

Transmission Provider's Additional Evidence in response to Régie de l'énergie Decision D-2014-117

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Table of Contents

1	Introduction.....	3
2	Guiding principles	3
3	Methodology for calculating the maximum allowance.....	4
3.1	Maximum allowance calculation.....	5
3.2	Maximum capacity to be transmitted on the system	8
4	Application of the Transmission Provider's maximum allowance for point-to-point service	9
5	Network upgrades to connect generating stations to serve native load	9
5.1	Treatment of a generating station connection to intermittent supply	10
5.2	Calculation of maximum amount applicable to the Matapédia project and other wind farm connection projects approved to date by the Régie	10
6	Methodology for establishment and payment of the Distributor's contribution for projects with phased commissioning	11
6.1	Merits of the Transmission Provider's proposal.....	11
6.2	Contribution for a project with phased commissioning when the applicant is a user of point-to-point service or a network integration customer.....	12
7	Cost-sharing and allocation	13
7.1	Cost-sharing among transmission service customers.....	13
7.2	Cost allocation to capital expenditure categories	14
7.3	Cost-sharing among beneficiaries of a transmission system improvement project	17
8	Follow-up on commitments.....	19
8.1	Treatment of follow-up on commitments	19
8.2	Comparison of follow-up on commitments under the current and new formats...	20
8.3	Rate impact.....	21
8.4	Amendments to the Transmission Tariff.....	21
9	Conclusion.....	21

1 Introduction

The Transmission Provider filed this application concerning the Transmission Network Upgrades Policy on April 30, 2014. In its evidence, it aims to address the concerns raised by the Régie de l'énergie ("the Régie") in its previous decisions.¹ The Transmission Provider's proposals are based on established practices and are consistent with the framework put in place by the Régie, the business environment in which transmission services are provided to customers and the characteristics of those services. The same applies to this additional evidence prepared in response to the Régie's request in Decision D-2014-117.

2 Guiding principles

In Decision D-2014-117, the Régie states:

[30] The Régie further notes that the Transmission Provider does not define the guiding principles of its Network Upgrades Policy. The Régie therefore considers that these principles must be defined.

[31] Accordingly, the Régie directs the Transmission Provider to file additional evidence describing the guiding principles of its Network Upgrades Policy.

The Transmission Provider's network upgrades are guided by three principles set out in Decision D-2002-95:

- Avoid excessive costs for network upgrades requested by a customer, thus protecting existing customers;
- Cover the costs of upgrades done for a customer;
- Ensure equitable treatment and non-discriminatory access to the transmission system, for all of the Transmission Provider's customers.

In R-3401-98, the Transmission Provider introduced its approach to treating network upgrades. The Régie accepted the Transmission Provider's proposals with the following conditions:²

- The cost of network upgrades is rolled into the Transmission Provider's rate base, where those upgrades are considered to be useful and prudent acquisitions;
- The amount that can be rolled into the rate base is limited;
- The maximum allowance granted by the Transmission Provider equals the present value of the transmission rate over 20 years, less operating and maintenance costs and applicable taxes;
- The same maximum allowance must be applied for network upgrades for native load service, point-to-point service and network integration service.

Because the transmission system is designed and planned as an integrated system, the entire system is used to serve all transmission customers. The transmission demand that the Transmission Provider must be prepared to meet on the system equals all demand from

¹ The list of decisions is presented in Exhibit HQT-1, Document 1, page 5.

² Docket R-3401-98, Decision D-2002-95, section 8.2.

transmission customers, i.e., customers of native load service, point-to-point service and where applicable, network integration service.

The definition of the transmission system is based on section 2 of the *Act respecting the Régie de l'énergie* ("the Act"³).

The principle of cost coverage is central to the Network Upgrades Policy. The maximum amount rolled into the Transmission Provider's rate base protects existing transmission service customers from excessive network upgrade costs.

The rolling into the rate base of the costs associated with network upgrades, to the maximum amount that can be borne by the Transmission Provider as set out in Section E of Attachment J to the *Hydro-Québec Open Access Transmission Tariff* ("the Transmission Tariff"), is supported by mechanisms to ensure that costs are covered.

Furthermore, the Transmission Tariff ensures equitable treatment and non-discriminatory access to the transmission system for all customers.

Point-to-point customers are required to make commitments for the connection of a new generating station or for any new point-to-point service according to the mechanisms set out section 12A.2 and Attachment J of the Transmission Tariff. These commitments formalize the relationship between the costs incurred by the Transmission Provider for the upgrades, i.e., the amount of the allowance granted, and the point-to-point revenues to be associated with the upgrades.

The Distributor is required to serve native load and procure transmission services, the methodology for which is set out in Part IV of the Transmission Tariff. In this context, there is no need to anticipate additional contractual obligations.

3 Methodology for calculating the maximum allowance

In Decision D-2014-117, the Régie stated:

[35] To this end, the Régie directs the Transmission Provider to provide additional evidence detailing the calculation of the maximum allowance and defining the parameters and variables used in the calculation. The Régie asks the Transmission Provider to clarify certain concepts used to calculate the maximum allowance, such as maximum capacity to be transmitted on the system, while describing to what these concepts should correspond in the case of demand growth projects for point-to-point and native load services. A practical illustration could be provided. The Régie also asks the Transmission Provider to produce the Excel spreadsheet containing the formulas used to calculate the maximum allowance.

The Transmission Provider notes that the values used for the maximum allowance are based on the maximum allowance calculation method derived from Decision D-2002-95. The Régie subsequently upheld use of this method.

