

**Demande de renseignements
du Distributeur et du Transporteur d'électricité
à PEG**

Questions de HQTD

1. Préambule :

C-AQCIE-CIFQ-0025

Rapport d'expert, p. 82, lignes 7-8.

“Some features of current regulation may be worth keeping because they work well or do not work badly enough to merit change.”

- a. Quels sont les caractéristiques du régime actuel méritant d'être conservées dans le futur MRI du Transporteur et du Distributeur?**

2. Préambule :

C-AQCIE-CIFQ-0025

Rapport d'expert, p. 100, lignes 6-9.

“As for HQT, the Company's revenue requirement history does not provide pronounced evidence of a "stairstep" cost trajectory that might be better addressed by a hybrid ARM. The HQT system may be too large and diverse for particular capex projects to have a large impact. This is an argument favoring an index-based escalator.”

- a. Sur quelles bases PEG s'appuie-t-il pour tirer une telle conclusion? Veuillez préciser les documents consultés au soutien de celle-ci.**

3. Préambule :

C-AQCIE-CIFQ-0025

i) Rapport d'expert, p. 98, lignes 6-8.

“If the Régie instead prefers the all-forecast approach, extensive use should be made of statistical benchmarking and productivity research to reduce regulatory cost and ensure value for customers, as in Australia and Ontario.” (nous soulignons)

ii) Rapport d'expert, p. 100, ligne 29 et p. 101, lignes 1-7.

“The Phase 2 study should, if HQT's data permits, consider the division's productivity trends as well as the trends for a large sample of investor-owned US power transmission utilities. The suitability of HQT's data for such an exercise is uncertain and should be clarified in Phase 1 data requests. The Phase 2 study should also consider appropriate inflation measures for an index-based ARM for Québec transmission. Finally, the study should survey transmission productivity studies from respected sources in the academic literature and regulatory proceedings. We also encourage the Régie to commission an independent statistical cost benchmarking study of HQT that can be useful in setting its stretch factor. Econometric research

required for index development reduces the incremental cost of a benchmarking study.” (nous soulignons)

- a. Dans ces deux extraits, PEG fait-il référence aux mêmes types d'études?
 - b. Ces études présentent-elles toutes le même degré de difficulté de réalisation? Sinon, veuillez expliquer.
4. Préambule :
C-AQCIE-CIFQ-0025
Rapport d'expert, p. 108, lignes 3-4.

“If service to large load customers is subject to price caps, there is no need to recover load retention discounts from other customers between rate cases.”

- a. Veuillez expliquer ce que l'intervenant entend par : « there is no need to recover load retention discounts from other customers between rate cases ».
5. Préambule :
C-AQCIE-CIFQ-0027
Revised Table 4 - Summary of Incentive Regulation Recommendations

HQD : Revenue cap for most customers and Price cap for industrial customers

Le 3 novembre 2015, l'AQCIE-CIFQ soumet une version amendée du tableau 4 de la preuve d'expertise de PEG, à sa page 110 (C-AQCIE-CIFQ – 0025). Dans ce tableau révisé, PEG recommande un mécanisme hybride pour le Distributeur (HQD) et non plus pour le Transporteur (HQT) comprenant entre autres, l'application d'un prix plafond pour les clients industriels.

- a. Veuillez confirmer qu'aucune autre modification au reste de la preuve de l'expert n'est requise à la suite de la modification apportée au Tableau 4.
- b. Veuillez définir les catégories tarifaires visées par l'application d'un mécanisme hybride aux clients industriels.

Questions de Concentric Energy Advisors

6. **Préambule:**
C-AQCIE-CIFQ-0025
Rapport d'expert, p. 3, lignes 9-13.

“Regulators use cost trackers to expedite recovery of some costs. Large, volatile costs like those for fuel and purchased power have traditionally been tracked. Tracking is further discussed in Section 5. The components of rates that address the less volatile costs of non-energy inputs like labor, materials, and capital are sometimes called “base rates,” and are not typically tracked.”

