

**Réponses du Transporteur
à la demande de renseignements numéro 1
de Nalcor Energy Marketing Corporation
(« NEMC »)
pour la phase 2B**

**DEMANDE DE RENSEIGNEMENTS N° 1
DE NALCOR ENERGY MARKETING CORPORATION (« NEMC »)
RELATIVE À UNE DEMANDE DU TRANSPORTEUR RELATIVE À LA MODIFICATION
DE LA POLITIQUE D'AJOUTS AU RÉSEAU DE TRANSPORT - PHASE 2**

PREUVE DU TRANSPORTEUR POUR LA PHASE 2B

- 1 Référence : i) Pièce B-0175, page 6, lignes 11 à 14**
- ii) Dossier R-3476-2001, Pièce HQT-1, Document 1**

Préambule :

i) « La description synthétique des investissements et de leurs objectifs accompagne chaque demande d'autorisation du budget annuel d'investissement pour les projets de moins de 25 M\$. Bien que cette description ait quelque peu évolué au fil du temps, les objectifs associés à chacune des catégories sont demeurés les mêmes.(our underline) : »

Demandes :

- 1.1 Please provide all changes to the investment categories definitions since they were first presented in the first HQT investment files (reference ii)). Please provide the rationales for all definitions modifications including the ones highlighted in exhibit B-0184.

Réponse :

- 1 Voir la réponse à la question 5.1 de la demande de renseignements numéro 1
2 de la Régie, à la pièce HQT-5, Document 4.1. La Régie, en ayant limité cet
3 exercice de justification aux modifications depuis le début du dossier de la
4 politique d'ajout, fixe un cadre d'analyse suffisant pour permettre à
5 l'intervenant d'apprécier la proposition de modification du texte de la
6 description synthétique des investissements et de leurs objectifs¹
7 (« *Description synthétique* »).
- 8 Le Transporteur tient à rappeler que cette proposition de modification visait à
9 ajouter des repères, tels que des mots clés et des exemples, afin de permettre
10 au lecteur de mieux identifier à quelles catégories sont attribués les coûts d'un
11 projet. La connaissance de l'ensemble des modifications apportées à la
12 description synthétique depuis 2001 apparaît comme un exercice sans
13 commune mesure avec la tâche de déterminer si les repères proposés
14 permettent de répondre à cet objectif. Le Transporteur précise également que,
15 considérant le temps écoulé, l'information demandée n'est pas disponible
16 aisément au prix d'un effort raisonnable.

¹ HQT-5, Document 2

- 2 Référence :**
- i) Pièce B-0175, page 8, lignes 8 à 10
 - ii) Décision D-2012-152, par 23

Préambule :

i) « La Régie a précisé que dans les cas où les pertes électriques constituent un paramètre de l'analyse économique, les données relatives à l'évaluation de ces pertes doivent être soumises lors du dépôt initial d'une demande d'autorisation d'un projet d'investissement.¹³ : »

ii) « [23] De même, il prévoit des travaux pour améliorer la qualité et la continuité du service, en ajoutant un disjoncteur de barre au poste de Bedford, afin d'y éviter qu'un défaut sur un transformateur de puissance ou sur la barre principale à 120 kV n'entraîne la perte complète du poste et de l'interconnexion. Le Transporteur fait valoir que neuf déclenchements de transformateurs ont été constatés à ce poste depuis l'année 2006 : »

Demandes :

- 2.1 Please explained why you refer to paragraph 23 of decision D-2012-152 in footnote 13 of reference i).

Réponse :

- 1 **Le Transporteur constate que la référence 23 de la note de bas de page ne**
2 **devrait pas y figurer. Le paragraphe 64 est le seul qui vient appuyer l'énoncé**
3 **mentionné à la référence i).**

- 3 Référence :**
- i) Pièce B-0175, page 9, Section 4

Demandes :

- 3.1 Please confirmed that the proposed OATT submitted by HQT in Phase 2A refers to all 4 investment categories definitions.

