

**ADDITIONAL EVIDENCE FROM THE POWER SUPPLIER:
IMPACT OF INSTALLING METERS UNDER THE LAD PROJECT
THAT DO NOT TRANSMIT MICROWAVE RADIATION**

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1. INTRODUCTION

During the Preparatory Meeting of February 2, 2012, the Régie asked the Power Supplier to find solutions to requests that may be made by certain customers who refuse to allow installation at their homes of new meters that transmit microwave radiation (“Smart Meters”) (Exhibit A-0050, pages 6-9). The Power Supplier responded to this request, although the evidence on record clearly demonstrates immediate and mean-term benefits of such meters. Furthermore, these units and the networks to which they are connected comply with applicable Canadian and Quebec standards.

The Power Supplier’s solution is to offer the new-generation meter as the standard unit and to permit installation of a meter that does not transmit microwave radiation (“opt out”), with the customer bearing this cost. This solution would require changes to the Conditions of Electricity Service (CES). On March 14, 2012, the Power Supplier accordingly submitted an application to set rates and conditions for the option of installing a meter that does not transmit microwave radiation (file R-3788-2012). Both types of authorization required (for the LAD Project and the new CES) can be practically and effectively brought into line through this approach, as the Régie had requested at the preparatory meeting.

The Power Supplier has replied in this document to the Régie’s requests at the preparatory meeting, including the impact of permitting customer opt outs on the deployment of an advanced metering infrastructure (AMI).

2. VOLUMETRIC ESTIMATE

The Power Supplier estimates that no more than 1% of its customers will refuse installation of new generation meters. This estimate is based on the experience of the Power Supplier and of other firms offering or planning to offer customers the possibility of opting out.

2.1. Hydro-Québec Distribution's Experience

The Power Supplier's data for determining the number of customers that might opt out have been drawn from pilot projects. A very small number of customers advised the Power Supplier during such projects that they would refuse to allow a new generation meter to be installed at their homes. Only 12 customers made such refusals among the 18,243 installations performed (0.07% refusal rate).

There is no evidence, however, to suggest that these customers would be the same as those who may request the installation of a meter that does not transmit microwave radiation ("non-communicating meter"). Some customers who have not already contacted the Power Supplier could refuse installation of a new-generation meter, while others who previously indicated that they did not want such meters might opt for them anyway, based on new information that they have received.

2.2. Benchmarking

No Canadian Power Supplier has to date offered an opt out.

To the Power Supplier's knowledge, only three US Power companies currently offer an opt out approved by their regulatory bodies. They are Pacific Gas & Electric (PG&E) in California, NV Energy in Nevada and Central Maine Power (CMP). These options are recent, as they only came into effect in May 2011 for CMP, February 2012 for PG&E and March 2012 for NV Energy. About 1% of CMP customers refused installation of a new-generation meter. PG&E estimated

that 2.7% of its customers would prefer no such installation, which is not however a guide to the much lower figures the Power Supplier anticipates.

Other suppliers also intend to offer opt outs, although the latter have not yet been approved by their regulatory bodies. They are DTE Energy in Michigan, Georgia Power in Georgia, Naperville in Illinois and Green Mountain Power (GMP) and Central Vermont Public Service (CVPS) in Vermont. The regulatory body has not yet required other California power suppliers (Southern California Edison and San Diego Gas & Electric) to offer an opt out.

