SUPPLY

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1 CONTEXT

Hydro-Québec Distribution (the Distributor) has several means at its disposal to ensure a balance between supply and demand. Besides heritage electricity, it can call for tenders to obtain long term or short term electricity supply contracts, as needed. In these cases, the Distributor applies the Code of Conduct and Call for Tenders and Contract Award Procedure. Depending on the energy balance context, the Distributor can also resort to the markets to resell its energy surpluses.

The Distributor can also carry out purchase transactions for periods of less than three months without proceeding by tender by virtue of a dispensation obtained from the Régie de l'énergie. Similarly, it can resell its surpluses by tender or in bilateral transactions.

In addition, in order to satisfy needs which cannot always be satisfied by short term products, the Distributor has concluded a framework agreement with Hydro-Québec Production (HQP).

Finally, the Distributor has an interruptible electricity option for its large power clientele and a use option on emergency generators. These two measures contribute to demand reliability and make it possible to increase the management flexibility of the Distributor supply, notably to respond to the needs created by very short term climate variances.

For the purposes of the Distributor's 2008 rate case, this request aims to have the supply costs beyond those of the heritage electricity volume recognized. After having presented the results and developments for 2006, as well as a follow-up of the situation in 2007, the Distributor will deal with the following elements for the projected test year 2008.

- supply needs;
- the volume of post-heritage supplies and energy surpluses;

- the cost of post-heritage supplies.

2 RESULTS AND DEVELOPMENTS FOR THE YEAR 2006

2.1 Needs for 2006

The year 2006 was marked by important variances. Needs were 7.7 TWh below those projected in our 2006 rate application, to attain 179.8 TWh. Climate variances alone were responsible for decreasing the needs by 4.5 TWh. This difference is so great that the probability of seeing greater climate variance than this is of only 3.3%.

With respect to demand variances, needs reduction was felt especially on the part of major customers in the industrial sector. In effect, the needs of this sector were 2.3 TWh below the needs projected in the 2006 rate application while the decrease was 0.9 TWh for all other sectors combined.

2.2 Supplies for 2006

In the framework of the 2006 rate application, the Distributor projected that the volume of post-heritage purchases would reach 8.6 TWh.

In subsequent revisions of the demand projections, the Distributor revised its purchase projections downwards. In fact, post-heritage needs in 2006 were only of 0.9 TWh.

In order to satisfy needs for the year 2006, the Distributor made four (4) short term calls to tender. Three of these were made in 2005, and only one in 2006. The Distributor bought 3.7 TWh of post-heritage electricity, distributed as follows:

- 2.2 TWh of commodities,
- 0.9 TWh of commodities with a reduction option,
- 0.6 TWh of bilateral purchases.

In addition to these supplies, needs filled by the framework agreement reached 96 GWh. Finally, of the 178.86 TWh of heritage electricity available to the Distributor, only 1.9 TWh could not be used.

The Distributor used all the flexibility of its supply portfolio to manage real time demand variances, including the resale of 0.9 TWh of already-contracted supplies.

TABLE 1

BALANCE SHEET OF2006 POST-HERITAGE SUPPLIES

In TWh	2006 Rate Application(1)	Real 2006	Variance
Targeted needs	**187,5**	**179,8**	**- 7,7**
Minus: heritage electricity	178,9	176,9	- 1,9
Post-heritage needs	**8,6**	**2,9**	**- 5,7**
Long term supplies	*1,5*	*1,4*	*- 0,1*
Short term supplies	*7,1*	*2,3*	*- 4,7*
Framework agreement	*-*	*0,1*	*+ 0,1*
Energy resale	*-*	*- 0,9*	*- 0,9*

(1) Rate Case R-3579-2005.

2.3 Supply costs for 2006

Prices on North American energy markets decreased considerably at the beginning of 2006 due mainly to above-average seasonal temperatures. Furthermore, the impact of hurricanes in the southern United States on energy prices diminished during the first quarter of 2006.

In its 2006 rate application, the Distributor projected that the cost of post-heritage purchases would attain $754 million. The real cost of supplies was $325 million

for an average post-heritage supply cost for 2006 of 11.4¢/kWh. Table 2 shows the variance between projected and real costs for 2006.

Tableau 2

Cost of post-heritage supplies for 2006

In millions of dollars	2006 Rate Application	Real	Variance
Long term supplies	142,8	107,5	- 35,3
Short term supplies	603,5	252,2	- 351,3
Energy resale	-	- 44,1	- 44,1
Capacity purchases	7,3	9,6	+ 2,3
Total	**753,6**	**325,2**	**- 428,4**

2.4 Indicators

Four indicators allow the Distributor it to follow and analyze its supply activities. These indicators are:

- the average unit cost of post-heritage supplies;
- market prices;
- the success of calls for tender as measured by the number of tenderers;
- the level of use of heritage electricity and recourse to the framework agreement.

