

**Réponses du Transporteur
à la demande de renseignements numéro 2
de l'Association québécoise des consommateurs
industriels d'électricité et du
Conseil de l'industrie forestière du Québec
(« AQCIE-CIFQ »)**

1 **DEMANDE DE RENSEIGNEMENTS N^o 1 DE L'AQCIE-CIFQ (PEG) AU**
2 **TRANSPORTEUR (HQT) RELATIVEMENT À LA DEMANDE**
3 **D'ÉTABLISSEMENT D'UN MECANISME DE RÉGLEMENTATION INCITATIVE**
4 **ASSURANT LA REALISATION DE GAINS D'EFFIENCE PAR LE**
5 **TRANSPORTEUR D'ÉLECTRICITÉ**

6 **1. Référence :**

7 Pièce HQTD-2, Document 1.3, *Témoignage de MM. James M. Coyne et Robert C.*
8 *Yardley de Concentric Energy Advisors sur les caractéristiques du MRI du*
9 *Transporteur d'électricité (version amendée), p. 3.*

10 **Préambule :**

11 *“The sheer geographic scale of its operations, location of traditional hydro resources and*
12 *new wind generation at great distances from load centers, and challenging climatic*
13 *conditions make HQT’s circumstances extraordinary as compared to other transmission*
14 *companies. These factors combine to produce significant capital requirements*
15 *necessary to maintain and extend HQT’s transmission facilities. These characteristics*
16 *create a unique set of circumstances under which HQT is required to maintain the*
17 *quality of service, within the context of an aging network and fulfill its public responsibility*
18 *for maintaining the integrity of its network. These circumstances must be considered in*
19 *the design of an MRI for HQT as they help identify factors within the control of HQT that*
20 *impact either capital (“CAPEX”) or operating expenses (“OPEX”) and other residual*
21 *items.”*

22 **Demandes :**

23 1.1 Granted that HQT’s large scale and remote generating sites raise the *level* of its
24 cost, why do these attributes make the *trend* in its cost going forward peculiar?

25 **R1.1**

26 **Réponse de Concentric :**

27 **These circumstances are likely to increase the level of its costs relative to**
28 **other Transmission providers, as suggested by the question. More**
29 **importantly, for purposes of designing the MRI, they will also impact the**
30 **variability of capital expenses as also noted on the same page referenced in**
31 **the Preamble.**

32 “Transmission company CAPEX are “lumpy”, and comprised of large
33 projects that are built over many years. They are often dictated by
34 system requirements beyond management’s direct control, such as the
35 integration of new generation. HQT’s CAPEX are driven by a
36 combination of: replacement of its aging infrastructure, growth in
37 customer demand or integration of new generation resources,
38 improvements in service quality, or external requirements (e.g., NERC
39 or governmental regulations). Total CAPEX and related property, plant
40 and equipment (PP&E) placed in service vary considerably from year-
41 to-year, depending on the mix of projects.”

1

2 1.2 Doesn't the fact that HQT serves a large region actually *stabilize* its revenue
3 requirement growth relative to the growth in those of, say, eight transmission
4 companies serving a region of similar size? For example, is there any reason to
5 think that HQT's revenue requirement growth is more unstable than that of
6 individual transmission owners in the northeast United States? If so, why?

7 **R1.2**

8 **Réponse de Concentric :**

9 **HQT's capital and operating expenses are driven by HQT-specific**
10 **circumstances described on pages 3-5 of HQT-D-2, Document 1.3. Concentric**
11 **has not examined the differences between HQT's revenue requirements and**
12 **smaller groups of transmission entities serving a region the same size as**
13 **Hydro-Quebec. With respect to how HQT's revenue requirement stability will**
14 **compare to individual transmission owners in the northeast United States,**
15 **Concentric observes that the transmission owners, such as those in New**
16 **England, are subject to FERC approved tariffs and not performance based**
17 **regulation models.**