The Transmission Provider will use the following terms in the sections below:

³ Docket R-3401-98, Decision D-2002-95, page 353, second paragraph.

- Maximum allowance: amount per kilowatt, currently \$598/kW;
- Maximum amount for transmission system network upgrades: calculated by multiplying the maximum allowance by the maximum capacity to be transmitted on the system.

3.1 Maximum allowance calculation

The maximum amount for network upgrades that can be borne by the Transmission Provider is calculated using the method described in the Transmission Tariff, Attachment J, Section E.

The maximum allowance equals the present value over 20 years of the annual rate, less operating and maintenance costs and applicable taxes, i.e., the public utility tax.⁴ Therefore, the impact will at worst be neutral for all customers, and at best, favourable.

The values used by the Transmission Provider in the calculation of the maximum allowance for network upgrades for 2014 set by the Régie in Decision D-2014-049⁵ are as follows:

- Straight-line amortization is established over a 20-year period;
- The cost of capital is determined by multiplying the projected weighted average cost of capital of 5.666% by the net value of the asset;
- Operating and maintenance costs are obtained by multiplying the capital cost by the operating and maintenance rate of 1.27%. The present value of this rate over 20 years is 15%, based on the projected weighted average cost of capital;
- The public utility tax is calculated by multiplying the public utility tax rate of 0.55% by the asset's net value the previous year, since the public utility tax is calculated based on the figures as at December 31 of the previous fiscal year;
- The annual cost is the sum of the amounts above.

The calculation of the maximum allowance is shown in the table below; it is obtained by matching the annual cost to the annual rate. Consequently, the maximum allowance is the present value over 20 years of the annual rate, less operating and maintenance costs and the public utility tax.

⁴ Tax on capital is no longer applicable (since 2011).

⁵ Docket R-3823-2012.

Table 1
Maximum allowance for 2014

Capital expenditure (\$/kW)	598
Projected weighted average cost of capital ¹	5.666%
Operating and maintenance ²	1.27%
Public utility tax ³	0.55%
Number of years	20

Year	Net asset ⁴	Amortization	Cost of capital	Sub-total ⁵	Operating & maintenance	Public utility tax	Annual cost ⁶
	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$/kW)
2014	568	30	34	64	8	3	74.65
2015	538	30	32	62	8	3	72.79
2016	508	30	30	60	8	3	70.93
2017	478	30	29	59	8	3	69.08
2018	448	30	27	57	8	3	67.22
2019	418	30	25	55	8	2	65.36
2020	389	30	24	54	8	2	63.50
2021	359	30	22	52	8	2	61.65
2022	329	30	20	50	8	2	59.79
2023	299	30	19	49	8	2	57.93
2024	269	30	17	47	8	2	56.07
2025	239	30	15	45	8	1	54.21
2026	209	30	14	43	8	1	52.36
2027	179	30	12	42	8	1	50.50
2028	149	30	10	40	8	1	48.64
2029	120	30	8	38	8	1	46.78
2030	90	30	7	37	8	1	44.93
2031	60	30	5	35	8	0	43.07
2032	30	30	3	33	8	0	41.21
2033	0	30	2	32	8	0	39.35
Present value		352	245	598	90	24	711

¹ Projected weighted average cost of capital according to Decision D-2014-049

² Operating and maintenance costs equalling 15% of capital cost

³ Public utility tax of 0.55% pursuant to Part VI.4 of the Quebec *Taxation Act*

⁴ Asset less amortization

⁵ Sub-total = Amortization + Cost of capital

⁶ Annual cost = Amortization + Cost of capital + Operating & maintenance + Public utility tax

The parameters and variables used to calculate the maximum allowance are presented in the sections below.

a) Amortization

Amortization is calculated using the straight-line amortization method approved by the Régie in Decision D-2010-020.⁶

For regulatory purposes, the useful life of transmission facilities can be up to 40 years for substations and up to 50 years for lines. The Transmission Provider uses a 20-year amortization period, which is conservative given the time over which these facilities will be in use.

The 20-year period has been used since R-3401-98, when the Régie adopted use of the maximum allowance in Decision D-2002-95 for native load and point-to-point service. The justification for this period was based on the existence of supply contracts with private generators, which generally have a 20-year term. This 20-year term is an approximation of the presence of these customers on the transmission system. The same period was applied for the facilities required by these customers to ensure equitable treatment for all system users.

b) Cost of capital

The cost of capital is calculated using the projected weighted average cost of capital, which is equal to the weighted average of the projected cost of the debt and the rate of return on equity, taking the capital structure into account. The Régie set the following values for 2014:

- Projected cost of debt: 4.580%
- Return on equity: 8.200%
- Capital structure: 70% debt and 30% equity
- Projected weighted average cost of capital:
5.666%, i.e., $(4.580\% \times 70\%) + (8.200\% \times 30\%)$

c) Operating and maintenance

The present value of the Transmission Provider's operating and maintenance costs is used to determine the maximum allowance. The Transmission Provider assumes that operating and maintenance costs over 20 years equal on average 15% of capital cost. This parameter has been used since R-3401-98. At that time, the Transmission Provider indicated that the percentage established in 2001 to account for operating and maintenance costs resulting from network upgrades, based on capital cost, was 18%. The Transmission Provider proposed using 15%, because the operating and maintenance costs and use of the transmission system are variable, and that percentage has been used up to now.

