PROPOSAL FOR ELECTRICITY RATES AND THEIR TERMS AND CONDITIONS

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1. REQUEST SUMMARY

The Hydro-Quebec Distribution (the "Distributor") current rates are described in the document "Distributor's Rates, Terms and Conditions, Effective April 1, 2005" (the "Rates"), approved on March 23, 2005 [1] by the Régie de l'énergie (the "Régie") in its Decision D-2005-48. That Decision was followed by Decision D-2005-342.

In the present request we apply for year 2006-2007 rates, as well as resulting modifications in the rates description.

1.1. Cross-subsidization

The 4th paragraph of Section 52.1 of the Régie Act (the "Act") stipulates that The Régie cannot make modification to the customer rates that would result in cross-subsidization between different customer categories. As it was directed by the Régie in its Decisions D-2003-232 and D-2004-47, and as it will again appear in Section 4.2, the uniform rates increased as proposed by the Distributor will not create cross-subsidization between the customer categories.

1.2. Rate Structure Proposal

In its Decision D-2005-34, the Régie described the principle, according to which the Distributor's electricity rates structure has to reflect the costs of service. The Régie requested that for the future rate reviews the Distributor present an update of the adequacy of rate structure and costs and examine which rate components cause the rate increase. There is no major element that would justify the adjustment of 2006-2007 Distributor's orientations concerning the rate structure compared to 2005-2006 rates.

[1] Decision on to the approval of the Distributor's transmission rates effective April 1, 2005.

That is why the Distributor adheres to the already accepted adjustments by the Régie in its Decision D-2005-34, while amending the justification of its proposal and guidance in Section 3.

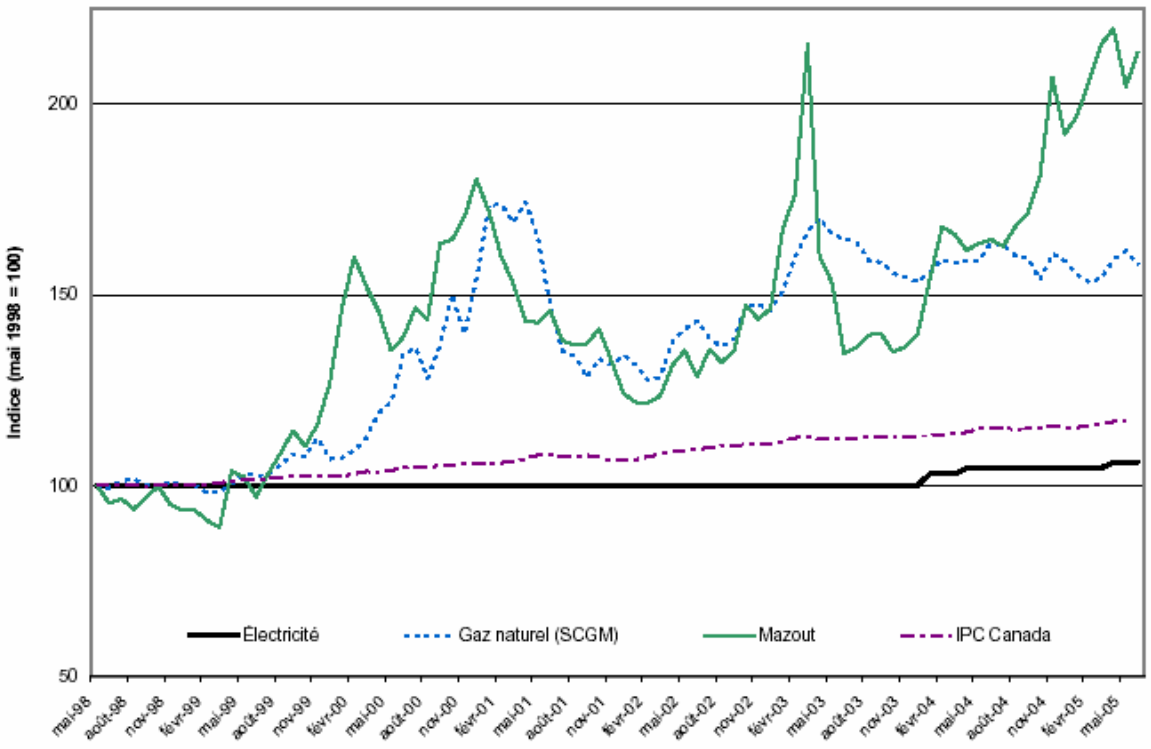
1.3. Electricity Rate Development, Inflation and Fuel Prices

After more than a five year rate freeze, the Régie authorized the Distributor to raise its rates in 2004. Since the consumer price index increased by 17 % between 1998 and 2005, while the Distributor's rates rose by only 5.7 % during the same period, rate payers in Quebec pay, in constant dollars, less for electricity today than seven years ago.

Moreover, as Figure 1 shows, the Distributor's customers benefited from electricity price stability during the period when fuel oil and natural gas prices experienced growth and a great volatility. Thus, between May 1, 1998 and on April 1, 2005, the energy bill for an average house of 158 m^2, heated by electricity, grew by 6 % whereas the bill for the same house, heated by fuel oil or natural gas, increased respectively by 120 % and 59 %.

[2] Request for electricity rates for the rate year 2005-2006.

FIGURE 1
CROISSANCE DES COÛTS D'ÉNERGIE POUR LE CHAUFFAGE DES LOCAUX
MAISON UNIFAMILIALE MOYENNE À MONTRÉAL



2. RATE STRATEGY

2.1 Rate principles

The Distributor can recoup the revenue authorized by the Régie via an infinite amount of rate structures going from flat rates for all customers (authorized revenues /sales in kWh) to various special rates, each comprising some fixed and variable components. Choices among number of rates, type of structure and level of each component should be done according to the principles, which follow.

2.1.1 To reflect the Cost of Service Structure

The rates constitute a signal, which makes it possible for the customer to be informed of the costs incurred. The design of various rates reflects the cost of service by their fixed and variable components, which translates into different cost of service characteristics for various rate categories. It also allows to similarly treat the customers who show similar consumption characteristics.

From a rate point of view, the cost of services is expressed by using capacity, energy and subscription charge.

Invoicing for capacity usually allows to recover the costs of equipment required to meet the demand during the on peak periods.

Even in the absence of any consumption in kWh, this equipment and services must be maintained and consequently invoiced for. Thus, the cost of the transmission and distribution network associated with each rate category is fixed since it relates to its availability during peak hours. Hence, it should be recovered via the capacity rate component.

Certain expenses depend on the quantity of delivered energy. They represent variable charges, which are normally recovered in the energy component of the rates. It is based on the cost of supply for each rate category, which is presented in ¢/kWh. It should be noted however that even though this expense is included in the energy rate component, it nevertheless reflects the use of peak power for each rate category since the allocation of this cost component is in particular done on the basis of the load factor.

Other expenses are related, most of all, to the number of served customers regardless of their consumption level. These expenses, such as cost of metering, switching and invoicing, are usually recovered by a subscription charge whenever they are significant.

2.1.2 To give a Price Signal promoting the Energy Effectiveness

To guarantee the optimal use of resources, the economic theory suggests that the price of goods is set at marginal cost[3], i.e. the cost associated with the production of an additional unit of this product. However, in Quebec, like elsewhere, the average costs are used to establish the basic block of electricity rates.

In the absence of a mechanism for setting rates at marginal cost, it is however possible to introduce good economic and energy choices in the rate structure signal, which reflects marginal costs. It is not to use marginal cost to set the rates but rather to use the marginal cost and its intrinsic structure (the costs of energy and capacity) as an indicator of the changes to be brought to the rate structure over a long-term horizon.

The price signal of long-term marginal cost will have a larger effect over customer behavior when applied to the most flexible components of the structure[4]. Thus, rate can encourage the consumers to make a rational use of electricity by being informed of their behavior impact over the Distributor's costs.

Marginal costs used in the present rate case are the same ones as those presented in case R-3552-2004, Phase II of application for approval of 2005 Budget of the Energy Efficiency Global Plan[5]. Taking into account that there were no significant variations in the Distributor's resource portfolio since Fall 2004 and considering that the marginal costs used in this document are indicators of a long-term trend

[3] In general, in electric industry, long-term marginal costs are used for design of the basic rates whereas short-term marginal costs are mostly used for the design of optional rates for managing short-term demand.
[4] Components, which customers perceive as price signal.
[5] Hqd-3, Document 1 of case R-3552-2004.

rather than a particular target, these costs remain valid with regard to the price signal.

2.1.3. Rate Simplicity, Equity, Continuity and Stability

A simplicity principle must generally guide the rate design. Simplicity means, on the one hand, to avoid rate multiplier or customized rates and, on the other hand, to develop rates that are easy to understand and apply. It is also for reasons of simplicity that the Distributor does not charge the residential customers for capacity component with a demand of less than 50 kW and the small customers (rate G) with a demand of less than 45 kW[6].

Rate simplicity must observe the principle of equity between the rate categories or the a rate category customers. Indeed, although the same rate category customers have many similarities in their consumption profile, their location on distribution network, along with the type of services used, they nevertheless represent a great diversity of costs. Since all customers of the same rate category are invoiced according to the same rate principle, some of them will pay more than their costs whereas others pay less. Equity within a rate category is guaranteed when, for the sub-groups of customers who form the same rate category, the difference between costs and benefits is reasonable.

Taking into account this cross-subsidization, the modification of a structure, although realized with constant revenue, will theoretically imply that certain customers will have their bill increased while others will see their bill decreased. In practical terms, since the adjustments of structure are carried out within the framework

[6]On April 1, 2006, the minimum limit of the capacity charge for rate G will be increased to 50 kW (see Section 3).

of rate increase requests, the "increase" associated with the modification of structure will be added to the regular rate increase, thus certain customers will see higher increase than the average. This cumulative effect must be taken into account to determine the period needed to reach the desired structure.

Continuity between rates makes it possible to establish equity between the rate categories. By respecting this principle, the rate structure encourages the customers to naturally choose the rate, which corresponds to their level of consumption and their maximum capacity demand utilization period.

The structure, as described above, should ensure the rate stability. The adjustments to the rate structure should be made in a progressive way and, in certain circumstances, such as the fine management of the peak, it is preferable to rely on rate options rather than disrupting the basic rate in order to respect the consumers right of choice and to account for their ability to modify load profiles.

2.2 Variation between required and expected Revenues for 2006

Taking into account the current rates and required revenue attributable to the application of rates on April 1 rather than January 1, 2006, the Distributor expects a loss of earnings of $463 M [7] for year 2006.

2.3 Proposed Rate increase

The Distributor's loss of earnings would make it possible to justify a request for rate increase of 5,3 % for the rate year 2006-2007. In order to reduce the impact from this increase on its customers, the Distributor rather requests of the Régie to approve a total rate increase of 3 % effective April 1, 2006[8], according to prices

[7] Including the regulatory provision of 31 M$ in 2005.
[8] See Hqd-4, Document 5.

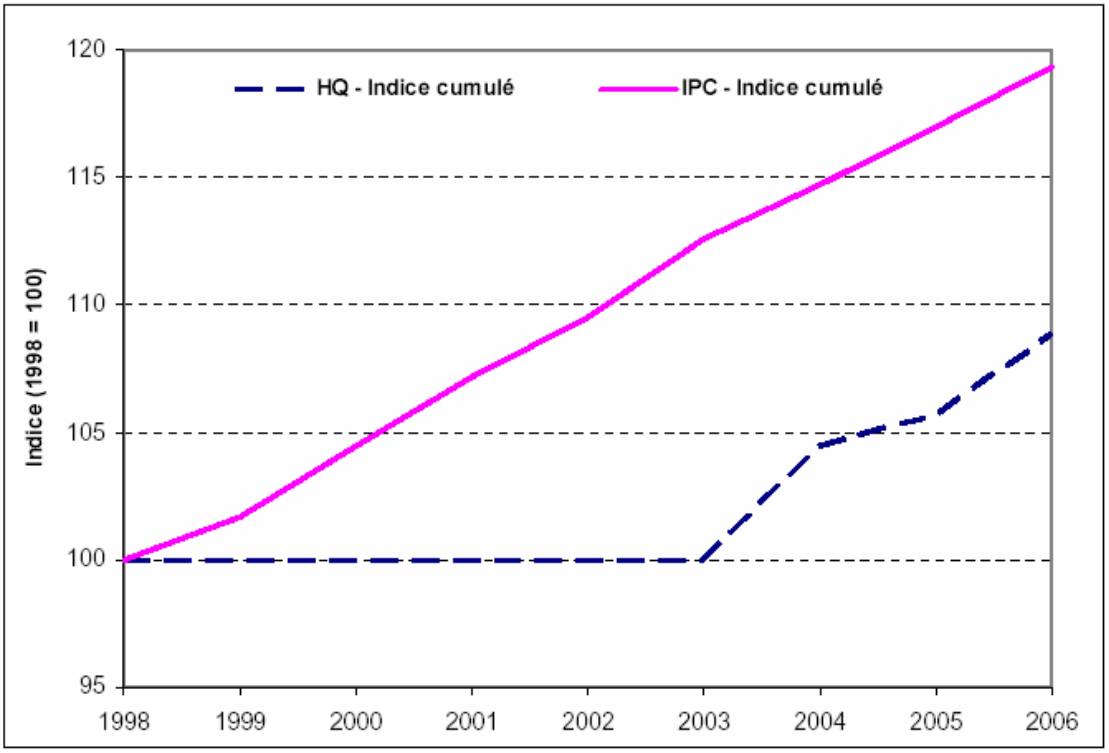
proposed in HQD-13, Document 3 of Evidence. This increase will make it possible to generate additional revenue of $260 M including $180 M from April 1 to December 31, 2006 and $79 M from the regulatory provision (see HQD-1, Document 1).

This rate increase equally applies to fees for managing consumption and emergency energy which prices were, historically and equity wise, adjusted according to the increase in flat rates (the case of rate GD) or, for the more recent rates, according to an agreement with the Producer (rate LD). The prices of certain rate options, in particular rate LP and the new option of additional electricity (see Section 6), however will be set according to the market price.

Figure 2 shows the evolution, between 1998 and 2006, of Consumer Price Index and the Distributor rates, including the proposed increase. The expected rate of inflation for 2006 is 2,0 %[9], which means that with the requested increase of 3 %, the customers will experience a real increase of 1 % on average. The real profits accumulated by the customers since 1998 thus are substantially maintained.

[9] Forecasts of May 2005. Source: Direction of Financial Markets – Treasury of the Company.

FIGURE 2
ÉVOLUTION DES TARIFS D'ÉLECTRICITÉ ET DES PRIX À LA CONSOMMATION



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3. PROPOSED STRUCTURE

3.1 Residential Rates

3.1.1 Rates and Customers Description

3.1.1.1 D and DM Rates

The D and DM Rates apply to subscription for which electricity is of residential use i.e. for the exclusive purpose of residential housing, except for the cases presented in Rates Description. The electricity delivered to farms and ranches is also supplied under rate D.

The D Rate applies to housing, where electricity is metered separately. Thus, for residential buildings with multiple residences, the D rate is applied when the consumption of each household is metered separately.

The structure of the D rate, presented in Table 1, consists of basic charge (40.64 ¢/day) and two increasing prices for the load usage, that is a lower price for the first 30 kWh per day (5.02 ¢/kWh), and the exceeding consumption invoiced at a higher price (6.33 ¢/kWh). During the winter season, if the maximum load exceeds 50 kW, the surplus is invoiced at the monthly charge of 3.96 $/kW.

Table 1

Rate D effective 1st April, 2005

Basic charge	40.64 ¢/ day
First 30 kWh/ day	5.02 ¢/kWh
The remainder of energy	6.33 ¢/kWh
Winter capacity charge (excess of 50 kW)	3.96 $/kW

The DM Rate is similar to the D Rate but adapted to collective metering (see Table 2). It applies to a subscription under which the delivered electricity is intended for an apartment building of collective living or a community residence consisting of rooms using collective metering.