18 **The below table shows the growth in revenue requirements of all Pool**
19 **Transmission Facilities ("PTF") in ISO-NE compared to that of HQT. There are**
20 **significant differences between the ISO-NE market and that of Quebec.**
21 **Concentric observes, however, that the revenue requirement growth of HQT**
22 **has been substantially lower than that for the ISO-NE transmission facilities**
23 **in aggregate. It is also worth noting that HQT's system is substantially larger**
24 **than that of ISO-NE, with approximately 21,295 line miles and 8,600 line miles**
25 **respectively.**

Table R1.2
ISO-NE PTF vs HQT Revenue Requirements (\$M)

	ISO-NE PTF Revenue Requirements	HQT Revenue Requirement
	Total Pre-1997 + Post-1996	
2009	\$1,262.8	\$2,824.1
2010	\$1,296.9	\$2,999.0
2011	\$1,517.5	\$3,009.4
2012	\$1,722.5	\$2,991.5
2013	\$1,887.8	\$2,933.9
2014	\$1,950.6	\$3,138.7
2015	\$2,052.6	\$3,179.5
CAGR 09-15	8.43%	2.00%

1 **2. Référence :**

2 Pièce HQTD-2, Document 1.3, *Témoignage de MM. James M. Coyne et Robert C.*
3 *Yardley de Concentric Energy Advisors sur les caractéristiques du MRI du*
4 *Transporteur d'électricité* (version amendée), p. 6.

5 **Préambule :**

6 *“Based on these considerations and the stakeholder feedback received to date,*
7 *Concentric is proposing a “Hybrid” model for HQT, with most OPEX¹⁰ adjusted each year*
8 *based on an I-X formula, subject to certain adjustments, and using cost of service for all*
9 *other components of the revenue requirements, including capital-related costs...The*
10 *non-parametric nature of HQT’s CAPEX does readily accommodate an I-X program”*

11 ¹⁰Pacific Economics Group (“PEG”) recognized this alternative in its report where it noted: “[s]hould an
12 index-based escalator prove unsuitable for HQT, a hybrid approach to ARM design also merits
13 consideration.”, Incentive Regulation for the Transmission & Distributor Services of Hydro-Québec, Pacific
14 Economics Group, October 26, 2015, p. 101.

15 **Demandes :**

16 2.1 Please confirm that PEG was referring in its report to a hybrid *attrition relief*
17 *mechanism* (ARM) (eg indexing for opex and forecasts for capital costs) rather than
18 a hybrid of an index-based ARM for opex and cost of service regulation for capital
19 costs.

20 **R2.1**

21 **Réponse de Concentric :**

22 **For clarification, the quote from Concentric’s September 30, 2016 report cited**
23 **in the preamble should read: “the non-parametric nature of HQT’s CAPEX**
24 **does not readily accommodate an I-X program.” (emphasis added)**

25 **Concentric understands that PEG refers to a hybrid ARM whereby capital**
26 **costs could be forecasted as part of a multi-year plan. Both PEG’s suggested**
27 **alternative and Concentric’s recommended approach recognize there are**
28 **reasonable alternatives for CAPEX that is not readily accommodated under**
29 **an I-X formula.**

30 2.2 Please identify all precedents Concentric is aware of that combine an index-based
31 ARM for opex and a cost of service treatment of *all* capital costs.

32 **R2.2**

33 **Réponse de Concentric :**

34 **Concentric has not undertaken a comprehensive review of MRI plans**
35 **worldwide, but is aware of the following examples of PBR whereby some**
36 **expenditures are indexed, and most or all of capital expenses are excluded**
37 **from the index and treated on either a cost of service basis, a hybrid-style**
38 **forecast of capital, or tracked through capital trackers. Concentric does not**
39 **consider this list comprehensive but rather is intended to provide examples.**

1 **- Fortis BC 2014-2019**

2 In the most recent decisions for FortisBC Inc. (FBC, the electric utility) and
3 FortisBC Energy Inc. (FEI, the gas utility), the BCUC approved capital
4 adjustment mechanisms for both companies in their 5-year PBR plans. Prior
5 PBR plans for the companies had different approaches to capital. For FBC,
6 prior to 2004, PBR covered only OPEX, and all capital spending was approved
7 separately. For FEI, over the 2005-09 PBR plan, smaller capital expenditures
8 were included in the I-X formula, but larger Certificate of Public Convenience
9 and Necessity (“CPCN”) projects (those greater than \$5M) were addressed in
10 separate regulatory processes. For FBC, a CPCN is required for projects
11 greater than \$20M.

