

**Note from Jean:** Sharon Noble, from the group Citizens for Safe Technology (<http://citizensforsafetechnology.org> - located in British Columbia), has put together a great summary of the result of her research and discoveries on the critical issue of incendiary 'smart' meters... I RECOMMEND IT TO YOUR ATTENTION!

Hello Jean,

I thought you might be interested in the letter I wrote to the Ontario Electrical Safety Authority today. In case you don't know what happened, you can learn about it here in an interview the victim gave.

<https://soundcloud.com/am640/mcarthursmart-meters-are-exploding-homeowner-veronica-onyskiw-discusses-jun-4th-2015>

I don't recall if Veronica said it on this interview, but the utility people took the meter the following morning and as they took it they said that it would be sent to people who would inspect it to learn the cause, but she should know that the smart meter did not cause the fire. This is so typical – exactly what happens every where.

There is an really important link to testimony in Texas in which very experienced journey linesmen say that ITRON meters are failing often, with palletes of burned and failed meters being at the shop. They identify one reason for the fires as being that the ITRON blades are much thinner than the analog blades, so the smart meter doesn't fit the meter base properly. These gaps result in arcing which leads to fires. Also, they confirm that insurers are being reimbursed for claims they pay out. Hope you find this interesting.

Regards,

Sharon

PS. Later on Sharon added, after the following comment from me...

"I found especially interesting to read in your note below that insurers are reimbursed for claims they pay out on smart meter fires, presumably by the utilities (I'd love to see some journalists getting an official statement from an insurer on this as a formal proof, since it goes to show a great contempt for human lives that continue to be at risk as they keep this whole messy problem under wrap and that both utility companies and insurers are complicit in covering this up) and that ITRON meters' blades are thinner than analog blades, leaving a gap which result in arcing and failures - as explained in <http://bit.ly/1Qw5T4M> (...) that part of the problem was a loose connection between the meter and the meter base because the smart meters had thinner "blades" than the previous analog meters."

Sharon's comment:

"Re. the insurers, the testimony was the first proof I've been able to get that this is happening, although I've long suspected it. Why else would the insurers not be screaming bloody murder about this risk? I have, via a Freedom of Information request, asked for the amount of money paid out to insurers by BC Hydro and the number of claims paid – nothing personal, and they did not respond. I submitted an official complaint to the Privacy Officer who is sitting on it.

I have spoken with victims of fires right after the fire and they were willing even eager to speak with me about what happened. Then I call a couple of weeks later to get an update and either they refuse to speak with me, or, as several have done, tell me they have been told by their insurer to not speak with me while they are in "negotiations" with Hydro.

This possible collusion makes sense. I have heard of victims having their premiums increased dramatically after a fire. Good for the insurers – pay the claim, get reimbursed by the utility or meter maker, and then increase the premiums. I have no direct proof yet other than the Texas testimony and info from victims (mostly verbal) – but it makes sense."

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**From:** Sharon Noble (dsnoble@shaw.ca)  
**Sent:** June 11, 2015  
**Subject:** Smart meters are fire hazards. Here is the proof.

Mr. Steve Smith June 11, 2015  
General Manager  
Electrical Safety Authority  
Toronto, Ontario  
steve.smith@electricalsafety.on.ca

Dear Mr. Smith,

In 2012 Armen Kassabian, Ontario Fire Marshal, wrote a report that expressed serious concerns about the safety of smart meters, regardless of the brand. They fail. They melt. They burn.

(<http://www.stopsmartmeters.org/wp-content/uploads/2012/10/FireMarshallReportSmartMeterFires-Canada.pdf> )

He was right. I've been tracking smart meter problems across North America for the past two years and those problems still exist. I know. Smart meters still fail. They still melt. They still burn. And, with the help of input from experts including electricians, electrical engineers and utility insiders, I can prove it.

You're reviewing the Sensus meter that exploded and caused a fire in Collingwood, but I can tell you that smart meters, regardless of the brand, have the same basic design flaws that have caused many who are far more knowledgeable than I to conclude that smart meters are fire hazards. They should not be allowed to put the lives of Canadians at risk.