- a. **Please confirm whether PEG is aware of numerous examples of cost trackers implemented in North America that do cover “non-energy inputs like labor, materials, and capital”.**
- b. **Please provide the report authored by PEG for EEI: Alternative Regulation for Evolving Utility Challenges: An Updated Survey, Mark Lowry, et al., January 2013.**

7. **Préambule :**
C-AQCIE-CIFQ-0025
Rapport d'expert, p. 3, lignes 14-21.

“To establish rates, the revenue requirement must be allocated across the utility’s services. For each service, rates are then set to recover the assigned revenue requirement given assumed quantities of “billing determinants.” Most base rate revenue is typically drawn from usage charges which vary with a customer’s use of the system. For commercial and industrial customers, demand charges collect most base rate revenue. For residential customers, who often lack advanced metering infrastructure, base rate revenue is typically drawn chiefly from volumetric charges. The balance of residential revenue is typically drawn from fixed customer charges.”

- a. **Please indicate which of the above comments apply to distribution utilities, transmission utilities, or both.**

8. **Préambule :**
C-AQCIE-CIFQ-0025
Rapport d'expert, p. 7, lignes 10-21.

“MRPs are the most common approach to incentive regulation around the world. These plans are designed to compensate a utility for its services for several years with revenue that does not closely track the utility’s own cost of service. Two components of MRPs are most commonly used to accomplish this.

- *A moratorium is imposed on general rate cases that typically lasts four to five years.*
- *Between rate cases, an attrition relief mechanism (“ARM”) automatically adjusts rates to reflect changing business conditions without linking the relief to the utility’s own cost growth.”*

The combination of a rate case moratorium and the ARM approach to rate escalation can strengthen cost containment incentives and permit an efficient utility to realize its target rate of return on equity (“ROE”) despite a material reduction in regulatory cost. This constitutes a remarkable advance in the “technology” of regulation.”

- a. **Please indicate the number of countries researched to determine “MRPs are the most common approach to incentive regulation around the world”.**
- b. **Please cite Canadian or U.S. legal standards or precedents indicating a utility must meet these standards to be permitted to “realize its target rate of return on equity”.**

9. Préambule:

C-AQCIE-CIFQ-0025

Rapport d’expert, p. 9, ligne 25.

“Provinces, where MRPs are used in Canada, are depicted in Figure 1.”

- a. **Does PEG consider the electric rate plans in effect for Yukon Electrical Company Limited and Northwest Territories Power Corporation to be models or templates appropriate for HQD or HQT? Please explain why or why not.**

10. Préambule:

C-AQCIE-CIFQ-0025

Rapport d’expert, p. 9, ligne 28 - p. 10, ligne 6.

“Overseas, the privatization of many energy utilities in the last 20 years has forced governments to reconsider their approach to regulation. The majority have chosen MRPs over the traditional North American approach to regulation for power transmission and distribution alike. Regulators in Australia, Britain, Germany, the Netherlands, New Zealand, and Norway are MRP leaders.”

- a. **Explain what is meant by “The majority have chosen MRPs”.**
- b. **Please provide supporting data including the countries, utilities, type of utility (electric transmission, electric distribution, gas transmission, gas distribution, etc.), and type of MRP program adopted.**

11. Préambule :

C-AQCIE-CIFQ-0025

Rapport d'expert, p. 10, ligne 13 - p. 11, ligne 2.

“The use of MRPs in the United States has recently spread to vertically integrated utilities in a diverse collection of other states that includes Colorado, Florida, Georgia, and Washington.”

- a. Please indicate whether PEG’s research shows that the use of MRPs in the United States has increased or decreased over the past two decades, and provide supporting data (including references, tables, lists, etc.).**

12. Préambule :

C-AQCIE-CIFQ-0025

Rapport d'expert, pp. 11 (lignes 5-11) et 12 (note en bas de page)

“An indication of the potential incentive impact of MRPs can be found in the experience of Central Maine Power (“CMP”), which operated under four successive MRPs from 1995 to 2014 [...]”¹³.