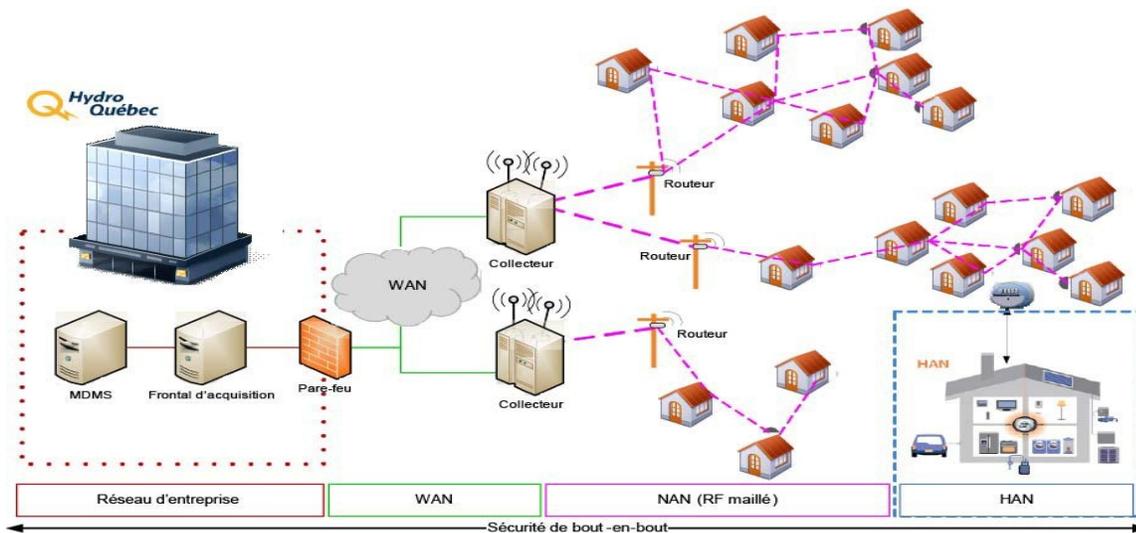
3. IMPACT OF CUSTOMER OPT OUTS FOR NEW-GENERATION METERS

3.1. Meshed Network Technology

As more fully described in Section 3.1 of Exhibit B-0006, HQD-1, Document 1, the Power Supplier's selected AMI is a technology that interlinks meters by incorporating a wireless communications card in each new-generation meter. The resulting network transmits consumption data from one meter to the next until the data reach a router and then a collector.

The collector then transmits such data over cellular or satellite technology to the Power Supplier's computer systems. These systems consists of an acquisition front-end and a metering data management system (MDMS). Billing information is ultimately transmitted to the SAP billing system. Figure 1 shows an AMI-based communications network.

FIGURE 1: ADVANCED METERING INFRASTRUCTURE (AMI)



The Power Supplier's network behaves like any other meshed network. The quantity and types of equipment it uses depend on the number of meters involved, their density and the ability of the collectors and routers to transmit data from a given number of customers. Communication between meters, or between a meter and a router or a collector requires a certain equipment density. Excessive distance hampers communication and will adversely affect the meshed network.

AMI network topology depends on such parameters as customer density in the area covered, natural obstacles (i.e., mountainous terrain) and use in a remote region with few meters installed.

The ratio between the number of routers and meters in more densely populated areas is lower than in rural regions, where a larger number of routers are needed to make up for the greater distances between meters.

The meshed network is dynamic and sends consumption data over a variety of routes. For example, one meter might ordinarily send its data through a neighbouring meter, but when the second meter is unable to serve as a relay, it will select an alternate route to the router.

The AMI also reconfigures itself automatically whenever a new component (meter, router or collector) is removed from or added to the network. To maximize this advantage, the AMI network must have sufficient flexibility to absorb minor changes without on each occasion requiring modification of the network topology.

3.2. Technological Impact of Permitting Opt Outs

Non-inclusion of a very small number of Smart Meters would have no impact on the dynamic AMI network. However, the number of customers declining installation of a new-generation meter is not the only factor involved in assessing impact on the meshed network's topology.

Equipment density is high enough in urban areas to absorb the removal of a larger number of new generation meters before there would be any need to revise the topology. In more thinly populated rural regions, however, a higher ratio of telecom equipment to meters will be required. The need to add or relocate routers and collectors might occur more frequently in rural than in urban areas. If there are many natural obstacles, a smaller number of new-generation meter opt outs could require reconfiguration of the AMI network.

