

**Régie de l'énergie du
Québec**

R-3888-2014

**Application to Amend
Transmission Network
Upgrades Policy**

SUBMISSION BY ACEF DE L'OUTAOUAIS

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Introduction

In its analysis of the Transmission Network Upgrades Policy, the ACEF de l'Outaouais (ACEFO) seeks to ensure that the methodologies used provide equitable treatment for each customer of the Transmission Provider, particularly with respect to native load.

For native load, this requires that the Policy and methodologies are adapted to the particular characteristics of native load, specifically, continuous growth, load durability, and the fact that the upgrades are intermittent but regular, to meet current and future demand.

ACEFO also seeks in its analysis and recommendations to ensure that the Policy and methodologies result in the impact of the upgrades being at worst neutral, for all customers.

ACEFO's evidence will address the following issues:

- The guiding principles;
- The methodology for calculating the maximum allowance;
- Application of the Transmission Provider's maximum allowance for network upgrades for the Distributor (native load);
- Application of the Transmission Provider's maximum allowance for network upgrades for point-to-point customers;
- Methodology for establishment and payment of the Distributor's contribution for projects with phased commissioning;
- Specific risks of certain projects;
- Follow-up on commitments.

1. Guiding principles

In its Additional Evidence,¹ the Transmission Provider sets out the guiding principles of the methodologies for network upgrades done to meet its customers' needs.

These guiding principles flow from Decision D-2002-95:

- Avoid excessive costs for network upgrades requested by customers, 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.²

¹ B-0011, HQT-3, document 1, page 3.

² Ibid.

Furthermore, question 1 of Information Request #1 from the Régie refers to the following excerpt from Decision D-2002-95:

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 maximum thus protects existing transmission service customers from excessive connection and integration costs.

The Régie is asking the Transmission Provider to state whether respect for rate neutrality is one of the principles of the Upgrades Policy.³

The Transmission Provider states that, “rate neutrality is upheld through application of the maximum allowance” and adds that, “the purpose of the maximum allowance is to ensure compliance with the first two guiding principles, i.e., avoiding excessive costs of network upgrades requested by a customer and thereby protecting existing customers, and covering the costs of upgrades done for a customer.”⁴

So, according to the Transmission Provider, rate neutrality is not a guiding principle, but a result to be obtained in order to avoid excessive costs and to cover the costs of network upgrades done for a customer.

It should also be remembered that the purpose is to prevent upgrades from exerting an upward impact on the rate charged to other customers, but that a downward impact is acceptable. This can occur if additional forecasted revenues from new demand following an upgrade are higher than the costs incurred to do the upgrades. In that case, the customer who requested the upgrades does not receive a credit, but the Transmission Provider’s revenues contribute to reducing the rate charged to all customers.

Since they flow from Decision D-2002-95, ACEFO is of the view that the three above-mentioned guiding principles should be used to inform the methodologies to be applied for the Upgrades Policy. We are also of the view that a paragraph should be added clearly stating that the application of the guiding principles in the case of network upgrades done to meet a customer’s needs should result in a rate impact that is, at worst, neutral for all of the Transmission Provider’s customers.

2. Methodology for calculating the maximum allowance

The Transmission Provider notes that it introduced its approach to treating network upgrades in R-3401-98, and that the Régie accepted the Transmission Provider’s proposals with the following conditions:

³ B-0015, HQT-4, document 1, page 4, question 1.3.

⁴ Ibid, response 1.3.

- 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 over 20 years of the transmission rate, less operating and maintenance costs and applicable taxes;
- The same maximum allowance should be applied to network upgrades for native load, point-to-point and network integration services.⁵

These conditions are reiterated on page 194 of the Hydro-Québec Open Access Transmission Tariff, which reads as follows:

The maximum amount to be borne by the Transmission Provider is calculated from the present value over twenty (20) years of the point-to-point rate for an annual delivery specified in Schedule 10 herein, less 15% to account for the present value over twenty (20) years of operation and maintenance costs for Network Upgrades completed, as well as for the amount of the applicable capital tax and public utility tax.

Thus, according to the estimated maximum allowance for network upgrades shown in R-3903-2014 and reproduced in Table 1 below,⁶ the maximum allowance of \$593/kW equals the present value of the rate (\$706/kW) less the present value of operation and maintenance costs (\$89/kW) and less the present value of the public utility tax (\$24/kW).

⁵ B-0011, HQT-3, document 1, page 3.

⁶ R-3903-2014, B0031, HQT-12, document 2, page 5.

Table 1
Maximum Allowance for Network Upgrades

Parameters:	Capital expenditure (\$/kW)	593 – Maximum allowance for network upgrades
	Projected weighted average cost of capital ¹	5.775%
	Operating and maintenance ²	1.28%
	Public utility tax	0.55%
	Number of years	20

Year	Amortization (\$)	Cumulative Amortization (\$)	Net Asset (\$)	Cost of Capital (\$)	Sub-total (\$)	Maintenance & Operating (\$)	Public Utility Tax (\$)	Annual Cost (\$/kW)
2015	30	30	564	34	64	8	3	74.82
2016	30	59	534	33	62	8	3	72.94
2017	30	89	504	31	61	8	3	71.07
2018	30	119	475	29	59	8	3	69.19
2019	30	148	445	27	57	8	3	67.31
2020	30	178	415	26	55	8	2	65.44
2021	30	208	386	24	54	8	2	63.56
2022	30	237	356	22	52	8	2	61.68
2023	30	267	326	21	50	8	2	59.81
2024	30	297	297	19	49	8	2	57.93
2025	30	326	267	17	47	8	2	56.05
2026	30	356	237	15	45	8	1	54.18
2027	30	386	208	14	43	8	1	52.30
2028	30	415	178	12	42	8	1	50.42
2029	30	445	148	10	40	8	1	48.55
2030	30	475	119	9	38	8	1	46.67
2031	30	504	89	7	37	8	1	44.79
2032	30	534	59	5	35	8	0	42.92
2033	30	564	30	3	33	8	0	41.04
2034	30	593	0	2	31	8	0	39.16
Total	593			360	953	152	34	1 140
NPV	347			247	593	89	24	706

¹Projected average weighted cost of capital proposed in the application.

