

**DEMANDE DE RENSEIGNEMENTS N° 1 D'OPTION CONSOMMATEURS (OC) À
PACIFIC ECONOMICS GROUP (PEG)**

**IMPLANTATION D'UN MÉCANISME DE RÉGLEMENTATION INCITATIVE (MRI)
– PHASE 3**

R-4011-2017

Inflation factor I

- 1. Référence :**
- i) Pièce B-0178, HQD20-D2, p. 21.
 - ii) Pièce B-0177, HQD20-D1, p. 8-9.
 - iii) Pièce C-AQCIE-CIFQ-0032, p. 51.

Préambule :

In reference i), Mr. Coyne quotes HQD's evidence that presents the Distributor's proposal for the inflation factor :

“The proposed “I” is a three-part index, with weights based on HQD's projected expenses in year 1 of the 4-year MRI.

- 1) Compensation Growth - fixed weighted index of average hourly earnings in Québec (all industries) to establish the indicator of changes in salary costs (weight: 16.6%)*
- 2) Costs Related to Assets - implicit index of business investment, the fixed capital investment component, published in the quarterly economic accounts of Québec's GDP (weight 56.8%)*
- 3) Other Expenses - the annual variations in the Québec CPI services, according to the method proposed by the Régie (weight: 26.6%).”*

In reference ii), HQD discusses the biases associated with using non-adjusted average hourly earnings of the EERH survey.

In reference iii), Dr. Lowry concludes *“that the IPC^{Québec} is a reasonable subindex for HQD's inflation measure if the formule d'indexation applies to fuel costs. The GDPIPI for final domestic demand in Canada merits consideration if the Régie decides to add a price subindex for fuel cost to the inflation measure”*.

Demande :

- 1.1 Has Dr. Lowry considered HQD's 3 factor inflation index proposal? If so, please provide comments. Please address HQD's remarks on biases associated with non-adjusted average hourly earnings.
- 1.2 Has Dr. Lowry considered whether a 3 factor inflation index and proposed weightings, in particular including costs related to assets, as proposed by HQD, affects his conclusion for

the appropriate I factor? If so, please comment.

Réponse de AQCIE-CIFQ / PEG :

- 1.1 Please see our response to DDR n° 2 of the Régie to AQCIE-CIFQ Question 1.
- 1.2 Please see our response to DDR n° 2 of the Régie to AQCIE-CIFQ Question 1.

Productivity factor X

- 2. Référence :**
- i) **Pièce C-AQCIE-CIFQ-0032, p. 14.**
 - ii) **Pièce C-AQCIE-CIFQ-0032, p. 29.**
 - iii) **Pièce B-0178, HQD20-D2, p. 23.**

Préambule :

- i) *“PMF trends of the U.S. and Canadian economies are detailed in Table 2. It can be seen that the PMF trend of the U.S. economy was fairly brisk, averaging 1.06% annual growth annually from 1998-2015. A sizable adjustment to the X factor is thus warranted in a U.S. formule d’indexation when the GDPPI is used as the inflation measure. The PMF trends of the Canadian and Québec economies have, meanwhile, been much closer to zero. This reality complicates comparisons of X factors in the United States and Canada.”*
- ii) *“Due to the limitations of Canadian data, regulators in Alberta and British Columbia have based X factors in their MRIs for gas and electric power distributors on the productivity trends of national samples of U.S. distributors. The Ontario Energy Board used estimates of U.S. productivity trends to choose the productivity target in its third-generation MRIs for power distributors but used Ontario data in two other MRIs.”*

Demande :

- 2.1 What is the decline in productivity growth for US and Canadian utilities? If available, please provide these data, together with comments.
- 2.2 Please discuss if/how the differences between US and Canada utility productivity trends and the underlying factors (e.g. lower customer/load additions, declining use per customer, etc.), influence a determination of the appropriate X factor for HQD. Please add any other relevant comments.
- 2.3 In reference iii), Mr. Coyne includes Table 6. Please discuss if/how these data relate to the appropriate input price differential for HQD.

