

**RÉPONSES D'HYDRO-QUÉBEC DISTRIBUTION
À LA DEMANDE DE RENSEIGNEMENTS N° 2
DE OC**

DEMANDE DE RENSEIGNEMENTS N°1 D'OPTION CONSOMMATEURS (OC) À HYDRO-QUÉBEC DISTRIBUTION (HQD) ET CONCENTRIC ENERGY ADVISORS (CEA)

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.

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%)."

Demande :

- 1.1 Has Mr. Coyne conducted an independent analysis of HQD's index proposal for the I factor? If so, please file these data.

Réponse de Concentric :

- 1 **No, Mr. Coyne has not conducted such an independent analysis.**

- 1.2 Would Mr. Coyne please provide his opinion of the HQD 3 factor inflation index and proposed weightings and provide references to other jurisdictions (other than Alberta) with similar indices and weightings.

Réponse de Concentric :

- 2 **The 3-factor index proposed by the Distributor is designed to represent the**
3 **market for input costs faced by the utility, which is the general purpose of an**
4 **inflation index in a PBR plan. The I factor is the measure of industry input**

1 inflation. In Mr. Coyne’s opinion, the I factor components recommended by the
2 Distributor are reasonable, and the weights are based on HQD’s actual costs
3 in each category, which again is reasonable.

4 Inflation measures used in PBR programs have evolved over time. The earlier
5 versions typically adopted broad inflation measures, such as consumer price
6 indices (CPI) or the economy-wide implicit price deflator (GDPIPI). More
7 recent versions, such as those in Alberta and Ontario, have recognized the
8 trade-off between the greater accuracy of a composite I factor, and the
9 simplicity of a single index. For example, the AUC determined:

10 Overall, the Commission is satisfied that a composite I factor
11 consisting of two indexes (one for labour and the other for non-
12 labour costs), represents a reasonable balance between the need
13 for transparency and the need for accuracy in establishing an
14 input price inflation measure for the Alberta electric and gas
15 distribution companies. AUC Decision 2012-237 (September 12,
16 2012), p. 39.

17 Similarly, the OEB concluded when it went from a single index to a composite
18 index in its 3rd Generation Incentive Regulation (IR) programs:

19 The Board finds that the 2-factor IPI is comprised of components
20 that are the best, practicable price indices for satisfying its
21 objectives. The 2-factor IPI can be implemented just as easily as
22 the GDP-IPI (FDD), but provides a better indication of Ontario input
23 price fluctuations than the economy-wide measure. Finally, the 2-
24 factor IPI achieves this without introducing unreasonable volatility.
25 EB-2010-0379, Report of the Board, Rate Setting Parameters and
26 Benchmarking under the Renewed Regulatory Framework for
27 Ontario’s Electricity Distributors (December 4, 2013), p. 8.

28 For comparison to other jurisdictions, Table R-1.2 below provides an overview
29 of I factors adopted by regulators in Alberta, British Columbia, Ontario and
30 Massachusetts.

TABLE R-1.2 – OVERVIEW OF I FACTORS ADOPTED BY OTHER JURISDICTIONS

	Alberta	Ontario 4 th Gen IR	Fortis BC Electric	Eversource
Inflation Factor	$I_t = 55\% \times AWE_{t-1} + 45\% \times CPI_{t-1}$, AWE_{t-1} = Alberta weekly earnings index for previous July through June CPI_{t-1} = Alberta CPI for previous July through June	Composite Index, or Custom IR using Distributor-specific rate trend for the plan term to be determined by the Board, informed by: (1) the distributor's forecasts (revenue and costs, inflation, productivity); (2) the Board's inflation and productivity analyses; and (3) benchmarking to assess the reasonableness of the distributor's forecasts.	CPI-BC as calculated by Statistics Canada (non-labor) and BC-AWE (labor) indexes, weighted 45/55 for the O&M and capital formulas.	Bureau of Labor Statistics GDP-PI
Source	AUC D-2012-237 at 52.	Report of the Ontario Energy Board, 4 th Gen IR Renewed Regulatory Framework, October 18, 2012 at 13.	BCUC Decision for Fortis BC Electric, September 2014 at 33-34.	MA DPU 17-05 Final Order for Eversource, November 31, 2017 at 393.