The characteristic of the DM Rate is the application of a multiplier in relation with the number of residences, calculation of fixed charge, and the threshold of the first level of consumption.

The multiplier corresponds:

- for an apartment building of collective living or a community residence consisting of rooms: to the number of appartments
- for a community residence consisting of rooms or apartments: to the number of rooms or appartments in the community residence plus
  - 1 for the first 9 rooms (apartments) or less, plus
  - 1 for each additional room or appartment.

The charge for the first and the second group is 5.02 ¢ / kWh and 6.33 ¢ / kWh respectively. During winter, when the maximum power consumption exceeds 50 kW, the surplus is invoiced at the monthly price of 0.99 $/kW.

Table 2

Rate DM effective 1st April 2005

Basic charge	40.64 ¢/ day X multiplier
First 30 kWh/ day x multiplier	5.02 ¢/kWh
The remainder of energy	6.33 ¢/kWh
Winter power premium (excess of 50 kW)	0.99 $/kW

As one can see from Table 3, a total of 2 747 381 subscriptions of D and DM rates were used for analysis purposes for the period from May 1, 2004 until April 30, 2005. Consumption and revenues associated with these subscriptions amount to 49 TWh and $3.2 billion as per the April 1, 2005 rates. Out of all the subscriptions, only 5600 were billed a winter power premium.

Two thirds of the residential customers had an all electricity heating (AEH) system; the other third uses a different heating system (not AEH)[10], for example with natural gas, fuel oil, wood or mixed. More than 43,000 subscribed farms involved into cattle breeding and agriculture are eligible for D rate.

[10] DT Rate residential customers are discussed in the following section.

Table 3

Description of D and DM Residential Customers Rates

(2004-2005)

	Subscribers	Yearly consumption (GWh)	Total revenue (M$)
Residential Customers			
All electricity heating	1 830 930	36 580	2 369
Without invoiced capacity	1 827 173	34 951	2 261
With invoiced capacity	3 757	1 628	108
Other types of heating	873 088	10 465	712
Without invoiced capacity	872 301	10 078	686
With invoiced capacity	787	387	26
Total residential customers	2 704 018	47 044	3 080
Agricultural Customers			
Without invoiced capacity	42 309	1 399	90
With invoiced capacity	1 054	259	17
Total agricultural customers	43 363	1 658	107
Total Residential Customers			
Without invoiced power	2 741 783	46 428	3 037
With invoiced power	5 598	2 274	151
Total residential customers	2 747 381	48 702	3 187

Table 4 presents the monthly invoices of the customers of D Rate for the period between May 1, 2004 and April 30, 2005. During this period, the average yearly consumption of D rate was 17 050 kWh and the average monthly invoice amounted to $93. With a consumption of 26 500 kWh per year, the average one-family electricity heated house had a monthly invoice of $140.

Table 4

Average Monthly Invoices for Rate D Customers

	Average annual consumption[1] (kWh)	Average monthly invoice ($)
All customers of rate D	17 050	93
Heated with electricity	19 300	104
Not heated with electricity	12 400	70
Average one-family house heated with electricity (158 m²)	26 500	140

Note 1: rounded consumption amount.

3.1.1.2 DT Rate

The DT Rate is an optional residential rate, which applies to any acceptable customer invoiced by D or DM rates that uses, mainly for dwelling, a Bi-energy system.

In addition to the basic charge of 40.64¢ per day, the DT rate includes two charges for energy according to the outside temperature: 3.67 ¢ / kWh when the temperature is equal or higher than -12 ° C or -15 ° C, depending on the climatic zones, and 16.46 ¢ / kWh when the temperature is below -12 ° C or -15 ° C (see Table 5 for the price structure and Table 6 for the zones where the rate transfer temperature is -15° C). In winter, when the maximum capacity exceeds 50 kW, the surplus is invoiced at the monthly price of 0.99 $/kW when metered collectively and 3,96 $/kW in other cases.

Table 5

DT Rate effective as of April 1st, 2005

Basic Charge	40.64 ¢/ day
Charge for off-peak energy	3.67 ¢/kWh
Charge for on-peak energy	16.46 ¢/kWh
Winter power premium over the surplus of 50 kW	
Building with collective metering	0.99 $/kW
Other cases	3.96 $/kW

The price of off-peak energy is adjusted in order to maintain competitive advantage relative to fuel oil. Currently, the customer may find it beneficial to use electricity during the off-peak hours as long as the price of fuel oil is above 27.7 ¢ / liter. [11]

Table 6

Zones where the DT Rate Transfer Temperature is -15° C

Noroît (Rouyn-Noranda, Valley-d'Or, LG-2/Nemiscau)
The north of Lanaudière area
High Lanaudière
High Mauricie
St-Féréol-des Neiges on Saguenay river
Saguenay
North Coast
Madeleine Island
The Low St-Laurent and Gaspésie [1]
Note 1: Except municipalities bordering (direct access) river or to the Bay-des-Chaleurs, from St-Fabien to Cascapédia river.

The on-peak price also applies to the overall consumption. This price is set to obtain neutrality between the DT and D Rates, for

[11] The average price for fuel oil was 60 ¢ / liter during the heating season of 2004-2005 (Source: The Régie).

an average one-family house and one year at normal temperature, when the customer uses only electricity for heating. It is sufficiently dissuasive to encourage customer to use an alternative source of energy for heating and to shift certain base loads.

In order for customer to find it beneficial to consume on-peak electricity, the price of fuel oil has to be higher than 1.24 $/liter. For one year at normal temperature, the DT rate may result in savings to customers of about 5% to 15 % compared to D rate, depending on their consumption management efforts.

DT Rate gathers approximately 119 000 subscriptions, of which 103 126 were retained for analysis during the May 1, 2004 and April 30, 2005 period. These subscriptions generated sales of 2.2 TWh and revenue of $114 M.

3.1.2 Framework of Analysis and proposed Structure

In its Decision D-2005-34, the Régie required the Distributor to present an adequacy analysis for the rate structure and costs while proposing which rate components the next rate increase should be included. This is in fact the regular justification exercise of a rate structure that the Distributor hereafter presents. This exercise includes the elements of the residential rate structure that already were the subject of the Régie's decision: freezing of basic charge, increase in capacity charge for the D and DM rates as well as introduction of a capacity charge for DT rate. The Distributor proposes to the Régie to continue using these trends for the rate year 2006-2007.

Beyond these elements, the Régie required, in the same decision, to specify the rate modifications necessary to improve the price signal, and this, when the cost allocation method will be better decided. Although the cost allocation method can have an effect on the allocated cost size for each rate category, the Distributor

mentions that regarding the price signal associated with a rate structure, and according to best practices in the matter of pricing, the focus must also shift towards marginal costs.

3.1.2.1 Basic Charge

Basic charge, expressed in ¢/day, is the fixed component of residential rates (D, DM, DT and DH). In its Evidence R-3541-2004, the Distributor demonstrated that the block of basic charge covers expenses of the customer service and metering, which were established at 35 ¢ / day. These costs are related, above all, to the number of served customers and do not vary with energy consumption.

In its decision D-2005- 34, the Régie opted to freeze the basic charge for residential rates. The Distributor requests that the Régie renew this rate freezing for the rate year 2006-2007. This proposal initially shows, for the price signal, the fact that basic charge is an inflexible part of the rate structure. This proposal is also justified by the fact that the cost of customer service has historically been very stable and established on a level similar to year 2006.

3.1.2.2 First Block Threshold

Conceptually, the firstblock covers the basic usage (lighting, electric household appliances, water heater) whereas the second b lock covers the other uses, one of which is heating. The threshold of 30 kWh per day translates correctly this distinction. The average daily consumption of customers without all electricity heating system is around 28 kWh per day on an annual basis.

3.1.2.3. Variation in the Energy Blocks

The prices of the two energy blocks are currently 5.02 ¢ / kWh for the first 30 kWh per day and 6.33 ¢ / kWh for the remaining kWh.

So the current difference between the energy blocks is 26 %.

In rate application Evidence 2005-2 006[12], the Distributor demonstrated that, on the basis of average costs differential[13] between the basic usage and other uses, the price difference between the first and the second D and DM rate blocks could be set at 34 % minimum and 50 % maximum.

The Distributor justification of the difference between blocks of energy, such as it appears in HQD-13, Document 1 of case R-3541-2004, always stays the same. The Distributor adds however to its justification the marginal cost signal.

Indeed, as mentioned in Section 2.1.2, a price set according to the long-term marginal cost ensures the optimal use of resources. The customer can then act according to the price signal on the most flexible part of his/her consumption.

The price of the residential rates second block of energy and consequently the difference between the two blocks of energy, is the most significant leverage available to the Distributor to encourage the effective behavior of its residential customers. Indeed, it is more difficult to decrease consumption for the basic usage (consumption of the first block).

On the other hand, the second block of energy is a more flexible component of the structure of D rate because it entails more possibilities for the customer to reduce consumption beyond the basic usage. The more the price of the second block increases, the more the customer will be inclined to reduce his/her consumption.

The Distributor does not suppose that the residential customer knows specifically the structure of D rate. On the other hand, the amount of customer's electricity bill depends on this structure.

[12] R-3541-2004, Hqd-1, Document 2, pages 14 -17.
[13] Or required revenue.

When, under the influence of a rate increase, the customer sees higher electricity bill, he/she will normally seek to consider actions that will contribute to his/her consumption reduction[14]. As mentioned earlier, when a price signal and energy choices are at stake, the price of the first block has less impact on consumption than the price of the second block. Since the revenues are constant, the price of the first block and the price of the second block are dependent and simultaneously determined, the rate exercise thus consists in determining the right price for each block, price which will support the smart energy choices while taking into account other rate principles.

Table 7 presents marginal costs associated with D rate. Thus, to encourage energy efficiency and to align the structure of residential rate on a long-term horizon, the price of the second block could reflect the marginal cost of heating. This cost is estimated at 8.56 ¢ / kWh [15](constant annuity over 10 years). By 2014, the marginal cost of heating increases to 9.60 ¢ / kWh. These costs are much higher than the current energy blocks prices.

[14]For example, to choose more efficient appliances and to replace windows.
[15]R-3552-2004, Hqd-3, Document 1,pp. 39 - 43.

Table 7

Costs avoided by rate D users

(R-3552-2004)

(in ¢/ kWh)										
Constant annuity 1 (10 years)		**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Water Heating	**8,06**	**8,44**	**7,27**	**7,42**	**7,56**	**7,71**	**7,87**	**8,52**	**8,69**	**8,87**	**9,04**
Supply and Transmission	7,50	7,92	6,74	6,88	7,01	7,15	7,30	7,94	8,10	8,26	8,42
Transmission - Local load	0,31	0,28	0,29	0,29	0,30	0,31	0,31	0,32	0,32	0,33	0,34
Distribution	0,26	0,24	0,24	0,25	0,25	0,26	0,26	0,27	0,27	0,28	0,26
Space Heating	**8,56**	**8,90**	**7,74**	**7,90**	**8,06**	**8,22**	**8,38**	**9,04**	**9,23**	**9,41**	**9,60**
Supply and Transmission	7,36	7,79	6,61	6,75	6,88	7,02	7,16	7,80	7,95	8,11	8,28
Transmission - Local load	0,65	0,60	0,62	0,63	0,64	0,65	0,67	0,68	0,69	0,71	0,72
Distribution	0,55	0,51	0,51	0,52	0,54	0,55	0,56	0,57	0,58	0,59	0,60
All uses	**8,19**	**8,56**	**7,40**	**7,54**	**7,70**	**7,85**	**8,01**	**8,66**	**8,83**	**9,01**	**9,19**
Supply and Transmission	7,42	7,84	6,66	6,80	6,93	7,07	7,21	7,85	8,01	8,19	8,33
Transmission - Local load	0,42	0,39	0,40	0,41	0,41	0,42	0,43	0,44	0,45	0,46	0,47
Distribution	0,35	0,33	0,33	0,34	0,35	0,35	0,36	0,37	0,38	0,38	0,39

[1] the nominal actualization rate is 6,75%

Without seeking to reach these prices level, the Distributor proposes to better reflect them. Since the increase of the first block does not or only slightly modifies the behavior of residential customers regarding the energy choices, the Distributor proposes rather to make a higher increase over the second block.

The cost of heating with an alternative source of energy can also be used as a signal to evaluate the possible trend for the second block price. As an indication, the cost in kWh-equivalent of heating with natural gas is 6.83 ¢ / kWh[16]. With the addition of operation and maintenance costs of natural gas system compared to electric, the price in kWh-equivalent became 10.45 ¢ / kWh.

Taking into account the cost difference between the basic usage and other uses (about 34 to 50 %), the price of fuels, especially with the marginal cost signal, there is some leeway to increase D rate second block more so than the first one. The Distributor thus proposes for year 2006 to increase the price for the second block

[16] Considering 80 % efficient natural gas heating system.

twice as much as the price for the first block in order to improve the price signal while limiting the rate impact on the customers.

This approach also applies to DT rate with regard to the charge for power consumption when the temperature is equal or higher than -12 °C or -15 °C. Indeed, this charge can be increased more to give a better price signal for all uses, while preserving the annual savings realized by the customer and without attenuating its interest to use fuel during the cold weather.

3.1.2.4 Capacity Charge

With regard to the capacity charge, the Distributor proposes to continue, for residential rates, adjustments introduced in 2005-2006 by increasing the charge to 0.75 $/kW for rates with individual metering and 0.18 $/kW for those with collective metering.

3.1.2.5 Rate Structure

The structure proposed for D rate, effective on April 1, 2006, including a total increase of 3 %, is shown in the table below. By taking into account the basic charge freeze and considering the factors described in Section 3.1 2.3, the charge for the second block is increased by 4.4 %, that is to say twice as much as the charge for the first block.

Table 8

Rate Increase and Selected Scenario – Rate D

Basic Charge	40.64 ¢/day
The first 30 kWh/day	5.13 ¢/kWh
The remainder of energy	6.61 ¢/kWh
Winter Power Premium (excess of 50 kW)	4.71 $/kW

3.2 Flat Rates

3.2.1 Description of Rates and Customers

3.2.1.1 L Rate

The L rate is developed for a large power consumption customers of at least 5 000 kW or more. It is set at low voltage. Thus, the supply credit for medium or high voltage is granted so as to not reflect on customers supplied at higher voltage, the higher costs of the networks of low voltage.

Table 9

L rate effective as of 1st April 2005

Capacity Charge	11.52 $/kW
Energy Charge	2.56 ¢/kWh
Premium for excess (winter season) daily	6.75 $/kW
monthly limit	20.25 $/kW

The data on 230 subscriptions from May 1, 2004 to April 30, 2005, were retained for the L rate analysis. The annual consumption adds up to 44 366 GWh with an annual revenue of $1 850 M. Table 10 presents a summary description of L rate customers.

Table 10

Description of rate L customers –2004-2005

	Subscriptions	Annual Consumption (GWh)	Total Revenues (M$)
Commercial	36	1 844	87
Industrial	152	36 969	1 505
Institutional	26	1 435	69
Municipal Systems	16	4 118	188
Total	230	44 366	1 850

3.2.1.2 M Rate

The M rate is developed for medium power consumption customers of at least 100 kW but less than 5 000 kW. Just like the L rate, it is set at low voltage, so that customers supplied at a higher voltage are entitled to a credit for supply at medium or high voltage.

Table 11

Rate M effective 1st April 2005

Capacity Charge	12,60 $/kW
Energy Charge	
for the first 210 000 kWh	3.94 ¢/kWh
for the remainder of energy	2.56 ¢/kWh
Premium for excess (winter season)	13.50 $/kW

The data on 12 098 subscriptions from May 1, 2004 to April 30, 2005, were retained for the M rate analysis.

