

CANADA
PROVINCE DE QUÉBEC
DISTRICT DE MONTRÉAL

No: R-3897-2014
(Phase 1 / HQT)

RÉGIE DE L'ÉNERGIE

Établissement d'un mécanisme de réglementation incitative assurant la réalisation de gains d'efficacité par le distributeur d'électricité et le transporteur d'électricité;

HYDRO-QUÉBEC

Mise en cause

- ET -

OPTION CONSOMMATEURS

Intervenante

MÉMOIRE D'OPTION CONSOMMATEURS

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I. Introduction

The present document constitutes an update to OC's recommendations, initially presented in its mémoire dated November 9th 2015 (C-OC-0012), pursuant to the revised evidence filed on September 30th 2016 by Hydro-Québec Transport ("HQT") and its experts Concentric Energy Advisers ("CEA")¹. The revised evidence was filed by HQT in Phase 1 of R-3897-2014 which aims to establish in a broad manner the characteristics of Hydro-Québec Distribution's (HQD) and HQT's *mécanismes de réglementation incitative* ("MRI"). Updates to CEA's initial MRI proposal, dated October 26th 2015, follows a letter filed by HQT on June 30th 2016 stating "*que son exercice de validation est maintenant complété et qu'il apportera des amendements à sa preuve déposée au dossier*"².

As a reminder, the MRI characteristics of both divisions need to achieve the objectives set by section 48.1 of an Act Respecting the Régie de l'énergie:

48.1. The Régie shall establish a performance-based regulation to ensure efficiency gains by the electric power distributor and the electric power carrier.

The regulation must pursue the following objectives:

- (1) ongoing improvement in performance and service quality;
 - (2) cost reduction that is beneficial to both consumers and the distributor or carrier;
- and
- (3) streamlining of the process by which the Régie fixes or modifies the rates the electric power carrier and the electric power distributor charge consumers or a class of consumers.

Between November 9th 2015 and this day, additional information was provided in two rounds of information requests (answered on February 2nd 2016 and February 10th 2017) and an additional information request by the Régie to interveners (answered on June 29th 2016). Furthermore, all parties presented their arguments in HQD's MRI Phase 1 hearings held at the end of September 2016. The present mémoire reflects this evidence and, as suggested by the Régie in its procedural decision D-2016-155³, focuses on key aspects of HQT's MRI as well as the principal differences between the experts' proposals. Most of the comments contained in this mémoire is directed towards the experts' proposals regarding Revenue Requirement Determination, subsequent to CEA revised recommendation. With respect to other MRI features, OC simply reiterates its initial recommendations and refers to its first mémoire.

¹ C-HQT-HQD-0095 et C-HQT-HQD-0097.

² C-HQT-HQD-0070.

³ A-0122, p. 5.

II. HQT characteristics

One of the conclusions of the Elenchus report (A-0003) was that the design of a MRI had to take into account the specificities of the regulated utility and the environment in which it operates. The Elenchus report states that: *“The diversity of regimes also demonstrates that there is no single best practice that should guide the development of new PBR regimes. Rather it shows that in different circumstances the details of an effective regime need to be tailored to the specific objectives that are relevant to the regulator”*⁴. Both CEA and Pacific Economics Group (PEG) recognize this and have built their proposal around what they have determined to be key HQT’s characteristics.

A non-exhaustive list includes:

- HQT’s size, operating the largest transmission system in North America⁵.
- Significant distance between production and load⁶.
- A high proportion (78,4 % in 2016) of HQT’s revenue requirement composed of capital expenses (CAPEX)⁷.
- Average growth in total revenue requirement, ratebase and amortization of respectively 2,09, 2,82 and 6,49 % from 2008 to 2017. Both ratebase and amortization growth for 2019-2022 are forecasted to be lower than average at respectively 1,50 and 1,58 %⁸.
- HQT is currently regulated under cost of service with rates set annually in rate cases. Investment projects under 25 M\$ are reviewed annually as part of a specific hearing and investment projects over 25 M\$ are reviewed individually⁹.
- Existing performance metrics are reviewed in annual rate cases by the Régie in areas such as reliability of service and customer satisfaction¹⁰.

