

## Rate of Return on Equity

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## **1 Overview**

1           Within the framework of the decision D-2003-93, the Régie de l'énergie required  
2           the Distributor to deliver during Phase 2 of the request R-3492-2002, an update  
3           of the risk free rate according to the methodology suggested by the Régie  
4           as well as evidence pertaining to the mechanism for adjustment of the rate  
5           of return. During the submission of Phase 2, the Distributor actually conducted  
6           an update of the risk free rate. However, he did not submit evidence related  
7           to the rate of return, a new set of detailed evidences on the rate of return on  
8           equity being judged unnecessary in Decision D-2003-93 made by the Régie,  
9           and asked to postpone the study of the formula of automatic adjustment  
10          of the rate of return on equity.

11          In this document, the Distributor establishes the rate of return on equity for the  
12          projected year 2005. The risk free rate was updated on the basis of the  
13          data from "Consensus Forecast", dated August 14, 2004, that represent  
14          Canadian data for the month preceding the submission of this evidence, per the Régie's  
15          requirements on page 72 of the Decision D-2003-93. Furthermore, the Distributor  
16          proposes to update the rate of return on equity on the basis of the data from  
17          the "Consensus Forecast", on the date when the Régie publishes its decision on  
18          this case. Besides, this update is in compliance with the Decision D-2004-47.

19          However, while favoring this approach, the Distributor chose not to present  
20          in this case evidence for a mechanism of automatic adjustment to the rate of  
21          return on equity and again requests the postponement of this subject.

22          The main motives for this choice are explained in the following section.

## **2 Grounds to Postpone the Examination of the Mechanism for Automatic Adjustment of the Rate of Return**

1 In the past, several regulatory agencies have put in place  
2 mechanisms of automatic adjustment of the rate of return. Among those are:  
3  
4 \*National Energy Board in 1994;  
5 \* The Public Utility Board of Manitoba in 1995;  
6 \* British Columbia Utility Commission set up a mechanism for automatic  
7 adjustment of the rate of return in 1996,  
8 which was updated in 1999;  
9 \* In March 1997, the Ontario Energy Board adopted the methodological guidelines  
10 on the practice of automatic adjustment mechanism of the rate of return;  
11 \* At the request of the Régie, SCGM put in place such a mechanism in  
12 1998;  
13 \* Gazifère proposed such a mechanism in 1999;  
14 \* More recently, in July 2004, the Alberta Energy and Utility Board released  
15 the Decision (D-2004-052) dealing with the generic cost of the capital for  
16 regulated companies transporting and distributing gas in Alberta. One of the  
17 sections of this Decision included the formula for automatic adjustment of the  
18 rate of return.

19 Following the example of other regulated companies, the Distributor does  
19 not oppose the introduction of a mechanism of automatic adjustment to the  
20 rate of return. However, such a mechanism must be set on parameters

1 initially established on a firm basis while being proposed in a relatively stable  
2 business environment.

3 The establishment of the initial parameters used in the formula of automatic  
4 adjustment to the rate of return and its subsequent adjustments entails a major  
5 influence on the authorized return. Among these parameters are the following:

6 \* The risk free rate of return

7 \* The  $\beta$  factor

8 \* The market premium

9 \* The capital structure

10 An initial overestimation or underestimation of these parameters can lead  
11 with time to multiplier effects that increase the overestimation or underestimation  
12 of the rate of return calculated with the adjustment formula.

13 In this respect, Hydro-Quebec is globally dissatisfied with the decisions of the Régie  
14 D-2002-95 and D-2003-93 regarding the establishment of these parameters,  
15 the risk analysis as well as the capital structure of the transmission and distribution  
16 divisions in which they result. In particular, it is important to clarify the level of the  
17 business risk of the Distributor. This clarification first requires the  
18 establishment of the appropriate regulatory base adapted to deal with the post-heritage  
19 supply costs.

20 Hydro-Quebec wishes to see these elements re-examined within the framework  
21 of a joint case pertaining to the cost of capital of all regulated activities.