A M rate customer consumes on average 2 GWh, but nearly 75 % of these customers never consume the second block of energy. More than a half of M rate customers are commercial (57 %); however, the M rate includes also industrial customers (25 %) and institutional (18 %) in a rather large proportion. The residential and agricultural customers are not noticeably part of this rate[17].

Table 12 shows the subscribers distribution outline, consumption and revenues at the M rate, by activity sector for the period from May 1, 2004 to April 30, 2005.

Table 12

Description of M Rate Customers [1] – 2004-2005

	Subscriptions	Yearly consumption (GWh)	Total revenues (M$)
Agricultural	32	36	3
Commercial	6 845	11 751	762
Industrial	2 992	9 203	583
Service	2 198	3 909	264
Residential	31	70	4
Total	12 098	24 969	1 615

Note 1: Including 22 short duration subscriptions to M rate, consuming 10 GWh and generating $0.8 M of revenues.

3.2.1.3 G Rate

The G rate is developed for small power consumption customers of less than 100 kW. Just like the L and M rates, it is set at low voltage, so that the customers supplied at a higher voltage are entitled to a credit for supply at medium or high voltage.

[17] Mainly, residential buildings and agricultural customers are not eligible for D rate.

Table 13

Rate G effective 1st April 2005

Basic Charge	12.33 $/ month
Premium for power exceeding 45 kW	14.0 $/kW
Energy Charge	
for the first 13 200 kWh	7.86 ¢/kWh
for the remainder of energy	3.96 ¢/kWh

The G rate collects nearly 250 000 subscriptions, but the reference data for year 2004-2005 only gather 221 093 of them, because of the relative instability of these subscriptions[18]. Such subscriptions represent a total revenue of $ 909M and a consumption of 11 214 GWh. This rate is essentially developed for commercial customers (89 % of subscriptions), but also institutional (8 %) and industrial (3 %). The agricultural and residential customers are marginally represented. Average consumption of rate G customers was approximately 51 MWh during the observed period.

The G rate structure allows for the division of customers into two groups with quite different characteristics: the customers who pay the capacity charge (with billable power exceeding 45 kW) and the customers who do not pay it. Table 14 shows, for the period from May 1, 2004 to April 30, 2005, the distribution of these subscriptions, consumption in kWh and revenues by type of customers; the table separately shows the data for customers who are billed for capacity.

[18] Indeed, most of them are small commercial buildings whose activity is more unstable and less foreseeable than that of companies under rates M and L or residential customers. It is common for this type of buildings to remain unoccupied for long periods after closing. If necessary, these subscriptions become inactive in the billing system or allowed for incomplete consumption profiles, which could not be retained for analysis.

Table 14

Description of G Rate Customers[1] –2004-2005

	Subscriptions		Yearly consumption (GWh)		Total revenues (M$)	
	Total	With billable power	Total	With billable power	Total	With billable power
Agricultural	310	47	19	10	2	1
Commercial	195 754	17 533	9 564	3 849	773	300
Industrial	6 774	1 341	493	293	41	25
Institutional	17 787	3 230	1 108	652	91	54
Residential	468	59	30	14	2	1
Total	221 093	22 210	11 214	4 818	909	380

Note 1: Including 3 489 subscriptions to rate G of short duration, consuming 42 GWh and generating $4 M of revenues.

In spite of being few, the customers with billable power have a significant weight on the consumption level and revenue. Indeed, if these customers represent only 10 % of the total subscriptions, they generate 42 % of revenues, with consumption of 4 818 GWh, that is to say 43 % of the total overall consumption. The average consumption of the billable capacity customer is 217 MWh for the observed period, which is nearly 7 times more than the average consumption of a customer who is not billed for capacity (that is 32 MWh).

3.2.2 Framework of Analysis and proposed Structure

3.2.2.1 Energy Charge

In order to comply with parameters set in case R-3541-2004 (in HQD-1, Document 3) and approved by the Régie in its decision D-2005-34 (p. 149), the Distributor proposes to apply differentiated increases in a progressive manner for the energy on customer bills. This approach reflects the bill increase relatively to the growth of

cost of supply, distribution and transmission, thus leads to introducing a structure modification, which increases the energy component. This allows the customer to minimize the impact of the increased bill since this component constitutes the most flexible part of the invoice. Such a choice reduces the fixed constraint, which is the capacity component on customer's bill. In this matter, it is proposed to maintain the G rate basic charge at its current level.

Thus, in waiting for approval of the supply cost allocation method, which will allow for a target update, the Distributor proposes to undertake, as of April 1, 2006, a gradual change of its general rate structure that will allow to increase the size of energy component while minimizing the impact on the customers. This reform is necessary in the setting where avoided costs range between 7 and 8 ¢ / kWh, depending on the particular customer category, which is much higher than the price of billed energy at the margin for the off-peak uses (energy charge for rate L and charge for the second block of energy for G and M rates).

The scenario presented within the framework of a 3 % increase consists of increasing the price of the energy by almost 4 % which results in capacity charge increase of 1,6 % fo L rate, 2,1 % for M rate and 2,1 % for G rate. Energy component increases about twice as much as the capacity charge for the general rates while maintaining the impact on customers at an acceptable level (as illustrated in Tables 15, 16 and 17).

The proportion of the energy component will thus be increased by approximately 0,5 % for general rates. Hence, the energy component will pass from 52,7 % to 53,2 % for G rate, from 52,8 % to 53,2 % M rate and from 61,4 % to 61,9 % for L rate.

Table 15

Scenarios of Rate Increase for G Rate

Components	Current rate	Uniform Raise	Variation	Scenario selected	Variation
Basic charge ($/month)	12.33	12.70	3.0%	12.33	0.0%
Capacity ($/kW)	14.40	14.83	3.0%	14.70	2.1%
1st block (¢/kWh)	7.86	8.10	3.0%	8.11	3.2%
2nd block (¢/kWh)	3.96	4.08	3.0%	4.09	3.3%
Energy proportion of rate	52.7%	52.7%		53.2%	0.5%
Impact on customers					
Average					3.0%
Maximal					3.3%
Minimal					0,0%

Note 1: The 0 % impact is linked to a customer who only pays for the Basic Subscription Charge.

Table 16

Scenarios of Rate Increase for M Rate

Components	Current rate	Uniform Raise	Variation	Scenario selected	Variation
Power ($/kW)	12.60	1.,98	3.0%	12.87	2.1%
1st block (¢/kWh)	3.94	4.06	3.0%	4.09	3.8%
2nd block (¢/kWh)	2.56	2.64	3.0%	2.66	3.9%
Energy proportion of rate	52.8%	52.8%		53.2%	0.4%
Impact on customers					
Average					3.0%
Maximum					3.4%
Minimal					2.2%

Table 17

Scenarios of Rate Increase for L Rate

Components	Current rate	Uniform Raise	Variation	Scenario selected	Variation
Capacity ($/kW)	11.52	11.87	3.0%	11.70	1.6%
Energy (¢/kWh)	2.56	2.64	3.0%	2.66	3.9%
Energy proportion of rate	61.4%	61.4%		61.9%	0.5%
Impact on customers					
Average					3.0%
Maximal					3.1%
Minimal					2.4%

3.2.2.2 Capacity Invoicing Threshold for G Rate

At the last rate application, the Régie accepted that the Distributor changes, within two years, the capacity invoicing threshold for G rate customers from 40 to 50 kW.

> "Thus, in order to start this reform, The Régie requires the Distributor to make modifications to G rate, associated with the increase of the application threshold to capacity charge from 40 to 45 kW effective April 1, 2005.... As the next step, the Distributor will have to submit in the next rate application, a request to increase the capacity charge threshold for G rate from 45 to 50 kW effective 1st April, 2006, accompanied by an impact study. "

As illustrated in Table 18, the capacity invoicing threshold would increase to 50 kW on April 1, 2006. The threshold for the first block of energy would be increased to 15 100 kWh in order to recover the distribution and transmission costs recovered before by the capacity charge while meeting the 42 % median load factor of this category.

Table 18

Invoicing Threshold Increase from 45 to 50 kW

	Rate on 1st April 2005	**Rate at 50 kW**
Basic Subscription Charge	12.33 $/month	12.33 $/month
Capacity Charge applicable to the excess over	14.40 $/kW 45 kW	14.40 $/kW 50 kW
Energy Charge Threshold for the 1st block Charge for the 1st block Charge for the 2nd block	 13 200 kWh 7.86 ¢/kWh 3.96 ¢/kWh	 15 100 kWh 7.86 ¢/kWh 3.96 ¢/kWh

The threshold change impact from 45 to 50 kW on G rate customers is presented in Table 19. The continuation of the invoiced capacity threshold reform is made at constant revenue for the Distributor. Although the impacts varies from one customer to another, for more than 90 % of them the impact of the invoicing threshold from 45 to 50 kW ranges between -0,5% and 0,5 %.

Table 19

Impact of Changing Invoice Threshold from 45 to 50 kW

Levels of changes in annual invoice (%)	Distribution of the customers (%)
Less than -4 (minimum: -46,6)	1.1
From -4 to -0,5	3.0
From -0,5 to 0,5	91.0
From 0,5 to 4	4.2
4 and more (maximum: 6,6)	0.8
Total	100.0

Appendix A presents, for illustration and for certain types of consumers, the impact on monthly invoices of a 50 kW threshold.

4 RATE INCREASE IMPACTS

4.1 Expected Revenue by Rate Category

This rate proposal allows the Distributor's revenue to increase by 260 M$ in 2006 including 180 M$ from April 1 to December 31, 2006. Table 20 presents a breakdown of 180 M$ additional revenue sources by rate category. [19]

[19] The details for each rate is shown in HQD-13, document 5.

Table 20

Revenue Generated by Rate Category in 2006 (M$)[1]

	Without the increase on 1st April 2006	Including the increase on 1st April 2006	Difference
Residential	3 828	3 903	75
Small power	1 201	1 227	26
Average power	1 697	1 735	37
Large power	1 924	1 967	43
Total – Regular Rates	**8 651**	**8 831**	**180**
Special Contracts	806	806	s/o
Rates for Consumption Management and Emergency Energy	18	18	0
Total	**9 475**	**9 655**[2]	**180**

Note 1 : The results may not match because of the round-offs.
Note 2 : Excluding the regulatory provision of 79 M$ from January to March 2007.

4.2 Impact on Cross-subsidization

In its Decision D-2003-93, the Régie adopted the cross-subsidization index calculation method proposed by the Distributor (index HQD) within the framework of case R-3492-2002 - Phase 1. It was also determined that the cross-subsidization index for year 2002 will be used as a benchmark to evaluate the index change throughout the years. The residential category index was at 80.2 % at that time.

However, in Decision D-2005-34, the Régie asked the Distributor to propose a method that would allow to measure and follow up the effects of changes brought forth to the cost allocation method on evaluation of the cross-subsidization index and this, based on the budgetary data.

As Table 21 indicates, and as described in more detail in HQD-12, Document 3, the year 2002 adjusted reference index for residential customers is now established at 81.0 %. For year 2006, before the uniform increase proposed by the Distributor, this index is 81.7 %. As one can expect, after a uniform increase of 3 %, the index remains stable at 81.6 %.

These results show a certain cross-subsidizing index inertia over time. However, these results also illustrate, as the Distributor emphasized in case R-3492-2002-Phase 1, that cross-subsidization is in fact a constantly changing concept, whose reality changes according to the evolution of sales for each rate category, as it is the case for associated costs.

The small observed variations may also be explained by the three months shift between financial and rate years, shift which affects the level of revenues by consumer category. For example, residential customers are characterized by a seasonal consumption profile, with a significantly higher consumption in winter than in summer; a rate increase after winter season will generate relatively less revenue from these customers when evaluated for the financial year.

Table 21

Cross–Subsidization Indices

	2002 adjusted Cross-subsidization Index	2006 Required Revenue	2006Expected revenue before Increase	HQD cross-subsidization Index before Increase	Expected Revenue after Increase on 1 April 2006	HQD Cross-subsidization Index after Increase
	(%)	(M$)	(M$)	(%)	(M$)	(%)
Residential	81.0	4 917	3 828	81.7	3 903	81.6
Small power	122.7	1 025	1 201	123.1	1 227	123.1
Average power	130.1	1 372	1 697	129.9	1 735	130.1
Large power	117.1	1 768	1 924	114.2	1 967	114.4
Total – Regular Rates	**100.0**	**9 082**	**8 651**	**100.0**	**8 831**	**100.0**
Special contracts	100.0	806	806	100.0	806	100.0
Consumption Management and Emergency Energy Rates	100.0	19	18	100.0	18	100.0
Total	**100.0**	**9 907**	**9 475**	**100.0**	**9 655**	**100.0**

Note 1: The results MAY not correspond because of the round-offs.

4.3 Customer Invoice

4.3.1 Residential rates

4.3.1.1 Impact Distribution

Table 22 presents the impact distribution across residential customers. Nearly 94 % of customers have a 1 to 4 % annual impact range. Moreover, about two thirds of the customers, the small consumers, are having their invoice increased by less than 3 %.

Table 22

Annual Impact of a 3% Rate Increase - D Rate

Annual Invoice Change (%)	Customer Distribution (%)
Less than 1 (minimum: 0)	5.6
From 1 to 2	25.2
From 2 to 3	34.9
From 3 to 4	33.8
4 and more (maximum: 8,1)	0.5
Total	100.0

4.3.1.2 Impact on monthly Invoices

The table below shows the impact to the monthly invoice increase for a standard consumption. The invoices increase by 1.6 % - 3.6 %.

Table 23

Monthly Impact on Standard Consumption - D Rate

Energy	Invoice with current Rate	Invoice with proposed Rate	Variation	Variation
kWh	$	$	$	%
625	43.57	44.25	0.68	1.6
750	49.84	50.67	0.83	1.7
1 000	63.70	64.97	1.27	2.0
2 000	127.00	131.07	4.07	3.2
3 000	190.30	197.17	6.87	3.6

4.3.1.3 Impact on an average Customer

Table 24 illustrates the effects of the increase on electricity invoice for residential customers. The monthly average residential customer's electricity invoice increases by $ 2.76.

Table 24
Effect of Proposed Increase on Monthly Invoice for Average Residential Customers (Rate D)

Average yearly consumption 2003-2004	Monthly invoice ($)		Increase ($)	Increase (%)
	Current rate	Proposed Rate, 1st April 2006		
Average customer (17 050 kWh)	92.90	95.66	2.76	3.0
Average customers with electric heating (19 300 kWh)	104.13	107.33	3.20	3.1
Average customers with not electric heating (12 400 kWh)	70.00	71.88	1.88	2.7
Customer living in an average one-family house heated with electricity (26 500 kWh)	140.15	144.79	4.64	3.3

4.3.2 General Rates

4.3.2.1 Impact Distribution

It is necessary to point out that the increase affects mostly the energy component, which is the most elastic part of the invoice. This makes it possible for the customer to minimize the impact of the increase to his invoice. The choice to apply the most significant increase to the energy component also allows for reduction of the constraint that represents the fixed part in customer invoice.

L Rate

The rate increase impact on rate L customers is presented in Table 25. The increase is between 2,4% and 3,1 % and 91 % of the customers have a 3 % or less increase.

Table 25
Proposed Increase Annual Impact – L Rate

Annual Invoice Change (%)	Customer Distribution (%)
2.9 and less (minimum: 2.4)	66.5
3.0	24.4
3.1	9.1
Total	100.0

M Rate

Table 26 presents the impact of the increase on M rate customers. The increase of invoice ranges between 2.2 and 3.4 %; 81 % of the customers have an increase between 2.9 % and 3.1 %.

Table 26
Annual Impact of Proposed Increase –M Rate

Annual Invoice Change (%)	Customer Distribution (%)
2.8 and less (minimum: 2.2)	8.1
2.9	18.9
3.0	31.4
3.1	31.0
3.2 and more (maximum: 3.4)	10.6
Total	100.0

G Rate

Table 27 presents the impact of the proposed increase on G rate customers, including the impact of the change to the invoicing threshold for capacity from 45 to 50 kW, which explains the great dispersion of impact. Nearly 70 % of customers have their bills rise by 2% - 3 %.