Réponse :

- 4 **Les modifications proposées aux *Tarifs et conditions* dans le cadre de la**
5 **phase 2A du dossier de la Politique d'ajouts portent sur les investissements**
6 **requis pour la catégorie Croissance des besoins de la clientèle, cette catégorie**
7 **étant la seule visée par les *Tarifs et conditions*. Les trois autres catégories ne**
8 **sont mentionnées qu'au nouvel article 12B qui décrit, à titre indicatif, la**
9 **méthode d'allocation des coûts entre les quatre catégories pour les projets**
10 **intégrés à objectifs multiples.**

- 3.2 Please confirmed that one of the purposes of the definitions presented in section 1 of the OATT is to help the reader better understand the scope of the articles of the OATT.

Réponse :

- 1 **Le recours à des définitions à la section 1 des *Tarifs et conditions* peut se**
2 **justifier lorsqu'elles sont utiles, adéquates et permettent de mieux comprendre**
3 **les dispositions visées aux fins de l'utilisation du réseau de transport et de la**
4 **gestion des services de transport offerts aux clients.**

- 3.3 As an alternative to adding the definition of investment categories in section 1 of the OATT, would it be preferable to add it in a new attachment?

Réponse :

- 5 **Voir la réponse à la question 12.1 de la demande de renseignements numéro 1**
6 **de l'AQCIE-CIFQ, à la pièce HQT-5, Document 4.3.**

TÉMOIGNAGE DU DR METIN CELEBI DE THE BRATTLE GROUP

- 4 Référence : i) Pièce B-0177, page 2, lignes 14 à 17**

Préambule :

- i) « Q. Please summarize your conclusions.
A. I conclude the following based on my review of the relevant provisions of HQT's current and proposed Hydro Québec Open Access Transmission Tariff (OATT) and regulatory filings, the Régie's past decisions, the transmission investment planning practices by HQT, and HQT's evidence filed in this case: »

Demandes :

- 4.1 Please provide the list of documents you have reviewed pertaining to the reference (i). More precisely, please provide the following lists:

- 4.1.1 List of documents pertaining to the regulatory filings reviewed;

Réponse :

- 7 **See Appendix A to Brattle's Prepared Direct Testimony.**

4.1.2 List of decisions reviewed;

Réponse :

1 **See Appendix A to Brattle’s Prepared Direct Testimony.**

4.1.3 List of documents reviewed pertaining to the transmission investment planning practices by HQT

Réponse :

2 **See Appendix A to Brattle’s Prepared Direct Testimony.**

4.1.4 List of documents reviewed in this case.

Réponse :

3 **See Appendix A to Brattle’s Prepared Direct Testimony.**

4.2 From the documents listed in responses to questions 4.1.1. to 4.1.4, please indicate which ones were translated into English and provide those documents.

Réponse :

4 **See Appendix A to Brattle’s Prepared Direct Testimony. The documents that**
5 **were translated to English are noted with “(translated version)” in the list.**

6 **Ces traductions internes non certifiées constituent des documents de travail**
7 **remis à l’expert dans le cadre de l’exécution de son mandat. Elles ne sont pas**
8 **produites en preuve et ne constituent pas la meilleure preuve des faits ou des**
9 **positions qui y sont énoncés, seule la version originale française faisant**
10 **preuve de son contenu.**

5 **Référence : i) Pièce B-0177, page 9, lignes 22 à 24**

ii) Pièce B-0177, page 4, lignes 3 à 4

Préambule :

i) « In general, the HQT’s transmission investment categories encompass the same types of investments as the categories of other system operators for meeting objectives that are relevant in the context of HQT system. In addition, HQT’s categories are put to similar use

as the categories of other system operators, that is, they serve both to identify the types of investments needed to maintain a reliable electric system responsive to their customers' needs, and to allocate the costs across investment categories. (our underline) »

ii) « Transmission investment costs associated with the Growth category are allocated to the specific transmission customers whose needs (such as load growth, new interconnection, and new generation interconnection) triggered the investment. (our underline) »

Demandes :