Average unit cost of post-heritage supplies and market price:

The average supply cost in 2006 was 11.4¢/kWh. For the sake of comparison, if the Distributor had made all of its purchases as needed on the DAM of Zone M of the NYISO, the average cost would have been 8.1¢/kWh.[1]

[1] This average cost is obtained by adding capacity costs, the cost of wind power integration and the cost of the framework agreement to the average cost of energy on the DAM (7,5 ¢/kWh), in order to make it comparable to the Distributor supply cost.

Two factors explain this variance. On the one hand, the Distributor made part of its purchases for 2006 at the end of 2005. While the purchases contracted by the Distributor reflect the provisions of the market at the time, prices of the different energy markets diminished considerably as of the very beginning of 2006.

On the other hand, given above-average seasonal temperatures, the Distributor had to exercise its option of reducing quantities associated with certain short term contracts. In a context of depreciated prices, the Distributor made up the suppliers' economic loss in order to exercise its option, as stipulated in the contracts for this type of product,

In fact, the Distributor was faced with exactly the opposite situation from that in 2005 when the market prices had steeply accelerated during the hurricane season in the United States. In 2005, the average cost of supplies had been 7.2¢/kWh when the market price indicator was 9.3¢/kWh.

The success of calls for tender as measured by the number of tenderers:

The success of calls for tender demonstrates the capacity of the Distributor to make the different parties enter into competition and to encourage the participation of a maximum number of players in order to benefit from the best prices. It must be recalled that to build up a pool of counterparties, the Distributor signs transaction agreements with them. In 2006, the Distributor had concluded eleven such agreements.

In order to satisfy the needs for 2006, the Distributor made four short term calls for tender in 2005-2006. The small number of offers submitted in 2005-04 can be explained by the difficult context in the energy sector in the fall of 2005 because of the hurricanes.

Table 3
Number of tenderers

# of calls for tender	Date granted	Number of tenderers
CT 2005-01	June 2005	6
CT 2005-02	September 2005	6
CT 2005-04	November 2005	2
CT 2006-01	March 2006	6

The level of use of heritage electricity and recourse to the framework agreement:

Heritage electricity is the least onerous product available to the Distributor. The latter always aims to make maximum use of it. The framework agreement, for its part, allows the supply and demand balance to be kept in real time despite unforeseeable events. For the Distributor, it is a measure of last recourse and the Distributor tries to minimize its use.

In 2006, the Distributor was unable to use a quantity of 1.9 TWh of heritage electricity. This result is attributable to important variations in demand (7.7 TWh), notably climate variance. In addition, climate variance occurred twice: 2 TWh in the first quarter of the year and 2.1 TWh during the last two months of the year.

To maximize the contribution of heritage electricity, the Distributor first proceeded to resell its basic supplies in February and then in the months of October, November and December..

Furthermore, a volume of 96 GWh was acquired by virtue of the framework agreement signed with the Producer. No overflow occurred during the 300 hours in which the price of overflows was $300/MWh.

3 FOLLOW-UP FOR THE YEAR 2007

3.1 Review of the context for the year 2007

When the 2007 rate application was filed in August 2006, the Distributor indicated that energy surpluses would reach 1.8 TWh in 2007. Whereas, starting in December 2006, monitoring by the Distributor indicated a significant decrease in anticipated 2007 needs compared to those projected in the summer of 2006. Closure of the Norsk Hydro plant and the downturn in the pulp and paper sector were a reality. The decrease in Alcan's anticipated needs also contributed to this decrease. All of these elements led to a decrease in needs of 2.1 TWh. Furthermore, from the first days of 2007, considerably higher than average seasonal temperatures led to a decrease in needs of about 1.4 TWh. Thus, as of mid-January, anticipated energy surpluses reached close to 5 TWh, an increase of a little over 3 TWh with respect to those projected in the rate application.

In order to deal with this situation, the Distributer filed an application with the Régie de l'énergie to allow suspension of two long-term supply contracts concluded with Hydro-Québec Production following CT 2002-01.[2] This application aimed at temporarily suspending contracts with the Producer in order to re-establish energy balance.