²Operating and maintenance costs equaling 15% of capital cost.

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

The table also shows that the cost components are:

- Cost of capital;
- Amortization cost;
- Operating and maintenance costs;
- Tax costs.

These cost components are also those used to determine the Transmission Provider's revenue requirement for the purposes of establishing its transmission rate, as set out in the Transmission Provider's Open Access Transmission Tariff:

- Return on rate base	\$1304.3 M
- Amortization	\$1079.0 M
- Net operating costs	\$719.5 M
- Taxes	<u>\$96.8 M</u>
- TOTAL	\$3199.6 M

These four components constitute 99.6% of the \$3,211.3 M revenue requirement for 2015 test year.⁷

2.1 Operating and maintenance costs

To determine the maximum allowance for network upgrades, the Transmission Provider includes the net present value of annual operating and maintenance costs equaling 15% of the capital cost over the period in question.

The Transmission Provider explains that:

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 forecasted 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.⁸

In order to analyse this cost component more closely, we prepared the table below, which shows operating and maintenance costs as a percentage of the total rate cost. The table shows, for each year in the period 2006-2012:

- The projected weighted average cost of capital, from which the annual operating and maintenance rate is calculated;
- The approved maximum allowance (\$/kW);
- The approved rate (\$/kW);
- The unit value of operating and maintenance expenses;
- The unit value of direct operating and maintenance costs;
- The ration of operating and maintenance expenses to the rate.

⁷ R-3903-2014, B-0013, HQT-5, document 1, page 3.

⁸ B-0011, HQT-3, document 1, page 7.

		2006	2007	2008	2009	2010	2011	2012	
(1) Projected capital rate (a)		6.80%	6.35%	6.38%	5.78%	5.69%	5.95%	5.70%	
(2) Calculated rate for Mtce & Ops.		1.39%	1.35%	1.35%	1.28%	1.27%	1.30%	1.28%	
(3) Maximum allowance (\$/kW)(b)		560	570	574	636	596	566	571	
(4) Calculated operating costs (\$/kW)	(3)/(2)	7.81	7.67	7.74	8.17	7.60	7.37	7.29	
(5) Direct operating costs (a)		372.6	417.9	377.7	384.9	374.2	380.2	380.2	
(6) Forecast demand (MW) (a)		34 465	36341	36 296	38 072	39 805	41 470	41 744	
(7) Direct operating unit costs	(5)/(6)	10.81	11.50	10.41	10.11	9.40	9.17	9.11	
(8) Approved rate (\$/kW) (c)		72.9	70.82	70.82	72	75.26	72.45	71.49	
(9) Ratio of calculated costs to rate	(4)/(8)	10.7%	10.8%	10.9%	11.3%	10.1%	10.2%	10.2%	average
(10) Ratio of direct unit costs to rate	(7)/(8)	14.83%	16.24%	14.69%	14.04%	12.49%	12.65%	12.74%	13.96%

We can also see that using the current approach, operating and maintenance costs represent 10.6% of the rate on average. However, that percentage would be close to 14% on average if direct operating and maintenance costs were used.

It should be noted that, based on our understanding of the Transmission Provider's response,⁹ the direct operating costs include only the costs related directly to new equipment, and exclude the other costs that the new equipment could generate.

The transmission rate is based on the revenue requirement, which includes all of the costs related to the system's operation. As a result, not taking into account all of the costs in determining the maximum allowance seems inconsistent with the use of the rate to forecast revenues from upgrade projects.

Furthermore, the reference given by the Transmission Provider¹⁰ states that in R-3401-98, gross costs were used as a basis for defining the operating costs to be taken into account in determining the maximum allowance:

Please provide the methodology and data used to establish the value of 15%.

R82.4 The present value of the Transmission Provider's operating and maintenance costs should be taken into account in determining the capital expenditure equal to the present value of transmission revenues. Hydro-Québec is of the view that the operating and maintenance costs equal 15% of the capital expenditure, on average. The data used to illustrate this percentage are the direct gross costs (Exhibit HQT-5, document 3, page 1) and the total forecasted annual peak demand of native load and network integration customers, and forecasted reservations for point-to-point service (Exhibit HQT- 10, document 1, page 26).¹¹

⁹ B-0019, HQT-4, document 2, pages 13 and 14, R16.1.

¹⁰ B-0019, HQT-4, document 2, page 15.

¹¹ R-3401-98, HQT-13, document 1, page 145, R-82.4.

We determined that by using direct gross costs shown in the Transmission Provider's revenue requirement for each of the years in the period 2006-2012 rather than direct operating costs, the ratio to the rate is 18.3% on average.

Another comparison is operating costs as a percentage of the Transmission Provider's revenue requirement.