Réponse de AQCIE-CIFQ / PEG :

- 2.1 Dr. Lowry's recent research indicates no decline in the productivity of U.S. power distributors. The trend in the productivity of Canadian power distributors is not well understood. Standardized data on distributor operations which are needed to estimate PMF trends are not available for most provinces. In the few provinces which do collect such data the capital cost data are not conducive to accurate PMF calculations. The productivity growth of Ontario power distributors is occasionally studied by the Ontario Energy Board and was most recently found by the Board to be close to zero. However, accurate measurement of Ontario distributor productivity is difficult, as Dr. Lowry discussed in his January 5 report in this proceeding.
- Plant value data are available for most Ontario distributors only since 1989. For several utilities, these data are available only since 2002. The benchmark year adjustments must therefore be fairly recent. Data on *gross* plant additions, which we prefer to use to calculate capital costs and quantities, are only available starting in 2013. These circumstances tend to reduce the accuracy of statistical research on the capital cost and total cost performance of Ontario utilities.
 - Many Ontario distributors are transitioning to International Financial Reporting Standards ("IFRS"). This has reduced capitalization of O&M expenses for some distributors, thereby materially slowing the O&M and multifactor productivity trends of many in the last few years.
 - Itemization of O&M salary and wage and material and service expenses is not available so that company-specific cost share weights cannot be calculated for O&M input quantity indexes.
 - The current scale index used by the Régie places sizable weights on peak load and delivery volumes rather than customer growth.
- 2.2 As suggested in the answer to question 2.1, the difference between the productivity trends of U.S. and Canadian power distributors is not well understood. Growth in average use of electricity by residential and commercial customers may well be slower in Canada than in the United States due to larger conservation and demand management programs. However, this has no bearing on the appropriate X factor for HQD.
- 2.3 Dr. Lowry advanced several reasons in his January 5 report why the Statistics Canada PMF index for the utility sector has little relevance to the choice of an X factor for HQD.
- It is a value-added calculation. As such, it ignores productivity in the use of intermediate inputs.
 - It is sensitive to developments in the gas distribution and power generation industries.

- A volumetric scale index is employed. This makes results sensitive to the slowing growth in average use of natural gas and electricity. Declining average use has been more pronounced in the gas utility industry than in the electric utility industry.
- Measured productivity growth is slowed by growth in expenses for utility conservation and load management programs, which are large in several Canadian provinces, but will likely be Y factored in HQD's MRI.

The relevance of the PMF trend of the Canadian economy in setting an X factor for HQD is diminished for two reasons. One is that the inflation measure in the revenue cap index is likely to include one or more input price indexes. Another is that the PMF growth trend of Canada's economy has been sluggish. The same table suggests that an input price differential is a more pertinent consideration in a U.S. MRI proceeding.

- 3. Référence :**
- i) **Pièce C-AQCIE-CIFQ-0032, p. 56.**
 - ii) **Pièce B-0178, HQD20-D2, p. 20.**

Préambule :

Dr. Lowry notes in reference i): *“There is no credible argument for setting stretch factors at zero just because utilities have operated for a few years under a cap on the revenue requis for charges d'exploitation.”*

Mr. Coyne notes in reference ii): *“Furthermore, the Régie has already accounted for an expectation that HQD should have economies of scale built into its formula with the G factor. By selecting a G of 0.75% of HQD's customer growth, the Régie has built in additional efficiency gains beyond those captured in the X factor. The Régie recognized this relationship in its Phase I Decision:”*.

Demande :

- 3.1 Did Dr. Lowry consider how a 1.5% annual reduction in *charges d'exploitation* affects the determination of the X factor and is this taken into account in the recommendations for X and stretch factors?
- 3.2 Did Dr. Lowry examine data for HQD and other utilities regarding growth factors and the relationship to the appropriate X and stretch factors? If so, please comment.
- 3.3 Given the Régie' decision to allow a 0.75% growth factor, please provide an opinion regarding how the growth factor may or may not affect exclusions and the appropriate threshold for Y Factors.