5.1 Please elaborate on the statement mentioned in reference i) pertaining to the “context of HQT system” :

5.1.1 Please describe the “context of HQT system” as stated in reference i), as it pertains to transmission investment;

Réponse :

1 **Brattle is aware of the Regie’s determination that HQT’s transmission system**
2 **(and wholesale market) is characterized by a number of attributes**
3 **distinguishing it from those of neighboring systems, including the fact it is**
4 **asynchronous to and isolated from other Interconnections through DC**
5 **interties, is served by only one major transmission provider, and is designed**
6 **to avoid congestion when all facilities are in service. These distinguishing**
7 **characteristics have been found relevant by the Regie in regulatory matters**
8 **related to investment planning, and are relevant when comparing HQT’s**
9 **investment categories with those used by transmission service providers**
10 **operating in different contexts and environments, to explain certain**
11 **commonalties or differences. As an example, the market efficiency category in**
12 **the case of PJM serves to capture upgrades aimed at reducing congestion**
13 **costs, which is not applicable to HQT’s system.**

5.1.2 Please describe the main differences between the HQT system and other similar systems, that are relevant to transmission investment;

Réponse :

14 **See response to 5.1.1.**

5.1.3 Please confirm that you are aware of the notion of the generic “HQT point” used by HQT.

Réponse :

1 **Brattle is aware of the existence of the HQT point, a proxy used by HQT and**
2 **recognized by the Regie to represent HQT’s transmission system as a whole.**

5.1.4 To your knowledge, are there other jurisdictions that use a generic point such as the HQT point? If so please provide the references.

Réponse :

3 **While the HQT point is a distinguishing feature of the HQT system, it is not per**
4 **se relevant to the issues addressed in his report. Brattle has therefore not**
5 **verified in carrying out his mandate, and is therefore not in a position to opine**
6 **on, whether there are other jurisdictions where a proxy such as the HQT point**
7 **has been introduced to represent transmission network, in whole or in part.**

5.2 To your knowledge, are there other jurisdictions where the injection point [point of receipt] of a transmission reservation used to justify a new interconnection project (reference ii) is a generic point, not associated with specific generation assets. If so, please provide the reference.

Réponse :

8 **Since it is not relevant to the issues addressed in his report, Brattle has not**
9 **verified in carrying out his mandate, and is therefore not in a position to opine**
10 **on, whether there are other jurisdictions where a proxy such as the HQT point**
11 **has been used as a point of receipt for purposes of a new interconnection**
12 **project.**

5.3 To your knowledge, are there other jurisdictions where the interconnection of a new generation source that is partly or totally used for export purposes using firm point-to-point services has a generic point as a withdrawal point [point of delivery]. If so, please provide the reference.

Réponse :

13 **Since it is not relevant to the issues addressed in his report, Brattle has not**
14 **verified in carrying out his mandate, and is therefore not in a position to opine**
15 **on, whether there are other jurisdictions where a proxy such as the HQT point**
16 **has been used as a point of delivery for export purposes.**

6 Référence : i) Pièce B-0177, page 10, lignes 3 à 5**Préambule :**

i) « Yes. I reviewed the investment categories and the underlying objectives used by British Columbia Hydro (BC Hydro) in Canada and PJM in the U.S. to assess commonalities and differences in investment categories. (our underline) »

Demandes :

- 6.1 What was the decisional process for selecting BC Hydro and PJM for the comparison exercises you performed? Was it a choice of your own or was it a selection done by HQT?

Réponse :

1 **Brattle chose to present BC Hydro and PJM as just two examples of system**
2 **operators with filed Open Access Transmission Tariffs (OATTs) in Canada and**
3 **the U.S. The transmission investment categories (and the objectives**
4 **underlying these categories used) by these two system operators included**
5 **commonalities and differences relative to the categories used by HQT.**
6 **Therefore, Brattle decided to present these two examples to assess**
7 **comparability to HQT.**

- 6.2 Did you consider other potential markets as comparable? If so, please provide the list of those other jurisdictions considered, and explain the decision not to include those jurisdictions in your testimony.

