[TRANSLATION]

Return on Equity and mechanism for treating earnings deviations ("Earnings Sharing Mechanism")

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1 Introduction

The purpose of this joint application by Hydro-Québec when carrying on electric power transmission activities (the "Transmission Provider") and Hydro-Québec when carrying on electric power distribution activities (the "Distributor") is to present a proposal for adjusting their rate of return on equity ("ROE") to a level comparable to that of enterprises with similar risks and to establish a mechanism for treating earnings deviations ("an earnings sharing mechanism") which will act as an efficiency incentive.

In order to satisfy the complementary demands of the Régie de l'énergie (the "Régie") stated in its Decisions D-2012-024[1] and D-2013-037[2], this request also proposes methods for updating the cost of debt and the prospective cost of capital at the conclusion of the rate applications.

Section 2 presents the application context by first setting out the findings on the gradual widening of the gap between the ROE authorized for the Transmission Provider and the Distributor and those of their peers. It then summarizes the regulatory circumstances leading to the current debate concerning the treatment of earnings deviations and shows the relevance and consistency of this application with Régie rulings on such matters.

Section 3 deals with the risk profiles of the Transmission Provider and the Distributor, a comparative analysis of their risks and those of other electric utilities and the proposal for a reasonable ROE for the Transmission Provider and the Distributor.

Section 4 deals with the general principles of an earnings sharing mechanism ("ESM") and results in a proposal that the Transmission Provider and the Distributor consider simple to apply and beneficial both to customers and the two divisions.

Section 5 presents the proposal for designed to satisfy Régie requirements regarding updating the cost of debt and the prospective cost of capital to the Transmission Provider and the Distributor.

Lastly, Section 6 presents the conclusions of this application.

The Transmission Provider and the Distributor retained the consulting services of Concentric Energy Advisors ("CEA"). The testimony of Messrs James M. Coyne and John P. Trogonoski, presented in Exhibit HQTD-2, Document 1, primarily concerns the determination of the ROE and the risk analysis. In Exhibit HQTD-2, Document 2, Robert C. Yardley's testimony concerns the ESM (earnings sharing mechanism).

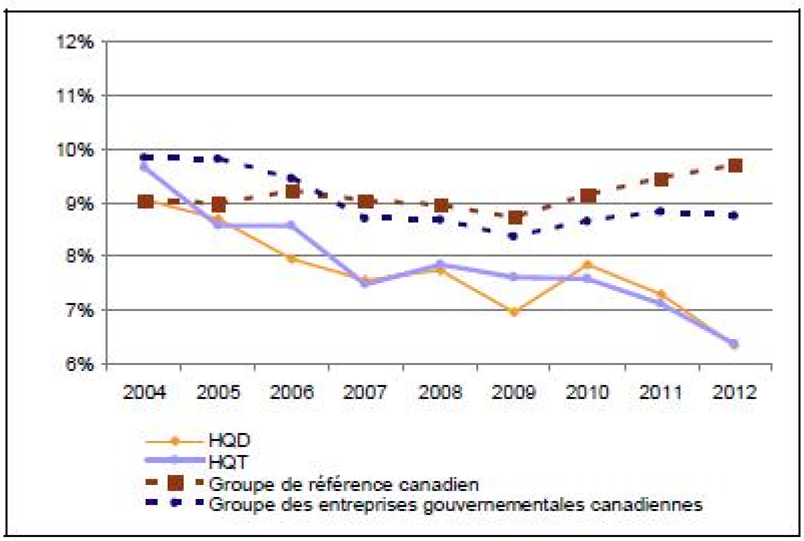
[1] Distributor's 2012-2013 Rate Application (R-3776-2011).
[2] Distributor's 2013-2014 Rate Application (R-3814-2012).

2 Context of the application

In recent years, the Transmission Provider and the Distributor have noted that their authorized ROE have remained not only at the low end of the spectrum of rates granted to rate-regulated enterprises operating in similar activity sectors in Canada and the U.S., but that this unfavourable variance has worsened over time. As more amply described in Section 3, the authorized ROE of the Transmission Provider and the Distributor are determined for regulatory purposes using a calculation established some ten years ago. During that period, the ROE resulting from that calculation have declined relative to those of comparable North American enterprises.