In its revised proposal, CEA puts emphasis on the *Modèle de gestion des actifs* (“MGA”), which was recently put in place by HQT¹¹. The MGA, which OC understands to be simulations of maintenance and investment decisions over the life of assets based on things such as characteristics and probability of failures of assets, provides guidance to HQT for the optimal trade-off between maintenance (OPEX oriented) and replacement (CAPEX oriented) of transmission assets. The MGA scenarios are re-evaluated every year and adjustments are incorporated in annual rate cases. For CEA, *“the integration of the MGA as part of the MRI proposal is explicitly designed to optimize HQT’s expenditures on maintenance when there are asset management decisions to be made with respect to whether to maintain the useful life of a*

⁴ A-0003, p. 82.

⁵ C-HQT-HQD-0095, p. 3 et C-AQCIE-CIFQ-0107, p. 76.

⁶ *Ibid.*

⁷ C-HQT-HQD-0095, p. 3.

⁸ C-AQCIE-CIFQ-0107, p. 84.

⁹ C-HQT-HQD-0094, p. 3 et C-AQCIE-CIFQ-0107, p. 88.

¹⁰ C-HQT-HQD-0094, p. 26 et C-AQCIE-CIFQ-0107, p. 90-92.

¹¹ C-HQT-HQD-0095, p. 4.

facility through a maintenance solution or whether it would be better for HQT's customers to address facility condition through a capital investment solution (or a combination of both)"¹².

Finally, in its updated report, PEG mentions the existing parametric formula used to set OPEX for both HQD and HQT¹³, which was also referenced by CEA in its initial report¹⁴. For example, in the current HQT rate case, 2017 OPEX (761,9 M\$) is obtained by applying an "I – X" formula (19,6 – 13 M\$) to approved OPEX of 2016 (691,1 M\$) and by adjusting for growth (11,8 M\$) and for *Éléments de suivi particuliers* ("ESP") (52,4 M\$)¹⁵.

¹² C-HQT-HQD-0095, p. 9.

¹³ C-AQCIE-CIFQ-0107, p. 86.

¹⁴ C-HQT-HQD-0094, p. 4.

¹⁵ R-3981-2016, B-0092, p. 8.

III. HQT MRI features

Revenue Requirement Determination

CEA Revised Proposal

CEA was initially proposing to set the revenue requirement through a multiyear forecast of its components, termed a “building block” approach. Through this approach and after the initial forecast, rates would have adjusted annually with corresponding adjustments in forecast parameters and other plan features such as Y and Z factors¹⁶. In its initial mémoire, OC suggested that the building block approach, which lacks any index-based formula, was less likely to accommodate the efficiency incentives and streamlining objectives required by section 48.1¹⁷.

CEA provides two main justifications for the revised proposal. First, the new management in place for HQT “*reconsidered its initial recommendation*”. Second, CEA recognized intervenor comments “*regarding the reliance on the “Building Block” approach with a three-year up-front forecast and their general preference for a mechanism that incorporates elements of an I-X approach*”¹⁸.

CEA’s new proposal is a “Hybrid” approach to MRI design where part of HQT’s revenue requirement is subject to an index-based formula and other elements are established under cost of service regulation¹⁹. The precise formula is provided at page 6 of the revised CEA report. An “I-X” formula would apply to most of OPEX and other cost elements, including amortization and return on capital, would be set annually under cost of service as is currently done in annual HQT rate cases.

OC submits the following table highlighting elements of HQT’s revenue requirement that would be subject to the “I-X” formula under CEA’s revised proposal. Approximately 21% of total revenue requirement would be covered to the “I-X” formula.

¹⁶ C-HQT-HQD-0057, p. 21.

¹⁷ C-OC-0012, p. 9-11.

¹⁸ C-HQT-HQD-0095, p. 1.

¹⁹ C-HQT-HQD-0095, p. 8.

Table 1 – Cost category formula coverage and amounts for 2017²⁰

Cost Category	Covered by the I-X formula	Amount for test year 2017 (M\$)
CEN (excluding ESP and adjustments)	Y	664,8
ESP	N	26,7
Ajustements pour la maintenance	N	45,0
Ajustements pour activités récurrentes	N	25,2
Autres charges	-	1 175,1
Achats de services de transport	N	19,2
Achats d'électricité	Y	15,0
Amortissement	N	1088,8
Taxes	N	99,7
Autres revenus de facturation interne	N	-47,6
Frais corporatifs	N	35,7
Comptes d'écarts	-	-15,9
Coût de retraite	N	-15,9
Pénalités liées aux services complémentaires	N	0,0
Comptes de frais reportés	N	-6,0
Intérêts reliés au remboursement gouvernemental	N	-0,4
Facturation externe	N	-3,2
Rendement	N	1350,3
Revenu Requis	-	3 297,3

CEA provides several explanations for excluding CAPEX and some OPEX categories from the “I-X” coverage. In general, they argue those cost categories are a poor fit for a formulaic approach or simply outside of HQT’s control.

