RÉPONSE DU RNCREQ À LA DEMANDE DE RENSEIGNEMENTS N° 1 DE LA RÉGIE DE L'ÉNERGIE RELATIVE À LA DEMANDE RELATIVE À L'ÉTABLISSEMENT DES TARIFS D'ÉLECTRICITÉ POUR L'ANNÉE TARIFAIRE 2008-2009

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1. Référence : i) Pièce B-1- HQD-12, document 1, page 9 ;
ii) Pièce B-1- HQD-12, document 3, page 40.

Préambule :

Référence i)

« Dans la stratégie énergétique du Québec 2006-2015, « *le gouvernement souhaite qu'Hydro-Québec implante progressivement au Québec une tarification selon la saison et l'heure d'usage. Le gouvernement demande à Hydro-Québec de présenter une demande à la Régie de l'énergie en ce sens en 2007. Ces propositions ne devront pas avoir pour impact d'augmenter la facture globale de l'ensemble des consommateurs* »» .

> According to Quebec's energy strategy 2006-2015, *"the government wants Hydro-Quebec to progressively implement rates that vary according to the season and the hour of use in Quebec. The Government asks Hydro-Quebec to present an application to that effect to the Régie de l'énergie in 2007. The result of these proposals must not be to raise customers' overall bills."*

Référence ii)

« *Dans l'optique d'accroître le signal de prix, le Distributeur considère qu'il est préférable de modifier le prix de la 2e tranche d'énergie que de modifier le seuil de la 1re tranche. D'une part, la modification du seuil de la 1re tranche ne permet pas de donner un meilleur signal de prix aux coûts marginaux et d'autre part, il est difficile de clairement cibler les clients touchés par une modification importante de la structure même du tarif.*

Compte tenu du risque de facturer en 1re tranche du chauffage en haussant le seuil d'énergie en hiver ou de facturer en 2e tranche des besoins de base en baissant le seuil d'énergie en été, le Distributeur préfère maintenir le seuil de la 1re tranche à 30 kWh par jour, hiver comme été ».

With the aim of improving the price signal, the Distributor deems it preferable to modify the price of the second block than to modify the threshold of the first block. On the one hand, modifying the threshold of the first block does not improve the marginal cost signal. On the other hand, it is difficult to clearly target customers affected by a significant modification to the rate structure itself.

Given the risk of billing heating in the first block if the threshold is increased in the winter period, or the risk of billing basic requirements in the second block if the threshold of the first block in the summer period is decreased, the Distributor prefers to maintain the first block threshold at 30 kWh per day for both the winter and summer periods.

Demande :

1.1 Veuillez commenter l'opportunité de faire varier le seuil de la 1re tranche d'énergie en fonction de la saison.

Please comment on the desirability of varying the threshold of the first block on a seasonal basis.

Response 1.1

We agree with the Distributor that increasing the size of the first block for all residential customers on a seasonal basis is not a useful approach.

First, it does not, in our view, respond to the government request described in reference i). While not explicitly stated, it seems clear that the Energy Strategy is calling for prices that more closely reflect the cost of service as it varies on a seasonal and hourly basis. To do so would obviously require <u>increasing</u> the price (or reducing the first block) in winter, which is the opposite of the option discussed by the Distributor.

Our proposal is based on three blocks instead of two, with a small and less expensive first block. This has the effect of setting an initial block that nearly all consumers use for their lights and appliances, a second block for typical water heat use, and a third block for space heat use. (The possibility of expanding the second block for existing space heat consumers is presented as an option.) Our proposal is thus not subject to the concerns raised by the Distributor in the second paragraph of reference ii). Heating will hardly ever be billed in the first block, nor will basic needs be billed in the 2nd or 3rd block. Even under our winter option, these effects would be very unlikely to occur.

Therefore the space heat consumer would still be seeing a price that would encourage frugal use of the scarce resource, even though they would receive a significant benefit in the size of their bill from the expanded second block.

