



# Smart Meters: What are the Risks?

by Jim Waugh

**N**o doubt you are aware of the smart meter program that BC Hydro began moving ahead in July. The \$930-million program was announced in 2008 by then Premier Gordon Campbell to allow BC Hydro to replace existing analog electric meters with smart meters for all of its 1.8 million customers.

The smart meter program concerns me deeply because there are significant safety, health and privacy issues that BC Hydro is not disclosing to the public. I feel an urgent need to tell as many people as possible why the smart meter program is a really bad idea and what we can do to opt out of it.

## **Why be concerned about smart meters?**

Smart meters using wireless technology are being installed in many American states and European countries (Idaho and Italy used fibre-optic connections rather than wireless). The installations have been met with intense opposition from concerned citizens.

Why are these people angry and pro-

testing smart meters with such vigour? They are concerned that wireless radiation from smart meter networks will compound their existing exposure to harmful radio-frequency (RF) radiation and increase their risks of illness. There have been numerous reports of people becoming

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ing sick shortly after smart meters were installed on their homes.

We are being exposed to high levels of RF radiation, whether we choose to or not, from sources such as cell antenna towers, Wi-Fi, cellphones, cordless

phones and other wireless technologies. In May 2011, the World Health Organization (WHO)/International Agency for Research on Cancer (IARC) announced that RF radiation had been classified as “possibly carcinogenic to humans (Group 2B).” Smart meters will add to the RF contamination in our homes, unnecessarily.

A significant percentage of the population (about 35 percent) feel the effects of RF radiation through symptoms like headaches, confusion, tinnitus, insomnia, fatigue, irritability and dizziness, and flu-like symptoms. A segment of the population, approximately three to five percent, suffer with acute sensitivities to radio frequencies much like allergic reactions that can be quite severe and debilitating.

Scientists are concerned about the strong link between human-made radiation and increases in reported cases of childhood and adult leukemia and brain tumours. Cases of autism have increased by 6,000 percent in recent years and new cases of Alzheimer’s disease are expected to increase by 300 percent in North America. Despite our war on cancer, reported cases of lung cancer are up 50 percent,

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breast cancer up 200 percent and prostate cancer up 400 percent. RF radiation has greater effects on children because their bodies are smaller and in the developing stages.

By proceeding with the installation of wireless smart meters, BC Hydro is deliberately and unnecessarily risking the health of thousands of children and adults under the guise of reducing energy usage.

**What does Health Canada say?**

BC Hydro claims the RF radiation from their smart meters is not harmful to people and are within Health Canada guidelines. The truth is the safe exposure guidelines recommended by Health Canada deal only with the *thermal* effects of wireless radiation while ignoring the *non-thermal* effects. This means that if the radiation from wireless smart meters is not causing the tissue of your body to increase in temperature then you have nothing to worry about.

Health Canada dismisses the biological effects of low-level RF radiation by ignoring hundreds of published research studies that document biological

effects at intensities thousands of times lower than what Health Canada deems to be safe. The biological effects over time can lead to any number of health effects including immune system and neurological disorders, and diseases including cancer. Wireless smart meter radiation can be harmful to humans and any state-

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ments by BC Hydro to the contrary are simply not true.

There is a real possibility that a large number of scenarios will occur where overlapping smart meter radiation may result in very high radiation densities. A computer model done by Sage Associates, a company located in Santa Barbara, California, demonstrated a number of situations where radiation densities

would exceed US FCC (Federal Communications Commission) guidelines. (FCC safe limit guidelines are similar to those claimed by Health Canada.)

One situation was a kitchen in a single family home in which radiation spikes from a smart meter mounted on the outside wall entered the room and reflected off the major appliances, causing multiple doses to occupants. These effects would be compounded if neighbouring smart meters were in close proximity to your house.

A situation I am familiar with is a townhouse complex where 15 analog electric meters are currently mounted on a wall common with an owner’s master bedroom. When BC Hydro installs the smart meters, each one will be reporting information to the wireless network 100 or more times a day resulting in excess of 1,500 radiation spikes over a 24-hour period, 365 days a year. It is very likely that similar situations will occur all over the province in long-term care facilities, daycare and preschool facilities, schools, public buildings and residential neighbourhoods.



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### What is the real truth about the smart meter program?

The smart meter program is not about saving money and reducing energy consumption. It's about a big company doing whatever it takes to return big profits to the provincial government: A recent newspaper article suggested that the smart meter program is designed to add value to BC Hydro for a quick BC Rail-type sale.

Smart meters are about gathering and recording very detailed personal information about you and your habits and selling it to whoever pays the price, like insurance companies and other organizations with deep pockets including government agencies. The information stored in BC Hydro computers will over time be worth a fortune. Smart meters are personal surveillance devices that will record when you go to bed and when you get up, if and when you get up during the night, when you leave for work and return home, and when you're on vacation. They will record what appliances you use and for how long.