For 2012, the operating and maintenance costs are \$9.11\$/kW (\$380.2 M / 41,744 MW), which equals 1.6% of capital cost on an annual basis. The data used to illustrate this percentage are the direct operating and maintenance costs and total forecast transmission demand. Calculated from present value over 20 years using a projected weighted average cost of capital of 5.698% for 2012, these costs equal 19% of the capital cost. Consequently, the Transmission Provider proposes holding the rate for operating and maintenance costs at 15% of capital cost.

⁶ Docket R-3703-2009 – Phase 1.

d) Tax on public utilities

The tax on public utilities is 0.55%, pursuant to Part VI.4 of the Quebec *Taxation Act*.

3.2 Maximum capacity to be transmitted on the system

In the table below, the Transmission Provider provides the definition of maximum capacity to be transmitted on the system that it uses to calculate the maximum amount for a network upgrade in the case of a generating station connection, a request for point-to-point service and native load growth,

Table 2
Maximum capacity to be transmitted in the case of demand growth network upgrades

• Generating Station Connection	The maximum capacity to be transmitted equals the capacity set out in the connection agreement, which equals installed capacity at the generating station that will transit on the system. This is the capacity that was used to plan and implement the connection of the generating station to the transmission system. For the Distributor, according to the proposal in evidence, the maximum capacity to be transmitted, for the generating station connection determines only the maximum cost that can be rolled into the aggregation of all projects.
• Request for point-to-point transmission service	The maximum capacity to be transmitted equals the capacity specified in the transmission service request that triggered the network upgrades.
• Load growth • Load growth – satellite substations⁽¹⁾ • Load growth – Distributor customers connected directly to the transmission system	Maximum capacity to be transmitted equals the lesser of: • Forecasted 20-year load growth for satellite substations within the project's impact zone, calculated using load forecasts per satellite substation provided by the Distributor; • The capacity added by the project. The maximum capacity to be transmitted equals the new transmission load requested by the Distributor for its customer.

1. For network upgrades involving facilities upstream of satellite stations, no growth MWs are factored into the maximum allowance calculation because they are taken into account in projects involving satellite substations and projects to connect Distributor customers to the transmission system. In its evidence, the Transmission Provider proposes codifying this practice.

4 Application of the Transmission Provider's maximum allowance for point-to-point service

In Decision D-2014-117, the Régie writes:

[38] The Régie notes that the Transmission Provider's proposal does not present a methodology for avoiding duplicate application of the maximum allowance for a point-to-point service user. This is an issue that is part of the Régie's requirements.

[39] The Régie considers the issue to be relevant. Accordingly, the Régie directs the Transmission Provider to file additional evidence describing a methodology for preventing duplicate application of the maximum allowance for a point-to-point customer.

According to the methodology set out in the Transmission Tariff, and with the proposed follow-up on commitments, the coverage of network upgrade costs by the Transmission Provider for its point-to-point customers is assured and verified.

The Transmission Provider recovers upgrade costs from transmission revenue, and where applicable, from contributions paid by customers. These methodologies apply to the various transmission services currently used by the Transmission Provider's customers, i.e., point-to-point on one hand, and native load on the other.

An allowance is granted to a point-to-point transmission customer only if the network upgrade required to meet the customer's demand generates revenue for the Transmission Provider, in the case of both point-to-point service and a generating station connection. Each allowance is associated with a network upgrade for which the point-to-point customer is required to make a contractual commitment of sufficient duration to ensure that the Transmission Provider can cover all of its costs. Under section 12A.2 and Attachment J to the Transmission Tariff, the point-to-point transmission customer is required to make such commitments for the connection of a new generating station or for any new point-to-point transmission service. These obligations formalize the existing relationship between the costs incurred by the Transmission Provider for these upgrades, i.e., the amount of the allowance granted, and the point-to-point transmission revenues associated with the upgrades, and are subject to annual follow-up. The purpose of this follow-up on commitments is to show that the costs incurred by the Transmission Provider for network upgrades or generating station connections are covered by the revenues from service agreements with point-to-point customers. In this context, there is no need to make assumptions about the capacity to be transmitted or the revenues to be associated with the upgrades done at the request of point-to-point customers, since the coverage of the costs borne by the Transmission Provider is assured and verified.

5 Network upgrades to connect generating stations serving native load

In Decision D-2014-117, the Régie stated:

[43] The Régie will make a determination in due course on the solution proposed by the Transmission Provider. However, the Régie considers it appropriate to explore alternatives so that the question raised in its earlier decisions can be answered accurately.

[44] Accordingly, the Régie directs the Transmission Provider to submit additional evidence proposing a method for treating the revenue shortfall from the connection of an intermittent generating source. In this case, the calculation of the maximum allowance is based on the maximum capacity to be transmitted, the level of which the Transmission

Provider considers to be clearly higher than guaranteed peak system capacity.

5.1 Treatment of connection of an intermittent generating source

The Transmission Provider's proposal concerning the assessment of the Distributor's contribution, including resource project connections,⁷ ensures that the Distributor covers costs for all of these projects, and is intended to determine the Distributor's contribution, where applicable. Consequently, connection of a generating source, intermittent or not, by the Distributor cannot result in a revenue shortfall.

In the first step, the maximum cost borne by the Transmission Provider is calculated on the basis of the maximum capacity to be transmitted from the Distributor's generating sources. This cost must be covered by the revenues from the Distributor and rolled into in the aggregation of all of the Distributor's growth projects. This initial step provides a comparable framework for all projects to integrate new resources into the Transmission Provider's system, whether or not they are associated with the Distributor.

