

MRI for Hydro-Québec Transmission

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1. Introduction

Québec's *Régie de l'énergie* has had a longstanding interest in *réglementation incitative* for transmission services of Hydro-Québec. On August 1, Hydro-Québec in its capacity as a provider of transmission and distribution ("T&D") services ("HQT" or "the Company") filed a request with the *Régie* to establish transmission rates for the three years from 2023 to 2025. *Réglementation incitative* has been largely excluded from the Company's proposal.

Pacific Economics Group Research LLC ("PEG") is North America's leading consultancy in the field of *réglementation incitative*. The *Association Québécoise des Consommateurs Industriels d'Électricité* ("AQCIÉ") and the *Conseil de l'Industrie Forestière du Québec* ("CIFQ") have asked PEG to prepare evidence for this proceeding on how *réglementation incitative* can continue for HQT consistent with applicable Québec Law.

In this document, we first provide pertinent background information on *réglementation incitative* for power transmission in Québec and on the evolution of *réglementation incitative* generally. We then discuss opportunities for incentive regulation of the Company's transmission services in the next few years. We then provide a proposal for evidence on *réglementation incitative* for power transmission in this proceeding.

2. Background

Québec Regulation

HQT operated under a *Régie*-approved first-generation *mécanisme de réglementation incitative* ("MRI") from 2019 to 2022. This mechanism was developed after Section 48.1 of Québec's *Loi Sur la Régie de l'énergie* (« LRÉ ») was established in 2013. This section mandated *réglementation*



incitative for T&D services of Hydro-Québec. Section 48.1 stated the objectives of *réglementation incitative* to be

- ongoing improvement in performance and service quality;
- cost reduction that benefits both consumers and the utility; and
- streamlining the process by which the *Régie* fixes or modifies utility rates.

Particular designs for *MRIs* were not prescribed in Section 48.1.

Section 49 of the *LRÉ* stated that when fixing or modifying rates for power transmission services the *Régie* should

- determine the rate base after giving due consideration to the fair value of the assets the *Régie* considers prudently acquired;
- determine the overall amounts of expenditure the *Régie* considers necessary for the provision of service;
- permit a reasonable rate of return on the rate base; and
- favour measures or incentives to improve performance and satisfaction of customer needs.

This language gave the *Régie* clear authority to judge the prudence of transmission costs and encouraged incentivized ratemaking provisions. Section 49 also permitted the *Régie* to “use any other (ratemaking) method it considers appropriate.”

The *MRI* approved for the Company’s transmission services was detailed in D-2018-001 and D-2019-060 and included the following provisions.

- *Revenus requis* rather than prices were capped.
- The *revenus requis* for the first year of the *MRI* was explicitly stated to be based on the cost of service.
- In later years of the mechanism, a *formule paramétrique* adjusted the *revenus requis* for *charges nettes d’exploitation* (“*CNE*”) that the Company incurred in the provision of services. This formula had the following terms.

- The inflation factor was a weighted average of growth in *IPC-Québec* and average hourly earnings.
- A 0.57% X factor was chosen by a process of *jugement*.
- The value of the *dividend client* was set at zero.
- A *facteur de croissance* provided compensation for system growth.

This formula applied to most *CNE*. However, costs of retirement programs were accorded variance account treatment.

- Largely traditional cost of service ratemaking continued for capital cost.
- A *mécanisme de traitement des écarts de rendement* (“*MTÉR*”) shared with customers any surplus earnings. Several performance metrics were linked to the *MTÉR*.
- A *clause de sortie* could trigger a reconsideration of the *MRI* in the event of a defined rate of return variance.
- The term of the plan was four years.

In 2019, Bill 34 abrogated Section 48.1 of the *LRÉ* and added a section to the *Loi Sur Hydro-Québec* that mandated a specific *MRI* for the Company’s distributor services. This reduced the *Régie’s* role in power distributor ratemaking. The *Régie* retained authority to approve *réglementation incitative* for the Company’s transmission services [Section 49(4) *LRÉ*].

In decision D-2022-053, which finalized rates for the last two years (e.g., 2021 and 2022) of the transmission *MRI*, the *Régie* asked the Company to provide a calendar for work anticipated to establish a second-generation *MRI* in its next *dossier tarifaire* and a post-mortem on its first-generation *MRI* in its 2022 annual report.

