comments on Positions of FCEI and AQCIE-CIFQ

NERA cites (on p. 12) the following extracts from a prior Régie decision:

“The Régie: Decision D-2020-041

The Régie devotes Section 11.3 of the decision to the question of “Reliability of Projections. It states that both FCEI (paragraphs 380-84) and AQCIE-CIFQ (paragraphs 385-88) refer to a difference between forecast and actual capital costs. FCEI in that case recommended a reduction of \$54 million in revenue requirement as a result of the difference in capital cost forecasts of \$324 million. The AQCIE-CIFQ recommended a reduction in rate base of \$400 million, expressing the opinion that deviations of actual expenditures from forecasts should “tend toward zero.”

“In its Opinion, the Régie also notes the differences between project-by-project forecasts and actual expenditures by HQT. Despite its recognition of HQT’s moves to improve its forecasts, it ordered a \$150 million reduction in rate base for the 2020 test year. Also, noting the persistence of a difference between forecast and actual values, the Régie asked HQT to consider the impact of DVA accounting as part of this current proceeding. The Régie expressed the opinion that DVA accounting

...could have the advantage, on the one hand of protecting both [HQT] and its customers from these acute problems and, on the other hand, create additional regulatory relief on cost items still using the cost of service.¹¹ (translation)

As a result, the Régie asked HQT to provide evidence on the impact of implementing a DVA for capital cost additions”.

¹⁰ NERA report page 11

NERA Comments on Omissions in the Régie's Framing of the DVA Issue¹¹

Dr. Makhholm states (on p. 13 and 14):

"The Régie's opinion about problems in forecasts in D-2020-041 comes solely from its examinations of the differences between HQT's forecasts and actual capital cost totals. Because the forecast uses regulatory lag as the means of incentivizing HQT, after-the-fact comparisons between those forecasts and actual values are not a valid means by which to assess the reasonableness of those forecasts".

"It is not reasonable to presume that the expected value of the practical incentive of beating forecasts is zero based on after-the-fact comparisons. The forecasts are there to improve upon by management action at HQT—otherwise they are an ineffectual incentive mechanism. The Régie has not rendered a definitive opinion on the subject. But it has not yet framed the DVA issue in a way that properly recognizes that PBR incentives are designed to give firms like HQT the ability to profit. In such a context, it is an error to claim, without evidence, that such rewards are themselves unfair and should somehow be recouped when they appear. Such is an unfortunate, but common-enough problem in the application of incentive regulation generally. Alfred Kahn indeed had a name for that problem: "profit envy"—the tendency of customers/intervenors to claim that the legitimate rewards to regulated service providers from PBR plans are somehow unfair and should be recouped".

Dr Makhholm concludes that (Page 14) :

"It would have been better, in framing the DVA issue, for the Régie to make a distinction between (a) a more detailed review of business plans and (b) after-the-fact comparisons that by themselves simply cannot answer the question of whether forecasts underlying such a PBR plan are reasonable"¹².

On p. 14-15, Dr Makhholm states:

"There are three errors that appear in FCEI's statements about the DVA. The first involves the concept of "median forecasts."

The second is the opinion, as expressed by both FCEI and PEG, that forecast test years provide only a small incentive anyway—the removal of which with a DVA is not a significant matter. The third is the application of asymmetric returns to the forecast test year incentive.

1. "Median Forecasts"

The FCEI states its opinion that the Régie's earnings sharing mechanism (ESM) is based on its expectation of "median forecasts"—saying further, that the "variances [between

¹¹ NERA Report Section V (D)

¹² NERA Report Page 14

forecast and actual project totals] observed over the last 10 years are not compatible with this expectation” (p. 5). The FCEI’s use of the term “median forecast,” attached to retrospective measurements of differences, is a manifest example of hindsight-based measurement that would make an HQT incentive based on regulatory lag unworkable. *Using such a concept of “median forecasts” to drive future rate reductions would defeat the Régie’s vision of “initiatives in the course of the year that could lead to efficiency gains.* As I said above, there should be a reasonable expectation that an incentive regulatory regime based on forecast test years will produce earnings for HQT (which are shared with consumers in an independent ESM-based sharing). The FCEI discussion of “median forecast,” mixing forward-looking forecasts and hindsight based actual expenditures, is inconsistent with that reasonable expectation.

Individual HQT capital addition projects have countless idiosyncrasies. Aggregate revenue requirement data, which exists for the purpose of tracking aggregate property totals as the basis for reasonable rates, do not capture such idiosyncrasies. Any useful analysis of contracts would depend on close-focus engineering. Econometrics is not useful, either at the project-by-project level or the aggregate level—econometric models used in contested regulatory proceedings are particularly not useful”.

Dr. Makhholm concludes as follows (Page 15):

“Neither FCEI nor PEG have offered any reasonable evidence, or any recommendation for obtaining evidence, to support their charges of bias, exaggeration, or a basis upon which any future “trimming” could occur. PEG does suggest a closer review of HQT’s “business plans.” If PEG means a further close-focus engineering review of HQT’s capital project forecasts at the time HQT makes them, it could be a useful suggestion. But the rest of PEG’s short discussion of the issue—particularly the comment on “trimming,” continues to suggest that PEG, like FCEI, mixes *forward-looking* forecasts with *hindsight-based* actual expenditures, which is a type of comparison that undercuts any incentive based in regulatory lag”.

5. Options for Implementing a HQT DVA

OC has considered the evidence and positions of the parties. The following are some considerations for a DVA for HQT:

PRO

Arguments for doing something about strategic deferrals at this time:

- the fact that HQT has historically exaggerated its capital expenditures and timing for in-service capital projects
- although recently HQT forecasts have improved¹³, issues remain, in particular large projects such as Micoua-Saguenay.

