

**BRIEF FROM
THE CANADIAN FEDERATION OF INDEPENDENT BUSINESS
(CFIB)**

**TRANSMISSION PROVIDER'S APPLICATION TO AMEND THE TRANSMISSION NETWORK
UPGRADES POLICY**

Régie de l'énergie du Québec docket number R-3888-2014

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I. Introduction

The network upgrades policy guides cost sharing when capital expenditures must be made to meet a customer's needs. For reasons of equity to all users of the system and also economic efficiency, it is important that appropriate cost-sharing rules be established.

Since the unbundling of rates, the Régie has identified a number of issues with the transmission network upgrades policy. For example, the following issues were identified in Procedural Decision D-2014-081:

- a. Guiding principles
- b. Application of the Transmission Provider's maximum allowance in the case of network upgrades;
 - 1. Methodology for calculating the maximum allowance
 - 2. Application of the Transmission Provider's maximum allowance for point-to-point service
- c. Network upgrades to connect generating stations that serve native load;
- d. Network upgrades for native load growth projects upstream of satellite substations;
- e. Rate impact calculation methods;
- f. Approach to cost-sharing among transmission service customers;

Special cases

- g. Specific risks associated with certain projects;
- h. Applicable credits when the customer has its own step-down substation;
- i. Methodology for the refurbishing or replacement of existing generating station switchyards
- j. Methodology for establishment and payment of the Distributor's contribution for projects with phased commissioning;
- k. Special arrangements for some projects, such as the integration of new renewable energy sources.

More specifically, in prior decisions¹ the Régie had identified double counting of revenues for load (or interconnection) and resource projects as an issue.

The Transmission Provider is proposing a project aggregation approach for follow-up on the commitments of point-to-point customers and another, distinct approach for determining the contribution of native load.

CFIB believes that, overall, the proposal a) sends the wrong signal to economic actors, namely customers (by, among other things, providing complementary refunds), b) is unfair (particularly to native load), and c) does not appropriately address the problem of double counting of revenues. First and foremost, however, CFIB believes this proposal is not consistent with the

¹ D-2009-071, paragraphs 110 and 111.

guiding principles that should inform development of the upgrades policy.

II. Guiding principles

The Transmission Provider says it is following three guiding principles, derived from decision D-2002-95,² with respect to network upgrades.

- > 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.

The first principle is reflected in Régie Decision D-2002-95, on page 298:

The Régie also accepts the Transmission Provider's proposal to limit the amount that can be rolled into the rate base.

Under the Transmission Provider's proposal, the total cost it would bear would equal the present value of the transmission rate over 20 years, less operating and maintenance costs and the tax on capital. [note omitted] The Régie recognizes that, at worst, the impact will be neutral for all customers and, at best, the impact will be favourable by reducing the transmission rate for all customers.

Application of this cap protects transmission service customers against excessive connection and integration costs.³

The Régie accepted this principle for both native load and other customers, in keeping with the principle of equitable treatment of all customers.

Ms. Chang cited two principles that generally guide the allocation of network upgrade costs in U.S. jurisdictions:

- 1) Ensure equitable treatment and non-discriminatory open access to the transmission system and;
- 2) Protect existing customers from undue cost burdens induced by other customers that request transmission service.⁴

These principles agree with the first and third principles listed by the Transmission Provider.

CFIB notes however that the Transmission Provider has added "Cover the costs of upgrades done for a customer" to the two principles set forth by the Régie in Decision D-2002-95 and mentioned by Ms. Chang. CFIB does not believe this additional principle should be adopted as it does not appear to add anything to the other two. Moreover, it is relatively vague and leaves room for interpretation.

In response to questioning by the Régie about whether rate neutrality is among the principles on which the upgrades policy is based, the Transmission Provider stated:

² HQT-3, Document 1, p. 5.

³ D-2002-95, p. 298.

⁴ HQT-4, Document 1, p. 5.