Réponse :

8 **Brattle considered the practices adopted by other system operators (such as**
9 **MISO, SPP, and BPA), but only presented BC Hydro and PJM as the examples**
10 **in his testimony as the PJM and BC Hydro examples are sufficient to illustrate**
11 **the commonalities and differences relative to HQT's investment categories. In**
12 **addition, as discussed in Brattle's Prepared Direct Testimony, differences exist**
13 **in transmission categories used by other system operators, depending on the**
14 **relevance of categories to each of their systems.²**

² HQT-05, Document-03, page 10.

6.3 Why have you not reviewed a utility similar to HQT (p. ex. Bonneville Power Administration (BPA)) in the US for the comparison exercises?

Réponse :

1 **See response to 6.2.**

7 **Référence : i) Pièce B-0177, page 10, lignes 11 à 13**

Préambule :

i) « But there are also differences in categories arising from the contextual differences among the systems, such as the lack of need for new transmission to address congestion costs in the HQT system, as also recognized by the Régie. (our underline) »

Demandes :

7.1 To your knowledge, does HQT currently have congestion issues on some of its internal paths? If so, please explain your assessment of that congestion in relation to your statement mentioned at reference i).

Réponse :

2 **As stated above, Brattle has referred to the issue of congestion to illustrate the**
3 **proposition that differences in context and markets can help explain**
4 **differences in investment categories used by transmission operators to best**
5 **serve these markets. To this end, he has accepted the Regie's determination**
6 **and HQT's representation that HQT's system is designed to avoid any**
7 **congestion when all facilities are in service and relied on the fact that service**
8 **providers operating in the U.S., such as PJM, are faced with congestion issues**
9 **and related operating constraints.**

10 **Questions 7.1, 7.2 and 10.2 do not address the issue of congestion as a**
11 **comparability factor but inquire as to the existence of actual congestion on**
12 **HQT's internal transmission lines in circumstances not specified (7.1), and to**
13 **other transmission providers' decisions or rationale for planning their**
14 **transmission system with or without congestion (7.2 and 10.2). Since such**
15 **inquiries are not relevant to the issues addressed in his report, Brattle has not**
16 **verified in carrying out his mandate, and is therefore not in a position to opine**
17 **on the existence of the potential or current "congestion issues" implied by the**
18 **intervener. For similar reasons, Brattle is not in a position to opine on the**
19 **planning strategies or rationale adopted by transmission providers in North**
20 **America to deal with the risks or levels of congestion in their respective**
21 **systems and markets, including PJM.**

7.2 To your knowledge, are there other transmission providers in North America that plan their system with no congestion? If so please provide the reference.

Réponse :

1 **As stated above in Response 7.1, a given transmission provider's decision or**
2 **rationale for planning its transmission system with or without congestion is**
3 **not relevant to the issues addressed in Dr Celebi's report. This being said,**
4 **while reviewing BC Hydro's OATT, Dr Celebi did come across references**
5 **relating to congestion and its planning process.**

8 Référence : i) Pièce B-0177, page 10, lignes 20

Préambule :

i) « BC Hydro uses four categories to classify transmission investments. »

Demandes :

8.1 Please provide the reference documents (e.g. web links) you used to access the review of BC Hydro investment categories.

Réponse :

6 **BC Hydro's investment categories are described in Attachment O of its Open**
7 **Access Transmission Tariff, accessible at the following link:**
8 [https://www.bchydro.com/content/dam/BCHydro/customer-](https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/tariff-filings/open-access-transmission-tariff/24-Attachment-o-oatt.pdf)
9 [portal/documents/corporate/tariff-filings/open-access-transmission-tariff/24-](https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/tariff-filings/open-access-transmission-tariff/24-Attachment-o-oatt.pdf)
10 [Attachment-o-oatt.pdf](https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/tariff-filings/open-access-transmission-tariff/24-Attachment-o-oatt.pdf)

8.2 Do BC Hydro investment categories specifically address transmission investment required as a result of power plant closures. If so, are such investments automatically considered as "System Plan Network Upgrades"? If not, please explain how are such investments are considered and how costs are allocated among existing clients (Local Load, Network Load, Point-to-Point and Generators).