¹³ *In 2013, CMP made a request for an MRP that would have significantly increased its revenue to allow for new capital expenditures. The CMP rate case was eventually settled, with a stipulation to terminate PBR in Maine and return to a system more akin to COSR. Maine Public Utilities Commission, Order Approving Stipulation, Docket No. 2013-00168, August 25, 2014.”*

- a. Why, in PEG’s opinion, did the MPUC approve a return to cost of service regulation, despite the productivity gains cited in Figure 3 on p. 12?**
- b. Is PEG aware of other commissions that have returned to cost of service regulation in the U.S. or Canada for electric utilities? If so, please cite these examples.**
- c. Please confirm PEG was involved in the CMP case, and if so, provide PEG’s written testimony and the MPUC’s decision.**

13. Préambule:

C-AQCIE-CIFQ-0025

Rapport d'expert, p. 13, lignes 1-4.

- *“Cost containment incentives 1 are strengthened by longer plan terms and well designed efficiency carryover mechanisms.*
- *The incremental incentive impact of lengthening the plan term diminishes.*
- *Incentives are modestly weakened by earnings sharing mechanisms.”*

- a. Please indicate when in years, in PEG’s opinion, the “incremental incentive impact of lengthening the plan term diminishes.”**
- b. Please show precedents and evidence that supports this opinion (provide the basis).**

14. Préambule :

C-AQCIE-CIFQ-0025

Rapport d'expert, p. 20, lignes 17-23.

“Broad regional or national peer groups are commonly used to establish the base productivity trend. It is generally necessary for the regulator to develop an independent view of the appropriate index formula by commissioning an independent productivity study. These studies can be managed by the Commission or intervenors. The former approach has been used in Alberta and Ontario whereas the latter approach has been used in British Columbia. While controversy is common concerning peer groups or productivity measurement methods, the base productivity trends chosen by North American regulators have tended to be around 1 percent.”

- a. Please indicate if the regulated electric or gas companies in Ontario also submitted independent productivity analysis.**
- b. Please indicate in addition to the AUC's commissioned productivity study, how many additional productivity analyses were submitted by the utilities, and the range of submitted productivity estimates.**
- c. Please indicate the range of productivity factors adopted by the OEB for the utilities considered the “most” and “least” efficient.**
- d. Please indicate if the OEB excluded the two largest utilities from the data set supporting these analyses.**
- e. Show detailed support of the specific base productivity trends chosen by North American regulators tending to be around 1 percent.**

15. Préambule :

C-AQCIE-CIFQ-0025

Rapport d'expert, p. 20, ligne 25 - p. 21, ligne 6.

“The indexing approach to the design of attrition relief mechanisms originated in the United States. Development was facilitated there by the availability of standardized high-quality data for numerous companies in several utility industries. First applied in the railroad industry, index-based ARMs have subsequently been used to regulate telecom, gas, electric, and oil pipeline utilities. California, Maine, and Massachusetts were early adopters in retail energy utility regulation. U.S. energy utilities that have operated under index-based ARMs include Bay State Gas, Boston Gas, Central Maine Power, San Diego Gas & Electric, Southern California Gas, and NSTAR Electric. Indexed based price caps are currently used by the Federal Energy Regulation Commission to regulate U.S. oil pipelines.”

- a. Please indicate how many electric distribution utilities in the U.S. are currently regulated under index-based ARMs. Please identify these companies.**
- b. Please indicate how many electric transmission companies in the U.S. are currently regulated under index-based ARMs. Please identify these companies.**

16. Préambule :
C-AQCIE-CIFQ-0025
Rapport d'expert, p. 21, lignes 14-21.

“Index-based ARMs compensate utilities automatically for key external cost drivers such as inflation and demand growth. This reduces operating risk without weakening performance incentives. Customers can be guaranteed the benefit of productivity growth that is superior to the industry norm.”