Rate neutrality is upheld through application of the maximum allowance. The purpose of the maximum allowance is to ensure compliance with the first two guiding principles, avoiding excessive costs for network upgrades requested by a customer, thereby protecting existing customers, and covering the costs of upgrades done for a customer.⁵

CFIB does not share the Transmission Provider's confidence that the maximum allowance ensures compliance with the first two principles, at least not with the proposed methodology. The concept of rate neutrality has different implications, depending on whether it is considered at the aggregate level or for an individual project. At the aggregate level, it does not guarantee compliance with the first guiding principle. CFIB does not believe that the Régie considered the concept of rate neutrality from a project aggregation point of view in Docket R-3401-98.

In CFIB's view, to comply with the guiding principles, the upgrades policy must not only ensure rate neutrality but also send customers the right price signal in order to promote profitable projects and discourage unprofitable projects.

CFIB also believes that, to promote non-discriminatory access, the upgrades policy should discourage reservations in excess of a customer's real needs.

With respect to the concept of equity, CFIB believes that it means that revenues from all projects should contribute to common costs after a certain time.

The following section discusses the Transmission Provider's proposal in light of these principles and reflections.

III. Transmission Provider's Proposal

a. Point-to-point customers

For the purposes of calculating the allowance for a project, Hydro-Québec's Open Access Transmission Tariff stipulates that the maximum for network upgrades is an amount per kW based on the present value over 20 years of the point-to-point transmission rate, multiplied by the new maximum capacity to be transmitted over the network.

One of the issues identified by the Régie in recent years is the possibility of double counting of the same revenues to support the allowance for both resource projects and load projects (or interconnections).

In response to this concern, the Transmission Provider suggests maintaining the calculation of the maximum allowance unchanged for both load and resource projects, but ensuring by means of an aggregate analysis that the revenues derived from load projects or service agreements are sufficient to cover the granted allowance.

More specifically, in the case of point-to-point customers, the Transmission Provider is proposing aggregate follow-up of all revenues and customer commitments on an annual basis. It is also proposing a complementary refund formula for existing obligations. It contends that these

⁵ HQT-4, Document 1, p. 4.

obligations are subject to established legal frameworks.⁶

CFIB believes that the Transmission Provider's proposal does not adequately address the double counting problem since under that proposal projects could be allocated revenues from capacity not required to serve them.

Let us take for example a new 1000 MW interconnection with respect to which a service agreement for the same capacity has been signed. Suppose that the required capital expenditure for this interconnection is \$250 million, so the allowance required for the project is \$250/kW, or half the \$500/kW maximum allowance permitted by the current tariff. Let us also suppose a 500 MW resource project that also costs \$250 million and a \$500/kW allowance required to cover the cost of the project (\$250 million/500,000 kW).

Under the Transmission Provider's proposal, the entire allowance for the resource project would be covered by the revenues from the service agreement, since they would all be factored in: the present value of the revenues generated by the service agreement is \$500/kW for a total of \$500 million. Since \$250 million is required to cover the capital expenditure for the interconnection, \$250 million is available to finance the resource project; therefore, the entire allowance is covered by those revenues. This approach means that revenues attributable to the entire 1000 MW in the service agreement are used to cover the allowance for a 500 MW project.

CFIB believes that offsetting the allowance for a project with revenues that cannot be generated by that project is unwarranted and not desirable. To send the right price signal, there must be a causal relationship between commitments and the revenues that cover them. If this condition is not satisfied, there may be no difference from the customer's point of view between reserving 1000 MW and 500 MW, which does not promote optimal use of the network.

CFIB also believes that the combination of the maximum allowance and the proposed follow-up for point-to-point customers has the effect of violating the guiding principles in several respects. First of all, this approach sends customers the wrong price signal. Among other things, it could result in the construction of unprofitable projects. Secondly, it promotes marginal cost pricing and could lead some customers to evade their fair contribution to common transmission costs.

The following example illustrates these concerns. Suppose Service Agreement A for 1000 MW and 20 years associated with Interconnection Project A and Resource Project A of the same capacity. The service agreement generates revenues with a present value of \$500/kW, which equals the combined cost of the interconnection and the resource project. Therefore, the project is entirely covered by the allowance and no initial contribution is required of the customer. After 20 years, the follow-up shows that the allowance has in fact been completely covered. No additional contribution is required. Agreement A is then renewed for another 20 years, generating revenues with a present value of \$500/kW.

