RÉPONSES À LA DEMANDE DE RENSEIGNEMENTS N° 3 DE LA RÉGIE DE L'ÉNERGIE (LA RÉGIE) À AQCIE-CIFQ RELATIVE À LA DEMANDE D'ÉTABLISSEMENT D'UN MÉCANISME DE RÉGLEMENTATION INCITATIVE ASSURANT LA RÉALISATION DE GAINS D'EFFICIENCE PAR LE DISTRIBUTEUR D'ÉLECTRICITÉ ET LE TRANSPORTEUR D'ÉLECTRICITÉ

1. Références : (i) Dossier R-3981-2016, pièce B-0008, p. 5 et 6;
(ii) Pièce C-HQT-HQD-0097; p. 9;
(iii) Pièce C-AQCIE-CIFQ-0107, p. 105 à 107;

Préambule :

(i) « *Le Transporteur s'est engagé à assurer la sécurité du personnel et du public, la fiabilité et la disponibilité du réseau, et ce, au moindre coût. Un tel engagement requiert une stratégie d'efficience qui permette non seulement d'optimiser les coûts tant aux charges qu'aux investissements mais aussi d'optimiser l'ensemble des interventions sur le réseau de transport. Le Transporteur s'appuie, depuis 2013, sur son modèle de gestion des actifs (« MGA ») pour réaliser cette optimisation.*

Le parc d'actifs du Transporteur, qui comporte plus de 700 000 équipements de diverses natures répartis dans 522 postes et plus de 34 000 kilomètres de lignes, continue de vieillir. En décembre 2015, 76 % des équipements du Transporteur étaient en deuxième moitié de vie. Or, plus un équipement vieillit, plus il requiert de la maintenance pour s'assurer de sa fiabilité, mais aussi de son plein rendement sur sa durée de vie. Ainsi, dans bien des cas, l'augmentation de la maintenance se traduit autant par une fréquence d'entretien plus élevée et des temps d'entretien plus longs, que par des coûts d'entretien plus élevés en raison, entre autres, du matériel requis.

[…]

Ainsi, sur la base des informations dont il dispose et par le biais du MGA, le Transporteur a proposé un scénario optimisé d'intervention en investissement et en maintenance qui permet d'assurer une fiabilité du réseau en mode proactif, […] »

(ii) « *L'ajustement pour la maintenance liée à la pérennité (P) correspond à une mise à niveau de la maintenance requise des installations existantes selon le scénario optimisé du MGA. Il représente une estimation à la marge des besoins additionnels aux CNE pour réaliser la maintenance de ses actifs afin de permettre au Transporteur d'assurer sa mission de base.*

L'ajustement pour les activités récurrentes (A) permet un ajustement des CNE en raison d'une hausse des activités de nature récurrente, comme l'application et le maintien de la conformité aux normes de protection des infrastructures critiques (« CIP ») de la NERC.

Enfin, l'ajustement pour les éléments de suivis particuliers (ESP) vise les éléments suivants :

- *Éléments sur lesquels le Transporteur n'exerce que peu ou pas de contrôle (par exemple, le coût de retraite);*
- *Activités de nature non récurrente qui font l'objet d'un budget spécifique.*

[…]

Les composantes de base incluent le rendement sur la base de tarification, l'amortissement, les taxes, les frais corporatifs et les autres éléments résiduels. Ces éléments évoluent selon une trajectoire autre que celle dérivée par la formule I – X et sont, par conséquent, déterminés sur la base du coût de service prévu. »

(iii) « *Transmission*
We believe that indexed and hybrid ARMs both merit serious consideration by the Régie for HQT. We discuss each approach in turn.

Indexing *An index-based revenue cap for HQT would have the general form*

$$growth\ Revenue^{HQT} = Inflation - X + growth\ Scale^{HQT} + Y + Z$$
$$X = Base\ Productivity\ Trend\ Transmission + Stretch\ Factor.$$

The inflation measure would likely be a weighted average of the growth rates in Statistics Canada indexes of macroeconomic Canadian inflation and of average weekly earnings in Québec.

