

TRANSMISSION AND DISTRIBUTION
WEATHER NORMALIZATION MECHANISM

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1. BACKGROUND

In File R-3579-2005, the Distributor proposed the implementation of a weather normalization mechanism . This proposal concretized its intention, formulated in 2004¹, to obtain approval for a weather normalization account to cover the surpluses and deficits related to the expenses and revenues from Transmission and Distribution. It also addressed the Régie's concerns² regarding the risks born by the Distributor arising from variation in demand, and specifically the disparities between actual sales and projected sales. The proposed mechanism specifically covers the transmission and distribution components, and takes in the revenue disparities arising from weather variances in these two sectors.

In Decision D-2004-34³, the Régie accepts the weather normalization mechanism proposed by the Distributor, applicable as of January 1 2006, holding that weather variances are outside of the Distributor's control and that they must be compensated for over time. As for variations in demand, the Régie, like the Distributor, holds that they are a normal part of business risks and that the disparities to which they give rise should not be born by the customers. The Régie accepts the account handling procedure proposed by

¹ In response to the CFIB in Exhibit HQD-14, Document 5 page 43: Rate Case R-3541-2004.

² Detailed in Decision D-2005-34.

³ D-2006-34, R-3579-2005, pages 19-21.

the Distributor, described in section 4.2 of Exhibit HQD-4, Document 4, R-3579-2005, page 24.

Moreover, it sets forth certain requirements that must be addressed by the Distributor. These requirements cover:

- The compilation of information relevant to the disparities;
- the documentation of the account's operation;
- the updating of the weighting scheme, established in the 1980's, and partially adjusted in 2002⁴, for the purposes of distributing the impact of climatic conditions.

The Régie will find the responses to these demands in the sections that follow.

Given that the weather normalization mechanism is effective as of January 2006, the Distributor presents in Section 5, by way of illustration, the compilation of the disparities by month, for the period January –April 2006.

⁴ Adjustments carried out beginning in 2002 to take into the account the compensatory effects between the D and DT tariffs caused by interruptible sales. Source: Response to commitment 3, HQD-15, Document 6.3, R-3579-2005.

2. NORMALIZATION MECHANISM

It is instructive to briefly review the principle on which the normalization mechanism is based.

Since it is unable to precisely forecast the weather to come, even in the short term, the Distributor uses, for the purposes of establishing tariffs, a forecast of sales under normal climatic conditions, based on a normalized history, independent of the effects of temperature. Consequently, temperature warmer or colder than the norm established for the purposes of sales forecasting causes the Distributor's sales revenue to vary with the fluctuations in temperature.

Moreover, since this revenue rises or falls while the Distributor must assume fixed costs for transmission and distribution, the Distributor's annual results and performance are affected. The implementation of a regulating account aims to smooth out, or level, these fluctuations in the Distributor's performance. By doing so, the Distributor would draw neither profits nor losses associated with variations caused by climatic conditions beyond its control on this portion of revenues.

3. METHOD OF CALCULATION

Calculation of the amounts to be contributed to the normalization account is based on the following sequence of steps:

- For a given year, estimate the impacts of climatic conditions on actual sales. This calculation is based on the hourly models for estimating the

system's requirements, established by Hydro-Québec TransÉnergie. The variables considered are temperature, wind speed, cloud cover and precipitation. The method is described in File R-3550-2004 and certain elements are also revisited in Exhibit HQD-4, Document 4 of File R-3579-2005, pages 10 to 12;

- Determine the variations in volume caused by climatic fluctuations by identifying the impacts related to heating and cooling;
- Distribute these volume differences by rate category according to a weighting that reflects the relative importance of heating and cooling activities for each of these categories. As demanded by the Régie in Decision D-2006-34, the Distributor submits an updated weighting scheme, in Section 4 of the present exhibit;
- Establish the revenues in ¢/kWh for each rate category: the unit transmission and distribution revenue equals the revenue from the Distributor's sales once the supply cost has been paid. For a given rate category, it is obtained by subtracting the average unit supply cost from the projected unit sales revenue for the year in question;
- Calculate the total revenue difference by rate category by multiplying the volume difference caused by climatic conditions by the total unit revenue for transmission and distribution.

4. DISTRIBUTION OF THE IMPACT OF CLIMATIC CONDITIONS BY RATE CATEGORY

In order to break down the impact of climatic conditions by rate category, the Distributor assigns each category a portion of the estimate of the impact of climatic conditions related to heating and cooling determined by TransÉnergie by applying the distribution percentages as described in the Rate File R-3579-2005 in Exhibit HQD-4, Document 4, page 12, Table 1.

In Decision D-2006-34, the Régie notes “*Regarding the distribution of the impact of climatic conditions, the Régie accepts OC’s proposal that the weighting in use, established in the 1980’s, be updated and submitted when the next rate case is held.*” (translator’s version)

To meet this requirement, the Distributor updated these distribution percentages by evaluating the heating and cooling volumes of its entire clientele for the last three years using a sample of customers for which consumption for these activities is known.

The percentages adopted by the Distributor were calculated using the average of the rates observed for these three years. The last columns in Tables 1 and 2 show the new percentages applicable as of January 1, 2007 for the distribution of the impact of climatic conditions on heating and cooling by rate category. For comparison purposes, the current percentages, used to compile the differences for 2006, are shown in the same table.

