

## Smart Metering Program – Frequently Asked Questions

### 1. What is a smart meter?

Smart meters, like power line and poles, help deliver electricity to homes and businesses. They are a necessary part of our electricity system.

Smart meters look similar to the old BC Hydro meter, but offer better service as part of an integrated system. The old meters can only measure electricity consumption. The new smart metering system measures the flow of electricity through the entire provincial electricity system; measures the quality of power, such as voltage, being delivered to homes and businesses; records consumption data on an hourly basis; and, automatically detects power outages.

### 2. Why do we need smart meters?

The electricity system that powers British Columbia has not changed significantly in 50 years, and has not kept pace with the rapid growth of technology and other demands on the system. Updating BC Hydro's meters is a key step in modernizing the electricity system, keeping our rates low and ensuring BC Hydro can continue to deliver safe, reliable power.

Combined with additional system meters throughout the grid, the new meters will help to manage the flow of electricity and track it like a store's inventory system. More information about the status of the electricity grid will ensure BC Hydro can continue to deliver safe, reliable, low-cost electricity to homes and businesses across the province when it is needed.

### 3. What are the benefits of the new meters?

The new meters will help BC Hydro get the lights back on faster and more safely in the event of an outage; they will provide people with tools to manage their energy use and save money; and they will help us keep our rates low by reducing waste and other costs. Upgrading our metering system and grid will deliver \$1.6 billion in savings to our customers over the next 20 years and help keep our rates among the lowest in North America.

### 4. Do smart meters cause fires?

Our meters have passed rigorous safety testing and are certified by Measurement Canada and Industry Canada. Any reports of BC Hydro smart meters causing fires have been investigated and are simply not true. As of early January 2012, we have safely installed more than 560,000 smart meters. It is important to know this metering technology is not new; BC Hydro has been installing digital meters for the past ten years. Smart meters are simply digital meters with the added capability of communicating wirelessly about energy consumption and the flow of power through the system

Visiting all 1.8 million of our customers provides a unique opportunity to identify potential safety issues in the field. More specifically, we are identifying a small number of situations where there are problems with the customer's meter base or there is faulty wiring on the customer's side of the meter. As with conventional meters, these types of maintenance issues may cause electrical incidents.

**5. Do smart meters cause interference with other electronic devices such as fire alarms?**

In British Columbia, smart meters will not cause interference with fire alarms because fire alarms are required to be hard-wired.

Smart meters are compatible with other wireless devices. The radio used by smart meters uses frequency hopping spread spectrum (FHSS) technology, which is resistant to interference. If a particular channel is being utilized by another wireless device, the smart meter will be able to successfully communicate using the other channels. In addition, the smart meter's radio operates infrequently – less than one minute a day in total.

**6. Do smart meters cause power surges or damage appliances?**

To quote the BC Safety Authority, "The BC Safety Authority believes it is highly unlikely that a smart meter would cause a power surge because removal and installation simply involves opening and closing the circuit—much like using a switch; it doesn't generate voltage on its own."

**7. How much power does BC Hydro believe it is losing to theft and how much is that theft costing ratepayers?**

It is estimated theft has grown to approximately 850 GWh/year – that's the equivalent of \$100 million or about a 3 per cent rate impact for all customers. It is also enough to power approximately 77,000 homes in B.C. for one year.

**8. How does BC Hydro expect to detect theft using smart meters?**

Theft detection will involve the installation of specialized devices that accurately measure the electricity delivered to an area and compare that with the actual customer consumption. This will allow BC Hydro to identify and eliminate theft where it is occurring and mitigate the impacts on legitimate customers.

In addition, smart meters will have a tamper detection feature that automatically notifies BC Hydro if they have been removed from the wall or otherwise manipulated.

**9. Are smart meters CSA approved?**

Smart meters are exempt from Canadian Safety Association certification because those standards govern electronic consumer products, versus products that are owned, operated and managed by the utility. Smart meters are owned, installed and read by the utility, and they are governed by the British Columbia Electrical Safety Regulations.

In addition, our smart meters are fully compliant with meter electrical safety and performance requirements from American National Standards Institute (ANSI), Institute of Electrical and Electronics Engineers (IEEE) and International Electrotechnical Commission (IEC).

**10. Is the radio technology used by smart meters safe?**

Smart meters are safe, as confirmed by health and science authorities including B.C.'s Provincial Health Officer, Health Canada and the World Health Organization.

Smart meters communicate for an average of one minute a day. In fact, exposure to radio frequency during a 20-year life span of a smart meter is equivalent to the exposure during a single 30-minute cell phone call.

BC Hydro's smart meters are well below Health Canada's exposure limits and the precautionary limits set by Switzerland, the country with the most rigorous standards in the world.