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## The Benefits of Smart Metering

BC Hydro is implementing smart meters and supporting infrastructure to encourage energy conservation at home and at work, helping us toward the goal of making B.C. energy self-sufficient by 2016.

The smart metering infrastructure could also improve the electrical system's reliability and performance, offering many operational efficiencies and customer benefits.

### Smart metering has the potential to offer:

<p><b>Customer service</b> – The customer experience will change with increased availability of consumption data, automated outage and restoration detection, and on-demand meter reads.</p>	
<p><b>Enabling pre-payment options</b></p>	<p>The Smart Metering &amp; Infrastructure program enables the implementation of pre-paid programs, which are becoming a popular way for people to manage their electricity consumption.</p> <p><b>Example:</b> A customer can pre-pay electricity bills for their children that are away at university. Customers can also sign into bchydro.com and top up their account(s) electronically before it reaches zero.</p>

<p><b>Conservation &amp; energy efficiency</b> – Increased customer awareness of how and when electricity is used; encouraging customers to shift consumption to off-peak hours and reduce their overall consumption.</p>	
<p><b>Detailed consumption information</b></p>	<p>Customers will have access to an unprecedented amount of consumption information. Today, customers have access to a maximum of 12 meter reads per year, but smart meters will collect information at least 24 times a day, 365 days a year.</p> <p>Customers and call centre agents will have access to the details they need to investigate unusual consumption, or bills that seem too high. Customers will appreciate how easy it will be to access, view and understand their consumption data.</p> <p><b>Example:</b> A customer checking consumption data could discover that on a particular Saturday, much more power was used than normal. Checking the calendar and his memory, the customer remembered that was the day the family's new home entertainment system was installed and put to good use for a movie-marathon weekend.</p>
<p><b>Monitoring energy use for conservation</b></p>	<p>Smart metering supports an infrastructure that enables customers to monitor their energy use in near real-time. That equips customers with the data they need to quickly make changes in how they're using electricity.</p> <p><b>Example:</b> Sally gets home from school and wants to do a load of dishes before her parents get home from work. She turns on</p>

the dishwasher and decides she'll make herself a snack. As she's getting everything together, the family in-premise display glows red. She investigates and realizes that she's using power during a peak period. She turns the dishwasher off and programs it to turn on later that evening when it's less expensive to use power.

**Operational efficiencies** – The Smart Metering & Infrastructure program is a key component of the BC Hydro Smart Grid program. Today's distribution grid is little more than an interconnected system of generating units, power lines, substations and transformers that deliver electricity to customers. Smart Grid refers to a modern, intelligent electricity transmission and distribution system that incorporates traditional and advanced power engineering to enhance grid performance and support a wide array of functionality for customers and the economy. BC Hydro is in the process of developing many applications that form part of Smart Grid, such as smart metering, to increase the reliability and efficiency of the electricity system overall. It can improve monitoring, information gathering and enable two-way interaction between BC Hydro and our customers.

**Outage detection and response**

Smart metering will help us to detect power outages, and let us know when power is restored. For example, we'll be able to proactively notify customers that their power has been restored.

**Example:** Here's what would happen in the event of tens of thousands of people losing power due to a massive wind storm hitting the Lower Mainland. Smart meters would send a message to BC Hydro, which would let us know within minutes which customers don't have power. And when power is restored, those individuals would be notified.

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