TABLE 1: PERCENTAGES - DISTRIBUTION OF THE IMPACT OF CLIMATIC CONDITIONS FOR HEATING

Heating	Current	2003	2004	2005	New percentages (average)
D		70.7%	69.7%	69.6%	70.0%
DT ⁽¹⁾	75.0%	-	-	-	-
G	8.0%	12.7%	12.8%	12.8%	12.8%
M	10.0%	11.9%	12.7%	13.0%	12.5%
L	7.0%	4.7%	4.8%	4.6%	4.7%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

(1) For the purposes of the update, the evaluation of the impact of the climatic conditions on heating for the DT rate is to be performed in advance of the distribution by rate category.

TABLE 2: PERCENTAGES - DISTRIBUTION OF THE IMPACT OF CLIMATIC CONDITIONS FOR COOLING

Cooling	Current	2003	2004	2005	New percentages (average)
D	20.0%	20.8%	19.4%	20.4%	20.2%
DT	0.0%	2.6%	2.8%	1.8%	2.4%
G	30.0%	20.0%	19.0%	18.9%	19.3%
M	37.5%	46.1%	47.0%	46.7%	46.6%
L	12.5%	10.5%	11.8%	12.3%	11.5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

As in previous years, the Distributor determines the impact related to heating for the DT rate clientele by using an hourly model for estimating the electricity demand of the dual-source systems of this clientele. However, from now on, the impact attributable to the DT rate is removed from the total impact, the rest being distributed among the other rate categories according to the percentages shown in Table 1. Currently, the estimation of the impact at the DT rate is subtracted from the impact attributed to the D and DT rates taken together (75% of the total) to obtain the impact associated with heating for the D rate.

The updating of the distribution percentages shows, with respect to heating, a slight increase for the G and M rates and a slight decrease for the D and L rates. For cooling, the share of the M rate increased, with a decline in the G rate.

The changes are not very significant in light of the fact that the distribution percentages have not been updated since the beginning of the 1980's. The differences can be explained by the interaction of a number of events, among them, a spread in the use of cooling.

5. PORTRAIT OF THE NORMALIZATION ACCOUNT AS OF APRIL 30, 2006

For the purposes of illustration, Table 3 below presents a brief portrait of the normalization account as of April 30, 2006, including interest, listed by month.

Table 4 shows the compilation by month and by rate category, as stipulated by

the Régie in its Decision D-2006-34, although it excludes the interest. The weightings used are presented in File R-3579-2005 and reproduced in Tables 1 and 2 in Section 4 above.

**TABLE 3: SUMMARY OF NORMALIZATION ACCOUNT FOR TEMPERATURE
FOR THE PERIOD JANUARY-APRIL 2006 (IN \$1000'S)**

	Initial balance	Interest (7.75%)	Monthly difference	Final balance
January	0.0		42,512.6	42,512.6
February	42,512.6	274.6	3,538.7	46,325.8
March	46,325.8	299.2	9,194.5	55,819.5
April	55,819.5	360.5	15,118.1	71,298.0

**TABLE 4: BREAKDOWN OF NORMALIZATION ACCOUNT FOR
TEMPERATURE BY RATE CATEGORY
FOR THE PERIOD JANUARY TO APRIL 2006 (IN \$1000's)**

	D rate	DT rate	G rate	M rate	L rate	Monthly difference	Temperature difference GWh	
January	33,186.6	- 1,599.2	5,280.5	4,689.8	954.8	42,512.5	-1,275.0	+ Hot
February	2,877.0	-238.5	435.1	386.4	78.7	3,538.7	-105.0	+ Hot
March	6,976.2	-160.6	1,149.8	1,021.2	207.9	9,194.5	-278.0	+ Hot
April	10,670.2	472.2	1,921.6	1,706.7	347.4	15,118.1	-464.0	+Hot
Total	53,710.0	- 1,526.1	8,787.0	7,804.1	1,588.8	70,363.8	-2,122.0	

As of April 30 2006, the tables show balances of \$70.4 million before interest and of \$71.3 million including interest.

6. OPERATING PRINCIPLES OF THE ACCOUNT

Given that the differences are calculated based on the actual results for a given full year, and given the limitations imposed by the deadlines for rate case submission, the annual differences registered will only be able to be integrated into the account beginning with the second test year following the year in question.

As the normalization mechanism operates continuously, it is instructive to distinguish between the differences registered annually. This distinction helps to ascribe the interest to the proper balances. To this end and, as described in file R-3579-2005 and accepted by the Régie in Decision D-2006-34, the sums accumulated in the account will be transferred to a rate base account at the beginning of the second test year following that to which the differences apply. The balance in the first account will bear interest at the average rate of the cost of capital until its integration into the rate base.

Owing to the particular nature imposed by the historically observed effects of compensating for climatic impact over time, the Distributor is to handle the disposition of the account balance in a particular manner. Since the balance in this second account should diminish over time due to its nature, the Distributor proposed, under Case R-3479-2005, that it not be depreciated. The account balance therefore varies with the annual influxes from the first account. Only the aspect intrinsic to the cost of financing is taken into account in the required revenue. Consequently, a positive balance will bring about a remuneration of the balance, to the benefit of the Distributor, whereas a negative balance will reduce the required revenue, reflecting a cost of financing to the customer's advantage.

By monitoring the account over a given period, it can be seen whether the phenomenon of compensation takes place as observed using the historical data.

If the balance were to increase from year to year, the Distributor would reserve the right to ask that the account be depreciated.

The balance of the account that will be transferred to the rate base, will, for each category of consumers, be added to the allocation of the rate base by customer class.