Below is a breakdown of the Transmission Provider's revenue requirement for the period 2006-2012. The data are taken from breakdowns submitted in the various rate cases.¹²

			HISTORY						
			2006	2007	2008	2009	2010	2011	2012
Return on rate base			1159.2	1157.6	1285.4	1268.0	1301.4	1273.3	1285.3
	Rate base		14799.11	14983	15673.6	16046	16666	16874.5	16894.1
	Actual weighted capital cost		7.833%	7.726%	8.201%	7.902%	7.809%	7.546%	7.608%
Expenditures			1451.3	1517.7	1447.3	1556.1	1697.6	1736.1	1706.1
Net operating costs			710.3	733.6	638.6	639.3	634.4	661.5	633.2
	Direct gross costs		496.7	514.3	491.1	497.1	496.0	534.4	492.3
	Shared services costs		362.4	373.5	297.8	306.8	313.7	316.4	310.7
	Capitalized costs		-109.7	-113.6	-112.7	-132.4	-142.1	-155.9	-138.4
	Internal billing		-39.1	-40.6	-37.6	-32.2	-33.2	-33.4	-31.4
Other costs			720	757.6	786.6	895.9	1043	1037	1071.7
	Transmission services purchases		19.3	19.8	18.3	33	33	31.2	30.3
	Electricity purchases		6.2	6.5	7				
	Amortization and decommissioning		534.4	569.1	652.1	781.2	949.8	962.2	994.8
	Taxes		160.1	162.2	150.6	122.2	101.4	86.7	87.9
	Other internal billing revenues				-41.4	-40.5	-41.2	-43.1	-41.3
Corporate costs			30.6	35.6	32.2	20.9	20.2	20.8	19.5
	Government refund interest		-6.6	-5.9	-5.2				
	External billing		-3	-3.2	-4.9				
	Pension variance account							16.8	-18.3
	Deferred charges (unauthorized commissioning)								
Revenue requirement			2610.5	2675.3	2732.7	2824.1	2999.0	3009.4	2991.4
Net operating costs as a % of total			27.2%	27.4%	23.4%	22.6%	21.2%	22.0%	21.2%
Return as a %			44.4%	43.3%	47.0%	44.9%	43.4%	42.3%	43.0%
Amortization as a %			20.5%	21.3%	23.9%	27.7%	31.7%	32.0%	33.3%
Taxes as a %			6.1%	6.1%	5.5%	4.3%	3.4%	2.9%	2.9%

The table shows that net operating costs represent about 22% of the revenue requirement over the last five years. The percentage falls as of 2008, due primarily to changes in telecommunications assets.

So according to the data used, the unit value equaling maintenance and operating costs can be about 11% under the Transmission Provider's current approach or about 22% when taking into account the Transmission Provider's revenue requirement.

In our opinion, the methodology and parameters used to determine the maximum allowance should represent actual costs as closely as possible, and as a result, the allowance should be determined by allocating maintenance and operating costs equaling the percentage of these costs in the Transmission Provider's revenue requirement.

¹² HQT-5, document 1, page 3 of R-3640-2007, R-3669-2008, R-3706-2009, R-3738-2010 and R-3823-2012.

ACEFO recommends that the Régie set maintenance and operating costs at 20% of the rate for the purposes of determining the maximum allowance for network upgrades.

2.2 Projected weighted average cost of capital

The methodology used to determine the maximum allowance for network upgrades uses the projected weighted average cost of capital to determine the percentage of the cost of capital, which, added to the other costs, must equal the rate.¹³ This rate is obtained from the Transmission Provider's revenue requirement, which includes a return on the rate base, using the weighted average cost of capital.

In response to an Information Request from ACEFO, the Transmission Provider states that the projected weighted average cost of capital captures the fact that the costs will occur in the future, over a maximum 20-year period, and that it is important to use a cost of capital close to the cost of capital that will prevail during this period.¹⁴

The following table we prepared shows a history of the weighted average cost of capital and the projected weighted average cost of capital.

	2006	2007	2008	2009	2010	2011	2012
Weighted average cost of capital (1)	8.34%	7.78%	7.84%	7.65%	7.44%	7.20%	6.84%
Projected weighted average cost of capital (2)							
Variance	1.54%	1.43%	1.46%	1.87%	1.75%	1.25%	1.149%

(1) Transmission Provider's Annual Reports

(2) D-2005-63; D-2007-34; D-2008-27; D-2009-15; D-2010-32; D-2011-59.

We can see that historically, the variance between the two costs ranges from 1.87% to 1.14%.

Given that the rate is calculated using the weighted average cost of capital and this this same rate is used to determine the maximum allowance, it would be consistent to use the same rate of return.

The projected weighted average cost of capital is normally used to determine and financially compare the different technical solutions for the Transmission Provider to meet demand, which equals a discount rate. It also shows that the projected cost of capital is applicable in determining the Transmission Provider's capital spending projects.¹⁵

However, when a determination is based on a rate, it would be more consistent to use the same rate as the one used to determine that rate. In our opinion, the use of a different rate does not ensure that the upgrades will, at worst, have a neutral impact on rates.

¹³ B-0011, HQT-3, document 1, page 6.

¹⁴ B-0019, HQT-4, document 2, page 12.

¹⁵ R-3903-2014, B-0022, HQT-8, document 1, page 13.

ACEFO recommends that the Régie rule that the weighted average cost of capital be used to determine the maximum allowance for transmission network upgrades.

3. Application of the Transmission Provider's maximum allowance for network upgrades for the Distributor (native load)

3.1 *General characteristics of the Distributor's load*

In its evidence, the Transmission Provider summarizes the characteristics of the Distributor's load as follows:

The specific nature of the native load transmission service and billing on the basis of forecasted total peak load, without any specific commitment to transmission service, calls for an adapted approach to covering network upgrade costs.

Native load consists of a multitude of loads supplied by a multitude of resources, without any particular inter-relationship. For the Transmission Provider, native load, represented by the Distributor, constitutes a whole. The Distributor's financial responsibility to the Transmission Provider is not governed by a specific commitment to purchase transmission service in a given quantity and for a given term, but by the provisions of Part IV of the Transmission Tariff.¹⁶

Given these characteristics, specific approaches for application of the maximum allowance for the Distributor's load should be designed. Equitable treatment of all customers does not imply identical treatment, but rather adapted treatment, as stated by the Transmission Provider: "Equitable treatment means treatment based on the same principles but adapted to the context of each."¹⁷

3.2 *Transmission Provider's proposal*

As shown in Table 2 below,¹⁸ the Transmission Provider proposes to aggregate the cost of all of the Distributor's projects requiring transmission network upgrades, whether for satellite substations, source substations or resource integration. However, the maximum annual capital expenditure that can be rolled into the Transmission Provider's rate base for all native load upgrades remains limited to the Transmission's Provider's maximum allowance applied to forecasted growth over 20 years in satellite substations and customers connected directly to the transmission system.¹⁹

We believe that the costs should be aggregated, because it ensures that all costs of upgrades for the Distributor are taken into account in determining the contribution to be paid to the Transmission Provider.