The wireless signals they send to BC Hydro will be prone to hacking by anyone with the means and intent (according to the U.S. security firm InGuardians) because they are simply radio transmitters. Hackers have become extremely astute at stealing personal information and disrupting operating systems as the Pentagon, Sony and Apple have discovered, and I'm sure BC Hydro will not be immune.

### Where's the opt-out clause?

The BC Hydro smart meter program does not give customers an option to opt out. In May 2011 a law firm in the state of Maine successfully convinced the Maine Public Utilities Commission to find "that it was an unjust and unreasonable practice for Central Maine Power Company to refuse to permit residential and small commercial customers to opt out of CMP's smart meter program."

The firm was able to prove "that because of unresolved concerns relating to health, privacy and cyber security resulting from the installation of wireless

meters on their homes," that customers should be given a choice. This was the first time in the United States that an electric utility was ordered to give customers a choice and it will serve as a precedent for other jurisdictions.

### What about property values?

The possibility that some customers may be successful in retaining their analog meters may have a positive effect on their long-term property values. A number of studies have been published that demonstrate stigmas such as close proximity of a residential property to high-voltage transmission lines, distribution lines, utility poles, and utility pole and ground mounted transformers can have a negative effect on values by as much as two to 20 percent. I expect that when the class action suits involving personal injury due to cellphone use currently proceeding in the United States are successful, two more property value stigmas will become cell antennas near or mounted on buildings and smart meters.



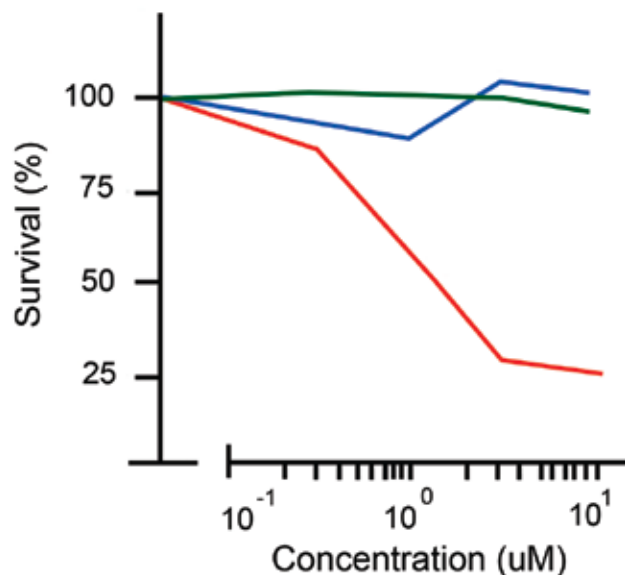
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To my knowledge, smart meter installations in Canada and the United States have not resulted in significant energy savings because smart meters cannot save energy. Electrical energy savings can only be realized by changing customer habits. If a person has been conscientious and following the suggestions for electrical energy conservation that BC Hydro has been promoting for a number of years, he/she may realize a cost saving by baking cookies for the grandchildren at 3:00 am rather than 3:00 pm or doing the laundry at 2:00 in the morning, but it is a scenario that is unlikely and totally beyond the control of BC Hydro.

### Get the facts

There are a couple of YouTube videos that I encourage you to watch that you will enjoy:

- The first one, about 4½ minutes long, is narrated by Jerry Day and is a good-natured look at some of the chilling facts about smart meters: [http://youtube.com/watch?v=8JNFr\\_j6kdI](http://youtube.com/watch?v=8JNFr_j6kdI)

- The second one is about 32 minutes in length and is presented by Rob States, an electrical engineer in California who has the experience and expertise to clearly explain how smart meters will impact your health: <http://youtube.com/watch?v=FLcTaSG2-U>

BC Hydro customers will not benefit from the smart meter program and we will be forced, without our permission, to bear the risks. This is not right and we must demonstrate our concerns by opting out.

Send a letter to BC Hydro and others who should be notified of your concerns. For a listing of your local BC Member of the Legislative Assembly go to [www.leg.bc.ca/mla/3-1-1.htm](http://www.leg.bc.ca/mla/3-1-1.htm).

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## Additional Web Resources

**Citizens for Safe Technology** [www.citizensforsafetechnology.org](http://www.citizensforsafetechnology.org)  
This website is regularly updated and has a Smart Meters Action Kit on how you can get more involved in voicing your opinion on this issue. Other action kits include the Cell Tower Action Kit and the Wi-Fi Action Kit. Their calendar is handy, too, to keep informed of any events in your area.

**Stop Smart Meters!** [www.stopsmartmeters.org](http://www.stopsmartmeters.org). This site is U.S. based but nevertheless hosts useful political updates, and health and environmental information.

**EMF Safety Network** [www.emfsafetynetwork.org](http://www.emfsafetynetwork.org) Here you will find a Smart Meter News section that is nicely updated, as well as plenty of other international links to EMF issues, experts and documents.



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