At the same time, a new Interconnection B and new Resource Project B of 1000 MW each are commissioned. Service Agreement B for the same capacity generates revenues with a present value of \$500/kW. The interconnection and resource projects require substantial capital expenditures totalling more than \$1,000/kW. Therefore, the service agreement does not, by itself, cover the \$500/kW maximum allowance for each project.

⁶ HOT-1, Document 1, p. 28.

With the Distributor's proposed follow-up methodology, this customer could use the revenues from Service Agreement A to cover the cost of Interconnection Project B and/or Resource Project B, and thereby obtain the maximum allowance in both cases.

This approach would have a number of consequences. First, the customer's perception of the transmission costs would be lower than the actual cost. This would affect the project's profitability from the customer's point of view. As a result, it might be in the customer's interest to carry out the project even if it is not profitable overall.

Secondly, using revenues generated by the renewal of Agreement A to finance Project B means that power is transmitted free of charge between Resource A and Interconnection A during the second 20-year period. Therefore, the agreement will not contribute to the transmission service's common costs during that period.

Moreover, this means that the revenues generated by a service agreement can be used to finance resource projects with a greater capacity than the interconnection to which the agreement relates. In our example, the revenues from Agreement A (for 1,000 MW) would be used to help finance projects totalling 2000 MW, more than the volume covered by the agreement.

As these examples show, the Transmission Provider's proposal does not meet the appropriate pricing signal criterion and is liable to lead to unsound capital expenditures and over-reservation of interconnections.

The complementary refunds proposed by the Transmission Provider for existing projects are an example of inappropriate cross-financing.

In short, the Transmission Provider's proposal for point-to-point customers is incompatible with the guiding principles. CFIB urges the Régie not to accept this proposal.

b. Native Load

The Transmission Provider is proposing to determine the contribution required of native load on an aggregate basis.⁷ Revenues would be established on the basis of capital expenditures for satellite substations, which would be compared with the cost of all load and resource projects carried out in order to serve native load. If costs exceed revenues, the Distributor will have to make a contribution to make up the difference. Positive balances could be carried forward to subsequent years. On this basis, the Transmission Provider estimates the Distributor's required contribution for the 2006-2014 period at \$733 million.

CFIB considers this approach to be lacking in equity in at least two respects when compared with the proposed aggregate treatment of point-to-point customers.

First, the native load aggregation is based on 20-year revenue forecasts, whereas the follow-up on point-to-point commitments is based on actual annual revenues. This is a significant difference because, in the first case, revenues for years 21 and after will never be counted

⁷ HOT-1, Document 1, Appendix 1.

against the commitments for resource projects whereas they will be for point-to-point customers (when a new agreement is signed).

Secondly, the native load aggregation ignores revenues stemming from load growth on existing capacity. Only revenues generated by incremental capacity produced by capital expenditures for a satellite substation are recognized. Once again, this approach is diametrically opposed to the one for point-to-point aggregation, under which revenues are calculated on the basis of the total capacity of the interconnections, not just the incremental capacity produced by a capital expenditure.

These two factors have considerable financial implications. For example, CFIB estimates that the revenues generated by native load growth since 2006, and assuming that native load requirements simply stay at 2015 levels up to 2025, will total \$3.6 billion.⁸ This figure is well above the Distributor's total capital expenditures for loads and resources since 2006, which total \$2.7 million.⁹ Thus, even without factoring in the inevitable increase in native load requirements and not counting a full 20 years of revenues for the majority of the growth seen between 2006 and 2015, the additional revenues from the Distributor since 2006 more than cover the capital expenditures required by the Distributor.

CFIB therefore believes that if the Transmission Provider's proposed approach is accepted for point-to-point customers, it would be indefensible to require a contribution from native load for the 2006-2015 period.

