RESPONSES BY HYDRO-QUÉBEC DISTRIBUTION
TO REQUEST FOR INFORMATION NO. 2
FROM ROEÉ

AUTONOMOUS GRIDS

R-3864-2014
Information request no. 2 from ROEÉ (expert Chris Neme) to Hydro-Québec

INTEGRATED GRID

1. Inclusion of past energy efficiency program results in forecast sales and energy requirements

Reference:

(i) R-3864-2013, HQD-1, document 1, Table 2-1, p. 12.

Questions:

1.1. Please indicate if the values in the table are net of the impacts of past energy efficiency programs? If not, please provide a version of the table that shows what the electricity consumption forecast would be once the impacts of past efficiency programs were included.

Response:

See the response to question 13.1 from OC in exhibit HQD-3, document 9.[1]

1.2. Please provide a similar table that takes into account this information and that shows peak demand savings over the last 10 years.

Response:

See the response to question 1.1.

Moreover, Table R-1.2 presents the impact on peak power of energy savings interventions over the last ten years.

TABLE R-1.2
IMPACT OF ENERGY SAVINGS INTERVENTIONS ON WINTER PEAK POWER (IN MW), WINTERS 2003-2004 TO 2012-2013

In MW	2003 - 2004	2004 - 2005	2005 - 2006	2006 - 2007	2007 - 2008	2008 - 2009	2009 - 2010	2010 - 2011	2011 - 2012	2012 - 2013
Energy savings interventions	0	30	100	200	340	490	640	790	950	1130

1.3. Please indicate if the values in the table are net of planned/future energy efficiency program or initiative impacts (e.g. the 0.6 to 1.0 TWh per year forecast for 2016 and beyond)? If not, please provide a version of the table that shows what the electricity consumption forecast would be once the impacts of both past and future efficiency programs were included.

Response:

See the response to question 13.1 from OC in exhibit HQD-3, document 9.

1.4. Please provide a similar table that takes into account this information and that shows peak demand savings over the last 10 years.

Response:

See the responses to questions 1.2 and 1.3.

1.5. Please explain how Hydro-Quebec takes into account the life-cycle or persistence of the energy savings that were produced by energy saving programs when developing a sales forecast that is net of the impacts of past, current and future efficiency programs. For example, if an HQ program caused a customer to change a behavior (e.g. lowering a thermostat setting), how long is the impact of that change assumed to last? If it is assumed to last only two years, does the sales forecast reflect the assumption that the savings are no longer occurring after the two years. Similarly, if an HQ program caused a customer to install an efficient lighting fixture with a product life of 10 years, does its sales forecast assume that the savings will no longer be there (i.e. demand will go up) beginning in year 11?

Response:

The effective life-cycle of the measures is taken into account in both the program cost-effectiveness analysis and the demand forecast. Beyond the life cycle, the impact of the measures is no longer attributed to the programs, but the savings in the markets do not thereby disappear. A proportion of the savings become common practice and continue to figure in the demand forecast.

2. Line loss rates

Reference:

(i) R-3864-2013, HQD-1, document 1, p. 12 (section 2.3.1)

Preamble:

(i) "The energy requirements covered by the Plan are essentially composed of electricity sales and distribution and transmission losses. A loss rate of 7.9% is assumed for the 2014–2023 period."

Questions:

2.1. Please explain what Hydro-Quebec's estimate of the line loss rate of 7.9% is based on.

Response:

As mentioned in section 3 of Appendix 2A of exhibit HQD-1, document 2.2 (B-0007), the overall loss rate of 7.9% corresponds to the average of the normalized loss rates for the years 2010–2012, corrected for the difference between the average real transmission loss rate over these three years and the reference loss rate of 5.6% adopted in the Transmission Provider's rate case (R-3823-2012).

The overall rate is stable across the whole forecast horizon, given that there is no indication of any rise or decline in this rate in the future.

2.2. Please indicate the loss ratio at a lower voltage (for example in the CATVAR program).

Response:

The loss ratio at a lower voltage is estimated at 9.3%.

2.3. Line losses increase as loads increase (for example, see www.raponline.org/document/download/id/4537). Thus, the marginal loss rate – i.e. the losses associated with adding the last kW of demand to the system – is higher than the average loss rate. What is HQ's average annual marginal loss rate (i.e. the weighted average of the marginal loss rates over the course of the year)?