¹⁶ B-0016, HQT-1, document 1, page 12.

¹⁷ B-0019, HQT-4, document 2, page 12.

¹⁸ B-0016, HQT-1, document 1, page 15.

¹⁹ B-0016, HQT-1, document 1, page 14.

Table 2
Proposed determination of the Distributor's required contribution – sample aggregation

Project	20-year growth	Transmission Provider's maximum allowance (\$598/kW)	Cost of network upgrades	Difference between maximum allowance and costs
	MW	\$ million	\$ million	\$ million
Satellite substation A	100	59.8	39.8	20.0
Source substation B	-	-	50.0	-50.0
Resource project 1	-	-	100.0 ¹	-100.0
Total	100	59.8	189.8	-130.0
Operating and maintenance costs (15%)				-19.5
Distributor's contribution				-149.5

1. In this example, costs are net of the initial contribution, which is the difference between the actual project cost and the maximum allowance, based on capacity to be transmitted for the project. For example, if the project cost is \$150 million and the maximum allowance is \$100 million, the net cost of the contribution is \$100 million and is payable by the Distributor.

Furthermore, the Transmission Provider considers that cost recovery over 20 years is conservative, because this period is shorter than the average useful life of its assets, which is 40 years. As a result, the Transmission Provider is assured of obtaining a contribution higher than the contribution it would get if the period was the same as the useful life of its facilities. However, the Transmission Provider notes that load growth occurs gradually over the 20-year period.²⁰

In response to an Information Request from ACEFO seeking confirmation that rate neutrality is reached as of the 20th year, the Transmission Provider states that the maximum allowance is applied to forecasted load growth over 20 years, and not upon reaching this growth in the 20th year only.²¹

Therefore, the Transmission Provider does not confirm that rate neutrality is reached as of the 20th year. However, the fact that the maximum allowance is determined using the load in the 20th year implies that the forecasted revenues prior to the 20th year are less than revenues that would guarantee rate neutrality.

Consequently, it appears that the Transmission Provider's proposal does not ensure that the impact on rates will be "at worst neutral". In fact, the impact will be upward during the period in which the load is less than forecasted over 20 years. Moreover, the impact will be neutral after 20 years only if forecasted demand materializes for the satellite substations identified.

Also, in response to an Information Request from ACEFO to specify whether the maximum capacity to be transmitted equals the load growth for each satellite substation within the impact zone or coincident load growth for satellite substations within the impact zone at the time of the Distributor's peak demand, the Transmission Provider states that it uses the load growth for each satellite substation within the impact zone

²⁰ B-0016, HQT-1, document 1, page 15.

²¹ B-0018, HQT 4, document-2, page 7, R3.2.

because this is the growth figure used for capital expenditure projects.²²

We are of the view that this application approach leads to an overstatement of the maximum allowance, since, as we understand it, the rate is based specifically on the Distributor's coincident peak demand.

Moreover, this may become complicated if there are load transfers between source stations and if the load of certain satellite substations is transferred to another source station.

Consequently, in our opinion, all of the above-mentioned elements indicate that the determination of the maximum allowance based on existing parameters does not ensure that rate neutrality will be reached for transmission network upgrades done to meet the Distributor's needs.

3.3 ACEFO's proposal

After analysing the Transmission Provider's proposal and considering the specific characteristics of the Distributor's load, we are submitting a proposal that would ensure rate neutrality for network upgrades done to meet the Distributor's needs.

The following assumptions are used:

- All of the Distributor's needs are used to determine the Transmission Provider's rate;
- The Distributor's needs are permanent;
- The determination of the Distributor's contribution should be based on actual data;
- The Distributor's needs change gradually on an ongoing basis, whereas upgrades are intermittent and respond to immediate and future needs.

Based on these assumptions, we propose that the Distributor receive an annual credit for network upgrades. The credit equals the annual increase in its total needs multiplied by the maximum allowance. This also equals the amount that the Transmission Provider can roll into its rate base, all of which has a neutral impact on the rate.

The credit is used to cover the cost of upgrades, and any surplus is accumulated for future upgrades that are required. A contribution from the Distributor would be required only if the accumulated credit is depleted. We also propose that management be over a set period, for example five years, during which the credits are assessed and compared with the costs of forecast upgrades.

Furthermore, given that the Distributor's load is permanent and that the average useful life of the Transmission Provider's facilities is 40 years,²³ we propose that the maximum allowance be determined on the basis of a 40-year period.

²² B-0019, HQT-4, document 2, page 16, R19.1.

²³ B-0016, HQT-1, document 1, page 15.

The table below shows an example of the application of this proposal. It uses the information from the Table in Appendix 1: *Aggregation of load growth projects and resource projects, and assessment of the Distributor's required contribution.*²⁴

Year		2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
Load history (MW) (1)	A	34710	35060	35100	35690	35690	36050	36830	37040	37397	37374
Load growth	B		350	40	590	0	360	780	210	357	-23
Maximum allowance 40 years (\$/kW)	C		665	678	676	735	776	725	736	818	772
Annual credits (\$M)	D = C*B		232.8	27.1	398.8	0.0	279.4	565.5	154.6	292.0	-17.8
Total HQT cap. exp. \$M – Load	E		143	58	140	173	170	126	105	296	389
Total HQT cap. exp. \$M – Resources	F		26	18	62	122	22	214	210	231	169
Annual balance	G = D - (E+F)		63.8	-48.9	196.8	-295.0	87.4	225.5	-160.4	-235.0	-575.8
Current balance			63.75	14.87	211.71	-83.29	4.07	229.57	69.13	-165.844	-741.6
(1) R-3864 HQD1 Doc2 App. 2D, p. 56 and HQD1 Doc2.2 App. 2A p. 20.											
(2) Values calculated based on forecasted rate and rate each year.											