*Following is some of the information I've gathered which I hope will help you in your review.*

### **1. Smart meter and digital meter fires are real**

They can and do catch fire for a number of reasons (see 4. for some examples) – and, when 240 VAC current direct from the grid starts flowing to ground through the melting plastic, the fire can become intense and almost impossible to extinguish until the power is turned off at the pole. This is true of any digital meter - whether radio-on, radio-off, or the new so-called 'analog-type', and regardless of cost or brand. These things are made largely of combustible plastic which will melt/ burn when it overheats. Please note that analog meters, made of glass and steel, don't burn - you couldn't ignite one if you tried.

### **2. Proper engineering practice does not appear to have been followed during the smart meter rollout**

- As in the Saskatchewan report, rather than changing the entire system there should have been a stepped procurement.

- Mast, meter base, meter, and customer's wiring should have been considered as an integrated system. For example, enclosures should have been designed, tested and certified to prevent fire, and, when one occurs, to prevent it from spreading to the house.

### **3. A culture of public safety is lacking**

Similar to Saskatchewan report, there seems to be an assumption that someone someplace must have tested these things, but no one seems to have checked to find out if this really was done by an independent, qualified person.

- **Lack of professional engineering involvement and sign-off on safety** - as required in the absence of CSA certification. In BC the BC Safety Standards Act ( 21-4) requires that if equipment is not CSA approved, it must be certified safe by a professional engineer certified in BC. This has not happened.

- **Smart meter companies and utilities accept the certification by ANSI and IEEE**, both of which are industry driven. They also assure safety based on certification by Measurements Canada which, in fact, certifies accuracy only.

- The same Sensus meter that failed and caused fires in Saskatchewan later was certified by UL. This puts into question the adequacy of the certification – a certified meter failed and burned. **The standards for certifying electricity meters need to be updated to ensure the safety of digital meters**

#### 4. Some reasons digital meters can catch fire

(Note - meters' internal operating temperatures can be high to start with; eg. – the load current gets near 200 amps and the disconnect switch gets hot because it's under-designed.)

- **Heating from arcing occurs possibly because contacts damaged** during installation and/or because of exchanges being made without the power turned off (a practice which contravenes the meter base's CSA certification)

- In BC and elsewhere in North America, **unqualified installers**, often people straight off the street with just a few hours of training, are allowed to exchange meters, something normally done by a highly trained and qualified person. These people are paid on a quota basis, rushing a job that they are not qualified to do, leaving behind a trail of damaged meters and bases.

- **Heating can occur from over-voltages, the sun beaming on the meter casing, and/or steam created when moisture finds its way into the meter enclosure (e.g. condensation, rain) and causes short-circuiting.** (Note: maintaining the integrity of the seal on the service mas is the customer's responsibility. How many customers know this?)

- Some meters, e.g. ITRON, contain **Lithium-metal batteries and electrolytic capacitors that explode when overheated**, as from the sun, exposed to moisture such as condensation, and/or stressed by over-voltages or reverse current. Even if the fire didn't start at the meter, once the meter heats, the battery will get hot and explode – and the fire can become much larger quickly.

- A component of vital importance to smart meter safety is **the remote disconnect switch**. In response to commands from the distant utility it can be used to turn a customer's power on and off. In response to signals from temperature and smoke sensors in the meter enclosure – signals indicating the meter is, or might soon be, on fire - it is meant to open, thereby isolating the meter from the 240 VAC grid to prevent a fire from starting or intensifying, and as well to protect firefighters and others from electrical shock as they attempt to put out the fire. When used for any of these on/off functions **a malfunctioning switch can result in arcing, which (per earlier) can start a fire and/or cause an existing fire to intensify.** In light of the electro-mechanical complexity of the switch – relying as it does on wireless signals coming from afar over a mesh network (and thus subject to transmission errors), and as well on sensors and actuating circuitry which may or may not be functioning properly in the presence of high voltage, heat, water, fire, or other damage - the reliability of this

switch is dubious. It shows no signs of CSA certification, and no documentation has been provided by BC Hydro or Itron showing certification and proof of adequate testing under field conditions to Canadian Standards. Nor has, despite requests, BC Hydro provided proof of sign-off on safety of the switch (or the meter either for that matter) by a Professional Engineer, as is required by BC Safety Standards Electrical Safety Regulation 21-(4). Aside from its potential fire-starting capability, the switch is critical from the safety point of view because if it fails to operate properly the disconnect function will not be accomplished and the intended safety functionality will not be assured.