CFIB urges the Régie to reject the Transmission Provider proposed methodology for aggregating and determining the contribution required of native load.

IV. CFIB's proposal

a. Maximum allowance

It might be possible to address the problem of double counting of revenues through calculation of the maximum allowance. However, this path appears complex. CFIB instead proposes adjusting follow-up to eliminate double counting, while respecting the guiding principles.

In the case of native load, all projects (satellite and source substations and resource projects) would receive a maximum allowance based on the project's capacity. If applicable, required contributions would be levied during follow-up on native load projects (see Section IV.c).

b. Follow-up on commitments of point-to-point customers

As noted above, CFIB believes that it is neither warranted nor desirable to offset the allowance for a project with revenues that cannot be generated by that project. To address this problem, it recommends the following approach to follow-up on commitments.

First, identify the revenues available to cover commitments, as presented by the Transmission

⁸ See Appendix.

⁹ HOT-1, Document 1, Appendix 1 (p. 35). Sum of lines C and D for all years.

Provider.¹⁰ Then, subtract from this amount the deemed annual payments related to all interconnection projects. Divide the difference by the total number of MWs covered by service agreements, excluding MWs related to revenues that are not considered¹¹ and “expired” MWs.¹² The quotient is the average revenue per MW available for meeting commitments related to resource projects.

This figure could then be applied to the capacity of each resource project to obtain the revenues available for meeting the commitments made in respect of the project, up to the total number of MWs called for by the agreements, as defined in the previous paragraph. The annual balance of commitments and revenues would not be transferable from one project to another. Various possible treatments of balances for a given project, in terms of carry-forwards from year to year, could be considered. One option would be to accumulate the balances, positive and negative, over time. Alternatively, only positive balances could be carried forward. Or no carry-forwards would be allowed.

Furthermore, no complementary refund should be authorized. If the Régie recognizes the specificity of the legal framework that governs existing contracts,¹³ a treatment could be applied if the necessary revenues could not be recovered before the expiry of the relevant agreements. It could be as simple as ascertaining whether the total surpluses recorded during the previous years exceeded the revenue deficit associated with these projects.

This methodology would have the advantage of largely settling the price signal issue since it would prevent allocating revenues to a project for a greater number of MWs than its capacity. Therefore, for each project that is not self-financing, a contribution must be made regardless of the status of other projects.

With respect to the sharing of common costs, CFIB proposes that the period over which the revenues generated by a service agreement (or its total or partial renewals) can be used to meet the customer’s commitments be limited to 20 years. The “expiry” of MWs would also help further limit the price signal problem.

c. Follow-up on native load commitments

With respect to follow-up on native load commitments, CFIB recommends that follow-up be carried out for each satellite substation (or customer connection). The model would be similar to the one proposed for point-to-point customers, i.e. it would be based on a comparison between annual revenues and deemed annual payments.

For each satellite substation, revenues for a given year would be based on the difference between forecasted load for the year and the actual load in 2005, which would accurately reflect the increase in revenues attributable to the substation since the beginning of the aggregation period. These revenues could first be applied to the annual payments for the substation and any remaining balance could be applied to the source substation that serves the satellite substation.

¹⁰ HOT-1, Document 1, Appendix 2 (p.45), line 1.4.

¹¹ HOT-1, Document 1, Appendix 2 (p.45), lines 1.2 and 1.3.

¹² CFIB proposes that the period over which the revenues generated by a service agreement can be used to meet the customer’s commitments be limited to 20 years.

¹³ HOT-1, Document 1, p. 28, lines 16-22.

If there is still a remaining balance, it could be applied to the annual payments for resource projects as a whole.

Let us take for example a simple case in which there is a single satellite substation (capacity 300 MW), a source substation (200 MW) and a resource (100 MW). The native load requirement was 100 MW in 2005. If the requirement increases to 200 MW in the following year, a resource investment will be necessary (let us say that the capacity of the resource is increased by 300 MW to bring it to 400 MW). Since no capital expenditure will be needed for the satellite and source substations, the additional revenue (100 MW x annual point-to-point rate) could be allocated in its entirety to the annual payment in respect of the commitment for the resource.