The scale index would likely be multidimensional. Variables used to construct the scale index would likely include transmission line miles and Québec's generation capacity. Peak demand growth is another major transmission cost driver but inclusion of this variable would reduce the incentive to contain peak demand growth. Consideration should therefore be paid to instead including in the scale index one or more variables that drive peak demand growth, such as the number of retail electric customers in Québec. Weights for the scale variables can be obtained from econometric research on the drivers of transmission cost.

[…]

The year-to-year growth of HQT's cost may vary materially from the gradual trend in revenue growth that would likely be provided by an index-based escalator. This situation could be addressed by a capital cost tracker for one or more major projects, already approved, that give rise to a cost surge. Alternatively or in addition, HQT could be permitted to borrow from future revenue escalation allowances.

Hybrid ARM *Having demonstrated the feasibility of an indexed ARM for HQT, we are nonetheless minded that the Regie may seek an alternative approach for the first plan period. Of the many other options we have discussed, we recommend a California-style hybrid approach. Revenue for O&M expenses would be indexed. There would be no tracker for MGA expenses. Revenue for capital costs would be based on a capital cost estimate that limits the role of forecasts. Estimating the gradually declining cost of older plant is straightforward. Setting the*

capex budget at an average of HQT's recent historic capex (with escalation for inflation less productivity growth) would substantially reduce regulatory cost and the opportunities for controversy and gaming. No dedicated capital cost tracker would be needed. However, some kinds of capex costs could be recovered through the Z factor.

Table 3 presents historical and forecasted data on HQT's capital expenditures. It can be seen that setting capex at the CAD 1.7 billion historical average for the 2013-2015 period can potentially produce a budget that is in line with forecasts for the upcoming plan period. Resultant escalation privileges can, once again, be borrowed between years of the plan. »

Il peut être compris de la proposition de mécanisme hybride formulée par PEG en préambule (iii) que les revenus requis du Transporteur seraient établis sur la base de l'application de la formule d'indexation pour ce qui est des charges nettes d'exploitation (incluant les charges en liens avec le MGA) et sur la base d'une estimation des investissements pour ce qui est des coûts en capital, laquelle serait également sujette à l'application de la formule d'indexation pendant la durée du mécanisme. Le mécanisme proposé par PEG ne ferait pas de cas particuliers reflétant le contexte d'affaires tel que présenté par le Transporteur en préambule (i) et ne reflèterait donc pas les ajustements particuliers découlant de l'approche du Transporteur découlant de son MGA tel que détaillé en préambule (ii). Par ailleurs, PEG introduit le recours à un facteur d'exclusion pour permettre la récupération de certains types de coûts en capital excédent la croissance permise par la formule d'indexation.

Demandes :

1.1 Veuillez confirmer l'interprétation ci-dessus en regard de la proposition du mécanisme hybride de PEG.

1.1 Réponse de l'AQCIE/CIFQ :

A "California-style" hybrid revenue requirement escalator has different ratemaking treatments for the components of required revenue which address charges nettes d'exploitation ("CNE") and capital costs (e.g., amortization, depreciation, and return on rate base). The escalator for *CNE* revenue is typically indexed. The escalator for the *capital cost* revenue typically relies in whole or in part on cost forecasts.

CNE Revenue

The following general formula is drawn from cost theory and is useful for the design of the CNE revenue escalator.

$$growth\ Revenue^{CNE} = growth\ Input\ Prices^{CNE} - (trend\ Productivity^{CNE} + Stretch) + growth\ Scale^{CNE} + Y^{CNE} + Z^{CNE}. \quad [1]$$

Here $growth\ Input\ Prices^{CNE}$ is the annual inflation in an index of CNE input prices. It could, for example, be a CNE-share weighted average of the inflation in a Quebec labor price index and Canada's gross domestic product implicit price index for final domestic demand. The shares for labor and other transmission CNE inputs could be recent averages for Hydro-Quebec TransÉnergie ("HQT") or for a sample of US power transmission utilities.

