



February 14, 2018

Sent via email

**Letter L-3-18**

**Re: S. N. – Smart Meter Safety Complaint Report**

Dear S. N.:

On September 5, 2017, the British Columbia Utilities Commission (BCUC) received your complaint report titled “BCUC & Smart Meter Fires: The Failure to Protect” (Complaint Report). Your Complaint Report relates to the alleged fire risks associated with Itron Smart Meters.

**Background and BCUC’s Order G-124-16**

On July 16, 2015, you filed a complaint with BCUC alleging that smart meters installed by BC Hydro and Power Authority (BC Hydro) and FortisBC Inc. (FBC) are fire safety hazards. Commission staff examined the information provided and gathered additional information from BC Hydro, FBC, the BC Safety Authority, the Office of the Fire Commissioner, local fire departments, the Canadian Standards Association (CSA) and publicly available literature and reports. The Commission concluded, after reviewing the information submitted by all parties, that there was no further action warranted. However, the Commission did conclude that there was sufficient justification for increased monitoring of fires that might be related to electrical meters and issued [Order G-124-16](#) on July 28, 2016.

Commission staff informed you that your complaint was closed on July 28, 2016 as the evidence reviewed by the Commission did not demonstrate an increased fire safety risk related to smart meters.

**September 2017 Complaint Report “BCUC & Smart Meter Fires: The Failure to Protect”**

On September 5, 2017, the BCUC received your Complaint Report which cites the lack of due diligence from both BC Hydro and FBC to mitigate possible fire risks associated with Itron Smart Meters. You also raised issues with the Commission’s process over the handling of your original complaint.

After an initial review of your Complaint Report, Commission staff requested technical information from BC Hydro and FBC in September and November 2017. Commission staff in particular sought additional information on investigation and compliance with local fire authorities; smart meter quality assurance and control and independent certification of Itron smart meters. We note that you have received copies of BC Hydro and FBC’s responses.

### **Investigation and compliance with local fire authorities**

BC Hydro and FBC (the Utilities) note that fire authorities lead the investigation to determine the origin and cause of meter fires. The Utilities submit that they support these fire authorities with the investigation. When the Utilities' field staff are able to access a meter after a fire event, the Utilities indicate that their staff inspect the meter and its installation to provide input to fire authorities to assist in determining the potential causes and reporting on fire related events. However determination of the cause of the fire remains with the fire investigator. The Utilities' note that their field staff are trained not to remove any meter from a fire scene without first conferring with the local fire authority. Meters are generally inspected on-site by fire inspectors, but in some instances, the fire authority may deem it appropriate that the meter be removed by the Utilities for off-site inspection while the investigation is ongoing. In those instances, the Utilities note that they retain meters for the duration of the investigation of fire authorities, providing full access to the meters by fire authority inspectors. The Utilities also note that they retain such meters for a period beyond the completion of the fire investigation. Alternatively, as submitted by the Utilities, a meter may be retained by the fire department during the investigation and recovered by BC Hydro or FBC at a later date. We note that BC Hydro and FBC have formalized their longstanding process for the handling of meters involved in a fire and/or electrical incident by introducing a chain of custody process for tracking returned meters.<sup>1</sup>

### **Smart Meter Quality Assurance and Quality Control**

The Utilities indicate their Professional Engineers have reviewed Itron's Factory Acceptance Testing (FAT) and engineering documents, and have determined they meet performance specifications and safety requirements. In addition, the Utilities have outlined their Quality Assurance/Quality Control (QA/QC) sample testing process, where each shipment of Itron Advanced Meters are quarantined and tested prior to deployment. The Utilities each indicate that they select a sample from a shipment of Itron smart meters for inspection and testing. Their sample quantity is based on Measurement Canada compliance sample specification requirements. The Utilities also note that Itron smart meters are visually and physically inspected for conformance to Measurement Canada requirements and for suitability for use in service. As part of the QA/QC checks, the Utilities submit that meters are inspected for markings, ranges, accuracy and any defects that may be detected by energizing and testing the meters on a certified meter test console. If the sample fails QA/QC, the Utilities each note that the specific issue is addressed with the manufacturer.<sup>2</sup>

The American National Standards Institute (ANSI) ensures all smart, electronic and electromechanical meters, regardless of technology, are designed, manufactured, and tested in accordance with ANSI C12 series of standards.<sup>3</sup> Registered Professional Engineers have confirmed BC Hydro and FBC are compliant with ANSI C12 series of standards for every Itron smart meter type that has been installed.<sup>4</sup>

In 2010, to confirm the integrity of the smart meter service disconnect switch, BC Hydro and FBC sponsored an independent evaluation of Itron's service disconnect switch. This evaluation was performed by the National

<sup>1</sup> FortisBC Inc., letter dated July 28, 2017, Advanced Metering Infrastructure Project Final Progress Report to June 2017 (FBC Letter); BC Hydro, letter dated August 23, 2017, Complaint filed by M.U. and L.Y. Response to Commission Information Request (IR) No. 1 to BC Hydro (BC Hydro Letter).

<sup>2</sup> FBC Letter; BC Hydro Letter.

<sup>3</sup> ANSI C12.1 – 2008, Code for Electricity Metering; ANSI C12.10 – 2009, Standard for Physical Aspects of Watt-hour Meters; ANSI C12.19 – 2008, For Utility Industry End Device Data Tables; ANSI C12.20 – 2010, Electricity Meters— 0.2 and 0.5 Accuracy Classes; ANSI C12.21 – 2006, Protocol Specification for Telephone Modem Communication; ANSI C12.22 – 2012, Protocol Specification for Interfacing to Data Communication Networks.

