

Can next-generation meters catch fire?

No. In the few cases of fire reported elsewhere, experts have demonstrated that the customer's meter socket, or base, was defective in some way. If a socket breaks when a meter is being replaced, the installer calls in a master electrician.

Next-generation meters are approved by Measurement Canada and they are safe.

In November 2013, the Corporation des maîtres électriciens du Québec issued a reminder of the importance of inspecting the socket regularly (in French). <https://www.cmeq.org/professionnels-de-lelectricite/actualites/fiche-dactualite/la-securite-electrique-il-faut-y-voir/>

Could next-generation meters be adversely affected by winter temperatures?

Hydro-Québec is bound to comply with Measurement Canada standards respecting the quality of electricity meters that operate throughout the year.

As part of the certification processes, the next-generation meters had to pass a test involving sudden, extreme temperature changes.

The new meters are designed to withstand Québec's harsh winters.

When will you offer customers the functionality to manage their electricity consumption?

In 2016, customers will be able to monitor their electricity consumption—in their Customer Space on the Hydro-Québec Web site—and use it wisely.

As the advanced metering infrastructure is rolled out, we'll carry out separate projects to study the implementation of certain functions.

Do the meters measure their own energy consumption and are customers charged for it?

No, the meters don't record the amount of electricity they use. The consumption of the meter itself (metering card, communications card, etc.) is not included in the customer's consumption and is not billed to the customer.

Could Hydro-Québec experience computer and telecommunication network failures? Could my billing data be lost?

The computer and telecommunications system hardware is robust and reliable. Nevertheless, Hydro-Québec has incorporated a number of contingency measures or systems into the advanced metering infrastructure in order to quickly correct any fault that might occur.

The new meters have an automatic backup function enabling them to save electricity consumption data while any technical problems are being fixed. The data can then be submitted once the situation has been restored.

Furthermore, with the dynamic architecture we have chosen, the mesh communications network will be reconfigured automatically as necessary.

What is the certification process for meters and telecommunications equipment to be used in the advanced metering infrastructure?

Certification testing for meters complies with the strictest international standards and falls into three categories: electromagnetic compatibility testing, climate testing and mechanical testing.

All telecommunications hardware undergoes thorough climate testing.

Hydro-Québec meters meet Measurement Canada certification standards.

Instead of allowing people to opt out, why didn't Hydro-Québec select remote activation and deactivation technology involving the next-generation meter's telecommunications card?

Although the technology is being studied, it's not yet on the market. That's why none of the bidders proposed it in response to our requests for proposals.

Opting out means having a noncommunicating electronic meter with no radiofrequency emissions installed. This meter, already being marketed, is accredited by Measurement Canada. Hydro-Québec's opting-out program is similar to most others, which take into account by the current state of the technology.

What is the frequency band of the next-generation meters?

The meters emit radiofrequencies in the 902-to-928-MHz band, the same one used by baby monitors.

What is the average transmission power of the routers in Hydro-Québec's advanced metering infrastructure?

- The theoretical values for router emissions are well below the Health Canada guidelines. Typically, the value at 4 m is approximately 70,000 times lower than the exposure limits, and at 1 m, it is approximately 4,000 times lower. The routers are therefore perfectly safe.
 - Keep in mind that the power density of emissions diminishes rapidly with distance. At 500 m, it is virtually impossible to measure a router's emission levels accurately, because they are more than one billion times lower than the standard in effect. At 100 m, the emission power is close to forty-three million times lower than the standard.
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Can the meter cause interference with my home electronics?

Any device that operates on the 902-to-928-MHz band and uses digital transmission technologies must meet Industry Canada standard CNR-210, so it must be designed to neither cause nor suffer from interference.

Some older devices, however, use the older analogue technology, which is being phased out. Although they are compliant with the standard, they may, in rare circumstances, suffer from interference caused by other devices operating in the same frequency band.

What do the routers and data collectors in the advanced metering infrastructure look like? Will you put one on my roof?

No, the routers and data collectors used by the advanced metering infrastructure will not be installed on people's roofs without the owners' prior agreement. Most of these small mobile communications devices will be installed on existing infrastructure (Hydro-Québec poles, telecommunications towers, etc.).

[An Evolvable Network](#) ■

An Evolvable Network

Hydro-Québec is entering a new stage in the development of a smart grid, which, in the long term, will cut costs to customers. The company decided on an advanced metering infrastructure that requires the installation of 3.8 million next-generation meters. This new technological platform will allow billing based on actual consumption through remote reading. Customers will no longer have to fill in meter-reading cards when they move and service can be restored remotely. Watch the video to learn more.

Length : 02 min. 53 sec.

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Will the selected technology eventually allow Hydro-Québec to offer a variety of new services?

Yes. Next-generation meters installed by Hydro-Québec have a two-way communications card, so they can transmit and receive. They transmit electricity use data, but can also receive updates or be reprogrammed remotely when new functions are implemented.

Before programming new functions, Hydro-Québec has to do an analysis to make sure that they will benefit customers or the company. This capability enables the selected technology to advance and to fully meet HQ's business needs as they evolve over time. In addition, any services must be approved by the Régie de l'énergie [Québec energy board] in light of, for instance, the investment required and the rates affected.

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Hydro-Québec only collects electricity use data for billing purposes. Customers' personal information, such as name, address and telephone number, is not sent through the various components of the advanced metering infrastructure network.

Hydro-Québec intends to use electricity use data from meters to improve service, especially with respect to outages.

The limited data collected, combined with encryption during communication, reduces the risk that the data might be intercepted on its way between components of the AMI, that is, between the smart meters and the head-end data server.

Of course, Hydro-Québec will continue to maintain all necessary security and privacy measures by following recognized industry guidelines and complying with the Act Respecting Access to Documents Held by Public Bodies and the Protection of Personal Information (CQLR, c. A-2.1).

Furthermore, in February July 2013, after its inspection, the Commission d'accès à l'information [access to information commission] concluded that "access to information [. . .] makes it possible to use the data collected, while at the same time protecting users' personal information."