Response:

The Distributor does not have this information.

2.4. Please indicate Hydro-Quebec's average loss rate at the time of winter peak demand.

Response:

The Distributor does not have this information.

2.5. Please indicate Hydro-Quebec's marginal loss rate at the time of winter peak demand.

Response:

The Distributor does not have this information.

2.6. Please indicate what Hydro-Quebec assumes about the loss rate for annual energy savings when it performs cost-effectiveness screening of its energy efficiency programs.

Response:

In the context of the annual energy requirements forecast, the impact of energy savings is taken into account in the sales forecast. Thus, the projected overall loss rate is applied to the reduction in sales attributable to the energy efficiency programs.

2.7. Please indicate what Hydro-Quebec assumes about the loss rate for winter peak demand savings when it performs cost-effectiveness screening of its energy efficiency programs.

Response:

The evaluation of the impact of energy efficiency programs on peak power is not based on an average loss rate at winter peak. Rather, it is based on assumptions of specific energy savings profiles per usage and per consumer sector. The methodology for assessing the impact of energy savings on power is presented in section 1.3 of Appendix 2E of exhibit HQD-1, document 2 (B-1) in case R-3648-2007, phase 2.

3. Energy efficiency measures

References:

(i) R-3864-2013, HQD-1, document 1, p. 17, l. 3-10
(ii) R-3864-2013, HQD-1, document 1, p. 12, Table 2-1
(iii) R-3864-2013, HQD-1, document 1, p. 17, l. 15-20
(v) R-3864-2013, HQD-1, document 1, p. 17, l. 27-29

Preamble:

(i) "As of 2016, so as to take account of the evolving context for the supply-demand balance, the Distributor proposes to fulfill one-third of its sales growth with energy savings interventions. Based on the current sales forecast, this represents annual realized savings of 0.6–1.0 TWh over the Plan horizon. Such a modulation of energy savings interventions offers flexibility to the Distributor but also requires sustained planning so as to be able to react rapidly to the market to capture the maximum number of lower-cost opportunities."

(iii) "In the business market, the Distributor will augment its offering of advisory and consulting services and will develop a portfolio of interventions targeting this sector. The priority will be on interventions designed to enhance the competitiveness of Québec companies. The Distributor's approach is thus part and parcel of its overall thrust to modernize its energy efficiency offering even as it pursues its R&D work."

(iv) "In the longer run, the Distributor will rely on strategies aiming to elicit durable behavioural change and market transformation. To achieve this, the Distributor will expand its range of interventions and work together with its partners. For example, the Distributor's expertise in the development of energy efficiency standards, codes, and regulations and its influence over such processes should help to guarantee the durability of gains made in certain markets that have reached maturity."

(v) "Furthermore, in view of expected trends in the energy and power balances, the Distributor will prioritize those energy savings interventions having a significant impact on the lessening of power requirements."

Questions:

3.1. Please indicate how and on what basis and/or assumptions did Hydro-Quebec establish the target of fulfilling one-third of its sales growth with energy savings interventions indicated in reference (i).

Response:

See the response to question 9.1 from ACEF de l'Outaouais in exhibit HQD-3, document 2.[2]

3.2. Please indicate if the 0.6 to 1.0 TWh mentioned in reference (i) represent new savings from efficiency, over and above those that have already been achieved and/or will be achieved in 2014 and 2015. If not, please indicate how much of the savings are new and how much are the continued impacts of previous years' efficiency programs.

Response:

See the response to question 1.1 from RNCREQ in exhibit HQD-3, document 10.[3]

3.3. Please indicate how the 0.6 to 1.0 TWh per year compares to actual incremental annual savings from 2010 through 2013 as well as forecasts for 2014 and 2015.

Response:

The Distributor confirms that the added energy savings values attain comparable levels.

3.4. Please indicate what Hydro-Quebec means by the term "sustained planning" (*planification soutenue*) in reference (i).

Response:

The use of adjustable criteria rather than a fixed target offers the Distributor the possibility of rapidly adjusting its efforts on energy efficiency as a function of the results obtained and of how the demand forecast evolves.

3.5. In reference (ii), Hydro-Quebec suggests that sales will grow from 184.8 TWh in 2016 to 196.6 TWh in 2023, for an average annual increase of 1.7 TWh. Please indicate if the 0.6 to 1.0 TWh per year have already been removed from that number. In other words, please indicate if the average annual sales growth without energy efficiency would have been 2.3 to 2.7 TWh per year from 2016 to 2023. If not, please explain.