Table 27
Annual Impact of Proposed Increase –G Rate
(Including the Change of Invoicing Threshold for Capacity)

Annual Invoice Change (%)	Customer Distribution (%)
Less than 2 (minimum: -45.2)	16.6
From 2.0 to 2.8	32.2
From 2.9 to 3.0	36.8
From 3.1 to 4	10.1
More than 4 (maximum: 9.9)	4.3
Total	100.0

4.3.2.2 Impact on monthly Invoices

L Rate

Table 28 presents the invoice increase after application of the proposed increase for rate L standard consumers. The invoice increase for this rate ranges between 2.8% and 3.1%.

Table 28
Monthly Impact on Standard Consumption – Rate L

Capacity kW	Energy kWh	Invoice at the current rate $	Invoice at the proposed rate $	Variation $	Variation %
5 000	2 340 000	112 611	115 755	3 144	2.8%
5 000	3 060 000	131 043	134 907	3 864	3.0%
10 000	5 760 000	238 380	245 478	7 098	3.0%
30 000	17 520 000	721 284	742 818	21 534	3.0%
50 000	23 400 000	1 053 660	1 083 750	30 090	2.9%
50 000	30 600 000	1 237 980	1 275 270	37 290	3.0%
50 000	32 750 000	1 293 020	1 332 460	39 440	3.1%

M Rate

Table 29 presents the variations of monthly invoices for standard consumption of M rate following the application of the proposed rate increase. According to selected consumption assumptions, the invoice variation ranges between 2.95 and 3.1 %.

Table 29
Monthly Impact on Standard Consumption –M Rate

Capacity	Energy	Invoice at the current rate	Invoice at the proposed rate	Variation	Variation
kW	kWh	$	$	$	%
100	25 000	2 245	2 309	64	2.9%
500	200 000	14 180	14 615	435	3.1%
1 000	400 000	25 738	26 513	775	3.0%
2 500	1 170 000	61 903	63 806	1 902	3.1%

G Rate

Table 30 presents the variations of invoices after application of the proposed increase for the standard G rate consumption. According to selected consumption assumptions, the invoice variation ranges between 2.6% and 3.1 %.

Table 30
Monthly Impact on Standard Consumption –G Rate

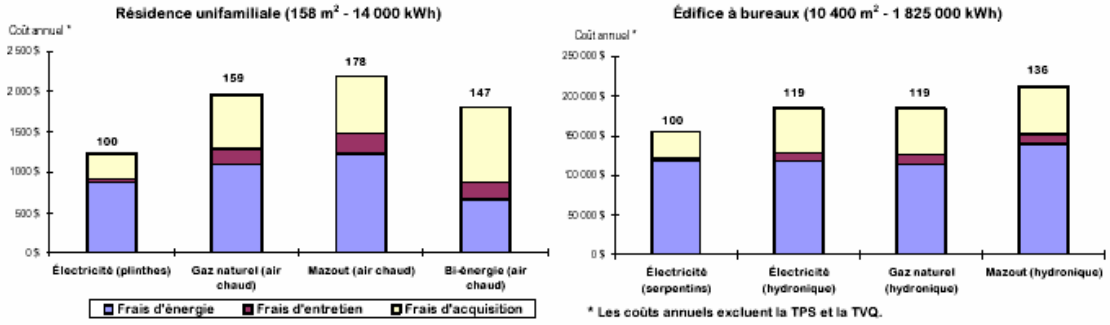
Capacity	Energy	Invoice at the current rate	Invoice at the proposed rate	Variation	Variation
kW	kWh	$	$	$	%
6	750	71	73	2	2.6%
14	2 000	169	174	5	2.9%
40	10 000	798	823	25	3.1%
80	40 000	2 615	2 696	81	3.1%

5 COMPETITIVE POSITION

5.1 In Quebec

Since the Distributor has a retail monopoly for electricity sale in Quebec[20], competition comes primarily from natural gas and fuel oil, as sources of alternative energy. As Figure 3 indicates, the electric space heating is definitely advantageous for a standard one-family residence when accounting for the low costs of acquisition, installation and maintenance. In the commercial area, the position of electricity for the heating remains also advantageous although fuel competition is stronger.

FIGURE 3
POSITION CONCURRENTIELLE DE L'ÉLECTRICITÉ
POUR LE CHAUFFAGE DES LOCAUX
JUILLET 2005



Moreover, the increase and the significant fluctuation of fuel prices during the last years, described in Section 1.3, created an unstable and not very attractive environment for the consumer. Consequently, the proposed rate increase will only have a negligible impact on the electricity competitive position compared to other forms of energy.

[20] Except for the municipal networks and St-Jean Baptiste-de-Rouville Electricity Co-operative.

5.2 In North America

Among the cities being part of the annual price comparison performed by the Distributor and, as indicates it the table below, only electricity rates of Manitoba Hydro, as well as BC Hydro, Seattle City Light and PacifiCorp for certain categories of customers, are lower than those of the Distributor as of April 1, 2005. [21]

Table 31

Comparative Indices of Electricity Prices in North America [1]

(April 2005)

	Residential Customers (1 000 kWh)	Small Power Customers (40 kW - 10 000 kWh)	Medium Power Customers (1 000 kW - 400 000 kWh)	Large Power Customers (5 000 kW - 3 060 000 kWh)
Canadian cities				
- Montreal	100	100	100	100
- Toronto	175	135	163	216
- Winnipeg	99	77	74	82
- Edmonton	140	115	120	147
- Vancouver	101	88	76	99
US cities				
- New York	320	265	273	340
- Boston	285	243	253	322
- Chicago	149	148	139	168
- Portland	125	101	90	111
- Seattle	136	91	107	160

Note 1: Prices calculated in Canadian dollars and exclude all sales taxes

In addition, as detailed in the following table, several electricity distributors in Canada increased since the submission of R-3541-2004, HQD-13, Document 1.

[21] Source: Comparison of electricity prices in large North-American cities (April 2005).

Table 32
Rate Increases in 2005-2006
Electricity Distributors in Canada

	Date	%	Notes
Granted Rate Increases			
Hydro-Quebec	1 April 2005	1.2 %	Asked: 2.7 %
Newfoundland Power (NL)	1 January 2005 1 July 2005	-0.5 % 5.2 %	Automatic adjustment according to the interest rates Rate stabilization account [1]
Newfoundland and Hydro Labrador (NL)	1 January 2005	9.7 %	Adjustment according to the price of fuels and hydro
Maritime Electric (EP)	1 July 2005	2 %	Requested: 2 %
Nova Scotia Power (NS)	1 April 2005	5.3 %	Requested: 7.3 % [2]
New Brunswick Power (NB)	March 31. 2005 July 7. 2005	3 % 3 %	Granted under the terms of the law. without revision [3] Granted under the terms of the law. without revision
Hydro Ottawa (ONE)	1 April 2005	6.1 %	Supply and distribution components [4]
Hydro Toronto (ONE)	1 April 2005	7.6 %	Includes supply and distribution [4]
Hydro Manitoba (MB)	1 April 2005	2.25 %	Requested: 2.25 %
EPCOR Energy (AB)	1 April 2005	2.95 %	Includes supply and distribution [5]
Rate rises requested			
Hydro-Quebec	1 April 2006	3 %	
Nova Scotia Power (NS)	1 January 2006	15 %	
SaskPower (SK)	1 October 2005	4.9 %	See note 6

Note 1: On the 1st of July of each year, the Newfoundland Power rates are adjusted in order to recover the amounts from the rate stabilization account set on March 31.
Note 2: The request went from 12.4 % to 7.3 % following a negotiated settlement process. Moreover, a rate increase of 10.4 % was granted on the 1st of January 2005 for certain industrial customers (rates adjusted annually according to the fuel price).
Note 3: NB Power can increase its rates more than once during a financial year (which ends on March 31) without having to file a request with the BCPU, as long as the total increase is not higher than the lhighest of 3 % and the rise of the CPI.
Note 4: On annual basis, for residential customers consuming 1 000 kWh per month (increase of 4.2% because of the supply component; the price of supply is regulated for lower than 250 000 kWh annual consumptions).
Note 5: On annual basis, for residential customers who consume 1 000 kWh per month (increase of 1.8% because of the supply component; the price of supply is regulated for the lower than 250 000 kWh annual consumptions).
Note 6: The government of Saskatchewan granted SaskPower a rate increase of 5.65 % on the 1st of September 2004, rather than 9 % and refused the additional request for 2 % on the 1st of September 2005.

6 RATE OPTIONS

6.1 Assessment of the Real Time Rate Option

6.1.1 Option Introduction on an Experimental Basis

In 1994, in order to allow customers to have an access to the market price and introduce a price mechanism almost instantaneously reflecting the network situation, Hydro-Quebec introduced an experimental option of setting rates in real time (RRT). In the nineties, RRT option covered approximately 70 customers and recorded a 50 MW average demand and a 10 % average marginal consumption for the participants.

6.1.2 Option Weaknesses

With only one price used in purchase mode as well as in sale mode, the RRT option sought to meet two objectives: the elimination of peak loads and sale of additional energy. The assessment of the current RRT allows for the identification of this option relative weaknesses.

At the beginning of the year 2000, the lack of flexibility combined with high prices caused a significant customer base crumbling. The LR Rate thus lost nearly 35 customers out of the 40 who had signed up. In addition, the method of fixing of hourly energy prices was often mentioned by the participating customers as one lacking transparency and being too highly influenced by the only one producer and not enough by the actual market.

As for the medium power, they were mainly Bi-energy customers who chose MR rate, but also customers who wanted to benefit from the option flexibility in order to optimize their heating loads.

When RRT prices increased, most of these customers migrated towards the BT rate, its prices becoming relatively more attractive. Thus, since January 1, 2001, the MR rate lost nearly 33 customers and only 2 are now using it.

As for the Distributor, RRT option is not a reliable mechanism for consumption management due to the absence of mandatory interruptions from the customer and too long a notice. The interruptible electricity option, like the one introduced from December 1, 2004 to November 30, 2006, more adequately and reliably meets the Distributor's needs for consumption management (see Decision D-2004-213).

6.1.3 Proposal

In this context, it is preferable that the Distributor creates better adapted options with each of them aiming at a distinct objective and targeting specific customers. Thus, in addition to interruptible electricity for medium and large power consumers, the Distributor proposes to meet the customers' flexibility needs by introducing an additional electricity option as of April 1 2006, that will be accessible to large power customers.

The assessment of the MR rate revealed that few medium power customers could benefit from the additional energy option, especially during high prices periods, to optimize their demand over short periods. For this reason, the Distributor does not expect, for the moment, to introduce a similar option for medium power consumers.

These options would advantageously replace the RRT. Consequently, the Distributor proposes to repeal rates LR and MR as of April 1, 2006.

6.2 Additional Electricity Option for large Power Customers

The additional electricity option is an offer to customer who would like to use an small quantity of additional power, outside of the Distributor's peak hours, that he would not otherwise consumed, at a capacity and energy combined price at the Distributor's marginal procurement average cost.

The proposed additional energy option replaces the current RRT option. The proposed option is however more flexible in its application and does not require any long-term commitment from the customers. In this context, the Distributor notices that all customers currently under RRT should adhere to the additional energy option. In the same way, the Distributor anticipates that other customers could be interested in the option due to the increased flexibility.

The potential of additional sales was evaluated by assuming a 6 month participation a year at a prices of 8 ¢/kWh. Being based on an average power of 25 to 50 MW, the evaluated potential ranges between 11 and 50 GWh depending on the number of days per month the customer calls the option (3 to 7 days).

6.2.1 Price Determination

The additional electricity for each month period is sold at the Distributor's average marginal procurement cost.

The fact that this energy is consumed outside the network's most loaded periods and without exceeding available power, allows to exclude transmission and distribution costs.

Normally, the acquisition at the Distributor's margin is done by using the short-term market products. Given the nature of the option for additional electricity, the products which must be used to establish its price are essentialy energy contracts, not capacity contracts.

Energy is usually dealt in $/MWh on the spot market or through a bilateral transaction. A significant number of the Distributor's transactions occur every

month, so that, in practice, it is impossible to establish in advance the price the Distributor will actually pay. In order to go around this difficulty, it is proposed to establish the price by applying a market indicator.

The selected indicator is the portfolio of options (futures) of New York Mercantile Exchange (NYMEX) targeting New York - Zone A market for peak and off-peak hours and for which data are available via Internet. The New York market is the Hydro-Quebec reference market because of its proximity and a significant number of transactions. In this pool, even if zone M is the Hydro-Quebec zone, zone A is the most significant and deep enough. These transactions can be checked on NYMEX web site[22] under the following names:

- NYISO Zone A LBMP Swap - Peak
- NYISO Zone A LBMP Swap - Off Peak

In order to determine a monthly price for every hour, prices of these two products are balanced according to the number of peak and off-peak hours of the targeted month as set in the schedule of the National Electricity Reliability Council (NERC).

Two adjustments will be applied to this market indicator. The first adjustment brings it back to Hydro-Quebec zone by reflecting a price differential between NYISO Zone A and Zone M. This adjustment will be set using historical data of this price difference and will be calculated on a 12 month rolling average for each referenced month[23]. The second adjustment reflects the delivery charges from NYISO Zone M to the border of Quebec. This adjustment is fixed at 6$US/MWh, according to a historical average, for every referenced month. This adjustment will be re-examined once a year.

The result of these adjustments will be converted into Canadian dollars at the exchange rate for the working day used for the market indicator.

[22] http://www.nymex.com/ele_oth _ main.aspx
[23] See Appendix B.

The Distributor send the price to the customers seven days before the beginning of each calendar month and this price remains the same for the month.

6.2.2 Application Form

The additional electricity option is reserved for L rate subscriptions held by a customer who does not benefit from the rate related to running-in new equipment. The participation in the additional electricity option is renewed monthly and is for a period of at least a month. At the end of its participation, the customer's subscription is again subject to the prices and conditions of existing L rate.

A detailed example of invoice calculation of additional electricity is presented in Appendix C.

6.2.2.1 Reference Components Determination

In order to establish the reference components (capacity and energy), the Distributor must receive, at least 5 working days prior to beginning of the consumption period, the customer written request. The Distributor must then confirm to the customer the reference components for the 1st day of the consumption period. In order to avoid any sales cannibalization at the basic rate, these components must reflect the normal profile of the customer consumption. Thus, the three previous consecutive month reference period is taken into account when registration before customer can register to the option.

6.2.2.2 Invoice Calculation

The reference components are invoiced under L rate, which allows the Distributor to ensure rate neutrality. All reference consumption is credited at the price of energy under L rate.

Any consumption beyond the reference is invoiced at the price of additional electricity, revised monthly. However, in order to limit additional consumption when marginal procurement cost is higher than the selling price to the customer, the Distributor reserves the right to prohibit additional consumption. Moreover, due to the network congestion problems, additional electricity could also be restricted.

During these restriction periods, any consumption beyond the reference will be invoiced at 50 ¢/kWh. This penalty is meant necessary in order to prevent additional capacity costs to the Distributor because of additional consumption.

6.2.2.3 Proposal

RRT being adjusted to the current context, the additional electricity option will allow to better meet the present needs of large power customers and to limit risks both for the Distributor and customers. The additional electricity option, in parallel with the interruptible electricity option, will adequately replace RRT as of April 1, 2006.

6.3 Interruptible Electricity Option for Medium Power Customers

6.3.1 Context

Within the framework of case R-3531-2004 aiming to repeal the BT rate intended for commercial, institutional and industrial customers (CII), the Distributor was directed to offer the similar option, an option of interruptible electricity effective April

1, 2006 for medium power customers having a electric load shedding capability. [24]

This option sprang from the interruptible electricity currently available to the L rate customers while being adapted for medium power customers who have Bi-energy CII system. This adaptation allows to take into account the nature of service rendered by the participating customers, the lesser resources available to medium power customers to manage their energy consumption and their lower interruption flexibility.