1.3 In reference i), Mr. Coyne quotes the paragraph 428 of the Alberta Utility Commission finding :

*“428. Accordingly, since **both** (emphasis added) components of the approved I factors can be considered input based price indexes, there is no need in this case for the Commission to consider an adjustment to TFP for an input price differential or productivity differential in the calculation of the X factor.”*

Has Mr. Coyne considered whether a 3 factor inflation index and proposed weightings, in particular including costs related to assets as proposed by HQD, affects his recommendations regarding:

- i) Input price differential;
- ii) Treatment of capital in the IRM formula.

If so, please provide an opinion on these.

Réponse de Concentric :

1 **Yes. Both issues are addressed in Concentric’s January 5, 2018 Report**
 2 **(HQD-20, Document 2 [B-0178]). The issue of an input price differential is**

1 addressed on page 21 (none required), and the treatment of capital is
2 addressed on page 24. Other PBR programs have significant capital
3 allowances not included in the HQD program, suggesting that an industry X
4 factor, or those resulting from other decisions provides a built-in stretch
5 factor for the Distributor without a capital factor.

Productivity Factor X

2. Référence : i) B-0178, HQD20-D2, p.23-25.

Préambule :

- i) *“The longer-term utility productivity growth of -1.1% declined to -2.1% over the most recent five-year period. All of the studies show lower (or more negative) productivity growth in the more recent time period, suggesting these longer-term averages may overstate current productivity trends due to the leveling of demand growth without a comparable reduction in inputs.”*

Demande :

2.1 What is the similar decline in productivity growth in the US sample of utilities used by Mr. Coyne? Please provide these data.

Réponse de Concentric :

6 For the sample of recent utility productivity studies referenced in Concentric's
7 Report (HQD-20, Document 2 [B-0178]), p. 22, the following comparisons at
8 Table R-2.1 are available. All of the studies are U.S. samples, except for the
9 Statistics Canada and Hydro One/PSE study. All but one of the studies show
10 negative productivity for the entire sample; and all but one show lower levels
11 productivity in the last 5 years compared to the entire sample.

TABLE R-2.1 – PRODUCTIVITY TRENDS OF REFERENCED STUDIES

	StatCan MFP	2012 AUC Proceeding	2016 AUC Proceeding	2016 AUC Proceeding	2016 AUC Proceeding	Christensen Eversource	Christensen Eversource	PSE - Hydro One
	Utility Sector Multifactor Productivity	NERA Results	Brattle Update of NERA	PEG Study for CCA	Christensen Study	Industry TFP	X Factor	Ontario Industry TFP
2000	2.4%	2.1%	2.1%	1.0%	2.0%			
2001	-7.9%	-3.4%	-3.4%	1.0%	-3.2%			
2002	7.8%	1.2%	1.2%	1.7%	1.8%	-0.1%	-0.8%	
2003	-3.0%	-2.4%	-2.4%	-1.4%	-2.1%	-2.1%	-3.5%	0.8%
2004	-3.0%	2.8%	2.8%	1.4%	3.0%	1.9%	1.6%	1.3%
2005	2.8%	2.1%	2.1%	1.2%	2.2%	0.1%	-2.0%	2.2%
2006	-3.1%	-2.5%	-2.5%	0.0%	-2.2%	-1.0%	-3.7%	0.2%
2007	4.2%	0.5%	0.5%	0.0%	0.5%	-0.4%	-4.9%	-1.5%
2008	0.5%	-4.9%	-4.9%	-0.2%	-4.4%	-2.3%	-7.1%	-0.6%
2009	-6.7%	-2.6%	-2.6%	0.8%	-3.7%	2.0%	-2.7%	-0.1%
2010	-1.5%		2.2%	0.4%	1.7%	-2.2%	-3.4%	0.8%
2011	-1.0%		-4.5%	0.5%	-3.9%	-1.9%	-3.8%	-1.3%
2012	-2.4%		-2.0%	1.2%	-2.0%	0.6%	-1.0%	-3.9%
2013	-3.1%		-0.2%	0.0%	-0.6%	-0.2%	-1.5%	-4.5%
2014	-1.9%		-1.8%	-0.1%	-1.7%	-1.0%	-2.5%	-2.0%
2015	-2.1%					0.2%	-0.7%	-2.8%
Entire Sample	-1.1%	-0.7%	-0.9%	0.5%	-0.8%	-0.5%	-2.6%	-0.9%
Last 5 Years	-2.1%	-1.5%	-1.3%	0.4%	-1.3%	-0.5%	-1.9%	-2.9%