12 The decisions and supporting rationale for FBC and FEI are similar, so
13 Concentric will focus on the electric decision (FBC). First, the Commission
14 determines an amount of “Base Capital” spending from the starting point
15 year prior to the first PBR year (in this case, 2013). The Company used its
16 approved 2013 capital expenditure of \$101.9M, adjusted for non-recurring
17 projects and non-controllable items to \$49.18M. This base capital is broken
18 down to three primary categories comprised of \$20.047 million for
19 Sustainment Capital, \$20.638 million for Growth Capital (primarily for new
20 connects), \$8.495 million for Other Capital.

- 21 • “Sustainment Capital” – Consists of expenditures for system
22 reinforcements, replacements and upgrades to generation,
23 transmission and distribution assets to ensure safety, integrity and
24 reliability.
- 25 • “Growth Capital” – Consists of expenditures for infrastructure
26 upgrades required to meet customer and associated load growth.
- 27 • “Other Capital” – Consists of expenditures for information systems,
28 vehicles, metering, telecommunications, facilities, and tools and
29 equipment.

30 The plan also includes an allowance for projects outside of PBR. Those
31 projects are excluded from the PBR formula and added to ratebase with full
32 cost recovery once placed into service on a flow-through basis, net of any
33 offsetting OPEX or revenue effects. The CPCN threshold (\$20M for FBC) was
34 used initially, subject to further submissions by the parties. In a subsequent
35 Order, the BCUC determined the materiality thresholds to be \$20M for FBC
36 and \$15M for FEI, and ruled that smaller projects should not be combined to
37 achieve that threshold. In 2014 Fortis’ proposal allowed for authorized
38 revenue to be determined according to a formula. Fortis proposed a revenue
39 cap building block approach that decouples allowed revenue from demand.

40 Prior PBR plans for the companies had different approaches to capital. For
41 FBC, prior to 2004, PBR covered only O&M, and all capital spending was
42 approved separately. For FEI, over the 2005-09 PBR plan, smaller capital
43 expenditures were included in the I-X formula, but larger “CPCN” projects
44 (those greater than \$5M) were addressed in separate regulatory processes.
45 For FBC, a CPCN is required for projects greater than \$20M.

46 **- New York**

1 Although NY alternative rate plans are not referred to as PBR, NY plans have
2 often been multi-year plans that set non-fuel/non-purchased energy O&M on a
3 COS basis in year 1 and then use inflation minus a productivity factor to set
4 collection amounts for later years (typically 2 more years). Capital costs are
5 collected based on specific construction and in-service date data so they are
6 cost of service. The exact productivity factors vary from case to case.
7 Generally speaking, the PSC applies a 1% productivity factor to O&M to
8 incent efficient operations.

9 The PSC often approves the use of deferrals and other accounting measures
10 to mitigate bill impacts of revenue requirement increases, and to allow the
11 utilities to maintain earnings when faced with increases in certain expenses
12 during the course of multi-year rate plans.

13 - Green Mountain Power

14 Green Mountain Power's most recent multi-year rate plan (2014-2017)
15 combined an index-based escalated for O&M with annual capital recovery.
16 GMP was to revise its base rates annually on a service-rendered basis
17 commencing October 1, 2015 and supported each such proposal with cost of
18 service information filed with the Board by August 1 of the same year.

19 The percentage base rate change is determined by comparing forecasted rate
20 year total cost of service to revenues that would be raised by existing base
21 rates and projected rate year sales. Base O&M costs are subject to change in
22 each future base rate adjustment in which merger savings are shared with
23 customers (CVPS and GMP merger), to reflect the change in the CPI-U,
24 Northeast Region, and Exogenous Changes and the impact of the Non-Power
25 Cost Cap. O&M recovery is determined by the following approach: Current
26 Non-Power Costs x (1 + CPI-U Northeast – 1% Productivity Adjustment + Non-
27 Power Supply Cost Incentive Adjustment) + Capital Spending Adjustment +
28 Exogenous changes (if any) + Incremental ROE Adjustment (if any). Capital
29 related expenses are recovered annually through an application to the board
30 under traditional cost of service treatment.