At the end of February 2007, the Régie rendered its decision and rejected the agreement aiming at the temporary suspension of contracts between Hydro-Québec Distribution and Hydro-Québec Production. The Régie asked that the Distributor instead resell its surpluses on the short term markets. The Distributor has since gone ahead with several resale operations. Section 3.5 goes into more detail on these activities.

[2] Case R-3624-2007.

3.2 Estimate of needs for 2007

The needs of the Distributor for the current year are estimated at this time at 186.3 TWh, or approximately 0.8 TWh less than the projected needs in the 2007 rate application. This estimate of annual needs takes into account the real needs of the Distributor for the first four months of 2007. Over this four month period, the impact of climactic conditions has caused an increase in needs in the order of 1 TWh. In fact, temperatures in the months of February and March were considerably below seasonal averages. Thus, with respect to the 2007 rate application, the decrease in needs coming from a decrease in demand is estimated at 1.8 TWh.

3.3 Post-heritage needs and supplies for 2007

Post-heritage needs currently are at 7.5 TWh in 2007. Given the energy contribution of post-heritage supplies which reach close to 11 TWh, the energy surpluses are estimated at 3.5 TWh, that is 1.7 TWh more than projected in the 2007 rate application. This evaluation of the surpluses takes into account short term purchases made in the winter of 2007 in order to deal with additional needs created by the cold temperatures of February and March, as well as reduced needs. Table 4 shows the different variations by source of supply.

Table 4
Post-heritage needs and supplies for 2007

In TWh	2007 rate application[(1)]	Estimate	Variance
Targeted needs	**187,1**	**186,3**	**- 0,8**
Minus: heritage electricity	178,9	178,8	- 0,07
Post-heritage needs	**8,2**	**7,5**	**- 0,8**
Long term supplies	*9,1*	*9,5*	*+ 0,35*
Short term supplies	*0,9*	*1,5*	*+ 0,55*
Energy resale	*-1,8*	*-3,5*	*- 1,7*

(1) Rate case R-3610-2006.

3.4 Estimate of post-heritage supply cost for 2007

For the current year, the total estimated cost of post-heritage supplies would be $645 million. This amount includes resale revenues which should attain $207 million. The cost of network transmission on the TransÉnergie grid for the transmission rate (point to point) associated with these resales is integrated into the Distributor supply costs.

The average supply cost is estimated at 8.6 ¢/kWh, or slightly higher than that projected in the 2007 rate application (8.1 ¢/kWh). Table 5 shows the main variations in the supply cost for 2007.

Table 5
Post-heritage supply costs for 2007

In millions of dollars	2007 rate application[(1)]	Estimate	Variance
Long term supplies	698,7	676,6	- 22,1
Short term supplies	90,4	140,3	+ 49,9
Energy resale	- 152,4	- 207,1	- 54,7
Capacity purchases	7,9	6,2	- 1,7
Network transmission cost	20,9	29,3	+ 8,4
Total	**665,5**	**645,4**	**- 20,1**

(1) Rate Case R-3610-2006.

3.5 Resale of surpluses on the markets in 2007

Since early March, the Distributor has been energetically reselling its energy surpluses in conformity with the Régie de l'énergie's decision in Case R-3624-2007. In order to do so, the Distributor offers its counterparties the possibility of buying monthly energy blocks according to an approach inspired by that used by short term energy buyers. The Distributor can make these sales either by calls to tender or bilateral transactions. In certain circumstances, the Distributor sells off its surpuses on the DAM (Day Ahead Market) of the NYISO and the ISONE.

The Distributor's resale strategy

To sell off its surpluses, the Distributor has conducted various calls to tender over the course of the year, covering periods from one to six months. By thus diversifying its resale periods, the Distributor attempts to minimize the effects of energy price fluctuations over the course of the year. The calls for tender are done in monthly blocks of 50 MW and the quantities offered vary according to the evolution of the Distributor's needs.

Energy surpluses which did not find any taker when calls to tender were made can be resold to interested counterparties in the course of the month or on the New York or New England Day Ahead Markets. As a last recourse, the Distributor can reduce acquired energy by virtue of the Hydro-Québec Production cyclable contract.

The Distributor has reserved guaranteed monthly point to point transmission on the Transporter network in order to secure its access to the interconnections. Transmission that is reserved in this way can be "re-oriented" as a function of calls to tender results or after a request by a counterparty which has been granted a 50 MW block. Table 6 shows the results of the Distributor's 2007 resale activities.