According to this table, our proposal gives results similar to the results of the reference with respect to the balance of the Distributor's contribution (-741 vs -733).

However, it is based on parameters and data that are more precise than those currently used by the Transmission Provider, particularly with respect to the increase in demand. It ensures rate neutrality because it takes into account all of the Distributor's needs in the short term rather than forecasted needs over 20 years for certain satellite substations, and there is no transition period during which there would be an upward impact on the transmission rate.

Moreover, this proposal is tailored to the characteristics of the Distributor's load, cited earlier:

The specific nature of the native load transmission service and billing on the basis of forecasted total peak load, without any specific commitment to transmission service, calls for an adapted approach to covering network upgrade costs.

Native load consists of a multitude of loads supplied by a multitude of resources, without any particular inter-relationship. For the Transmission Provider, native load, represented by the Distributor, constitutes a whole. The Distributor's financial responsibility to the Transmission Provider is not governed by a specific commitment to purchase transmission service in a given quantity and for a given term, but by the provisions of Part IV of the Transmission Tariff.²⁵

ACEFO recommends that the Régie adopt this proposal for determining the Distributor's contribution for transmission network upgrades required for native load.

²⁴ B-0016, HQT-1, document 1, page 35.

²⁵ B-0016, HQT-1, document 1, page 12.

4. Application of the Transmission Provider's maximum allowance for network upgrades for point-to-point customers

4.1 Additional costs and revenues

The Transmission Provider notes that when a point-to-point customer requests transmission service that requires network upgrades, the customer is granted an allowance over a maximum period of 20 years or according to the term of their service agreement with the Transmission Provider, and must pay a contribution if the cost of their network upgrades exceeds the allowance.

The Transmission Provider adds that point-to-point customers may also cover the cost of network upgrades done to correct generating stations by making one of the commitments set out in section 12A.2 of the Open Access Transmission Tariff.²⁶

In its Information Request, the Régie cites Decision D-2007-08, in which it states, with respect to approval of the wording of section 12A.2 of the OATT.²⁷

According to the Régie, the use of several agreements is acceptable if it is shown that each agreement generates additional revenue for the Transmission Provider and if all of the additional revenue is sufficient to cover the additional costs associated with the project (R-3605-2006, Decision D-2007-08, p. 73).

In this decision, the Régie clearly indicated the need to show that additional revenues are generated for the Transmission Provider to cover the allowance granted to the point-to-point customer requesting transmission service that requires network upgrades.

In response to an Information Request from the Régie to “explain the appropriateness of considering all revenues generated by transmission service agreements in effect rather than the additional revenues from new service agreements associated with the project,” the Transmission Provider responded as follows.²⁸

Where a generating station is being connected, section 12A.2 i) states that the point-to-point customer must execute at least one service agreement for long-term firm transmission service. The Tariff does not stipulate the signing of a new transmission service agreement. In this context, a point-to-point customer who has already signed a long-term firm service agreement may present the same service agreement to cover the maximum amount borne by the Transmission Provider for the connection of a generating station, provided that this agreement generates sufficient revenues to cover the costs of all upgrades for which it is presented. The Régie has already accepted this approach, particularly with respect to the Romaine complex connection (R-3757-2011).

Thus, according to the Transmission Provider it is sufficient to show that one or more already signed agreements generate enough revenue to cover the costs of upgrades, without having to show that these generate additional revenues.

²⁶ B-0016, HQT-1, document 1, page 12.

²⁷ B-0015, HQT-4, document 1, page 42, question 16, preamble (i).

²⁸ B-0015, HQT-4, document 1, page 42, R16.1.

Concerning the reference to the Romaine project (R-3757-2011), we would like to note paragraph 86, in which the Régie says it would be advisable to clarify the wording of section 12A.2 i):

As mentioned above, the parties do not have the same understanding of the scope of section 12A.2i) of the Open Access Transmission Tariff, and it may be advisable to clarify the text, but this cannot be done as part of a section 73 application.²⁹

In our opinion, the current proceeding is the appropriate forum for clarifying the wording of section 12A.2 i), and this can be done in compliance with the guiding principles set out in section 1 above, specifically, ensuring that the costs of network upgrades done for a customer are covered.

Also, clarifications to the wording should take into account the Régie's decision in which it states that "the use of several agreements is acceptable if it is shown that each agreement generates additional revenue for the Transmission Provider and **if all of the additional revenue is sufficient to cover the additional costs associated with the project.**"³⁰ (Emphasis added.)

Thus, if new capital expenditures are rolled into the Transmission Provider's rate base without new revenue being generated, the result is an upward impact on the transmission rate.

Again, in Decision D-2002-95, the Régie stated 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".³¹ Consequently, transmission network upgrades may have a downward impact on the rate, if the forecasted revenues are higher than the costs incurred; however, they cannot have an upward impact.

The Transmission Provider's current approach, i.e., using existing revenues that exceed existing commitments to offset the cost of new network upgrades gives a point-to-point customer an advantage over other customers for future projects.

In order to ensure that new network upgrade projects have an impact that is "at worst neutral", this situation should be corrected, with the Régie ruling that the costs of new projects are to be offset by new revenues.

Accordingly, to clarify the existing wording of section 12A.2 i), ACEFO recommends to the Régie that section 12A.2 i) be amended to state that the upgrades must generate revenues over and above existing revenues.

²⁹ D-2011-083, page 49.

³⁰ R-3605-2006, Decision D-2007, 08, p. 73.

³¹ D-2002-95, page 298.