31 2.3 Please identify all precedents for including a company's *own* salary index in an
32 index-based ARM.

33 **R2.3**

34 **Réponse de Concentric :**

35 Concentric has not researched or proposed the internal salary index based
36 on precedents. HQT's internal wage inflation index is proposed as part of its
37 composite I-factor given the reliance on specific collective bargaining labor
38 contracts and is therefore a more reliable indicator of the input cost of labor.
39 See HQT's supplemental evidence in HQT-3, Document 1.2, line Inflation (I)
40 on page 9 for relevant references to HQD's file.

41 2.4 Please confirm that a provision in an MRI to adjust revenue for a change in the
42 target *rate of return* on investment is not the same as a cost of service treatment of
43 capital cost.

1 **R2.4**

2 **Réponse de Concentric :**

3 **The rate of return is one portion of capital related costs which includes the**
4 **return on rate base and depreciation/amortization expenses. These**
5 **approaches are not interchangeable, since one of them may apply for a utility**
6 **more than the other. The MRI must be adapted to the utility's circumstances.**

7 2.5 Doesn't this proposal provide imbalanced incentives to contain opex and capex? If
8 not, why not?

9 **R2.5**

10 **Réponse de Concentric :**

11 **The model for HQT proposed by Concentric introduces an I-X incentive for**
12 **covered operating costs, which is a greater cost control incentive than exists**
13 **under the cost of service model. For reasons outlined in Concentric's**
14 **September 30, 2016 report, pp. 2-10, and in response to Question**
15 **AHQ-ARQ 1.2, in Concentric's view, this adaptation of the I-X model makes it**
16 **more appropriate for HQT's circumstances than a broader I-X approach. The**
17 **recommended approach introduces incentives where HQT can be expected to**
18 **exercise a reasonable degree of control, thereby creating a meaningful**
19 **incentive. This same opportunity does not exist on capital projects that are**
20 **designed to meet specific needs and reviewed by the Régie. Further, any MRI**
21 **program with special treatment for capital expenditures results in some**
22 **imbalance, which is accepted as a necessary trade-off to apply incentives**
23 **where they also recognize that an alternative regulatory approach, such as**
24 **the direct oversight of capital expenditures, is appropriate.**

25 2.6 Why are frais corporatifs excluded from indexation?

26 **R2.6**

27 **Réponse de Concentric :**

28 **See response to Question AHQ-ARQ 2.3 in HQTD-8, Document 2.**

29 2.7 Why are amortization expenses subject to indexing in the Company's MRI proposal
30 for HQD but not in its proposal for HQT?

31 **R2.7**

32 **Réponse de Concentric :**

33 **See response to Question AHQ-ARQ 2.2 in HQTD-8, Document 2.**

34 2.8 Does the addition of an earnings sharing mechanism to the plan weaken or
35 strengthen the Company's incentive to contain costs?

36 **R2.8**

37 **Réponse de Concentric :**

38 **In general, earnings sharing mechanisms (ESMs) weaken the incentive to**
39 **pursue cost savings, particularly those that require an investment to achieve.**
40 **While ESM serve a useful purpose in addressing the potential impact of**

1 earnings variations on both customers and shareholders, Concentric
2 expressed caution in establishing the specific parameters of an ESM as noted
3 on page 9 in its September 30, 2016 Report.

4 The parameters of the ESM must, therefore, preserve the ability of HQT to
5 retain a meaningful portion of the savings that are generated by efficiency
6 improvements, particularly for efficiency gains that require an up-front
7 investment. A strong incentive will encourage HQT to pursue efficiency gains
8 in all areas of its OPEX including payroll (salaries and overtime), benefits, and
9 fees for external services.

10 2.9 Doesn't the combination of annual rate cases for capital and an ESM produce
11 *unusually weak* incentives to contain capex?