2. Références : i) Pièce B-1- HQD-12, document 3, page 27 ;
ii) Pièce B-1- HQD-12, document 3, page 56.

Préambule :

Référence i)

« *La prime de puissance joue un rôle équivalent à celui d'une 3e tranche de consommation, c'est-à-dire qu'elle permet d'appliquer un prix plus élevé pour la consommation à la marge de la 2e tranche. Ce faisant, pour ces clients, il existe un appariement clair entre leurs choix énergétiques — soit la gestion de leur appel de puissance en hiver — et leur facture alors qu'une 3e tranche en énergie ne pourrait être associée à aucune consommation particulière* ».

The demand charge plays a role that is equivalent to the role of a third consumption block. In other words, it makes it possible to apply a higher price for consumption that is marginal to the second block. In doing so, for these customers, there is a clear link between their energy choices –between the management of their power demand in winter- and their bills, whereas a third energy block could not be associated with any specific consumption.

Référence ii)

« *Dans le but d'étendre la portée du signal de prix en puissance pour assurer une meilleure gestion des appels de puissance, le Distributeur propose de facturer annuellement la puissance au-delà de 50 kW. Cette modification permettra à la prime de puissance de jouer son rôle équivalent à une 3e tranche d'énergie durant toute l'année* ».

With the aim of expanding the price signal for power to improve the management of power demands, the Distributor proposes to bill power exceeding 50 kW on an annual basis. This modification will allow the demand charge to fulfill a role that is similar to a third block throughout the year.

Demandes :

2.1 Veuillez commenter l'affirmation du Distributeur à l'effet qu'une 3e tranche en énergie ne pourrait être associée à aucune consommation particulière.

Please comment on the Distributor's affirmation to the effect that a third block of energy cannot be associated with any particular end use.

Response 2.1

Table 5 of HQD-12, Document 3, which shows average consumption for all households, indicates that typical consumption is about 20 kWh/day for lights and appliances, 9 kWh/day for water heat, and that usage above 29 kWh/day is typically associated with space heat. While there is not a perfect correlation between the blocks and the end-uses, there is clearly a cost-justification for a third block.

It is important to note that our 3-block proposal is very different from that discussed by HQD in its evidence. Our proposal in effect splits the existing first block into two parts. It thus does <u>not</u> create a new threshold above the 30 kWh/day level.[1] The proposal discussed by HQD, on the other hand, is to add a third block <u>above</u> 30 kWh/day. We agree with HQD that a block starting higher than 30 kWh/day cannot be associated with a particular end use.

[1] Except in the option presented for extending the 2nd block for existing electric heating customers during the winter.

The residential demand charge discussed in reference ii) applies only to the largest residential consumers. Even at a purely space heat load factor of 20%, usage of 50 kW would imply consumption of 240 kWh/day, or 7,200 kWh per month. For customers of this extreme size, the demand charge is a reasonable way to hold them accountable for their demand. However, these customers represent only a very small percentage of total residential customers.[2] Furthermore, it seems likely that many of the Rate D customers with demand greater than 50 kW are agricultural customers with some commercial activities.

Another reason why it is appropriate to bill a capacity charge for residential loads of this size is that they typically involve dedicated transformers, and so there is little or no load diversity from a distribution planning perspective. For smaller space heat customers, on the other hand, there are multiple customers per transformer, and thus diversity benefits.

Given that the demand charge applies only to a very small minority of residential customers, it is not an adequate tool to ensure an appropriate price signal for space heating. We thus disagree with HQD's affirmation in reference i) that the demand charge fulfills a role similar to a third block.

3. Référence : Pièce B-1- HQD-12 document 3, page 54-55.

Préambule :

« *De plus, le balisage effectué permet de constater que peu de distributeurs offrent une tarification à plus de 2 tranches et que les structures tarifaires à 3 tranches sont généralement équivalentes en termes de consommation à la structure à 2 tranches du tarif D. Le Distributeur tient à rappeler ici que la prime de puissance applicable au tarif D joue déjà le rôle d'une 3e tranche de façon plus efficace* ».