TABLE 6

SUMMARY OF THE DISTIBUTOR'S RESALE ACTIVITIES

	Année 2007		
	Volume de ventes (TWh)	**Revenus de ventes [1] (M$)**	**Revenu moyen ($/MWh)**
Reventes réalisées *(volumes vendus en mars et avril)*	0,7	41	58,2
Reventes engagées *(volumes déjà contractés pour les mois de mai à septembre)*	1,9	114	61,4
Reventes prévues *(volumes de ventes prévus pour les mois de mai à décembre)*	0,9	52	58,0
Total - Revente d'énergie	**3,5**	**207**	**59,9**

[1] Revenus de revente avant la prise en compte du coût de service de transport point à point.

4 SUPPLY NEEDS FOR 2008

4.1 Energy needs

Energy needs are made up of two factors: the consumption by customers served by the TransÉnergie network together with projected losses on the distribution and transmission networks. The rate of losses taken into account is 7.5%.

With respect to projected sales, projected consumption is the sum of additional internal use, in other words the consumption of electricity by Hydro-Québec buildings and yards, plus projected sales, minus consumption outside of the integrated network.

For 2008, projected energy needs are 185.4 TWh. With respect to standardized needs for 2007 and taking into account February 29, 2008, projected needs for 2008 are slightly lower than 2007 needs. This decrease in demand comes essentially from large corporations making up the industrial sector.

4.2 Capacity needs

Projection of capacity needs is obtained applying hypotheses on consumption characteristics to projected annual energy needs for use (space heating, water heating, other uses) or by consumption sector. These characteristics have to do

with the monthly distribution of energy as well as with monthly ratios of network peak capacity to energy consumed in the month.

The hypotheses on consumption characteristics come from monthly records of the demand for electricity, from measuring consumption profiles, from simulation models of the hourly demand for certain uses and from other relevant indicators, such as the degree-days of heating.[3]

For the 2007-2008 winter peak, capacity needs are for 35 830 MW.

4.3 Post-heritage needs

In 2008, post-heritage supply needs are at 6.5 TWh. As for the Distributor's previous rate cases, supply needs are evaluated according to a scenario which assumes complete use of the heritage electricity volume and no recourse to the framework agreement.[4] The needs for capacity in addition to the heritage electricity volume are for 1 715 MW. These energy and capacity needs are detailed as an annex, in tables A-1 and A-2.

[3] The exercise of forecasting power needs during the winter peak must take into account, in addition to energy needs, the consumption of Hydro-Québec Production plants associated with heritage electricity since this includes the hourly heritage electricity profile as presented in Decree 1277-2001.

[4] Based on a determinist scenario under normal climactic conditions.

5 POST-HERITAGE SUPPLIES FOR 2008

In 2008, almost all post-heritage supplies, or over 10 TWh, will come from long term supplies. The Distributor must, however, manage close to 4 TWh of surplus energy in order to re-establish energy balance. The following sections show the Distributor's supply costs and volumes.

5.1 Energy supplies

In 2008, the Distributor's long term supply contracts will procure 10.4 TWh of energy. This is an increase of close to 1 TWh from 2007, attributable mainly to the contribution of Hydro-Québec Production's two contracts over a twelve-month period instead of over ten months in 2007. Similarly, the wind farm of l'Anse-à-Valleau which is to come into service at the end of September 2007, will contribute additional energy in 2008. Furthermore, the St-Ulric wind farm which was to come into service originally in December 2007 was put off until the fall of 2008.

Uncertainty surrounding the evolution of demand could bring the Distributor to revise its planning over the course of the year, but additional needs would, above all, reduce energy surpluses. The energy contribution of each of the Distributor's supply sources is shown in Table 7.

TABLE 7
POST-HERITAGE ENERGY SUPPLY VOLUME FOR 2008

PRODUITS	Quantités
	TWh
LONG TERME	**10,380**
TCE	**4,075**
HQP	**5,270**
Base	3,074
Cyclable	2,196
Bowater	**0,147**
Kruger	**0,133**
Tembec	**0,003**
Éolien 1 (990 MW)	**0,751**
Baie-des-Sables	0,337
Anse-à-Valleau	0,309
St-Ulric	0,077
Carleton	0,029
Intégration éolienne	**-**
COURT TERME	
À ENGAGER	
Très court terme	0,034
Revente	-3,922
Puissance	-
TOTAL	**6,492**

5.2 Energy surpluses

For 2008, energy surpluses are estimated at 3.9 TWh. As in the 2007 rate application, the Distributor based its planning on the scenario that surpluses would be resold on the short term market. Given the 2007 experience on resale markets and the large volumes which will be traded on short term markets in 2008, the Distributor considers it prudent to accept a market signal which includes a disparity of approximately $3 US/MWh with respect to reference term

prices for resale.[5] Over the next few months, the Distributor will continue to explore different avenues allowing it to optimize its supply portfolio in order to re-establish the energy balance.