The second step is to aggregate all of the Distributor's growth projects, including resource projects, intermittent or not. This aggregation associates costs with forecasted 20-year growth in native load at satellite substations and forecasted new load for Distributor customers connected directly to the transmission system. The Transmission Provider's proposal is based on the premise that the forecasted load growth will translate into native load transmission demand, resulting in revenue for the Transmission Provider.

One of the Transmission Provider's aims with this proposal is to address the Régie's concerns about the recovery of the costs of the Distributor's resource projects.

The Transmission Provider has filed what it considers an optimal proposal, based on its analysis, and it has not found any alternative that would better respond to the Régie's concerns. In the event that alternatives are proposed in the course of the proceeding, the Transmission Provider reserves the right to make representations with respect to such proposals.

5.2 Calculation of maximum amount applicable to the Matapédia project and other wind energy connection projects approved to date by the Régie

[45] Additionally, the Régie asked the Transmission Provider to explain the calculation of the maximum allowance applicable to the Matapédia project and to the other wind energy connection projects approved by the Régie to date. The Régie expects the Transmission Provider to justify the calculation in light of the requirements set out in its decisions.

When the Régie examined the Transmission Provider's applications for authorization to integrate wind energy plants into the transmission system,⁸ it reserved its decisions on the estimated contribution from the Distributor for integrating these projects until the issues were addressed in this proceeding. Until the Régie has ruled on this issue, possibly at the conclusion of this proceeding, the Transmission Provider has no choice but to apply the existing regulatory

⁷ Docket R-3888-2014, Exhibit HQT-1, Document 1, section 3.1.2.2.

⁸ Docket R-3631-2007, Decision D-2007-141, page 25, Docket R-3742-2010, Decision D-2011-166, paragraph 29, Docket R-3638-2013, Decision D-2014-045 — Reasons, paragraph 93.

framework.

Table 3
Calculation of maximum amount applicable to the Matapédia project
(1st call for tenders) and the other wind energy connection projects approved to date by the Régie

	1st call for tenders	2nd call for tenders	3rd call for tenders
Maximum capacity to be transmitted	817.5 MW	2004.5 MW	289.9 MW
Maximum allowance	<u>\$560/kW</u>	<u>\$596/kW</u>	<u>\$571/kW</u>
Maximum amount for transmission network upgrades	\$457.8 M	\$1194.7 M	\$165.5 M

The above table shows the Transmission Provider's calculation of the maximum amount based on the maximum allocation approved by the Régie at the time the Transmission Provider and Distributor signed the administrative agreement, multiplied by the maximum capacity to be transmitted as updated in the rate cases. For the purposes of the calculation shown above, the maximum capacities to be transmitted are those estimated in the R-3823-2012 rate application.

Under the proposal filed in this proceeding, the calculation of the maximum amount for network upgrades will not result in any allowance, and is used solely to determine the costs of upgrades that may be included in the aggregation of all projects to meet the Distributor's demand growth.

6 Methodology for establishment and payment of the Distributor's contribution for projects with phased commissioning

6.1 Merits of the Transmission Provider's proposal

In Decision D-2014-117, the Régie stated:

[48] The Régie finds that the Transmission Provider has provided little support for the merits of this proposal. The Régie considers it necessary for the Transmission Provider to file additional evidence providing further justification for its proposal and describing alternative solutions.

[49] The Régie also asks the Transmission Provider to clarify the methodology that would be used for the connection of wind energy plants and the methodology's compliance with the requirements set down by the Régie in a number of decisions, including those relating to the connection of the wind energy plants resulting from calls for tenders 2003-02, 2005-03 et 2009-02.

The following table illustrates the application of the proposed methodology to the connection of a generating station with phased commissioning serving native load.

Table 4
Phased commissioning
Example of application of the proposed methodology to the
connection of a generating station serving native load

Determination of contribution

Project cost (200 MW)	\$185 million
Maximum allowance (\$598/kW)	<u>\$120 million</u>
Contribution	\$ 65 million

Annual contribution per commissioning

		Comm 1	Comm 2	Comm 3	TOTAL
Maximum contribution for switchyard		25	25	25	75
Connection costs		40	50	20	110
Total cost	A	65	75	45	185
<i>Maximum amount - beginning balance</i>	B	120	55	0	
<i>Maximum amount – ending balance</i>		55	0	0	
Total contribution	B-A	-	(20)	(45)	(65)

Currently, the Transmission Provider includes in its rate base the contribution payable upon final commissioning of a project.

The Transmission Provider's proposal maintains the practice of setting the maximum allowance at the level in effect at the time the administrative agreement with the Distributor is signed.

In the case of a project with phased commissioning, the Transmission Provider's proposal⁹ specifies that the contributions would be reflected in the rate base when the value of the commissioned assets exceeds the maximum amount of the allowance, and subsequently at each commissioning up to the final commissioning. It is equitable since payment of the contributions will begin as the maximum amount of the allowance is reached. Moreover, it is simple and precise, since it is based on the actual cost of the assets commissioned year after year.

The Transmission Provider has filed what it considers an optimal proposal, based on its analysis, and it has not found any alternative that would better respond to the Régie's concerns about the matching of costs with contributions in the Transmission Provider's rate base. In the event that alternatives are proposed in the course of the proceeding, the Transmission Provider reserves the right to make representations with respect to such proposals.

6.2 Contribution for a project with phased commissioning when the applicant is a user of point-to-point service or a network integration customer

In Decision D-2014-117, the Régie stated:

[50] The Régie also notes that the Transmission Provider's proposal contains no specific provisions concerning determination and payment of the contribution for a project with phased commissioning when the applicant is a user of point-to-point service or network integration service. The Régie believes this situation has occurred in the past and must therefore be anticipated.