For example, excluding CAPEX from the index-based formula “reflects the fact that HQT’s capital expenditures can vary significantly from year to year, with corresponding fluctuations for both return and amortization”²¹. Also, they “are often dictated by system requirements beyond management’s direct control, such as the integration of new generation”²².

²⁰ C-HQT-HQD-0112, p. 6 and C-HQT-HQD-0117, p. 4.

²¹ C-HQT-HQD-0095, p. 7.

²² C-HQT-HQD-0095, p. 4.

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As Table 1 shows, several categories are also excluded such as incremental OPEX derived from the MGA (*Ajustements pour la maintenance*), *Ajustements pour activités récurrentes*, Corporate fees and Taxes. OC understands from HQT's explanations provided in answers to the Régie's IR #3²³ that both adjustments are subsequently incorporated into the following year's "base" OPEX and covered by the "I-X" formula. Excluding Corporate fees and Taxes is justified, in contrast to HQD's MRI, because "*these expense categories represent a greater share of the revenue requirement (4.2%, combined), and HQT is unable to directly control these costs, creating a misalignment between the incentive and ability to control these material cost categories*"²⁴.

PEG Updated Proposal

PEG's proposal for the determination of HQT's revenue requirement is twofold as they suggest the Régie should consider two approaches.

In the first approach, most of the revenue requirement would be indexed through an "I-X" formula, with adjustments for growth and other exclusions (Y and Z factors). The second approach has some similarities with CEA's proposal and is also called "Hybrid". Under this proposal, OPEX would be indexed as in the first approach, but CAPEX would be forecasted for the duration of the plan²⁵. This is different from CEA's proposal where CAPEX and other OPEX exclusions are set under cost of service regulation rather than forecasted.

PEG also recognizes that the treatment of CAPEX under a MRI, for a capital-intensive utility such as HQT, poses a challenge and they suggest that HQT "*might need the option of requesting tracker treatment for some projects if an index-based ARM is chosen. This proposed treatment would be similar to the Ontario Energy Board's Incremental Capital Module*"²⁶.

Unlike CEA, PEG does not address in detail the cost categories that should be excluded in the two approaches. Rather, PEG makes a general recommendation to limit the number of Y and Z factors. For example, they state that "*Eligibility for Z factor treatment should be limited. Materially thresholds should be high, and pertain to each incident so that the utility is not incentivized to compile numerous small incidents*"²⁷.

²³ C-HQT-HQD-0112, p. 16.

²⁴ C-HQT-HQD-0113, p. 10.

²⁵ C-AQCIE-CIFQ-0107, p. 107.

²⁶ C-AQCIE-CIFQ-0107, p. 109-111.

²⁷ C-AQCIE-CIFQ-0107, p. 111.

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OC Comments

CEA's revised proposal which incorporates an indexed-based formula coverage for some OPEX categories, as shown in Table 1, is a step in a right direction as it concurs with some of the comments OC made in its initial memoire²⁸.

However, OC notes that the CEA proposal has strong similarities with the existing regulatory system and strongly resembles the current revenue requirement setting method where most of OPEX is fixed with the global parametric formula with other elements established under cost of service. In answer to OC's second IR on the difference between the proposal and the existing situation, CEA mentions that: *"The primary difference is the movement from a single forecast test year, based on cost of service, to a multi-year incentive rate plan for most operating expenses"*²⁹.

When examining the differences between CEA's and PEG's proposals to determine the revenue for HQT's MRI, the treatment of CAPEX merits considerable attention by the Régie as it has been a matter of contention in other Canadian jurisdictions and as it is an important part of HQT's revenue requirement. It has also generated a lot of questions and comments from interveners and the Régie during HQT's Phase 1 hearing.

There are many alternatives to cost of service regulation available, as illustrated by PEG's proposal or the recent experiences of the British Columbia Utilities Commission (BCUC), the Alberta Utilities Commission (AUC) or the Ontario Energy Board (OEB)³⁰. CEA also recognizes the different alternatives in their revised testimony:

*"Capital trackers have been used to isolate the rate effects of certain types of expenditures, such as replacements for leak-prone pipe by gas distributors. Large capital projects may be separately tracked while smaller projects rolled into an I-X framework. Or, the utility may be allowed to apply for "K-factor" treatment for projects deemed out of the ordinary course of business and beyond management's direct control. These latter examples are all derived from electric T&D or integrated utilities, or gas distributors in North America; none have been applied to a transmission specific entity"*³¹.