5.3 Capacity supplies

For the 2007-2008 winter season, post-heritage capacity needs will largely be filled by Distributor long term contracts for 1 257 MW. This is an additional capacity contribution of 650 MW from these long term contracts as compared to the winter of 2006-2007. This increase is essentially explained by the winter contribution of Hydro-Québec Production contracts (600 MW). The capacity contribution of wind farms is ensured by the wind power integration agreement concluded with Hydro-Québec Production. The capacity contribution of long term contracts and other means is shown in Table 8.

[5] The reference price for resale is based on the NY market of Zone M. This price is established from term prices on the NY market of Zone A, plus a basis between Zones A and M.

TABLE 8
POST-HERITAGE POWER SUPPLIES
WINTER 2007-2008

PRODUITS	Quantités
	MW
CONTRATS DE LONG TERME	**1 257**
TCE	**547**
HQP	**600**
Base	350
Cyclable	250
Bowater	**20**
Kruger	**16**
Tembec	**0**
Intégration éolienne	**74**
AUTRES MOYENS	**775**
Électricité interruptible	**525**
Abaissement de tension	**250**
TOTAL	**2 032**

The Distibutor will rely on the option of interruptible electricity and the lowering of voltage to cover the remaining portion of its capacity needs. With respect to the interruptible electicity option, the Distributor accepts a comparable subscription level to that of the 2006-2007 winter season.[6] Last winter, signed contracts came to a total of approximately 750 MW in capacity. Definite quantities for the winter of 2007-2008 will only be known after the subscription deadline, i.e. after September 1, 2007. For the 2007-2008 winter season no power purchase is required on short term markets.

[6] Given the constraints linked to the use of interruptible electricity, a reserve of 30 % is applied to available quantities in order to determine the effective contribution of this means in the Distributor's power assessment.

5.4 Cost of post-heritage supplies for 2008

A total supply cost of post-heritage electricity of $556.4 million is projected for 2008, which corresponds to an average cost of 8.6¢/kWh. This amount includes projected costs for the interruptible electricity option. Table 9 shows the annual costs of post-heritage supplies.

The cost of long term supplies reflects the modalities projected in the contracts signed by the Distributor. For 2008, this cost should reach $767 million for an average cost of 7.4 ¢/kWh.

The evaluation of short term supply costs and resale revenues is based on forward prices on the energy markets as of April 30, 2007. According to this approach, resale revenues are estimated at $251 million in 2008 for an average sale price of 6.4 ¢/kWh.

TABLE 9
VOLUME AND COST OF POST-HERITAGE SUPPLIES FOR 2008

PRODUITS	Quantités	Coûts d'achat	Coûts unitaires
	TWh	M$	¢/kWh
LONG TERME	**10,380**	**767,0**	**7,4**
COURT TERME			
À ENGAGER			
Très court terme	0,034	3,0	8,7
Revente	-3,922	-250,7	6,4
Puissance	-	5,3	-
SERVICE DE TRANPORT		31,8	8,1
TOTAL	**6,492**	**556,4**	**8,6**

5.5 Risk management

In 2008, the Distributor will continue to manage its exchange risk on short term transactions with a definite disbursement or cash inflow. In the current supply

context, the Distributor will hedge the exchange rate on resale transactions in US dollars which will be the object of a contract.

ANNEX

TABLE A-1

PROJECTED ENERGY NEEDS FOR 2008

		TWh
PRÉVISION DES VENTES		**172,3**
plus	Usage interne	0,5
moins	Consommation hors réseau intégré	0,4
Consommation prévue		172,4
plus	Pertes de distribution et de transport	12,9
BESOINS PRÉVUS		**185,4**
moins	Électricité patrimoniale	178,9
BESOINS POSTPATRIMONIAUX		**6,5**

TABLE A-2
PROJECTED POWER NEEDS FOR THE 2007-2008 PEAK

		MW
BESOINS PAR USAGE		
Chauffage domestique et agricole		10 417
Chauffage général et institutionnel		3 348
Eau chaude domestique et agricole		1 574
Industriel - PME		1 471
Industriel - Grandes entreprises		7 796
Autres usages		11 224
BESOINS PRÉVUS		**35 830**
plus	Réserve requise	3 327
	Taux de réserve	*9,3%*
moins	Électricité patrimoniale *(incluant la réserve)*	37 442
BESOINS POSTPATRIMONIAUX		**1 715**