Index-based ARMs do not fully compensate utilities for cost surges. Necessary cost surges can be addressed by cost trackers, but trackers involve their own complications as we discuss further below. The design of index-based ARMs can involve statistical cost research that is complex and sometimes controversial.”

- a. **How are customers guaranteed the benefit of productivity growth that is superior to the industry norm with an index-based ARM?**
- b. **If an index-based ARM does not allow a utility a reasonable opportunity to earn its authorized return, in PEG’s opinion, would the resulting return on equity meet the definition of a fair return in Canada?**

17. Préambule :
C-AQCIE-CIFQ-0025
Rapport d'expert, p. 22, lignes 13-18.

“The hybrid approach has been found to be adaptable to the diverse cost trajectories of California’s gas and electric utilities and has been used from time to time before and after the restructuring of the electric power industry. The hybrid approach has recently been used in the ARMs of Southern California Edison and the three Hawaiian Electric utilities.”

- a. **Please provide an overview of the hybrid ARMs used by Southern California Edison and the three Hawaiian electric utilities, and the dates adopted.**

18. Préambule :
C-AQCIE-CIFQ-0025
Rapport d'expert, p. 24, lignes 15-17.

“The menu developed for the 2010-2015 plan and presented in Ofgem (2009) is given in the matrix below. The first line of the matrix is a ratio between the utility’s cost forecast and the regulator’s cost forecast.”

- a. **Please indicate if this methodology still applies in the Ofgem’s most recent RIIO version of incentive regulation for electric distributors. If not, please describe how it has changed.**

19. Préambule :

C-AQCIE-CIFQ-0025

Rapport d'expert, p. 26, lignes 14-15.

"We have noted benchmarking and productivity research are used extensively by regulators that use forecasted ARMs."

- a. **Please describe for each regulatory agency, the estimated number of staff and utilities regulated:**
 - i) **Ofgem**
 - ii) **Australian Energy Regulator**
 - iii) **Ontario Energy Board**
 - iv) **Régie de l'énergie**

20. Préambule :

C-AQCIE-CIFQ-0025

Rapport d'expert, p. 32, lignes 14-15.

"Appropriate weights can be obtained from econometric research on the drivers of power transmission cost."

- a. **Please provide any studies PEG is aware of that provided econometric research on the drivers of power transmission costs and appropriate weights.**

21. Préambule :

C-AQCIE-CIFQ-0025

Rapport d'expert, p. 33, lignes 23-24.

"Three practical methods that have been developed for calculating capital costs in indexing studies merit note."

- a. **Is there a consensus among practitioners as to the best approach for measuring capital costs for utilities?**
- b. **Is data availability a constraint for each approach?**
- c. **Do these methods produce results that can vary considerably?**

22. Préambule :

C-AQCIE-CIFQ-0025

Rapport d'expert, p. 36, lignes 3-7.

"Unfortunately, the number of utilities, for which good data are available, which face productivity growth drivers similar to those facing the subject utility is sometimes limited. This is a chronic problem in Canada, where standardized data that could be used to accurately measure the productivity trends of numerous utilities are not readily available and there are few potential peers for HQD and HQT in any event."

- a. If PEG was asked to develop productivity studies for HQD and HQT, what specific peer groups would PEG recommend and why?
- b. What does PEG consider to be the potential pool of transmission providers from which a peer group would be selected?

23. Préambule :

C-AQCIE-CIFQ-0025

Rapport d'expert, p. 42, lignes 24-29.

“Our analysis suggests that for a distributor that does not have unusual CapEx needs, a well-designed index-based ARM should be sufficient to finance normal CapEx requirements on average over many years. The budgets yielded by the ARM may be too small in some years but will be too large in others. This mirrors the outcome of competitive markets where, for example, an aluminum smelter cannot count on higher aluminum prices in the years immediately following an increase in its capacity.”

- a. What recourse would a utility have if the indexed ARM is insufficient to finance its capital requirements?

24. Préambule :

C-AQCIE-CIFQ-0025

Rapport d'expert, p. 47, lignes 19-20.