HQT instead requested and obtained provisional rates for 2023 that were unchanged from 2022 levels. The Company subsequently requested and received provisional rates for 2024. On August 1, 2024, Hydro-Québec as noted above filed a request to establish transmission rates for the three years from 2023 to 2025 and distribution rates for the single year 2025/2026.

A post-mortem on the first-generation transmission *MRI* was filed last June as part of the Company’s *Rapport Annuel 2023*. However, no calendar for development of a second-generation *MRI* has been provided. HQT has stated that, in view of what it claims are the unsatisfactory results of the



first-generation *MRI* and the abrogation of Section 48.1 of the *LRÉ*, it was inappropriate and premature to make such a proposal.

Bill 69, which is currently before the National Assembly, would create a new Section 48 of the *LRÉ* that mandates a new approach to ratemaking for T&D services of Hydro-Québec. This approach has the following features.

- Each three years, the *Régie* would establish tariffs for the next three years that reflect *revenus requis* for those years that ensure operation of the T&D networks. These *revenus requis* would presumably be informed by multiyear cost forecasts. Rate designs and service offerings may be reconsidered in these proceedings.
- Some portion of these annual *revenus requis* may be shifted between the years.
- Hydro-Québec may request a revision in these tariffs due to “particular circumstances”.

Section 49 of the *LRÉ* would remain in force with some revisions to the language. Notably, the *Régie* should now favor *mécanismes incitatifs* for power distributor as well as transmitter services. Furthermore, the *Régie* « *peut également utiliser tout autre méthodes ou tenir compte de tout autre element qu'elle estime approprié notamment pour favoriser la réalisation de la transition énergétique.* » Section 50 states that « *sont presumés prudemment acquis et utiles les actifs nécessaires pour assurer l'exploitation du réseau... acquis ou construits par le transporteur d'électricité* ». The provision of the *Loi Sur Hydro-Québec* that prescribed a specific *MRI* for distribution services of Hydro-Québec would be deleted.

General Trends in *Réglementation Incitative*

Réglementation incitative has evolved since the *Régie* first formally considered this ratemaking approach for T&D services of Hydro-Québec more than a decade ago. Innovations have occurred yearly. There are now four well-established general approaches to *réglementation incitative*.

- 1) Multiyear rate plans entail a moratorium on the rebasing of a utility's rates to its cost of service. Such rebasings are typically scheduled to occur every three to five years, although plans with two-year cycles have been called multiyear rate plans in a few jurisdictions (e.g., the state of Washington). Between rate cases, an attrition relief mechanism adjusts rates using a predetermined formula that is not linked to the utility's actual cost during the plan. Methods for designing attrition relief mechanisms include cost forecasting, indexing, and historical own-



cost trending. Many attrition relief mechanisms have hybrid designs that include more than one of these approaches. Some costs are subject to variance account (also called “Y factor”) treatment. Some multiyear rate plans include *MTÉR*s and *clauses de sortie*. Multiyear rate plans are widely used in Canada and modern economies overseas and their popularity has grown considerably in U.S. ratemaking.¹

- 2) Weakening the link between revenue and system use by such means as revenue decoupling and lost revenue adjustment mechanisms strengthens incentives for demand-side management.
- 3) Variance accounts with partial passthroughs strengthen cost containment incentives.
- 4) Targeted performance incentive mechanisms based on metrics and targets can strengthen performance incentives in targeted areas (e.g., reliability, customer service quality, cost management, and demand-side management).
- 5) Targeted incentives for underused practices (e.g., pilot programs and cost trackers) encourage practices such as demand-side management that utilities tend to underuse.

Multiyear rate plans can include the other four approaches to *réglementation incitative*.

Moreover, the other four approaches can be employed in the absence of a multiyear rate plan and often are.