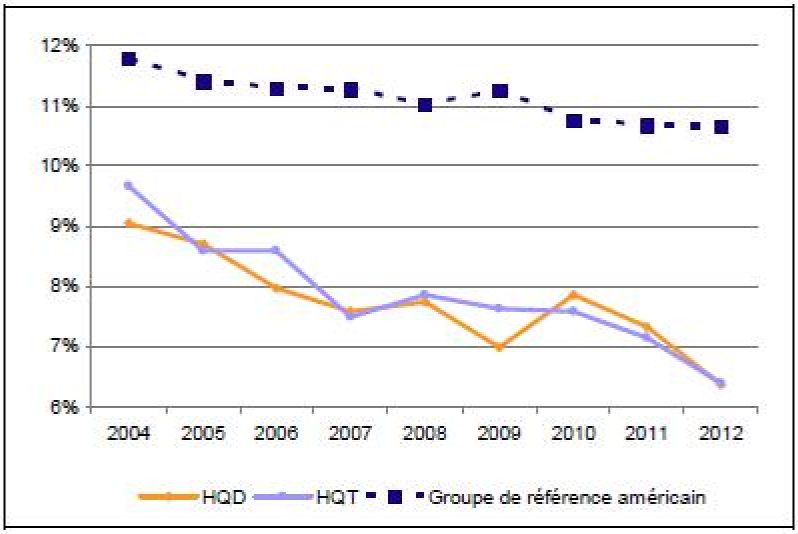
This is borne out by figures 1 and 2, which illustrate that the margin of variation for the two regulated divisions has widened in the 2004-2012 period relative to comparable Canadian and U.S. enterprises.

Figure 1
Authorized rates of return on equity of comparable Canadian electric utilities (2004-2012)[3]



* Canadian proxy group
** Canadian government corporations

Figure 2
Authorized rates of return on equity of comparable U.S. electric utilities (2004-2012)[3]



- U.S. proxy group

However, in recent years, the Transmission Provider and the Distributor generated real rates of return exceeding those authorized by the Régie. This was questioned by the Régie and certain stakeholders and has been determined as an issue to be examined in the recent rate applications filed by the Transmission Provider and the Distributor.

Thus, on March 8, 2012, in Matter No. R-3776-2011[4], the Régie rendered Decision D-2012-024, in which it stated as follows:

[Translation:]

> *"[29] The Régie notes in the 2013-2014 rate case, the Distributor shall submit evidence respecting a proposal for an earnings sharing mechanism as well as the method for establishing a reasonable return for the Distributor and variance management mechanisms.*
>
> *[…]*
>
> *[63] As stated earlier, the Régie notes that the Distributor shall submit evidence in the next rate case on the method for establishing a reasonable return for the Distributor."*

Similarly, on May 24, 2012 in relation to Matter No. R-3777-2011[5], the Régie rendered decision D-2012-059, in which it stated as follows:

> *"[154] The Régie therefore asks the Transmission Provider to deal with the issue of overearnings in the next rate case and to submit specific evidence with respect thereto."*

[3] Source of data: Concentric Energy Advisors.
[4] Distributor's 2012-2013 Rate Application.
[5] Transmission Provider's 2012 Rate Application.

In this context, in 2012 the Transmission Provider and the Distributor proposed a joint process aimed first at adjusting the authorized ROE, so as to bring it to a level comparable to that of their industry peers. This process was also aimed at adopting an ESM on this new base. In Decision D-2012-097 rendered August 3, 2012 in relation to Matter No. R-3814-2012 *supra,* the Régie accepted the proposed process and held acknowledged that it was necessary treat the review of the financial policies of the Transmission Provider and the Distributor together with the ESM issue:

[Translation:]

> *"[19] Therefore, the Distributor notified the Régie that a joint document prepared by the Transmission Provider and the Distributor would be filed in September 2012 in order to start the process, which will lead to review of their financial policy and to a proposal for treating earnings deviations for both divisions. The joint document will, inter alia, present a schedule of work to be done, a description of the information and consultation process with the Régie and the various stakeholders as well as the benchmarking of practices observed in this field.*
>
> *[20] <u>The Régie accepts the Distributor's proposal,</u> and in doing so specifies that the proposal for an earnings sharing mechanism and review of the method for establishing the Distributor's rate of return on equity will be considered in a separate case and therefore are not included in the issues considered in the present matter." (Emphasis added.)*

Moreover, in its Decision D-2012-119[6] rendered September 13, 2012 in connection with the same Matter No. R-3814-2012, the Régie reiterated the need to examine together the issues of an earnings sharing mechanism (ESM) and establishment of the ROE:

[Translation:]

> *"[13] The Régie is of the view that it is inappropriate to address retroactive application of an earnings sharing mechanism, the terms and conditions of which will only be known at a later date. Moreover, such an issue could not possibly be dealt with without also considering retroactive application of the financial policy. <u>The Régie reiterates that the Distributor had bound its proposal of an earnings sharing mechanism to a review of the method for establishing its rate of return.</u>" (Emphasis added.)*

Consequently, on September 28, 2012 the Transmission Provider and the Distributor filed a proposal to that effect with the Régie, which stated as follows:

[6] Distributor's 2013-2014 Rate Application.

[Translation:]

"(...) both divisions plan on submitting their joint application relating to the financial policy and a mechanism for treating earnings deviations <u>in the beginning of the second quarter of 2013</u>. This timeframe should allow for implementation of the Régie's decision in relation thereto in the Transmission Provider's 2014 rate year and in the Distributor's 2014-2015 rate year, if rendered in due time." (Emphasis added.)