In addition, the benchmarking that was carried out shows that few distributors offer rates with more than two blocks and, in terms of consumption, the three-block rate structures surveyed are generally equivalent to the two-block structure of Rate D. The Distributor wishes to restate that the demand charge applied to Rate D already plays the role of a third block in a more effective manner.

[2] According to HQD's bill frequency analysis, only 8.5% of residential customers use more than 150 kWh/day (the highest category for which figures are provided). The number exceeding 240 kWh/day must account for only a tiny proportion of total residential customers, as can also be seen in Figure 2 of HQD-12, doc. 3.

Demande :

3.1 Veuillez commenter l'affirmation du Distributeur à l'effet que les structures tarifaires à 3 tranches sont généralement équivalentes en termes de consommation à la structure à 2 tranches plus une prime de puissance pour les tarifs résidentiels.

Please comment on the Distributor's affirmation to the effect that 3-block rate structures are generally equivalent in terms of consumption to the 2-block structure with a capacity charge for residential rates.

Response 3.1

Few of the three-block (or four or five-block, in the case of California rates) even approach the level of consumption implied by a demand charge that comes into effect only at usage above 50 kW. At the average residential load factor of 47%, this would be consumption of 16,920 kWh in a month (47% load factor * 720 hours/month * 50 kW). By contrast, the California «baselines » are between 500 kWh/month and 1000 kWh/month, and the highest block rate applies to usage over 300% of baseline, or 1500 to 3000 kWh/month. The Avista three-block rate applies to usage over 1300 kWh/month.

If the capacity charge applied to usage over 10 kW, it would have the same effect as the 3-block rates of other utilities, applying to much, if not substantially all space heating consumption. At a 50 kW threshold, it is a rate that applies only to the most extreme residential use of electricity.

4. Références : i) Pièce C-9-8- RNCREQ - Rapport d'expertise de M. Lazar, page 1 ;

ii) Pièce C-9-8- RNCREQ - Rapport d'expertise de M. Lazar, page 24.

Préambule :

Référence i)

« *The most logical way to reform HQ residential rates to reflect costs and encourage the wise use of resources is to implement the following proposals :*

- *Reduce the basic monthly customer charge to a level that reflects metering, meter reading, and billing costs only;*

- *Reduce the rate for the initial block of usage and then hold it constant for an extended period of time, providing some rate and bill stability to modest users of electicity;*

- *Create an intermediate block, designed and priced to accommodate typical water heating usage, which has annual and time-of-day consumption patterns superior to those of space heating* ».

Référence ii)

Table 11. Three-Block Residential Rate Design Proposal

Demandes :

4.1 Veuillez indiquer si votre proposition de réduire le montant de la redevance, combinée à la réduction du seuil de la 1re tranche d'énergie et à la création d'une tranche intermédiaire entre 20 kWh/jour et 30 kWh/jour, est équivalente en terme de revenus générés et en terme de signal de prix à la proposition du Distributeur de geler le prix de la redevance et de hausser le prix de la 1re tranche. Veuillez élaborer.

Please indicate if your proposal to reduce the amount of the customer charge, combined with the reduction of the threshold for the first block and the creation of an intermediate block of 20 or 30 kWh/day, is equivalent in terms of revenue generated and in terms of price signal to the Distributor's proposal to freeze the customer charge and to increase the price of the first block. Please elaborate.

Response 4.1

Our proposal is designed to produce precisely the same amount of revenues as the Distributor's proposal. This is set forth in Table 11 (2008 rates) and Table 13 (2009 and 2010 rates, assuming 2% annual increases) of our written evidence.

The Distributor's proposal is to freeze the customer charge and to increase both the first and second blocks, increasing the second block by twice as much as the first block. (See HQD-12, Document 3, Section 2.25.)