Response:

See the response to question 13.1 from OC in exhibit HQD-3, document 9.

See also the response to question 1.5.[4]

3.6. Please indicate, according to Hydro-Quebec, what kind of interventions tend to "enhance the competitiveness" of Quebec, as mentioned in reference (iii), and how these interventions can be identified and validated by Hydro-Quebec.

Response:

In the business market, energy efficiency generally refers to lower energy consumption for the production of the same service or product unit. For the industrial sector in particular, energy efficiency is closely linked to growth in business productivity and hence competitiveness. Decreased energy consumption may derive from technological changes or from better organization or management of plant operations. Among other criteria, the Distributor will prioritize energy efficiency projects based on their capacity to improve the energy intensity of a business or sector.

3.7. Please indicate what Hydro-Quebec means by "modernizing its energy efficiency offering" as mentioned in reference (iii).

Response:

See the response to question 9.3 from ACEF de l'Outaouais in exhibit HQD-3, document 2.[5]

3.8. Please indicate what Hydro-Quebec intends by the use of the term “market transformation” in reference (iv). Please provide a list of market transformation indicators and their respective weight.

Response:

The purpose of a market transformation approach is to conduce to long-term change in the structure or workings of a market. This transformation is accomplished by eliminating structural barriers. It strives for the natural adoption of measures, such that they will persist after an intervention (of whatever form) ends.

Penetration rate, awareness, affordability, and customer satisfaction are some indicators used to assess the measures. The weight given to each indicator varies according to the measure.

3.9. Please indicate what Hydro-Quebec means exactly in reference (iv) by helping to “guarantee the sustainability of the gains made in certain markets that have reached maturity.”

Response:

See the response to question 3.8.

3.10. Please indicate if reference (v) means that Hydro-Quebec will put emphasis on measures with great impact on peak demand, and indicate how and which of these interventions will be chosen.

Response:

The Distributor will put emphasis on those usages affording a substantial impact on power, especially those related to space and water heating.

4. Awareness raising interventions versus technological or financial incentive interventions

Reference:

(i) R-3864-2013, HQD-1, document 1, pp. 16–17 (section 3.1)

Question:

4.1. Hydro-Quebec appears to be suggesting in reference (i) that all of its post 2015 energy efficiency savings from both residential and business customers will result from the provision of awareness raising information, advice and consulting services (businesses only). Put another way, it appears as if Hydro-Quebec is not planning to offer any programs that, for example, provide rebates or other financial incentives for customers to invest in efficiency. Is that a correct interpretation of the Company's statements?

Response:

This interpretation does not correspond to the Distributor's intentions.

5. Interruptible electricity

Reference:

(i) R-3864-2013, HQD-1, document 1, p. 18, l. 18-24

Preamble:

(i) "The Distributor will continue as well to attempt to interest large industrial customers in interruptible electricity. The Distributor maintains the hypothesis that this program will contribute 850 MW to the power balance. Added to this quantity is the interruptible block linked to the special contract with Aluminerie Alouette. Aluminerie Alouette's interruptible load is 150 MW for winter 2013–2014 and is expected to increase to 300 MW by winter 2016–2017, reaching 450 MW in winter 2019–2020."

Questions:

5.1. What is the annual cost to HQ, per MW, of being able to interrupt Aluminerie Alouette? Please provide the cost separately for each year.

Response:

The cost of being able to interrupt Aluminerie Alouette is determined according to the terms and conditions of the interruptible electricity option for large power consumers

governed by the *Distributor's Rates and Conditions* given in section 2 of chapter 6. See also the response to question 13.2 of the Régie's request for information no. 1 in exhibit HQD-3, document 1 (B-0021).[6]

5.2. What is the annual cost to HQ, per MW, of the other 850 MW? Please provide the cost separately for each year.

Response:

See the response to question 5.1.

6. Appeals to the public

Reference:

(i) R-3864-2013, HQD-1, document 1, p. 19, l. 3-5

Preamble:

(i) "In addition, it will continue to make appeals to the public as necessary. The Distributor seeks to increase the public profile of this method and to analyze how the impact of appeals to the public evolves over several successive winters."