4.2 *Multiple use of agreements*

In its application for intervenor status, ACEFO says its goal is to ensure that the maximum allowance is applied only once and that all of the costs should be considered, from production to delivery to the end customer.³²

Also, the Régie directed the Transmission Provider to “file additional evidence describing a methodology for preventing duplicate application of the maximum allowance for a point-to-point customer.”³³

The Transmission Provider responded as follows:

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.”³⁴

In our opinion, these methods do not cover a case where the commitment made to cover the costs of an upgrade to connect a generating station is in the form of a service agreement that has already been used to cover the costs of a different project.

An example is the upgrades required for the asynchronous interconnection with Ontario. In that proceeding (R-3646-2007), the Régie said it was “satisfied with the economic feasibility of the project, which, according to the assumptions used by the Transmission Provider for the period 2009-2030, does not result in an upward impact on the current rate. The same is true for the rate impact over 40 years.”³⁵

³² C-AEFCO-0002, page 3, paragraph 11.

³³ A-0005, page 11, paragraph 39.

³⁴ B-0016, HQT-3, document 1, page 9

³⁵ D-2008-030, page 18.

In reaching this conclusion, the Régie reiterated the Transmission Provider's rationale, i.e., "the costs of the Project will be recovered from Transmission Provider's revenue requirement and corresponding transmission rates, up to the maximum amount for network upgrades. To this end, the Generator signed a long-term firm transmission service agreement for 1,250 MW for a 50-year term."³⁶

In another proceeding, i.e., R-3674-2008 concerning an application by the Transmission Provider for approval to acquire and construct buildings and facilities to connect the Eastmain-1-A and Sarcelle generating stations to its transmission system, a commitment was signed to cover integration costs; section 26 of the commitment reads as follows:

Pursuant to paragraph 6.1e), the Generator invokes the commitment set out in paragraph i) of section 12A.2 of the Open Access Transmission Tariff, i.e., at least one signed service agreement for firm long-term service. The Generator hereby **designates the expedited service agreement for firm long-term point-to-point service for a new asynchronous interconnection with Ontario executed by the Transmission Provider and the Generator on October 16, 2006** (the Service Agreement).

Pursuant to the Open Access Transmission Tariff, the Transmission Provider associates the corresponding amount of transmission service revenues received or to be received from the Generator pursuant to the Service Agreement with the integration costs borne by the Transmission Provider, less any amount already reimbursed to the Transmission Provider, where applicable.³⁷ (Emphasis added).

So it appears that in this case the same service agreement was used to cover the costs of connecting the Eastmain-1-A and Sarcelle generating stations to the transmission system, and to cover the costs of the asynchronous interconnection with Ontario. In the proceeding on the Eastmain-1-A and Sarcelle generating stations, the Transmission Provider showed that the present value of the revenues resulting from the transmission service agreement were sufficient to cover the costs of the two network upgrades.³⁸

In our opinion, such proof should be required for each network upgrade, and the Transmission Provider should show that these are additional revenues, meaning, revenues that would not be generated if the project was not done. The additional costs incurred for a network upgrade should be associated with additional revenues sufficient to cover these costs and the Transmission Provider should clearly identify these additional revenues to ensure that they are not used to cover the additional costs of a different upgrade.

The Transmission Provider also stated as follows: "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."³⁹ This means identifying the contractual commitment and linking it to a specific project.

³⁶ Ibid.

³⁷ R-3674-2008, HQT-7, document 2, article 26, page 24.

³⁸ R-3674-2008, HQT-7, document 1, page 6.

³⁹ B-0011, HQT-3, document 1, page 9.

In our opinion, saying that the customer is invoking the commitment made under paragraph i) of section 12A.2 of the Open Access Transmission Tariff, as is the case in R-3757-2011,⁴⁰ is not sufficient, because it does not identify the contractual commitment and does not show that it involves additional revenues.

ACEFO recommends that the Régie require that the costs incurred by the Transmission Provider for a network upgrade be offset by additional revenues guaranteed under a contractual commitment that clearly stipulates this element.

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

With respect to the methodology for the establishment and payment of the Distributor's contribution for projects with phased commissioning, the Transmission Provider explains that it is proposing to apply the same methodology to all of its customers' future projects.⁴¹

The Transmission Provider states that "using this methodology, the costs and contributions of a such a project can be matched, so that the Transmission Provider can roll these upgrades into its rate base for rate-setting purposes."⁴²

The Transmission Provider notes that according to the current methodology, the maximum applicable allowance and the methodology for establishing contributions are determined when the connection agreement with the customer is executed, and the practice is to require payment of the contribution upon final commissioning of the project. This practice was developed for projects that do not have phased commissioning, meaning the majority of projects. The Transmission Provider adds that for projects with phased commissioning, it proposes requiring payment of the Distributor's contribution as of the commissioning at which the maximum allowance for the project is reached, and subsequently for each commissioning thereafter, until final commissioning.⁴³

In response to Information Requests suggesting that the contribution is prorated based on the amount associated with the commissioning or prorated based on the MW corresponding to each partial commissioning,⁴⁴ the Transmission Provider states that it would be "inappropriate to require a contribution from a customer who has not reached the maximum amount to which they are entitled, based on the characteristics of their project, because the maximum amount is associated with the project and not with the commissioning amounts. This is a single project, covered under a single application for approval and for which a single maximum amount is calculated on the basis of the project's total capacity."⁴⁵

⁴⁰ R-3757-2011, B-0005, HQT-1, document 1, Appendix 1, article 26, page 24.

⁴¹ B-0011, HQT-3, document 1, page 13.

⁴² B-0016, HQT-1, document 1, page 19.

⁴³ B-0016, HQT-1, document 1, pages 19 and 20.

⁴⁴ B-0015, HQT-4, document 1, pages 25 and 26, questions 8.4 and 8.5.

⁴⁵ Ibid, R8.4, lines 43 and subsequent.