Réponse :

11 **BC Hydro investment category descriptions do not specifically mention**
12 **transmission investments required as a result of power plant closures. Power**
13 **plant closure is one of various reasons that may affect reliable operation of the**
14 **transmission system, including transmission outages, deterioration or aging of**
15 **transmission infrastructure, weather events, and changes in system load.**

8.3 Does BC Hydro use a generic point such as the “HQT point” in its planning and commercial activities? Please provide reference.

Réponse :

1 As stated above in Response 5.1, the existence of the HQT point is not per se
2 relevant to the issues addressed in Brattle’s report. This being said, while
3 reviewing BC Hydro’s OATT, Dr Celebi did not see any reference to the
4 existence of such a proxy to represent BC Hydro’s transmission system.

9 Référence : i) Pièce B-0177, page 11, lignes 12 à 14

Préambule :

i) « PJM classifies its transmission investments under five categories: Baseline Reliability, Operational Performance, Generation and Transmission Interconnection, Public Policy Requirements, and Market Efficiency. »

Demandes :

9.1 Please provide the reference documents (e.g. web links) you used to access the review of PJM transmission investment categories.

Réponse :

5 PJM’s transmission investment categories are described in the following
6 documents, as referenced in Brattle’s Prepared Direct Testimony:

7 • PJM, 2017 RTEP Book 2, Section 1: 2017 Executive Summary, accessed at
8 [https://www.pjm.com/-/media/library/reports-notices/2017-rtep/2017-rtep-book-](https://www.pjm.com/-/media/library/reports-notices/2017-rtep/2017-rtep-book-2.ashx?la=en)
9 [2.ashx?la=en](https://www.pjm.com/-/media/library/reports-notices/2017-rtep/2017-rtep-book-2.ashx?la=en)

10 • PJM, Operating Agreement, OA 1. Definitions, accessed at
11 <https://www.pjm.com/directory/merged-tariffs/oa.pdf>

12 • PJM, Manual 14B: PJM Regional Transmission Planning Process, Sections 1.4
13 and 2, accessed at
14 <https://www.pjm.com/~/-/media/documents/manuals/m14b.ashx>

- 9.2 How does PJM address the impact of power plant closures pertaining to potential transmission investment that they may trigger and how are the costs allocated among existing clients (Local Load, Network Load, Point-to-Point and Generators).

Réponse :

1 In the event of power plant closures, PJM conducts a series of studies to
2 determine if the generator deactivation will result in a reliability criteria
3 violation.³ If a reliability criteria violation is identified, transmission investment
4 needed to resolve the violation will be made in the baseline reliability upgrades
5 category. Costs for baseline reliability upgrades are allocated to load in
6 transmission zones according to the type of project. For Regional Facilities
7 and necessary lower voltage facilities, 50% of the costs are assigned annually
8 on a load-ratio share basis, and 50% on a directionally-weighted solution-
9 based distribution factor (DFAX) analysis.⁴ For lower voltage facilities with
10 estimated costs greater than or equal to \$5 million, 100% of costs are assigned
11 using the DFAX analysis.⁵ The DFAX analysis uses power flow analysis to
12 determine each load zone's percent usage of flow on the baseline reliability
13 project. For lower voltage facilities with estimated costs below \$5 million,
14 costs are fully assigned to the zone where the upgrade will be located.⁶

10 Référence : i) Pièce B-0177, page 12, lignes 6 à 7

Préambule :

i) «The Market Efficiency category in the case of PJM captures upgrades aimed to reduce congestion costs, which is not applicable to the HQT system as explained above.»

Demandes :

10.1 Please define the terms “Congestion cost” as mentioned at reference i)

Réponse :

15 As defined by PJM, congestion cost is “[t]he price that represents the inability
16 to use the least expensive generation to meet the electricity demand due to
17 transmission limitations”.⁷

³ PJM, 2017 RTEP Book 3, Section 4.0: Generator Deactivations, pp. 205-208

⁴ PJM, Open Access Transmission Tariff, Section 12(b)(i).