2.2 Please discuss how the differences between US and Canada productivity trends and the underlying factors (e.g. lower customer/load additions, declining use per customer, etc.) affect a determination of the appropriate X factor for HQD.

Réponse de Concentric :

1 **At the macroeconomic and business sector level, the U.S. productivity trend**
 2 **has outpaced that of Canada by 1.0% over the past 15 years, although this gap**
 3 **has narrowed to 0.1% over the most recent 5 years, as illustrated in Table 6 of**
 4 **Concentric’s Report (HQD-20, Document 2 [B-0178]). The same level of**
 5 **publicly available data for Canadian utilities required for detailed productivity**
 6 **studies is not available, so PBR programs in Canada typically rely on studies**
 7 **based on U.S. samples, as those cited in Concentric’s report.**

8 **Broadly speaking, Concentric has observed the industry trends in the U.S. are**
 9 **representative of those in Canada in terms of the major drivers impacting**
 10 **productivity. At this time, Concentric has not studied any differences in a**
 11 **manner that would allow a determination of a differential applicable to**
 12 **Canadian companies, or HQD, so it relies on the U.S. studies as being**
 13 **representative of the environment faced by HQD.**

2.3 How much of the estimated North American industry productivity trend is influenced by the US Sample vs. the Canadian Sample? Please provide this information.

Réponse de Concentric :

1 **The studies cited in Concentric’s January 5, 2018 Report (HQD-20,**
2 **Document 2 [B-0178]) that are utility specific all rely on U.S. samples with the**
3 **exception of the study submitted by Power System Engineering on behalf of**
4 **Hydro One in Ontario, which is based on data from Ontario’s electric**
5 **distributors collected by the Board.**

2.4 Please discuss how this response reconciles with the recommendation for a zero productivity offset (plus a stretch factor)?

Réponse de Concentric :

6 **Concentric has not recommended a zero productivity offset. Concentric’s**
7 **recommendation, outlined in its January 5, 2018 Report (HQD-20, Document 2**
8 **[B-0178]), is for a -0.75% productivity factor and a 0.25% stretch factor, with a**
9 **resulting X factor of -0.5%.**

3. Référence : i) Pièce B-0178, HQD20-D2, p. 14 et 20.

Préambule :

Mr Coyne notes :

“HQD has, however, provided evidence of its productivity in its document “Études, analyses et rapports pour la détermination du Facteur X déposés dans le cadre de l’établissement du mécanisme de réglementation incitative du Distributeur” filed in response to the Régie’s decision D-2017-043 (R-3897-2014, A-0161), including a significant decrease in its workforce for the period 2008-2017. HQD has also seen improvements in efficiency indicators as presented in file R-4011-2017.

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 Mr. Coyne examine the impact of HQD’s productivity and efficiency improvements on the distribution revenue requirement and the return on equity for the recent and IRM periods? If so, please provide this review/assessment. If not, please provide an opinion based on a review of the recent and forecast 2018 O&M costs and return on equity data, whether further efficiencies can be achieved under the IRM. Please relate this to the projection for Hydro One Distribution provided at page 14 of the evidence and to Mr. Coyne’s recommendations on the X and stretch factors.