In response to a similar request from ACEFO, the Transmission Provider explained that the maximum allowance represents the maximum amount to be borne by the Transmission Provider for network upgrades done at the customer's request, and that as long as the project costs stay within the maximum amount, the Transmission Provider does not require any contribution from the customer.⁴⁶

In our opinion, the objective of the methodology for payment of the contribution for projects with phased commissioning should be to ensure rate neutrality. It is thus appropriate to match the cost of commissionings with the forecasted revenues based on the customer's commitment to cover the integration costs. Also, this commitment should be set out in the connection agreement to be executed by the Transmission Provider and the customer.

If the commitment states that the forecasted revenues for the entire project start being collected as of the first commissioning, the Transmission Provider's proposal described above in this section is acceptable, because rate neutrality is assured. However, if the commitment indicates that the forecasted revenues as of the date of the first commissioning do not cover the costs of that commissioning, rate neutrality is not assured and a contribution should be required from the customer as of that commissioning.

ACEFO recommends that the Régie require that the methodology for payment of a contribution from a Transmission Provider customer in the event of phased commissioning be defined in the connection agreement that the parties are required to sign, and that the methodology ensure rate neutrality for the project as of the first commissioning.

6. Specific risks of certain projects

The Transmission Provider states that in Decision D-2008-073 on the Éléonor mining project, the Régie raised concerns over the risks involved in connecting certain Distributor customers:⁴⁷

One of the characteristics of the Project is that, at the Distributor's request, the Transmission Provider is building facilities in an isolated area that will, in practice, be dedicated to serving a single native load customer. The Régie questioned the Transmission Provider about the rate impact on the Transmission Provider and its customers of a hypothetical discontinuation of operations by the Distributor's customer after only a few years of operation with uninterrupted supply."

The Transmission Provider also notes "that under the Open Access Transmission Tariff, its customer for native load service is the Distributor, and that it has no commercial relationship with the Distributor's customers."⁴⁸

⁴⁶ B-0019, HQT-4, document 2, page 9, R8.1.

⁴⁷ B-0016, HQT-1, document 1, page 21, and Decision D-2008-073, page 14.

⁴⁸ B-0016, HQT-1, document 1, page 21.

In response to the Régie's concerns, the Transmission Provider is proposing a policy that is applicable to the Distributor and which would apply "in the case of projects to connect industrial customers with facilities in isolated areas to the transmission system".⁴⁹

The Transmission Provider states that:

Under the proposed policy, the Distributor would be required to pay an indemnity equal to the remainder of the allowance plus operating and maintenance expenses in the event that one of the industrial customers in question should discontinue operations within 20 years or the period for which the allowance was granted.

The remainder of the allowance will be prorated based on the number of years remaining in the duration of the granted allowance If such an indemnity is paid, the remainder of the allowance will be deducted from the Transmission Provider's rate base and will no longer be reflected in its revenue requirement.⁵⁰

Although this policy may be appropriate where operations are discontinued, it does not cover a situation where operations are reduced.

In response to an Information Request from ACEFO, the Transmission Provider states that the policy would not apply in the event of a reduction in operations or in the event of lower than forecasted demand.⁵¹

In our opinion, the policy should be applied in such cases, i.e., a reduction in operations or demand less than forecasted, to maintain rate neutrality. The determination of the Transmission Provider's maximum allowance is based on a level of demand and that level should be achieved and maintained to ensure a neutral impact on the rate.

If demand is less than forecasted, the installed facilities may be too large, which breaches the first guiding principle set out in section 1: "Avoid excessive costs for network upgrades requested by customers, thus protecting existing customers." Moreover, in such a case, actual revenues are lower than forecasted and insufficient to cover the costs incurred for the upgrades, which has an upward impact on the transmission rate.

ACEFO recommends that the Régie direct the Transmission Provider to develop measures for recovering its costs in the event that demand is lower than forecasted.

Furthermore, in an Information Request, the Régie raised the case of a temporary discontinuance of operations. The Transmission Provider responded that in such a case, "it proposes applying the proposed policy upon confirmation by the Distributor that its customer's operations have been discontinued, without assuming a possible resumption of operations, unless the Distributor has confirmed that the discontinuation is temporary

⁴⁹ Ibid.

⁵⁰ B-0016, HQT-1, document 1, page 22.

⁵¹ B-0019, HQT-4, document 2, page 10, R10.1.

and that a resumption of operations is officially planned.”⁵²

We are of the opinion that not applying the policy in the event of a temporary interruption may be acceptable, on the condition that the period for which the allowance was granted is respected. Given that the value of the maximum allowance is based on a defined period, the forecasted revenues should cover the same period. Then, if there is a temporary interruption, for example for one year, the customer’s commitment should be extended by one year.

ACEFO recommends that in the event of a temporary interruption of operations, the cost recovery period be extended by the same length of time as the temporary interruption of operations.

It should be noted that under ACEFO’s proposed application of the Transmission Provider’s maximum allowance for network upgrades for the Distributor (native load) above in section 3.3, the Transmission Provider should not implement specific measures. The reduction in demand resulting from the discontinuation or reduction of the customer’s operations creates a reduction in the Distributor’s total demand, thereby reducing the annual credit granted to the Distributor for its transmission network upgrades.

7. Follow-up on commitments

The Transmission Provider notes that in Decision D-2009-71, the Régie asked for annual follow-up on commitments.⁵³ In response, the Transmission Provider filed a proposed format for follow-up, which consists in filing all of the Generator’s annual point-to-point revenues and all of the Generator’s commitments, on an annual basis. The Transmission Provider concluded that all revenues will offset all commitments.⁵⁴

Below is the excerpt from the Régie decision referenced by the Transmission Provider:

According to the Régie, annual flows from each customer commitment and the associated annual revenue flows from each point-to-point service reservation should be accounted for separately for the purposes of follow-up on commitments made when point-to-point service is requested under section 12A.2 i). To the extent possible, this separate accounting should be consistent with the characteristics and intent of each case and comply with the Open Access Transmission Tariff and with the Régie’s previous decisions.⁵⁵

According to the Régie’s request, separate accounts should be maintained for each customer commitment and for the annual revenues from each point-to-point reservation associated with the commitments, not a general account for all commitments and revenues.