¹³ B-0190 Response to Regie DDR No7 Question 1.1
2014-2018 overage of \$269.8 million dropped to overage for 2019-2020 of \$25.4 million

CON

Arguments for not doing anything more about strategic deferrals at this time:

- HQT already has a MTÉR and this shares the benefits of strategic deferrals.
- Any change in the treatment of deferrals that the Régie might make in this proceeding might only be implemented for one or two years.
- HQT argues that the MTÉR may need to be reconsidered if another remedy for capex deferrals is added to the regulatory system.

6. Conclusions & Recommendations

6.1 Conclusions

Regulatory Considerations

Historically, there has been significant under and over capital spending by HQT. This has been the source of legitimate concerns expressed by AQCIE-CIFQ and FCEI which have been dismissed by NERA, as ill-founded.

The impact of these variances is that ratepayers may pay in the revenue requirement for assets that are in not in service (underspend) or must make up the overspend in the next rate year. An overspend does also impact the HQT return on rate base during the test year.

The NERA report and recommendation regarding a DVA, is, inter alia, based on Dr. Makholm's interpretation of historical North American regulatory law and practice.

The focus is on *regulatory lag* and the incentive for HQT to produce and adhere to reasonable forecasts of capital expenditures and the related incentive to beat these forecasts by making an allowed return on a lower average test year rate base. He notes:

"The Régie's opinion about problems in forecasts in D-2020-041 comes solely from its examinations of the differences between HQT's forecasts and actual capital cost totals. Because the forecast uses regulatory lag as the means of incentivizing HQT, after-the-fact comparisons between those forecasts and actual values are not a valid means by which to assess the reasonableness of those forecasts"¹⁴.

This statement by Dr. Makholm is not supported by any specific quantitative analysis by either NERA or HQT. OC requested this statistical analysis however NERA/HQT¹⁵ declined to provide it.

OC suggests that Dr. Makholm has selected certain regulatory tenets and practices to support his conclusions regarding a capital DVA.

With an annual review of HQT capital by the Régie, his central argument of regulatory lag incentives is diminished.

¹⁴ NERA report, p. 13

¹⁵ B-0196 Response to OC DDR no 1 Questions 5 and 6

Dr. Makhholm did not indicate that, as well as:

- the incentive from regulatory lag
- HQT generating a fair return on both operating costs and capital costs as part of rate base
- other regulatory principles and practices must be considered.

Primary among these is: *are rates just and reasonable?* This applies to both the utility and to ratepayers^{16 17}.

Rates derive from a revenue requirement that includes, inter alia, a utility's proposed costs (O&M and Capital), depreciation, cost of capital, and return on equity.

One of the tools that regulators use is ex-ante review and analysis of historic forecast and actual and the reasons offered for variations by the utility (variance report).

There is often a materiality threshold set by the regulator that relates to either the capital envelope or the impact on the revenue requirement. ~~The Régie has established a \$15 million materiality threshold.~~

It is not appropriate for ratepayers to pay for assets that are not in service, regardless of the existence of an earnings sharing mechanism (MTÉR). If this is the case, the rates do not meet the requirement of being "just and reasonable".

Applicability to HQT

HQT is in year 4 of a 1st generation incentive regulation plan which indexes O&M through a revenue cap formula. *Capital is not indexed by the formula and is under annual cost of service.* This regulatory framework will continue until 2024, at which point HQT will rebase its rates (to adjust for differences between costs and revenues).

The Régie will also consider if a 2nd Generation MRI is appropriate and whether this should include a capital factor that will index some or all of the capital.

OC suggests that on balance, it is during the upcoming proceedings that further consideration should be given to a capital in-service variation account.

The MRI term is to be set by the Régie. Terms of up to 5 years are common in Canada.

¹⁶ Sections 5 and 49(7) of An Act Respecting the Régie de l'énergie; OEB Rate Handbook Section 3 and Section 36 OEB Act

¹⁷ Supreme Court of Canada *Atco vs AUC* 2015 SCC 45, [2015] S.C.R. 219 **DATE:** 20150925 **DOCKET:** 35624

During the MRI period, both the O&M spending and capital spending may vary from the approved plan. This reflects the decoupling of costs and revenues (rates).

Variations in actual operating costs from the forecast costs can occur, but the utility has many levers to ensure these variations are small.

However, capital spending is significantly more difficult for the utility to control. For example, the impacts of labour disputes, weather and third party capital contributions.

If a second generation MRI includes a capital factor with most capital indexed within the RCI formula, then only occasional large projects should/would remain as capital Y factors. A CISVA will not enhance the process for review of such projects. The current cost of service approach contains the necessary regulatory tools to review the proposed capital expenditures and in-service dates (commissioning).

However, if only minor capital is included in the MRI capital factor, a CISVA could be a useful tool to address deviations from forecasts. As noted above, the CIVSA account records the revenue requirement variation due to under and over capital spending. The account is asymmetric over the term of the plan and may have a threshold, such as a percentage of the capital related revenue requirement¹⁸.

6.2 Recommendations

Primary Recommendation:

Postpone consideration of a DVA until the 2024 HQT cost of service rebasing and consideration of a second generation MRI. Monitor HQT capital performance in 2022 and 2023.

Secondary Recommendation:

If the Régie finds that action is required at this time, OC believes that the most reasonable approach would be to consider an ex-ante markdown of capital for 2022 and 2023. The amount would be calculated based on the recent 5-year historical difference between the company's capital revenue and capital cost, for projects under \$65 million. ~~taking into account the Régie approved materiality threshold of \$15 million.~~

OC has not undertaken analysis or calculations regarding this secondary option.

All Respectfully Submitted.

¹⁸ Ibid 5