Réponse de Concentric :

1 Concentric examined HQD's cost and efficiency performance in its Phase I
2 evidence (Performance Based Regulation Recommendations, Prepared For:
3 Hydro-Québec Distribution and Hydro-Québec TransÉnergie, R-3897-2014,
4 Before The: Régie de l'Énergie, October 26, 2015, Revised February 10, 2016,
5 HQTD-2, Document 1 révisé [C-HQT-HQD-0057] pp. 7 – 12). As noted in the
6 references cited in the preamble, HQD has provided additional evidence on its
7 efficiency improvements. Concentric has not conducted any additional
8 analysis, but its recommended stretch factor assumes that HQD will be able to
9 find additional operating efficiencies under the MRI program.

10 On the comparison to Hydro One, there is not an equivalent projection for
11 HQD. Hydro One's proposal is under OEB's Custom IR option, so it includes
12 an explicit projection for capital above the I-X rate path. That is the primary
13 "custom" element of the program. HQD's program does not include any
14 explicit adjustment for capital over the I-X rate path.

- 3.2 Did Mr. Coyne examine data for HQD and other utilities regarding growth factors and the relationship to the appropriate X and stretch factors? If so, please provide this.

Réponse de Concentric :

15 Each of the programs Concentric cited in its comparisons accommodates
16 growth, but the mechanisms vary.

Alberta

17 In Alberta, the electric distributors operate under a price cap, so rates escalate
18 with I-X. For the price cap:

19
$$\text{Rates}_t = \text{Rates}_{t-1} * (1 + I - X) \pm \text{Other Adjustments}$$

20 The other adjustments include Y and Z factors, and allowances for capital
21 spending above the I-X rate path. So growth beyond I-X for an Alberta electric
22 distributor is accommodated through increased customer growth and sales,
23 and through capital allowances. Capital, beyond I-X, is divided into two
24 categories: Type 1 and Type 2. The first type of capital includes projects and
25 programs that must be extraordinary and not previously included in the
26 distribution utility's rate base; and the project must be required by a third
27 party. The second type of capital (also called "K bar"), would include all or
28 most other capital that does not qualify for either Y factor or Z factor
29 treatment, whether fully funded under the I-X mechanism or not. Type 2 capital
30 covers incremental capital funding with the distribution utilities being given a
31 predetermined amount of incremental capital funding for all or a portion of the
32 PBR term. The distribution utilities are expected to manage their capital

1 programs within the capital funding constraints of the Type 2 amounts
2 provided. The AUC explained its Decision: “K-bar is able to provide
3 incremental capital funding for programs that fail the Type 1 criteria while
4 maintaining strong incentives for efficiency whereas the amended pure I-X
5 proposal would provide incremental capital funding on an extremely restricted
6 basis.” Decision 20414-D01-2016 (December 16, 2016), at 211.

Ontario

7 Ontario’s electric distributors have three options for PBR programs:

- 8 1. 4th Generation IR – an I-X price cap index (with rebasing after 4 years)
- 9 2. Custom IR – a distributor specific rate trend, such as that approved for
10 Toronto Hydro and proposed by Hydro One
- 11 3. Annual IR Index – an I-X price index (no fixed term)

12 Growth under these programs varies by program. Under the 4th generation
13 Incentive Regulation (IR), utilities can apply for incremental capital under its
14 “Incremental Capital Module”. Recovery of incremental capital, beyond I-X,
15 can be recovered if it meets the criteria shown in Table R-3.2, established
16 under the prior program. (Report of the Board on 3rd Generation Incentive
17 Regulation for Ontario’s Electricity Distributors, July 14, 2008, Appendix II).
18 The thresholds for applicability were subsequently revised in the OEB’s
19 “Advanced Capital Module”, September 18, 2014 and January 22, 2016.

**TABLE R-3.2 – CRITERIA FOR RECOVERY OF INCREMENTAL CAPITAL APPLICATIONS –
ONTARIO ENERGY BOARD**

Criteria	Description
Materiality	The amounts must exceed the Board-defined materiality threshold and clearly have a significant influence on the operation of the distributor; otherwise they should be dealt with at rebasing.
Need	Amounts should be directly related to the claimed driver, which must be clearly non-discretionary. The amounts must be clearly outside of the base upon which rates were derived.
Prudence	The amounts to be incurred must be prudent. This means that the distributor’s decision to incur the amounts must represent the most cost-effective option (not necessarily least initial cost) for ratepayers.