If the requirement increases to 300 MW in the third year, a capital expenditure will be required for the source substation (+200 MW). As no capital expenditure will be needed for the satellite substation, the additional revenue (200 MW x annual point-to-point rate) could be allocated in its entirety to the annual payment in respect of the commitment for the source substation. If there is a remaining balance after this commitment has been covered, it could be used to cover the annual payment for the resource.

If the requirement increases to 400 MW in the fourth year, a capital expenditure will be required for the satellite substation. The additional revenue (300 MW x annual point-to-point rate) could be allocated in its entirety to the annual payment in respect of the commitment for the satellite substation. If there is a remaining balance, it could be used to cover the annual payment for the source substation and then the resource.

This simple approach would make it possible to recognize the entire revenue growth generated by native load, including the revenues generated by the additional capacity of the satellite substations. This is much more symmetrical with what is being proposed for point-to-point customers, who can generate substantial revenues from existing interconnections to finance resource projects. It also makes it possible to allocate revenues to a capital expenditure in a source substation without requiring a parallel capital expenditure for a satellite substation.

On the other hand, this approach does not make it possible to meet commitments for a satellite substation or a source substation through load growth on another unconnected satellite substation. This is a good thing as it would distort the price signal and could hinder the search for optimal solutions for meeting increased load requirements at different points in the system on the basis of their specific circumstances.

As the general trend is towards native load growth, CFIB believes it should be possible to carry forward negative annual balances for projects up to the 20th year after commissioning.

CFIB proposes that MWs “expire” after 20 years, as for point-to-point customers. Therefore, after 2025, the reference year for calculating load growth at a satellite substation would be **the current year minus 20** (rather than 2005).

This approach also has the advantage of handling isolated customer connections in an appropriate manner. If an isolated customer should stop using electricity, it would be up to the Distributor to pay any non-covered commitments with respect to the connection.

V. Summary of recommendations

In short, CFIB is asking the Régie to:

1. Reject the guiding principle "Cover the costs of upgrades done for a customer";
2. Recognize the need for the upgrades policy to send the right price signals;
3. Recognize the need for the upgrades policy to discourage reservations in excess of customers' real needs;
4. Reject the Transmission Provider's proposal with respect to follow-up on point-to-point customers' commitments;
5. Reject the Transmission Provider's proposal for determining contributions from native load;
6. Accept CFIB's proposal for follow-up on point-to-point commitments;
7. Accept CFIB's proposal for follow-up on native load commitments.

Appendix

Incremental transmission revenues from the Distributor, 2006-2015

Year	Required capacity (MW)	Incremental capacity versus 2005	Rate \$/kW-year	Rate impact (\$ million)
2005	34060		72.90	
2006	35371	1311	72.90	-
2007	35862	1802	72.45	131,366
2008	35705	1645	71.13	119,180
2009	35764	1704	73.32	121,206
2010	35230	1170	74.80	85,784
2011	36502	2442	73.71	182,662
2012	36710	2650	73.62	195,332
2013	37134	3074	69.41	226,308
2014	37043	2983	72.61	207,050
2015	37818	3758	72.84	272,868
Sum 2006-2015				1,541,755
Net present value 2016-2025*				2,036,348
Total 2006-2025 (excluding growth after 2015)				3,578,104

* NPV function (5.775%, 3758*72.84 for 20 years)

Sources:	
2005	R-3549-2004, Phase 2, HQT-4, Document 1
2006	R-3605-2006, HQT-12, Document 1
2007	R-3605-2006, HQT-12, Document 1
2008	R-3640-2007, HQT-13, Document 1
2009	R-3669-2008, HQT-12, Document 1
2010	R-3706-2009, HQT-12, Document 1
2011	R-3738-2010, HQT-12, Document 1
2012	R-3777-2011, HQT-12, Document 1
2013	R-3823, 2013, HQT-12, Document 1
2014	R-3823, 2013, HQT-12, Document 1
2015	R-3903-2015, HQT-12, Document 1