Question:

6.1. Please indicate:

- what form such appeals to the public will take;
- how they will be modified to increase their public profile;
- what measures and methodology will be used to analyze their impact.

Response:

See the responses to question 9.2 from OC in exhibit HQD-3, document 9 and question 11.1 from AHQ-ARQ in exhibit HQD-3, document 3.[7]

7. Development of new interventions and continuation of strategic intelligence efforts

Reference:

(i) R-3864-2013, HQD-1, document 1, p. 19, l. 10-16

Preamble:

(i) "The Distributor will pursue the analysis of the commercially achievable potential of the power demand management measures identified in the technical/economic potential assessment. This analysis will serve to define the set of parameters needed to design new interventions.

The Distributor is also pursuing its strategic monitoring of market trends in new technologies enabling public utilities to deploy new power demand management methods."

Questions:

7.1. Please explain how Hydro-Quebec carries out the analysis mentioned in reference (i). Are measures identified on the basis of their technological and economic potential and on their effect on peak load? Please explain how these power demand management measures are identified and applied.

Response:

See the responses to questions 2.4 and 2.6 from the CFIB in exhibit HQD-3, document 7.[8]

7.2. Please indicate what Hydro-Quebec views as "strategic monitoring" and please provide the documents or results related to this strategic monitoring.

Response:

See the response to question 3.4 from the GRAME in exhibit HQD-3, document 8.[9]

9. Winter peak capacity

Reference:

(i) R-3864-2013, HQD-1, document 1, p. 28, Table 4-3

Questions:

9.1. Hydro-Quebec estimates in reference (i) that it will need to acquire 650 MW of winter peak capacity in 2013-2014 from short-term market purchases. That need is projected to grow to 1500 MW by 2018-2019. Please provide Hydro-Quebec's estimate of the cost, per MW, of those purchases.

Response:

See the responses to question 13.2 of the Régie's request for information no. 1 in exhibit HQD-3, document 1 (B 0021), and question 4.1 from AHQ-ARQ in exhibit HQD-3, document 3.[10]

9.2. Please provide the values separately for each year and explain the basis for the estimates.

Response:

See the response to question 9.1.

10. Economic development and government policy

References:

(i) R-3864-2013, HQD-1, document 1, p. 30, (section 4.5), l. 1-9
(ii) R-3864-2013, HQD-1, document 1, p. 30, Table 4-4
(iii) R-3864-2013, HQD-1, document 1, p. 12, Table 2-1
(iv) R-3864-2013, HQD-1, document 1, p. 28, Table 4-3

Preamble:

(i) "On 7 October 2013, the Government of Québec announced the launch of its 'Priorité Emploi' economic policy. Among the measures put forward in this policy is the use of the Distributor's energy surpluses over the next ten years to stimulate job creation and investment in Québec in certain specific niches. This measure represents a promising opportunity to sell a significant portion of the surplus over the period and, in so doing, to maximize the use of heritage pool electricity. To illustrate the impact of this initiative on energy surpluses,

the Distributor, in Table 4-4, presents several scenarios for the period covered by the Plan."

Questions:

10.1. Is it accurate to say that HQ's base forecast of electricity sales (i.e. as shown in Table 2-1) and winter peak demand (i.e. as shown in Table 4-3) does not include any potential impacts from this policy? If not, please explain.

Response:

The sales forecast for the reference scenario, as presented in reference (iii), and the winter peak demand forecast, as presented in reference (iv), do not include the potential impacts of the government's "Priorité Emploi" policy.

10.2. Please provide a table similar to Table 4-4, but showing the impacts on winter peak demand (MW) and related reserve margin requirements rather than annual TWh sales.

Response:

See the response to question 22.1 of the Régie's request for information no. 2 in exhibit HQD-3, document 1.1.[11]

11. Deferred energy agreements

Reference:

(i) R-3864-2013, HQD-1, document 1, p. 7, l. 4-12

Preamble:

(i) "Thus, the Distributor planned to make prudent use of the deferred energy agreements with the Generator to ensure that the balance of the deferred energy account could be used up by the expiration of the base load and cycling contracts. To achieve this, energy covered by the cycling contract was no longer deferred out to the Plan horizon, and energy covered by the base load contract was not deferred for the initial years of the plan. The non-deferred quantities were to be covered by sales transactions with the Generator. Recalls were planned for the entire period covered by the Plan so as to meet winter energy and power requirements."