[51] Accordingly, the Régie directs the Transmission Provider to submit additional evidence specifying the methodology for the determination and payment of the

⁹ Docket R-3888-2014, Exhibit HQT-1, Document 1, section 3.4.

contribution of a point-to-point or network integration service customer for a project with phased commissioning.

The Transmission Provider proposes to apply the same methodology to all its customers' future projects.

In its evidence,¹⁰ the Transmission Provider stated that it "proposes to amend the Transmission Tariff to require transmission service customers to begin paying a contribution as of the commissioning at which the maximum allowance for the project is reached and subsequently upon each commissioning thereafter." (emphasis added)

Transmission service customers include point-to-point, native load and network integration customers, all of which are defined in the Transmission Tariff.

As noted above, the proposal is equitable, simple and precise, since it is based on the actual cost of the assets commissioned year after year.

7 Cost-sharing and allocation

7.1 Cost-sharing among transmission service customers

In Decision D-2014-117, the Régie stated:

[54] The Régie notes that the Transmission Provider does not specify the cases in which the proposed methodology would not apply. The Régie also believes that it would be relevant and appropriate to know, in the context of this case, what alternative methods the Transmission Provider might propose for the purpose of sharing costs among the various transmission service customers.

[55] The Régie directs the Transmission Provider to submit additional evidence specifying the cases in which the proposed solution would not apply, and explaining possible alternatives to the Transmission Provider's proposed methodology for cost-sharing among the various transmission service customers.

At this time, the Transmission Provider has not identified any cases in which the proposed methodology would not apply. Therefore, it has not defined alternative methodologies for cost-sharing among the various transmission service customers.

In stating that "If this approach does not apply to a particular project, the Transmission Provider will submit the replacement method to the Régie," the Transmission Provider wanted to leave the door open in case an exceptional situation should arise. In such a situation, it would submit a more suitable alternative cost-sharing methodology to the Régie.

The Transmission Provider's proposal is based on the methodology in the Transfer Pricing Policy in the *Transmission Provider Code of Conduct*.¹¹ That Policy contains a similar clause stipulating that the Transmission Provider shall submit to the Régie for prior authorization any exception to the previously described requirements, without however specifying the situations that could give rise to an exception.

The Transmission Provider has filed what it considers an optimal proposal, based on its analysis, and it has not found any alternative that would better respond to the Régie's

¹⁰ Docket R-3888-2014, Exhibit HQT-1, Document 1, page 20, line 13.

¹¹ *Transmission Provider Code of Conduct*, sections 5.1 to 5.3
http://www.oatiaoasis.com/HQT/HQTdocs/code_de_conduite_en.pdf.

concerns. In the event that alternatives are proposed in the course of the proceeding, the Transmission Provider reserves the right to make representations with respect to such proposals.

7.2 Cost allocation to capital categories

In Decision D-2014-117, the Régie stated:

[56] In Decision D-2012-161, the Régie raised the question of cost-sharing for a project that belongs to both the “demand growth” and “asset maintenance” capital expenditure categories.

[57] The Régie considers it appropriate to deal with cost-sharing for projects that belong to more than one capital expenditure category in this proceeding, particularly in the context of integrated capital expenditure planning, under which this situation may become increasingly common.

[58] The Régie directs the Transmission Provider file additional evidence describing the cost-sharing methodology and criteria that it intends to apply to projects that belong to both the “demand growth” category and to capital expenditure categories that do not generate revenues.

In response to this question from the Régie, the Transmission Provider would like to provide the following background information.

Capital projects are classified according to their objectives.

The resulting classification is used to allocate project costs to the various capital expenditure categories. Capital projects that are needed to meet new customer demand belong to the revenue-generating group, while projects that ensure the durability of the system, the maintenance or improvement of service quality or compliance with requirements belong to the non-revenue-generating group. Based on these objectives, the Transmission Provider uses four capital expenditure categories recognized by the Régie, in the following order: “customer demand growth,” “asset maintenance,” “maintenance and improvement of service quality” and “compliance with requirements,” as defined in the exhibit entitled “Description synthétique des investissements et de leurs objectifs” in docket R-3904-2014.¹² Some projects pursue more than one objective and therefore belong to more than one category, insofar as the other categories prove to be material.

The Transmission Provider recalls that only projects that meet new customer needs, i.e. “customer demand growth” projects, are covered by the Transmission Network Upgrades Policy.

Cost allocation for projects in the aforementioned categories is simple in the case of single-objective projects and in the case of multiple-objective projects in which each of the project’s main components (substation, line, etc.) can be ascribed a single objective. In these cases, the cost of each component is allocated to the “customer demand growth” category or one of the non-revenue-generating categories based on the specific purpose of the component. In this regard, the Transmission Provider specifies that, as a general rule, the cost of initiatives aimed at “compliance with requirements” can easily be separated from those that pursue other goals.

¹² R-3904-2014, HQT-1, Document 2.

In all these cases, the Transmission Provider understands that the method of cost allocation between the “customer demand growth” category and the non-revenue-generating categories raises no concerns on the part of the Régie.

However, to optimize each of its initiatives, the Transmission Provider carries out many large-scale projects whose main components simultaneously pursue multiple objectives in an integrated fashion (“integrated multiple-objective projects”). For example, entire facilities and sometimes entire sub-systems are sometimes fully replaced to achieve objectives of durability, growth and service quality improvement. The allocation of project costs to the various relevant categories is more complicated in those cases.