12 **R2.9**

13 **Réponse de Concentric :**

14 The question must be addressed in the context of “weak” in comparison to
15 some benchmark. CAPEX growth, in the proposed plan, is constrained by the
16 Régie's approval of both large (\geq \$25M) projects on an individual basis and
17 annually for aggregated smaller projects. The existing incentive for CAPEX
18 management therefore remains the same. A new incentive is created with the
19 I-X cap on OPEX related costs. In general, longer term rate plans and an ESM
20 that provides for a greater utility sharing of earnings increase the incentive to
21 pursue efficiency gains as compared to shorter term rate plans and ESMs
22 with lower utility sharing parameters.

23 2.10 Please provide all a table with HQT's total capital revenue requirement for as many
24 years as possible, along with any evidence that the growth in its total capital
25 revenue requirement is more volatile than HQT's opex or the capital revenue
26 requirements of other transmission utilities.

27 **R2.10**

28 **Réponse de Concentric :**

29 **See responses to Questions Régie 1.1 and 10.2 in HQT-8, Document 1.**

30 **3. Référence :**

31 (i) Pièce HQT-2, Document 1.3, *Témoignage de MM. James M. Coyne et*
32 *Robert C. Yardley de Concentric Energy Advisors sur les caractéristiques du*
33 *MRI du Transporteur d'électricité (version amendée), p. 8.*

34 (ii) Pièce HQT-2, Document 1, *Témoignage de MM. James M. Coyne et*
35 *Robert C. Yardley de Concentric Energy Advisors sur les caractéristiques du*
36 *MRI du Transporteur d'électricité (version révisée), p. 21 (deleted).*

1 **Préambule :**

2 (i) *“The revised MRI proposal reflects two principle changes from the original*
3 *building block proposal: (1) OPEX is based on a multi-year I-X formula and*
4 *(2) all other components of the revenue requirements are based on COS as*
5 *currently used by HQT.”*

6 (ii) *“This [“bottom up”] approach recognizes the non-parametric nature of HQT’s*
7 *CAPEX and OPEX that does not readily accommodate an I-X program...*
8 *The efficiency incentives sought under Article 48.1 could still be achieved by*
9 *developing a multiyear rate plan that determines a future revenue cap.”*

10 **Demandes :**

11 3.1 Please confirm that relative to Concentric’s original proposal for HQT, which
12 featured a “building block” ARM, the new proposal involves

- 13 • Weaker capex containment incentives
14 • More imbalanced incentives to contain opex and capex
15 • Higher regulatory cost.

16 **R3.1**

17 **Réponse de Concentric :**

18 **a. Concentric confirms that the revised hybrid approach contains slightly**
19 **weaker CAPEX containment incentives. Under the initial proposal, HQT’s**
20 **CAPEX would have been incented under a multi-year cost-of-service**
21 **forecast. In the revised hybrid approach, HQT’s CAPEX will be incented**
22 **under a single year cost of service forecast. In both proposals, the Régie**
23 **would retain its existing approval process for large and small capital**
24 **projects, and therefore exercise its authority regarding the efficiency of**
25 **the capital investments.**

26 **b. See response to Question 2.5, above.**

27 **c. Not confirmed. It is not clear that the regulatory cost associated with**
28 **approval of a multi-year building block forecast for OPEX and CAPEX**
29 **would be less than an I-X for OPEX and annual cost of service approval**
30 **for capital.**

31 3.2 Isn’t the revised proposal therefore *less* consistent with Article 48.1 than HQT’s
32 original proposal in this proceeding?

33 **R3.2**

34 **Réponse de Concentric :**

35 **This is a question of law that will be decided by the Régie.**

36 **Concentric believes HQT’s revised proposal is consistent with the objectives**
37 **of Article 48.1. As outlined in Concentric’s Report, September 30, 2016, p.8:**

1 “The revised MRI proposal reflects two principle changes from the
2 original building block proposal: (1) OPEX is based on a multi-year I-X
3 formula and (2) all other components of the revenue requirements are
4 based on COS as currently used by HQT.