This undertaking was accompanied with a proposal to establish an informal information and consultation process beforehand with the stakeholders. The proposed schedule was based on Hydro-Québec's decision not to seek review of the rate of return in the Distributor's 2013-2014 rate application or file a 2013 rate application for the Transmission Provider.

However, the Transmission Provider and the Distributor had to defer the informal information and consultation process because of uncertainties related to the application by several stakeholders that the Transmission Provider file a 2013 rate case, and to issues raised by stakeholder requests that multiple variance accounts be created in connection with the Distributor's 2013-2014 rate case. A letter to that effect was sent to the Régie and to the interested parties on November 28, 2012, citing the impact of these factors on the sequence in which specific issues would be dealt with in the announced consultation process.

Decision D-2013-030 pertaining to Matter No. R-3826-2012[7], and Decision D-2013-034 pertaining to Matter No. R-3823-2012[8], rendered respectively February 22 and 27, 2013, ended the arguments regarding the need for the Transmission Provider to file a rate case for 2013.

Also, on March 12, 2013, the Régie made the following statement in its Decision D-2013-037 *supra* concerning the relevance of creating multiple variance accounts for the Distributor:

[Translation:]

"[56] The Régie acknowledges the concerns of the stakeholders and the Distributor. While it is committed to ensuring that the rates for reference year 2013 are fair and reasonable, it is of the view that a proliferation of variance accounts is not desirable in the current regulatory context."

As the uncertainties that led to deferral of the consultation process have been resolved, the Transmission Provider and the Distributor could recommence the process. However, in the same decision the Régie also requested that the Distributor:

[Translation:]

[7] Application for review of Decision D-2012-126, filed by the Transmission Provider.
[8] Application for modification of transmission rates for 2013, filed by an Intervenor.

"[58] (...) act promptly so that the conclusions respecting the proposal for an earnings sharing mechanism and revision of the method for establishing the rate of return on equity can be considered in the 2014-2015 rate case. Therefore, the Régie asks the Distributor to submit a new timetable regarding going forward with the consultation process as soon as possible."

Given the Régie's request to get back to it quickly with a new timetable and given its requests regarding the timeframe for implementing the conclusions of the joint application, the Transmission Provider and the Distributor will comply with their undertaking to file an application in the 2nd quarter of 2013 but would prefer to bypass the planned informal information and consultation process. Both are of the view that conducting such a process at this stage would compromise the Régie's desired timeframe for implementing the conclusions of this application. It is worth noting that the purpose of the informal process proposed by the Transmission Provider and the Distributor was to facilitate consideration of the joint application and was not in any manner intended as a substitute for the formal examination and public hearing process.

The Québec Government's Bill 25[9] is another contextual factor for one of the issues covered by the proposal of the Transmission Provider and the Distributor, namely the ESM. They are of the view that their proposed mechanism is in keeping with the Bill, which is aimed at achieving efficiency enhancements that benefit consumers and the enterprise alike.

As demonstrated in Section 4, this mechanism is a practical response to the issue raised by the Régie and the stakeholders and fosters the achievement of sustained efficiency gains to the benefit of customers and both divisions. Furthermore the proposed mechanism is simple and can be readily implemented without significantly burdening the current regulatory process.

Lastly, in the same Decision D-2013-037, on the matter of updating the cost of debt and the prospective cost of capital, the Régie stated as follows:

[Translation:]

"[91] The Régie shares the stakeholder's view, and is of the opinion that the Distributor's proposed updating procedure is incomplete because it concerns only the numerator and not the denominator. The Régie expects the Distributor to include evidence on the cost of debt and the eventual updating of each component for the projected review of its overall financial.

[...]

[9] *Act respecting mainly the implementation of certain provisions of the Budget Speech of 20 November 2011,* Bill 25, presented February 21, 2013, 1st session, 40th legislature.

> *[101] The Régie reiterates its request that the Distributor submit evidence on the updating of the prospective cost of capital when it examines the latter's method for establishing a reasonable return."*

Thus, this application addresses the Régie's requests.

3 Risks and return on equity

Risk assessment is an important input in determining a reasonable ROE for the Transmission Provider and the Distributor. This exercise involves a comparative analysis of their respective risks and those of their industry peers.

To assess the extent to which the risks of Hydro-Québec's regulated divisions compare with those of public utility companies, the Transmission Provider and the Distributor engaged the services of experts James M. Coyne and John P. Trogonoski, whose testimony is set forth in Exhibit HQTD-2, Document 1.

For the assessment, Messrs Coyne and Trogonoski took into consideration the risk profiles of the Transmission Provider and the Distributor, briefly presented in sections 3.2 and 3.3. Their findings are summarized in Section 3.4.

3.1 General

The risks of an enterprise carrying on rate-regulated activities are generally subdivided into three categories for the purpose of determining its ROE: business risk, regulatory risk and financial risk.