As integrated multiple-objective projects made their appearance, the Transmission Provider performed cost allocation adapted to each situation, as was described in the proceeding on authorization of the Duchesnay substation project.¹³ For other projects of this nature subject to Régie authorization, the Transmission Provider provided, when required to do so by the Régie, clarifications on the manner in which costs had been allocated to the various categories in each specific case. For all multiple-objective projects authorized by the Régie, the Transmission Provider used a method for allocating costs to the various budget categories that was equitable and suited to the project.

The Transmission Provider describes below the cost allocation methodology for integrated multiple-objective projects that belong to both the “customer demand growth” category and non-revenue-generating categories. However, the Transmission Provider reiterates that exceptional cases remain possible, given the unique and complex nature of some projects. If necessary, an appropriate cost allocation methodology will be submitted to the Régie for review as part of the project authorization process.

a) Cost allocation of integrated multiple-objective projects

In order to standardize cost allocation for integrated multiple-objective projects, the Transmission Provider allocates a portion of project costs to each of the relevant categories sequentially. This differential cost allocation methodology is used because it is impossible to objectively measure, for each of the project facilities or components that contribute to achieving more than one objective, the portion of costs that relates to each of the project’s objectives.

- ***Separating costs between “customer demand growth” and “asset maintenance”***

In the case of projects that serve to achieve both growth and durability objectives and only those two objectives, the cost allocation methodology begins by considering asset maintenance needs. This approach is based on the paramount importance of ensuring the durability of the assets that make up the existing network. Moreover, the Transmission Provider’s initiatives are conditioned by significant needs with respect to the durability of its aging network. In this regard, the Transmission Provider has adopted a durability strategy to maintain network reliability and control and maintain at an acceptable level the risk associated with equipment and facilities.

The costs allocated to the “asset maintenance” category are based on the replacement value

¹³ R-3832-2013, HQT-4, Document 1.

of the facility or the part of the facility, as the case may be, that serves to maintain the existing service in accordance with current applicable standards.¹⁴

- Full replacement of the facility: When the Transmission Provider's durability strategy identifies a sufficient number of pieces of equipment to consider full replacement of the facility, the value of the replacement needed to maintain the existing service in accordance with current applicable standards is allocated to the asset maintenance category.
- Partial or piece-by-piece replacement of the facility: In cases where the Transmission Provider's durability strategy identifies only a limited number of pieces of equipment to be replaced at the facility in the course of the project, the capital expenditures allocated to the asset maintenance category are confined to the value of the replacement, in accordance with current applicable standards, of the pieces of equipment that have reached triggers (risk levels) warranting their replacement immediately or in the near future.

The costs allocated to the "customer demand growth" category are calculated differentially, by deducting from the total project cost the costs allocated to the "asset maintenance" category using the applicable approach, as described above.

- ***Separating costs between "customer demand growth" and "maintenance and improvement of service quality"***

In the case of projects that serve to achieve both growth and "maintenance and improvement of service quality" objectives and only those two objectives, where the costs to be allocated to the two categories in question cannot be objectively separated, the costs allocated to the "maintenance and improvement of service quality" category are estimated differentially, by comparing the total value of the project with the value of a functional solution that meets only growth needs.

- ***Separating costs between the "customer demand growth," "asset maintenance" and "maintenance and improvement of service quality" categories in a project involving all three categories***

In the case of projects that serve to achieve growth, asset maintenance and maintenance and improvement of service quality objectives, costs are allocated as follows. Costs are first allocated to the "asset maintenance" category as described above, and then to the "customer demand growth" category, counting the cost of a functional solution that meets durability and growth needs, and then to the "maintenance and improvement of service quality" category in view of the total project cost.

b) Presentation of costs by component

Once the cost of each category has been determined, the project's components are assigned to the categories.

For purposes of follow-up the Transmission Provider assigns each major piece of equipment

¹⁴ According to the reengineering of the supply chain, R-3903-2014, HQT-3, Document 1.

and component, such as a transformer or a line, to a single capital category, with some exceptions. These assignments are made taking into account the amounts determined in the allocation of costs to the various categories.

7.3 Cost-sharing among beneficiaries of a transmission system improvement project

In Decision D-2014-117, the Régie stated:

[59] In Decision D-2014-045, the Régie concluded that improvements to the main system may serve users other than the initial requester, without those users shouldering a share of the costs. It further concluded that this situation resulted from giving the principle of non-discriminatory access to the system priority over the user-pays principle.

[60] The Régie considers it useful to cite certain excerpts from that decision:

[96] The Régie also concludes that the improvements to be authorized to the Matapédia system and the main system may serve users other than the Distributor, without those users shouldering a share of the costs. This situation results from the fact that there is a waiting list for requests for long-term transmission service. The process gives priority to non-discriminatory access but departs from the user-pays principle. This concern could be addressed in the review of the upgrades policy.

[61] The Transmission Provider argued that this subject, raised in Decision D-2014-045 – Reasons, which was rendered after the filing of this application, is not directly related to the issues in this case and need not be decided for the purposes of ruling on the present application. It believes this matter could be examined at a later date in another case.

[62] Given the nature of the follow-up requested [in Decision D-2014-045-Reasons], the Régie believes that while Decision D-2014-045-Reasons was rendered after the filing of this application, it is appropriate to address this issue here.