trend Productivity^{CNE} is the trend in the productivity of transmission CNE inputs. It could be the trend in the transmission CNE productivity of a sample of U.S. electric utilities or (less desirably) that of HQT. *Stretch* is a stretch factor. This could be set at a standard value (e.g., 0.20%) or linked to CNE benchmarking results. *growth Scale*^{CNE} is the growth in an index of scale-related drivers of power transmission CNE. This could be an elasticity-weighted average of the growth in several scale variables. The elasticities could be estimated with econometric research on drivers of the transmission CNE of U.S. electric utilities. Y^{CNE} would be the annual adjustment to CNE revenue for changes in expenses slated for passthrough treatment. Z^{CNE} would be the annual adjustment to CNE revenue for miscellaneous external events such as severe storms and changes in government policy.

Assuming that productivity growth equals growth in operating scale, formula [1] reduces to

$$growth\ Revenue^{CNE} = growth\ Input\ Prices^{CNE} - Stretch + Y^{CNE} + Z^{CNE}. \quad [2]$$

However, little or no research has been done that establishes whether such an assumption is reasonable.

Capital Cost Revenue

The escalator for the capital revenue requirement typically reflects a forecast of depreciation and the return on rate base. This cost tends to decline mechanistically absent brisk growth in the allowed rate of return. The more controversial issue is the value of future plant additions. Various methods have been used in California hybrid ARMs to estimate these values. These methods include 1) using the average value of additions in the last few years and 2) using the value of additions approved for the test year (which is forecasted in California). Multiyear forecasts of plant additions have been used much more rarely, as consumer groups balk at carefully reviewing such forecasts.

With any of these methods, plant additions can be expressed in real terms and escalated by the forecasted growth in construction cost inflation. This escalation can be subject to a correction after actual inflation becomes known. Statistics Canada maintains indices des prix à la construction dans les services d'électricité (IPCSE) for various kinds of transmission facilities which might be useful for this purpose.[1]

Real plant additions can also be expressed as *unit* costs (e.g. real additions/growth in line km) and then escalated for system growth subject to true-up. This kind of formula has also been used to establish plant addition budgets in MRIs for British Columbia utilities. These formulas were discussed in our response to Question 1.1 of the Regie's second round of information requests.[2] The capital formulas for FortisBC Energy were also provided in response to that data request. The current MRI of FortisBC also features a formula to escalate capital additions. The capital additions formula for FortisBC's bundled power service is provided below.[3]

[1] See Statistics Canada Table 327-0011. Link: http://www5.statcan.gc.ca/cansim/a26?lang=eng&id=3270011

[2] C-AQCIE-CIFQ-0076, p. 9-10.

[3] BCUC (2014), *In the Matter of FortisBC Inc. Multi-Year Performance Based Ratemaking Plan for 2014 Through 2018*, p. 20.

Capital Formula:

$$C_t = C_{t-1} \times [1 + (I - X)] \times \left(\frac{AC_t}{AC_{t-1}}\right)$$

Where: *C=Capital Expenditures subject to formula*
AC=Average Customers
t = Upcoming year
I = Inflation Factor
X = Productivity Factor

The resultant escalator for capital revenue may have a formula like the following in a given year t.

$$growth\ Revenue^{Capital}{}_t = 2\% + Y^{Capital}{}_t + Z^{Capital}{}_t.$$

Question 1.1 seems to presume a different kind of hybrid escalator in which all revenue is subject to a single indexed escalator but revenue growth is increased to fund expected capital revenue shortfalls. An example of this alternative approach can be found in the current "custom" MRI for the power distributor services of Toronto Hydro-Electric. We are proposing a *California-style* hybrid, which is simpler to develop due in part to the substantially diminished role for capital cost forecasting.

1.2 Veuillez déposer une référence décrivant l'approche « California-style », référée en (iii).

1.2 Réponse de l'AQCIE/CIFQ :

Hybrid approaches to the design of attrition relief mechanisms ("ARMs") have been used in California multiyear rate plans many times. Gas and electric utilities faced adverse business conditions in the late 1970s and early 1980s that encouraged frequent rate cases. This led the California Public Utilities Commission ("CPUC") to impose a requirement that rate cases be held no more frequently than every two years. Recognizing that attrition could occur during the stayout period, the CPUC permitted post-test year adjustments to allow utilities a reasonable chance to earn their allowed return. These adjustments were usually called Attrition Rate Adjustment Mechanisms and often took a hybrid form.