For an enterprise that determines its revenue requirements on the basis of a projected reference year, its business risks basically correspond to the risks related to income variability and costs resulting from the nature of its operations, its cost structure and market fluctuations.

Its regulatory risk, considered part of its business risks, arises from the uncertainties respecting decisions by the economic regulatory body concerned with fixing its rates and approving its investments, all of which can affect cost recovery and its ROE.

Financial risks exist insofar as the variability of an enterprise's financial results is exacerbated by charges associated with servicing its debt. Payment of such charges takes priority over any payment of dividends to holders of common shares. The financial risk is proportional to the relative weight of debt financing in total financing.

3.2 Transmission Provider's risk profile

The Transmission Provider's business risks result basically from chance events that would increase its costs in a rate year. Thus, although the Transmission Provider has a relatively fixed cost structure, in the period for which its projected revenue requirements have been established it remains subject to variability of certain costs which could have a significant adverse effect on its financial performance. The Transmission Provider does not however incur any revenue-related risks because transmission service revenues for supplying native load are fixed and income variability from point-to-point transmission services is covered by a variance account.

The following facts, specific to the Transmission Provider's operational context, are conducive to such events.

With 33,639 km of lines and 516 substations at the close of 2012, the Transmission Provider's system is characterized by its size, its level of automation and its complexity. Several features distinguish it from typical North American systems. One such feature is the polarization of load and generation in the northern and southern extremities of the system respectively. The vast distance between generation and load requires several voltage conversion steps, more types of equipment, demanding operating conditions and stringent maintenance. These characteristics exert high pressure on the probability of breakage and malfunction, the consequences of which may be specifically aggravated due to other distinctive features specific to system usage, namely winter peak and the high rate of system use.

Moreover, the Transmission Provider's system crosses zones in difficult weather conditions that make it vulnerable to climate-related events such as floods, snow, ice storms and wind. Such conditions may also render access to the system for repair and maintenance purposes more difficult and burdensome. Its system is also exposed to geomagnetic activity. The Transmission Provider has no regulatory protection mechanism for exceptional unforeseeable costs that it could incur due to extreme weather events, such as the 1998 ice storm or some other extreme natural phenomenon of the same magnitude, which can cause a significant increase in costs recorded as expenses.

Another significant operational risk, while not unique to the Transmission Provider, is due to its aging infrastructures, which generate an increased risk of malfunction, despite an ambitious reliability upgrade program and a targeted maintenance strategy. This situation significantly increases the likelihood of underestimating maintenance cost forecasts or projected asset retirements. The Transmission Provider also plans on making significant growth-in-needs investments over the next decade. The planned investment budget is therefore significantly larger compared to the previous decade, which will exert increased pressure on cash flows. Furthermore, given that the Régie's authorization is an important factor for each project's critical path, the related regulatory procedures add pressure to project timetables to which the Transmission Provider must adapt.

As regards technological advances, the transmission system specifically uses a vast, constantly changing telecommunications network, with increasing levels of performance and integration into the transmission system. While the likelihood of a major telecommunications network malfunction is within acceptable limits because of existing and future mitigation measures, the adverse effects of such a malfunction could be higher because of the transmission system's increasing dependence on it. However, the Transmission Provider has no regulatory protection mechanism for unforeseeable extraordinary costs that it could incur due to a major telecommunications malfunction. Such an event could lead to a significant and unexpected increase in costs recorded as expenses.

3.3 Distributor's risk profile

The Distributor's business risks take various forms. They are specifically related to forecasting demand and managing supply resources, the specific features of the distribution system and bad debts.

The Distributor faces significant business risks given that its sales are subject to large fluctuations. Thus, while a variance account for weather conditions protects it from income variations due to climate conditions, its sales are sensitive to economic conditions given that it derives a significant portion of its revenues, namely 31%, from its industrial customers.

While its sales are vulnerable to the international economic situation, events of force majeure (fires, labour disputes) can cause sudden production shutdowns. It is also important to note that this is an asymmetrical risk. While the increased production capacity of its industrial customers is generally known in advance, plant shutdowns and labour disputes are difficult to anticipate. All these factors mean that the real requirements of such customers can fluctuate widely in relation to forecasts accepted in the rate case. Lastly, the Distributor faces a market risk given that natural gas prices have become more competitive compared to electricity prices.

Furthermore, while the Distributor can satisfy its energy requirements through heritage pool contracts, which provide it with an annual supply of 165 TWh, it must deal with the uncertainties of post-heritage contracts that have taken on growing importance over the years (possibilities of contestations, timeframes).

The Distributor must also deal with the risks related to the size of its system. It has 113,525 km of lines and five distribution control centres. The system was established to serve a vast and diverse region and to satisfy the requirements of over four million customers located primarily in densely populated areas, but also in rural areas and remote communities. Furthermore, the system must be operated and maintained in varying, changing and often extreme weather conditions that affect the service life of the system's equipment. The concentration of risks related to the size of the Distributor's system is what distinguishes it from most North American power utilities. This situation leads to variability of its operating, maintenance and investment costs.