6.3.2 Option Parameters Determination

For the Distributor, medium power customers interruptible electricity will be an additional tool to manage the local load supply/demand balance. The proposed option must however must allow for the reconciliation of the Distributor's needs for management in the context of current procurement with customers' capability to partially reduce their electricity consumption. In addition, it must comply with the criteria set by the Régie in its Decision D-2002-115, so-called obligation to be practically applicable to the customers who benefited from the BT rate, thus support the Bi-energy program.

The repeal of rate BT rate caused the transfer to medium power general rates of customers having some fuel boilers and who then benefit from a potential electric shedding capability. The medium power customers include customers with many different consumption profiles, mainly commercial customers, but also industrial and institutional customers, as well as a small number of residential and agricultural customers. In addition, and even though the potential remains low, some of these customers could have a certain flexibility to proceed to a partial load shedding for one or more of their uses, for example lighting or processing.

The methods applied to the large power customers for the interruptible power option are currently too constraining and not easily applicable to medium power customers. For example, with a 3 hours notice before an interruption, the customer

[24] R-3531-2004, Hqd-1, Document 1, pp. 21 to 24.

may be advised during the night for an interruption starting at 6 o'clock in the morning, which requires the constant presence of a person in charge on the site.

In order to simplify the application of the option, it is proposed to advise the participating customers, without any cancellation possibility, at 15 o'clock the day before the interruption. Moreover, it is proposed to establish fixed periods of interruption during the day, corresponding to the critical network periods, from 7 to 11 and from 17 to 21 o'clock. In theory, this way the customers will have sufficient time to react.

For the Distributor, however, this modifies the nature of the option, which becomes comparable with short-term purchases on the New York market[25] where the notice is 17 to 32 hours. In addition, since these customers have a alternative energy source and can thus avoid the production losses in case of interruption, the proposed option proves to be less constraining than the L rate customers interruptible option. Thus, the credit proposed for winter 2006-2007 will be 12 ¢/kWh, taking into account the historical market conditions. This credit corresponds to the historical prices on DAM market of NYISO [26] for 100 highest hours (about 15 ¢/kWh), less the price of the M rate 2nd energy block [27], which the customer will not have to incur at the time of interruption. Considering the price of fuel oil, which is

[25]Day Ahead Market Price (DAM) of zone HQ of New York Independent System Operator (NYISO), plus the applicable transmission and ancillary service charges.
[26]See appendix B.
[27]Currently 2,56 ¢/kWh. Proposed price of 2,66 ¢/kWh on April 1, 2006.

equivalent to approximately 8 ¢/kWh[28], this would represent for the customer an approximately 7 ¢/kWh net credit.

6.3.3 Customers Consultation

In order to evaluate the medium power customer interest for an electricity interruptible option and to specify its methods, a customer and various industry experts consultation process took place between June 27 and July 6, 2005.

In total, 29 participants, divided into nine groups met in Montreal and Quebec: 5 groups of experts (consulting companies, equipment suppliers, eco-energy service firms) and 4 groups of customers (BT rate and nont-BT). Before the meeting, the participants received documents specifying, among others, the outline of items for discussion in order to have some preliminary idea on the subject and to allow a thorough discussion at the meeting.

The Distributor engaged an independent firm to conduct group discussions. The meetings were hosted by a consultant in the presence of the Distributor's experts to answer, if needed, technical questions.

[28]Corresponds to price of 60,5 ¢/liter, at a 70% heat efficiency.

Explored concept

The interruptible power concept, its operation as well as option methods were presented to the participants. The primary goal was to measure the participants interest in the global concept and technical potential of application in the current market; the second goal was to measure the acceptability and viability of the various application methods.

Main Results

The majority of participants agreed that the concept is interesting but remains very limited with regard to its potential of application. Several customers already optimize their electricity consumption by using other sources of energy for some of their uses. Thus, the electrically heated boilers seem mostly used during off-peak hours, cannot be substituted when they are used during reference hours. The commercial and institutional customers must in addition take into account constraints related to their own customer comfort. For industrial customers, any intervention likely to have an impact over the production process is not possible without the recourse to a reliable and economic auxiliary source.

The participants challenged the option profitability for the customers, taking into account the granted credit and the expected benefits uncertainty. Indeed, the customers expect a guaranteed minimum revenue that would cover their expenses and flexibility of the conditions so that the option proves to be interesting (only a variable credit of 12 ¢/kWh was mentioned during consultation process). In addition, they noted an additional risk to the customer, the price of fuel oil could evolve/move during the subscription period whereas the credit would remain the same. Moreover, the penalty is considered to be too high in comparison with the offered credit (a penalty of 50 ¢/kWh was mentioned during consultation process).

According to some, lower penalty could nevertheless play its dissuasive role; according to others, no penalty should be applied.

As for the methods, a greater flexibility seems necessary. For example, some pointed out that only one area of load shifting could apply according to certain consumption profiles, that automation would facilitate the application and that the notices should directly be sent to several persons elected by the customer, by e-mail or pager, rather than only be indicated on the Internet site. Ideally, the notices should be transmitted early given the limited availability of the qualified personnel after 15 o'clock.

Under the current conditions, the option doesn't look economically very interesting to the customers, but the possibility of the option being offered is welcomed and could be considered in future energy decision. A more flexible and attractive option could however increase the number of interested customers. The market trends could in addition contribute to make this option more profitable in the future years.

6.3.4 Proposed Application Methods

Taking into account the participant comments during consultations, the methods were adjusted in order to make the option much simpler and flexible for the customers. The level of credit is not easily adjustable since it reflects the current market conditions but it is proposed to partly offer it in the form of a fixed credit. This will allow to compensate customers for the required modifications, to maintain equipment in good operating conditions, management and application of the option. In addition, a variable credit will be used to compensate for fuel costs. The targeted objective is to make it possible for the prospective customers to be able to use it

without too many constraints in order to maintain an interruptible group of medium power customers. These methods could be adjusted in the future.

The following methods are proposed:

Commitment

At the Distributor's request, the participating customers must be able to offer, for the winter period, an interruptible power corresponding to at least 15 % of their maximum power of the previous winter's average invoice with a minimum of 100 kW. The customer must specify the maximum power, which he/she appoints not to be exceeded during an interruption period (basic power).

Commitment is valid for the winter period from December 1 until March 31 of the following year. During the commitment period, modifications can be made to the basic power and will be applicable to the next consumption period. When a customer loses his load shifting capability, for example, because of malfunctioning equipment, he/she will have to advise the Distributor who will withdraw the option for one temporary period and will consequently adjust the credit. If this situation occurs more than twice during the customer's commitment period or if the number of days of unavailability exceeds seven working days, the customer could be withdrawn from the option for the remainder of his/her commitment.

Notice of Interruption Request

When the Distributor wishes to call upon interruptible electricity, the Distributor send an interruption request notice, (which is transmitted by e-mail or pager) to all participating customers, at 15 o'clock at the latest, the day before the interruption. The notice includes the beginning and end time for one or two interruptions for the day. The interruption periods are of four hours in duration each and are established for predetermined time periods, from 7 until 11 or from 17 until 21 o'clock,

corresponding to the network critical periods. Once transmitted, the Distributor cannot cancel the notice.

A maximum Interruption Number

The maximum number of interruptions during the period of commitment is 2 periods of 4 hours per day, for 100 hours maximum (25 periods).

Applicable Credits

The 12 ¢/kWh proposed credit would be made in fixed and variable form. Thus, a fixed credit of 5 $/kW[29] would apply for the winter period at a rate of 1.25 $/kW, over the monthly effective interruptible power and a variable credit of 7 ¢/kWh would apply to the hourly effective interruptible power.

Credit Calculation

The amount, credited monthly to the participating customer during the four winter months, corresponds to the product of 1.25 $/kW-month by the difference between the average load during the working days reference hours over the consumption period (excluding the public holidays and the days of interruption), and the level of power that the customer commits not to exceed during the time of interruption.

The amount offered to the participating customers in each hour of the interruption period corresponds to the product of the 7 ¢/kWh hourly credit and the effectively interrupted power, that is to say, the difference between the average hourly power during the working days reference hours for the consumption period (excluding the public holidays and the days of interruption), and hourly average power during the interruption period.

[29] Is equivalent to 5 ¢ / kWh for 100 hours of interruption.

Penalty for Default of Interruption

The customer is responsible to limit his/her calls for real power to a level lower than 105 % of the applicable basic power. For any excess over this limit during the interruption period, the customer will lose credit for this hour of interruption, in addition to paying the general applicable rate. Moreover, the Distributor will apply a 0.25 $/kW penalty for each excess load during the interruption period. The sum of penalties will be however limited to the total fixed credit amount for the commitment period.

An example of credit application and penalty is presented in Appendix D of this document.

6.3.5 Impacts

6.3.5.1 Impact on Participants

The customers who sign up for the electricity interruptible option all have, a priori, a Bi-energy heating system (they are for example former customers of the BT rate) and use the offered flexibility to manage their capacity demand and reduce their bill for energy. Thus, they are customers for whom the interruptible electricity option will bring value to their existing installations.

The amounts, which customers could receive under the terms of this option are related to the shedded load, number of hours of interruption and offered credits. As previously mentioned, fixed credit will allow to compensate for the customer's required modifications, equipment maintenance, option management and application. Moreover, no particular installation to the communication equipment is required to be able to receive the interruption notices (e-mail or pager). Furthermore, if the customer does not have an interval meter allowing to meter consumption every 15 minutes during the interruption periods, the Distributor will

install it as a part of the ongoing program of metering equipment modernization, without specific charges since these replacements are already planned for this type of customers (see R-3531-2004, Hqd-2, Document 1, pages 16-17).

6.3.5.2 Impact on the Distributor

Interruptible electricity for the customers of medium power will constitute an additional tool to manage the local load supply/demand balance. As for the level of potential interruption expected from this option, the Distributor currently forecasts 60 MW which he had specified within the framework of the request for repeal of the BT rate[30]. Indeed, contrary to the interruptible option for the large power customers, of which the Distributor has a history of several decades of subscription as a rather homogeneous clientele, the proposed new option has very heterogeneous customers at year 0. A better forecast would thus be completely speculative.

The Distributor would not undergo any loss of revenue for power or energy following the requested interruptions. Indeed, on the one hand, the participating customer will continue to pay for the capacity charge set forth for its monthly maximum committed capacity or his applicable contractual demand. On the other hand, the price of rate M energy is deduced from the market price to establish the credit offered for interruption.

The option implementation will give rise to the certain fixed costs to the Distributor, in particular for development of the invoicing system, promotion and customer recruitment. In addition, certain recurring annual expenditures related to the option management must also be considered for metering (maintenance of telephone connection to communicate consumption data), invoicing and delivering notices.

[30] R-3531- 2004, Hqd-1, Document 1, p. 24.

However, they are directly connected to the number of interruption customers who will subscribe to the option.

6.4 Other Rate Options modified by the Distributor

6.4.1 LC Rates

The LC rate was developed in the eighties with the purpose of selling the occasional energy surpluses. These surpluses are disposed in the form of supplemental energy to the large power customers equipped with a fuel fired boiler.

When a surplus of energy was anticipated, the Distributor forwarded a request for tender to the customers, who, in turn submitted requests to buy blocks of surplus energy.

In the context of current acquisition, the Distributor proposes to repeal the LC rate.

6.4.2 LP Rate

The LP rate, offered as assistance energy for short period of time in order to help maintain the boiler program under the LC rate. Taking into account the repeal of the LC rate, the Distributor proposes to limit the rate to the current customers.

Since the power consumption under the LP rate is not included as a part of heritage energy, the charge for this energy should reflect the Distributor's marginal procurement cost. To do so, the Distributor proposes to use, as an indicator, the price of the additional electricity option set on a monthly basis.

The price of electricity consumed without authorization will be also adjusted to application methods of the additional electricity option by changing it from $1.00 to

$0.50 kWh. Methods related to the delivery of electricity within the framework of this rate remain the same, but the Distributor proposes to introduce a 72 hours deadline to handle any request for consumption in order to better account for possibilities and needs for sound management of its network.

6.4.3 Making up Methods

6.4.3.1 Winter Activities

The methods related to winter activities were introduced in the tariff practice in February 1984, following a request of the association of Quebec ski resorts owners for activities taking place during winter.

With the end of the energy surpluses, the access to winter activities method is closed to new customers since May 1, 1988 within the framework of a possible withdrawal of the related methods and a correction of 2 % per year introduced on May 1, 1993 in order to reach the standardized rates (in particular G-9). This making-up was suspended in 1997 when the National Assembly adopted the Law on the Régie (Bill # 50). Thus, the annual eligible customer increase for the winter activities rate has been 8% since May 1, 1996.

The Distributor intends to continue, at the same rhythm then agreed to, the 2% annual making-up, that begun in 1993 and discontinued in 1997. The invoice on April 1 2006 will increase by 10 %. The correction will take place for 6 - 8 years. This making-up relates to 24 key customers and represents nearly $5 000 of additional revenue in 2006 from these customers.

6.4.3.2 Municipal Networks

On May 1, 1990 Hydro-Quebec introduced an upper limit mechanism for the applicable increases to municipal networks in order to limit the relatively high rate

increases that some of these networks underwent due to the L rate modifications, in progress since 1990.

This making-up clause at 0.5 % higher than the average increase of L rate, applies until it is more advantageous for the municipal network to be invoiced under L rate than to be charged per rate L as of April 30th, 1990, adjusted by a certain multiplier. The making-up was repealed on May 1, 1996.

The Distributor proposes to reintroduce this making-up by maintaining the rate initially fixed at 0.5 % per year in order to standardize the rates applied to municipal networks.

There are only two municipal networks remaining, which benefit from this treatment, the municipalities of Saguenay and Westmount. With a renewal of 0,5% increase, which represents in 2006 an amount of $600 000, it will take 1 or 2 years before this making-up is complete.

7 RATES IN AUTONOMOUS NETWORKS

7.1 Introduction

The rates applicable to the customers in non interconnected networks is described in the Rates and Section XIII specifies the particular methods of application. In addition to the applicable prices, the rate structures and the conditions for application were not re-examined since the introduction of the Régie Act.

In order to meet the changing needs of autonomous networks, the Distributor proposes in this document certain modifications to the Rate document.

7.2 Description of Customers

The Iles-de-la-Madeleine, Port-Menier on the Anticosti island, fifteen villages at the far end of the Low North Coast, fourteen others in Nunavik[31] and three villages in High-Mauricie form the autonomous networks. As a whole, nearly 15 000 customers from 37 communities consuming approximately 300 GWh constitute the customers of these networks.

The customers are mainly of residential, but also institutional, commercial and industrial. Population of the Ile-de-la-Madeleine is approximately half of the customers and the total energy sales of the autonomous networks. The native communities (mainly located on Nunavik and High-Mauricie) represent more than the third of the customers and approximately 25 % of the energy sales.

[31] Nunavik is located to the north of 53rd parallel.

Table 33

Description of Customers
Year 2004

	Subscription	Sales (MWh)	Total revenues ($)
South of the 53rd parallel			
Residential customers	8 892	138 186	8 898 360
Business customers	1 630	109 421	8 231 417
Sub-total	**10 522**	**247 607**	**17 129 777**
North of the 53rd parallel			
Residential customers	3 434	26 022	2 369 399
Business customers	773	32 184	3 094 117
Sub-total	**4 207**	**58 206**	**5 463 516**
Total	**14 729**	**305 813**	**22 593 292**

In Nunavik and High-Mauricie, the demand for heating is satisfied by fuel oil, that is 100 % and 95 % respectively. Elsewhere, the electric space heating is more widespread. All the customers of Romaine on the Low North Coast and approximately half of the customers on Iles-de-la-Madeleine and Anticosti use electricity for space heating.

