

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

**DEMANDE RELATIVE À L'ÉTABLISSEMENT DES TARIFS D'ÉLECTRICITÉ
DE L'ANNÉE TARIFAIRE 2017-2018****DOSSIER R-4011-2017**

FACTEUR X**Question 1 :****Références:**

- (i) B-0178, HQD-20, document 2, p.6
- (ii) B-0178, HQD-20, document 2, p. 22, tableau 5

Préambule :

(i)
« Both outputs and inputs vary by year, and taking the difference between the two indices creates a volatile year-to-year profile, so the data is typically compiled over many years to reflect the industry trend. All the studies show an industry trend in productivity converging at or below zero over this two-decade period, indicating negative productivity growth. This does not mean the utilities in the sample are becoming less productive, per se, but that the rate of growth of inputs is exceeding the rate of growth in outputs. A contributing factor has been the decline in electric demand growth without offsetting declines in labor, capital and other operational costs required to maintain and upgrade these utility systems. »

Questions :

1.1 Veuillez justifier la pertinence de facteurs X découlant d'études de productivité utilisant des variables de volumes de ventes et puissance aux fins de l'établissement d'un mécanisme incitatif de type « revenu cap ».

Réponse de Concentric :

1 **Concentric addresses this issue in response to the following questions : 2.c,**
2 **5.b, 7.b, 10.a, 10.c and 12.b at HQD-21, Document 3.**

3 **Concentric also notes, confirming the findings in the 2016 AUC Decision, that**
4 **the choice of output measure remains subject to considerable debate. The**
5 **Massachusetts Department of Public Utilities (MDPU or Department) wrestled**
6 **with this issue in its Eversource Decision, and found:**

7 **Traditionally, the Department has approved TFP studies that use**
8 **both customer count and a measure of sales (i.e., kWh sales) as**
9 **output measures. See D.P.U. 96-50 (Phase I) at 275-278; D.T.E. 03-**
10 **40, at 476. Eversource used number of customers as the sole**
11 **output measure for its TFP study (Exh. ES-PBRM-1, at 30; Tr. 3, at**
12 **491). Several intervenors maintain that the Companies' use of**
13 **number of customers as the sole output measure is problematic**

1 because total output consists of all of the products and services
2 produced by the relevant firm or industry (Attorney General Brief
3 at 31; Vote Solar Brief at 6-7).

4 The Department has previously expressed concern with the use of
5 number of customers as the sole indicator of LDC output growth.
6 D.P.U. 07-50-A at 48-49; D.P.U. 96-50 (Phase I) at 275-276.189. As
7 Eversource recognizes, while the number of customers is a driver
8 of the costs needed to operate gas or electric distribution systems,
9 it does not capture all of the reasons for changes in costs
10 associated with providing distribution services (Exh. ES-PBRM-1,
11 at 49; Tr. 3, at 495). D.P.U. 07-50-A at 48-49. For example, a
12 distribution company may make capital expenditures to replace
13 existing assets and the magnitude of capital replacement required
14 has little or no correlation with levels of customer growth (Exh. ES-
15 PBRM-1, at 49; Tr. 3, at 494-495, 633-634). D.P.U. 07-50-A at 48-49.
16 Instead, these capital expenditures are influenced by factors such
17 as the age of the assets, changes in technology, past patterns of
18 customer growth and increases in the load to serve (Exh. ES-
19 PBRM-1, at 49; D.P.U. 07-50-A at 48-49).

20 Because of significant changes in the electric distribution utility
21 industry, use of kWh sales as an alternate output measure may
22 also be flawed. In particular, successful energy efficiency
23 programs have led to decreased energy consumption, which has
24 resulted in decreased kWh sales for electric distribution utilities
25 (Exh. ES-GWPP-1, at 21-26; Tr. 1, at 32, 71; Tr. 5, at 986; Tr. 8, at
26 1474, 1538). D.P.U. 07-50-A at 3, 6. In addition, the introduction of a
27 growing amount of distributed energy resources into the
28 distribution system decreases kWh sales (Exh. ES-GWPP-1, at 22,
29 25-26). In this current environment, electric distribution utilities
30 may exhibit kWh sales data that are unrelated to distribution
31 system investments or other customer service inputs (see Tr. 3, at
32 494-495, 633-634).

33 Given the discussion above, the Department concludes that both
34 output measures used in traditional TFP studies (i.e., kWh sales
35 and customer count) present challenges. The record does not
36 contain the data necessary to allow us to consider a non-
37 traditional output measure. In these circumstances, the
38 Department finds that Eversource has demonstrated that customer
39 count is a reasonably reliable TFP output measure as it is less
40 affected than kWh sales by the industry changes discussed above
41 (Exh. ES-GWPP-1, at 21-26; Tr. 1, at 32, 71; Tr. 5, at 986; Tr. 8, at
42 1474, 1538). D.P.U. 07-50-A at 3, 6. Going forward, any distribution
43 company conducting a TFP study should consider and present
44 data regarding alternative or non-traditional output measures that
45 are designed to capture all of the products and services it
46 provides. (MDPU Eversource Decision, p. 387-389).

47 Please note that in response to Question 5.b. at HQD-21, Document 3,
48 Concentric believes that the specific choice of output measures, and their

1 implications, is beyond the scope of this Phase III-A proceeding (see also
2 Concentric's introductory remarks to responses to AQCIE-CIFQ at HQD-21,
3 Document 3, page 3).

4 Please also note that the most recent study submitted and accepted in the
5 Eversource proceeding relied on customers as the measure of output growth,
6 its productivity result is the most negative of all those cited, and it is utilized
7 in a revenue cap incentive mechanism.

1.2 Veuillez justifier la pertinence de facteurs X découlant d'études de productivité utilisant des variables de volumes de ventes et puissance aux fins de l'établissement d'un mécanisme incitatif avec un facteur de croissance basé sur le nombre de clients.

Réponse de Concentric :

8 The applicability of the studies cited by Concentric in its X factor
9 recommendation for a revenue cap model is addressed in response to
10 Question 1.1. On the issue of customer growth, as noted in Concentric's
11 Report at p.20¹ : « By selecting a G of 0.75% of HQD's customer growth, the
12 Régie has built in additional efficiency gains beyond those captured in the X
13 factor. »

1.3 Pour chacune des études répertoriées par l'expert, veuillez présenter le taux de croissance des intrants correspondant au facteur X présenté au tableau 5.

Réponse de Concentric :

14 Concentric has not collected this data, and for reasons provided in response
15 to Question 1.1, Concentric believes this is beyond the scope of the current
16 Phase III-A² proceeding.

1.4 De la même manière, pour chacune des études répertoriées par l'expert, veuillez présenter le taux d'inflation utilisé pour calculer la croissance des intrants. Si une pondération de plusieurs indices est utilisée ou si plusieurs indices sont utilisés, veuillez fournir l'explication et identifier la pondération qui est accordée à chacun dans l'établissement du taux de croissance global des intrants.

Réponse de Concentric :

17 Concentric has not collected this data, and for reasons provided in response
18 to Question 1.1, we believe this is beyond the scope of the current Phase III
19 proceeding (Phase III-A).

¹ HQD-20, document 2 (B-0178).

² See footnote 1 at HQD-21, document 3, page 3.