[63] Accordingly, the Régie directs the Transmission Provider submit additional evidence on the methodologies that meet the concerns mentioned above and set out in Decision D-2014-045 – Reasons.

The Transmission Provider believes that the waiting list and cost causation principles remain the customary equitable practices for managing customer requests that involve network upgrades. It does not believe that it is departing from the user-pays principle by applying these practices. The requester is a user of the transmission system. When it triggers a network upgrade, this user must cover the entire cost through payment of the transmission tariff and, if applicable, of a contribution.

The Transmission Provider points out that before accepting a request for point-to-point transmission service or a request to connect a generating station, it must examine the transmission system's capacity. If the requested use cannot be accommodated without impairing system reliability, a system impact study is conducted to analyze the impact of the proposed request for transmission service. If the impact study shows that network upgrades are necessary to meet the service request, the Transmission Provider develops an optimal solution that takes into account, among other things, technical, economic, environmental and social considerations.

Therefore, the technical solution selected by the Transmission Provider includes the network upgrades required to satisfy the service request, comprising both local connections and upgrades to the main system.

In some cases, these upgrades may exceed the requester's strict needs. This can happen if,

for example, it is impossible to acquire standard equipment that perfectly matches the service request. The surplus capacity thereby created remains limited and is in the nature of capital expenditures for power network infrastructure. In other cases, the upgrades required for the requester make it possible subsequently to resolve an operational limitation for all users.

Upgrades to the main transmission system benefit all and may make it possible to accommodate new customers or to support increased use by existing customers of the system without additional capital expenditures. By generating additional transmission revenues, other things being equal, these customers cause a decrease in rates for all transmission service customers, including the customer for which the upgrades were made.

The Transmission Provider understands that the user-pays principle cited by the Régie amounts to cost-sharing among beneficiaries.

The Transmission Provider is not aware that cost-sharing among the beneficiaries of a transmission system improvement project is a common practice in other jurisdictions. While there has been extensive discussion of the concept of cost-sharing among beneficiaries, there is no single approach to this matter. This is essentially due to the heretofore unresolved difficulty of identifying all the beneficiaries of an upgrade and objectively determining and measuring the potential benefits over the upgrade's entire useful life. This difficulty results from, among other things, the geographic and temporal diversity of the beneficiaries. Therefore, as the requester responsible for the network upgrade is clearly identifiable, sequential management of requests remains the rule, on the principle that this requester must bear the costs of its request (the cost causation principle). The Transmission Provider believes that this practice, combined with application of the maximum capital expenditure that can be covered by the Transmission Provider, is consistent with the two fundamental principles of user pays and non-discriminatory access. The sequential treatment currently applied also means that the system user that triggers an upgrade must cover its costs via a contribution beyond the maximum amount borne by the Transmission Provider.

Some network upgrades provide direct or indirect benefits to existing or future users other than the requester that triggered the expenditure. It is however reasonable to think that those users would be inclined to challenge any attempt to make them pay a share of the cost of upgrades that are not required for their own transmission or generating station connection needs, on the grounds that they were not involved in the decision to make such network upgrades. The waiting list and cost causation principles are customary practices for managing customer requests that lead to network upgrades and for ensuring that the costs of these upgrades are borne entirely by the requesters rather than the beneficiaries.

The case to which the Régie refers¹⁵ clearly illustrates the principle explained above according to which it is up to the requester rather than other beneficiaries to bear the cost of network upgrades. In that case, improvements to the main system are required for resource integration. Without those upgrades, the increase in throughput on the main system would affect the system's stability and degrade its reliability. The Transmission Provider has an obligation to ensure the system's robustness and stability under the most severe conditions anticipated in the design criteria.

¹⁵ Docket R-3836-2013.

In some cases, the sequence of requests for service or to connect generating stations may differ from the sequence of commissionings. In any event, the full costs are allocated to the customer that triggered the need for the network upgrade, in accordance with customary utility practice. These general principles are based on the cost recovery concept, the protection of existing customers against excessive network upgrade costs, and the idea that the requester should cover the cost of the upgrade.

8 Follow-up on commitments

In Decision D-2014-117, the Régie stated:

[65] The Régie is concerned about the rate implications of the Transmission Provider's proposal. It also understands that the proposed change in follow-up on commitments will have an impact on the text of the Transmission Tariff.

[66] In Decision D-2011-039, the Régie discussed this same concern:

[458] At this stage, the Régie does not believe it has all the information it needs to make an informed decision on this matter. Follow-up on purchase commitments is secondary to the question of the nature of these commitments as currently worded, particularly in section 12A.2 and Attachment J of the Transmission Tariff. The Régie will therefore deal with these issues in the course of the generic hearing provided for in section 10.6 herein.

[459] Therefore, on the question of the nature of the commitments made by the Transmission Provider's customers with respect to the connection of a generating station, the Régie will want to ensure that the terms and conditions of these commitments enable the Transmission Provider to recover the costs it has incurred in a fair and reasonable manner, and enable the Régie to accurately assess the rate impact of the various possible approaches for this purpose.

[67] The Régie directs the Transmission Provider to submit additional evidence explaining and justifying each of the differences between the Transmission Provider's proposed treatment of commitment follow-up and the prevailing practice to date. A comparison of the results produced by the proposed format for follow-up on commitments and those produced by the current format should be provided. The additional evidence should present and justify the rate impact of the new approach and specify which provisions of the Transmission Tariff would be amended.