There are arguments to be made in favour of including some CAPEX under an index-based formula, as opposed to cost of service regulation, especially in light of section 48.1. It would provide greater incentives for HQT to pursue efficiencies and also has the potential to streamline the regulatory process if investment projects are reviewed less frequently.

²⁸ C-OC-0012, p. 9-11.

²⁹ C-HQT-HQD-0117, p. 6.

³⁰ See for example answers 3.1-3.3 of C-HQT-HQD-0117 and 2.2 of C-HQT-HQD-0114.

³¹ C-HQT-HQD-0095, p. 7.

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As mentioned below, CEA excludes CAPEX from formula coverage because those costs do not follow a “I-X” trajectory and are sometimes outside of HQT’s control. OC notes that projected rate base and amortization growth during what should be the years of application of the MRI (2019-2022) average 1,50 and 1,58 % respectively, which does not exclude a formulaic approach. OC also submits that HQT has some control over its investment decisions, in investment categories such as maintenance, as demonstrated by the recently adopted MGA. Further reasoning and calculations of a hypothetical revenue cap index, justifying CAPEX coverage by an “I-X” formula, is also provided by PEG in its revised report³².

The main drawback of including CAPEX under an index-based formula would be the risk of large deviations in HQT’s earnings during the MRI term. OC submits that this would be mitigated with an ESM, recommended by both experts, as well as with possible deferral accounts for in-service capital.

On balance, OC finds that HQT’s CAPEX should be part of an indexed-based formula coverage, which is more in line with objectives of section 48.1, but with adjustments to take into account (i) the possibility of large deviations in CAPEX and (ii) CAPEX not under the control of HQT.

To accommodate the first problem, a “K factor” approach combined with sufficient requirements, similarly to other Canadian jurisdictions, could be designed. The “K factor” approach is described by CEA in answer to the Régie’s IR #3 as follows: *“The presumption is that all capital is covered under the I-X unless a project or capital program meets a certain set of criteria, in which case the utility can apply for a K factor to account for the incremental cost”*³³. Several issues are raised by PEG in its report³⁴ and should be the focus of Phase 3. Also, in Phase 3, the Régie should consider Y or Z factoring certain types of investment categories, such as Compliance (*Respect des exigences*), since HQT does not have control over those costs.

If the Régie finds that an indexed-based approach to CAPEX is unsuitable for HQT’s first generation MRI, a compromise could be PEG’s second approach, the “Hybrid ARM”, where capital costs are forecasted. OC suggests this approach is more likely to incentivize HQT to pursue efficiencies than CEA’s proposal in which CAPEX is set through on cost of service. CEA recognized in an answer to AQCIE-CIFQ’s IR #2 that its revised proposal *“contains slightly weaker CAPEX containment incentives. Under the initial proposal, HQT’s CAPEX would have been incented under a multi-year cost-of-service forecast. In the revised approach, HQT’s CAPEX will be incented under a single year cost of service forecast”*³⁵.

³² C-AQCIE-CIFQ-0107, p. 122-127.

³³ C-HQT-HQD-0112, p. 29.

³⁴ C-AQCIE-CIFQ-0107, p. 109-111.

³⁵ C-HQT-HQD-0114, p. 10.

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Other issues to address, potentially in Phase 3, are OPEX exclusions suggested by CEA. Like PEG, OC recommends limiting the exclusions unless appropriate justifications are provided and requirements met. OC, for example, is not convinced that it is appropriate to include annual adjustments from the MGA (*Ajustements pour la maintenance*) in the determination of HQT's revenue requirement. OC suggests that PEG's position on OPEX exclusions should be clarified.

Overall, OC finds CEA's proposal is not a sufficient departure from the existing framework and is less likely to accommodate section 48.1 objectives as compared to PEG's two proposed approaches. For this reason, OC recommends adopting PEG's *Index-based approach for HQT's MRI*. If the Régie finds that an indexed-based approach to CAPEX is unsuitable for HQT's first generation MRI, OC recommends adopting PEG's second approach, the "Hybrid ARM".

Setting the inflation factor (I)

The determination of "X" and "I" factors will be subject to more scrutiny in Phases 2 and 3 of the present case. However, CEA suggests in their Phase 1 proposal to set the "I" factor using a composite index computed as the average of HQT's labour inflation index and Canada's consumer price index (CPI)³⁶. An identical proposal was made by CEA for HQD's MRI.