The broad outlines of the first hybrid ARMs for Pacific Gas & Electric (PG&E) and San Diego Gas & Electric, approved in 1981, are remarkably similar to that of hybrid ARMs that are still occasionally used today.[4]

- CNE revenues were escalated only for inflation. Separate escalators for labor and non-labor CNE were featured. The CPUC implicitly acknowledged that growth in productivity and operating scale also drives CNE growth but assumed that their impact was offsetting.

  > Our labor and nonlabor costs adopted for test year 1982 will be escalated by appropriate inflation factors for labor and nonlabor expenses…. We will not adopt a growth factor but assume that any growth or increase in activity levels will be offset by increased productivity and efficiency.[5]

[4] Hybrid ARMs are frequently featured by utilities in their post-test year proposals even though approved ARMs may take different forms.
[5] CPUC Decision No. 93887 in Cases 60153, 58545, 58546, Dec. 30, 1981. 1981 Cal. PUC LEXIS 1279; 7CPUC 2d 349.

- Plant additions were fixed in constant dollars at a multiyear average of recent historical values, then escalated for inflation. Pacific Gas & Electric's average of plant additions was calculated on a per customer basis, while San Diego Gas & Electric's were calculated on a total plant additions basis. Major plant additions, typically for generation, were addressed outside of the hybrid ARM.
- Other components of capital cost, like depreciation and the return on rate base, were forecasted using cost of service methods.

The first hybrid ARM for Southern California Gas, approved in 1982, allowed escalation of labor CNE by the forecasted growth in the Consumer Price Index for 1984, while non-labor CNE were escalated by the forecasted growth in the Producer Price Index for Industrial Commodities. Plant additions were estimated as a recent 5 year average of plant additions, including a projection of additions in the forecasted test year value, and reflected inflation. The order outlining this plan is Attachment Regie-3-AQCIE-1.2A.[6]

Despite more favorable business conditions since the early 1980s, the CPUC has continued to allow post-test year revenue adjustments. This has been due in part to longer (e.g., 3-5 year) rate case cycles. Hybrid ARMs have frequently been used. These ARMs have typically continued to feature CNE indexation using separate labor and non-labor escalators, inflation escalation of multiyear historic average plant additions, and forecasts of more predictable other components of capital cost.

Some features of California's hybrid ARMs have varied between utilities over the years. These features include the specific inflation measures, the use of inflation forecasts, and the plant additions baseline for escalation. For example, Pacific Gas & Electric's plant additions escalator was usually reliant on a 5 year historic average of plant additions per customer, while San Diego Gas & Electric's early plans tended to rely on a 4 year historic average of plant additions.

Here are some other ARM design innovations.

- In the 1990s, San Diego Gas & Electric had a hybrid ARM that featured labor and non-labor escalators for CNE with explicit adjustments for customer growth and productivity. Transmission, distribution, general, and common plant additions were calculated using a formula based on econometric analysis of San Diego Gas & Electric's own history of plant additions and customer levels.
- Several recent hybrid ARMs for Southern California Edison have featured capex budgets that were fixed in real terms at the value for the (forecasted) test year, then escalated for expected construction cost inflation.
- Detailed indexes of inflation in the prices of utility CNE inputs have replaced indexes of macroeconomic price inflation in the escalation of CNE revenue.

Attachment Regie-3-AQCIE-1.2B provides the tariff sheet that outlines Southern California Edison's current hybrid ARM. Attachment Regie-3-AQCIE-1.2C provides a listing of precedents where California-style hybrid attrition relief mechanisms have been implemented.

1.3 Veuillez élaborer sur les avantages et les inconvénients d'un mécanisme qui assujetti l'ensemble du revenu requis à la formule d'indexation sous la forme « Indexing » proposé à la référence (iii). Veuillez préciser comment ce mécanisme permettrait de répondre au contexte décrit à la référence (i), soit les exigences grandissantes et la hausse concomitante des charges d'entretien et des investissements en pérennité.