Although the Federal Energy Regulatory Commission in the United States favors the very different cost of service formula approach to power transmission ratemaking, multiyear rate plans are quite common for power transmission in other countries with modern economies. Plans for power transmitters often use an approach to attrition relief mechanism design that entails a sizable role for cost forecasts. For example, plans began for transmission services of Hydro One Networks shortly after that for Hydro-Québec, and Hydro One has operated under such plans for its transmission services ever since. The attrition relief mechanisms for Hydro One transmission have had hybrid designs that entail a *formule paramétrique* for *CNE* revenue and cost forecasting for capital revenue. An X factor based on statistical benchmarking has applied to both *CNE* and capital revenue.

¹ See, for example, PEG’s recent report on a survey of PBR and other alternatives to traditional ratemaking for the Edison Electric Institute: Mark Newton Lowry, Matt Makos, Gretchen Waschbusch, and Benjamin Cohen, “Innovative Regulatory Tools for Addressing an Increasingly Complex Energy Landscape: 2023 Update,” Edison Electric Institute, February 2024.

A new challenge in multiyear rate plan design is how best to facilitate a cost-effective transition to an economy that uses cleaner energy. This transition will occasion substantial growth in electricity demand but with uncertain timing. Jurisdictions that have grappled with this challenge have included British Columbia, Ontario, California, Massachusetts, Australia, and Great Britain. The BC Utilities Commission recently decided to eschew an approach to multiyear rate plan design for BC Hydro that included *formules paramétriques*. The energy transition was a stated reason. BC Hydro is instead expected to operate under a multiyear rate plan with an attrition relief mechanism based on a multiyear cost forecast. The BC Commission continues to entertain multiyear rate plans with indexing for gas and electric services of the FortisBC utilities.

Other jurisdictions are using alternative approaches to multiyear rate plan design to address the energy transition. For example, PEG has worked for the Ontario Energy Board in a just-concluding proceeding that has considered a multiyear rate plan for power distributor services of Toronto Hydro-Electric. Toronto Hydro claimed in this proceeding that its new attrition relief mechanism must be based on a combination of forecasts and variance accounts to better address the challenges of the energy transition. A settlement was reached last week that contains the following provisions.

- The attrition relief mechanism would be based on forecasts, but cost would be forecasted in real terms and then escalated by forecasted inflation less a stretch factor. The inflation factor would be subject to a true up to reflect new information.
- The stretch factor would be based on cost benchmarking. PEG and a THESL witness each prepared a benchmarking study for the proceeding and the 0.6% stretch factor in the settlement is consistent with PEG's study.
- Demand-related costs would receive variance-account treatment due to uncertainties associated with demand growth in the next five years.

3. Implications for Hydro-Québec

Approaches (2)-(5) to *réglementation incitative* are all fair game for HQT's transmission services in 2025 even if the revenue requirement is based on a cost forecast. These approaches can include the following.

- Statistical benchmarking of the proposed revenue requirements
- Other targeted performance incentive mechanisms



- Targeted incentives for underused practices such as effective peak load management
- Partial pass through variance accounts for Y-factored and Z-factored costs.

As for the new ratemaking regime detailed for T&D in Bill 69, this is a multiyear rate plan and thus is a form of *réglementation incitative*. Many multiyear rate plans have attrition relief mechanisms based on multiyear cost forecasts, including plans in Great Britain, Georgia, Minnesota, and New York state. A forecast basis for attrition relief mechanisms weakens performance incentives but has some advantages during the anticipated energy transition. There is still a potential role for benchmarking, stretch factors, and inflation indexing in an attrition relief mechanism that relies heavily on cost forecasts. The provision in section 48.1 that HQT D can request new rates during the plan can be addressed with a Y factor, a Z factor, and/or a *clause de sortie*.

4. Proposed PEG Evidence

This proceeding is a good time for the *Régie* to start considering new approaches to *réglementation incitative* for T&D services of Hydro-Québec. Here are some reasons.

- Current Québec law states that the *Régie* should consider *réglementation incitative* for power transmission services, gives it flexibility in doing so, and the *Régie* has indicated a continuing interest in doing so. Continuation of *réglementation incitative* for transmission is not conditional on a positive review of the first-generation *MRI* by HQT D.
- Some kinds of *réglementation incitative* can be pursued in the absence of multiyear rate plans and these are applicable to ratemaking years addressed in this proceeding (e.g., 2024-2025).
- The *Régie* could, in any event, treat its transmission ratemaking from 2023 to 2025 as either a multiyear rate plan of short term or a plan that is subject to suspension or reconsideration if Bill 69 is approved.
- 2024 or 2025 could alternatively be the rebasing year for a new *MRI*. It is common in *réglementation incitative* to consider the first year “castoff” rates and the multiyear rate plan simultaneously.