Question:

11.1. Please explain concretely what this involves.

Response:

In the reference, the Distributor reiterates the strategy that was presented in the 2011–2020 Supply Plan. In this regard, see exhibit HQD-1, document 1 (B-0004), in case R-3748-2010.[12]

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[1] **13. Reference:**

i) Exhibit B-0005, HQD1-D1 P. 27-28.

Preamble:

In reference (i), the Distributor presents Tables 4-2 and 4-3, which contain the energy and power balances at the 2014–2023 Supply Plan horizon.

Request:

13.1. Please file tables presenting the differences between the energy and power balances for the 2014–2023 Supply Plan and the corresponding balances for the 2011–2020 Supply Plan. Please distinguish the "Requirements covered by the Plan" by demand before adjustments for energy efficiency.

Response:

The information necessary to compare the energy and power balances under this Plan with those of the 2011–2020 Supply Plan are available in exhibit HQD-1, document 1 (B-0005) in this case and in exhibit HQD-1, document 1 (B-0004) in case R-3748-2010.

Pursuant to section 72 of the Act respecting the Régie de l'énergie, the supply plan presents the supplies needed in order to fulfill the requirements of the Québec markets after application of the energy efficiency interventions.

[2] **9. References:** (i) Exhibit B-0005, HQD-1, doc. 1, p. 17

Preamble:

(i) "As of 2016, so as to take account of the evolving context for the supply-demand balance, the Distributor proposes to fulfill one-third of its sales growth with energy savings interventions. Based on the current sales forecast, this represents annual realized savings of 0.6–1.0 TWh over the Plan horizon. Such a modulation of energy savings interventions offers flexibility to the Distributor but also requires sustained planning so as to be able to react rapidly to the market to capture the maximum number of lower-cost opportunities.
To achieve these energy savings, the Distributor will initially rely on its accomplishments to date by seeking to improve its existing portfolio. In the short run, it will put the emphasis on new strategic orientations giving pride of place to awareness-raising approaches while helping customers better

understand and manage their electricity consumption with the help of appropriate tools and advice. In the business market, the Distributor will augment its offering of advisory and consulting services and will develop a portfolio of interventions targeting this sector. The priority will be on interventions designed to enhance the competitiveness of Québec companies. The Distributor's approach is thus part and parcel of its overall thrust to modernize its energy efficiency offering even as it pursues its R&D work." [our emphasis]

Requests:

9.1. Please explain how the Distributor arrived at the idea of fulfilling a third of sales growth in this way [reference (i)].

Response:

The Distributor's choice to determine its energy efficiency efforts as a proportion of sales growth is based on industry practice. This criterion allows the Distributor to adjust its level of effort in accordance with future requirements while limiting the impact on rates.

Furthermore, the Distributor intends to maintain what it has accomplished in terms of energy efficiency and pursue its involvement in the market. The proposed percentage is designed to strike a balance between these factors for the long term.

[3] **References:**

(i) R-3864, HQD-1, doc. 1, p. 17

(ii) R-3864, HQD-1, doc. 1, p. 12

Preamble:

Reference (i):

"As of 2016, so as to take account of the evolving context for the supply-demand balance, the Distributor proposes to fulfill one-third of its sales growth with energy savings interventions. Based on the current sales forecast, this represents annual realized savings of 0.6–1.0 TWh over the Plan horizon."

Reference (ii) indicates that requirements will increase by 0.6 TWh from 2016 to 2017.

Requests:

1.1. Please explain how the Distributor obtained values for annual savings of 0.6–1.0 TWh.

Response:

These values for energy savings are determined from the target, which is to fulfill one-third of sales growth through new energy-saving interventions over the period 2016–2023.

[4] See the response to question 13.1 from OC in exhibit HQD-3, document 9 (see above).