The Distributor also runs a major risk because of the increase in overdue accounts and the decrease in payment arrangements with its residential customers in the winter. Persisting economic uncertainty, the obligation to supply all its customers, post-consumption invoicing and the inability to suspend electrical service in wintertime all contribute to certain residential customers finding it difficult to give priority to paying their electricity bills. The situation is exacerbated by the extensive use of electric heating, which results in high average bills.

Lastly, it remains that during the ratemaking exercise, the Distributor faces the risk of not having all its costs recognized, including a reasonable return, despite the fait that it has variance accounts that provide it with protection against major fluctuations of factors beyond its control.

3.4 Overview of CEA expert testimony on the risks of both regulated divisions

The testimony of James M. Coyne and John P. Trogonoski of CEA is presented in Exhibit HQTD-2, Document 1, which, from an investor's perspective, compares the business and financial risks of the Transmission Provider and Distributor to those of Canadian and U.S. regulated public utilities at the operating level.

First, the analysis considers the similarities and differences between Canada and the U.S. as regards their respective economic situations, government and regulatory policies and integration of financial markets. Both experts are of the view that investors do not find significant differences in the economic, financial and regulatory environment of both countries, which would establish a different risk profile and would require distinct return on capital between Canadian and U.S. enterprises with comparable risks.

Moreover, both experts are of the view that it is possible to develop groups of Canadian and U.S. enterprises with comparable risks and that can be used as a proxy group *for* regulated low-risk public utility transmission and distribution companies, like the Transmission Provider and the Distributor.

Based on their risk analysis, Messrs Coyne and Trogonoski drew the following conclusions:

- Although the short-term risks of the Transmission Provider and Distributor are comparable to those of the enterprises in the Canadian proxy group, their long-term risk is higher than that of those same companies;
- There are no significant differences between the Transmission Provider and the Distributor and the enterprises in the U.S. proxy group, apart from the fact that those companies have regulated production infrastructures. However, the risk caused by ownership of this type of infrastructure is more than offset by capitalization rates that are higher than those of the Transmission Provider and the Distributor.

As regards the financial risks, Messrs Coyne and Trogonoski show that the Transmission Provider and Distributor's financial leverage in their capital structures is slightly higher than the enterprises in the Canadian proxy group and much higher than the enterprises in the U.S. proxy group. Lastly, the credit metrics (financial ratios) taken into account by the credit-rating agencies are weaker for the Transmission Provider and the Distributor than for companies in the U.S. proxy group.

Conclusion respecting the risks of the regulated divisions

To summarize, there is no significant difference in the business risks between the Transmission Provider and the Distributor and the enterprises in the Canadian and U.S. proxy groups, other than the risk related to ownership of regulated generation by a fraction of the U.S. power utilities, a risk that is more than offset by higher capitalization rates among the comparable U.S. enterprises.

From the standpoint of determining a reasonable ROE for the Transmission Provider and the Distributor, Messrs Coyne and Trogonoski found that the enterprises in the U.S. proxy group are more comparable to the regulated Hydro-Québec divisions than those in the Canadian proxy group, given that the U.S. group is composed of enterprises that derive most of their operating revenues from regulated sales of electric power. Moreover, there are very few publicly-traded Canadian utilities, which limits the possibility of building a Canadian proxy group with enterprises comparable to those of the Transmission Provider and the Distributor, as regards their operations. For this reason, both experts believe it is reasonable and appropriate to rely mainly on the results of the U.S. proxy group and to use the Canadian proxy group as corroboration for the reasonableness of those results.

3.5 Cost-of-equity valuation models

Valuation of the ROE of the Transmission Provider and the Distributor is currently based on methodologies approved by the Régie in two important decisions rendered in 2002 and in 2003. Decisions D-2002-95[10] and D-2003-93[11] dealing with the first rate applications of the Transmission Provider (R-3401-1998) and of the Distributor (R-3492-2002) established the regulatory bases for those rates.

These decisions specifically determined that the ROE of the Transmission Provider and the Distributor is calculated, for each of them, on the basis of a forecasted risk-free rate, plus a risk premium determined by the Régie. Thereafter, in successive rate applications, the Transmission Provider and the Distributor continued to calculate the ROE based on an updated forecasted risk-free rate plus a fixed-risk premium of 3.28% for the Transmission Provider and 3.40% for the Distributor. The update of the risk-free rate is derived from forecasted average rates of 10-year Canada government bonds, established on the basis of data published in the *Consensus Forecasts* for a given month, plus the spread between the rates of 30-year and 10-year bonds for the previous month.

Thus, over the years, the Transmission Provider and the Distributor have in fact used an implied ROE adjustment formula with an elasticity factor of 100% for changes in the risk-free rate, tantamount therefore to passing on the entirety of any change in the risk-free rate directly to the ROE. The unprecedented drop in government bond rates in recent years has resulted in a corresponding drop in the ROE of both regulated divisions.