⁵ PJM, Open Access Transmission Tariff, Section 12(b)(ii), pp. 2-5.

⁶ PJM, Manual 14B, Attachment A, p. 54.

⁷ PJM, “PJM Glossary,” accessed at https://www.pjm.com/Glossary.aspx#index_C.

10.2 Is PJM planning its transmission system with congestion? If so please explain the rationale of that planning process.

Réponse :

1 **As stated above in Response 7.1, a given transmission provider's decision or**
2 **rationale for planning its transmission system with or without congestion is**
3 **not relevant to the issues addressed in Dr Celebi's report. This being said,**
4 **while reviewing PJM OATT, Dr Celebi did come across references relating to**
5 **congestion and its planning process.**

SUIVI DE LA LETTRE DE LA RÉGIE DE L'ÉNERGIE EN DATE DU 14 MARS 2019

11 Référence : i) Pièce B-0184, page 6, lignes 21 à 24

Préambule :

i) « Les investissements attribués à cette catégorie sont destinés au maintien ou à l'amélioration de la qualité du service rendu par le Transporteur à l'égard de la capacité de service offerte. Ils incluent notamment les investissements requis pour maintenir la fiabilité du réseau à la suite de la fermeture de centrales ou d'un retrait ou d'un déplacement de charges.(our underline) : »

Demandes :

11.1 Please indicate if other transmission providers in other jurisdictions do refer to power plant closure in their definitions of investment categories? If so, please provide reference.

Réponse :

6 **None of the transmission providers that Brattle reviewed in other jurisdictions**
7 **explicitly refer to power plant closure in their definitions of investment**
8 **categories.**

11.2 Please indicate if HQT considered the following plant closure scenarios as having the same impact on its system and therefore as being part of the same investment category:

11.2.1 Scenario 1 : A plant owner decides to shut down a power plant permanently which would result in a net loss of transited energy on HQT system.

Réponse :

1 **Voir la réponse à la question 11.2.2.**

11.2.2 Scenario 2 : A plant owner decides to shut down a power plant permanently but decides to increase the production (including additional capacity) of others of its power plants located in a different location in order to maintain its overall level of energy generation unchanged.

Réponse :

2 **Les deux scénarios décrits sont différents. Pour le scénario 1, dans**
3 **l'éventualité où la fermeture de la centrale génère une dégradation de la**
4 **fiabilité du réseau de transport, des investissements seraient requis et réalisés**
5 **pour maintenir la fiabilité du réseau. Ces investissements seraient attribués à**
6 **la catégorie Maintien et amélioration de la qualité du service.**

7 **Pour ce qui est du scénario 2, le Transporteur aurait à déterminer si des ajouts**
8 **au réseau sont requis pour maintenir la fiabilité du réseau suite à la fermeture**
9 **de la centrale d'un producteur, comme dans le scénario 1. Si tel est le cas, ces**
10 **investissements seraient alloués à la catégorie Maintien et amélioration de la**
11 **qualité du service.**

12 **Advenant le cas où ce même producteur désire augmenter la puissance d'une**
13 **ou de plusieurs de ses centrales, il devrait déposer une demande formelle au**
14 **Transporteur, conforme aux *Tarifs et conditions*, pour chacune des centrales**
15 **visées. Le Transporteur aurait alors à déterminer, le cas échéant, les ajouts**
16 **requis afin de transiter l'augmentation de puissance associée à chacune des**
17 **centrales, dont les coûts seraient alors attribués à la catégorie Croissance des**
18 **besoins de la clientèle. L'ordre dans lequel les études seraient réalisées**
19 **dépend alors de la chronologie des demandes.**

11.3 In reference to scenario 2 mentioned in question 12.2. please indicate, in the event that transmission investment is needed to accommodate the increased generation, if HQT would consider that investment in the category of "Croissance des besoins de la clientèle".

Réponse :

20 **Voir la réponse à la question 11.2**