[5] 9. References: (i) Exhibit B-0005, HQD-1, doc. 1, p. 17

Preamble:

(i) "As of 2016, so as to take account of the evolving context for the supply-demand balance, the Distributor proposes to fulfill one-third of its sales growth with energy savings interventions. Based on the current sales forecast, this represents annual realized savings of 0.6–1.0 TWh over the Plan horizon. Such a modulation of energy savings interventions offers flexibility to the Distributor but also requires sustained planning so as to be able to react rapidly to the market to capture the maximum number of lower-cost opportunities.
To achieve these energy savings, the Distributor will initially rely on its accomplishments to date by seeking to improve its existing portfolio. In the short run, it will put the emphasis on new strategic orientations giving pride of place to awareness-raising approaches while helping customers better understand and manage their electricity consumption with the help of appropriate tools and advice. In the business market, the Distributor will augment its offering of advisory and consulting services and will develop a portfolio of interventions targeting this sector. The priority will be on interventions designed to enhance the competitiveness of Québec companies. The Distributor's approach is thus part and parcel of its overall thrust to modernize its energy efficiency offering even as it pursues its R&D work." [our emphasis]

9.3 What does the Distributor mean by "improve its existing portfolio"? Please explain.

Response:

Improvement of the existing portfolio is the intended result of a strategy designed to maintain a degree of stability in the Distributor's offering of programs while taking account of the evolution of its business context.

The strategy chosen for the coming years focuses on a gradual reduction of direct financial aid, favouring instead awareness-raising and consulting approaches as well as integrated packages. This strategy costs less overall to implement and promises durable behavioural change.

[6] **13. References:** (i) Exhibit B-0008, p. 37;

(ii) Case R-3748-2010, Exhibit B-0078, p. 3.

Preamble:

Table 4B-1 of reference (i) presents the costs of existing and projected supplies over the Plan horizon.

13.2 Please provide the quantities and prices used to obtain the costs of power purchases, itemizing interruptible electricity, short-term purchases, and long-term purchases [see reference (ii)].

Response:

The cost of power purchases is determined by considering the power requirements for the four winter months of a single year; i.e., January to March plus December.

The Distributor specifies that the power costs presented in Table R-13.2 are determined for

planning purposes only and are reviewed each year in accordance with the specific requirements of the coming winter peak.

***See also Table R-13.2 (Power purchases)**

[7] **9. Reference:** I) Exhibit B-00057, HQD1-D1, p. 19.

Preamble:

The Distributor states in reference i):

"Improve awareness-raising in regard to the concept of peak and continue making appeals to the public

"The Distributor will actively pursue its customer awareness raising efforts with the goal of inducing customers to consume electricity judiciously at peak times.

"In addition, it will continue to make appeals to the public as necessary. The Distributor seeks to increase the public profile of this method and to analyze how the impact of appeals to the public evolves over several successive winters."

Request:

9.2. Please clarify what the Distributor means by "increase the public profile of this method."

Response:

The Distributor has undertaken to diversify the methods it uses to inform its customers of appeals to the public, among other things by using Twitter messages or text message alerts. In addition, it intends to pursue its media outreach efforts by means of appeals, interviews, and online press releases published on the hydroquebec.com site.

11. Reference: B-0005, HQD-1, document 1, p. 19, l. 1–5.

Preamble:

"The Distributor will actively pursue its customer awareness raising efforts with the goal of inducing customers to consume electricity judiciously at peak times.

"In addition, it will continue to make appeals to the public as necessary. The Distributor seeks to increase the public profile of this method and *to analyze how the impact of appeals to the public evolves over several successive winters.*" (Our emphasis.)

Requests:

11.1. Please state how the Distributor will analyze how the impact of appeals to the public evolves over several successive winters, as it mentions in the reference.

Response:

Each year, the Distributor surveys the population with a view to improving the effectiveness of its approach. The survey measures, among other things, public awareness of appeals to the public, participation rates, and satisfaction with the information provided about means of reducing power consumption during these peak periods. The information collected over several successive winters allows the Distributor to assess the performance of this approach.

[8] **Question 2:**

References:

(i) HQD-1, document 1, pp. 18–19

(ii) HQD-1, document 1, p. 28, Table 4-3

(iii) Report on technical/economic potential of power demand management – integrated system, p. 11, Table 4.

(iv) 2012 Progress Report on the 2011–2020 Supply Plan, response to question 1.1 from the Régie, p. 4.

Preamble:

Reference (i) presents an overview of power demand management interventions.

In reference (ii), the Distributor indicates 50 MW for the other power demand management interventions in 2016–2017 and a cumulative total of 300 MW in 2021–2022.

(iii) "The measures offering the highest potential are those necessitating the installation of heating appliances, whether heat storage or dual energy, with a technical/economic potential of approximately 1,300 MW."