Given the historically low level of risk-free interest rates, Hydro-Québec reached the conclusion, like many other Canadian public utilities, that the ROE of its regulated divisions do not meet the *Fair Return Standard,* according to which the reasonable cost of equity must correspond to the return requirements of an investor had it invested funds in a company with comparable risks. In the case of the Transmission Provider and the Distributor, the situation is further exacerbated by application in the return adjustment formula of an elasticity factor of 100% in relation to risk-free rate variations in comparison with factors varying between 50% and 75% applied to the rates of return of comparable regulated enterprises in Canada.

Numerous Canadian transmission providers and power and gas distributors and their experts have raised such arguments and have applied to their respective regulators (Régie de l'énergie, National Energy Board, *Ontario Energy Board, Alberta Utilities Commission)* for upward adjustments of their risk premiums. The actions taken by the regulators have been as follows:

[10] Transmission Provider's 2001 Rate (R-3401-98).
[11] Distributor's 2004-2005 Rate Application du (R-3492-2002).

- Suspension of automatic ROE adjustment formulas or modification thereof to take into account credit spreads and to adjust elasticity factors;
- Adjustment of the market risk premium in a financial crisis;
- Increase in adjustments for flotation costs and a financial flexibility margin;
- Adjustment of the implicit risk premium for perceived increased risk;
- Adjustment to take into account weaknesses in the financial asset valuation model in a low-bond-rate situation;
- Increase in capitalization rates.

Against this background, the Transmission Provider and the Distributor called upon the expertise of Messrs Coyne and Trogonoski to propose a reasonable ROE. Based on the comparable proxy groups they selected, the experts were able to establish an ROE for the Transmission Provider and the Distributor that satisfied the Fair Standard of Return using financial models generally accepted by Canadian and U.S. regulators.

Messrs Coyne and Trogonoski also reiterated the *stand-alone principle,* which requires that in determining the ROE, a regulated enterprise must be treated as if it were seeking to attract capital on the financial markets independently (on a stand-alone basis) from the rest of the enterprise to which it belongs. This principle was recognized in Régie Decisions D-2002-95 and D-2003-93.

The use of models well-established in financial and regulatory spheres is favoured to determine market-required returns, especially in a current financial context that departs from historical experience, namely:

- the *Capital Asset Pricing Model* (CAPM);
- the "*Discounted Cash Flow (*DCF) model.

These models formalize the evaluation of the returns/risk relationship on the basis of empirical data. Their point of departure consists in identifying enterprises with risks comparable to those of the Transmission Provider and the Distributor for which market data are available.

Based on the DCF model and data pertaining to comparable Canadian and U.S. enterprises, Messrs Coyne and Trogonoski first established a range of rates-of-return-on equity from 9.2% to 12.1%, including an adjustment for flotation expenses and financial flexibility of 30 basis points. That range was then compared to the results of the adjusted CAPM model *(Reconciled CAPM)* in order to formulate their recommendation. Thus, Messrs Coyne and Trogonoski are of the view that an ROE of 9.2% is appropriate for the Transmission Provider and the Distributor. They justify the rate of 9.2% by suggesting that greater weight be placed on the results of the DCF model derived from data on the U.S. proxy group and the lower end of the spectrum of the results be selected to account for the absence of risks related to power generation for the Transmission Provider and the Distributor, without however including an adjustment to reflect their higher financial risk.

In order to validate their recommendation, Messrs Coyne and Trogonoski analyzed the results of a group of Canadian power transmission and distribution utilities, without market data, to ensure that the rates of return recommended for the Transmission Provider and the Distributor are compatible with the rates of the utility companies.

Since the ROE recommended by Messrs Coyne and Trogonoski is based on models generally accepted by regulators, and the results of those models are calculated on the basis of Canadian and U.S. groups of companies whose comparability is justified by a substantiated risk analysis, the Transmission Provider and the Distributor endorse and adopt the recommendations of Messrs Coyne and Trogonoski and ask the Régie to approve their proposal that their ROE be revised to 9.2%.

The Transmission Provider and the Distributor consider this a conservative proposal given that the rate falls in the low end of the spectrum of the results reported by Messrs Coyne and Trogonoski. The financial risks of the Transmission Provider and the Distributor are much greater than those of the comparables given the low capitalization of those regulated divisions. In their view, this conservative proposal facilitates resolution of the matter.

As regards their capital structures, the Transmission Provider and the Distributor have maintained them at their current levels, namely:

- 30% equity to 70% debt for the Transmission Provider as approved by the Régie in its Decision D-2002-95;
- 35% equity to 65% debt for the Distributor as approved by the Régie in its Decision D-2003-93.