7.3 Autonomous Networks Electricity rates

7.3.1 History north of the 53rd parallel

In May 1981, the federal government transferred to the government of Quebec responsibility for Nunavik's electrical networks, which are located north of the 53rd parallel. When Hydro-Quebec took over in 1982, electric heating was almost non-existent there. This situation facilitated the adoption of

dissuasive pricing[32] to discourage the use of electricity for purposes of heating water and buildings, by a elevated price for the power consumed beyond the 20 kWh/day threshold for residential customers. In 1996, with the aim of standardizing the application of the residential rate for autonomous networks located north and south of the 53rd parallel, this threshold was increased to 30 kWh/day and special connection charges[33] are applicable when this new connection supplies heating loads. The use of electricity for heating water and buildings in networks supplied by thermal stations does not constitute a good economic choice since the heating appliances powered by fuel oil situated at the consumption site have a much higher efficiency than those of electricity production from power stations with diesel engines. It is thus definitely more advantageous, for all Quebec customers, if autonomous network customers heat their buildings and water directly by using fuel oil.

Back in 1982, the use of electricity for any thermal application was prohibited from flat rates and the maximum supply limit was fixed at 100 kVA. In order to standardize the rate application of autonomous networks south of the 53rd parallel and given the similar characteristics to all autonomous networks, Hydro-Quebec increased this limit to 1,000 kVA in 1993.

7.3.2 History south of the 53rd parallel

After the nationalization of electricity in 1963, electricity delivered from an autonomous network south of the 53rd parallel was invoiced at the same rates as those applicable to an integrated network. In 1982 a supply limit was fixed at 1,000 kVA[34] in order to take into account the particular conditions of production in the autonomous networks..

[32]The history of the applicable rates is available in Appendix E.
[33]That is to say $5 000 for the first 20 kilowatts and $250 per additional kilowatt.
[34]At the time of the assumption of responsibility for the autonomous networks to the north of 53rd parallel.

In 1996 Hydro-Quebec submitted a proposal with the goal of slowing down the expansion of electric heating which, since the seventies, had been creating larger and larger discrepancies between revenues generated in autonomous networks and operation costs. By the Rates Regulation # 642 of May 1st, 1996, Hydro-Quebec is authorized to extend the application of dissuasive pricing to all customers supplied from autonomous networks and to impose special connection charges of $5,000 when the new connection feeds loads are designated for space heating or water heating. The regulation expects a gradual application of these rates by granting lead time for the conversion of electric heating systems to another source of energy. In December 1996, the Council of Ministers amended Rates Regulation # 642 in order to withdraw the dissuasive rates and special connection charges for networks south of the 53rd parallel.

7.3.3 Current rate application

Residential customers of networks north of the 53rd parallel benefit from a residential rate up to the consumption of 30 kWh per day, the consumption associated with the first tier generally corresponding to the basic uses. The surplus, consumption associated with electric heating, is invoiced at 28.07 ¢ / kWh.

Consumption characteristics of business customers do not allow the Distributor to establish a rate structure that can limit the use of electricity for thermal applications. Thus, although the flat rates apply to all subsciptions[35], certain uses are specifically prohibited in the regular rates. As specified in article 268 of the Rates document, a dissuasive rate of 61.91 ¢ / kWh applies to all consumption when the delivered electricity is used for heating buildings, water or any other thermal application, except for some appliances

[35] Lower than 1 000 kVA.

(electric household appliances, industrial or commercial appliances used for cooking and food conservation, and appliances for manufacturing processes in light industry). It should be noted that a thermal machine or instrument is an appliance used *"(…) to convert heat into work or to transfer heat from a source of a certain temperature to another source of another temperature by using an engine (refrigerator, heat pump).*" [36] Article 268's restrictions and exceptions aim at encouraging customers to make an optimal use of energy resources.

Dissuasive pricing is supported by the application of special connection charges[37] when the connection feeds loads designated for heating buildings or water north of the 53rd parallel.

Customers supplied from autonomous networks south of the 53rd parallel benefit from rates applicable to integrated networks which explains the significant number of customers using electricity for heating buildings and water and this, in spite of measurements other than pricing set-up with the intent of reducing this use. Indeed, the energy efficiency programs in autonomous networks had the goal, among others, since 1979, to encourage heating with fuel oil.

7.4 Special connection charges: temporary electric heating

During construction, portable radiators are regularly used for drying joints and paint. Although this is a temporary use of electricity for a short duration, special connection charges are applicable given it is a load for heating buildings as stipulated in Conditions of Service of Rates Regulation # 634[38] ("Conditions of Service") in effect[39]. In practice, these charges are not easily applicable for this

[36]Large encyclopedic dictionary Larousse, 1985.
[37]That is to say $5 000 for the first 20 kilowatts and $250 per additional kilowatt.
[38]Conditions of Service of Rates Regulation # 634 on the conditions of supply of electricity (L.R.Q., C H-5, A. 22.0.1) as modified by Decisions D-2001-60, D-2001-259, D-2002-07, D-2002-261 and D-2003-23 of the Régie (L.R.Q., C R-6.01, A. 31).
[39]Article 42.

type of use considering the short period of use, that is a the maximum of 21 days[40], and the low importance of the load.

As an indication, the additional consumption for a house in construction is approximately 750 kWh, that is 1,500 Watts during 21 days[41], and represents energy cost of approximately $140[42]. The Distributor estimates that in 2003, about sixty [43] houses were built in Nunavik.

In order to clarify the situation, to ensure a uniform application of these charges, and considering the absence of a safe alternative to electric radiators, the Distributor proposes to modify Article 42 [44]of the Conditions of Service so that the special connection charges do not apply to temporary electric heating for drying joints and paint during construction.

7.5 Thermal applications: air-conditioning and heating cables

As specified in Section 7.3.3, the dissuasive rate applies to flat rates when electricity is used for any thermal application, which includes, among others air conditioning, in networks located north of the 53rd parallel. Thus, when electricity is used for air conditioning or to feed heating cables in water supply pipes, the overall consumption of the subscription is invoiced at the dissuasive price of 61.91 ¢ / kWh.

[40]Period from 14 to 21 days of June to October.
[41]Use factor of 100 %.
[42]Cost estimated at $176 (output of 3,7 kWh/litre and cost of fuel of 0,86 $/litre) and returned with rate D of $38.
[43]The Distributor does not have statistics on new constructions in Nunavik, the number of permanent existing connections was used as reference.
[44]The modification is presented in Appendix F.

Business customers expressed the need to use air conditioning to control the temperature and humidity during the summer thus ensuring a favorable environment for equipment sensitive to heat and for service users (airports, hospital, buildings with offices, etc). In a letter written in June 2003, the Makivik Society mentioned, "We requested that Hydro-Quebec look into the possibility of allowing electricity to be used for air conditioners as the summers in Nunavik are becoming warmer and warmer." The Distributor's analyses show that there is no effective alternative to the use of electricity and that the economic impact of air conditioning on the regular rate will be limited. The total cost of the additional load of 275 MWh [45] would be in the order of $40,000, representing approximately 1 % of sales revenues to business customers in Nunavik.

Moreover, since 1996, the Kativik Regional Government (ARK) enquired of Hydro-Quebec to modify the applicable rates and to allow the use of electricity for heating cables in underground supply water conduits between the source and water treatment plant. The ARK considered the costs linked to the application of the dissuasive rate *"unreasonable considering the stake for health and public hygiene the drinkable water supply represents, a service both fundamental andvital".* In fact, freezing of the water supply pipes in the Village of Puvirnituq in winter 2004 generated an emergency which led to, in the summer of 2005, the installation of heating cables over a distance of 5.1 km.

According to ARK, installation of electric heating cables is the most reliable, simplest and the only technically possible solution. In effect, the short period of use,

[45] Assumptions selected: 50 % of the customers of the flat rates which install three air-conditioners of the residential type (0,625 kW), for the period of 30 days use with a time operating ratio and diversity factor of 50 %.

as well as low consumption, ensures that a generator would not be effective and that the operational costs would be prohibitory.

The Distributor considers that the low consumption associated with heating cables in underground water supply pipes, estimated by the ARK[46] at approximately 9,900 kWh one year out of two, as well as the significant stakes for health and public hygiene justify the application of the regular rate. However, for the purpose of peak management, these loads will have to be interrupted on request of the Distributor. The annual shortfall between the regular rate and the currently applicable dissuasive rate will be $2,700 for one village and up to a maximum amount of $ 37,500 if the 14 villages of Nunavik install this technology.

The Distributor proposes to allow the use of electricity for appliances serving only climatic purposes as well as heating cables in water supply pipes between the source and water treatment plant, without the application of the dissuasive flat rate. The addition of these exceptions respects the objective set in Article 268 of the Rates documentdocument to encourage the customers to use various sources of energy in an optimal way.

7.6 Rate for the deliveries exceeding 1,000 kVA

7.6.1 Current situation

The Distributor is responsible for the production equipment of the autonomous networks, the use of which brings about elevated costs.. These costs are explained for the most part by the production of thermal source, as well as distance, rendering supply with fuel difficult and expensive.

[46] According to the ARK, "*This heating cable would be used only in the case when conduit gets frozen (urgency), or is going to be (prevention). During last ten years this heating cable would have been in function five times for periods varying from one or two weeks* "

Although the Distributor is required to distribute electricity to any person who requests it on the territory covered by Distributor's exclusive authority[47], including autonomous networks, there is no rate in the Rates document for a subscription supplied from an autonomous network with a power demand exceeding 1,000 kVA. As stated in Article 269 of the Rates document, "*the rates in effect do not apply to deliveries of electricity exceeding 1,000 kilovolt-amps delivered from an autonomous network".* Consequently, a special contract approved by the government is required each time a subscription exceeds the limit set in Article 269. Until now, only one customer located on the Magdalen Islands has been the subject of a special contract.

This provision identifies that an additional load of more than 1,000 kVA, or 900 kW[48] has a major impact on autonomous network's production capacity. In effect, an additional load of 900 kW represents, according to the power station, an increase varying between 30 % and 600 % of 2004-2005's peak.[49] With the networks being developed and designed to meet the normal growth of the loads, the leeway available to the Distributor is insufficient and the additions of this size imply the recourse to additional production equipment, even the construction of a new power station resulting in significant delays.

In order to meet the potential needs for these customers, by avoiding the recourse to special contracts, the Distributor applies to the Régie to amend Article 269 by introducing a rate designed for customers of more than 1,000 kVA supplied from an autonomous network.

[47] In accordance with article 76 of the Law on The Régie of energy.
[48] That is to say 90 % of the greatest call of power connect in kilovolt-amperes for the subscriptions of small or average power as defined in article 1 of the text of the Rates.
[49] Except for the power station of the Islands - of-the-Madeleine and the reservoir power station Robertson.

7.6.2 Need for a new rate

Actually, few customers are covered by Article 269 since only one exceeds the limit of 1,000 kVA, the others having maximum power demand lower than 770 kVA. However, certain customers already considered an increase in their loads and a new customer could request a connection for a load exceeding the existing limit. The approval of a rate by the Régie will allow to avoid the recourse to special contracts and to inform the prospective customers of the applicable rate conditions.

The introduction of new MA rate to the Rates document will codify and clarify the rate conditions while maintaining the uniform application of the rate throughout the autonomous networks.

7.6.3 Marginal costs of production

By definition, the marginal cost of production reflects the cost to be incurred to supply an additional demand, at the margin of an original situation in regard to the balance between supply and demand. Thus, the marginal cost is a function of current and future supply and the nature of demand, that is to say the level, allocation in time and duration.

As for the available supply, autonomous networks are characterized by a fleet of power stations functioning on heavy or light diesel. Existing engines must be replaced at the end of their lifespan. The addition of an engine is required at the time when peak power reaches the power station's firm level of power. [50]

As for the demand, it acts on customer consumption that has a required power of more than 900 kW with a use factor in the order of 60 %. [51]

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[50] The criterion to determine the firm power is as follows:

- For Cap-aux -Meules: the total power of all units minus the power of two units with the most power, the whole multiplied by 90 %. This allows to keep a unit in mild reserve and to make maintenance on another unit in peak period without putting in danger the security of supply.
- For other networks: the total power of all units minus the power of the unit with the most power, the whole multiplied by 90 %.

[51] Corresponds to the monthly use factor of all customers of rate M whose maximum power demand is lower than 2 000 kW.

An additional load of this importance, given the size of power stations, gives necessity to proceed with the addition of a production unit, in addition to significantly increasing the energy produced at the power station.

The marginal cost of production suitable for this demand thus constitutes a fixed cost that corresponds to the required investment cost, and a variable cost that corresponds to the power station's operational cost (fuel, operation and maintenance).

The principal characteristics that determine the power station's production costs are:

- size of the production units (in MW) and space available at the power station for additional units;
- the type of fuel used (heavy or light diesel);
- location of the power station.

Each isolated network is unique in regards to the stated characteristics and implies a different marginal cost. However, in order to develop only one rate, applicable to all autonomous networks and which reflects as accurately as possible the costs that the Distributor will have to incur to supply to the future customers of rate MA, the Distributor must chose the following generic approach:

- use the marginal cost of the Cap-aux-Meules plant to represent the marginal cost applicable to the power stations operating on heavy diesel;

- use an average marginal cost, representative of the diversity of situations of power stations operating on light diesel and applicable to all other autonomous networks. [52]

Thus, in the case of a power station operating on heavy diesel, the selected reference unit is one with the same characteristics as the existing units existing in Cap-aux-Meubles' power stations. The investment cost in the order of $2 M/MW corresponds to that of the addition of a unit of approximately 6 MW.

Concerning other networks, the selected reference unit is a unit of 1MW operating on light diesel and whose costs correspond to the average of the costs of the various networks. The investment cost for a unit of 1 MW is between $2 M and $7 M, depending on whether it is necessary or not to rebuild the power station and according to the location of the network. The average cost increases to $4.5 M/MW.

The principal hypothesis for each one of these two types of units are summarized in the table below.

[52] Although the source of principal energy of the Lake-Robertson is of origin hydraulic, reliability is ensured by groups functioning the light diesel.

Table 34
Assumptions Used for Calculating Marginal Costs

Group production	Heavy diesel	Light diesel
Lifespan (years)	20	15
Size (MW)	6	1
Power available (%)	90	90
Investment cost (1) (k$/MW)	1,947	4,550

Note 1: In dollars of 2006.

These investment costs are then translated into annual installments adjusted to inflation on the basis of the unit's lifespan, by using Distributor's economic parameters[53] authorized by the Régie. They constitute the fixed part of the marginal costs of production and are presented in Table 35.

The variable costs associated with these production units consist of fuel cost, and maintenance and operational costs.

Fuel cost for Cap-aux-Meules is based on the costs forecast for year 2006. For the reference unit of other networks, the cost of the selected fuel[54] corresponds to the average of the costs forecasted for year 2006 for each power station, weighted against the energy produced by them.

The unit's variable maintenance costs are based on a marginal cost analysis for Cap-aux-Meules. This cost was used for the all networks.

[53] Nominal current rate of 6,97 % and rate of long-term inflation of 2 %.
[54] Let us note that these costs include the transmission and storage of the fuel and are expressed in cents per liter. To obtain the fuel costs in cents per kilowatt-hour, the average output of the units of production are taken into account, as well as the losses and the consumption of the auxiliary services of the power stations.

Table 35 presents the fixed and variable marginal costs that will be used to establish rate MA.

Table 35
Marginal Costs for an Increase in Production Capacity

Increase in production capacity	**Heavy diesel**	**Light diesel**
fixed charges (capital assets) (1)	174.63 $/kW – a year	490.97 $/kW – a year
Monthly fixed charges (2)	**14.35 $/kW – a month**	**40.35 $/ kW – a month**
Maintenance and operation (3)	2.37 ¢/kWh	2.37 ¢/kWh
Cost of fuel (4)	11.57 ¢/kWh	26.44 ¢/kWh
Variable expenses	**13.94 ¢/kWh**	**28.81 ¢/kWh**

Note 1: Increasing annual installment.
Note 2: For a 30 days monthly period.
Note 3: Increasing annual installment 2006.
Note 4: Forecast 2006.