(iv) "The Distributor is pursuing the analysis of the results for the technical/economic potential of power demand management measures. Additional work will be done to assess the most promising opportunities, allowing for the deployment of new specific demand management measures as applicable. In parallel, the Distributor is planning to carry out pilot projects relating to the use of advanced metering infrastructure functionalities.

Questions:

2.4. Please indicate what measures are envisioned to achieve a 50-MW reduction in power requirements in 2016-2017.

Response:

The measures envisioned are identified in the assessment of the technical/economic potential for power demand management. The feasibility of the most promising measures is currently being assessed and validated through the work of IREQ. These measures include remote control of water heaters, temperature setpoint management in residences, and HVAC management in commercial and institutional buildings.

2.6. Concerning reference (iii), please indicate how much progress has been made by the Distributor on each of the measures included in the technical/economic potential assessment, as identified in Tables 3 and 4.

Response:

See the response to question 2.4.

For the work of IREQ, see the response to question 20.2 from the Régie in exhibit HQD-3, document 1.1.

In addition, the Distributor will continue those of its interventions that are aimed at raising customer awareness to power demand management with a view to inducing them to change their behaviour during peak periods. Once measures are shown to be feasible to implement and the contribution they will make is known, the Distributor will conduct analyses to establish their economic viability as new interventions in power demand management. As applicable, commercial programs will then be presented to the Régie. See also the response to question 8.5 of the Régie's request for information no. 1 in exhibit HQD-3, document 1 (B-0021).

[9] **3.4** (Ref. v). The Distributor has announced its intention to pursue the assessment of the technical/economic potential of power demand management measures and is also pursuing its strategic monitoring of new technologies and methods of power demand management. Please clarify whether the Distributor has produced or commissioned from a third party a monitoring report on market trends in new technologies which public utilities can use to deploy new methods of power demand management. If such a report exists, please file it.

Response:

The Distributor monitors market trends in energy efficiency as part of its routine operations. It is also a member of various organizations, such as E Source, an organization providing analyses in response to various requests made by the Distributor. The results of these analyses remain market information which the Distributor uses to develop its interventions.

[10] 4. Reference:

B-0021, HQD-3, document 1, page 51, response 13.2, Table R-13.2

Preamble: power balance, Table 4-3, HQD-1, document 1 (B-0005)

4.1. Please explain why the prices in $/kW-winter of the short-term and long-term lines in the reference are not the same, even though both refer to the same table footnote. Please explain the relationship between these prices and the avoided costs.

Response:

The prices in $/kW-winter represent the forecast price of power purchases determined according to the avoided power costs filed in case R-3854-2013 by the Distributor.

The "short-term" line presents the short-term avoided costs of $10/kW-winter 2013 $, annuity growing with inflation) while the "long-term" line presents linear growth in the power cost,

reaching $40/kW-winter (2013 $, annuity growing with inflation) in the winter of 2019–2020 and for subsequent years.

[11] **22 References:**

(i) Exhibit B-0005, p. 30

(ii) Exhibit B-0005, p. 28, Table 4-3.

Preamble:

(i) In Table 4-4, the Distributor presents the impacts of Québec's "Priorité Emploi" economic policy on energy surpluses in TWh and states as follows:

"Thus, in all but the accelerated scenario, the Distributor would possess sufficient energy surpluses to meet the new requirements over the Plan horizon. Depending on the degree to which the goals of "Priorité Emploi" are attained, the Distributor will progressively incorporate those projects receiving the required approvals into its planning processes." [our emphasis]

Requests:

22.1. Please indicate whether the Distributor included the impact of new requirements related to the goals of the economic policy in the "Power Balance" table [reference (ii)].

Response:

The Distributor did not include the impact of the economic policy in its requirements forecast. As mentioned in reference (i), the Distributor will progressively incorporate those projects receiving the required approvals into its planning processes.

[12] Exhibit HQD-1, document 1 (B-0004) of case R-3748-2010:

3.1.5. Agreements to defer energy under contracts with the Generator

In July 2010, the Régie, in decision D-2010-099, approved the new agreements to defer deliveries under the 350 MW and 250 MW contracts in effect with the Generator. The new agreements add flexibility to the supply portfolio, due in part to changes made to the duration of the contracts and to the terms and conditions governing energy returns during winter peak periods. The deferred energy agreements allow the Distributor to defer a portion of its energy surpluses and to meet energy and power requirements.