Use of the same ROE for both regulated divisions is justifiable from Hydro-Québec's perspective, by the fact that the use of different capital structures takes into account the risk differentiation of both regulated divisions. This way of doing things is not new and is specifically applied by the *Alberta Utilities Commission.*

4 Mechanism for treating earnings deviations (Earnings Sharing Mechanism)

4.1 General principles

An earnings sharing mechanism (ESM) is a regulatory instrument generally associated with incentive regulation allowing, on the basis of a reasonable return threshold, certain deviations between the ROE earned and the authorized ROE to be shared between the regulated enterprise and its customers. When the financial results of the regulated enterprise are known, the earnings deviations and the amount to be shared with customers are calculated by applying an established formula.

Robert C. Yardley, in his testimony produced in Exhibit HQTD-2, Document 2, described the general principles of the ESM structure and the regulatory context in which they apply.

The most common ESMs may include some or all of the following elements:

- A definition of the ROE calculation, expressed as a percentage, for the purposes of applying the sharing formula and, specifically, the period to which the calculation applies (normally 12 months);
- Thresholds expressed as a percentage defining a deadband within which deviations are either fully absorbed or retained by the regulated enterprise; a number of ESMs observed do not have a deadband;
- For the portion of earnings deviations outside the deadband, a ratio establishes the percentage allotted to the regulated enterprise and the percentage allotted to customers;
- More complicated ESMs can be multi-tiered defined by several thresholds and various sharing ratios, for example, a first sharing threshold may have a sharing ratio of 75% for the regulated enterprise, a second threshold, a sharing ratio of 50% and a third, 25% or 0%;
- Methods for attributing earnings to customers in subsequent years.

If the sharing thresholds and sharing ratios result in the same sharing percentage for a negative or positive deviation of the same size, the ESM is considered a symmetric ESM; otherwise it is an asymmetric ESM.

4.2 Proposal of the Transmission Provider and the Distributor

The Transmission Provider and the Distributor consider that any ESM must be designed and administered so as to:

- ensure fair treatment of stakeholders;
- be an incentive for the regulated divisions to improve their efficiency;
- pass on efficiency gains in the divisions to customers;

- foster regulatory streamlining.

To this end, they propose the following mechanism, as recommended by Robert C. Yardley:

- Deadband: up to 50 basis points above the authorized ROE for the Transmission Provider and up to 100 basis points above the authorized ROE for the Distributor;
- Deviation above the deadband: to be shared equally with their customers;
- Deviation below the authorized ROE: to be absorbed by the Transmission Provider and Distributor.

The proposed mechanism is illustrated in figure 3:

Figure 3
Earnings sharing mechanism

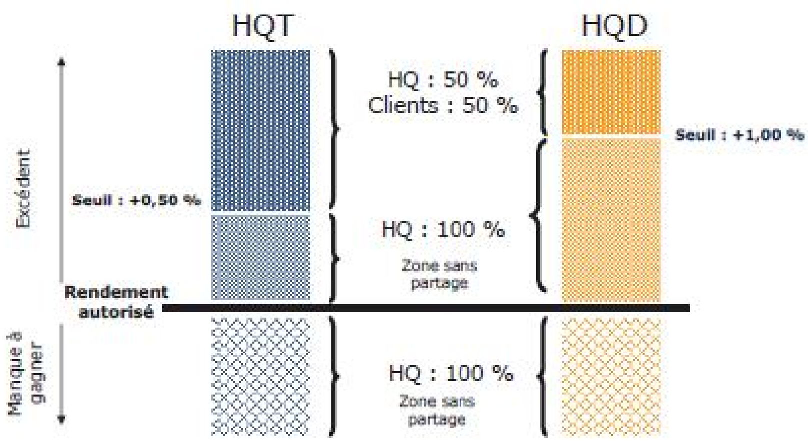


Table – translated terms	
Seuil = threshold Excédant = surplus Manque à gagner = shortfall Rndement autorisé = authorized return	Clients= customers Seuil = threshold Zone sans partage = deadband

Furthermore, the Transmission Provider and the Distributor maintain the following variance accounts set up to ensure fair treatment of the parties and to cover significant factors beyond their control. These accounts are as follows:

<u>Transmission Provider</u>

- variance account for revenue from point-to-point transmission services;

- variance account for pension costs;

Distributor

- "pass-on" account for the purchase of electricity;
- variance account for transmission loading;
- smoothing account for transmission and distribution revenue for weather conditions;
- variance account for fuel cost;
- variance account for load retention rates;
- variance account for pension costs;
- variance account for major blackout costs;
- variance account for costs related to the Bureau de l'efficacité et de l'innovation énergétiques.

The existence of a deadband, within which positive deviations are fully retained by the Transmission Provider and the Distributor, is for them fundamental in order to maintain sufficient incentive to achieve efficiency gains. As regards the sharing percentage of 50% for any greater deviation, the Transmission Provider and the Distributor are of the view that this is a reasonable sharing in order to achieve the objectives of fairness, maintenance of efficiency incentives and simplicity of application. It also takes into account that they will fully absorb negative deviations.