- **The casing and many components are made of combustible plastic** that can melt and burn when overheated. As said earlier, analogs are made of metal and glass and would not burn if you tried.

- Digital and smart meters are being put into a base that was designed to be used in conjunction with an incombustible analog meter. No safety testing has been done to ensure compatibility. In a lawsuit in Texas, in testimony given by experienced utility linesmen, it was said that ITRON meters' blades were thinner than analog blades, leaving a gap which resulted in arcing and failures.

([http://www.stopsmartmetersbc.com/wp-content/uploads/2015/05/Reed\\_Answering\\_Brief-1.pdf](http://www.stopsmartmetersbc.com/wp-content/uploads/2015/05/Reed_Answering_Brief-1.pdf) - page 8)

## 5. Other safety hazards

- **Disconnect switch reliability is questionable.** It may arc generating heat, may not operate as expected **putting fire-fighting personnel at risk.** (as explained earlier) This was determined to be the cause of many fires in Florida and Saskatchewan.

- There are reports of **interference with AFCI and GFCI devices and smoke detectors.**

- **Many meter bases were not designed/tested/CSA-certified for combustible meters (to contain an electronic meter fire).** The meter bases were certified by CSA in conjunction with an analog meter. These meter bases were never certified to connect to a combustible digital meter. **Putting a combustible meter into a base certified to hold a non-combustible meter annuls the certification.**

- If a digital meter catches fire, there's a good chance someone passing by will notice the fire and try to put it out with a garden hose, for example. With the 240 VAC current flowing into the meter area directly from the grid there's **a chance the well-intended passer-by could suffer electrical injury.**

- Smart meters are being installed **with no regard to its proximity to flammable objects** such as propane tanks, gas lines, paints, etc in garages, or the wood/vinyl siding of a building..

- There have been several incidents **of smart meters burning, exploding or being blown off homes when there is a power surge**. I have not been able to find an incident where this occurred with an analog meter.

## **6. General concerns**

- In both British Columbia and Quebec, **smart meters are being removed from fire scenes by utility companies before fire inspectors have been able to complete their jobs**. In BC, BC Hydro has stated that it does not inspect “failed” meters but rather immediately returns them to ITRON for replacement. There is no opportunity for an independent examination to determine the actual cause of these failures.

- Because meters are largely composed of plastic, often **there is nothing left of the meter to investigate**.

- There seems to be a **consistent corporate message that utility employees are to tell customers that any problem, whether it’s damaged appliances or a fire, was due to the meter base, not the smart meter**. Just as Mrs. Onyskiw was told by Mr. Irwin as he removed the burned smart meter from the side of her home, there would be an investigation, but the meter was not the problem. This also was the policy of employees of Oncor and Centerpoint in Texas, as confirmed by testimony. ([http://www.stopsmartmetersbc.com/wp-content/uploads/2015/05/Reed\\_Answering\\_Brief-1.pdf](http://www.stopsmartmetersbc.com/wp-content/uploads/2015/05/Reed_Answering_Brief-1.pdf) page 10)

- **Smart meter failures (overheating and melting) and fires are not being tracked**. As far as I have been able to learn, fire commissioners do not have codes specific to smart meters so any fire that is reported will be attributed to failed electrical distribution equipment or otherwise coded as an electrical fire.

Sensus meters have caused fires and have been recalled in Pennsylvania (Peco), Florida (Lakeland), Oregon (Portland), Saskatchewan, and now in Ontario. For some reason Sensus meter fires get more publicity than do fires involving the other brands, but that does not mean others are safe. In Texas, palettes of ITRON and Landis Gyr meters had failed, and the linesmen knew of many fires.

All of these makes of meters have been installed in Ontario and I’m sure that investigation would show that they have caused damage and put lives at risk. They, too, should be inspected and tested by an agency independent of corporate influence.

I hope you will find this information useful. If you have any questions, please let me know.

Sincerely,

Sharon Noble