⁵² B-0015, HQT-4, document 1, page 29, R10.4.

⁵³ B-0016, HQT-1, document 1, page 27, and R-3669-2008, Decision D-2009-071, paragraph 34.

⁵⁴ B-0016, HQT-1, document 1, pages 45 and 46.

⁵⁵ D-2009-071, paragraph 34.

In our opinion, the Transmission Provider's proposal on this issue does not respond to the Régie's request. ACEFO recommends that the Régie direct the Transmission Provider to propose a follow-up format consistent with the request made in D-2009-071.

Furthermore, according to the data provided by the Transmission Provider, the revenues for commitments increased from 2005 to 2010, at which point they stopped increasing.⁵⁶ So there were no additional revenues as of 2010. However, the commitments made under section 12A.2 i) of the Open Access Transmission Tariff appear from 2009 on.⁵⁷ The assumed annual payment for all commitments increased from \$12.4 M in 2009 to \$80.1 M in 2013.

Accordingly, we can see an increase in costs for the Transmission Provider without a corresponding increase in revenues.

This is contrary to Decision D-2007-08, in which the Régie states, with respect to acceptability of the wording of section 12A.2 i):

According to the Régie, the use of several agreements is acceptable if it is shown that each agreement generates additional revenue for the Transmission Provider and if all of the additional revenue is sufficient to cover the additional costs associated with the project.⁵⁸

Consequently, under the follow-up format submitted by the Transmission Provider, the additional costs are not offset by additional revenues, resulting in an upward impact on the transmission rate.

8. Summary of conclusions and recommendations

Guiding principles

In ACEFO's view, the three guiding principles set out in section 1 inform the methodologies to be applied for the Transmission Provider's network upgrades policy. Also, ACEFO recommends adding a paragraph that clearly states that the application of the guiding principles, in the case of network upgrades done to meet a customer's needs, should result in a rate impact that is, at worst, neutral for all of the Transmission Provider's customers.

Methodology for calculating the maximum allowance

- ***Operating and maintenance costs***

The methodology and parameters used to determine the maximum allowance should represent actual costs as closely as possible, and as a result, the allowance should be determined by allocating maintenance and operating costs equal to the percentage of these costs in the Transmission Provider's revenue requirement.

⁵⁶ B-0016, HQT-1, document 1, page 45, line 1.4.

⁵⁷ Ibid, page 46.

⁵⁸ R-3605-2006, D-2007-08, page 73.

ACEFO recommends that the Régie set maintenance and operating costs at 20% of the rate for the purposes of determining the maximum allowance for network upgrades.

- ***Projected weighted average cost of capital***

ACEFO recommends that the Régie rule that the weighted average cost of capital be used to determine the maximum allowance for transmission network upgrades.

Application of the Transmission Provider's maximum allowance for network upgrades for the Distributor (native load)

- ***General characteristics of the Distributor's load***

Given the characteristics of native load, specific approaches for application of the maximum allowance for the Distributor's load should be designed. Equitable treatment of all customers does not imply identical treatment, but rather adapted treatment.

- ***Transmission Provider's proposal***

The Transmission Provider's proposal does not ensure that the impact on rates will be "at worst neutral". In fact, the impact will be upward during the period in which the load is less than forecasted over 20 years. Moreover, the impact will be neutral after 20 years only if forecasted demand materializes for the satellite substations identified.

Using the peak load of satellite substations rather than their coincident load at peak period results in an overstatement of the maximum allowance.

This may become complicated if there are load transfers between source stations and if the load of some satellite substations is transferred to another source station. Consequently, all of these elements indicate that the determination of the maximum allowance based on existing parameters does not ensure that rate neutrality will be reached for transmission network upgrades done to meet the Distributor's requirements.

- ***ACEFO proposal***

ACEFO recommends that the Régie adopt the proposal set out in section 3.3 above for determining the Distributor's contribution for transmission network upgrades required for native load. This proposal consists in granting native load an annual credit based on load growth.

Application of the Transmission Provider's maximum allowance for network upgrades for point-to-point customers

- ***Additional costs and revenues***

To clarify the existing wording of section 12A.2 i) of the Open Access Transmission Tariff, ACEFO recommends to the Régie that section 12A.2 i) be amended to state that the upgrades must generate revenues over and above existing revenues.

- ***Multiple use of agreements***

ACEFO recommends that the Régie require that the costs incurred by the Transmission Provider for a network upgrade be offset by additional revenues guaranteed under a contractual commitment that clearly stipulates this element.

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

ACEFO recommends that the Régie require that the methodology for payment of a contribution from a Transmission Provider customer in the event of phased commissioning be defined in the connection agreement that the parties are required to sign, and that the methodology ensure rate neutrality for the project as of the first commissioning.

Specific risks of certain projects

ACEFO recommends that in the event of a temporary interruption of operations, the cost recovery period be extended by the same length of time as the temporary interruption of operations.

It should be noted that under ACEFO's proposed application of the Transmission Provider's maximum allowance for network upgrades for the Distributor (native load) set out above in section 3.3, the Transmission Provider should not implement specific measures. The reduction in demand resulting from the discontinuation or reduction of the customer's operations creates a reduction in the Distributor's total demand, thereby reducing the annual credit granted to the Distributor for its transmission network upgrades.

Follow-up on commitments

The Transmission Provider's proposal on this issue does not respond to the Régie's request. ACEFO recommends that the Régie direct the Transmission Provider to propose a follow-up format consistent with the request made in D-2009-071.

Furthermore, under the follow-up format submitted by the Transmission Provider, the additional costs are not offset by additional revenues, resulting in an upward impact on the transmission rate.