20 Under the Custom IR plan, rates are set based on a five-year forecast of a
21 distributor’s revenue requirement and sales volumes. According to the Board:

22 The Custom IR method will be most appropriate for distributors
23 with significantly large multi-year or highly variable investment
24 commitments that exceed historical levels. The Board expects that
25 a distributor that applies under this method will file robust
26 evidence of its cost and revenue forecasts over a five year horizon,
27 as well as detailed infrastructure investment plans over that same

1 time frame. (Report of the Board, Renewed Regulatory Framework
2 for Electricity Distributors: A Performance-Based Approach,
3 October 18, 2012, at p. 19.)

4 As seen with the Hydro One proposal, and that approved for Toronto Hydro,
5 the additional capital under a custom IR program can add significant revenues
6 to the underlying I-X rate path. The projected impact of the Hydro One capital
7 factor ranges from 1.64% to 2.86% above the revenue requirement that would
8 otherwise be set by I-X. In effect, the nominal X factor of 0.6% is negative,
9 ranging from -1.04 to -2.26% when the capital factor is considered. This
10 proposal remains under review. In the case of Toronto Hydro, the approved
11 price cap mechanism is of the form:

$$12 \quad \text{PCI} = I - X + C$$

13 Where rates increase with I-X and C provides incremental funds for capital
14 needs. Toronto Hydro's approved C factors increase the capital recovery
15 portion of revenue requirements, and are not covered by I-X:

- 16 • 2016 – 4.07%
- 17 • 2017 – 7.60%
- 18 • 2018 – 5.99%
- 19 • 2019 – 4.43%

20 These incremental capital factors clearly exceed an inflationary level,
21 projected to average 2.1% over this period by Toronto Hydro. The impact on
22 revenue requirements is seen in the following compliance filing¹:

¹ Toronto Hydro-Electric System Limited, EB-2014-0116, Draft Rate Order Update, Filed: 2016 Feb 29, Page 6 of 10.

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Table 2 – Annual C_n Factor

	2015	2016	2017	2018	2019
Interest	79.3	87.7	95.4	99.9	104.3
ROE	120.2	133.0	144.7	151.6	158.2
Depreciation	206.0	218.7	242.2	257.7	275.0
PIs/Taxes	25.0	16.9	24.3	40.2	45.7
Capital-related RR	430.5	456.3	506.6	549.4	583.2
OM&A	243.9	247.6	251.3	255.1	258.9
Revenue Offsets	(41.3)	(41.9)	(42.5)	(43.2)	(43.8)
Total RR	633.1	662.0	715.4	761.4	798.3
C _n		4.07	7.60	5.99	4.43

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When these and other adjustments flow through rates, the average implicit X factor for Toronto Hydro over this 4-year period is -3.13%.

British Columbia

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In the most recent decisions for FortisBC Inc. (FBC, the electric utility) and FortisBC Energy Inc. (FEI, the gas utility), the BCUC approved capital adjustment mechanisms for both companies in their 5-year PBR plans. The decisions and supporting rationale for FBC and FEI are similar, so Concentric will focus on the electric decision (FBC).

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First, the Commission determines an amount of “Base Capital” spending from the starting point year prior to the first PBR year (in this case, 2013). The Company used its approved 2013 capital expenditure of \$101.9M, adjusted for non-recurring projects and non-controllable items to \$49.18M. This base capital is broken down to three primary categories comprised of \$19.194 million for Sustainment Capital, \$19.760 million for Growth Capital (primarily for new connects), \$8.134 million for Other Capital, and a remaining \$1.723 million for PST and pension adjustments.

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- **“Sustainment Capital” – Consists of expenditures for system reinforcements, replacements and upgrades to generation, transmission and distribution assets to ensure safety, integrity and reliability.**
- **“Growth Capital” – Consists of expenditures for infrastructure upgrades required to meet customer and associated load growth.**

- “Other Capital” – Consists of expenditures for Information Systems, Vehicles, Metering, Telecommunications, Facilities, and Tools and Equipment.”