22 In this case, the whole set of parameters of the cost of capital of the

24 Distributor and the Transporter would be re-examined and a mechanism

1 of automatic adjustment of the rate of return will be proposed for both  
2 divisions.

3 In the context of the current request, the calculation of the rate of return on equity  
4 will take into account:

5 \* an update of the calculation of the risk free rate of return according to the  
6 formula suggested by the Régie in the Decision D-2003-93 and already  
7 applied in Phase 2 of the Case R-3492-2002;

8 \* Maintains the market risk premium at the level of 6.19 %  
9 with a Beta of 0.55.

### **3 Calculation Of The Rate of Return on Equity**

10 Table 1 summarizes the rate of return on equity obtained for the historic year 2003,  
11 for the base year 2004 and for the projected year 2005.

12

13 For the projected year, the rate of return on equity of 9,24 %  
14 breaks up into:

15 \* a risk free rate of return of 5,83 % and

16 \* the risk factor, as established by the Régie in its Decision D-2003- 93  
17 of 3,41 %

**TABLE 1**  
**RATE OF RETURN ON EQUITY**

	historic	basic	projected
	2003	2004	2 005
<b>Risk free rate of return</b>	5,31%	5,65%	5,83%
Average rate of Canadian 10-year bonds	4,75%	5,20%	5,30%
Forecast 3 months	4,60%	4,90%	5,10%
Forecast 12 months	4,90%	5,50%	5,50%
Monthly average of the daily variations	<b>0,56%</b>	<b>0,45%</b>	<b>0,53%</b>
Canadian 30-year bonds	4,94%	5,22%	5,29%
Canadian 10-year bonds	4,38%	4,76%	4,76%
<b>Risk premium</b>	<b>3,405%</b>	<b>3,405%</b>	<b>3,405%</b>
Market premium	6,19%	6,19%	6,19%
Beta	0,55	0,55	0,55
<b>Rate of return on equity</b>	<b>8,71%</b>	<b>9,06%</b>	<b>9,24%</b>

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2 For the purpose of the Régie's approval, the Distributor's required rate of return on  
3 equity for the projected pilot year is equal to

4 9,24 %.

5 The calculation of the risk free rate of return is based on the data of the  
6 "Consensus Forecast" of August 14, 2004, one month before the case was  
7 submitted to the Régie, as per the requirements of the Régie specified in its  
8 Decision D-2003-93. The details of the daily rate variation for the 10-year and  
9 30-year bonds are presented in Table 2.

TABLE 2

**CALCULATION OF THE DAILY RATE VARIATION FOR THE 10-YEAR AND 30-YEAR BONDS DURING AUGUST 2003**

DAY	BOND RATE (%)		VARIATION
	30 YEARS	10 YEARS	
2004-07-01	5,344	4,849	0,50
2004-07-02	5,261	4,727	0,53
2004-07-05	5,271	4,741	0,53
2004-07-06	5,294	4,756	0,54
2004-07-07	5,303	4,758	0,55
2004-07-08	5,29	4,731	0,56
2004-07-09	5,277	4,724	0,55
2004-07-12	5,273	4,729	0,54
2004-07-13	5,29	4,757	0,53
2004-07-14	5,292	4,776	0,52
2004-07-15	5,289	4,779	0,51
2004-07-16	5,223	4,687	0,54
2004-07-19	5,225	4,686	0,54
2004-07-20	5,267	4,739	0,53
2004-07-21	5,294	4,774	0,52
2004-07-22	5,276	4,755	0,52
2004-07-23	5,261	4,727	0,53
2004-07-26	5,262	4,748	0,51
2004-07-27	5,337	4,841	0,50
2004-07-28	5,33	4,826	0,50
2004-07-29	5,327	4,818	0,51
2004-07-30	5,28	4,758	0,52
<b>AVERAGE</b>	<b>5,28</b>	<b>4,76</b>	<b>0,53</b>

1 C10130Y Index C10110Y Index