7.6.4 Proposed structure of rate MA

Proposed rate MA reflects the production costs[55] associated with the electricity service to customers of more than 1,000 kVA located in autonomous networks. The structure of rate MA is based on the structure of rate M to which a second level of price for power and a third level for energy are added to reflect the signals of the marginal costs of production. No change is made to distribution and transmission costs.

Finally, rate MA is calibrated by a monthly use factor of 60% which corresponds to that observed by all customers of rate M with the maximum power demand lower than 2,000 kW.

The Distributor proposes to reflect the marginal costs in rate MA at the margin of the limit of 900 kW. The standing fixed costs of production will be recovered by the bias of the power premium applicable to billable kilowatts exceeding 900 kW. Thus, to the power premium of rate M are added the fixed costs of an increase in

[55] Heavy diesel feeds the power station of Cap-aux-Meubles and light diesel - all the other power stations.

production capacity, $14.35/kW for a power station operating on heavy diesel and $40.35 /kW for a power station operating on light diesel.

As for the variable expenses, the Distributor proposes to recover them with a third tier of energy. The threshold of this third tier is fixed to 390,000 kWh per month, which corresponds to the power consumed for a load of 900 kW with a monthly use factor of 60 %. The price of this tier is obtained by replacing rate M price of energy of 2.56 ¢ / kWh with the autonomous networks' variable component of the marginal costs of production, which reflects the type of fuel used. As presented in Table 35, these marginal costs differ clearly according to whether it is electricity produced by a power station operating on heavy diesel (13.94 ¢ / kWh) or light diesel (28.81 ¢ / kWh).

So that the price signal can follow the trend of the prices of heavy or light diesel, the "cost of fuel" component will be indexed on October 1 of each year according to market prices. [56]

Tables 36 and 37 illustrate the price calculations for the second tier of power and third tier of energy of rate MA when electricity is produced from a power station operating on heavy or light diesel.

[56] This will be done on the basis of the data published in Bloomberg Financial Markets Commodities News "Oil Buyer' S Guides", such as detailed in Hqd-13, document 4.

Table 36
Rate Structure of the MA Rate – Heavy Diesel

Year 2005	Power ($/kW)		Energy (¢/kWh)		
	1st block	**2nd block**	**1st block**	**2nd block**	**3rd block**
	< = 900 kW	> 900 kW	0 to 210,000 kWh	210,000 to 390 000 kWh	Remainder of energy
Basic components of the M rate	12.60	12.60	3.94	2.56	N/a
Fixed marginal cost	-	14.35	-		-
Cost of fuel	-	-	-	-	11.57
Operation and Maintenance	-	-	-	-	2.37
MA Rate	**12.60**	**26.95**	**3.94**	**2.56**	**13.94**

As an indication, in a heavy diesel network, the average unit price for a customer with a load of 1,500 kW and use factor of 60 % is 11.78 ¢ / kWh given that he benefits from 900 kW and the volume of energy corresponds to the prices of rate M.

Table 37
Rate Structure of Rate MA – Light Diesel

Year 2005	Power ($/kW)		Energy (¢/kWh)		
	1st block	2nd block	1st block	2nd block	3rd block
	< = 900 kW	> 900 kW	0 to 210,000 kWh	210,000 to 390,000 kWh	Remainder of energy
Basic components of the M rate	12.60	12.60	3.94	2.56	N/a
Fixed marginal cost	-	40.35	-	-	
Cost of fuel	-	-	-	-	26.44
Operation and Maintenance	-	-	-	-	2.37
MA Rate	**12.60**	**52.95**	**3.94**	**2.56**	**28.81**

As an indication, in a light diesel network, the average unit price for a customer with a load of 1,500 kW and use factor of 60 % is 20.11 ¢ / kWh given that it benefits from 900 kW and the volume of energy corresponds to the prices of rate. M.

7.7 Domain of Application

The new rate MA will apply to subscriptions supplied from autonomous networks whose maximum power demand exceeds 900 kW. When there is more than one subscription at the same location that uses electricity in similar ways, the sum of the maximum power demand is considered in the establishment of the load.

It should be reminded that no customers are currently targeted by rate MA. In order to account for the only customer who exceeds the limit and has a special contract, the Distributor proposes particular conditions of application for any eventual increase in load beyond what is specified in the contract.

For this customer, rate M will be applied up to the available power specified in the contract and corresponding volume of energy; the surplus will be billed at rate MA.

Moreover, the Distributor asks for a thirty months notice before serving the customer in order to allow for planning of the needed procurement.

7.7.1 Modifications of wording

The wording of rate MA is presented in document HQD-13, document 4. It should be noted that Article 2 of Section 1 of Conditions of Service will have to be repealed [57] for the approval of the Régie of a rate applicable to deliveries exceeding 1,000 kVA delivered from an autonomous network. Consequently, provisions of this document will apply henceforth to the extension and modifications of networks for connections of loads exceeding 1,000 kVA delivered from an autonomous network.

7.8 Definition of "autonomous network"

The definition of "autonomous network" in the Rates document uniquely targets networks where electricity is produced by power generating units operating on fossil fuels, gas turbines, or wind mills. This definition, adopted in 1982, does not reflect the possibility that the networks can be supported by renewable source of energy like hydraulics. The applicable definition should, like that of Conditions of Service, cover all networks detached from the principal network.

It would be appropriate to bring up to date the definition of 1982 and to harmonize the definitions by adopting that of the Conditions of Service, which rests on fundamental characteristic of these networks, that is to say their autonomous character, and avoids any ambiguity that would be brought forth by the use of two different definitions.

[57] See appendix F.

8 PROPOSED RATES

8.1 New framework of rates

The new rate framework is presented in HQD-13, Document 3.

8.2 Calculation of new prices

The structure of a rate consists of several elements grouped into three components: the charge of subscription, power and energy. Each one of these elements are allocated a price expressed in ¢ / day or $ / month, in $ / kW and in ¢ / kWh to which apply certain constraints to meet customers' need in simplicity. The two main constraints determined by the Distributor are as follows:

- prices are limited to two decimals.[58] Among others, prices for energy (¢ / kWh) and power ($/kW) are limited to two digits after the decimal point;
- applicable prices on a monthly or weekly basis must be divisible by the corresponding number of days in order to ensure service invoicing for a different number of days.

The increase in rates consists of:

- modification of price of the components according to the reserved parameters;
- adjustment of prices so that they comply with the constraints mentioned previously;
- ensuring that the final result, that is all rates of the same category of consumers, generate additional revenues equivalent to the proposed rate increase.

[58] Except the supply credits.

For each rate category, the elements of the affected rates have been modified according to this procedure.

It should be emphasized that the Distributor carries out, if necessary, specific adjustments that permit to ensure continuity between the rates. As an example, the power premium ofrate G-9 can only be increased by steps of 0.03 $/kW due to the requirement of being divisible by 30. However, this premium must be adjusted according to the evolution of the M rate [59] power premium, whose increase is 2.1 %. The premium of rate G-9 could thus be increased to $3.75 /kW, which is an increase of 1.6 %, or to $3.78 /kW, which represents an increase of 2.4 %. The selected option was to bring the premium to $3.78 /kW, which corresponds to an increase close to that of rate M, although higher. Once this choice is in effect, the Distributor then adjusts the price of energy of rate G-9 to 8.37 ¢ / kWh, which is an increase of 3.2 %, in order to reach an increase of 3 % of the revenues from this category of customers.

9 MODIFICATIONS MADE TO THE RATES DOCUMENT

The modifications made to the text Rates document, as well as their justification, are detailed in HQD -13, Document 4. However, considering the efficacy and due to the volume of documents, the rate prices have not been modified in accordance with the framework outlined in Hqd-13, Document 3. They will be, following the decision of the Régie on this application and in accordance with the update of the rates framework that will then be produced.

The Rates document initially was the subject of a new numbering system. The objective is to bring stability to the numbering system of a very large amount of items when items or rates are added or withdrawn from the document. The proposed numbering system is based on a sequence

[59] See justification in case R-3541-20 04, Hqd-1, document 3, page 31.

that is specific to each chapter. Thus the later modifications that will be made to a rate will not have an impact on the numbering of other chapters or others rates. This modification will minimize the corrections that must be made to the documents used, among others, by the Distributor for internal training. It will also permit to stabilize the reference to the items that are frequently used in references to the items of credits for power supply of medium or high voltage, as well as readjustment for losses from transformation. Appendix G presents the proposed numbering system and its application in the Rates document. Starting from year 2006, this document will carry the title of Rates and Conditions of the Distributor, in order to correspond to the name used in the Rates document.

Other modifications, of a syntax nature, were also made in order to clarify the text of the respective items.

9.1 Decision D-2004-170

Within the framework of Request R-3531-2004, the Distributor requests to repeal rate BT that includes a series of commercial measurements. Decision D-2004-170 of the Régie implies two rate options, which will affect the text of the Rates.

9.1.1 Repeal of rate BT

The Régie accepted that rate BT be repealed on April 1, 2006. Consequently, the Distributor proposes the withdrawal of sub-sections 1 and 2 from Section 12.

9.1.2 Transitional rate for the uses of photosynthesis

The Régie accepted that a transitional rate be offered for the uses of photosynthesis. This rate, in conformity with the calculation method set by the Régie, is presented in Articles 261 to 264 of sub-section of Section XII entitled: “Sub-section 3 – Transitional Rate”. Taking into account the repeal of rate BT, it is proposed to transfer sub-section 3 after Section 4 from Chapter 4 with the title "Transition Rate – Photosynthesis" and to preserve only the articles of rate BT necessary for the application of the transitional rate.

9.2 Interpretative provisions

In the interpretative provisions chapter, the definition of municipal network is introduced in order to conform to the Régie Act. Moreover, the definitions of housing, rooming house for rent, autonomous network and voltage are modified.

9.3 General rates of low power

As for flat rates of low power, the modifications are as follows:

- The invoiced power threshold changes from 45 to 50 kW and the threshold of the 1st tier changes from 13,200 to 15,100 kWh.
- Regarding winter activities, retrofitting, cancelled in 1997, is reintroduced so that it is independent of the future rate adjustments.
- As for rate GD, the text now specifies that the resale of energy to a third party is not allowed, as for rate LD.

9.4 General rates for medium power

In the case of general rates for medium power, the modifications are as follows:

- Introduction in regards to the article on contracted power, a rule specifying that the transition from rate G-9 to rate M must take into account the minimum billable power of the customer at rate G-9.
- On the level of Article 4.8's wording, a portion of the text is removed in order to ensure a coherence with the Conditions of Service in which refunding is established on the basis of average kW rather than on the maximum power demand.
- Finally, rate MR is withdrawn given that the Distributor requires its repeal, whereas the interruptible electricity option is added in accordance with the proposal of the Distributor in Request R-3531-2004 regarding the request for repeal of rate BT, as mentioned in Section 6.

9.5 General rates for high power

With regard to rates for high power, several modifications are formulated, they are:

- Reintroduction of the retrofitting of 0.5 % applicable to municipal networks and cancelled in 1997.
- Withdrawal of rate LC given that the Distributor requires its repeal and adjustment of rate LP consequently.
- For rate H, introduction of a rule which accounts for the minimum billable power of rate H at the time of transition from rate H to rate L or M.

- In the case of rate LD, introduction of methods for transitioning rate LD, firm or non-firm option, towards rate L.
- As for the running in of industrial processes, the title is modified for running in new equipment.
- The option for payment in American dollars is modified in order to take into account the economic parameters that result from the decisions of the Régie. Moreover, the option accounts for the customer's choice to adhere to other options
- The request for repeal of rate LR involves its withdrawal from the Rates document as well as reformulation of Article 6.38 of the option of interruptible electricity.
- As for the interruptible electricity options, the reference to hourly price of consumption during the period of renewal is now that of the option of additional electricity.
- Addition of the option of additional electricity as mentioned in Section 6.

9.6 Applicable rates for autonomous networks

As mentioned in Section 7.6, introduction of rate MA for power demand higher than 900 kW for autonomous networks. Moreover, the removal of sub-section 3 to take into account the repeal of rate BT.

9.7 Additional provisions

Article 21, supply credit for medium or high voltage, from the Rates document is moved to the chapter on additional provisions following Article 10.2 (304). Moreover, given

that there are no customers supplied with voltage higher than 50 kV, the levels of voltage beyond this threshold are withdrawn.

The text of the readjustment for losses of transformation, Article 10.4, is reformulated in order to make its application simpler.

9.8 Rate of Visilec service

Article 11.6 is reformulated in order to clarify the applicable notice before the service is available and the beginning of the rate application.

APPENDIX A: Impact of Change of Invoiced Power Threshold From 45 kW to 50 kW

(Examples of monthly invoices)

- RATE G: Impact of the Change of Invoiced Power Threshold From 45 kW to 50 kW

(Examples of monthly invoices)

	Current Rate G at 45 kW	Rate G at 50 kW
Threshold of power (kW)	45	50
Energy threshold (kWh)	13 200	15 100
Basic Charge ($/kW)	12.33	12.33
Power ($/kW)	14.40	14.40
Energy 1st block	7.86	7.86
Energy 2nd block	3.96	3.96
Invoice minimum	36.99	36.99

	Customer Profile			Invoice with rate G at 45 kw			Invoice with rate G at 50 kw			
	Use factor	Energy	Maximum Power Demand	Energy	Power	Total	Energy	Power	Total	Variation
	(%)	(kWh)	(kW)	($)	($)	($)	($)	($)	($)	(%)
Case 1: Customer not invoiced for power (maximum power demand of 45 kW or less)										
Low fuel consumption (less than 13 200 kWh)	N/D	8 000	-	629	-	641	629	-	641	0.0%
High consumption (more than 15 100 kWh)	N/D	17 000	-	1 188	-	1 200	1 262	-	1 274	6.2%
Case 2: Customer who will not be invoiced any more for power (maximum power demand > 45 kW and <=50 kW)										
Low use factor	36%	12 200	47	959	29	1 000	959	-	971	-2.9%
Strong use factor	50%	17 000	47	1 188	29	1 229	1 262	-	1 274	3.7%
Case 3: Customer invoiced for power (maximum power demand of more than 50 kW)										
Very Low use factor	1%	300	55	24	144	180	24	72	108	-40.0%
Low use factor	31%	12 200	55	959	144	1 115	959	72	1 043	-6.5%
High use factor	69%	42 200	85	2 186	576	2 774	2 260	504	2 776	0.1%

APPENDIX B: Historic Prices on Reference DAM Market (NYISO Zone M)

Historical prices on Reference DAM market (NYISO Zone M, including exit cost)

- Average Price in $US MW/h -

Year	Winter (Peak and Off-peak	Winter (Peak)	Winter (Peak) 300 hours +	Winter (Peak) 200 hours +	Winter (Peak) 100 hours +
2000	42.23	48.04	76.95	84.28	96.09
2001	43.37	48.88	67.77	72.19	80.94
2002	35.27	38.65	60.47	64.83	71.08
2003	61.75	70.86	106.66	114.45	126.96
2004	59.10	66.01	87.68	93.50	103.64
2005	62.37	68.96	88.76	96.15	110.40
Average	**50.68**	**56.90**	**81.38**	**87.57**	**98.18**
Average 2003-2005	**61.07**	**68.61**	**94.37**	**101.37**	**113.67**

Note 1: The period of winter refers to the period from 1st January to March 31 and December of the same year.

Note 2: The distinction between peak and off-peak periods does not take public holidays in account.

Note 3: The year 2005 covers only the period from 1st January to March 31.