Réponse de AQCIE-CIFQ / PEG :

- 3.1 Dr. Lowry was assuming that the Facteur X and the Dividende Client would replace the requirement that growth in HQD's revenue for *charges d'exploitation* would be slowed by 1.5% per annum. This may not be sustainable for HQD. In his recent PMF study for Lawrence Berkeley National Laboratory, Dr. Lowry reported a 0.77% growth trend in the productivity of U.S. power distributor operation and maintenance inputs over the 1996-2014 sample period. Growth in multifactor productivity averaged 0.39%.
- 3.2 Approved revenue cap indexes in North American MRIs have various specifications related to growth in operating scale. The most common treatment has been to escalate allowed revenue for the full amount of customer growth. The growth specification is pertinent to the choice of an X factor.
- 3.3 A 0.25% markdown of customer growth will slow growth in HQD's revenue requirement by a modest 0.2% per annum assuming continuation of HQD's recent 0.9% annual customer growth. Dr. Lowry has considered this in making his 0.3% X factor recommendation. He does not believe that this affects exclusions and Y factor thresholds.

Impact of HQD IRM Formulation

4.

Préambule :

It would assist OC and other parties in the Phase 3 proceeding to have a simulation/projection of the 2018-2021 distribution revenue requirement (excluding transmission and cost of power) to understand the impacts on the revenue requirements and rates based on the recommendations of PEG for the IRM Formula.

Demande :

- 4.1 Has Dr. Lowry examined/projected the 2018-2021 revenue requirement and return on equity under the IRM Formula? If so, please provide this.

If not, please provide a simulation/projection of the 2018-2021 HQD Distribution Revenue Requirement (excluding transmission and cost of power) using the 2018, as filed, cost of service components, together with the assumptions/recommendations for the 2018-2021 IRM as per Dr. Lowry's evidence. The format should be similar to the projection for Hydro One Distribution referenced on page 14 of Mr. Coyne's evidence.

- Please make appropriate assumptions regarding items to be determined in the final phase.

- Please include the ROE in the projection.
- Please provide the result in pdf and Excel format, including appropriate explanatory notes.

Réponse de AQCIE-CIFQ / PEG :

- 4.1 Attachment OC-PEG-4.1 provides a forecast of a revenue cap index for HQD. This forecast assumes Dr. Lowry's proposed inflation measure, a 0.3% Facteur X, and a 0.2% Dividende Client. Forecasts of growth in the two inflation subindexes were purchased from the Conference Board of Canada. It can be seen that the revenue cap index is forecasted to average 2.34% annual growth over the 2019-21 sample period. This is similar to the 2.25% average annual growth that the index would have achieved had it been operative from 2010 to 2016. PEG did not have the time or secure funding to forecast the entire revenue requirement and resultant ROE.

Y Factors – Pension costs

5. Référence :
- i) Pièce C-AQCIE-CIFQ-0032, p. 60.
 - ii) Pièce B-0177, HQD20-D1, Annexe B, p. 16.
 - iii) Ontario Energy Board, EB-2015-0114, Appendix D, p. 23-24.

Préambule:

- i) *“Y factoring retirement costs is a judgement call as there are arguments on both sides. Y factoring these costs can encourage HQD to shift employee compensation from salaries and wages to retirement benefits. Review of these costs can be challenging. On the other hand, these costs are substantial and variable due to business conditions beyond HQD's control. The labor price subindex of the inflation measure tracks trends in salaries and wages but not retirement costs. Retirement costs have been Y factored in several MRIs. The decision on whether to Y factor retirement costs should depend on the extent to which the MRI protects HQD from other kinds of risk.”*
- ii) *“La majorité des fluctuations du coût de retraite, tant en ce qui a trait au coût des services rendus qu'aux autres composantes, sont dues à des fluctuations de valeurs de marché tant au niveau du taux d'actualisation que du rendement de l'actif. Le tableau 1 montre des fluctuations une année sur l'autre jusqu'à 107 M\$, soit une variation équivalente à un taux de rendement autorisé de près de 3 %. Ces fluctuations sont clairement hors du contrôle d'Hydro-Québec et une telle volatilité année sur année ne saurait être captée par la Formule d'indexation.”*