By contrast, our proposal is to decrease the customer charge and to decrease the rate for the first block. The second and third blocks would be increased from current levels. The price signal from our proposal is superior to that of the Distributor, as the vast majority of consumers, and the overwhelming majority of energy consumed, would be subject to marginal prices that more closely approximate marginal cost. The end block of our proposal is $.08/kWh, while that of the Distributor is only $.0703. Given a marginal cost for both water heat and space heat in excess of $.10/kWh (see HQD-12, Document 3, Table 3), the price signal benefit of our proposal is quite evident.

4.2 Veuillez indiquer si votre proposition favorise les clients qui ne consomment pas régulièrement toute l'année (exemple : chalets) et ceux qui disposent d'une autre source d'énergie (mazout, gaz naturel, bois, etc.) pour le chauffage. Veuillez élaborer.

Please indicate if your proposal favours customers who do not consume electricity on a regular basis throughout the year (e.g. summer cottages) and those with another source of energy for space heating (oil, gas, wood, etc.). Please elaborate.

Response 4.2

Our proposal is more favorable to customers that consume small amounts of electricity every month, and less favorable to customers that consume large amounts of electricity every month. Summer cottages would probably benefit, because they have modest use in the summer and little or no use in the winter. By contrast, seasonal units in winter resort areas such as Mt. Tremblant would probably pay higher bills under our proposal, as the winter usage would push the customer into the third block, more than offsetting the savings from the lower customer charge an initial block rate.

The rate design would benefit consumers who use oil or natural gas space heat. It is noteworthy that both of these are commodities for which 100% of the supply is purchased at an unregulated market price, unlike electricity, where the heritage supply is provided at a cost-based price. Basically, the proposed rate design gives every customer (regardless of heating type) a more equal share of the cost benefit of that heritage supply, and prices space heating usage (regardless of heating type) at a level more commensurate with marginal cost. All consumers would pay a below-marginal price for their lights-and-appliances usage. Those using natural gas are already paying 100% of marginal cost for their space heating consumption, and my proposal would put electric heat consumers (particularly new electric heat consumers) on a more consistent basis to gas and oil heat consumers.

This approach could, under some circumstances, result in significant bill increases for electric heating customers. Based on our analysis of HQD's bill frequency data, we have found that, under our proposal, this effect is very limited. While average residential bills for electric heating customers increase by 7% during the winter, their bills for the remaining 8 months would increase, on average, by only 1.87%. The weighted average bill increase for these customers would thus be only slightly greater than under HQD's proposal.

In our view, this bill impact profile is acceptable. Furthermore, this approach accomplishes the result sought by the government in reference i) to Question 1.1, above, in that it increases rates for electric heating customers during the winter (when supply costs are higher) without increasing them substantially on average.

In the event, however, that the Régie finds these bill impacts (or those that flow from a different implementation than the one we propose) to be excessive, we have presented an option to mitigate it, which would extend the 2nd block in winter for existing electric heating customers only. The effect would be to maintain the price signal for marginal consumption for almost all existing electric heating customers, and to maintain the full price signal for new electric heating customers.[3]

It would, however, impose an additional administrative burden on HQD. The fact that many utilities in North America apply such rates suggests that this burden is manageable; however, it would be important to carefully evaluate it before adopting this approach.

[3] In order that heating choices for future construction be made based on marginal costs, it is important that new electric heating customers not benefit from the extended 2nd block.

It is important to note that, under our three-block design, many consumers (including summer cottages) will not incur the third block rate in summer (unless they use substantial amounts of air conditioning). Because marginal costs are lower in summer than in winter, it is entirely appropriate (i.e. cost-based) that bill impacts be lower for summer cottages than for ski cabins.

It is to be noted that many utilities address the issue of part-year consumers in creative ways. First, the utility line extension policy typically requires that these type of customers pay the full cost of extending distribution facilities to serve them. Second, some utilities read meters and issue bills only once or twice a year in seasonal areas, avoiding meter reading and billing costs during the months when there is little or no usage. These strategies both increase revenue and reduce expense associated with serving part-year consumers.