APPENDIX C: Example of Calculation of Invoice with the Option of Additional Electricity for Large Power Customers

Reference Month						
Period	**Days**	**kW**	**KVA**	**kWh**	**F.U.**	**F.P.**
Jan-05	31	7 200.0	7 272.0	4 665 600.0	87.1%	99.0%
Feb-05	28	7 350.0	7 423.5	4 762 800.0	96.4%	99.0%
March-05	31	7 100.0	7 171.0	4 600 800.0	87.1%	99.0%
The last 3 months average:	**30.0**	**7 216.7**	**7 288.8**	**4 676 400.0**	**90.0%**	**99.0%**
Average hourly power:				**6 495.0 kW**		

Detail of calculation

	from	to	days	hours
Period of consumption:	2005-07-03	2005-08-04	33	792

Monthly price of additional electricity: 0.08 $/kWh

Consumption of the period:

Power:	9 328.0 kVA	Power factor:	94.3%
Power demand:	8 800.0 kW	Use factor:	75.7%
Contractual demand:	- -		
Consumption of energy:	5 276 808 kWh	unauthorized kWh:	2 000 kWh

Calculation of the reference components:

Average Power:	7 288.8 kVA	Hourly average power (a):	6 495.0 kW
Average Power demand:	7 216.7 kW	Period of consumption (b):	792 hours
Average maximum power:	7 216.7 kW	Consumption of energy (a x b):	5 144 040 kWh

a) Reference Invoice for the period

Power Premium:	7 216.7 kW	X	$11.520 X	792 / 720	$91 449.60
Credit of power supply:	7 216.7 kW	X	$-2.2890X	792 / 720	$-18 170.85
Readjustment due to losses of transformation:	7 216.7 kW	X	$-0.1386X	792 / 720	$-1 100.25
Reference Energy:	5 144 040 kWh	X	$0.0256		$131 687.42
Total - Reference Invoice:					**$203 865.93**

b) Invoice of additional electricity for the period

Real energy for the period:	5 276 808 kWh
Less energy of reference:	5 144 040 kWh
Additional electricity for the period:	**132 768 kWh**

If positive additional electricity	132 768 kWh	X 0.0800 $/kWh	**$10 621.44**
If negative additional electricity	0 kWh	X 0.0256 $/kWh	**$0.00**
Total - Invoice of additional electricity:			**$10 621.44**

c) Readjustment to account for variation of the power factor

	Reference		Reality	
Maximum power demand:	(PMArf)	7 216.7 kW	(PMAre)	8 861.6 kW
Real maximum power:	(PMRrf)	7 216.7 kW	(PMRre)	8 800.0 kW
Variation:		**0.0 kW**		**61.6 kW**
Effective power price (EPP):	9.09 $/kW/month			
Total - Premium of readjustment FP:	[(PMAre - PMRre) - (PMArf - PMRrf)] * PEP =			**$616.10**

d) Penalty for consumption beyond the reference in unauthorized period

kWh consumed beyond the reference in unauthorized period:	2 000 kWh	X 0.500 $/kWh

Total - Penalty:	**$ 1000.00**

Total of the invoice (a+b+c+d)	**$ 216 103.47**

Average unit cost: **$ 0.0410 /kWh**

APPENDIX D: Example of Application of Credits and Penalties Associated with the Option of Interruptible Electricity for Medium Power Customers

Illustration of credits calculation applied to one day of interruption
Interruptible electricity option for medium power customers

Confirmation before 15:00 day before
2 hourly interruptions

Hour of the day	Average hourly power of hours in the month A kW/hour	Real average hourly power B kW/hour	Stopped energy C A - B kW/hour	Hourly credit without surplus D C * 0.07 ¢/kWh $	Surplus (on the 15 minutes basis) E kW
1		637			
2		647			
3		657			
4		666			
5		676			
6		706			
7	680	421	259	$18.13	-
8	680	440	240	$16.80	-
9	680	415	265	$18.55	-
10	680	425	255	$17.85	-
11		715			
12		705			
13		711			
14		706			
15		715			
16		706			
17	680	670 *			171
18	680	426	254	$17.78	-
19	680	420	260	$18.20	-
20	680	430	250	$17.50	-
21		706			
22		715			
23		711			
24		706			
	Summon variable appropriations of the day			$124.81	
Fixed credit	680 kW	475 kW	205 kW	$1.25 /kW =	$256.25
Penalty	670 kW	499 kW	171 kW	$0.25 /kW=	$42.75

* Reading of 670 kW during a 15 minute period during one hour and considering the basic power for other periods of integration

Source data		
Basic power	475	kW
Limit surplus	499	kW
Fixed credit (4 winter months)	1.25	$/kW
Variable credit	0.07	¢/kWh
Penalty on surplus	0.25	$/kW

APPENDIX E: Historic Rates Applicable in Autonomous Networks North of the 53rd Parallel

Rate components	Règ.	# 225 * Jan 1981	#290 Jan 1982	#321 Jan 1983	#346 Feb 1984	#383 May 1985	#403 May 1986	#429 May 1987	#453 May 1988	#480 May 1989	#499 May 1990	#499 May 1991	#569 May 1992	#586 May 1993	#586 May 1994	#618 May 1995	#642 May 1996	#658 May 1997	#663 May 1998	Jan 2004	April 2004	April 2005
Rate D																						
Subscription Basic Charge	$/day	0.200	0.230	0.245	0.258	0.266	0.280	0.293	0.304	0.317	0.340	0.362	0.373	0.376	0.377	0.377	0.379	0.385	0.390	0.4017	0.4064	0.4064
Energy																						
20 first kWh/ day	¢/kWh	2.40	2.70	2.90	3.06	3.15	3.32	3.47	3.60	3.76	4.03	4.31	4.45	4.51	4.54	4.54						
30 first kWh/ day	¢/kWh																4.59	4.66	4.74	4.88	4.95	5.02
The remainder of energy	¢/kWh	15.00	15.00	16.00	18.00	18.00	19.00	20.00	21.00	22.00	23.60	25.20	26.00	26.30	26.50	26.50	26.50	26.50	26.50	27.30	27.68	28.07
Power																						
Surplus of 50 kW in winter	$/kw	N.A.	0.60	0.66	0.69	0.72	0.75	0.90	1.50	1.60	1.74	1.89	1.98	2.01	2.04	2.04	3.00	3.03	3.06	3.15	3.21	3.96
Flat rates																						
Dissuasive price	¢/kWh	**	**	43.00	45.00	45.00	45.00	45.00	47.00	48.00	51.60	55.20	57.13	57.99	58.57	58.57	58.57	58.57	58.57	60.33	61.18	61.91

* Regulation 280 amends Regulation 225 in order to introduce a dissuasive rate.
** The distributor stops the electricity delivery.

APPENDIX F: Details of Modifications in the Text of Conditions of Service for Autonomous Networks

Conditions of Service in effect	Revised version	Justification of modification
Chapter I – General provisions **Section I – Area of application** **1.** Subject to the provisions of Chapters III and IV, which do not apply to the service of low voltage and medium voltage in the limits specified in Article 32, the present regulatory provisions establish conditions of electricity service for Hydro-Quebec. **2.** The present regulatory provisions do not apply to electricity service exceeding 1,000 kilovolt amperes in an autonomous network**.**	**Chapter I – General provisions** **Section I – Area of application** **1.** Subject to the provisions of Chapters III and IV, which do not apply to the service of low voltage and medium voltage in the limits specified in Article 32, the present regulatory provisions establish conditions of electricity service for Hydro-Quebec. **2.** ~~The present regulatory provisions do not apply to electricity service exceeding 1,000 kilovolt amperes in an autonomous network~~	Introduction of rate MA to the text of Rates that applies to deliveries of electricity exceeding 1,000 kilovolt-amps.
42. At the time of initial installation of a connection by Hydro-Quebec, the requestor must pay the connection expenses per the Rates, as well as the cost of a connection part that exceeds 30 meters of conduit measured according to the covered distance, to the advantage of the requestor according to one of the following:	**42.** At the time of initial installation of a connection by Hydro-Quebec, the requestor must pay the connection expenses per the Rates, as well as the cost of a connection part that exceeds 30 meters of conduit measured according to the covered distance, to the advantage of the requestor according to one of the following:	To allow the temporary electric heating during construction**.**

1° from the line which separates the private property from public property; 2° from the network In the case of an autonomous network located north of the 53rd parallel, if the new connection delivers power to supply buildings or water heating loads, special connection charges under the terms of the first subparagraph are special connection charges for autonomous network specified in the Rates. These charges also apply during a conversion to electricity of space or water heating system.	1° from the line which separates the private property from public property; 2° from the network In the case of an autonomous network located to north of the 53rd parallel, if the new connection delivers power to supply buildings or water heating loads, special connection charges under the terms of the first subparagraph are special connection charges for autonomous network specified in the Rates. These charges also apply during a conversion to electricity of space or water heating system. Special connection charges do not apply when connection feeds the loads of temporary electric heating for drying joints and paint during construction.	
When there is an interruption or work on Hydro-Quebec equipment subsequent to the initial installation of connection, the one who requires or causes this interruption or work, must pay to Hydro-Quebec the cost of this work, except for the cases when the work is required to follow on a defect in connection or Hydro-Quebec	When there is an interruption or work on Hydro-Quebec equipment subsequent to the initial installation of connection, the one who requires or causes this interruption or work, must pay to Hydro-Quebec the cost of this work, except for the cases when the work is required to follow on a defect in connection or Hydro-Quebec	

network. These costs are calculated in conformance with Article 59	network. These costs are calculated in conformance with Article 59	

APPENDIX G: Proposed New Classification of Rates and Conditions of the Distributor

In force			**Proposal**			
Section		No Articles	Chapter	Section	Sub- section	No. Articles
I	**Interpretive provisions**	1 to 2	1			1.1 and 1.2
II	**Residential rates**		2			
	Sub-section 1 - General	3 to 6		1		2.1 to 2.4
	Sub-section 2 - D Rate	7 to 16		2		2.5 to 2.14
	Sub-section 3 - DM Rate	17 to 22		3		2.15 to 2.19
	Sub-section 4 - DT Rate	23 to 33		4		2.20 to 2.30
	Sub-section 5 - DH Rate	34 to 39		5		2.31 to 2.36
III	**Flat rates for small power**		3			
	Sub-section 1 - G Rate	40 to 48		1		3.1 to 3.9
	Sub-section 2 - G-9 Rate	49 to 55		2		3.10 to 3.16
	Sub-section 3 - GD Rate	56 to 60		3		3.17 to 3.21
	Sub-section 4 – Transitional Rate *(snow manufacturing)*	61 to 62		4		3.22 to 3.23
IV	**Flat rates for medium power**		4			
	Sub-section 1 - M Rate	63 to 72		1		4.1 to 4.10
	Sub-section 2 - G-9 Rate	73		2		4.11
	Sub-section 3 - GD Rate	74		3		4.12
	Sub-section 4 - Transitional Rate *(snow manufacturing)*	75 to 80		4		4.13 to 4.18
	Addition: Transitional Rate - Photosynthesis	N.A.		5		4.19 to 4.30
	Sub-section 5 – running in of new equipment	81 to 85		6		4.31 to 4.35
	Sub-section 6 – Running in within the framework of the experimental program of new technologies of heating	86 to 90		7		4.36 to 4.40
V	**Repealed: Option for real time rate- Rate MR.**	91 to 102	N.A.	N.A.	N.A.	N.A.

In force			Proposal			
Section		No. articles	Chapter	Section	Sub - section	No articles
N.A.	Addition: Interruptible option of electricity for customers of medium power	N.A.	4	8		
	Sub-section 1 – General provisions	N.A.			8.1	4.41 to 4.43
	Sub-section 2 – Credits and conditions for application	N.A.			8.2	4.44 to 4.48
VI	**Flat rates for large power**		5			
	Sub-section 1 - Rate L	103 to 114		1		5.1 to 5.12
	Repealed: Sub-section 2 - Rate LC	115 to 130		N.A.	N.A.	N.A.
	Sub-section 3 - Rate LP	131 to 144		7		5.41 to 5.52
	Sub-section 4 - Rate H	145 to 148		2		5.13 to 5.16
	Sub-section 5 - Rate LD	149 to 159		3		5.17 to 5.28
	Sub-section 6 - Rate of transition	160 to 164		4		5.29 to 5.33
	Sub-section 7 - Grinding of new equipment	165 to 169		5		5.34 to 5.38
	Sub-section 8 - Tests of equipment	170 to 171		6		5.39 and 5.40
N.A.	**Options for large power**	N.A.	6			
VII	**Load Maintenance Rate**			1		
	Sub-section 1 - Industrial customers of large power of the Distributor	172 to 180			1.1	6.1 to 6.9
	Sub-section 2 - Industrial customers of large power of municipalities	181 to 183			1.2	6.10 to 6.12
VIII	**Option for payment in American dollars**			2		
	Sub-section 1 - Industrial customers of large power of the Distributor	184 to 193			2.1	6.13 to 6.22
	Sub-section 2 - Industrial customers of large power of municipalities	194 to 196			2.2	6.23 to 6.25

In force			Proposal			
Section		No. articles	Chapter	Section	Sub-section	No. articles
IX	**Repealed: Option for rate in real time - Rate LR**	197 to 210		N.A.	N.A.	N.A.
X	**Interruptible option for electricity for customers of high power**			3		
	Sub-section 1 - General provisions	211 to 213			3.1	6.26 to 6.28
	Sub-section 2 - Credits and conditions for application	214 to 223			3.2	6.29 to 6.38
XI	**Option for rate insurance**		6	4		
	Sub-section 1 - New industrial customers of large power of the Distributor	224 to 234			4.1	6.39 to 6.49
	Sub-section 2 - New industrial customers of large power of municipalities	235 to 237			4.2	6.50 to 6.52
	Addition: Option for additional electricity	N.A.		5		
	Sub-section 1 - General provisions	N.A.			5.1	6.53 to 6.57
	Sub-section 2 - Conditions for application	N.A.			5.2	6.58 to 6.64
XII	**Repealed: Bi-energy rate**		N.A.		N.A.	N.A.
	Sub-section 1 - General	238 to 246		N.A.	N.A.	N.A.
	Sub-section 2 - Rate BT	247 to 260			N.A.	N.A.
	Sub-section 3 – transitional rate	261 to 264	4	5		4.19 to 4.30
XIII	**Rates applicable to autonomous networks**					
	Sub-section 1 - Residential rates application methods customers of autonomous networks	265 to 267		1		7.1 to 7.3
	Sub-section 2 - General rates Application methods of low and	268 to 269		2		7.4 to 7.7

In force			Proposal			
Section		No articles	Chapter	Section	Under section	No articles
	medium power for the customers of autonomous networks		7			
	Repealed: Sub-section 3 - Bi-energy rate application methods of section XII for customers of autonomous networks	270		N.A.	N.A.	N.A.
XIV	**Rates with fixed price for general use**	271 to 274	8			8.1 to 8.4
XV	**Rates for street lighting**		9	1		
	Sub-section 1 - General	275 to 276			1.1	9.1 to 9.2
	Sub-section 2 - General service rate of street lighting	277 to 281			1.2	9.3 to 9.7
	Sub-section 3 - Complete service rate of the of street lighting	282 to 287			1.3	9.8 to 9.13
XVI	**Rates for Security lighting**	288 to 290		2		9.14 to 9.16
XIX	**Additional provisions**		10			
	Sub-section 1 - General	303 to 307		1		10.1 to 10.6
	Sub-section 2 - Restrictions	308 to 310		2		10.7 to 10.9
	Sub-section 3 - Invoicing Methods	311		3		10.10
	Sub-section 4 - Provisions relating to the text of rates and conditions of the Distributor	312 to 315		4		10.11 to 10.14
XVIII	**Rate for Visilec service**	296 to 302	11			11.1 to 11.7
XVII	**Expenses related to electricity supply**	291 to 295	12			12.1 to 12.5