[6] The hybrid ARM is discussed on pages 39 and 60-64 of the order.

1.3 Réponse de l'AQCIE/CIFQ :

Dr. Lowry endorses the basic concept of an asset management program which explores ways to use labor expenses, other CNE, and refurbishment capex to extend the service lives of assets. However, he believes that HQT has not made a strong case in this proceeding that its asset management program, which it calls the "modele de gestions des actifs" ("MGA"), requires special ratemaking treatment. In his extensive research over many years on power transmission and distribution costs, Dr. Lowry has found that CNE for these network services are characteristically much more volatile than the corresponding capital costs. Yet MRIs commonly permit supplemental revenue only for *capital* costs. Utilities evidently accept that overcompensation when CNE is low will over time balance out undercompensation when CNE is high.

It is not clear that the MGA will *increase* the volatility of CNE on balance, or that the CNE budget established in the last rate case before the MRI begins will not, together with revenue growth, provide satisfactory CNE revenue on balance in the three years before the next rate case. Dr. Lowry also notes that HQT's CNE account for a small share of its revenue requirement. This reduces the impact on earnings of year to year mismatches between the Company's CNE and its CNE revenue. As for capital cost volatility, HQT has represented the MGA as *reducing* the need for capex, not increasing it. Dr. Lowry knows of no MRI precedent for a tracker to fund variations in CNE or other costs due to an MGA.

It should also be noted that other features of Dr. Lowry's recommended plan would contain HQT's operating risk. These include inflation indexing, revenue decoupling, an earnings sharing mechanism, Z factors, and a rebasing of rates to the company's forecasted costs after three years of indexing. In considering the riskiness of a proposed plan the totality of provisions should be considered.

With respect to indexed ARMs, these are similar to hybrid ARMs in their treatment of CNE. They are less tailored to fluctuations in capex than a hybrid ARM can be since the indexes are based on industry price and productivity trends. However, supplemental revenue can be provided for capex surges. See our response to question 1.6 below for further discussion of the options.

1.4 Veuillez élaborer sur les avantages et les inconvénients d'un mécanisme qui assujetti l'ensemble du revenu requis à la formule d'indexation sous la forme « Hybrid » proposé à la référence (iii). Veuillez préciser comment ce mécanisme permettrait de répondre au contexte décrit à la référence (i), soit les exigences grandissantes et la hausse concomitante des charges d'entretien et des investissements en pérennité.

1.4 Réponse de l'AQCIE/CIFQ :

A hybrid ARM provides a ratemaking treatment for CNE that is similar to that of an indexed ARM. However, it can be more tailored to expected capex fluctuations if some or all plant additions are forecasted. If the determination of plant addition budgets is substantially formulaic, there might still be a need for supplemental capital revenue using one of the methods discussed in our response to question 1,6 below. One the downside, the evaluation of capex forecasts raises regulatory cost, and the utility has an incentive to exaggerate capex needs.

1.5 Veuillez préciser la méthode de détermination des coûts en capital pendant la durée d'application du mécanisme de type « Hybrid ». Veuillez préciser comment celui-ci pourrait permettre au Transporteur de faire face à une hausse de ses charges en

maintenance et de ses coûts en investissements plus importants que ne le permettrait la formule d'indexation du mécanisme incitatif.

1.5 Réponse de l'AQCIE/CIFQ :

The method for determining capital revenue in a hybrid ARM is discussed at some length in our response to question 1.1. Many of the methods discussed would not provide supplemental revenue for a capex surge. A capex surge could in principle be funded by capital trackers or permission to "bunch" revenue escalation privileges. These provisions are discussed in our response to question 1.6.

1.6 Veuillez préciser à quelles conditions le Transporteur pourrait avoir recours à un facteur d'exclusion pour refléter la croissance des coûts en capital excédent celle permise par la formule d'indexation.