Under the PBR plan, changes in approved capital expenditures follow a formulaic approach, as illustrated below:

Table 3.8 PBR Capital Formula Inputs and 5-Year Forecasts

Line No.	Particulars	2013 Base (1)	2014 Formula (2)	2015 Formula (3)	2016 Formula (4)	2017 Formula (5)	2018 Formula (6)
1	2013 Base Capital (\$000)	\$ 49,180					
2	Less Capital Tracked Outside of Formula						
3	Pension/OPEB (Capital portion)	(6,741)					
4		42,439					
6	Average Number of Customers	128,796	129,770	130,922	132,142	133,385	134,667
7	% Change in Customers		0.76%	0.89%	0.93%	0.94%	0.98%
9	Composite I-Factor		2.31%	2.42%	2.34%	2.36%	2.30%
11	Productivity X-Factor		0.50%	0.50%	0.50%	0.50%	0.50%
13	I-X Mechanism (1+I-X)		101.81%	101.92%	101.84%	101.86%	101.80%
15	Net Inflation Factor ((1 + Line 7) * Line 13)		102.58%	102.82%	102.79%	102.82%	102.79%
15	Formulaic Capital (Line 15 * Prior Year)		43,534	44,754	46,012	47,309	48,630
16	Add: Capital Tracked Outside of Formula						
17	Pension/OPEB (Capital portion)	6,741	6,396	5,952	5,508	5,133	4,826
18	PCB Compliance - Substations		6,062				
19	Advanced Metering Infrastructure Project		16,765	18,233	583	741	604
21	Total Capital Under PBR		72,758	68,950	52,103	53,183	54,060

(Source: Exhibit B-1, p. 58)

The “growth factor” shown in line 7 is determined by the change in customers, and the growth factor was multiplied by the growth portion of the capital allowance of 50%.

The plan also includes an allowance for projects outside of PBR. Those projects are excluded from the PBR formula and added to the ratebase with full cost recovery once placed into service on a flow-through basis, net of any offsetting O&M or revenue effects. The CPCN threshold (\$20M for FBC) was used initially, subject to further submissions by the parties. In a subsequent Order, the BCUC determined the materiality thresholds to be \$20M for FBC and \$15M for FEI, and ruled that smaller projects should not be combined to achieve that threshold. Another aspect of the BCUC decision is a deadband around capital spending. If the company under (or over spends) its capital under the formula by 10% in a single year, or 15% in two years, the companies are required to file recommendations for adjustments to base capital for the remainder of the PBR term.

Massachusetts

1 In the Eversource PBR plan, the company operates under a revenue cap
2 where it absorbs customer growth under its I-X rate path. The company also
3 indicated that the proposed I-X plan would allow it to absorb the \$400 million
4 of grid modernization investments (equivalent to 1.08% in annual revenue
5 requirement, as noted above), while amounts above that level would be
6 recovered separately. The Department determined it was appropriate to
7 address the \$400 million grid modernization investment outside the PBR plan,
8 and therefore reduced the proposed X factor by that amount, resulting in an
9 approved X factor of -1.56% (-2.64% + 1.08%). The Department did approve
10 separate energy storage projects of \$55 million and \$45 million for an electric
11 vehicle infrastructure program beyond the I-X rate path.

- 3.3 Given the Régie's decision to allow a 0.75% growth factor, did Mr. Coyne examine the effect on treatment of capital under the IRM? If so, please provide this. If not, please provide an opinion regarding how the growth factor may or may not affect exclusions and the appropriate threshold for Y factors.

Réponse de Concentric :

12 The issue of capital growth was addressed in the Concentric Report (HQD-20,
13 Document 2 [B-0078]), at p. 24 :

14 For HQD, all capital investments, other than those excluded for a Z
15 factor, are included in the formula. This creates a greater challenge
16 in that regard than the Alberta utilities, Eversource or Hydro One
17 face under their PBR plans.