The proposed asymmetric ESM would reduce the regulatory burden by avoiding contestations of management decisions when the mechanism is applied in negative deviation situations. Dealing with positive deviations globally without distinguishing the factors that contributed to such deviations, irrespective of whether or not they are within the control of the regulated divisions, would also streamline the process.

However, the Transmission Provider and the Distributor propose that the current process for reviewing their respective costs of service and performance be maintained. This regular review process, implemented by the Régie in their rate applications, allows for yearly monitoring of changes in costs as well as efficiency and quality-of-service indicators for each division respecting many variables.

In conclusion, the Transmission Provider and the Distributor propose that this ESM be adopted for the following reasons. This mechanism:

- is simple and can be quickly implemented;

- concretely address the concerns of the Régie and of the stakeholders regarding positive earnings deviations realized by the Transmission Provider and the Distributor;
- encourages the achievement of efficiency gains benefiting both divisions and their customers because of the asymmetry of the mechanism, its deadband and participation in additional earnings;

Moreover, it is consistent with the aforementioned Bill 25.

4.3 Conditions governing variance accounts for earnings deviations

In order to transfer to customers the earnings attributed to them pursuant to the proposed ESM, the Transmission Provider and the Distributor suggest that they each create a variance account for reporting earnings deviations to be shared. Moreover, they propose to make the account subject to the following conditions:

For a given historic year, using 2014 as an example:

- Recognition of real earnings deviations at the year end of the historic year (2014);
- Presentation of the results of the calculation of the earnings deviation to be remitted to customers in the annual report for the historic year (2014) filed with the Régie;
- Consideration of the earnings deviation to be remitted to customers in the projected reference year (2016);
- Application until disposition, of a return, at the rate authorized on the rate base, on the deviation recorded in the account.

The proposed conditions have the advantage of being simple to apply, by recognizing, once definitive, the real earnings deviations to be remitted to customers as that is its fundamental objective. They also minimize the disposition period and therefore the impact on customer rates. However, from a rate stability perspective, it would be relevant to re-assess the conditions according to the size of the earnings deviations to be shared.

5 Other proposals

5.1 Proposal pertaining to the cost of debt

At paragraph 58 of its Decision D-2012-024, the Régie stated that forecasted return on rate base components and the prospective cost of capital should be based on the most current data. It also held that debt-related rates should be updated in the rate case.

To satisfy this request and the request formulated in paragraph 91 of Decision D-2013-037, the Transmission Provider and the Distributor propose to update the components of the average cost of debt by reflecting the impact of rate and volume variations on the numerator and the denominator.

Because Hydro-Québec arranges its financing and manages its debt in an integrated manner, which procures the same average cost of debt for both regulated divisions, the Transmission Provider and the Distributor propose that their updates of the cost of debt be established at the same time, namely in December. Thus, a simultaneous update would allow the Transmission Provider and the Distributor to present the same revised cost, knowing that they would then obtain the same real cost of debt. Moreover, performing the update on one date would simplify its process.

Financing transactions that have been processed as well as new financing volume forecasts, established on the basis of data available on the date of the update, would then be taken into account. The update would also incorporate a review of rates applicable to floating-rate debt and to projected new fixed-rate loans. For that purpose, the most recent *Consensus Forecasts* rate projections would be used to establish interest rates forecast on an annual basis. For rate forecasts applicable to Hydro-Québec, the methodology in effect in previous rate cases would apply.

5.2 Proposal pertaining to the prospective cost of capital

In the same vein, to satisfy the Régie's request that the Distributor submit evidence on updating the prospective cost of capital at the time of considering the method for establishing a reasonable return, the Transmission Provider and the Distributor propose the following: assuming the Régie is satisfied with the current methodology for determining the prospective cost of capital, they propose to the Régie that in December they will update the short-term and long-term financing rate for calculating the prospective debt rate. In their view, this proposal adequately satisfies the Régie's request.

Thus, the revised interest rate forecasts for issues of debt at fixed rates and floating rates would also be used to update the prospective cost of capital.

6 Recommendations and conclusion

The valuations conducted by Messrs Coyne and Trogonoski based on the proxy group of Canadian and U.S. companies, according to the reconciled CAPM and DCF models, result in an ROE ranging from 9.2% to 12.1%%, including an adjustment for flotation costs and financial flexibility.

As regards the determination of a mechanism for handling earnings deviations, Robert C. Yardley recommends an asymmetrical earnings sharing mechanism with a deadband of 50 basis points and 100 basis points beyond the authorized rates of return, for the Transmission Provider and the Distributor respectively, with any deviation greater than the deadband to be shared equally with their customers.

In conclusion, the Transmission Provider and the Distributor endorse the recommendations of the CEA experts and ask that the Régie approve their proposal to revise their ROE to 9.2%, as well as their proposal regarding the earnings sharing mechanism and the methods proposed for updating the cost of debt and of the prospective cost of capital.