1.6 Reponse de l'AQCIE/CIFQ :

MRIs with indexed rate or revenue caps often have provisions for supplemental revenue to fund capex surges. The provisions in the Ontario Energy Board's fourth generation MRI for power distributors merit consideration by the Regie. An Advanced Capital Module ("ACM") can provide supplemental revenue if the capex forecasted over the term of the MRI exceeds a materiality threshold. The threshold is determined by a formula that considers the funds available for capex from depreciation of the rate base and revenue growth and adds a dead zone (currently 10%). Information needed to decide on ACM funding is provided by the multiyear distribution system plans that distributors are required to file. Consideration of the need for extra revenue over the entire plan discourages the utility from "bunching" capex in one or two years of the plan to get more supplemental revenue.

In addition to the ACM, an Incremental Capital Module can provide Ontario distributors with additional funding for projects that could not be clearly anticipated at the time of the ACM filing. In addition, the Z factor term in the price cap index formula permits supplemental funding for capex due to unforeseeable external events such as severe storms.

The Ontario approach is designed to reduce overcompensation for capex surges. It does this by providing funding only for capital cost that exceeds the funding available from depreciation and revenue growth during the plan by a material amount. However, overcompensation is still possible. The kinds of capex for which utilities receive extra funding may have been incurred by utilities in the productivity study, slowing their productivity growth and the reducing the X factor term of the price cap index. While the materiality threshold addresses double counting during a plan, in between capex surges, utilities may naturally experience productivity growth exceeding the industry norm yet revenue growth is based on the *long run* productivity trend. Thus, customers will not receive the benefit of industry productivity growth over many plans even if it is achievable. Note also that giving a utility dollar for dollar recovery of a capital revenue shortfall when capex surges is certain to overcompensate the utility in the long run since, between future rate cases, the cost of that capex is likely to shrink due to depreciation whereas the corresponding component of the revenue requirement is likely to grow. The deadzone in the materiality threshold formula can address these problems but 10% may be insufficient. An alternative to the deadzone is to increase the X factor.

The Ontario approach to providing supplemental revenue has the additional limitation of requiring a *total* capex forecast. This raises regulatory cost and can weaken capex containment incentives.

Another means of providing supplemental revenue for capex surges is to permit the utility to "bunch"

its revenue escalation privileges. If solid evidence is provided that a capex surge must occur in the first indexing year, for instance, the utility can use some or all of its revenue escalation privileges from later plan years in the first year provided that revenue grows more slowly in later plan years. For example, if revenue was slated to escalate in a 100 102 104 106 pattern it can instead be permitted to escalate in a 100 104 104 104 pattern. This kind of privilege can in principle be extended to multiple plans.

1.7 Veuillez préciser si le mécanisme de type « Hybrid », décrit à la référence (iii), inclut un facteur de croissance.

1.1.1. **Dans l'affirmative, veuillez préciser :**

1.1.1.1. **S'il s'agit du même facteur de croissance décrit pour l'approche « indexed based revenue cap ».**

1.1.1.2. **Si ce facteur de croissance est applicable à l'OPEX et/ou au CAPEX.**

1.1.2. **Dans la négative, veuillez expliquer l'absence d'un facteur de croissance.**

1.7 Réponse de l'AQCIE/CIFQ :

As described in our response to question 1.1, hybrid revenue caps can have growth factors for both CNE and capital cost. A growth factor is featured in the general CNE revenue escalation formula (formula [1]) which we provided in response to question 1.1, although these have rarely been used in California. Growth factors can also be used in the plant addition escalation formulas. Growth factors for CNE or capex could differ from that which might be used in a *comprehensive* revenue cap index since the latter should be appropriate for *total* cost.