Reference iii) presents the accounting treatment for the 2016 post-retirement true-up variance account (PTUVA) of Enbridge Gas Distribution.

Demande :

- 5.1 Has Dr. Lowry examined regulatory practice regarding inclusion/exclusion of pension and other post-employment benefits (OPEBs) in IRMs? If so, please provide any relevant information.
- 5.2 If as HQD suggests, the variations in pension and OPEBs are primarily market valuation and actuarial, does Dr. Lowry have an opinion regarding whether, rather than exclusion, a pension and or OPEBs variance account is an option, similar to the variance account approved for Enbridge Gas Distribution?

Réponse de AQCIE-CIFQ / PEG :

- 5.1 Dr. Lowry is generally aware of the ratemaking treatment of costs of pensions and other post-employment benefits in MRIs but has never done a formal and thorough survey. He noted in his January 5 report that these costs are sometimes accorded Y factor treatment and provided some examples.
- 5.2 Dr. Lowry believes that if the retirement costs of HQD are subject to Y factor treatment the Company should absorb the first \$15 million of positive or negative retirement cost variances. The prudence of variances exceeding this amount should be eligible for review. Deferring a portion of unusually large variances for future recovery is a reasonable option.

Y Factors – Rate of return on capital

- 6. Référence :** i) **Pièce C-AQCIE-CIFQ-0032, p. 60.**

Préambule:

In reference i), HQD presents a Y_{CC} factor to account for the impact in variations in the interest rate and the rate of return on equity on the weighted average cost of capital.

Demande :

- 6.1 Has Dr. Lowry considered HQD's "Y_{CC}" proposal? If so, please comment.

Réponse de AQCIE-CIFQ / PEG :

- 6.1 Dr. Lowry has considered HQD's Ycc proposal and believes that the math is reasonable if the intent of the Ycc factor is to account for the full change in the weighted average cost of capital. However, he believes that there should be an adjustment during the MRI only for changes in the cost of debt.

Comptes d'écarts et de reports (CER)

- 7. Référence :** i) **Pièce B-0177, HQD20-D1, Annexe B, p. 27.**

Préambule:

- i) *“Par ailleurs, comme mentionné à la section 1.4, le Distributeur soutient qu’il est également nécessaire d’adjoindre un CER à chacun des éléments de coûts récurrents traités en exclusion.”*

Demande :

- 7.1 Please comment on HQD's proposal to create deferral accounts for all proposed exclusions.
- 7.2 Does Dr. Lowry know if creating deferral accounts for Y factors is a common practice in other North American jurisdictions? Please comment.

Réponse de AQCIE-CIFQ / PEG :

- 7.1 Dr. Lowry believes that it is generally reasonable for costs that accorded Y factor treatment to be addressed by some form of CER. However, these need not function exactly like those that HQD has used in the past. Multiyear deferrals should be considered only for unusually large cost surges such as those that might result from a major storm. Eligible deferrals should be limited by materiality thresholds and deadbands.
- 7.2 Dr. Lowry has never undertaken a formal review of the use of CERs for Y factors, however, his understanding is that the use of CERs for specific Y factors is common in North American MRIs, especially to address costs of energy, transmission, and conservation and load management. There are widely varying ratemaking treatments for these costs, including the level of regulatory review of the costs incurred, the incentivization provisions, the interest paid on eligible deferrals, and the duration of deferments. Most Y factored costs are not subject to multiyear deferrals.