“The popularity of capital trackers in US utility regulation reflects in part the generally more conservative approach to regulation in US jurisdictions.”

- a. Please explain what is meant by “conservative” in this context.
- b. Does PEG believe that any of these trackers is not appropriate?
- c. Does PEG believe that regulation in the U.S. is more “conservative” than in Canada?

25. Préambule :

C-AQCIE-CIFQ-0025

Rapport d'expert, p. 69, lignes 28-29.

“National Grid has secured efficiency carryover mechanisms for several power distribution utilities in the Northeast US.”

- a. Please indicate if the rate plans described for the National Grid utilities have been terminated, and if so, in what year.

26. Préambule :
C-AQCIE-CIFQ-0025
Rapport d'expert, p. 76, lignes 8-9.

“Indications of operating inefficiency imply the need for slower revenue growth going forward. Unusual cost conditions complicate benchmarking.”

- a. **Please provide support for operating inefficiencies if this statement is referring to HQD or HQT.**
- b. **Please describe how PEG would propose to account for HQD's and HQT's unusual cost conditions in a benchmarking study.**

27. Préambule :
C-AQCIE-CIFQ-0025
Rapport d'expert, p. 94, lignes 10-15.

“A transition to MRPs may require a change in the culture of Hydro-Québec and other participants in Québec regulation. There is no practical way for MRPs to simultaneously strengthen performance incentives materially and ensure that rates of return are always close to allowed levels. A culture of cost recovery entitlement is less suited to operation under MRPs than an attitude, more typical of Québec businesses, that a competitive rate of return is, with sound management and a little luck, attainable in the long run.”

- a. **In PEG's opinion, how much difference between an allowed and earned return would indicate the fair return standard was no longer being met?**

28. Préambule:
C-AQCIE-CIFQ-0025
Rapport d'expert, p. 96, lignes 10-14.

“If decoupling is instituted, several issues in the design of the revenue decoupling mechanism will require resolution. One is whether decoupling should apply to industrial customers. If the answer is “yes”, an important further issue is whether baskets should be implemented that insulate residential and commercial customers and industrial customers from the revenue impact of fluctuations in each other's revenue.”

- a. **Please provide examples of where price and revenue caps have been mixed across customers' classes in the implementation of MRPs.**

29. Préambule:
C-AQCIE-CIFQ-0025
Rapport d'expert, p. 99, lignes 11-13.

“Research should ideally be conducted on the productivity trends of both HQD and a large sample of US power distributors. A study of US trends is the more essential of these two as those trends provide the essential external productivity growth standard.”

- a. **What large sample of U.S. power distributors would PEG propose for such a study?**
- b. **If such a study were conducted, how would PEG specifically propose to account for the substantial differences between HQD and the U.S. sample?**

30. Préambule:
C-AQCIE-CIFQ-0025
Rapport d'expert, p. 99, lignes 19 à 25.

“We also encourage the Régie to commission an independent transnational statistical benchmarking study of HQD that can provide input on the appropriate stretch factor. Econometric research used to develop ARMs reduces the incremental cost of a cost benchmarking study. Econometric benchmarking studies are favored by regulators in a number of jurisdictions. We believe that independent benchmarking studies are much more effective at establishing the truth about a utility's operating performance than a critique by Régie staff and intervenors of utility-commissioned studies.”

- a. **What countries would PEG propose to include in such a study?**
- b. **What would be the estimated cost and timeframe for its completion?**
- c. **How would the study account for the differences in the governmental, macroeconomic and operating circumstances of the sample?**

31. Préambule:
C-AQCIE-CIFQ-0025
Rapport d'expert, p. 100, lignes 20-23.

“Using data on the operations of US utilities, we have undertaken preliminary econometric research that suggests that we can obtain sensible and statistically significant weights for a transmission scale index that is serviceable for a revenue cap index for HQT.”

- a. **Please provide the preliminary econometric research.**

32. Préambule:

C-AQCIE-CIFQ-0025

Rapport d'expert, p. 100, lignes 24-30 - p. 101, ligne 1.