5 This Hybrid MRI proposal meets each objective of Article 48.1. The
6 three-year MRI term will provide an incentive for HQT to identify and
7 implement continuous improvements in its operations and
8 performance, fulfilling the first objective. The cost reduction objective
9 will be realized by using a fixed X factor for OPEX throughout the MRI
10 term, optimizing costs using the MGA and explicitly sharing the
11 earnings surpluses through the ESM; the achievement of performance
12 targets will also be rewarded through the ESM. The streamlining
13 objective will be achieved by replacing two cost-of-service rate filings
14 with targeted annual updates for data required to establish HQT rates.
15 While HQT’s Building Block proposal achieved these same objectives,
16 the Hybrid MRI provides greater transparency with respect to the
17 efficiency that was embedded within the forecasts that serve as the
18 benchmark under a three-year Building Block proposal.”

19 **4. Référence :**

20 Pièce HQTD-2, Document 1.3, *Témoignage de MM. James M. Coyne et Robert C.*
21 *Yardley de Concentric Energy Advisors sur les caractéristiques du MRI du*
22 *Transporteur d’électricité* (version amendée), p. 11.

23 **Préambule :**

- 24 • *“Adjustment to maintenance expenses based on the output of the MGA and other*
25 *costs related to recurring activities.*
- 26 • *Adjustments to reflect elements of Operating Expenses that are specifically*
27 *tracked, including any that are subject to variance accounts.*
- 28 • *The inflation factor will be based on the average of the HQT labor cost index and*
29 *the Canadian inflation rate.”*

30 **Demandes :**

31 4.1 Please provide a full explanation of the “adjustment to maintenance expenses
32 based on the output of the MGA and other costs related to recurring activities.”

33 **R4.1**

34 **Réponse de Concentric :**

35 HQT utilizes its MGA to perform an annual optimization between maintenance
36 and capital expenses. It is appropriate to reflect the outcome of this
37 optimization analysis when determining annual revenue requirements
38 because the alternative would, by implication, deviate from what is optimal.

1 **5. Référence :**

2 Pièce HQT-D-2, Document 1.3, *Témoignage de MM. James M. Coyne et Robert C.*
3 *Yardley de Concentric Energy Advisors sur les caractéristiques du MRI du*
4 *Transporteur d'électricité* (version amendée), p. 4.

5 **Préambule :**

6 *“Taken together, the HQT depreciation and amortization expense, its return on rate*
7 *base, and applicable taxes comprise 78.4% of the company’s revenue requirements.”*

8 **Demande :**

9 Considering this remark, and the proposals to use HQT’s salary inflation index in the I
10 factor, and to make an adjustment for MGA maintenance, approximately what
11 percentage of HQT’s revenue requirement would be subject to the incentives generated
12 by a conventional revenue cap index in HQT’s proposed MRI?

13 **R5.1**

14 **Réponse de Concentric :**

15 **See response to Question Régie 1.3 in HQT-D-8, Document 1.**

16 **6. Référence :**

17 Pièce HQT-D-2, Document 1.3, *Témoignage de MM. James M. Coyne et Robert C.*
18 *Yardley de Concentric Energy Advisors sur les caractéristiques du MRI du*
19 *Transporteur d'électricité* (version amendée), p. 1.

20 **Préambule :**

21 *“HQT, with direction provided by a new management team, has subsequently*
22 *reconsidered its initial recommendation, and has asked Concentric to evaluate*
23 *alternative MRI models.”*

24 **Demandes :**

25 6.1 Did Concentric *recommend* a cost of service treatment for all capital costs from
26 amongst all options considered in this work for HQT? Or did it just present options,
27 with pros and cons, leaving the choice between options to HQT?

28

29 **R6.1**

30 **Réponse de Concentric :**

31 **Concentric has served as an independent expert working with HQT and HQD**
32 **on the evaluation of alternative regulatory frameworks. Concentric has**

1 **provided research and analysis on a range of options, including the currently**
2 **proposed approach that would both satisfy the requirements of Article 48.1**
3 **and meet the operating circumstances of the utilities. Additionally, as**
4 **explained in Concentric’s September 30, 2016 report, HQT considered**
5 **direction from its new management team, and feedback from stakeholders on**
6 **the originally proposed plan. Ultimately, the proposed plan is that of HQT,**
7 **supported by Concentric’s research and analysis of the alternatives.**