1.8 Veuillez élaborer sur les avantages et inconvénients des deux approches proposées à la référence (iii), considérant les objectifs :

a) **D'amélioration continue de la performance et de la qualité du service;**
b) **Réduction des coûts profitables à la fois aux consommateurs et au Transporteur;**
c) **Allégement du processus par lequel sont fixés ou modifiés les tarifs du transporteur d'électricité.**

1.8 Réponse de l'AQCIE/CIFQ :

a) **D'amélioration continue de la performance et de la qualité du service;**

An indexed revenue cap can generate stronger capex containment incentives than a hybrid revenue cap in which the capex budget is based on an average of HQT's past plant additions. The incentives to contain CNE should be similar.

b) **Réduction des coûts profitables à la fois aux consommateurs et au Transporteur;**

An indexed ARM builds into the revenue trajectory an expectation of improved productivity growth. A hybrid revenue cap may do this only with respect to CNE. When plant additions are based on a forecast it can be difficult for regulators and stakeholders to ascertain the value to customers. However, a productivity offset could in principal be added to the plant addition formulas of a hybrid

ARM. Another concern with forecasts is that utilities have incentives to exaggerate capex needs. Both problems have sparked Britain's regulators to develop independent views of the capex requirements of utilities by making extensive use of statistical benchmarking and engineering consultants. They have also developed an information quality incentive to strengthen utility incentives to provide realistic forecasts.

c) **Allégement du processus par lequel sont fixés ou modifiés les tarifs du transporteur d'électricité.**

An indexed revenue cap escalator potentially involves lower regulatory cost than a hybrid escalator. However, the streamlining is reduced by the following.

- A revenue cap index applicable to capital cost as well as CNE increases the stakes on the X factor selection. This invites opportunistic behavior and controversy like that which is associated with the return on equity issue in rate cases. Many Canadian utilities subject to MRIs have recently hired inexperienced witnesses to take a "fresh look" at the productivity issue. These witnesses have typically recommended negative X factors even though approved X factors based on productivity evidence have almost always been positive in North America. Regulators are compelled to weigh competing arguments. They are tempted to choose an X factor in the middle of competing proposals, but this rewards an outlier strategy.
- If supplemental capital revenue is available, utilities may expend large amounts of effort requesting such revenue and these requests can be difficult to review.

2. Références : (i) Pièce C-AQCIE-CIFQ-0107, p. 83 et 88;
(ii) Pièce C-AQCIE-CIFQ-0107, p. 110.

Préambule :

(i) « *The capex plan of HQT is discussed in the current rate case. Capex can be seen to be fairly variable. Capex will be especially high in 2019 but much lower on average in the remaining years in which an ARM might apply.* »
[…]

« *Planning*
A public planning process is not well developed for HQ's transmission or distribution. Capex plans are discussed in rate cases. Intervenors complain that they are often not provided with enough information to effectively participate and engage in planning processes. Effective oversight of T&D capex was noted in Section 5.1.2 to be challenging. Substantial resources are needed to properly develop independent views. »

(ii) « *Evidentiary Requirements Minimum filing requirements should be established for capital cost tracker requests. The salient alternatives to the proposed capex, including CDM options, should be addressed by the applicant. Other parties should be permitted to propose alternative solutions.*

The procedure for approving the reasonableness of proposed large plant additions should be strengthened, ideally by moving to a public process of integrated distribution and transmission planning that considers CDM options. An increase in the minimum dollar amount of capex eligible for review should be considered. »

Demandes :

2.1 Veuillez préciser le ou les éléments du dossier tarifaire dans lesquels le « Capex plan » est discuté, selon les extraits reproduits à la référence (i).

2.1 Réponse de l'AQCIE/CIFQ :

Dr. Lowry relied on the data in Tableau 10 ("Sommaire des mises en service par catégorie à l'horizon 2026 (M$)" of HQT-9, Document 1 (" Planification du réseau de transport") of Demande R-3981-2016. The last sentence of the quoted caption from Dr. Lowry's testimony should be restated as follows.

> Plant additions will be especially high in 2018 but much lower on average in the remaining years in which an ARM might apply.

2.2 Veuillez préciser si la procédure d'approbation dont il est question à la référence (ii) est une approbation du projet ou une approbation d'ajout au « *capital cost tracker* ».

2.2 Réponse de l'AQCIE/CIFQ :

Dr. Lowry contemplated the occasional submission of a multiyear transmission system plan. This plan should be integrated in the sense that it includes conservation and demand management alternatives to capex for addressing demand growth. The submission of such a plan could occur at

the time of the plan update proceeding and would be independent of the capital tracker process.