8.1 Treatment of follow-up on commitments

The Transmission Provider proposes introducing annual follow-up on the annual payment commitments made pursuant to paragraph 12A.2(i) of the Transmission Tariff in connection with network upgrades for point-to-point transmission customers that is consistent with the current treatment and ensures ongoing follow-up on Toulnostouc-type commitments.

The Transmission Provider's proposed approach enables annual comparison of all commitments with all revenues generated by current transmission service agreements for each point-to-point transmission customer. For any new network upgrade, the customer will continue to make a commitment to cover the entirety of the actual costs, excluding the customer's contributions beyond the maximum amount granted plus operating and maintenance costs and applicable taxes. At the time the commitment is made, the Transmission Provider will calculate the annual payment on the basis of estimated costs. The final annual payment will be calculated on the basis of actual costs once all finishing work following final commissioning has been completed.

To date, the connection projects authorized under paragraph 12A.2(i) of the Transmission Tariff have originated with the Generator, as a point-to-point transmission customer, and have not been linked to annual commitments. For these projects, a single revenue sufficiency demonstration was made at the time of the application to the Régie for project authorization, based on the present value of the revenues from at least one long-term transmission service agreement. The Transmission Provider proposes to apply a complementary refund as a reasonable transitional measure with respect to existing obligations under paragraph 12A.2(i) of the Transmission Tariff, where the obligation is subject to an established legal framework compliant with the regulatory framework in effect at the time the agreement was signed. The purpose of the complementary refund is to recognize the entirety of the annual revenues generated by current service agreements, in accordance with the provisions of paragraph 12A.2(i) of the Transmission Tariff, which stipulates that the point-to-point transmission customer must have signed at least one service agreement. Every year, after Touloustouc-type commitments and commitments based on metering at the generating station are covered, total available revenues from current agreements will be applied pro rata to the annual payments that must be covered pursuant to paragraph 12A.2(i) of the Transmission Tariff. The surplus will be used for an accelerated refund of existing commitments under paragraph 12A.2(i) of the Transmission Tariff, in effect at the time. The complementary refund is consistent with the regulatory framework that has existed since 2006 and the resulting agreements, and accelerates the transition to uniform follow-up on all commitments for point-to-point transmission customers.

8.2 Comparison of follow-up on commitments under the current and new formats

Appendix 2 to Exhibit HQT-1, Document 1, presents a clear comparison of the results produced by the current format for follow-up on commitments and the proposed format. Sections 1 and 2.1 of the Appendix basically show the follow-up on Touloustouc-type commitments under the current format, while section 2.2 covers commitments under paragraph 12A.2(i) and Attachment J of the Transmission Tariff.

We therefore see surpluses from 2005 to 2008, when revenues were used only to cover Touloustouc-type commitments. Starting in 2009, commitments under paragraph 12A.2(i) and Attachment J of the Transmission Tariff were added. The surpluses are applied, pro-rated to the deemed annual payments for the Ontario interconnection and the Eastmain-1-A and De la Sarcelle generating stations, to provide complementary refunds as a transitional measure.

For purposes of comparison, the following table shows that the amounts of revenues and annual payments related to follow-up on Touloustouc-type commitments presented in Exhibit HQT-2, Document 14 of the Transmission Provider's 2012 annual report to the Régie are identical to those presented for 2012 in sections 1.1, 1.2, 1.3, 1.4 and 2.1 of Appendix 2 in Exhibit HQT-1, Document 1 in the present case.

Table 5
Comparison of formats for follow-up on commitments

Annual report headings ¹	2012 actual	Appendix 2 headings ²	2012 actual
A. Revenues (agreements)	311.7	1.1 Point-to-point revenues	311.7
A. Minimum revenue base	20.3	1.2 Minimum revenue base	20.3
A. Revenues associated with commitments under paragraph 12A.2(i) and Attachment J ³	213.2	1.3 Revenues for commitments under paragraph 12A.2(ii)	1.8
A. Commitments under paragraph 12A.2(ii)	1.8	1.4 Revenues for Touloustouc-type commitments and other commitments (the sum of 213.2 and 76.3) ⁴	289.5
B. Touloustouc-type commitments	76.3	2.1 Touloustouc-type commitments	76.3

1. 2012 annual report, Exhibit HQT-2, Document 14.

2. Exhibit HQT-1, Document 1, pages 45-46.

3. The current method excludes Touloustouc-type commitments from revenues, thereby showing the amounts required to cover commitments under paragraph 12A.2(i) and Attachment J.

4. Heading 1.4 in the proposed format shows the revenues needed to cover Touloustouc-type commitments and commitments arising from paragraphs 12A.2(i) and 12A.2A2(ii).

8.3 Rate impact

Like the previous approach to follow-up on commitments, the new approach will have no impact on the elements on which the revenue requirement is calculated, i.e. the rate base, operating expenses, amortization and taxes. It is a new way to follow up on the commitments made by customers to cover the costs incurred for network upgrades.

8.4 Amendments to the Transmission Tariff

To implement the proposed new approach to follow-up on transmission service commitments, the Transmission Provider plans to amend section 12A and Attachment J of the Transmission Tariff. Among other things, the amendments will adjust the text to codify the proposal to follow up on commitments on an annual basis rather than a present value basis, to codify the aggregation methodology and to correct some typographic errors.

9 Conclusion

The Transmission Provider believes its proposal and the additional evidence submitted in this proceeding address the Régie's concerns and are consistent with the legal, regulatory and business environment within which the Transmission Provider operates. The Transmission Provider's proposals are equitable to its customers and are aimed at making it possible to carry out network upgrades that meet customers' needs and ensure reliable transmission service.