“Indexing research can provide the foundation for an index-based ARM for HQT. It is also useful in the design of index-based escalators for O&M revenue in hybrid ARMs and index-based forecasts of O&M expenses in all forecast ARMs. An independent productivity study is, therefore, desirable for power transmission in Phase 2 as well. Trends in the O&M, capital, and multifactor productivity of transmission utilities should be addressed in this study as well.

The Phase 2 study should, if HQT's data permits, consider the division's productivity trends as well as the trends for a large sample of investor-owned US power transmission utilities.”

- a. **Please provide a list of companies PEG would include in such a study.**
- b. **How would the transmission operations of these companies be isolated from other operations?**
- c. **Please list all transmission companies in North America PEG is aware of operating under index-based ARMs, or other forms of MRPs.**

33. Préambule:

C-AQCIE-CIFQ-0025

i) Rapport d'expert, p. 102, lignes 3-6.

ii) Rapport d'expert, p. 106, lignes 5-7.

i) “While more effort in a traditional review of HQD's power supply costs should produce better results, steps should be taken to strengthen HQD's incentive to contain these costs. One possible approach is to incentivize the power supply cost tracker. Revenue/MWh could, for example, be based b% on HQD's actual cost and (1-b)% on its forecasted cost.”

ii) “We discussed in Section 6.2.4 the option of an incentivized cost tracker for HQD's power supply expenses. An alternative means of strengthening the division's incentive to contain these expenses is to establish a PIM for power supply costs.”

- a. **Please indicate any North American commission that has approved such a mechanism on power supply costs, and cite the decision.**

34. Préambule :

C-AQCIE-CIFQ-0025

Rapport d'expert, p.102, lignes 23-26.

“We do not believe that HQD needs a capital cost tracker in the first plan period. HQT, in contrast, might need the option of requesting tracker treatment for some projects if an index-based ARM is developed. This proposed treatment would be similar to the Ontario Energy Board’s Incremental Capital Module.”

- a. **Is PEG aware of any concerns expressed by utilities regarding the allowance of capital projects under the OEB’s Incremental Capital Module?**
- b. **In which of the OEB’s options under its latest incentive regulation framework for electric distributors is the Incremental Capital Module allowed, and how many utilities have applied under this option?**

35. Préambule :

C-AQCIE-CIFQ-0025

Rapport d'expert, p.105, lignes 10-12.

“Both plans should have extensive performance metric systems. In these systems, some metrics should have only targets whereas others should be used in performance incentive mechanisms.”

- a. **What criteria would PEG apply to determine whether a metric would be used in a performance incentive mechanism vs. “have only targets”?**

36. Préambule :

C-AQCIE-CIFQ-0025

Rapport d'expert, p.105, ligne 28 - p. 106, ligne 4.

“HQD could be rewarded for documented success at reducing peak load. Its reward could be a share of documented distribution, transmission, and power supply savings. Distribution CapEx savings from particular local projects could be rewarded in the manner of the Brooklyn Queens Demand Management project. Market transformation is further encouraged if a PIM can be devised that encourages CDM from all sources.”

- a. **Does the reference to a share of documented distribution and transmission savings refer to avoidance/deferral of future investments or savings from facilities that are already in service?**
- b. **Please describe how the BQDM project is relevant for purposes of this proceeding?**
- c. **Does PEG understand that the current proceeding is addressing “market transformation” issues? If so, please explain how.**

37. Préambule:

C-AQCIE-CIFQ-0025

Rapport d'expert, p. 109, lignes 11-15.

“In addition to independent productivity trend studies, there should be statistical benchmarking studies of each division’s recent historical costs and the costs forecasted for the 2017 test year. The Régie should also consider hiring independent engineering consultants or developing additional in house expertise to develop better independent views of the capex requirements of the two divisions.”

- a. **Please describe precisely how the benchmarking studies would be used in the rate determination.**
- b. **How will these benchmarking studies take the specific characteristics of the Transmission and Distribution provider into account?**