18 Based on the additional response to 3.2 above, Mr. Coyne concludes that the
19 other plans cited in the research have approved capital mechanisms (beyond
20 Y or Z factors) that HQD does not have in the program approved by the Régie.
21 Mr. Coyne does not believe that a Y or Z factor is the appropriate treatment for
22 capital expenditures in the normal scope of business, but exceed the I-X rate
23 rate path. A more efficient and typical approach is the creation of a capital
24 factor.

4. Référence : i) Pièce B-0178, HQD20-D2, p. 16.

Préambule :

Mr. Coyne discusses the Eversource new PBR program and notes:

"The Department determined it was appropriate to address the \$400 million grid modernization investment outside the PBR plan, and therefore reduced the X

factor by that amount, resulting in an approved X factor of -1.56% (-2.64% + 1.08%).”

Demande :

- 4.1 Other than for the new IRM program of Eversource in Massachusetts, is Mr. Coyne aware of other North American tribunals that have recognized a negative X factor?

Réponse de Concentric :

1 **Not explicitly, although with capital program allowances, the effective X can**
2 **be negative. This is a relatively recent occurrence based on the growing**
3 **evidence of negative industry productivity. This issue was argued in**
4 **Massachusetts, and the Department concluded:**

5 **The Attorney General notes that no other jurisdiction in North**
6 **America has approved a negative X factor to date (Exh. AG/DED-1,**
7 **at 47-48; Tr. 3, at 583-585). This fact does not, however, preclude**
8 **the possibility of an X factor that is negative. In fact, other**
9 **jurisdictions have acknowledged that an X factor may be positive**
10 **or negative (Exh. VS-1-13, Att. (a) at 48). Whether an X factor is**
11 **positive or negative is determined solely by the relationship**
12 **between outputs and inputs in a given industry, and there is no**
13 **reason to dismiss the possibility that the electric distribution**
14 **industry may be in a period exhibiting changes that result in**
15 **decreasing output given a similar or increasing level of inputs (see**
16 **Exh. ES-PBRM-1, at 47). For these reasons, the Department cannot**
17 **find that the proposed X factor is unreasonable merely because it**
18 **is negative or lower than any productivity offset approved to date.**
19 **Rather, in the sections below, the Department reviews the**
20 **Companies’ TFP study to determine whether it was conducted in a**
21 **reasonable manner using appropriate assumptions. (MDPU**
22 **Eversource Decision at p.382.)**

23 **On the issue of implicit X factors being negative, the Department noted:**

24 **For example, the Companies maintain that the Alberta Utilities**
25 **Commission essentially implemented a negative X factor in 2016**
26 **because it approved a capital cost recovery mechanism on top of**
27 **the X factor, and used industry inflation indices, instead of the**
28 **lower economy wide inflation measure that the Companies employ**
29 **(Companies Brief at 337, citing Tr. 3, at 499-500, 511; RR-DPU-7, at**
30 **7). In addition, the Companies argue that the British Columbia**
31 **Public Utilities Commission, in effect, set a negative X factor,**
32 **because the 0.93 percent X factor it allowed had only a 0.1 percent**
33 **stretch factor and included a capital cost recovery mechanism that**
34 **allowed rate changes from six to eight percent each year**
35 **(Companies Brief at 337, citing Tr. 3, at 499-500, 511; RR-DPU-7, at**
36 **7). The Companies assert that, while the Ontario Energy Board set**
37 **its X factor at zero, it used the higher industry inflation indices and**
38 **allowed two supplemental capital cost recovery mechanisms**

1 (Companies Brief at 338, citing Report of the Ontario Energy Board
2 (OEB), Renewed Regulatory Framework for Electricity Distributors:
3 A Performance-Based Approach at 18 (Oct. 18, 2012)). Finally, the
4 Companies argue that the California Public Utilities Commission
5 authorized Southern California Edison Corporation and Pacific
6 Gas & Electric Company to implement annual adjustments in 2016
7 and 2017 that are similar in percentage terms to the adjustments
8 the Companies seek under the PBR (Companies Brief at 338-339).
9 (MDPU Eversource Decision, footnote 181, at p. 361.).

4.2 In general, is Mr. Coyne aware of North American tribunals that have recognized a negative X factor for a first generation IRM?