As mentioned in OC's final arguments in HQD's Phase 1 hearing³⁷, both experts stated that using an internal indicator as a proxy for the "I" factor is an unusual practice when it comes to the design of a MRI. In the case of both HQD and HQT, it entails that the shareholder could have an influence on the "I" factor and the setting of the revenue requirement. OC generally opposes using an internal indicator for the "I" factor.

As previously mentioned, Phase 3 should focus on choosing the "right" indicator, taking into account HQT's revenue requirement composition and items indexed by inflation. Also important will be the decision to use of forecast versus historical data. OC notes the BCUC decided to use backward looking values of British Columbia CPI and average weekly earnings for Fortis BC MRI³⁸.

³⁶ C-HQT-HQD-0095, p. 8.

³⁷ C-OC-0034, p. 10-11.

³⁸ G-139-14, *FortisBC Inc. Multi-Year Performance Based Ratemaking Plan For 2014 Through 2018*, September 14th 2014, p. 33.

Setting the productivity factor (X)

As stated in its initial mémoire, OC supports PEG's recommendation of undertaking productivity and benchmarking studies in Phase 2, in order to inform on the determination of "X"³⁹. Both experts have provided extensive evidence in IRs and during HQD's Phase 1 hearing on drawbacks associated with data and methodology choices, as well as possible solutions. OC notes that PEG addresses multiple concerns with regard to data and methodology issues in its updated report⁴⁰.

Unforeseen or exogenous events (Z factor)

Both experts are suggesting using a Z factor to cover unexpected elements of cost that are out of the control of the company. As stated in its initial mémoire⁴¹, OC supports the idea of having a Z factor. In Phase 3, guidelines should be developed to define the elements to be included.

Earning sharing mechanism (ESM)

Both experts suggest having an earning sharing mechanism (ESM) as part of HQT's MRI. While an ESM reduces the efficiency incentive of a MRI, it is considered to be a prudent approach for a first generation MRI. As stated in its initial mémoire⁴², OC suggests including an ESM as part of HQT's MRI.

Off-ramp

Both experts suggest having an Off-ramp provision in case of large deviations in HQT's revenue requirement. As suggested by PEG and CEA, the Off-ramp provision could be benchmarked on deviations from allowed ROE. As stated in its initial mémoire⁴³, OC recommends including an Off-ramp provision as part of HQT's MRI.

Efficiency carryover mechanism (ECM)

PEG suggests that an efficiency carryover mechanism ("ECM") should be considered for HQT's MRI. As stated in its initial mémoire⁴⁴, OC recommends using an ECM for HQT's MRI in Phase 3.

³⁹ C-OC-0012, p. 12.

⁴⁰ C-AQCIE-CIFQ-0107, p. 129-130.

⁴¹ C-OC-0012, p. 15.

⁴² C-OC-0012, p. 8.

⁴³ C-OC-0012, p. 19.

⁴⁴ C-OC-0012, p. 20.

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Performance indicators

On the basis of the Elenchus report, OC noted in its first mémoire that MRIs generally include performance metric systems to balance some of the effects of efficiency incentives. For HQT, both experts are suggesting the use of performance indicators currently used by the Régie, such like Reliability and Security indicators. OC also note that HQD-HQT is now considering a Customer satisfaction indicator given the goals set out in Hydro-Québec's new *Plan stratégique*⁴⁵.

Experts also recommend incentivizing some of the performance metrics. For example, CEA suggests linking the performance of HQT to the sharing of earnings in the ESM. OC supports the use of performance indicators with some of them being incentivized. In its mémoire, OC also pointed out to the Régie the scorecard approach, an outcome-based approach used by the OEB, which could inspire the Régie⁴⁶.

Term

The term of HQT's first MRI must be determined so that as HQT-HQD puts it, an appropriate balance is obtained between the pursuit of efficiency and the risks for both HQT and its customers, both increasing with the number of years the MRI is in place⁴⁷. As stated in its initial mémoire⁴⁸, OC finds PEG's recommendation for a four years term to be appropriate. A four year term is more likely to accommodate the long-term nature of HQT's business decisions than a shorter term and is, on average, the length of MRIs in other Canadian jurisdictions.

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⁴⁵ C-HQT-HQD-0112, p. 26.

⁴⁶ C-OC-0012, p. 15-18.

⁴⁷ C-HQT-HQD-0108, p. 7.

⁴⁸ C-OC-0012, p. 12.