- Bill 69 by no means precludes *réglementation incitative* if passed since it effectively requires a multiyear rate plan and we have noted that many *MRIs* have had forecasted attrition relief mechanisms.
- Consideration of *MRI* evidence in this proceeding can help the *Régie* fashion instructions for evidence in future transmission *MRI* proceedings.

Non-Empirical Work

Based on this analysis, PEG proposes to provide non-empirical evidence on the following topics in a polished report:

- HQT D’s post mortem on its first-generation transmission *MRI*;
- relevant changes in *réglementation incitative* since the *Régie*’s first *MRI* proceeding, including innovations to better address the energy transition;
- how multiyear rate plans for power transmission work in a few salient jurisdictions where cost forecasts are used to design attrition relief mechanisms (e.g., Great Britain, Ontario, and Australia);
- what kinds of *réglementation incitative* make sense for transmission in 2024 and 2025 in view of Québec’s planned energy transition; and
- what changes in *réglementation incitative* for power transmission merit consideration in a future proceeding if Bill 69 is passed.

Preparation of this evidence would require review of recent developments in Québec ratemaking and energy policies. This would be followed by the drafting of *demandes des renseignements* (“*DDRs*”) to HQT D and the review of their responses. After filing our report, PEG would respond to *DDRs* of other parties and provide oral testimony. A trip to Montréal is assumed. We would also assist AQCIE and CIFQ with cross examination of other parties in the proceeding and final arguments.

Empirical Work

It does not make sense to update our research on the productivity trends of U.S. power transmitters in this proceeding. However, for an additional fee PEG can update and upgrade its



econometric benchmarking work on HQT D's transmission costs. Arguments favoring such research include the following.

- Benchmarking HQT D's transmission costs and calculating its transmission productivity trends could shed light on the impact that the first generation *MRI* had on the Company's performance. PEG recently used research on the productivity trends of Alberta energy distributors to measure their response to two multiyear rate plans.
- Stretch factors are typically based on benchmarking studies in North American ratemaking.
- Our previous power transmission benchmarking and productivity research for AQCIE/CIFQ used a sample period ending in 2019. Four additional years of U.S. transmission operating data are now available. Data from transmission operations of Hydro One Networks could also be included.
- The Company's proposed costs for 2024 and 2025 could be benchmarked in addition to its historical costs if satisfactory forecasts are provided.
- Methodological upgrades could make such research more relevant to Québec operating conditions.

Arguments against new transmission benchmarking work include the following.

- PEG's past work to benchmark the cost of HQT produced extremely negative results.
- The cost of the work is substantial.
- It would take time to gather the necessary data from HQT D.

Weighing these considerations, we do not propose new econometric benchmarking work on HQT D's transmission cost at this time. However, we encourage the *Régie* to consider such work for distributor services of the Company in a subsequent proceeding.

A less expensive piece of work that may be worthwhile in this proceeding is to measure how the *CNE* productivity trend of Hydro-Québec's transmission changed during the *MRI*. We recently published an illuminating study in the *Electricity Journal* of how two generations of multiyear rate plans in Alberta



affected energy distributor productivity growth.² A budget for such work can be prepared if the *Régie* is interested.

Proposed Cost of Services

In estimating the cost for this proposed work we have escalated the applicable hourly rates for our personnel from the *Régie's* January 2020 *Guide de paiement des frais* to reflect the substantial 15% *IPC inflation* since that time. The resultant proposed rates are far below those of competing consultancies or those we charge many clients and are much lower in U.S. dollars due to an unfavorable USD/CAD exchange rate.

² Lowry, Mark Newton, David Hovde, Rebecca Kavan, and Matthew Makos. "Impact of Multiyear Rate Plans on Power Distributor Productivity: Evidence from Alberta," *The Electricity Journal*, Volume 36, Issue 5, June 2023.