<sup>44</sup> FBC Letter; BC Hydro Letter.

Electric Energy Testing, Research & Applications Center (NEETRAC) and confirmed the performance capability of the Itron smart meter service disconnect switch.<sup>5</sup>

Furthermore, due to requests from regulators, Underwriters Laboratories published the UL 2735 Meter Safety Certification Standard in 2013: [https://standardscatalog.ul.com/standards/en/standard\\_2735\\_1](https://standardscatalog.ul.com/standards/en/standard_2735_1). This standard contains requirements for the electric shock, fire, mechanical and radio-frequency (RF) emissions safety aspects of all electric utility meters, including smart meters, and is the foundation for both the UL product safety certification service and the product safety testing service. This also includes Smart Meter Service Disconnect Switch certification requirements.<sup>6</sup> Itron has received UL 2735 certification for the energy only smart meters used by BC Hydro and FBC. In order to achieve certification, no modifications were required to the energy only meters that BC Hydro and FBC began purchasing in 2011. As a result, all of BC Hydro's and FBC C2SOD and CN2SOD smart meters now have a UL 2735 meter certification by an independent third party.<sup>7</sup>

### Commission Review Process

We also note that in this Complaint Report, you raise concerns with the Commission's consideration of your prior complaint, dated July 16, 2015. That complaint was escalated to a proceeding and reviewed by a Commission Panel who issued findings in the matter by way of a Commission Order. If a party is unsatisfied with the resolution of a proceeding, the appropriate recourse is to seek reconsideration or appeal to the Courts. The Commission's records indicate that following the Commission's findings in Order G-124-16, you had sought information on how to apply to have the Commission's decision reconsidered, to which Commission staff responded on September 7, 2016.

An application can be made to the Commission to reconsider a decision under Section 99 of the *Utilities Commission Act*. In the interests of both efficiency and fairness, the application undergoes an initial screening phase. To pass this initial screening phase, the Commission will review the application for reconsideration and determine if the application has established a *prima facie* case sufficient to warrant full reconsideration by the Commission. The Commission generally applies the following criteria to determine whether an application has established a *prima facie* case sufficient to allow reconsideration:

- The Commission has made an error in fact or law;
- There has been a fundamental change in circumstances or facts since the Decision;
- A basic principle had not been raised in the original proceedings; or
- A new principle has arisen as a result of the Decision.

More details on the Commission's Reconsideration Criteria Guidelines can be found on our website at the following link: [Reconsideration Criteria](#).

Commission decisions may also be appealed to the Court of Appeal for British Columbia. The Court of Appeal will only consider alleged errors of law or jurisdiction. An appeal to the Court must be launched within 30 days after the Commission has issued its Decision. However, it is necessary first to seek the court's leave for the appeal. The court will normally grant leave only if other remedies have been exhausted. Therefore, the appellant should first apply for reconsideration by the Commission.

Should you have any further concerns in how your complaint has been handled by the BCUC, you also have the alternative of contacting the Ombudsperson's Office (see Appendix A for further details).

<sup>5</sup> FBC Letter; BC Hydro Letter

<sup>6</sup> UL 2735 – 2013, UL Standard for Safety Electric Utility Meters.

<sup>7</sup> FBC Letter; BC Hydro Letter.

## **Conclusion**

As referenced above, [Order G-124-16](#) requires BC Hydro and FBC to report to the Commission with all incidents where a meter and/or meter base is reasonably assessed to be the possible or likely scenario of high temperature or fire event that results in the meter and or meter base requiring replacement. BC Hydro and FBC are required to report this on a semi-annual basis and must continue until December 31, 2020. These semi-annual reports filed to the Commission ensure fire or heating events related to smart meters are thoroughly investigated. As of the date of this letter, Commission staff note that BC Hydro and FBC are compliant with the above order.

Commission staff have reviewed all compliance filings submitted by BC Hydro and FBC in accordance with Order G-124-16. Commission staff have also reviewed your latest Complaint Report along with the supplementary information provided by BC Hydro and FBC in response to this complaint.

Thank you again for contacting the Commission.

Sincerely,

*Original signed by:*

Patrick Wruck  
Commission Secretary

/yl

Attachment

cc: Mr. Fred James  
Chief Regulatory Officer  
BC Hydro and Power Authority  
Bchydroregulatorygroup@bchydro.com

Ms. Diane Roy  
Director, Regulatory Services  
FortisBC Inc.  
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**Office of the Ombudsperson Information**

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If you have concerns about how the Commission handled your complaint, you may wish to contact the Office of the Ombudsperson). The Ombudsperson receives enquiries and complaints about the practices and services of public agencies within its jurisdiction. Their role is to impartially investigate complaints to determine whether public agencies have acted fairly and reasonably, and whether their actions and decisions were consistent with relevant legislation, policies and procedures.

If you decide to file a complaint with the Ombudsperson, they will review the Commission's process to ensure it was fair. The Ombudsperson could request that the Commission reopen its investigation, although this does not guarantee a different outcome for you.

Provided is a link to the Office of the Ombudsperson's website: <https://www.bcombudsperson.ca/>. You may also call their Office toll-free at 1-800-567-3247. An employee at the Office will be able to assist you and inform you of your options.