The concentration of customers who refuse installation of a new-generation meter could also influence network topology. The greater the geographic concentration of refusals, the more likely the need to modify network topology.

However, at a refusal rate of 1% to 2% throughout Quebec, the AMI vendor believes there will be no more than a minimal impact on network topology and that no additional equipment will be needed.

3.3. Impact on LAD (Remote Reading) Project Deployment

Permitting opt outs would require the deployment of processes and systems to handle customer applications and installation of appropriate meters during the massive changeover.

Administrative procedures are designed to apply the CES as approved by the Régie. These procedures must cover communications with customers, opt-out notifications, installation by customers of new-generation meters, follow-ups, billing and a decision to reverse an opt out decision following a move or for any other reason. Billing must be adjusted to include new fees that will be charged to opt-out customers.

Meter deployment logistics pertain primarily to internal communication components that will permit proper identification of customers who decide to opt out during the deployment process.

The primary impact on deployment would involve the need to adjust working processes and related computer systems.

4. TECHNICAL OPT OUT SOLUTION

4.1. Solution Chosen: Non-Communicating Meters

All existing customer meters concerned will be replaced with new meters. As stated in file R-3788-2012 (HQD-1, document 1, section 3.1), the Power Supplier has studied the matter and selected a non-communicating electric meter solution for customers that opt out.

The Power Supplier has rejected the possibility of retaining electromechanical meters. The Power Supplier notes that such meters are no longer being made in North America. As mentioned in the exhibits,¹ the age of the electromechanical meters and implementation of Measurement Canada's New Compliance Sampling Specifications increase the potential for rejecting these meters. If it were to retain electromechanical meters, the Power Supplier would have to manage small batches of such meters for which Measurement Canada seal expirations might differ. Furthermore, the small sizes of these batches would require the Power Supplier to remove all meters from a particular batch to conduct quality controls. This would generate considerable management and maintenance expenses.

Existing electric meters, which represent some 20% of the embedded meter base, must also be replaced with non-communicating meters if the customer opts out.

4.2. Reading Meters

The Power Supplier plans to keep the visual meter reading schedule at six per year for residential customers whose power use is not billed.

¹ See Section 2.1 of Exhibit B-0072, HQD-4, document 13.

5. STUDY OF IMPACT ON THE POWER SUPPLIER'S PROPOSAL

5.1. Cost of Opting Out

The Power Supplier's standard offer would, once the Régie approves the LAD Project, involve use of a new-generation Smart Meter. Under Article 15.5 of the existing CES, customers who ask to opt out and select a non-communicating meter would bear that cost.

The right of a customer to refuse installation of a device that transmits microwave radiation and opt for a non-communicating meter is not covered by the Power Supplier's basic service and constitutes a new CES. The applicant-pays principle is already enshrined in Article 15.5 of the CES, whereby work or repair after the initial placement online of an electrical installation is charged to the party requesting or causing the work or repair. The CES also provides for other options for which the applicant must pay any cost exceeding the Power Supplier's basic offer. This is the case, for example, with a request for underground or backup service, the additional cost of which must be paid by the applicant.

All opt out-related costs, including impact on deployment logistics, will be billed to the applicant. They appear in File R-3788-2012 for approval of a CES applicable to this option. This file covers opt-out costs. They consist in the direct costs involved in installation specific meter models, manual meter readings, handling applications and developing systems.

5.2. Neutral Impact on LAD Project Savings

Initial and recurring costs involved in opting out will be billed at applicable CES rates for that option. These tariffs have been calculated according to the additional costs generated by customers opting out.

Such billings will cover all opt out costs. The Régie could revise these tariffs annually as with the Power Supplier's other tariffs and terms of service.

Customers who opt out would accordingly bear such additional costs, in accordance with practices adopted by all companies offering or planning to offer such a choice. Consequently, anticipated savings to be generated by the LAD Project would not be affected.