Réponse de Concentric :

10 Please see the response to Question 4.1.

Impact of HQD IRM Formulation

5. Référence :
- i) Pièce B-0013, HQD3-D4, p. 11-25.
 - ii) Pièce B-0020, HQD5-D1, p. 10-11.
 - iii) Pièce B-0178, HQD20-D2, p. 14 et 20.
 - iv) Incentive Ratemaking Report (CEA), EB-2012-0459, Exhibit A, Tab 9, Schedule 1.

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 on the rates based on the recommendations of CEA and HQD for the IRM Formula.

Demande :

5.1 Has Mr. Coyne/HQD 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 the evidence of Concentric and HQD. The format should be

similar to the projection for Hydro One Distribution referenced at page 14 of the 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 :

1 **Le Distributeur est d'avis que l'intervenant a en main toutes les informations**
2 **nécessaires afin de faire des scénarios de formules d'indexation**
3 **prévisionnelles à partir des tableaux 5 et 6 de la pièce HQD-5, document 1**
4 **(B-0020) et des caractéristiques des facteurs I et X proposées à la pièce**
5 **HQD-20, document 1 (B-0177).**

5.2 Has Mr. Coyne/HQD examined the sensitivity of the revenue requirement/return on equity to a higher productivity/stretch factor? If so, please provide this.

Réponse :

6 **Voir la réponse à la question 5.1.**

5.3 Did Mr. Coyne consider placeholders for capital and other items, as he recommended for the Enbridge Gas Distribution Custom 2014-18 IRM Plan in reference iv)? Please discuss in detail, including why this was rejected in favor of Y factors for incremental capital.

Réponse de Concentric :

7 **Yes. These alternatives were originally considered prior to submission of the**
8 **Phase I evidence with evaluation of a “building block” model, along with**
9 **“capital trackers”. Ultimately, the I-X approach was recommended in order to**
10 **meet the requirements of Article 48.1. Concentric believes that the use of a**
11 **capital tracker should be retained and evaluated as experience is gained with**
12 **this first-generation MRI.**

Y factors – Pension costs

6. Référence :
- i) Pièce B-0177, HQD20-D1, Annexe B, p. 16.
 - ii) Pièce B-0176, HQD15-D1.5, p. 21.
 - iii) Ontario Energy Board, EB-2015-0114, Appendix D, p. 23-24.

Préambule :

- i) *“La majorité des fluctuations du coût de retraite, tant en ce 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.”*

In reference ii), Mr. Coyne presents in Table 1 the treatment of Y factors in other North American jurisdictions.

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

Demande :

- 6.1 Has Mr. Coyne examined regulatory practice regarding inclusion/exclusion of pension and Other Post-Employment Benefits (OPEBs) in IRMs other than the ones presented in reference ii)? If so, please provide any relevant information.

Réponse de Concentric :

1 **Concentric is aware that pension and OPEB expenses are oftentimes**
2 **recovered through a tracker mechanism. This is the case in Massachusetts**
3 **where pension/OPEB expenses are often recovered through the PBOP**
4 **reconciling mechanism (« Pensions and Benefits Other than Pensions »).**

- 6.2 Please elaborate on the treatment of pension costs and OPEBs in Ontario described in Table 1 of reference ii) as “Partial”.

Réponse de Concentric :

5 **Please see response to Régie’s information request n° 8, HQD-21, document**
6 **1.2, Questions 7.1 and 7.2.**

- 6.3 If as HQD suggests, the variations in pension and OPEBs are primarily market valuation and actuarial, does Mr. Coyne have an opinion whether rather than exclusion, a pension and or OPEBs variance account is an option, similar that for Enbridge Gas Distribution?

Réponse de Concentric :

7 **As discussed in response to Régie’s information request n° 5, HQD-15,**
8 **document 1.5 (B-0176), the recovery of Y factor costs such as pension**
9 **expense can take various forms but all forms of recovery are intended to**
10 **match revenue with the actual costs incurred during a defined period. A**

- 1 **common approach is to include a forecast amount in rates and then use a**
- 2 **variance account to true-up to the actual expenses at the end of the year.**